BY ORDER OF THE COMMANDER
3D WING

DEPARTMENT OF THE AIR FORCE
INSTRUCTION 21-101

3D WING
Supplement

28 AUGUST 2025

Maintenance

AIRCRAFT AND EQUIPMENT
MAINTENANCE MANAGEMENT

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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RELEASABILITY: There are no releasability restrictions on this publication

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OPR: 3MXG/MXQ

Certified by: 3MXG/CC
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Supersedes: AFI21-101_3WGSUP, 27 June 2019

Pages: 77

This supplement extends the guidance of Department of the Air Force Instruction (DAFI) 21-101, *Aircraft and Equipment Maintenance Management*, and will be used in conjunction with DAFI) 21-101_Pacific Air Forces Supplement (PACAFSUP), *Aircraft and Equipment Maintenance Management*. It applies to all units assigned under the 3d Wing (3 WG), and all personnel performing or supporting maintenance on aircraft or equipment controlled by the 3 WG. This instruction will apply to the Air Force Reserve Command (AFR), but only when assigned duties are in support of 3 WG aircraft and equipment. This supplement does not apply to Civil Air Patrol. Submit requests for waivers through the chain of command to the publication Office of Primary Responsibility (OPR) for non-tiered compliance items. This supplement cannot be supplemented or further extended. Refer recommended changes and questions about this publication to the OPR using the Department of the Air Force (DAF) Form 847, *Recommendation for Change of Publication*. Route the DAF Form 847 through the appropriate chain of command. Ensure all records generated as a result of processes prescribed in this publication adhere to AFI 33-322, *Records Management and Information Governance Program*, and are disposed in accordance with the Air Force Records Disposition Schedule, which is located in the Air Force Records Information Management System. See **Attachment 1** for a Glossary of References and Supporting Information. The use of the name or mark of any specific manufacturer, commercial product, commodity, or service in this publication does not imply endorsement by the Department of the Air Force. Compliance with attachments is mandatory. This publication requires the collection and or maintenance of information protected by the Privacy Act (PA) of 1974. The authority to collect

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SUMMARY OF CHANGES

This publication has been substantially revised and must be completely reviewed in its entirety. Abbreviations, acronyms, and references used throughout this supplement were updated to correlate with the newly revised DAFI 21-101. The update also provides better alignment, compliance, and integration with DAFI21-101_PACAFSUP.

1.3.4.1. **(Added)** For aircraft and on-aircraft parts or systems, the owning Aircraft Maintenance Squadron (AMXS)/Fighter Generation Squadron (FGS) will be the primary coordinator for all engineering requests. For off-aircraft parts or systems, Maintenance Squadron (MXS) will be the primary coordinator.

1.3.4.1.1. **(Added)** Production will be the technical focal point for all engineering dispositions, will maintain access to the respective factory system, and initiate submit requests in accordance with factory templates. Squadron Supervision must approve all drafts prior to forwarding to Quality Assurance (QA).

1.3.4.1.2. **(Added)** QA will review approved drafts and will mark "Approved" in the respective factory system.

1.3.4.1.3. **(Added)** Production Teams must maintain access to their respective factory request system to retrieve working copies of new approved guidance for engineering dispositions. QA will distribute approved guidance via e-mail distribution to the originating Unit Supervision and Production.

1.13.3. **(Added)** In accordance with AFI 48-127, *Occupational Noise and Hearing Conservation Program*, personnel working in or entering designated "hazardous noise areas" will wear Hearing Protection Devices (HPD) when hazardous noises exist. When noise sources are operating, personnel will wear their HPD in accordance with Bioenvironmental Engineering survey distance and time. An official listing of approved HPD can be obtained from Bioenvironmental.

1.13.3.1. **(Added)** There is significant potential for hazardous noise exposure while on the flight line from aerospace ground equipment, operating aircraft and power tools. Therefore, the flight line is a designated hazardous noise area. The following policy is established to clarify requirements for hearing protection while on the flight line.

1.13.3.1.1. **(Added)** No hearing protection is required when driving on the flight line in a fully enclosed vehicle unless the vehicle has been identified as a hazardous noise producer at the operator's position.

1.13.3.2. **(Added)** When working outside on the flight line and noise sources are operating, approved hearing protection is required in accordance with the equipment's Bioenvironmental Engineering survey. This includes either approved ear plugs, or earmuffs. Hearing protection devices must be approved by Bioenvironmental Engineering. Refer to your work center Bioenvironmental Engineering survey for required Noise Reduction Ratings (NRR).

1.13.3.3. **(Added)** When working within 100 feet of running aircraft or 30 feet of a running Auxiliary Power Unit (APU), dual hearing protection will be worn. Dual hearing protection will be worn for workers who are within 300 feet of an aircraft that is landing or taking off. Dual hearing protection consists of a combination of both plugs and muffs, or plugs and an approved communication headset.

1.13.3.4. **(Added)** When within 30 feet of running aerospace ground equipment that requires dual hearing protection, approved PPE must be worn. Hearing protection devices must be approved by Bioenvironmental Engineering. Refer to your work center Bioenvironmental Engineering survey for required NRR.

1.13.3.5. **(Added)** Questions concerning flightline hearing protection requirements should be directed to Bioenvironmental Engineering.

1.13.3.6. **(Added)** All personnel will wear protective foot coverings (booties) when walking on any external surface of F-22 aircraft. Operational risk management must be used whenever wearing booties may not provide enough traction for the individual to work safely (i.e. wet or frozen surface).

1.15.2.1. **(Added)** Personal electronic/communication devices are authorized on the flightline, munitions areas, hangars, and/or other industrial work areas with the intent to facilitate more effective communication. Use of these devices is prohibited within 10 feet of any aircraft and munitions unless a greater distance (e.g., fuel servicing, weapons loading, etc.) is specified by DAFI 91-208, *Hazards of Electromagnetic Radiation to Ordnance (HERO) Certification and Management.*

1.15.2.1.1. **(Added)** Personnel will also comply with restrictions in TO 00-25-172, *Ground Servicing of Aircraft and Static Grounding/Bonding*; DAFI 31-218, *Motor Vehicle Traffic Supervision*; AFMAN 17-1301 *Computer Security (COMPUSEC)*; JBELMENDORF-RICHARDSONI 31-118, *Motor Vehicle Traffic Supervision Program*; and DAFI 13-213_3WGSUP, *Airfield Driving*, applicable aircraft, equipment TOs; and applicable Advanced Programs Office (APO) directives.

2.4.1.2.1. **(Added)** Each squadron with Radio Frequency (RF) emitting equipment will appoint a Radiation Safety Officer (RSO). The RSO will:

2.4.1.2.1.1. **(Added)** Ensure all personnel working on or with RF-emitting equipment are properly trained in RF safety practice. The training will occur initially, when procedures change, and then annually as refresher training and will be documented.

2.4.1.2.1.2. **(Added)** Act as a point of contact for all RF safety matters and assist in incident investigations.

2.4.2.20.2.1. **(Added)** Reference **Attachment 14**, for Decision Matrix for FCF/OCF requirements.

2.4.3.15.1. Reference **paragraph 11.41**, for “repeat”, “recur”, and “cannot duplicate” (CND) discrepancy procedures.

2.4.3.6.1. **(Added)** The 3rd Wing Avionics Manager (WAM) is appointed as program manager for: ASIP, Identification Friend or Foe (IFF), and SERENE BYTE/PACER WARE. The WAM is the alternate Electronic Warfare Officer (EWO) and chairs the Avionics working group meetings.

2.5.2. **(Added)** Approve all non-maintenance use of aircraft maintenance facilities under their control.

2.10.1.1. **(Added)** The AMU/FGS OIC/Chief/Superintendent will appoint a Wash Rack Facility Manager in writing.

2.12.8.2. **(Added)** Discrepancies with a scheduled start date and time greater than 30 calendar days after the date of discovery will be deferred.

3.11.8. **(Added)** AMU/FGS Wash racks are maintained by AMU/FGS Support Sections.

4.4.3.1.1.1. **(Added)** Utilize the Visual Inspection Worksheet (see Egress shared drive folder MXMCG_Maintenance Forms).

4.4.3.1.1.1. **(Added)** The Egress Section vehicle/transport trailer will be limited to one ejection seat and related explosive components.

4.4.3.1.1.2. **(Added)** Utilize the 36-Month Inspection Package (see Egress shared drive folder MXMCG_Maintenance Forms).

4.4.3.1.1.3. **(Added)** Utilize the Drogue Parachute Worksheet (see Egress shared drive folder MXMCG_Maintenance Forms).

4.4.3.1.5. **(Added)** Utilize the Recovery Parachute and Survival Kit Worksheet (see Egress shared drive folder MXMCG_Maintenance Forms) during recovery parachute or survival kit maintenance.

4.4.3.1.6. **(Added)** Utilize the F-22 Canopy Assembly Worksheet (see Egress shared drive folder MXMCG_Maintenance Forms) during canopy swaps.

4.4.3.1.7. **(Added)** Utilize the Time Change Worksheet (see Egress shared drive folder MXMCG_Maintenance Forms) whenever time changes are accomplished.

4.4.4.2.7. **(Added)** Establish notification procedures to inform the base fire department when open or confined fuel tank maintenance is in progress and when maintenance is complete.

4.5.2.10.1.1. **(Added)** Ensure all equipment to be painted in Aircraft Structural Maintenance Shop will be delivered clean and free of all reflective tape and vinyl.

4.5.5. **(Added)** Identification, Movement, and Maintenance of AGE.

4.5.5.1. **(Added)** Equipment will be assigned to organizations, as authorized by aircraft allowance standards, by color code and field numbers. Color codes will be as follows:

4.5.5.1.1. **(Added)** 732nd Air Mobility Squadron (AMS) – White (with Air Mobility Command emblem).

4.5.5.1.2. **(Added)** 525 FGS – Gold.

4.5.5.1.3. **(Added)** 90 FGS – Red.

4.5.5.1.4. **(Added)** 962 AMU – Green.

4.5.5.1.5. **(Added)** Transient Alert – Orange.

4.5.5.1.6. **(Added)** RED FLAG – Black.

4.5.5.2. **(Added)** AGE movement requests will only be accepted from Production Superintendents, Expediters, Munitions Control, and/or the Maintenance Operations Center (MOC).

4.5.5.2.1. **(Added)** AMU/FGS/Unit Production Superintendents and Expediters are responsible for prioritizing deliveries, movements, and pick up of all AGE and will notify AGE Drivers of priorities, as required. AGE Drivers will deliver and pick up equipment in the order requested, unless otherwise notified.

4.5.5.2.2. **(Added)** AGE Drivers will not borrow equipment assigned to other organizations. The AMU/Unit Production Superintendent is responsible for coordinating all requests to borrow equipment through the owning organization.

4.5.5.2.3. **(Added)** Prior to any AGE pick up:

4.5.5.2.3.1. **(Added)** All equipment will be retracted to stowed position. All hoses, ducts, and cables will be securely stored on or in the equipment, in accordance with design specifications.

4.5.5.2.3.2. **(Added)** All dust and rain caps will be properly installed. All handrails will be installed and secured with pins on all maintenance stands.

4.5.5.2.3.3. **(Added)** All doors and compartments will be closed.

4.5.5.2.3.4. **(Added)** All equipment will be moved outside the 10-foot aircraft circle of safety with tow bar situated for easy access; parking brakes will be engaged, or wheels will be chocked.

4.5.5.3. **(Added)** Organizations requiring temporary use of AGE for other than non-maintenance use will submit justification for their requirements to the 3 MXS Maintenance Officer/Chief Enlisted Manager not later than seven days prior to the date needed.

4.5.5.3.1. **(Added)** When an organization has a temporary request approved, AGE will be issued on a DAF Form 1297, *Temporary Issue Receipt*.

4.5.5.3.2. **(Added)** The using organization is responsible for all fuel/refueling costs while the equipment is in their possession.

4.5.5.3.3. **(Added)** AGE Drivers will perform servicing and a service inspection prior to placement of powered AGE on sub-pools.

4.5.5.3.4. **(Added)** Users will check AGE for serviceability prior to use. Discrepancies will be documented on AFTO Form 244, Industrial/Support Equipment Record, in accordance with T.O. 00-20-1 and Defense Property Accountability System Maintenance and Utilization (DPAS MU) interim system guidance.

4.5.6. **(Added)** Bomb Lift Procedures.

4.5.6.1. **(Added)** Bomb lifts will be signed out on DAF Form 1297 from the appropriate AGE Team to AMU/Unit qualified operators. Operators will perform a “prior to use” inspection before starting the unit and deliver AFTO Form 244 to the AGE representative. The AGE representative will check the AFTO Form 244s while the operator is signing them out on a DAF Form 1297.

4.5.6.2. **(Added)** Bomb lifts will be returned to the AGE facility at 7-day intervals to inspect for serviceability.

4.5.7. **(Added)** Non-powered AGE (NPA) Procedures. Each AMU/Unit will be supplied with hydraulic and oil servicing carts and are responsible for the following:

4.5.7.1. **(Added)** Document discrepancies on the AFTO Form 244. If a discrepancy renders the equipment inoperable/unserviceable, the user will immediately report the discrepancy and field number to the AGE Driver for repair or replacement.

4.5.7.2. **(Added)** Coordinate the delivery of NPA to support training requirements.

4.5.7.3. **(Added)** The using organization is responsible for the contents and monitoring of fuel bowsers.

4.5.7.3.1. **(Added)** Foreign substances such as oil, hydraulic fluids, chemicals, hardware, safety wire, or trash will not be placed in fuel bowsers.

4.5.7.3.2. **(Added)** The using organization is responsible for delivering fuel bowsers to the defueling location and for the disposal of all non-recyclable petroleum products through the Hazardous Waste Facility.

4.5.7.3.3. **(Added)** AMUs/FGSs and Units will dispose of all waste/reclaimable petroleum products and will drain bowser sumps to prevent damage to equipment. Any water removed will be drained and disposed of IAW local environmental procedures.

4.5.7.4. **(Added)** AMUs/FGSs and Units will monitor and maintain LOX, GOX, Sulfur Hexafluoride (SF-6), and Gaseous Nitrogen (GN2) Bottle contents (quantity/pressure levels) and are responsible for LOX cart servicing. Users will ensure the AFTO Form 134, *Aviator Breathing Oxygen Servicing Trailer Log*, is properly annotated and will only deliver carts to Base Cryogenics with properly completed forms.

4.5.7.5. **(Added)** AGE Flight is responsible for transporting LOX, GOX, SF-6, and GN2 Carts to and from the Electrical and Environmental Section and AGE facilities for the purposes of scheduled and unscheduled maintenance and Base Cryogenics for post-maintenance requirements.

4.5.7.6. **(Added)** AGE Flight will monitor and coordinate all LOX, GOX, SF-6, and GN2 Cart scheduled inspections.

4.5.7.7. **(Added)** LOX Carts requiring purge prior to maintenance must contain 15-gallons or less prior to being purged.

4.5.7.8. **(Added)** AGE Flight will coordinate LOX Cart servicing after scheduled maintenance/AGE inspections, if required, at the LOX plant.

4.5.7.9. **(Added)** A forms jacket or tube, with AFTO Form 244 and AFTO Form 134 will be attached to each unit.

4.5.7.10. **(Added)** GOX, SF-6, and/or GN2 bottle requisition, storage, and/or replacement is the responsibility of the user/AMU.

4.5.7.11. **(Added)** The AMU is responsible for maintaining the optimum operating levels in Self-Generating Nitrogen Servicing Cart (SGNSC), High Purity (HP)-SGNSC, and Stored Energy System Servicing Cart (SESSC).

4.5.8. **(Added)** AGE Cold Weather Operations.

4.5.8.1. **(Added)** At temperatures of 20 degrees Fahrenheit or below, maximum effort will be made to store all powered AGE not-in-use inside a facility. Hangar-exclusive equipment (electric hydraulic test stands, generators, air conditioners), will be moved outside of hangars only for purposes of relocating the equipment to another hangar, maintenance facility, or for repair pickup.

4.5.8.2. **(Added)** Care must be exercised to prevent unnecessary damage and wear to diesel-powered support equipment. Diesel engines will be started and warmed up, at low Revolutions per Minute (RPM), for at least 5 minutes before a load is applied. If the unit is required after completion of a job, it should be placed in a “no load” condition with the engine at idle and monitored by the using organization until used for other tasks.

4.5.9. **(Added)** AGE Towing.

4.5.9.1. **(Added)** Tandem towing of AGE is authorized. The heaviest unit must be placed nearest the tow vehicle. Four-wheeled units will not be towed behind two-wheeled units.

4.5.9.2. **(Added)** AGE will not be towed using the center and outside pintle hooks simultaneously.

4.5.9.3. **(Added)** Total weight of all units being towed will not exceed the maximum capacity of the tow vehicle.

4.5.9.4. **(Added)** AGE tow vehicles are permitted to tow four ground heaters in tandem on the outside pintle hooks in the vicinity of the flightline. AGE tow vehicles are permitted to tow four ground heaters in tandem on the center pintle hooks in areas off the flightline. Outside pintle hooks will not be used off the flightline. No more than two ground heaters may be towed on the pintle hook of other vehicles.

5.2.8.1.11.1.1. **(Added)** Responsible for all work center numbers/codes in IMDS in accordance with TO 00-20-2, Maintenance Data Documentation.

5.2.8.1.11.2.1. **(Added)** Will route all requests for work center additions, changes, and/or deletions processing in memorandum format.

5.2.8.1.11.4. **(Added)** Will assign an IMDS mnemonic and work center number/code based on the following format:

5.2.8.1.11.4.1. **(Added)** Work center number/code: in accordance with TO 00-20-2 based on code designations previously established.

5.2.8.1.11.4.2. **(Added)** Work center mnemonic: Based on the branch assigned and previously created work center mnemonics for that organization/branch. Similar naming convention will be used to mirror the previously existing organizational structure

5.2.8.1.11.2.1. **(Added)** Will maintain a current list of unit identifiers, organizations, branches, and work center mnemonics loaded into IMDS for reference when establishing new work centers or changing existing work center, see the 3 MXO Database Management SharePoint for the template.

5.2.8.3.2.1.1. **(Added)** IMDS Subsystem Monitors will be documented on an appointment letter drafted and maintained by the IMDS Database Manager(s). See the MXO Database Management SharePoint for the sample Subsystem Monitor Letter.

5.2.8.3.2.1.2. **(Added)** If an IMDS Subsystem Monitor is replaced, their replacement's information will be sent to the IMDS Database Manager(s) so the associated letter can be updated.

5.2.8.3.4.1.1. **(Added)** For non-possessed aircraft loaded in IMDS which will have maintenance performed by JBER maintenance personnel, the affected AMU/FGS(s) will send the Name/Rank/User ID/Employee Number/Profile ID for all personnel who will require access to said aircraft. This request should be sent to the IMDS Database Manager(s) as early as possible to prevent any work stoppage.

5.2.8.3.4.2.2. **(Added)** IMDS Database Manager(s) will use the information provided by the AMU(s) to build and route an access request letter for the ELC that owns the non-possessed aircraft. This letter will be sent to that ELC's IMDS Database Manager(s) for processing.

5.2.8.3.4.7.1. **(Added)** During any unscheduled MIS downtimes, MMA MIS/Host DBM will notify users immediately upon receiving notification from IMDS FAS and/or IMDS PMO.

5.2.8.3.4.7.2. **(Added)** During any unscheduled MIS downtimes lasting more than three hours, MMA MIS/Host DBM will contact the IMDS FAS to determine source/cause.

5.2.8.3.4.7.3. **(Added)** When MIS downtimes exceed 48 hours, regardless of whether they are scheduled or unscheduled, MMA MIS/Host DBM will notify users that manual/backup procedures need to be implemented. To accomplish this, MIS users should use the following tools:

5.2.8.3.4.7.4. **(Added)** AFTO Form 349s, Maintenance Data Collection Record, pre-printed MIS screen snapshots, or Excel Spreadsheets will be used to document all maintenance in sequential order (based on manual job control sequence numbers, reference MMA SharePoint website). These backup records will be maintained until MIS downtime/outage concludes and documentation can resume successfully in the MIS. At this time, the manual documentation needs to be accomplished in the MIS promptly.

5.2.8.3.4.7.5. **(Added)** Units using documentation systems with capabilities independent of the primary MIS (such as IMIS) may continue to document data in a stand-alone environment. These systems will download/transfer all data into IMDS when connectivity is restored.

5.2.8.3.4.12.3. **(Added)** For a template of an IMDS Transaction Identification Code (TRIC) Authorization letter, see the 3 MXO Database Management SharePoint.

Table 5.1. (Added) 3 MXG Deferred Code Listing.

3 MXG DEFERRED CODE LISTING	
DEFERRED CODE	**NARRATIVE**
AWM	AWAITING MAINTENANCE
AWP	AWAITING PARTS
AAJ	AWAITING ASSOCIATED JOB
AAS	AWAITING ASSOCIATED SHOP REPAIR
ADM	AWAITING DEPOT MAINTENANCE
AFF	AWAITING TANK ENTRY (FUEL CELL)
ALM	AWAITING LOCAL MANUFACTURE
ALO	AWAITING LO REPAIR
AMP	AWAITING PMP
AOA	AIRCRAFT IN COMBAT ALERT CELL
APH	APH/AWAITING PHASE
APM	AWAITING PMEL- AGE
APQ	AWAITING PQDR- AGE
AQA	AWAITING QA EVALUATION
ATC	AWAITING TIME CHANGE ITEM
ATT	AWAITING TCTO COMPLIANCE
AWF	AWAITING FAILURE
XFR	AWAITING TRANSFER EVALUATION

5.2.8.3.6.2.1. **(Added)** Section Chiefs of the appropriate work center will appoint a primary and alternate section DIT monitors in writing to MMA.

5.2.8.3.6.2.2. **(Added)** If a DIT representative is replaced, their replacement's information will be forwarded to the MMA Data Integrity Manager. This should be done as soon as possible to account for program turnover and any required DIT training with MMA Data Integrity Manager.

6.2.11. **(Added)** The QA Superintendent is the authority for the interpretation of TOs and regulations in reference to Technical Data. The QA Superintendent will involve the Unit Chief in the process.

6.6.2.1. **(Added)** QA augmentees require an annual EPE on either a PE or technical inspection.

6.9.5.4. **(Added)** Maintain AFTO Form 22/TODCR master continuity binder for the MXG.

6.9.5.4.1. **(Added)** During validation, all requests must be reviewed to determine if an AFTO Form 22, *Technical Manual (TM) Change Recommendation and Reply*, is necessary. If applicable, the LCL, LJG, LWC, or LPS will be returned to the OPR for initiation of an AFTO Form 22. The OPR will initiate the AFTO Form 22, in accordance with TO 00-5-1. QA Product Improvement Office will provide assistance as necessary.

6.9.5.4.2. **(Added)** Assist in training/On-the-Job Training (OJT) for AFTO Form 22 and TODCRs.

6.9.5.4.3. **(Added)** Provide regular TODCR PIM reports and AFTO Form 22 feedback to originators.

6.10.4.4. **(Added)** MXG TODO will:

6.10.4.4.1. **(Added)** Enter newly published LCL, LJG, LWC, LPS, revisions, and deletions in the weekly flying schedule and distribute to all applicable TODAs.

6.10.4.4.2. **(Added)** Monitor and distribute all local TO publications upon request.

6.10.4.4.3. **(Added)** Keep DAF Forms 673 for approved supplements on file.

6.10.7.3. **(Added)** TODOs/TODAs will maintain continuity Binders and will be formatted in accordance with 3 MXG TODO master continuity binder.

6.10.7.3.1. **(Added)** TODO/TODA Continuity Binders will be formatted with the following tabs:

6.10.7.3.1.1. **(Added)** TAB A. Current TODO/TODA appointment letter, Computer-Based Training (CBT) completion of training for the applicable Basic and Advanced TODO/TODA courses, Approved AFTO Form 43, if using Electronic Tools (eTOOLs) a copy of the current ADPE account listing all eTOOL equipment.

6.10.7.3.1.2. **(Added)** TAB B. Local tracking sheet, TCMAX, or TAS for TO index checks.

6.10.7.3.1.3. **(Added)** TAB C. Current Quarterly ETIMS listing or DD Form 2861, Cross Reference, stating, "ETIMS located on computer."

6.10.7.3.1.4. **(Added)** TAB D. AF Form 3126, General Purpose, used to track requisitions submitted by TODA to TODO.

6.10.7.3.1.5. **(Added)** TAB E. On order TO e-mails and open AFTO Forms 276, Special requisition For Air Force Technical Order (If Applicable).

6.10.7.3.1.6. **(Added)** TAB F. Monthly TO receipt list.

6.10.7.3.1.7. **(Added)** TAB G. Monthly wing distribution list with LCL, LJG, LPS, and LWC.

6.10.7.3.1.8. **(Added)** TAB H. Annual LEP Check schedule with month and year due.

6.10.7.3.1.9. **(Added)** TAB I. Miscellaneous.

6.10.8.2. **(Added)** The 3 MXG eTool admins will serve as focal point for all ETIMS and eTools technical issues. Additionally, the 3 MXG TODO will:

6.10.8.2.1. **(Added)** Assist unit TODAs with technical problems concerning ETIMS accounts.

6.10.8.2.2. **(Added)** Distribute an updated ETIMS listing to TODA accounts quarterly.

6.10.8.2.3. **(Added)** Perform annual inspections on all TODA accounts. Inspections will be graded with a satisfactory or an unsatisfactory rating.

6.10.8.3. **(Added)** Damage such as cracked cases, broken handles or any discrepancy that does not impede computer operation may still be used. All discrepancies will be annotated in the tool accountability system.

6.10.10. **(Added)** Provide each unit TODO/TODA with the PKI certificates required to operate their master tools.

6.10.11. **(Added)** Maintain a copy of all TODA custodian appointment letters and training certificates for the MXG. Appointment letters will include the appointee's security clearances.

6.10.12. **(Added)** Validate all new TO requirements against the applicable TO index prior to submitting them to the responsible TODA.

6.10.13. **(Added)** Squadron TODAs will:

6.10.13.1. **(Added)** Provide weekly and monthly distribution lists and a quarterly TO listing to the 3 MXG TODO.

6.10.13.2. **(Added)** Ensure and track eTools currency in accordance with TO 00-5-1 using the tool accountability system.

6.12.2.2.1. **(Added)** With approval from both the 3 OG/CC and 3 MXG/CC, an FCF certified aircrew from a non-3 WG unit may perform FCFs on 3 WG aircraft.

6.12.3.4.1. **(Added)** Review and stamp all inspected forms on the FCF aircraft.

6.12.3.4.2. **(Added)** Ensure the FCF checklist is kept with the aircraft forms until an FCF aircrew has accepted the aircraft and all applicable checklist items have been accomplished.

6.12.3.4.3. **(Added)** Be responsible for all C-12 FCF, OCF, In-Flight Operational Checks, and High-Speed Taxi Checks.

6.12.4.3. **(Added)** Limited FCF profiles will be coordinated through and approved by the 3 OG/CC and 3 MXG/CC.

6.14.4. **(Added)** 3 OG/CC approval is required to exceed 100 Knots of Calibrated Air Speed (KCAS) during High-Speed Taxi Checks. Departure end cables will be raised for F-22 High Speed Taxi Checks.

6.15.5. **(Added)** AMUs/Squadrons will utilize the Weight and Balance Preparation Checklist (See **Attachment 29**) when performing a W&B.

7.2.1.1.1. **(Added)** See **Attachment 27** for Impoundment Checklist.

7.2.1.2.1. **(Added)** Before assuming any Impoundment Authority or Impoundment Official duties, assigned personnel will attend the locally developed Impoundment Training Course through QA.

7.3.1.2.1. **(Added)** For inadvertent release or explosive mishap, a maintenance officer or experienced 2W1XX Senior Noncommissioned Officer (SNCO) with knowledge of the affected system will be appointed the Impoundment Official.

7.5.7.4.1. **(Added)** Uninstalled engines will be impounded if any of the following incidents occur: fire, augmenter burn through, turbine or compressor damage due to failure of any engine component, or engine gearbox failure.

7.5.12. **(Added)** In the occurrence of a third time repeat/recur of Not Mission Capable (NMC) restricted item.

7.5.13. **(Added)** If the lost tool or equipment was not used on but was in close proximity to an aircraft or uninstalled engine, the impound authority will make the determination to impound the affected aircraft or installed engine based on the potential for Foreign Object Damage (FOD).

7.5.14. **(Added)** An aircraft landing gear fails to extend or retract due to an unknown condition IAW **paragraph 7.5.12**.

7.5.15. **(Added)** The aircraft has been confirmed as being contaminated with chemical, biological, or radiological materials.

7.5.16. **(Added)** An aircraft sustains FO damage from an unknown cause.

7.6.1.1. **(Added)** The 3 WG Form 147, *Quality Assurance Impoundment Record,* and Impoundment Checklist (see **Attachment 27**) will be used and kept with aircraft/equipment forms.

7.6.1.1.1. **(Added-F-22)** The impound checklist will be kept with the impound official or production superintendents.

7.6.8.1. **(Added)** Impoundment Release Authority will clear the forms by entering “Investigation complete, all corrective actions have been reviewed, aircraft or equipment released” referring to original discrepancy in the “corrective action” block.

7.8. (Added) Maintenance Incident Reporting Procedures:

7.8.1. **(Added)** Upon notification of an aircraft/equipment incident, MOC will initiate the appropriate Emergency Action Checklist (EAC) and notify QA.

7.8.2. **(Added)** Incident scene will not be disturbed until appropriate agency is afforded opportunity to photograph.

7.8.3. **(Added)** QA will provide initial incident report slides to MXG leadership.

7.8.4. **(Added)** The owning unit is responsible for providing a completed 3 MXG Investigation Worksheet (available on the QA SharePoint®) to QA within five duty days (e-mail to: **3MXG.MXQ@us.af.mil**). Unit must contact QA to request an extension.

7.8.5. **(Added)** QA will review/e-mail the final incident summary to 3 MXG leadership and 3 WG Safety.

8.2.7.1. **(Added)** Only tools properly marked and accounted for in accordance with this guidance will be used on aircraft, aircraft components, and support equipment. Tools used and transported within the flight line areas but from agencies outside of the 3 MXG will have an identification marking reflecting which agency the tool belongs to.

8.2.7.2. **(Added)** Each unit has been assigned a prefix for the nine-digit TCMax identifier, and each prefix beginning with EL is listed in **Table 8.1** (Fabrication Flight, 517th Airlift Squadron Life Support Section, etc., will be identified by first five characters).

Table 8.1. (Added) 3Aircraft Maintenance Squadron.

525 FGS	EL25
90 FGS	EL90, All suffixes after the prefix 9-
F-22 Alert	ELAA, EA-1 thru -25, E-500 thru -699

Table 8.2. (Added) 703Aircraft Maintenance Squadron.

962 AMU	EL62, (all suffixes)

Table 8.3. (Added) 3Munitions Squadron.

ARMAMENT FLIGHT	ELER
PRODUCTION FLIGHT	
PGM	ELEW0
Trailer Maintenance	ELEW1
Conventional	ELEW2
Line Delivery	ELEW3
MATERIEL FLIGHT	
Inspection	ELEW4
Storage	ELEW5
SYSTEMS FLIGHT	
Training	ELEW6
Mobility	ELEW7

Table 8.4. (Added) 3Maintenance Squadron.

ACCESSORIES FLIGHT	C50 thru 100, CF1 thru 120, CE50 thru 100
Electrical-Environmental	ELCE
Fuel Shop (Fighters)	ELCF
Fuel Shop (Heavies)	ELCFE
Egress	ELCG
Hydraulics	ELCH
Avionics Section	C1 thru 29, AVS 1 thru 10
Avionics (AIS)	ELCVA
Avionics (Lantern)	ELCVS
AGE FLIGHT	ELEA
FABRICATION FLIGHT	
Main	ELEFS
F-22/LO	ELEFL
NDI	ELEFN
North Shop	ELEFH

Metals Tech	ELEFM
MAINTENANCE FLIGHT	
R&R/Wheel & Tire	ELEM
Trans Alert	ELET
Crash and Recovery	ELEP
PROPULSION FLIGHT	ELCP, All Suffixes
Pratt & Whitney	ELPW
TMDE	ELCD, C30 thru 45, CL1 thru 15, CA1 thru 20
Test Cell	ELCT

Table 8.5. (Added) 3Maintenance Operations.

AFREP	ELAF
QA	ELQA
MTF	ELMX, SMAT1 thru 4
WSS	ELWS, ALSC-1 thru ALSC-10

Table 8.6. (Added) Additional.

732 AMS	ELAS
372 TRS/DET 14	ELTD

8.2.8.2. **(Added)** Personnel without employee numbers will mark all individually issued equipment with contact phone number.

8.2.9.4. **(Added)** Squadrons will develop and enforce a method for tracking rags.

8.2.12.1. **(Added)** Depot Field Teams (DFT), aircraft contractors, and factory representatives must have a tool control program in place for all tools and equipment required to accomplish work on aircraft and/or aircraft components. Tool control procedures will be adhered to in accordance with this instruction.

8.2.14.1. **(Added)** Crash Recovery trailers and Metals Technology welding trailers will be maintained, controlled, and inventoried in the same manner as dispatchable CTKs

8.3.1.2. **(Added)** CTK Custodians will maintain a Master CTK Continuity Binder for each area of responsibility. If a tab is not required, identify the section as not required. Sub-located sections will be identified with use of the DD Form 2861, Cross Reference. Each binder will contain the following tabs, at a minimum:

8.3.1.2.1. **(Added)** Tab A. CTK Custodian appointment letter.

8.3.1.2.2. **(Added)** Tab B. Copy of **Chapter 8**, *Tool and Equipment Management*, this instruction.

8.3.1.2.3. **(Added)** Tab C. Master Tool Room Master Inventory Lists (MIL).

8.3.1.2.4. **(Added)** Tab D. Completed 3 WG Form 145, *Lost Tool/Object Report*. Completed forms will be maintained for 1-year for the applicable CTK/equipment items.

8.3.1.2.5. **(Added)** Tab E. Annual Tool Inspection Log.

8.3.1.2.6. **(Added)** Tab F. Locally manufactured tools and/or equipment authorization letters.

8.3.1.2.7. **(Added)** Tab G. Spare Tool Inventory List.

8.3.1.2.8. **(Added)** Tab H. List of explosion-proof lights by CTK number, type of light, and inspection due dates.

8.3.1.2.9. **(Added)** Tab I. 3 WG Form 146, *Missing/Removed Tool Log*, for Precision Measurement Equipment Laboratory (PMEL) items removed and broken and/or damaged/serviceable tools.

8.3.3.1. **(Added)** For safety purposes, clearly mark all flightline dispatchable CTKs with reflective tape. The reflective tape will be applied on all corners and visible from all angles.

8.3.3.2. **(Added)** All dispatchable CTKs will have a FOD bag inside or attached to the CTK. FOD will be put in FOD bag during maintenance and removed from FOD bag prior to turning into CTK Support Section.

8.3.6.6.1.1. **(Added)** All containers and pouches used for small items will list each item, including the container, on the CTK MIL. Each container will be marked “Pieces + Container = Total” (example: 16 pieces + case = 17).

8.3.6.6.1.2. **(Added)** The following items have been approved by QA as too small to be marked, etched, or stamped: Apex bits, drill bits, jeweler’s files, and hex wrenches with ¼” size drive diameter or smaller.

8.3.6.6.1.3. **(Added)** Identification markings are not required where the etching, stamp, or marking will damage the tool (i.e. UT Transducers, delay-line attachments, wedges, ET bolt-hole probes, etc.).

8.3.6.6.1.4. **(Added)** Requests for approval to omit etchings, stamps, or markings on all other items will be routed by email to the QA Superintendent. The written approval will be maintained in physical or electronic format in the CTK program binder.

8.3.6.7.1.1.1. **(Added)** An added 3WG Form 146 is required for each dispatchable CTK.

8.3.6.7.1.3. **(Added)** AFTO Form 244, Industrial/Support Equipment Record, or other MIS will be used to document broken/damaged/removed items for all Test Equipment (TE) and Support Equipment (SE) requiring an AFTO Form 244. MIS will match the TE and SE AFTO Form 244 documentation. For Red X conditions, the AFTO Form 244 will be attached to equipment.

8.3.13. **(Added)** CTK Custodians will maintain a listing of all applicable warranted tool manufacturers.

8.3.13.1. All broken/removed tools will be assessed for warranty before disposal. All unserviceable warranted tools will be stored separately from unserviceable non-warranted tools and the CTK Custodians will inventory both.

8.3.13.2. Units will develop methods for tracking unserviceable warranted/non warranted tools dispositions (replaced, repaired, awaiting replacement, or disposed).

8.3.13.3. Tools that have expired warranties may be disposed of in accordance with standard procedures. All non-warranty tools will be de-etched prior to disposal.

8.3.14. **(Added)** CTKs will not be placed on any aircraft exterior surface without a protective barrier (example: rubber mat).

8.5.4.5. **(Added)** On-site turnover of CTKs will be approved by FGS/AMU/Unit Production Superintendent prior to execution. On-site turnover of CTKs will be performed by the receiving and losing technician.

8.5.4.5.1. Each will perform a joint inventory at the job site and sign a printout of TCMax or an AF Form 1297, along with their employee number. The joint inventory will be signed off/approved by the AMU Production Superintendent or MXS/MUNS Production Superintendent (for off-equipment work only).

8.5.4.5.2. The losing technician will deliver the print out of TCMax or AF Form 1297 to the Support Section prior to being released from shift.

8.5.4.5.3. On-site turnovers will not extend beyond two shifts without approval of the Squadron Operations Officer or Superintendent. **Exception:** For TMDE, when calibration of the hush house is accomplished, a complete inventory of the CTK will be performed at each shift change and validated by the MXS Production Superintendent until calibration is complete.

8.5.5.9. **(Added)** eTools Information Technology Equipment Custodian (ITEC) account custodians will:

8.5.5.9.1. **(Added)** Work with appropriate agencies to resolve technical issues such as syncing problems or software issues.

8.5.5.9.2. **(Added)** Work with appropriate agencies to resolve hardware issues such as cracked screens, malfunctioning hard drives, or malfunctioning network cards.

8.5.5.9.3. **(Added)** Remove unserviceable eTools from service until the cause for unserviceability is repaired. eTools custodians will notify the applicable TODO when an eTools is removed from service.

8.5.5.10. **(Added)** 3 MXG eTools cabinets will be as follows:

8.5.5.10.1. **(Added)** All cabinets will have the computer's Electronic Identification Designator (EID) displayed on the front of each drawer. The computer name will also be displayed on the front of each drawer.

8.5.5.10.2. **(Added)** All cabinets will have a quick reference indicator (e.g. red/green slider) on the drawers to easily identify serviceable/unserviceable eTools.

8.7.2.1. **(Added)** Locally manufactured or modified equipment will be identified, maintained, and controlled by the user. The owning function/organization is responsible for maintenance of the equipment and is responsible for obtaining inspection criteria requirements.

8.7.4. **(Added)** Organizations requesting a locally manufactured tool or piece of equipment will:

8.7.4.1. **(Added)** Coordinate with the fabricating work center to ensure the item can be manufactured. All requests for locally manufactured aircraft parts will be routed through supply.

8.7.4.2. **(Added)** Create and schedule a job in IMDS for the fabricating work center.

8.7.4.3. **(Added)** Provide all necessary drawings, specifications, materials, and bits/pieces required by the fabricating work center. Operating/Shop Stock or work order residue may be used.

8.7.4.4. **(Added)** Unless pre-coordinated with the fabricating work center, the requesting agency will maintain all local manufacture paperwork and store all materials until all required items have been received.

8.7.4.5. **(Added)** Provide a properly completed AFTO Form 350, *Reparable Item Processing Tag*, to the fabricating work center.

8.7.4.6. **(Added)** Order all required materials. The fabricating work center may assist in researching proper materials. NOTE: Local manufacture requirements generated within the 3 MXS are exempt from processing through base supply provided they are required to satisfy an internal maintenance requirement.

8.7.4.7. **(Added)** Ensure all locally manufactured equipment used for lifting purposes (load bearing) are load tested and NDI inspected annually.

8.8.1.1.1. **(Added)** The Support Section Chief via an appointment letter will assign personnel access to tool rooms.

8.9.2.7. **(Added)** If the tool/item is found at a later date, an edited copy of the original 3 WGForm 145 will be sent to QA and the 3 WG FOD Manager. The 3 WG FOD Manager will maintain a copy of the report for one year.

8.9.3. **(Added)** Any lost individually issued equipment (that is, ear defenders, reflective belts, and so forth) must be reported in accordance with lost tool procedures.

8.9.4. **(Added)** MOC will maintain the lost tool control log and issue control numbers. The log will consist of name of individual who lost the tool/item, unit assigned, equipment/aircraft serial number, CTK number, nomenclature of the lost tool/item, date and time item was lost, specific shop area/flight line (aircraft location). If applicable, the impoundment authority/official name, rank, and telephone number.

8.9.5. **(Added)** The procedures in **Table 8.9** will be followed for lost tools/items involving an aircraft/equipment.

Table 8.9. (Added) Lost Tool/Item Involving Aircraft/Equipment.

Item Found	Red X for lost tool/item AFTO Form 781A "Inspected" by:	Maintenance Supervision review/sign 3 WG Form 145	QA Review/Sign	3 WG Form 145 (Block #8) Signature
No	Maintenance Supervision	Block #5	Block #7	MXG/CC, MXG/CD
Yes	Impound Official (If Impounded) Qualified 7-Level (If Not Impounded)	Block #8	Block #7	Maintenance Supervision

8.9.6. **(Added)** The procedures in **Table 8.10** will be followed for lost tools/items not involving aircraft/equipment.

Table 8.10. (Added) Lost Tool/Item Not Involving an Aircraft/Equipment.

Item Found	Maintenance Supervision review/sign 3 WG Form 145	QA Review/Sign	3 WG Form 145 (Block #8) Signature
No	Block #5	Block #7	MXG/CC, MXG/CD
Yes	Block #8	Block #7	Maintenance Supervision

9.17.2.2. **(Added)** QA Superintendent is the approval authority for the MXG.

9.17.2.2.1. **(Added)** Customers requesting a local manufacture will:

9.17.2.2.2. **(Added)** Coordinate with the fabricating work center section chief to ensure the item(s) can be manufactured. All local manufacture requests for aircraft parts will be routed through supply.

9.17.2.2.3. **(Added)** Coordinate all locally manufactured, developed, or modified tools and equipment used on aerospace equipment for approval through the 3 MXG/CC or designated representative.

9.17.2.2.4. **(Added)** Create and schedule a job in IMDS for the fabricating section.

9.17.2.2.5. **(Added)** Provide all drawings, specifications, materials, and bits/pieces required by the fabricating section. Operating/shop stock or work order residue, on hand at the fabricating section, may be used for the local manufacture, provided sufficient material is on hand.

9.17.2.2.6. **(Added)** Requestors will hold all local manufacture paperwork and store all materials received (unless prior arrangements have been agreed upon) until all required items have been received.

9.17.2.2.7. **(Added)** Provide a maintenance snapshot and a properly filled out AFTO Form 350 to the manufacturing section.

9.17.2.6. **(Added)** Fabricating sections will:

9.17.2.6.1. **(Added)** Assist customers in researching materials necessary for requested items, however, the requestor will order all required materials.

9.17.2.6.2. **(Added)** Fabricate requests in a timely manner based on mission needs.

11.6.5.2. **(Added)** In the event MIS is inoperative during Red Ball maintenance actions, the Production Superintendent or Flightline Expediter will:

11.6.5.2.1. **(Added)** Notify MOC of the Red Ball maintenance discrepancy. The individual notifying MOC of the Red Ball will obtain a valid manual job control number.

11.8.3.22. **(Added)** Aircraft Engine Run Trim Pad Worksheet. Worksheet is located on QA SharePoint®.

11.10.1.1. **(Added)** The Wing Avionics Manager (WAM) will serve as the ASIP project officer. The WAM will:

11.10.1.1.1. **(Added)** Coordinate between all applicable agencies responsible for maintaining ASIP equipment to ensure equipment is repaired and reinstalled in aircraft as soon as possible.

11.10.1.1.2. **(Added)** Review all ASIP correspondence and distribute information to aircraft maintenance units.

11.10.1.2. **(Added)** The F-22 Specialist Flight Chiefs will designate a primary and alternate ASIP monitor and provide the appointment letter to the WAM.

11.10.1.3. **(Added)** The E-3 Support Section Flight Chief will designate a primary and alternate Debrief Section ASIP monitor and provide the appointment letter to the WAM.

11.10.4. **(Added)** During deployments and/or off-station sorties, the ASIP Monitor will ensure forms are collected for each sortie and either mailed to home station or hand-carried to home station and turned over to the ASIP Monitor for processing.

11.10.4.1. **(Added)** The ASIP Monitor will maintain a log showing the date the forms were transmitted, date range of sorties reported, and number of forms submitted.

11.10.5. **(Added)** All ASIP Monitors will ensure forms have been collected for each flight flown for the month and transmitted to the MDS-specific ASIP Manager.

11.11.1.2. **(Added)** The WAM will function as the IFF Program Manager.

11.11.1.3. **(Added)** All testing data and results will be maintained for a minimum of 1 year.

11.12.1.2. **(Added)** Joint Base Elmendorf-Richardson MDS meets this requirement.

11.17.4.6. **(Added-F-22)** Certified on Inlet/Intake/Exhaust Inspections.

11.17.10.8. **(Added)** Engine run-qualified personnel will be required to take an emergency procedures test semi-annually. The emergency procedures due date is tracked using the appropriate MIS for all airframes assigned to JBER.

11.18.5. **(Added)** Blended blades will be marked using layout dye to permanently identify damaged areas. FOD that is determined to be serviceable without blending will also be marked with layout dye.

11.20.5.6.5.1. **(Added)** An augmented FCC crew is a minimum of two FCCs (an FCC and assistant FCC).

11.20.5.6.5.2. **(Added)** When the aircraft is tasked with a mission that requires augmented aircrew, squadron commanders will consider assigning an augmented FCC crew or an additional MEP.

11.20.6.2.11. **(Added)** Chaff/flare qualified, if applicable.

11.20.6.2.12. **(Added)** Thrust reverse deactivation, if applicable.

11.20.6.3.2.6.1. **(Added)** Includes auto and manual modes of operation for cargo doors.

11.20.6.3.2.8. **(Added)** Chaff/flare qualified, if applicable.

11.20.6.3.2.9. **(Added)** Thrust reverse deactivation, if applicable.

11.20.6.4. **(Added)** FCC and Assistant FCC responsibilities and training. The FCC/Assistant FCC will:

11.20.6.4.1. **(Added)** Ensure a Dash 6 preflight; thru flight or preflight/basic post-flight inspection is completed before crew show, as applicable.

11.20.6.4.2. **(Added)** Maintain aircraft forms in accordance with TO 00-20-1.

11.20.6.4.2.1. **(Added)** Transcribe forms when necessary.

11.20.6.4.2.2. **(Added)** Transcribed forms will remain with the aircraft until they can be turned in to the home station PS&D or Debrief if option to keep pulled forms in Debrief is being utilized.

11.20.6.4.3. **(Added)** Accompany their aircraft for the entire mission, unless specific guidance is received from the 618th Air Operations Command Global Aviation Data Management (618 AOC/GADM), responsible C2 element, or the unit commander.

11.20.6.4.4. **(Added)** Coordinate travel and provide the appropriate flying squadron current operations office with FCC information to be listed on the aircrew flight authorization if applicable. **Note:** Annotating FCCs on the flight authorization allows the aircraft commander to secure billeting for them.

11.20.6.4.4.1. **(Added)** If the FCC assigned aircraft has a crew change, the FCC will need to obtain billeting using normal TDY orders (DD Form 1610).

11.20.6.4.5. **(Added)** Provide DD Form 1610 travel orders to the AC or appropriate AMC command and control agency to facilitate billeting, clearances, etc.

11.20.6.4.6. **(Added)** For aircraft executing 618 AOC tasked missions, the FCC(s) will coordinate with AMC En Route maintenance for logistics C2 support. At locations without AMC En Route maintenance, FCC will coordinate with transient alert and 618 AOC/GADM. See Air Mobility Command Instruction (AMCI) 21-108, *Logistics Support Operations*, for additional guidance.

11.25.1.1.2.2. **(Added)** The QA Superintendent will designate the Hot Refueling Program Managers in writing.

11.25.3.2. **(Added)** Hot Pit refueling will be performed in accordance with LCL-3WG/TOD F702727144.

11.25.11.3.1. **(Added)** Phase 3 is the responsibility of each FGS. After Phase 1 and 2 are complete, initial certification will be performed by a squadron certifier and require the completion of two hot refuels, with the first one as an over-the-shoulder hands-on and the second with no assistance. Only one individual will be initially certified by a certifier at a time.

11.25.11.5.1. **(Added)** Squadron certifiers must be Hot Pit qualified for a minimum of 180-days prior to being qualified as a certifier.

11.25.12.3. **(Added)** The Hot Pit Certifier will complete an AF Form 2426, *Training Request and Completion*, and provide it to QA and the Squadron Unit Training Manager (UTM).

11.25.12.3.1. **(Added)** Squadron UTMs will update MIS. Squadron UTMs will enter the start date and journal entry indicating Phase I and Phase II training were completed.

11.25.12.3.2. **(Added)** Phase III will be signed off by the Certifying Official. The Certifying Official will annotate the "Completion Date" and initial the Trainer Block. This procedure does not include initial certifications.

11.28.3. **(Added)** Aircraft barrier engagement recovery procedures see 3 WGI 21-101, *Crashed, Damaged, or Disabled Aircraft Recover (CDDAR)*.

11.38.3.6. **(Added)** E-3s will use the AFTO Form 781 and F-22s will use the IMIS Aircraft Status Board to track total oil serviced.

11.38.3.7. **(Added)** F-22 FGSs will submit weekly oil samples to the Oil Analysis Program lab for all assigned oil carts. (N/A for other AMUs)

11.38.3.7.1. **(Added)** Sampled carts will be delivered to the OAP lab no later than 1600 the first duty day of each week. A DD Form 2026, *Oil Analysis Request*, will accompany every oil cart sample submitted to the lab. The AFTO Form 244 will have the date oil samples are taken and when sampling is due documented on the form.

11.38.3.7.2. **(Added)** Oil carts whose samples are not received by OAP lab by the prescribed time will be placed on a code "P – Do not use, submit sample."

11.38.3.7.3. **(Added)** AGE Flight will submit an oil sample to the OAP lab for all oil carts they service before releasing the carts.

11.38.3.7.4. **(Added)** Aircraft oils in bulk containers (55-gallon drums or other) that are to be transferred to oil carts to service aircraft engines will be sampled at initial opening. Contents of bulk containers will not be placed into servicing carts until sample results are received.

11.38.3.7.5. **(Added)** NDI will maintain an OAP Sample Receipt Log which includes the following information: aircraft tail number, time sample taken, time sample delivered, time MOC was notified of OAP status, and name of the individual notified.

11.38.3.7.6. **(Added)** Aircraft engine shutdown time will be entered in the "Local Time Taken" block on the DD Form 2026 in format – Engine shutdown/Sample taken.

11.42. (Added) Repeat/Recur and Can Not Duplicate (CND) Discrepancy Procedures.

11.42.1. **(Added)** The FGS/AMU Debrief Section will document Repeat/Recur conditions in MIS and on the AFTO Form 781A/IMIS Electronic Forms. Manual forms will be clearly marked in bold red print or stamp to indicate Repeat/Recur discrepancies. IMIS Electronic Forms will indicate Repeat/Recur in the discrepancy block.

11.42.1.1. **(Added)** Repeat/Recur 1: if the discrepancy is a red diagonal, the technician who performed corrective action will sign the "Corrected By" block. For all "Repeat 1" discrepancies, a 7-level technician or higher must sign the "Inspected By" block.

11.42.1.2. **(Added)** Repeat/Recur 2: if the discrepancy is a red diagonal, the technician who performed the maintenance will sign the "Corrected By" block. For all "Repeat 2" discrepancies, a MSgt or higher must sign the "Inspected By" block.

11.42.1.3. **(Added)** Repeat/Recur 3: if the discrepancy is a red diagonal, the technician who performed the maintenance will sign the "Corrected By" block. For all "Repeat 3" discrepancies, the FGS/AMU OIC/Chief/Superintendent must sign the "Inspected By" block.

11.42.1.4. **(Added)** CND discrepancies will be cleared by entering "CND Malfunction" in the Corrective Action block. All maintenance actions taken will be listed, including TO references. The individual performing or assisting in the malfunction diagnosis or maintenance will sign the "Corrected By" block. The individual signing the "Inspected By" block must be a 7-level technician or higher.

11.43. (Added) Aircraft Servicing Documentation.

11.43.1. **(Added)** AGE Flight will develop a local tracking sheet for servicing carts that will include, at a minimum; aircraft tail number, component serviced, date/time, and employee number (this tracking sheet will stay with the servicing cart). Maintenance personnel will document the tracking sheet after using the servicing cart. AGE Flight will maintain the tracking sheets for 90-days.

11.43.2. **(Added)** Each time servicing carts (hydraulic, Polyalphaolefin (PAO), oil, Liquid Oxygen (LOX), Gaseous Oxygen (GOX), air, coolant, and nitrogen) are used for servicing, the cart number will be documented in the Corrective Action block or by INFO NOTE.

11.44. (Added) Hangar Doors Program.

11.44.1. **(Added)** Units must ensure continued operation of hangar doors. Building custodians will perform and document operational checkout of hangar doors and safety features in accordance with DAFMAN 91-203, *Air Force Occupational Safety, Fire, and Health Standards*. Notify 773d Civil Engineer Squadron Customer Service (CES/CEOCSU) (Comm 907-552-3727) for any problems that occur with the operation of the hangar doors or parts needing repair and/or replacement.

11.44.2. **(Added)** Maintenance Training Flight, in conjunction with Building Custodians will provide initial Hangar Door training. This training must include the following subjects: door hazards, emergency procedures, hangar door operations, and cold weather hangar door operating instructions. Additional topics may be added based upon unique door characteristics. Hangar Door Awareness Training for aircraft maintenance personnel will be documented in conjunction with Maintenance Orientation and Maintenance Annual Refresher.

11.44.3. **(Added)** Building Custodians will maintain initial hands-on hangar door training for each type of aircraft hangar door within their assigned facilities. As an annual requirement, personnel will receive this training covering the same subjects addressed in the initial MTF training and for the applicable facility. Training completion will be tracked by the facility managers.

11.44.4. **(Added)** Cold Weather Hangar Door Procedures. These procedures apply to all 3 MXG-owned hangars/shelters equipped with exposed piping and is designed to prevent freezing of pipes and inadvertent activation of Fire Suppression Foam Systems. Due to heating times of hangar/shelter bays, appropriate measures should be taken to ensure doors are not open longer than specified/required.

11.44.4.1. **(Added)** At 32 degrees to 0 degrees ambient air temperature, the on-duty Production Superintendent will ensure hangar door usage is limited to mission essential operations. Main hangar doors should not be open for longer than the time required to safely tow the aircraft/equipment into/out of the hangar. The hangar door open period should not exceed 45-minutes and will be followed by a 30-minute rewarming period. The door open and rewarming period is the same for individual aircraft shelters.

11.44.4.2. **(Added)** At 0 degrees ambient air temperature and below, the on-duty Production Superintendent will ensure hangar door usage is limited to only mission essential operations. Main hangar doors should not be open for longer than the time required to safely tow the aircraft/equipment into/out of the hangar.

11.44.4.2.1. The hangar door open period for Hangars 1, 2, 3, 5, 15, 16, 19, 22, 25, Hush House 1 and 2, Building 8549, Building 8691, and Warm Storage should not exceed 15-minutes and will be followed by a 45-minute rewarming period.

11.44.4.2.2. The hangar door open period for Hangars 8, 14, 20, 21 and Shelters 17, 23, 24, and 26 should not exceed 40-minutes and will be followed by a 60-minute rewarming period.

11.44.4.3. **(Added)** FGS/AMU Production Superintendents will coordinate with Maintenance Squadron Production Superintendents before opening Hangar 2 doors during Cold Weather Operations.

11.44.4.4. **(Added)** FGS/AMU's will post a physical copy of the General Hangar Door Operation Checklist (**Attachment 18**) at every hangar door control panel within the respective facilities.

11.45. (Added) Aircraft Hangaring/Aircraft Towing Procedures.

11.45.1. **(Added)** For general hangar door operations see **Attachment 20**.

11.45.2. **(Added)** For aircraft hangar checklists see Attachments **18 and 19**.

11.45.3. **(Added)** The Tow Supervisor will complete and sign an Aircraft Hangar Checklist immediately upon completion of aircraft hangaring operations. The F-22 checklist will be displayed in clear view on or near the nose landing gear. The E-3 checklist will be displayed in the aircraft forms in front of the AFTO Forms 781A/or designated location. The Tow Supervisor will ensure the area is clean upon removal of aircraft.

11.45.4. **(Added)** For Hangar 17 & Hangar 23's Auxiliary Power Unit (APU) hood exhaust checklist, see **Attachment 21, Attachment 23**, this supplement.

11.45.5. **(Added)** For Hangar 24 and Hangar 26 Auxiliary Power Unit (APU) exhaust checklist, see **Attachment 22**, this supplement.

11.45.6. **(Added)** For Hangar 27 (WLT) Auxiliary Power Unit (APU) exhaust checklist, see **Attachment 24**, this supplement.

11.46. (Added) Aircraft Wash Rack Procedures.

11.46.1. **(Added)** When outside temperatures are below 33 degrees Fahrenheit, aircraft which have been parked outside will be positioned on the wash rack at least 4-hours prior to the scheduled wash time in order to allow temperature stabilization.

11.46.2. **(Added)** The Wash Rack Facility Manager will provide and store an authorized and approved Qualified Product List of materials needed for cleaning aircraft listed in TO 1-1-691.

11.46.3. **(Added)** The Wash Rack Supervisor will:

11.46.3.1. **(Added)** Supervise operation of the wash rack, training of wash personnel, and ensuring a safety briefing is completed prior to initiating an aircraft wash.

11.46.3.2. **(Added)** Clean the wash rack and equipment after each aircraft wash and inventory and properly store all wash rack equipment.

11.46.3.3. **(Added)** Ensure a qualified 7-level or higher completes an after-wash inspection. The wash supervisor or representative will notify the Production Superintendent and MOC of wash completion. MOC will notify QA and Corrosion Control (if required).

11.46.3.4. **(Added)** Ensure the aircraft is dry prior to towing aircraft from the wash rack. The AMU OIC/Chief/Superintendent can waive this requirement but must take appropriate action to dry aircraft brakes prior to towing aircraft to another hangar. Aircraft will not remain outside until completely dry.

11.47. (Added) Vehicles and Support Equipment.

11.47.1. **(Added)** Additional equipment for vehicles, to include but not limited to chocks, FOD containers, ice scraper, extension cord, and any other vehicle related items, will be marked with the vehicle number or the Equipment Identification Designator (EID) and annotated on the vehicle inspection form.

11.47.2. **(Added)** FO picker will be annotated on the vehicle's inspection form. **Exception:** Special purpose vehicles with space between tread exceeding one and a half inches are exempt from the requirement of being equipped with an FO picker but are still required to stop and complete a vehicle inspection prior to entering the airfield.

11.47.3. **(Added)** To prevent FOD hazard to aircraft, fire extinguishers that are carried on vehicles and equipment which operate on the flight line will have the safety pull-pin attached to the extinguisher by lanyard.

11.47.4. **(Added)** All pintle hooks will have a safety or cotter pin installed whether open or closed, and pin will be secured to vehicle or support equipment by a lanyard.

11.47.5. **(Added)** When parking a vehicle in a hangar, **under no circumstances** will vehicles be left running when parked in hangars. The vehicle will be pointed toward the exit, with brakes set or wheels chocked, and keys left in the ignition.

11.48. (Added) Prior to any towing operation, the vehicle operator will:

11.48.1. **(Added)** Complete a walk-around inspection of the equipment to ensure cables, ducts, doors, panels, and hardware are properly stored, and release the brakes. Ensure equipment is properly disconnected from the aircraft. Check for foreign objects and visible signs of fluid leaks, misuse, or abuse.

11.48.2. **(Added)** Ensure tow vehicle and AGE equipment pintle hooks are properly closed and safety/cotter pins are installed and retained by friction. Prior to towing, it is critical that operators check the lock on the pintle hook by raising the tow bar sharply upward, ensuring that the pintle hook does not open.

11.48.3. **(Added)** Document all equipment discrepancies on the AFTO Form 244. **Note:** AGE will not be moved or picked up until above items are completed.

11.48.4. **(Added)** A Supervisory Review of AFTO Form 244 will be accomplished by an NCO or Civilian Equivalent after any scheduled and/or unscheduled maintenance. A supervisor review will consist of reviewing equipment forms and MIS for accuracy IAW TO 00-20-1 and documenting Part IV of the 244.

11.49. (Added) Aircraft Deicing.

11.49.1. **(Added)** Deicing season is mid-October through mid-April. Deicing operations during this time frame are supported by AGE Flight.

11.49.1.1. **(Added)** AGE Flight does not provide personnel support for deicing outside the timeframe identified in **paragraph 11.48.1** Organizations will perform their own deicing during this period. AGE Flight will continue to maintain deicer trucks during this period; however, organizations are required to perform basic servicing of assigned trucks during this period.

11.49.2. **(Added)** AGE Flight will provide a Deicer Truck Driver for 24-hour support, beginning 0001 on Mondays and concluding at 2400 on Fridays. All other personnel required for deicing (spotters and operators) are the responsibility of the requesting organization. AGE Flight will not provide truck drivers on weekends, holidays, or down days, unless directed by the 3 MXG/CC or 3 MXG/CD. The requesting organization (e.g. AMU or Transient Alert) is responsible for providing the truck driver during these times. AGE Flight will ensure the requesting organization is provided with a fully serviced deicer truck(s) for all weekends, holidays, or down days. Requesting organizations are also responsible for providing deicer truck drivers anytime workload demands exceed AGE Flight personnel availability.

11.49.3. **(Added)** The 732 AMS will receive the same support as 3 WG organizations during the deicing season, with the following exceptions: AGE will ensure the 732 AMS is provided with a serviced deicer truck(s) for all weekends, holidays, and down days. Truck(s) will be positioned in Hangar 14 with vehicle keys and AF Form 1800 inside the vehicle. AGE will ensure the window placard reflects the deice fluid mixture and Lowest Outside Air Temperature Capability (LOAT). AGE will also ensure personnel are available and/or on-call to service deicing fluid upon request.

11.49.3.1. **(Added)** AGE Flight personnel will perform the daily use inspection Monday- Friday. The 732 AMS will accomplish daily use inspections during weekends, holidays, and down days. 732 AMS will also ensure vehicles are refueled after use.

11.49.3.2. **(Added)** Should 732 AMS require support during weekends, holidays, or down days, they will coordinate a Federal Civil Service employee overtime request with the 3 MXS Maintenance Officer or Chief Enlisted Manager prior to any employee performing overtime support. All overtime requests will be paid by the 732 AMS.

11.49.3.3. **(Added)** The 732 AMS will store deicer trucks inside a heated facility to prevent cold-soaking and to maximize deicing fluid heater operations.

11.49.3.4. **(Added)** The 732 AMS MOC will coordinate with 3 MXG MOC to establish mission priority. 732 AMS MOC will provide the 3 MXG MOC and the 3 MXS Deice Section with a daily flying schedule and any other additional deicing requirements that are not reflected on the daily flying schedule.

11.49.4. **(Added)** Deicing Procedures:

11.49.4.1. **(Added)** The Deicing Supervisor will brief deice procedures, safety, and route of travel to the vehicle driver, basket operator, and spotter(s) before initiating deicing operations.

11.49.4.2. **(Added)** Regardless of the direction of vehicle travel deicer drivers will remain in constant communication with the deicing basket operator. The vehicle operator will not reposition the deicer truck unless the truck movement is continuously monitored and directed by deicing basket operator or the ground spotter (chock walker) using headsets, radio, and hand signals.

11.49.4.3. **(Added)** All units conducting deicing operations must track the deicer vehicle registration number, aircraft tail number, and fluid usage anytime AGE Flight does not provide the deicer truck driver. This information will be relayed to AGE Flight for maintenance and fluid tracking.

11.50. (Added) Winter Operations. All winter operation procedures will be followed from 15 October to 15 April or when the temperature meets the procedure criteria.

11.50.1. **(Added)** All temperatures referred to are ambient unless otherwise specified.

11.50.1.1. If temperature falls below negative (-)20°F, the buddy system will be implemented for all personnel performing duty outside and the Squadron Maintenance Supervision must approve all outside activity. This does not include personnel working inside a heated C-17 or E- 3 aircraft or vehicle. Alert aircraft and aircraft requiring maintenance have priority on hanger space.

11.50.1.2. If temperature falls below -35°F, all outside activity must be approved by the Maintenance Group Commander or designated representative.

11.50.2. **(Added)** All training activity cancellations will be decided through the Maintenance Operations Officer-in-Charge (OIC).

11.50.2.1. At -40°F, the Maintenance Operations OIC will cancel all outdoor Aircraft Maintenance Qualification Program courses (AMQP) and all outdoor field training detachment (FTD) courses.

11.50.2.2. At -50°F, the Maintenance Operations OIC will cancel all indoor training, all indoor AMQP courses and all indoor FTD courses.

11.50.3. **(Added)** Engine and shelter heaters will be placed as far away as ducting will permit. Operators must ensure burners are turned **off** and the outlet air temperature gauge reads "OFF" before shutting the engine down. If personnel do not wait until the digital temperature gauge reads "OFF", potential damage to the unit may occur. Heater units with engines running will be monitored for safe and proper operation. Report any abnormal heater operation to the respective AGE Team driver immediately. (Reference DAFMAN 91-203, Paragraph 24.14.9, and Ground Heater T.O. 35E7-2-11-21, **Paragraph 4.5.3**)

11.50.4. **(Added)** Vehicles may be left running to protect the battery from freezing.

11.50.5. **(Added)** Vehicles equipped with chains during winter conditions must be checked before and after each operation to ensure serviceability. When a broken chain is discovered that vehicle will not be operated on the airfield until that chain is replaced or repaired. If links are missing, a search will be initiated to retrieve them. If they are not found, a magnetic sweeper will be requested through Airfield Management. (Reference DAFI 13-213_3WGSUP, Paragraphs 4.24.1, 4.24.1.1, and 4.24.1.2.)

11.50.6. **(Added)** Any vehicle equipped with a snowplow will ensure the plow is stored in the full down position when parked. (Reference applicable owner's manual.)

11.50.7. **(Added)** During winter conditions, snow and ice accumulation will be removed from vehicles before they are operated on the airfield. (Reference DAFI 13-213_3WGSUP, Paragraph 4.13.5.)

14.1.4.5.1. **(Added)** Manning permitting; QA Augmentee (min 7-Level) will be provided from PS&D or MMA.

14.1.6.6.1. **(Added)** FGS/AMU PS&D AVDO will initiate required AFTO Form 103s, route through AMU for OIC or equivalent signature, and then forward it to the Maintenance Operations Officer (MOO) PS&D AVDO for review and coordination with PDM IAW T.O. 00-25-4.

14.2.2.4.1.1. **(Added)** The most current Annual Jacket File checklist will be located in the Aircraft Jacket File.

14.2.4.2. A Pre/Post Dock meeting is required for Signature Assessment System (SAS) Annual Audit, REDUX, PMP, CFT, and DFT events. Host meetings and notify the appropriate Operations Officer/MX SUPT and flight supervisors of any recurring problems with attendance. (T-2). Prior to the pre-dock meeting, PS&D will:

14.2.4.1.2. **(Added)** PS&D will send AF Form 2410, *Inspection/TCTO Planning Checklist*, to FGS/AMU Production Super, FGS/AMU PMP Manager (PMPs Only), Local CFT Team Leads (CFTs Only), LO, Engine Management, and Maintenance Operations Documentation Sections 5 duty days prior to the scheduled Pre-Dock Meetings. Recipients will respond NLT 2 duty days prior to the meeting. Negative replies are required. **Exception:** Annual SAS/RDX will not require a Pre/Post Dock meeting. 5 duty days prior to the SAS/RDX starting the FGS/AMU Schedulers will provide LO/FGS Production with a TCTO listing of all open TCTO that require LO downtime.

LO/Production must respond NLT 2 duty days prior to the start of the SAS/RDX listing the TCTOs that will/will not be accomplishing.

14.2.6.2.2.1. **(Added)** In order to receive MSE credit for scheduled maintenance actions the AFTO Form 349 must be given to PS&D NLT 2359. (E-3s Only).

14.2.6.2.2.2. **(Added)** In order to receive MSE credit for scheduled maintenance actions the MX action must be completed in IMIS NLT 2359. (F-22s Only).

14.3.1.1.2.2. **(Added)** FGS/AMU PS&D will be notified the same day suspense's are cleared by the authorized work centers. The authorized technician will take a screenshot of the screen being processed, attach it to an email and send to the PS&D office.

14.3.1.1.2.2.1. **(Added)** In order to be granted Suspense clearing access, members must fill out/sign an IMDS Transaction Identification Code (TRIC) Authorization letter. Once signed send the attachment, and TRIC access letter to the PS&D Subsystem Manager. For the letter, see the 3 MXO Database Management SharePoint®.

14.3.1.1.2.3. **(Added)** FGS/AMU PS&D will validate a component's maintenance interval type and previous operating time NLT the next duty day after installation for parts having an inspection or TCI using a type interval of hours, starts, cycles or rounds.

14.3.1.1.2.4. **(Added)** Performing work centers will install and remove all applicable TCIs for work performed using applicable MIS. PS&D will process applicable MIS screens to accomplish suspense validations and load job standards. 3 MXS Egress and 3 OSS Aircrew Flight Equipment Section will load, install, remove, validate suspense, and establish the Job Standard (JST) for all applicable TCI's in applicable MIS.

14.3.1.1.2.4.1. **(Added)** A separate letter will be published by Egress and Aircrew Flight Equipment designating authorized individuals (SSgt and above) allowed to process suspense validations. However, for all TCI's completed, Egress and Aircrew Flight Equipment must send a copy of MIS documentation showing job completion no later than the following Wednesday to PS&D. PS&D will use the documentation provided to verify data is updated in MSM/MIS.

14.3.3.2.3.2. **(Added)** PS&D will brief the MXG/CC (or equivalent) weekly on unaccomplished TCTOs that are within 180 days of grounding.

14.3.3.2.4.1.1. **(Added)** PS&D will reference the 150-day report received from AFLCMC/WWU, F-22 PSM-OL, while performing monthly TCTO recon.

14.3.3.2.4.3. **(Added)** Mandatory attendees will be PS&D TCTO monitor, AMU/FGS PS&D, EMB, AMU/FGS Pro Super, FSC, AMU/FGS DMS, AGE, Armament, LO, and Munitions.

14.3.3.3.1.1.1. **(Added)** Will coordinate all Local OTIs with PS&D prior to submission to MXG for approval.

14.3.3.3.2.7.1. **(Added)** The LRS/Supply Flight Service Center TCTO monitor will only release kits/parts with a printed and signed IMDS 122 or email coordination with AMU scheduler/TCTO monitor.

Table 14.2. Joint Base Elmendorf-Richardson Aircraft Line Numbers.

90th Fighter Generation Squadron		**525th Fighter Generation Squadron**	
901 – 950	Normal/Adds	501 – 550	Normal/Adds
951 – 999	Deployed/Off Base/TDY	551 – 599	Deployed/Off-Base/TDY
101 – 125	* Demo	126 – 150	* Demo
201 – 250	** Local Exercise	251 – 299	** Local Exercise
601 – 650	*** Cross Country	651 – 699	*** Cross Country
401 – 425	Exercise Alert	426 – 450	Exercise Alert
451 – 475	NORAD/ANR Alert	451 – 475	NORAD/ANR Alert
301 – 310	FCF/OCF	311 – 320	FCF/OCF
* Demo = F-22 Demonstration Team support ** Local Exercise = RED FLAG-Alaska, POLAR FORCE, etc. *** Cross Country = To and From home station/off base location (or between off base locations) only **Note:** These examples are not all-inclusive. Final adjudication is up to PS&D and 3 MXG/CD.			

962nd Aircraft Maintenance Unit	
801 – 810	Normal/Adds
811 – 820	Deployed/Off-Base/TDY
821 – 830	* Local Exercise
831 – 840	** Cross Country
841 – 850	NORAD/ANR Alert
851 – 860	OCF/FCF
* Local Exercise = RED FLAG-Alaska, POLAR FORCE, etc. ** Cross Country = To and From home station/off base location (or between off base locations) only **Note:** These examples are not all-inclusive. Final adjudication is up to PS&D and 3 MXG/CD.	

14.3.3.3.2.7.2. **(Added)** DMS will only release kits/parts stored in aircraft TNB with a printed and signed IMDS 122 or email coordination with FGS/AMU scheduler/TCTO monitor

14.3.3.3.2.10.2. **(Added)** Upon completion of TCTO affecting aircraft Weight and Balance notify QA W&B Manager.

14.3.4.3.4.5. **(Added)** Submit TCI extension requests NLT 60 days prior to the due date/current extension expiration (Only if parts are not available). **Note:** Original due dates in the MIS will not be changed to reflect the extension due date.

14.5.6.3.1.1. **(Added)** Cross-country (XC) missions departing from JBER will use XC line numbers and are listed with scheduled take-off times only. XC missions originating from off-station (returning to JBER) use XC line numbers and are only listed with estimated land times. Changes to XC departure and/or XC return sorties are not recorded as deviations for Flying Scheduling Effectiveness. They are considered scheduled as flown.

14.5.6.3.1.2. **(Added)** Crew Ready times for all sorties should be called into the MOC and flying squadron's Top 3 no later than 60-minutes prior to scheduled take-off time. Crew Show time for fighters is 30-minutes prior to scheduled take-off time.

14.5.6.3.1.3. **(Added)** The F-22 standard (minimum) turn time is 3.0 hours for normal turns and 1.0 hours for hot pits. Quick Turns (non-hot pit turns less than 3-hours) may be authorized by FGS/MXA and will be annotated as "Quick Turn" on the weekly schedule in the remarks section of the daily fly page. Rapid Crew Swaps (non-hot pit turns less than 2 hours) may be authorized by FGS/MXA and will be annotated as "Rapid Crew Swap" on the weekly schedule in the remarks section of the daily fly page. Hot pits will be annotated as "Hot Pit" on the weekly schedule in the remarks section of the daily fly page. The E-3 standard (minimum) turn time is 4.0 hours.

14.5.6.3.8.1. **(Added)** All Pen & Ink 2407s must be approved by the 3 OG/CC and 3 MXG/CC or their designated representatives. AFR equivalent leadership is authorized to approve Pen & Ink 2407s on UTA weekends.

14.5.6.3.9.3. **(Added)** The flying window is MDS-specific and defined as the period between the first scheduled take-off and the last scheduled land for a particular MDS. (For example, the F-22 flying window can be between 0900-1600 and the E-3 flying window between 1200-2100.)

14.5.6.3.10. **(Added)** For scheduling quiet hours during daily flying, requests are submitted to 3 OSS/OSOS in accordance with 3d Wing Instruction (WGI) 13-204, *Airfield and Air Traffic Control Procedures* "at least two weeks in advance" of the requested quiet hour period.

14.5.6.3.11. **(Added)** XC Procedures. XC sorties are counted in the planned sortie total for that day (example: planned 12T0, 8 are local training and 4 are XC).

14.5.6.3.12. **(Added)** ATO scheduling procedures:

14.5.6.3.12.1. **(Added)** Annotate AF Form 2402 and the remarks section of the fly page with the name of the exercise; blocked out each aircraft tail number associated with the exercise on the AF Form 2402.

14.5.6.3.12.2. **(Added)** Utilize Exercise line numbers (see **Table 14.2**).

14.5.6.3.12.3. **(Added)** Do not list take-off, land times, aircraft tail numbers until 2 hours prior to first scheduled take-off. All of the sortie line numbers (to include 2nd and subsequent goes) will be loaded 2 hours prior to the 1st take-off. Distribute the daily fly page NLT 2 hours prior to first take-off. Normal deviations apply if within the 2 hours window.

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

(Added) 10 USC §9013, *Secretary of the Air Force*

(Added) F021 AF IL A, *Core Automated Maintenance System (CAMS)*, (December 09, 2003, 68 FR 68611)

(Added) DAFI 13-213_3WGSUP, *Airfield Driving,* 22 September 2023

(Added) DAFI 31-218, *Motor Vehicle Traffic Supervision,* 22 May 2006

(Added) DAFMAN 91-203, *Air Force Occupational Safety, Fire, and Health Standards,* 25 March 2022

(Added) DAFI 21-101_PACAFSUP, *Aircraft and Equipment Maintenance Management,* 26 October 2020

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

(Added) AFMAN 11-202V3, *Flight Operations,* 10 January 2022

(Added) AFMAN 11-218, *Aircraft Operations and Movement on the Ground*, 05 April 2019

(Added) AMCI 21-108, *Logistics Support Operations*, 02 March 2023

(Added) JBELMENDORF-RICHARDSONI 31-118, *Motor Vehicle Traffic Supervision Program,* 02 May 2013

(Added) 3 WGI 13-204, *Elmendorf Airfield and Air Traffic Control Procedures* 01 June 2022

(Added) 3 WGI 21-101, *Crashed, Damaged, or Disabled Aircraft Recover (CDDAR),*

(Added) 3 WG OPORD 3310-22, *Aerospace Control Alert Procedures,* 21 October 2022

(Added) LCL3WG/1F22A-002, *Alert Procedures,* 23 December 2020

(Added) T.O. 35E7-2-11-21, *Operation and Maintenance Instructions*, 30 April 2025

Prescribed Forms

(**Added**) 3WG Form 145, *Lost Tool/Object Report*

(**Added**) 3WG Form 146, *Missing/Removed Tool Log*

(**Added**) 3WG Form 147, *Quality Assurance Impoundment Record*

Adopted Forms

(**Added**) AF Form 3126, *General Purpose*

(**Added**) AF Form 1800, *Operator's Inspection Guide and Trouble Report*

(**Added**) AFTO Form 134, *Aviator Breathing Oxygen Servicing Trailer Log*

(**Added**) AFTO Form 276, *Special Requisition for Air Force Technical Order*

(**Added**) AFTO Form 350, *Reparable Item Processing Tag*

(**Added**) DAF 673, *Department of the Air Force Publication/Form Action Request*

(**Added**) DD 2026, *Oil Analysis Request*

Abbreviations and Acronyms

(Added) AMQP—Aircraft Maintenance Qualification Program

(Added) APO—Advanced Programs Office

(Added) BRU—Bomb Rack Unit

(Added) CAC—Combat Alert Cell

(Added) COR—Contracting Officer Representative

(Added) DAF—Department of the Air Force

(Added) DAFI—Department of the Air Force Instruction

(Added) DPAS MU—Defense Property Accountability System Maintenance and Utilization

(Added) EAC—Emergency Action Checklist

(Added) FOM—Facilitate Other Maintenance

(Added) FTD—Field Training Detachment

(Added) GN2—Gaseous Nitrogen

(Added) HEI—High Explosive Incendiary

(Added) HP—High Purity

(Added) HPD—Hearing Protection Devices

(Added) IMC—Instrument Meteorological Conditions

(Added) IPL—Immediately Prior to Launch

(Added) IRCM—Infrared Countermeasures

(Added) ITEC—Information Technology Equipment Custodian

(Added) MOO—Maintenance Operations Officer

(Added) NEW—Net Explosives Weight

(Added) NLG—Nose Landing Gear

(Added) NRR—Noise Reduction Ratings

(Added) PACAFSUP—Pacific Air Forces Supplement

(Added) PMP—Program Maintenance Package

(Added) RF—Radio Frequency

(Added) RPM—Revolutions Per Minute

(Added) RSO—Radiation Safety Officer

(Added) **SAS**—Signature Assessment System

(Added) **SESSC**—Stored Energy System Servicing Cart

(Added) **SF-6**—Sulfur Hexafluoride

(Added) **SGNSC**—Self-Generating Nitrogen Servicing Cart

(Added) **SOF**—Supervisor of Flying

(Added) **SORN**—System of Records Notice

(Added) **SWB**—Side Weapons Bay

(Added) **TDD**—Target Detecting Device

(Added) **TP**—Training Projectile

(Added) **TRIC**—Transaction Identification Code

(Added) **UALS**—Universal Ammunition Loading System

(Added) **VMC**—Visual Meteorological Conditions

(Added) **WAM**—Wing Avionics Manager

(Added) **WGI**—Wing Instruction

(Added) **XC**—Cross-Country

Office Symbols

(Added) **AOC/GADM**—Air Operations Command Global Aviation Data Management

(Added) **FGS**—Fighter Generation Squadron

(Added) **EWO**—Electronic Warfare Officer

Attachment 13 (Added)

3D WING 3 DIGIT DEVIATION CODES

Table A13.1. 3D Wing 3 Digit Deviation Codes.

3 WG 3-DIGIT DEVIATION CODES		
CAUSE CODE	**NARRATIVE**	**CATEGORY**
ATA	CONFLICTING AIR TRAFFIC	Air Traffic
EXH	EXERCISE, HHQ	Exercise
EXL	EXERCISE, LOCAL	Exercise
HQN	HHQ, NAF	HHQ
HQP	HHQ, OTHER	HHQ
HQR	HHQ, AIRSPACE/ RANGE	HHQ
HQT	HHQ-MAJCOM	HHQ
MTA	MAINTENANCE CAUSED BY OPS	Maintenance
MTD	LATE DE-ICE	Maintenance
MTE	EOR-MAINTENANCE RELATED	Maintenance
MTF	AIRCRAFT REQUIRES FCF/OCF	Maintenance
MTI	AIRCRAFT IMPOUNDED	Maintenance
MTM	MUNITIONS SUPPORT	Maintenance
MTN	MAINTENANCE NON-DELIVERY	Maintenance
MTP	PHASE/ISO/PMP (TIME MANAGEMENT)	Maintenance
MTU	UNSCHEDULED MAINTENANCE	Maintenance
OPF	OPS LIFE SUPPORT	Ops
OPI	IMPROPER SCHEDULING	Ops
OPL	AIRCREW ILLNESS	Ops
OPM	MISSION CHANGE	Ops
OPN	COMMAND POST NOTIFIED CREW LT	Ops
OPO	OPS OTHER	Ops
OPP	OPS PREFERENCE	Ops
OPR	OPS TRAINING	Ops
OTG	GROUND EMERGENCY	Other
OTH	OTHER	Other
OTI	INFLT NMC CONDITION (BIRD STRIKE, A/R)	Other
OTO	OFF-STATION CAN'T RETURN FOR MISSION	Other
OTT	EQUIP TEST/EVAL-OPS TEST AND EVAL	Other
SUL	LATE POL DELIVERY	Supply
SUN	SUPPLY NON-DELIVERY	Supply
SUS	CAUSED BY LATE SUPPLY DELIVERY	Supply
SYA	SYMPATHY DUE TO ATOC SUPPORT	Sympathy
SYB	SYMPATHY DUE TO ABORT	Sympathy
SYC	COPE THUNDER SUPPORT	Sympathy
SYD	SYMPATHY DUE TO DELAY	Sympathy
SYF	RED FLAG SUPPORT	Sympathy

SYP	SYMPATHY FOR LATE MAC PACS	Sympathy
SYR	SYMPATHY DUE TO TANKER/RECEIVER/MISS EVT	Sympathy
SYT	SYMPATHY DUE TO DACT TRAINING	Sympathy
UTE	UTE MANAGEMENT	Utilization
WXD	DELAY FOR DEICING	Weather
WXH	WEATHER AT HOME STATION	Weather
WXR	WEATHER AT RANGE/SITE	Weather
WXS	SNOW REMOVAL	Weather
GAA	BEFORE ENGINE START	Ground Abort
GAB	AFTER ENGINE START, BEFORE TAXI	Ground Abort
GAC	AFTER TAXI	Ground Abort

Attachment 14 (Added)

3D WING FCF/OCF DECISION MATRIX

Table A14.1. 3D Wing FCF/OCF Decision Matrix.

3 WG FCF/OCF DECISION MATRIX		
ACTIVITY	**FUNCTIONAL CHECK FLIGHT (FCF)**	**OPERATIONAL CHECK FLIGHT (OCF)**
In General	Major maintenance, rebuild, or to ensure airworthiness.	Lack confidence in capability in a specific system or significant aircraft downtime.
Required When	1. At OG/CC or MXG/CC direction. 2. Stated in applicable -6 TO.	1. At OG/CC or MXG/CC direction. 2. Unable to validate system through ground checks. 3. In-flight operational check required by Dash 1 or Dash 2. 4. When required by FARs.
Approval Authority	3 OG/CC and 3 MXG/CC (or CD).	3 OG/CC and 3 MXG/CC (or CD).
Flight Crew Requirement	FCF current, qualified, trained and approved IAW applicable instructions.	OG/CC discretion based upon reason for OCF.
Flight Procedures	Dash 6 (TO -6CF-1).	Dash 1.
FLIGHT IN CONJUNCTION WITH	**FUNCTIONAL CHECK FLIGHT (FCF)**	**OPERATIONAL CHECK FLIGHT (OCF)**
Ferry flight	No, except with 3 WG/CC waiver IAW TO 1-1-300	No restrictions
Mission or training flight	No, requires 3 WG/CC waiver IAW TO 1-1-300	No, requires 3 OG/CC approval
Initial Checkout Sortie (N/A for C-12s)	No, requires 3 WG/CC waiver IAW TO 1-1-300	N/A
QA Involvement	Mx inspection, forms review, crew brief, and debrief	Mx inspection, forms review, crew brief, and debrief
Aircraft Configuration	Standard FCF configuration	As determined by Mx/Ops
Weather Criteria	3000/3 ± 1 hour airworthiness verified before Instrument Meteorological Conditions (IMC); checks in VMC	In accordance with AFMAN 11-202V3_3WGSUP checks in VMC
Minimum WX (Waiver able by 3 OG/CC)	1500/3 ± 1 hour airworthiness verified before IMC; checks in VMC	In accordance with AFMAN 11-202V3_3WGSUP checks in VMC

Attachment 15 (Added)

MAINTENANCE AND HANDLING OF EXPLOSIVES LOADED AIRCRAFT

A15.1. Maintenance and Handling of Explosives Loaded Aircraft.

A15.1.1. **Airfield Parking Locations:** parking of explosives loaded aircraft on the parking ramps will be done in accordance with the Net Explosives Weight (NEW) chart. This chart will also be used for parking in H-16 Combat Alert Cell (CAC) (Hangar 16) and H-17 Slots 1-8 (Hangar 17). The chart is available on the Wing Safety SharePoint®, or it can be obtained from the 3 WG Weapons Safety or 3 MXG Weapons Standardization offices directly.

A15.1.2. **Maintenance Hangars 1, 2, 3, 4, 15, and 25H-1, H-2, H-3, H-4, H-15 and H-25.** Aircraft parked in these hangars will have all training missiles isolated. All live missiles, impulse carts, ammunition, and chaff/flares will be downloaded and/or removed. **Exception 1:** 20 mm training projectile (TP) ammo may remain loaded. **Exception 2:** the 3 MXG/CC or 3 MXG/CD may authorize munitions-loaded aircraft to be placed in maintenance hangars under emergency weather or environmental conditions. When this option is exercised, absolutely no maintenance of any kind will be performed on the aircraft.

A15.1.3. **Hangars 19, 20, 21, 22 (Fuel Barn), and H-19, H-20, H-21 and H-22 Fuel Barn's, Corrosion/Paint Barn.** All munitions and stores, live or inert, will be downloaded from the aircraft prior to being placed in these hangars.

A15.1.4. **Hush House Engine Test Cell.** All munitions and stores, live or inert, will be downloaded from aircraft. **Exception:** 20 mm TP ammo may remain loaded.

A15.1.5. **Munitions/Explosives On-Load/Off-Load Areas.**

A15.1.5.1. Contact 3 WG Weapons Safety or Airfield Management for specifics concerning compensatory actions, additional restrictions covering explosive operations, and authorized NEWs at each location.

A15.1.5.2. Anytime munitions (except inert) are delivered and/or removed on aircraft (fighter or cargo), the controlling unit will notify the 3WG MOC by radio or telephone. The reporting individual must provide the hazard class division and any applicable fire/chemical hazard symbols. Notifications are also required when munitions are removed from sited locations.

A15.1.5.3. Units that upload/download munitions on aircraft will notify MOC of the current status by location on a real time basis. MOC will immediately provide this information to the Fire Alarm Communications Center.

A15.2. Launch and Recovery.

A15.2.1. Actions involving munitions during launch and recovery operations are limited to Red Ball maintenance, AIM-9 dome cover removal, and the securing of missile gear as applicable.

A15.2.2. All CATM/AIM-9/-120 Missile safing gear (umbilical protective covers, safety handle diaper pins, shorting caps, striker point, and Target Detecting Device (TDD) covers) will be placed in the packing envelope (NSN: 8105-00-190-9824) and stowed in the Side Weapons Bay (SWB) "bird cage." The packing envelope will be marked for the aircraft tail number. AIM/CAP-9 dome covers will be placed in the "bird cage" for the applicable SWB loaded.

A15.2.3. Aircraft Arming. F-22A aircraft may be armed in chocks in accordance with F-22A TOD 1400-series procedures. In situations where single point arming is preferred, aircraft will be armed at designated locations outlined in 3WGI 13-204.

A15.2.4. Aircraft Gun Safing:

A15.2.4.1. Upon return from flight, “hot” gun safing will be performed in accordance with F-22A TOD 1400-series at EOR. EOR locations are outlined in 3WGI 13-204.

A15.2.4.2. “Hot” gun safing procedures may be performed in chocks under the following situations:

A15.2.4.2.1. Aircraft ground aborts prior to flight.

A15.2.4.2.2. Aircraft is removed from alert "ON" status.

A15.2.4.2.3. Aircraft safe for maintenance procedures required to facilitate other maintenance (FOM).

A15.3. Immediately Prior To Launch (IPL)/Safing Procedures.

A15.3.1. During IPL operations, safety pins and safety devices will be stowed in the appropriate aircraft pin bags. Extreme caution will be taken at all times to prevent ingestion into aircraft engines. If safety pins or devices cannot be removed or positioned with ordinary effort, the aircrew will be informed, and the aircraft will be safed.

A15.3.2. Gun systems will only be armed/set up for mission requirements as printed in the weekly flying schedule, AF Form 2407, *Weekly/Daily Flying Schedule Coordination*, and F-22A TOD 1400-series procedures. Aircraft loaded with forward firing munitions will be positioned in accordance with 3WGI 13-204, DESR6055.09_AFMAN91-201, and F-22A TOD 1400-series TOD. Aircraft will always be positioned in the direction least hazardous to personnel and resources.

A15.3.3. Aircraft will not be approached for safing until the aircrew places both hands in full view to inform the qualified technician that all armament switches are positioned to safe.

A15.3.4. Ground communication hookup will be established prior to commencing safing actions. If, for any reason, ground communication is inoperable, safing will begin with hand signals and the qualified technician will give the aircrew thumbs up signal upon completion.

A15.3.5. Aircraft will be safed in accordance with F-22A 1400-series TOD procedures.

A15.3.6. When using the intersection of Taxiways D and N, north of Blue ramp, Gold and Blue spots 1 and 2 must be empty to maintain separation from the IPL/safing operation.

A15.3.7. When using Taxiway D, west of Taxiway D3 at approach end of Runway 34, Blue spots 27 and 28 must be empty to maintain separation from the IPL/safing operation.

A15.3.8. If light carts are required, they will be positioned to maintain at least 10-feet of wing tip clearance.

A15.4. Emergency Procedures. Warning: if loose or broken ammunition is evident during accomplishment of these procedures, notify the aircrew and the Maintenance Operation Center (MOC) and safe aircraft. Direct aircraft to taxi to the authorized jammed gun area. Do not allow aircraft to return to the parking area until loose or broken ammunition and powder are removed.

A15.4.1. **Notification of weapons system malfunction:** pilot will notify tower of any known hung or malfunctioned weapons system prior to arrival.

A15.4.1.1. In this situation, the Supervisor of Flying (SOF) will direct aircraft to appropriate de-arm area for safing actions.

A15.4.1.2. The SOF will notify the MOC, who will initiate emergency procedures.

A15.4.1.3. Upon notification, the MOC will announce an In-Flight Emergency (IFE) and initiate the appropriate EAC.

A15.4.1.4. AMUs will be notified through the MOC and will need to provide weapons personnel to assist EOD in safing and possibly downloading munitions at the recovery location.

A15.4.2. Gun/Missile and Forward-firing Ordnance Malfunctions. Comply with all requirements and/or /restrictions outlined in 3WGI 13-204.

A15.4.2.1. A runaway gun is defined as a gun that fails to stop rotating when the trigger is released. A jammed gun is defined as a gun that starts to rotate and then stops for no apparent reason and cannot be rotated by hand. All other problems will be defined as a gun malfunction.

A15.4.2.2. Runaway Gun System: if a runaway gun exists, both engines will be shut down immediately. If the weapons technician determines a jammed or runaway gun does not exist, the aircraft gun will be safed for return to the parking ramp.

A15.4.3. If a condition is discovered at EOR, EOR personnel will declare a ground emergency through the MOC, refer to the applicable EAC, and establish essential cordons. Direct aircraft to appropriate safing areas, as necessary.

A15.4.4. If the response time of EOD is more than 10-minutes after the aircraft lands, or if an unsafe condition exists, direct the aircrew to shut down the aircraft and ground egress.

A15.5. F-22 Hung/Jammed Gun Procedures. The following In-flight Gun Malfunction Procedures will be followed when an aircraft is returning with a known or suspected jammed gun system:

A15.5.1. The Air Traffic Control Tower will activate the primary crash phone.

A15.5.2. The Command Post/MOC will notify the appropriate AMU Weapons Flight, Armament Flight, QA, Wing Safety, the Wing Weapons Manager, and Munitions Control.

A15.5.3. The aircraft will taxi directly to the authorized jammed gun areas outlined in 3 WGI 13-204. The aircraft should be pointed in a direction to avoid populated areas.

A15.5.4. If gun system cannot be cleared in accordance with 1400-series TOD, technicians will shut down the aircraft.

A15.8. Impounding Aircraft for Weapons Malfunctions. Aircraft identified with inadvertent stores releases or jammed/runaway gun systems will be impounded immediately following appropriate safing actions. Access to the aircraft and its weapons systems will be controlled in accordance with DAFI 21-101 _PACAFSUP_3WGSUP until the cause of the malfunction can be identified.

A15.9. F-22 Combat Alert Cell (CAC) Operations.

A15.9.1. Aircraft placed in an "ALERT" posture at the CAC will adhere to the following "ALERT" procedures in accordance with F-22 TOD, 3WG OPORD 3310-22, and LCL3WG/1F22A-002, *Alert Procedures*.

A15.9.2. Aircraft Arming. Aircraft will be armed in chalks in accordance with 1400-series TOD.

A15.9.3. Aircraft De-Arming:

A15.9.3.1. Aircraft will be de-armed in chalks in accordance with 1400-series TOD.

A15.9.3.2. "Hot" gun safing procedures may be performed in chocks under the following situations:

A15.9.3.2.1. Aircraft ground aborts prior to flight.

A15.9.3.2.2. Aircraft is removed from alert status.

A15.9.3.2.3. Aircraft safe for maintenance procedures required to Facilitate Other Maintenance.

Attachment 16 (Added)

F-22 HANGAR CHECKLIST

Table A16.1. F-22 Hangar Checklist.

F-22 HANGAR ENTRY/REMOVAL CHECKLIST *This checklist is not all inclusive nor a substitute for technical data.*	
AIRCRAFT TAIL #	**DATE:**
- Use in Conjunction with DAFI21-101_3WGSUP, Attachment 18, *General Hangar Door Operation Checklist.* -All 20mm High Explosive Incendiary (HEI) ammunition will be downloaded prior to hangar entry (except into Hangars 16 or 17). -All 20mm TP ammunition will be downloaded prior to aircraft entry into fuel cell, corrosion control facilities or PE phase input.	
SECTION 1. PRIOR TO HANGAR ENTRY PROCEDURES	**INITIALS**
1a. Tow team supervisor will brief route of travel and obstacles. (During winter ops the tow team supervisor will assess the towing route for snow/ice and ensure it is clear and sanded/deiced if necessary.)	
1b. Check aircraft forms to ensure aircraft is properly configured for hangar entry and/or removal.	
1c. Ensure munitions/impulse carts and chaff/flare are downloaded or safed, as applicable. (Weapons 7-Level.)	
1d. Ensure all -21 equipment is properly installed.	
1e. Ensure **all:** Roll-up doors (Kennels/Slots/CAC/WLT/Corrosion South Hangar) are **fully** opened. Sliding hangar doors will be opened to accommodate wingspan plus 10 feet farther on each side IAW AFMAN 11-218 para 3.7.	
SECTION 2. HANGAR ENTRY OF ALL F-22 HANGARS Complete additional checks in Sections 3 and 4 for applicable hangars.	**INITIALS**
2a. Position, chock, ground aircraft, and place drip pans under aircraft.	
2b. Install “REMOVE BEFORE FLIGHT” streamers & pads on horizontal stabs.	
2c. Ensure fuel bowser & soak-up pads are available or installed as necessary & fire extinguisher positioned.	
2d. Display appropriate warning signs.	
2e. This checklist will be prominently displayed on or near the nose landing gear (NLG) in clear view.	

SECTION 3. FUEL BARN, HANGAR 2, LO MAINTENANCE HANGAR ENTRY, AND CORROSION FACILITY.	
3a. Aircraft must be at least 500-pounds below the maximum internal fuel load. **Print Name/Rank/Employee#:**	
3b. When towing for fuel maintenance, check with fuel barn for what fuel load is required for maintenance and operational checks. **Print Name/Rank/Employee#:**	
SECTION 4. FUEL BARN ENTRY	**INITIALS**
4a. Disconnect aircraft battery in the left forward avionics bay for fuel barn maintenance.	
4b. Tow bar will remain attached to the aircraft while in fuel barn with NLG Torque link disconnected.	
ENTRY TOW TEAM SUPERVISOR Print Name/Rank/Employee#:	**SIGNATURE:**
SECTION 5. REMOVAL OF AIRCRAFT FROM HANGAR	
Tow Team Supervisor will brief route of travel and obstacles. (During winter ops the tow team supervisor will assess the towing route for snow and ice and ensure it is clear and sanded/deiced if necessary).	
During winter operations, ensure heaters are turned off whenever hangar doors open.	
Ensure **all:** Roll-up doors (Kennels/Slots/CAC/WLT/Corrosion South Hangar) are **fully** opened. Sliding hangar doors will be opened to accommodate wingspan plus 10 feet farther on each side IAW AFMAN 11-218 para 3.7.	
Clean up any spills from aircraft (fuel, oil, hydraulic fluid).	

Attachment 17 (Added)

E-3 HANGAR CHECKLIST

Table A17.1. E-3 Hangar Checklist.

E-3 HANGAR ENTRY/REMOVAL CHECKLIST *This checklist is not all inclusive nor a substitute for technical data.* -Use in Conjunction with DAFI21-101_3WGSUP, **Attachment 18**, *General Hangar Door Operation Checklist*.-	
AIRCRAFT TAIL #:	**DATE:**
SECTION 1. HANGAR ENTRY PROCEDURES	**INITIALS**
1a. Tow Team Supervisor will brief route of travel and obstacles. (During winter operations, the tow team supervisor will assess the towing route for snow and ice and ensure it is clear and sanded/deiced if necessary.)	
1b. Check aircraft forms/fuel load to ensure aircraft is properly configured for hangar entry/jacking.	
1c. During winter operations, ensure heaters are turned off whenever hangar doors open.	
1d. Ensure **all:** Hangar doors are fully opened to accommodate aircraft wingspan plus ten feet on either side IAW AFMAN 11-218 para 3.7. Roll-up doors fully opened for tail access.	
1e. Ensure hangar floor is free of foreign objects and all equipment is clear of aircraft path.	
1f. During winter operations, ensure tow vehicle equipped with chains, does not exit the epoxy painted area. (Stay in the **dark gray** area.)	
1g. Place drip pans under engines.	
1h. After completion of tow, ensure tow bar and tow vehicle remain readily available for emergency aircraft extraction.	
TOW TEAM SUPERVISOR Print Name/Rank/Employee#:	**SIGNATURE:**
SECTION 2. REMOVAL OF AIRCRAFT FROM HANGAR	
2a. Tow Team Supervisor will brief route of travel and obstacles. (During winter ops the tow team supervisor will assess the towing route for snow and ice and ensure it is clear and sanded/deiced if necessary).	
2b. During winter operations, ensure heaters are turned off whenever hangar doors open.	
2c. Ensure **all:** Hangar doors are fully opened to accommodate aircraft wingspan plus ten feet on either side IAW AFMAN 11-218 para 3.7. Roll-up doors (Kennels/Slots/CAC/WLT/Corrosion South Hangar) fully opened for tail access.	
2d. During winter operations, ensure tow vehicle equipped with chains does not exit the epoxy painted area. (Stay in the **dark gray** area.)	
2e. Clean up any spills from aircraft (fuel, oil, hydraulic fluid).	

Attachment 18 (Added)

GENERAL HANGAR DOOR OPERATION PROCEDURES

Table A18.1. General Hangar Door Operation Procedures.

GENERAL HANGAR/ROLL-UP DOOR (Kennels/Slots/CAC/WLT/Corrosion South Hangar) OPERATION PROCEDURES (VISUAL AID)
SECTION 1. OPENING HANGAR/ROLL-UP DOORS (Kennels/Slots/CAC/WLT/Corrosion South Hangar) **WARNING:** Do Not Operate Doors Unless You Have Received Hands-On Training from the Facility Manager for this facility IAW DAFMAN 91-203 para 24.14.3.
1a. Verify door paths/tracks are free of obstructions, are in good operating condition and correct any discrepancies as required. Report damage to the facility manager and do not operate door.
1b. Close and secure personnel doors prior to operating, if applicable.
1c. Follow the correct cold weather operating procedures if applicable IAW DAFI 21-101_3WGSUP para 11.43.4.
1d. For towing operations, the roll-up doors (Kennels/Slots/CAC/WLT/Corrosion South Hangar) will be cycled to the fully "OPEN" position. Sliding hangar doors will be opened to accommodate wingspan plus 10 feet on each side.
1e. For personnel and equipment entry: Roll-up doors (Kennels/Slots/CAC/WLT/Corrosion South Hangar) will be opened a **minimum of 10 feet** (quick reference line). Sliding hangar doors will be opened a **minimum of 10 feet** IAW AFMAN 11-218 para 3.7.
SECTION 2. CLOSING HANGAR DOOR
2a. Verify door paths/tracks are free of obstructions, are in good operating condition and correct any discrepancies as required. Report damage to the facility manager and do not operate door.
2b. Close and secure personnel doors prior to operating hangar doors, if applicable.
Facility Manager Name & Phone:
Facility POC Name & Phone:
NOTES: 1. Use in conjunction with Aircraft Hangaring Checklist.

Attachment 19 (Added)

HANGAR 17 AUXILIARY POWER UNIT (APU) HOOD EXHAUST CHECKLIST

Table A19.1. Hangar 17 Auxiliary Power Unit (APU) Hood Exhaust Checklist.

HANGAR 17 APU HOOD EXHAUST OPERATION CHECKLIST *This checklist is not all inclusive nor a substitute for technical data.*	
Note: Operate APU exhaust hood/fan during any APU operation.	**DATE:**
SECTION 1. EXTENSION OF THE APU EXHAUST HOOD. Note: Red light above forward aircraft door will illuminate when APU exhaust hood is not fully retracted.	**INITIALS**
1a. Ensure all obstructions are clear of APU exhaust hood prior to extension.	
1b. Press and hold the green button on the APU exhaust hood operation panel to extend the APU exhaust hood.	
Note: APU exhaust fan switch is located next to the slot access door.	
1c. Once the APU exhaust hood is fully extended, turn on APU exhaust fan. Allow one minute for supply air fan to reach appropriate speed.	
1d. Verify the exhaust fan is running. **Note:** Red light above APU exhaust fan switch does not indicate exhaust fan is operating.	
1e. Start the APU IAW applicable TOD.	
SECTION 2. DURING APU OPERATION	**INITIALS**
2a. Verify the CO sensor reads less than 25 parts per million. **WARNING: If the CO sensor reaches 25 parts per million, a yellow light will illuminate. Immediately shut down the APU and open the forward and aft aircraft doors.**	
2b. Verify airflow through the exhaust vent (using the gauge to the left of the hood operation panel) is between 10,000 and 15,000 ACFM. **Immediately shutdown the APU if airflow is outside this range.**	
SECTION 3. RETRACTION OF THE APU EXHAUST HOOD	**INITIALS**
3a. Shut down the APU IAW applicable TOD.	
3b. Shut off the APU exhaust fan.	
3c. Ensure all obstructions are clear of the APU exhaust hood prior to retraction. **Note:** The red light above the forward aircraft door will illuminate anytime the APU exhaust hood is not fully retracted.	
3d. Press and hold the black button on APU exhaust hood operation panel until exhaust hood is fully retracted. **CAUTION:** Ensure the APU exhaust hood is fully retracted prior to aircraft tow/taxi.	
Emergency Retraction: in the event of APU exhaust hood failure, pull the manual unlock harness attached to the APU exhaust hood using a long pole from the ground.	

Attachment 20 (Added)

HANGAR 24 AND HANGAR 26 F-22 AUXILIARY POWER UNIT (APU) HOOD EXHAUST CHECKLIST

Table A20.1. Hangar 24 And Hangar 26 F-22 Auxiliary Power Unit (APU) Hood Exhaust Checklist.

HANGAR 24 and 26 APU HOOD EXHAUST OPERATION CHECKLIST *This checklist is not all inclusive nor a substitute for technical data.*	**DATE:**
SECTION 1. LOWERING THE APU EXHAUST DUCT	**INITIALS**
1a. Ensure all obstructions are clear of the APU exhaust hood prior to lowering.	
1b. Ensure power switches on APU exhaust duct operation panel are set to on.	
1c. Press and hold the lower button on APU exhaust duct operation panel until the exhaust duct is fully lowered. **Note:** The red APU exhaust down light and green APU exhaust door damper light above the operation panel will illuminate and the airflow intake fan will start.	
1d. Verify the airflow intake fan (located on the north side of the west wall, at the top) is running.	
1e. Start the APU IAW applicable TOD.	
SECTION 2. DURING APU OPERATION	**INITIALS**
2a. Verify the CO sensor located on the southeast corner of the bay reads less than 25 parts per million. **WARNING: If the CO sensor reaches 25 parts per million, a yellow light above APU exhaust duct will illuminate. Immediately shut down APU and open forward and aft bay doors.**	
SECTION 3. RAISING THE APU EXHAUST DUCT **CAUTION:** Ensure the APU exhaust duct is fully retracted/raised prior to aircraft tow/taxi.	**INITIALS**
3a. Shut down the APU IAW applicable TOD.	
3b. Ensure all obstructions are clear of the APU exhaust duct prior to raising. **Note:** A red light above the APU exhaust duct operation panel will illuminate anytime the APU exhaust duct is not fully raised.	
SECTION 4. EMERGENCY RAISING	**INITIALS**
4a. In case of APU exhaust duct failure, use a 6-foot ladder to reach the APU exhaust motor located in the middle of the south wall of each bay. Rotate the hand crank until the APU exhaust duct is in the appropriate position. **CAUTION:** Do not operate the APU exhaust duct from operation panel after manual raising operations.	
4b. Contact the 525 FGS facility manager when emergency procedures have been initiated.	

Attachment 21 (Added)

HANGAR 23 AUXILIARY POWER UNIT (APU) HOOD EXHAUST OPERATION CHECKLIST

Table A21.1. Hangar 23 Auxiliary Power Unit (APU) Hood Exhaust Operation Checklist.

HANGAR 23 APU HOOD EXHAUST OPERATION CHECKLIST *This checklist is not all inclusive nor a substitute for technical data.*	
Note: Operate APU exhaust hood/fan during any APU operation.	**DATE:**
SECTION 1 EXTENSION OF THE APU EXHAUST HOOD	**INITIALS**
1a. Ensure all obstructions are clear of the APU exhaust hood prior to extension.	
1b. Turn on APU exhaust fan. **Note:** The APU exhaust fan switch is located next to the APU hood control panel	
1c. Press and hold "DOWN" button on APU exhaust hood operation panel until the hood is fully extended. Visually verify the extend/retract actuator is fully extended. A red beacon above front door will illuminate.	
1d. Visually verify the green exhaust fan ready light is illuminated. **Note:** A green ready light illuminates approximately 90 seconds after APU is switched on.	
1e. Start APU IAW appropriate TOD.	
SECTION 2. DURING APU OPERATION **CAUTION:** Failure to ensure proper fan operation could result in damage to aircraft.	**INITIALS**
WARNING: If a red light on the left wall adjacent to the exhaust fan switch begins to strobe or horn sounds, **immediately** shut down the APU. Failure to do so could result in damage to aircraft.	
2a. If a red light on right wall adjacent to CO monitor begins to strobe, verify the CO sensor reading is below 35 PPM. If the reading is above 35 PPM, continue to monitor and open the forward and aft hangar doors. If PPM is above 50 PPM, shut down the APU IAW applicable TOD and exit the building.	
SECTION 3. RETRACTION OF THE APU EXHAUST HOOD	**INITIALS**
3a. Verify the APU is shut down.	
3b. Turn off the APU exhaust fan.	
3c. Ensure all obstructions are clear of the APU exhaust hood prior to retraction.	
3d. Press and hold the UP button on the APU exhaust hood operation panel until the hood is fully retracted. The hood is fully retracted when no chrome is showing on the extend/retract actuator and the red beacon above front door extinguishes. **CAUTION: Ensure the APU exhaust hood is fully retracted prior to aircraft tow/taxi.**	
SECTION 4. APU HOOD FAILS TO RETRACT	**INITIALS**
4a. Contact 90 FGS Facility Manager at 551-9087.	

Attachment 22 (Added)

HANGAR 27 APU HOOD EXHAUST CHECKLIST

Table A22.1. Hangar 27 APU Hood Exhaust Checklist.

HANGAR 27 APU HOOD EXHAUST OPERATION CHECKLIST *This checklist is not all inclusive nor a substitute for technical data.*	
Note: Operate APU exhaust hood/fan during any APU operation.	**DATE:**
WARNING: Ensure proper aircraft positioning with APU hood exhaust.	
SECTION 1. LOWERING THE APU EXHAUST DUCT:	**INITIALS**
1a. Ensure all obstructions are clear of APU exhaust hood prior to lowering.	
1b. Ensure power switches on APU exhaust duct operation panel are set on.	
1c. Press and hold "LOWER" button on APU exhaust hood operation panel until exhaust is fully lowered and **RED** light illuminates.	
Note: The red APU exhaust down light and green APU exhaust door damper light above operation panel will illuminate and the airflow intake fan will start	
1d. Push red ventilation start "mushroom switch". This will activate the APU exhaust hood damper (the **GREEN** light will illuminate once this is complete). This could take up to 90 seconds. The APU exhaust system will activate after green light is illuminated	
1e. Wait 3 minutes for MAU supply fan and HRU exhaust system to become fully activated, the **BLUE** light will illuminate once this is complete.	
1f. Begin APU operation IAW TOD.	
SECTION 2. DURING APU OPERATION:	
2a. Verify the CO sensors read less than 25 parts per million. **WARNING:** If the CO sensor reaches 25 parts per million, a yellow light will illuminate. Immediately shut down the APU and open aircraft hangar door.	
SECTION 3. RAISING THE APU EXHAUST HOOD: **CAUTION:** Ensure the APU exhaust hood is fully retracted prior to aircraft tow/taxi.	
3a. Shut down the APU IAW TOD.	
3b. Wait 3 minutes.	
3c. Pull out the red "Ventilation Start" mushroom switch to deactivate the APU exhaust system.	
3d. Ensure all obstructions are clear of the APU exhaust hood prior to retraction	
3e. Press and hold the "RAISE" button on the APU exhaust hood operation panel until exhaust hood is fully retracted and RED light is off.	
3f. **Emergency Retraction:** In the event of APU exhaust hood failure, locate the APU exhaust hood manual hood motor located on the North hangar wall. Rotate the hand crank until the APU exhaust duct is in the appropriate position.	

Attachment 23 (Added)

AIRCRAFT STRUCTURAL MAINTENANCE INTAKE CHECKLIST FOR ON-EQUIPMENT MAINTENANCE

Table A23.1. Aircraft Structural Maintenance Intake Checklist for On- Equipment Maintenance.

LOW OBSERVABLE AIRCRAFT STRUCTURAL MAINTENANCE INTAKE MAINTENANCE CHECKLIST		
PURPOSE: To assist Low Observable technicians performing aircraft intake maintenance in accordance with DAFI21-101_3WGSUP. **PROCEDURES:** A two-person concept for intake repair or intake rivet replacement is required. • One person will monitor and account for all tools and hardware placed into the intake; inventories are documented using page two of this checklist. All tools and hardware will be documented on this form prior to being placed in the intake. • The second person will accomplish the maintenance task. A FOD bag is required to secure debris. • During intake repair or intake rivet replacement, the Intake Maintenance Checklist will be taped in plain sight. • The Low Observable Section will maintain completed checklists for one year.		
AIRCRAFT TAIL #:	**CTK #:**	**DATE:**
INTAKE/INLET #:	**POSITION:**	**JCN:**
Enter a thorough description of the intake discrepancy (include type and location):		

REQUIREMENT:	**INITIALS**	**EMP#**
1. Enter/upgrade Red X in aircraft forms for the maintenance discrepancy.		
2. Enter Red X in aircraft forms for engine plugs, barrier paper, and tape.		
3. Enter Red X in aircraft forms for post-maintenance FOD/Tool check.		
4. Clear Red X in aircraft forms after repair completion.		
5. Clear Red X in aircraft forms for engine plugs, barrier paper, and tape.		

6. Clear Red X in aircraft forms for FOD/tool check.		
7. Supervisor review of this document and aircraft forms.		
8. Copy sent to QA.		

INVENTORY

-All items (tools, consumables, bench stock, etc.) taken into aircraft intake must be placed on this inventory.

-Two-person concept applies during this process. Technician #1 will accomplish inventory and Technician #2 will accomplish maintenance.

-Attach additional inventories as required until repair completion and file all inventories with completed checklist.

Technician #1 **Name:**	**Emp #:**	**Date:**	**Shift:**
Technician #2 **Name:**	**Emp #:**	**Date:**	**Shift:**
Inventory:			
Technician #1 **Name:**	**Emp #:**	**Date:**	**Shift:**
Technician #2 **Name:**	**Emp #:**	**Date:**	**Shift:**
Inventory:			

Technician #1 **Name:**	**Emp #:**	**Date:**	**Shift:**
Technician #2 **Name:**	**Emp #:**	**Date:**	**Shift:**
Inventory:			
Technician #1 **Name:**	**Emp #:**	**Date:**	**Shift:**
Technician #2 **Name:**	**Emp #:**	**Date:**	**Shift:**
Inventory:			
Technician #1 **Name:**	**Emp #:**	**Date:**	**Shift:**
Technician #2 **Name:**	**Emp #:**	**Date:**	**Shift:**
Inventory:			

Attachment 24 (Added)

IMPOUNDMENT CHECKLIST

Table A24.1. Impoundment Checklist.

	IMPOUNDMENT CHECKLIST	YES	NO
1	Review DAFI 21-101_PACAFSUP_3WGSUP		
2	Have impounded aircraft, engines, and equipment been isolated using cones, ropes, and placards? **Note:** Large airframe aircraft use cones and placards.		
3	Has access been limited to only authorized personnel?		
4	Have all historical records and forms been obtained? **Note:** Not applicable to 3X failure and lost tool impoundments.		
5	Has wing flight, ground, or weapons safety been notified for mishaps that meet DAFI 91-204?		
6	Have the aircrew, crew chiefs, EOR de-arm crew, witnesses, and any other parties involved been debriefed?		
7	Have the appropriate specialists and supervisors been selected to develop an inspection and troubleshooting plan?		
8	Are oxygen, fuel, oil, or hydraulic samples required?		
9	Have all munitions items been removed prior to performing impounding maintenance?		
10	Do the aircraft active forms include the AFTO 781A write-ups for impoundment, including a separate CAMS/GO-81 JCN for aircraft impounded?		
11	Has the 3 MXG/CC been briefed on all actions or findings either daily or more frequently as required?		
12	Once the malfunction that caused the impoundment has been corrected, has the “impound official review” block been signed off and the red dash symbol been initialed?		
13	Has applicable Squadron supervision reviewed impoundment documentation prior to QA review?		
14	Has QA reviewed and signed off the aircraft forms?		

Attachment 25 (Added)

F-22 ACCEPTANCE CHECKLIST

Table A25.1. F-22 Acceptance Checklist.

F-22 ACCEPTANCE CHECKLIST *This checklist is not all inclusive nor a substitute for technical data.*	
AIRCRAFT TAIL #:	**DATE OF INSPECTION:**
Sections identify the responsible activity or individual and required tasks (as applicable). Employee that completes each action will enter their employee number (EMP #) to the right of the action when completed.	
SECTION 1. FGS	**EMP #**
1a. Notify MOF, PS&D, and QA of aircraft arrival.	
SECTION 2. PS&D	**EMP #**
2a. Ensure all Time Changes, TCTOs, and Special Inspections due are entered in IMDS.	
2b. Review and return all de-centralized records to appropriate work-centers.	
2c. Perform document review, verify FCF sorties and hours flow prior to release.	
2d. Perform AFTO Form 95 verification.	
2e. Perform jacket file creation/verification.	
2f. In cooperation with IMIS administrator; verify aircraft loaded into IMIS, and ensure the IMDS interface is operating.	
2g. Perform Hardware/Software comparison and correct all discrepancies.	
SECTION 3. DEBRIEF	**EMP #**
3a. Debrief the pilot and ensure AMU Production Superintendent is aware of discrepancies.	
SECTION 4. EMB	**EMP #**
4a. Ensure engines and components are loaded in IMIS.	
4b. Ensure any time changes, TCTOs, OTIs or local inspections that are due are completed.	
SECTION 5. TEAM CHIEF/DCC	**EMP #**
5a. Review previous flight discrepancies	
5b. Establish fuel card	
5c. Maintain an information file of all discovered discrepancies.	
5d. Coordinate with NDI to establish JOAP records.	
5e. Verify all maintenance is documented in IMIS.	

SECTION 6. DCC	EMP #
6a. Perform BPO inspection.	
6b. Perform -21 equipment inventory.	
6c. Perform aircraft document review.	
6d. Verify SPRAM assets delivered (diverters, tanks).	
6e. Verify camera pod and glare shields are delivered.	
6f. Enter acceptance inspection template into IMIS.	
SECTION 7. WEAPONS	**EMP #**
7a. Perform weapons AME and NIE equipment inventory.	
7b. Functional check gun system with 10 dummy rounds.	
7c. Perform COLT checks.	
7d. Perform operational/detent check on applicable loaded AME.	
SECTION 8. SPECIALISTS	**EMP #**
8a. Perform KOV S/N verification and KMID registration.	
8b. Aircraft Hardware/Software configuration management review.	
8c. Verify CNI battery and A/C battery manufacturer “Born On” dates.	
SECTION 9. STRUCTURES	**EMP #**
9a. Perform Structures Outer Mold Line Inspection.	
9b. Pilot and Crew Chief names.	
SECTION 10. LIFE SUPPORT	**EMP #**
10a. Unpack/inspect/repack survival kit/personal parachute.	
10b. Ensure all life support inspections are loaded within 5 days.	
SECTION 11. EGRESS	**EMP #**
11a. Remove/deliver survival kit to AFE.	
11b. Remove canopy (as applicable).	
11c. Remove seat (as applicable).	
11d. Complete CAD/PAD verification (as applicable).	
11e. Install seat (as applicable).	
11f. Install canopy (as applicable).	
11g. Install survival kit (location appropriate).	
11h. Perform egress final.	

11i. Verify IMDS/IMIS configuration.	
SECTION 12. SQUADRON MAINTENANCE SUPERVISION	**EMP #**
12a. Review all discrepancies annotated on acceptance inspection feedback checklist prior to submission to QA PIM.	
SECTION 13. QA	**EMP #**
13a. Establish a point of contact for discrepancy and deficiency reporting (PIM).	
13b. Retain Acceptance Inspection Feedback Checklist for filing and submit PQDR.	
13c. Perform Weight and Balance and/or CG files verification	

Attachment 26 (Added)

WEIGHT AND BALANCE PREPARATION CHECKLIST

Table A26.1. Weight and Balance Preparation Checklist.

WEIGHT AND BALANCE (W&B) PREPARATION CHECKLIST		
Weighing procedures are outlined in TOs 1-1B-50, 1F-22A-5-1, 1F-22A-5-2, and Aircraft Weighing (F755887144). Ensure any maintenance that affects W&B, i.e. TCTOs, engine changes, or LO restore (500sq ft or greater), is accomplished prior to preparing aircraft for weigh. **Direct any questions to a QA W&B technician.**		
Check box to the left of each item once completed or verified.	**AIRCRAFT TAIL#**	**DATE:**
1. Pre-weigh Criteria		
	1a. Wash and lube aircraft. Minimum drying time of 12 hours required after wash. If aircraft is exposed to rain/snow, drying time starts when aircraft is removed from wet environment.	
	1b. Aircraft must have no stores and no MODS loaded.	
2. Chart A Inventory		
	2a. Open all weapon's bays, infrared countermeasures (IRCM) doors, 4135, 4165, avionics cover panels (CIPs, CNIs, EW) and gun safe door 4214.	
	2b. Lower arresting hook.	
	2c. Open canopy.	
	2d. Call QA to complete the Chart A inventory.	
	2e. Fully install/close avionics cover panels, 4135, 4165, and 4214.	
3. Defuel/De-puddle		
	3a. Ensure aircraft is fully refueled.	
	3b. Level aircraft 1° to 2° nose up and between 0° to 0.25° right wing low.	
	3c. Call QA, W&B technician must verify degree measurements.	
	3d. Call for full load defuel truck. All fuel must be removed in one continuous defuel or Step 3 must start over.	
	3e. Raise arresting gear while power is applied.	

	3f. Call QA for re-verification of aircraft degree measurements prior to de-puddle.
	3g. De-puddle aircraft until fuel flow is discontinuous (as drops or mist).
	3h. Call QA for residual fuel calculations.
	3i. After residual fuel calculation, level aircraft 0° laterally and longitudinally.
4. Final Preparations for Weigh	
	4a. Ensure the following are still fully serviced: tires, engines, APU, AMADs, PAO, SES, System 1 & 2 hydraulic reservoirs.
	4b. Verify canopy closed.
	4c. Remove all -21 (including HUD and MFD covers).
	4d. Turn off all fans and blowers.
	4e. Close all hangar doors when aircraft is on scales.
5. Weigh	
--Initial weigh is a warmup (platform scales or load cells). --If load cells are utilized, jacks will not be spun, and hammers will not be used. Any jarring force applied to jack can cause miscalculations. --After weigh, aircraft must remain on the spot, untouched, until released by QA.	

Attachment 27 (Added)

C-12 FUNCTIONAL CHECK FLIGHTS (FCF) CHECKLISTS

Table A27.1. C-12 Contracting Officer Representative (COR) FCF Briefing Checklist.

3 MXG C-12 COR FCF BRIEFING FCF CHECKLIST 1			
This checklist is designed to aid in the preparation and accomplishment of the FCF process and is to be filled out and signed during the FCF briefing. The aircrew checklist (-6 CL) will be filed with the applicable aircraft records history. **FCF Checklist 2** is to be checked off during the debriefing to ensure all required items are accomplished.			
AIRCRAFT TAIL #:	**PILOT:**	**JCN:**	
REASON FOR FCF:		**DATE:**	
ACTIVITY	**TASK**	**DATE**	**INITIALS**
COR	1. COR advised of pending FCF.		
	2. Weight and balance checked.		
	3. FCF entered into 781As.		
	4. FCF entered into COR programs.		
	5. Approved/Required letters on-hand.		
	6. Data entered on OCF/FCF log.		
	7. Pre-flight QVI accomplished and signed off.		
	8. Forms reviewed, stamped, and signed off.		
	9. Pilot/Aircrew is briefed on the following: a. Purpose of FCF. b. FCF-related maintenance or discrepancies. c. Document requirements for FCF pilot.		
QA	1. Notified 3 MXG/CC (or designated representative).		
CREW	1. Notified 3 OG/CC (or designated representative).		
	2. Received aircrew checklist.		

	3. Checked weather requirements.		
	4. Reserved range space.		
	5. Have read and understand (as applicable): a. DAFI 21-101_AMCSUP. b. DAFI21-101_3WGSUP. c. DAFI21-101_PACAFSUP. d. TO 1-1-300. e. 1C-12(F)(J)-6CL-1 F.		
	6. FCF profile determined (Full/Limited). If limited, highlight applicable items in the checklist.		

PILOT CERTIFICATION: I certify that I have been briefed on the items initialed above, checked NOTAMS, weather, and confirmed airspace has been reserved.

FCF Pilot Signature and Date:

BRIEFER CERTIFICATION: I certify that I have conducted the briefing in accordance with DAFI 21-101_PACAFSUP_3WGSUP and procedures.

COR Briefer - Print Name: _____

COR Briefer - Signature and Date:

Table A27.2. C-12 COR FCF Debriefing Checklist.

3 MXG C-12 COR FCF DEBRIEFING FCF CHECKLIST 2 This checklist is designed to aid in the preparation and accomplishment of the FCF process. Checklist 2 is to be checked off by COR during the debriefing to ensure all required items are accomplished. The aircrew checklist (-6CL) will be filed with the applicable aircraft records history in accordance with DAFI 21-101_PACAFSUP_3WGSUP.		
ACTIVITY	**TASK**	**INITIALS**
PILOT	1. All discrepancies found during FCF are documented in aircraft forms (as applicable).	
	2. FCF aircrew checklist (-6 CL) are appropriately checked and the checklist is signed.	
QAR	1. Date and time of next FCF briefing and take-off have been scheduled (as applicable).	
	2. FCF checklist is returned from the aircrew.	
	3. FCF log is completed.	
COR SUPPLEMENTARY PROCEDURES This section is to assist in items to be accomplished after an FCF is complete.		
PILOT	1. Print CAMS Screen 174 for the FCF.	
	2. File all documents under Tab H of the FCF/OCF Program Book.	

Attachment 28 (Added)

C-12 OPERATIONAL CHECK FLIGHTS (OCF) CHECKLISTS

Table A28.1. C-12 OCF Checklist.

3 MXG C-12 COR OCF BRIEFING OCF CHECKLIST 1 This checklist is designed to aid in the preparation and accomplishment of the OCF process and is stored in the FCF/OCF book upon completion. **OCF Checklist 2** is to be checked off during the debriefing to ensure all required items are accomplished.			
AIRCRAFT TAIL #:	**PILOT:**	**FLIGHT DATE:**	**JCN:**
REASON FOR OCF:	**OCF AUTHORIZING AUTHORITY (SQUADRON COMMANDER):**		

ACTIVITY	**TASK**	**DATE**	**INITIALS**
COR	1. C-12 COR section advised of pending OCF.		
	2. OCF entered in CAMS and 781As.		
	3. OCF entered in COR Programs.		
	4. Data entered into OCF/FCF log.		
	5. Pre-flight QVI accomplished (as applicable).		
	6. Forms reviewed by COF.		
	7. Applicable approval letters on-hand.		
	8. Pilot/Aircrew briefed on: a. Purpose of OCF. b. Maintenance performed. c. Documentation requirements of OCF pilot.		
CREW	9. Checked weather requirements.		
	10. OCF profile determined.		

PILOT CERTIFICATION: I certify that I have been briefed on the items initialed above, checked NOTAMS, weather, and confirmed airspace has been reserved.
FCF Pilot Signature and Date:

BRIEFER CERTIFICATION: I certify that I have conducted the briefing in accordance with DAFI 21-101 and DAFI 21-101/3 WG SUP procedures.
COR Briefer's Signature and Date:

Table A28.2. C-12 OCF Checklist (Checklist 2).

3 MXG C-12 COR OCF DEBRIEFING OCF CHECKLIST 2		
This checklist is designed to aid in the preparation and accomplishment of the OCF process and is stored in the FCF/OCF book upon completion. This checklist is to be checked off during the debriefing to ensure all required items are accomplished. **OCF Checklist 1** is to be filled out and signed during the OCF briefing.		
ACTIVITY	**TASK**	**INITIALS**
PILOT	1. Pilot has properly signed off the OCF in the aircraft forms as "Released" or "Not Released."	
	2. All discrepancies found during OCF are documented in aircraft forms (as applicable).	
QAR	3. Date and time have been scheduled of next OCF briefing and take-off (as applicable).	
	4. OCF Log completed.	

Table A28.3. C-12 OCF Procedures.

COR OCF SUPPLEMENTARY OCF PROCEDURES	
This checklist is to assist in items to be accomplished **after an OCF is complete**.	
ACTIVITY	**TASK**
PILOT	1. Sign off CAMS, complete COR programs, and print CAMS Screen 174.
	2. File all documents under Tab G of the OCF/FCF Program Book.

Attachment 29 (Added)

F-22 FUNCTIONAL CHECK FLIGHT (FCF) QUALITY ASSURANCE CHECKLISTS

Table A29.1. F-22 FCF QA Briefing Checklist.

3 MXG F-22 FCF QA BRIEFING CHECKLIST This checklist is designed to aid in the preparation and accomplishment of the FCF process. TO 1F-22A-6CL-1 is to be filled out and signed during the FCF briefing. The aircrew checklist (-6 CL) will be filed with the applicable aircraft records history.				
AIRCRAFT TAIL #:	**PILOT:**	**DATE:**	**LCN:**	
			JCN:	
HQ CAT:	**LAST FLY DATE:**	**REASON:**	**2407:**	
ACTIVITY	**TASK**		**DATE**	**INITIALS**
QA	1. QA advised of pending FCF.			
	2. Ensure FCF and reason are entered into MIS.			
	3. Complete FCF log entry.			
	4. Forms QVI, signed off through last flight and entered into QA Database (LEAP).			
	5. BPO/Pre-Flight QVI accomplished/entered into QA database (LEAP).			
	6. Schedule an FCF briefing w/applicable squadron.			
	7. Review weight and balance documents (Form F).			
	8. Pilot is briefed on the following: a. Purpose of FCF. b. FCF-related maintenance or discrepancies. c. Document requirements for FCF pilot.			
CREW	1. Notified 3 OG/CC (or designated representative).			
	2. Received aircrew checklist (1F-22A-6CL-1).			
	3. Checked weather requirements.			
	4. FCF profile determined (Full / Limited). If limited, highlight applicable items in the checklist.			
PILOT CERTIFICATION: I certify that I have been briefed on the items initialed above, checked NOTAMS and weather, and confirmed airspace has been reserved. **FCF Pilot Signature and Date:**				
BRIEFER CERTIFICATION: I certify that I have conducted the briefing in accordance with DAFI 21-101_PACAFSUP_3WGSUP procedures. **QA Briefer Printed Name:_____** **QA Briefer Signature and Date:**				

Table A29.2. F-22 FCF QA Post Flight Checklist.

3 MXG F-22 QA FCF POST FLIGHT CHECKLIST		
PILOT	**DATE**	**INITIALS**
1. Pilot has properly signed-off FCF in IMIS as “released” or “not released.”		
2. All discrepancies found during FCF are documented during maintenance debrief.		
3. -6 CL completed by pilot and given to QA representative.		
QA		
1. Complete FCF log entry.		
2. Forward FCF Checklist to Plans & Scheduling (3 MXG).		

Attachment 30 (Added)

F-22 FCF PRE-MISSION CHECKLIST

Table A30.1. F-22 FCF Pre-Mission Checklist.

F-22 FCF PRE-MISSION CHECKLIST FCFs are check flights conducted for other than contractual conformance and/or to ensure aircraft is airworthy IAW TO 1-1-300 and TO 1F-22A-6.		
FGS WILL:		**EMP #**
1	The production superintendent will notify QA and the operations squadron commander as soon as it becomes evident that an FCF is required.	
2	Generate an FCF template and place it in MIS. Enter the FCF discrepancy. All discrepancies will be entered on a RED DASH.	
3	Perform required pre-flight operational checks.	
4	The production superintendent will ensure aircraft scheduled for FCF is configured clean.	
5	AMU supervision will perform a forms review. Notify QA that forms are ready for review after MX and forms are completed NLT one day prior to scheduled take off time.	
6	AMU supervision will notify QA when the aircraft is ready for QVI.	

Attachment 31 (Added)

F-22 OPERATIONAL CHECK FLIGHT (OCF) QUALITY ASSURANCE CHECKLISTS

Table A31.1. F-22 OCF QA Briefing Checklist.

3 MXG F-22 OCF QA BRIEFING CHECKLIST This checklist is designed to aid in the preparation and accomplishment of the OCF process. TO 1F-22A-6CL-1 is to be filled out and signed during the OCF briefing and will be filed with the applicable aircraft records history (as required).				
AIRCRAFT TAIL#	**PILOT**	**DATE**	**LCN:**	
			JCN:	
HQ CAT:	**LAST FLY DATE:**	**REASON:**	**2407:**	
ACTIVITY	**TASK**		**DATE**	**INITIALS**
QA	1. QA advised of pending OCF.			
	2. Ensure OCF and reason are entered into MIS.			
	3. BPO/Pre-Flight QVI accomplished/Entered into QA database (LEAP).			
	4. Complete OCF log entry.			
	5. Forms QVI, signed off through last flight and entered in QA Database (LEAP).			
	6. Schedule an OCF briefing w/applicable squadron.			
	7. Review weight and balance documents (Form F).			
	8. Pilot is briefed on the following: a. Purpose of OCF. b. OCF-related maintenance or discrepancies. c. Document requirements for OCF pilot.			
CREW	1. Notified 3 OG/CC (or designated representative).			
	2. Received aircrew checklist (1F-22A-6CL-1) (as required).			
	3. Checked weather requirements			
	4. OCF profile determined (Full / Limited). If limited, highlight applicable items in the checklist.			
PILOT CERTIFICATION: I certify that I have been briefed on the items initialed above, checked NOTAMS, weather, and confirmed airspace has been reserved. **OCF Pilot Signature and Date:**				
BRIEFER CERTIFICATION: I certify that I have conducted the briefing in accordance with DAFI21-101_3WGSUP procedures. **QA Briefer Print Name:_____** **QA Briefer Signature and Date:**				

Table A31.2. F-22 OCF QA Post Flight Checklist.

F-22 OCF QA POST FLIGHT CHECKLIST		
PILOT	**DATE**	**INITIALS**
1. Pilot has properly signed-off OCF in IMIS as “released” or “not released.”		
2. All discrepancies found during OCF are documented during maintenance debrief.		
3. 1F-22A-6CL-1 CL completed by pilot and given to QA representative (as required).		
QA	**DATE**	**INITIALS**
1. Complete OCF log entry.		
2. Forward OCF Checklist to Plans & Scheduling.		

Attachment 32 (Added)

F-22 OPERATIONAL CHECK FLIGHT (OCF) PRE-MISSION CHECKLIST

Table A32.1. F-22 Operational Check Flight (OCF) Pre-Mission Checklist.

F-22 OCF PRE-MISSION CHECKLIST		
FGS WILL:		**EMP #**
1	The production superintendent will notify QA and the operations squadron commander as soon as it becomes evident that an OCF is required.	
2	Generate an OCF template and place it in MIS. Enter the OCF discrepancy. All discrepancies will be entered on a RED DASH.	
3	Perform required pre-flight operational checks.	
4	The production superintendent will ensure aircraft scheduled for OCF is configured clean.	
5	AMU supervision will perform a forms review. N otify QA that forms are ready for review after MX and forms are completed NLT one day prior to scheduled take off time.	
6	AMU supervision will notify QA when the aircraft is ready for QVI.	
OCF missions are flown to check the operations of selected systems or equipment that requires flight verification in accordance with TO 1-1-300 and TO 1F-22A-6.		

Attachment 33 (Added)

E-3 FUNCTIONAL CHECK FLIGHT (FCF) QUALITY ASSURANCE CHECKLISTS

Table A33.1. E-3 FCF QA Briefing Checklist.

3 MXG E-3 QA FCF BRIEFING CHECKLIST

This checklist is designed to aid in the preparation and accomplishment of the FCF process. The aircrew checklist (1E-3A-6CL-1) is to be filled out and signed during the FCF briefing and will be filed with the applicable aircraft records history.

AIRCRAFT TAIL#:	**PILOT:**	**DATE:**	**LCN:**
HQ CAT:	**LAST FLY DATE:**	**REASON:**	**2407:**

ACTIVITY	TASK	DATE	INITIALS
QA	1. QA advised of pending FCF.		
	2. Ensure FCF and reason are entered into IMDS.		
	3. BPO/Pre-Flight QVI accomplished/signed off.		
	4. Complete FCF log entry and enter in QA database.		
	5. Forms reviewed and signed off through last Flight.		
	6. Schedule an FCF briefing w/applicable squadron.		
	7. Review weight and balance documents (Form F).		
	8. Pilot is briefed on the following: a. Purpose of FCF. b. FCF-related maintenance or discrepancies. c. Document requirements for FCF pilot.		
	9. Notified 3 MXG/CC (or designated representative).		
CREW	1. Notified 3 OG/CC (or designated representative).		
	2. Received aircrew checklist (1E-3A-6CL-1).		
	3. Checked weather requirements.		
	4. FCF profile determined (Full / Limited). If limited, highlight applicable items in the checklist.		

PILOT CERTIFICATION: I certify that I have been briefed on the items initialed above, checked NOTAMS, weather, and confirmed airspace has been reserved.

FCF Pilot Signature and Date:

QA BRIEFER CERTIFICATION: I certify that I have conducted the briefing in accordance with DAFI21-101_3WGSUP, procedures.

QA Briefer Printed Name: _____

QA Briefers Signature and Date:

Table A33.2. E-3 FCF QA Post Flight Checklist.

E-3 FCF QA POST FLIGHT CHECKLIST		
PILOT	**DATE**	**INITIALS**
1. Pilot has properly signed off FCF in Forms as “released” or “not released”.		
2. All discrepancies found during FCF are documented during maintenance debrief.		
3. -6 CL completed by pilot and given to QA representative.		
QA	**DATE**	**INITIALS**
1. Complete FCF log entry and input into QA database.		
2. Forward FCF Checklist to Plans & Scheduling (3 MXG).		

Attachment 34 (Added)

E-3 FUNCTIONAL CHECK FLIGHT (FCF) PRE-MISSION CHECKLIST

Table A34.1. E-3 Functional Check Flight (FCF) Pre-Mission Checklist.

E-3 FCF PRE-MISSION CHECKLIST			
FGS WILL:		**DATE**	**INITIALS**
1	The Production Superintendent will notify QA and the Operations Squadron Commander as soon as it becomes evident that FCF is required.		
2	Generate FCF template and enter it in IMDS. Enter the FCF discrepancy.		
3	Perform required -6 Preflight and required operational checks.		
4	AMU supervision will perform a forms review. Notify QA that forms are ready for review no later than one day prior to scheduled take-off time.		
5	AMU supervision will notify QA when the aircraft is ready for QVI.		

Attachment 35 (Added)

E-3 OPERATIONAL CHECK FLIGHT (OCF) QUALITY ASSURANCE CHECKLISTS

Table A35.1. E-3 OCF QA Briefing Checklist.

3 MXG E-3 OCF QA BRIEFING CHECKLIST				
This checklist is designed to aid in the preparation and accomplishment of the FCF process. 1E-3A-6CL-1 is to be filled out and signed during the FCF briefing and will be filed with the applicable aircraft records history.				
AIRCRAFT TAIL#:	**PILOT:**	**DATE:**	**LCN:**	
HQ CAT:	**LAST FLY DATE:**	**REASON:**	**2407:**	
ACTIVITY	**TASK**		**DATE**	**INITIALS**
QA	1. QA advised of pending OCF.			
	2. Ensure OCF and reason are entered into IMDS.			
	3. Applicable -6 Pre-flight QVI accomplished/signed off			
	4. Complete OCF log entry and enter in QA database.			
	5. Forms reviewed and signed off through last flight.			
	6. Schedule an OCF briefing w/applicable squadron.			
	7. Review weight and balance documents (Form F).			
	8. Pilot is briefed on the following: a. Purpose of OCF. b. OCF-related maintenance or discrepancies. c. Document requirements for OCF pilot.			
	9. Notified 3 MXG/CC (or designated representative).			
CREW	1. Notified 3 OG/CC (or designated representative).			
	2. Received aircrew checklist (1E-3A-6CL-1).			
	3. Checked weather requirements.			
	4. OCF profile determined (Full / Limited). If limited, highlight applicable items in the checklist.			
PILOT CERTIFICATION: I certify that I have been briefed on the items initialed above, checked NOTAMS, weather, and confirmed airspace has been reserved. **OCF Pilot Signature and Date:**				
QA BRIEFER CERTIFICATION: I certify that I have conducted the briefing in accordance with DAFI21-101_3WGSUP procedures. **QA Briefer Print Name:** _____ **QA Briefer Signature and Date:**				

Table A35.2. E-3 OCF QA Post Flight Checklist.

E-3 OCF QA POST FLIGHT CHECKLIST		
PILOT	**DATE**	**INITIALS**
1. Pilot has properly signed off OCF in forms as “released” or “Not Released”.		
2. All discrepancies found during OCF are documented during maintenance debrief.		
3. -6 CL completed by pilot and given to QA representative.		
QA	**DATE**	**INITIALS**
1. Complete OCF log entry and input into QA database.		
2. Forward OCF Checklist to Plans & Scheduling.		

Attachment 36 (Added)

F-22 HIGH SPEED TAXI (HST) QUALITY ASSURANCE BRIEFING CHECKLIST

Table A36.1. F-22 High Speed Taxi (HST) Quality Assurance Briefing Checklist.

3 MXG F-22 HST QA BRIEFING CHECKLIST This checklist is designed to aid in the preparation and accomplishment of the HST process. This checklist is to be filled out and signed during the HST briefing.				
AIRCRAFT TAIL#:	**PILOT:**	**DATE:**	**LCN:**	
HQ CAT:	**LAST FLY DATE:**	**REASON:**	**2407:**	
ACTIVITY	**TASK**		**DATE**	**INITIALS**
QA	1. QA advised of pending HST.			
	2. Ensure HST and reason are entered into MIS.			
	3. BPO/Pre-Flight QVI accomplished/signed off.			
	4. Complete HST log entry and enter in QA database			
	5. Forms QVI and signed off through last flight.			
	6. Schedule an HST briefing with applicable squadron.			
	7. Review weight and balance documents (Form F).			
	8. Pilot is briefed on the following: a. Purpose of HST. b. HST-related maintenance or discrepancies. c. Document requirements for HST pilot.			
	9. 3 OG/CC approval is required to exceed 100 Knots of Calibrated Air Speed (KCAS) during HST checks. Departure end cables will be raised for F-22 HST checks.			
CREW	1. Notified 3 OG/CC (or designated representative).			
	2. Checked weather requirements.			
	3. Performed takeoff data review to indicate highest speed expected and the stopping distance.			
PILOT CERTIFICATION: I certify that I have been briefed on the items initialed above, checked NOTAMS, weather, and confirmed airspace has been reserved. **HST Pilot Signature and Date:**				
BRIEFER CERTIFICATION: I certify that I have conducted the briefing in accordance with DAFI 21-101_PACAFSUP_3WGSUP procedures. **QA Briefer Print Name:** _____ **QA Briefer's Signature and Date:**				

Attachment 37 (Added)

E-3 HIGH SPEED TAXI (HST) QUALITY ASSURANCE CHECKLISTS

Table A37.1. E-3 HST QA Checklist.

E-3 HST QA CHECKLIST **HIGH SPEED TAXIS REQUIRE AN FCF QUALIFIED PILOT**				
AIRCRAFT TAIL#:	**FCF PILOT:**	**DATE:**	**REASON:**	
ACTIVITY	**TASK**		**DATE**	**INITIALS**
QA	1. QA section advised of HST.			
	2. Weight and Balance checked.			
	3. Forms reviewed/exceptional release signed.			
	4. Discrepancy entered in IMDS for HST.			
	5. Ensure aircraft is configured with minimum 1E-3A-1 operations fuel required.			
	6. Brief pilot on the following: a. Purpose of HST check. b. HST-related maintenance or discrepancies. c. Required documentation. d. Brake check prior to taxi. e. Cool down time for brakes after full stop.			
CREW	1. Notified 3 OG/CC (or designated representative).			
	2. Checked weather requirements.			
	3. I have read and understand the following: a. TO 1-1-300 paragraph 3.3. b. DAFI21-101_3WGSUP, Chapter 6.14.			
PILOT CERTIFICATION: I certify that I have been briefed on the items above, checked NOTAMS and weather. I am FCF qualified and current. **HST Pilot Signature and Date:**				
QA BRIEFER'S CERTIFICATION: I certify that I have conducted the briefing in accordance with DAFI 21-101_PACAFSUP_3WGSUP procedures. **QA Briefer Print Name:** _____ **QA Briefer's Signature and Date:**				

Table A37.2. High Speed Taxi Debrief Checklist.

HIGH SPEED TAXI (HST) DEBRIEF CHECKLIST		
TASK	**DATE**	**INITIALS**
1. Pilot has properly signed-off the original discrepancy.		
2. Any new discrepancies found during HST check are entered in IMDS.		