BY ORDER OF THE COMMANDER
EDWARDS AIR FORCE BASE

AIR FORCE INSTRUCTION 21-101

AIR FORCE MATERIEL COMMAND
Supplement

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Supplement

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AIRCRAFT AND EQUIPMENT
MAINTENANCE MANAGEMENT

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This publication supplements Air Force Instruction (AFI) 21-101, *Aircraft and Equipment Maintenance Management.* This supplement prescribes guidance and procedures for all Edwards Air Force Base (AFB) organizations and personnel that develop, test and maintain aerospace platforms and associated equipment. This instruction is applicable to all operational and maintenance activities on Edwards AFB. Where no written guidance and/or supplemental information is provided by AFI 21-101, AFMC Sup, the guidance herein directly supports the paragraphs in AFI 21-101. Ensure that all records created as a result of processes prescribed in this publication are maintained IAW AFI 33-322, Records Management and Information Governance Program, and disposed of IAW Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS). Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Form 847, Recommendation for Change of Publication; route AF Forms 847 from the field through the appropriate functional's chain of command. This instruction requires the collection and/or maintenance of information protected by the Privacy Act of 1974 authorized by 5 United States Code, Section 552a, as amended; 37 United States Code; Executive Order 9397, Numbering System for Federal Accounts Relating to Individual Persons, as amended; and AFPD 11-2; and authorized by Title 10, United States Code, Section 8013, Secretary of the Air Force. The Privacy

Act System of Records Notice F011 AF XO A, Aviation Resource Management Systems; and SORN F036 AF PC V, Awards and Decorations covers required information and is available at **http://dpclo.defense.gov/Privacy/SORNs.aspx**.

This publication may be supplemented at any level, but all direct supplements must be routed to the OPR of this publication for coordination prior to certification and approval. This publication does not apply to Air Force Reserve Command Units.

SUMMARY OF CHANGES

This publication has been substantially revised and must be completely reviewed in its entirety. Summary of changes are as follows; numerous paragraphs that did not apply to aircraft maintenance were deleted. **Chapter 8** has the most changes. The FOD section has some control changes for Personal Protective Equipment (PPE) and personal items. The sign off for repeat/recur discrepancies has been simplified. A procedure was added for an alternate procedure to sign off an AFMC Form 310.

1.6.2.1. **(Added)** Technical Order (TO) 00-5-1, *AF Technical Order System*, requires that Operations and Maintenance TOs must be available and used at the job site. For purposes of implementing this requirement, the job site is defined locally as the immediate area where work (requiring the use of Operations and Maintenance technical data) is being performed. Technical data must be opened to the specific task being performed.

1.6.2.2. **(Added)** Ensure no munitions or maintenance operation will be performed without Department of Defense (DoD) approved technical data, contractor data or local technical data drafted, reviewed and approved per this instruction and AFTCI 63-101_20-101. Activities affected include the loading and handling of munitions, munitions alternate mission equipment and nonstandard equipment in support of maintenance or test programs.

1.6.2.3. **(Added)** The Wing Weapons Manager (WWM) will review Safety Review Board reports, test plans and flight clearance through the applicable SPO/Seek Eagle office for any deviations from applicable weapons configurations or loading technical data.

1.6.2.4. **(Added)** Country-unique TOs and supplements: country supplied technical data used solely for the maintenance of the airframe, engine and sub systems of non-USAF aircraft by 412 MXG personnel.

1.15.2.2.1. **(Added)** Cell phone use is prohibited within 10 feet of any aircraft unless a greater distance is specified (e.g., fuel servicing, weapons loading, etc.).

2.4.1.1. **(Added)** See supplemental **paragraph 11.40** for local radiation protection program guidance.

2.4.44.1. **(Added)** Refer to supplemental **paragraph 11.42** For procedures to review and clear "repeat", "recur", and "cannot duplicate" (CND) discrepancies.

2.6. (Added) Director of Logistics (DoL). The DoL is principal advisor concerning logistics to the Combined Test Force (CTF) Director, the System Program Office (SPO) and the 412 MXG/CC as it applies to combined Developmental Test and Evaluation (DT&E)/Operational Test and Evaluation (OT&E) projects at Edwards AFB CA. The DoL provides technical management to the combined contractor/government logistics/maintenance operations of the CTF to assure efficient and effective execution of test programs. Additionally, the DoL provides expertise in formulating and developing Logistics Support Plans, Logistics Test Plans, and any other logistics related plans required to support the combined DT&E/OT&E effort. The DoL serves as a focal point for development, integration, and coordination on all aspects of test and production weapons systems logistics support requirements including the use of modeling and simulation to conduct supportability test, maintenance of aircraft and support equipment, technical order development, materiel support, transportation, facilities and test support equipment. The DoL develops logistics/maintenance policies and processes affecting entire CTF, provides advice and guidance to command and staff elements within the CTF and provides management and oversight of the DT&E portion of a combined DT&E/OT&E organization.

2.12.8.2. **(Added)** Notify the Engine Management (EM) section when any corrections are made to aircraft times to ensure that flight hour driven inspections are up-to-date and accurate.

2.12.8.3. **(Added)** Ensure engine removals and installations are documented in the applicable Maintenance Information System (MIS) before end of shift and/or before next engine run.

2.12.20.1. **(Added)** for units operating F-35 weapons systems, Dash-21 inventories are tracked in the Autonomic Logistics Information System (ALIS).

2.13. (Added) Wing Avionics Manager (WAM).

2.13.1. **(Added)** Serves as the MXG Aircraft Structural Integrity Program (ASIP) Project Officer IAW **Chapter 11**.10 of this publication.

3.6.4.1.2. **(Added)** F-35 expediter will maintain copies of the following in the expediter vehicle: Flying schedule, emergency action and functional checklists, base grid map with cordon overlay, Quick Reference List (if developed) and tracking device for aircraft status. The Minimum Essential Function Listing, Logistic Control Number (LCN) and In Process Inspection listing are internal to the ALIS.

3.6.12. **(Added)** Ensure engine data from daily flown/ground run aircraft is downloaded via Common Engine Transfer System or equivalent unit and is sent (either hand carried or sent via email) to the EM section no later than 0900 the next duty day.

3.6.13. **(Added)** Notify the EM section when problems occur with downloading engine data. Engine data will be sent to EM as soon as possible after the problem is solved.

3.8.2. **(Added)** Follow procedures IAW AFMCI 21-105 for DCC/ADCC marking procedures.

3.10.1.12.1. **(Added)** For units operating F-35 weapons systems, ensure the Joint Strike Fighter Program Office provides Composite Tool Kits (CTK) in accordance with production contract guidelines.

3.10.1.30. **(Added)** The weapons section Noncommissioned Officer in Charge (NCOIC)/Chief will submit a load crew alignment/code-out/checklist qualified letter to the Weapons Standardization by the 5th day of each month.

3.10.1.23.1. **(Added)** Ensure Live Fire Notification document located on Weapons Standardization SharePoint is updated 24 hours prior to live loading operations and inert separation missions.
https://org2.eis.af.mil/sites/22683/MXW/Live%20Sortie%20Notification/Forms/AllItems.aspx#InplviewHash4e943750-64e7-485e-b3f8-e1a30a4f873f=SortField%3DModified-SortDir%3DAsc

3.10.1.30. **(Added)** The Weapons Section NCOIC/Chief will appoint expediters in writing to Weapons Standardization.

3.10.6. **(Added)** Units operating F-35 weapons systems should request technical assistance IAW AFI 21-101 paragraph 4.6.4 for support equipment (SE) requiring repair when procedures are not established. Ensure an AR is submitted for SE requiring repair when procedures are not established.

3.10.6.1. **(Added)** Units operating F-35 weapons systems will review and coordinate loading related Joint Technical Data (JTD) AFTOs in the ALIS Customer Relationship Management tool.

4.4.3. **(Added)** All F-35 egress maintenance will be accomplished in accordance with the applicable JTD, JSF AEI, EIR or a current and approved engineering disposition using only tools and support equipment authorized by Lockheed Martin and Martin Baker.

4.4.3.1.1.1. **(Added)** On-equipment egress maintenance or inspection will not be performed after Egress Section normal duty hours (Monday through Friday, 0700-2400) without the support of aircraft owning unit personnel.

4.4.3.1.1.2. **(Added)** Ejection seat and canopy removal/installation and ejection seat raise/tilt procedures shall only be performed inside a maintenance hangar.

4.4.3.1.1.2.1. **(Added)** If available, an overhead hoist shall be used to conduct canopy and/or seat removals and installations, otherwise a manual utility crane shall be used as allowed by technical data. Note: An overhead hoist is considered available when it is serviceable and when no other aircraft already occupies the hangar parking location necessary to facilitate use of the overhead hoist.

4.4.3.1.1.2.1.1. **(Added)** If hangar overhead hoist parking location is already occupied, aircraft shall not be towed/relocated solely for the purpose of making the overhead hoist available if the capability to use manual utility crane exists. Exceptions may be made to this requirement by aircraft owning unit Production Superintendents based on aircraft maintenance priorities.

4.4.3.1.1.3. **(Added)** If manual utility crane will be used to remove or install F-16 canopy and/or seat assemblies, the following aircraft configuration requirements apply:

4.4.3.1.1.3.1. **(Added)** Single-seat F-16 aircraft must have the centerline external fuel tank removed.

4.4.3.1.1.3.2. **(Added)** Dual-seat F-16 aircraft must have the centerline and left external fuel tank removed.

4.4.3.1.3.1. **(Added)** 412 MXS/MXMA Component Repair Flight will send a representative to the quarterly wing PS&D meeting to assist in the forecasting of time change requirements for the following quarter.

4.4.3.1.4.1.1. **(Added)** Location of egress maintenance operations inside Building 1425. Note: Any explosives maintenance or storage actions in Building 1425 conducted by personnel not assigned to the 412 MXS/MXMA Component Repair Flight will be coordinated through/approved by the 412 MXS Egress Section Chief or their designated representative.

4.4.3.1.4.1.2. **(Added)** Maintenance Area #1: North side of Building 1425 for ejection seat maintenance.

4.4.3.1.4.1.3. **(Added)** Maintenance Area #2: Southeast side of Building 1425 for canopy maintenance.

4.4.3.1.4.2. **(Added)** Explosive storage area/transit area requirements.

4.4.3.1.4.2.1. **(Added)** Secured cage located in northwest corner of Building 1425 used for storage of explosive components. F-16 and F-35 canopies, B-52 escape hatches and T-38 seats awaiting maintenance or installation will be kept in the northeast section of Building 1425 inside the designated transit area. Advanced Concept Ejection Seat II, Mark 16 series and B-52 ejection seats awaiting maintenance or installation will be kept in the southwest corner of Building 1425 inside the designated transit area.

4.4.3.1.4.2.2. **(Added)** Seats and/or components delivered to Building 1425 for maintenance, storage or transit by personnel not assigned to the 412 MXS/MXMA Component Repair Flight will be returned to the user in the same equipment configuration in which it was received.

4.4.3.1.4.2.3. **(Added)** At the beginning and end of each shift, seat assemblies, seat supports and other equipment in storage and/or transit will be inspected for proper safety and protective device installation and the accuracy of all required documentation will be verified.

4.4.3.1.4.2.3.1. **(Added)** Personnel assigned to the 412 MXS/MXMA Component Repair Flight will have access to the munitions lockers and explosive storage cage. Explosive storage areas and lockers will remain locked when not in use.

4.4.3.1.4.2.4. **(Added)** Personnel limits inside Building 1425.

4.4.3.1.4.2.4.1. **(Added)** Maintenance Area #1: No more than 4 supervisors, 12 technicians and 4 casuals.

4.4.3.1.4.2.4.2. **(Added)** Maintenance Area #2: No more than 4 supervisors, 8 technicians and 3 casuals.

4.4.3.1.4.2.4.3. **(Added)** Explosive Storage Area: No more than 2 supervisors, 4 technicians and 2 casuals.

4.4.3.1.4.2.5. **(Added)** Grounding systems will be checked in accordance with AFMAN 32-1065, *Grounding and Electrical Systems*, and continuity checks will not exceed 1 ohms.

4.4.3.1.4.2.6. **(Added)** LMRs, pagers and cellular telephones will be turned off prior to entry into Building 1425.

4.4.3.1.4.2.7. **(Added)** Explosives maintenance will cease when lightning is within five nautical miles of the base as determined by the base weather office.

4.4.3.1.4.2.8. **(Added)** Any personnel (regardless of unit of assignment) performing explosives and/or egress maintenance inside Building 1425, will be familiar with fire reporting, personnel evacuation and fire extinguisher use procedures as listed on the 412 MXS/MXMA Component Repair Flight job safety training outline in addition to the following:

4.4.3.1.4.2.8.1. **(Added)** Emergency procedures for fired explosives:

4.4.3.1.4.2.8.2. **(Added)** Evacuate to the required withdrawal distance and notify the MOC of the incident. Once the scene has been cleared or if there is no reason to evacuate notify the following agencies; Weapons Safety (7-4287), QA (7-3624) and MXS Director (7-2599/cell 661- 810-7607).

4.4.3.1.4.2.8.3. **(Added)** The US16E Under Seat Rocket Motor (USRM) is delivered in a wooden container the DoD Hazard Classification is 1.3C. If it is delivered in a metal container the DoD Hazard Classification is 1.2.1C. Any US16E USRM delivered in a metal container must be placed into a wooden container prior to being accepted into Building 1425 in order to satisfy explosive limitations for which the facility is licensed to store.

4.4.3.1.4.3. **(Added)** Authorization for the temporary storage of any explosive items not listed on the Explosive Facility License for Building 1425 must be coordinated by the requesting agency for approval through 412 TW/SEW prior to delivery/acceptance of the item. Temporary storage is limited to 30 days.

4.5.1.8. **(Added)** Aerospace Ground Equipment (AGE) does not dispatch or coordinate emptying of fuel bowsers.

4.5.1.9. **(Added)** AGE personnel will monitor all sub-pools for equipment serviceability. This will include open AFTO Form 244, Industrial Support Equipment Record or AFTO Form 245, Industrial/Support Equipment Record (Continuation Sheet) discrepancies, fuel and oil levels and any equipment damage that may render the equipment unserviceable or unsafe for use.

4.5.1.10. **(Added)** AGE will be assigned to aircraft owning organization's equipment sub-pools and other aircraft maintenance activities as agreed under specified memorandums of agreement. A base fleet sub-pool has been established to provide supplemental support to other aircraft maintenance activities as requested (e.g., cruise missile launches, Transient Alert, special projects and/or other ground support requirements).

4.5.1.11. **(Added)** All personnel (regardless of unit of assignment) are responsible for ensuring the proper equipment safety standards (i.e. security of panels/doors, application of parking brake, etc.) of any equipment they deliver to a sub-pool area.

4.5.1.12. **(Added)** AGE personnel will install distinctive sub-pool markings on all AGE equipment. Refer to **Table 4.1**.

Table 4.1. (Added) Customer Sub-pool Markings.

AIS Shop	AIS
Munitions Maintenance	AMMO
B-1	B1
B-2	B2
B-52	B52
Base Fleet	Base
Base Support Equipment	BSUP
C-17	C17
C-135	C135
Corrosion Control Facility	CC
F-16 Falcon	F16
F-22A	F22
Fuel System	Fuels
Global Hawk	GH
Hush House	HH
IMF Facility	IMF
Joint Strike Fighter	JSF
KC-46	KC46
Foreign Military Aircraft (FMS)	LMF16
MOD Aircraft	MOD
Museum	Museum
Paint Spray Booth	PSB
Phase Dock	Phase
Pratt & Whitney Test Cell	PW

Transient Alert	TA
T-38	T38
Vista F-16	Vista
Wash Rack	W/R
Weapons Back Shop	Weapons

4.5.2.2.2. **(Added)** Provide the MOC with a list of periodic inspection requirements that will be printed in the weekly Maintenance Summary.

4.5.2.8.1. **(Added)** All personnel using AGE in the performance of aircraft maintenance/operations must receive AGE Familiarization Training. AGE Familiarization Training will be conducted by an AGE Flight Trainer or an authorized individual designated in writing by 412 MXS/MXMG Aerospace Ground Equipment Flight.

4.5.2.8.2. **(Added)** Individuals who require AGE Familiarization Training will be scheduled by their Unit Training Manager (UTM).

4.9.5.11.1. **(Added)** The 412 MXS/MXMXI Inspection Team will perform all EOR operations during normal operating hours (0600-2200 Monday thru Friday). Any additional requests for Maintenance Flight to perform EOR operations require prior coordination by AMU Supervision and the 412 MXS/MXMXI Inspection Team and approval by the 412 MXG/CC or designated representative. (Verbal concurrence/approval is sufficient.)

4.9.5.12.2.3. **(Added)** Munitions removed from transient aircraft will be stored in the applicable unit's explosive locker. If transient aircraft munitions items exceed the authorized storage quantity, the weapons section (or Load Standardization Crew (LSC) when applicable) will coordinate with the 412 MXS/MXMW Munitions Flight to store the items.

4.11.1.5.1. **(Added)** Ensure engine, module, component removals and installations, time update data, borescope compliance and findings, unknown serial number verification and Time Compliance Technical Order (TCTO) status changes are reported to EM section no later than close of business the first duty day after the event.

4.11.3.5.3. **(Added)** Notify the EM section of all modules and serially controlled parts that are returned to Supply or shipped off station for overhaul, modification and/or other maintenance. NOTE: Coordination with EM is essential before shipping any part or assembly off station (i.e., NRTS, deficiency report (DR), etc.) so the records can be properly removed from IMDS/Comprehensive Engine Management System (CEMS) database.

4.11.3.6.2.8.4. **(Added)** Prior to engine final ensure all worksheets are completed and all parts are installed using MIS.

4.11.3.6.2.13.1. **(Added)** Prior to engine final, provide the EM Section with a completed Blade Blending/FOD Damage worksheet for all engines requiring blade blending or incurring foreign object damage.

5.2.2.1.1.1. **(Added)** Expected Times in Commission (ETIC) will be based/reported in 30-minute increments with the last digit representing the number of times an ETIC was changed, i.e., in a 1506 ETIC, the "6" indicates that the ETIC has been changed six times.

5.2.2.1.15.1. **(Added)** For Edwards AFB specific engine run instructions refer to **paragraph 11.45**.

6.3.15. **(Added)** The QA Division Chief will designate a Chief Inspector.

6.3.16. **(Added)** The QA Division Chief will designate individuals to be the Lead Technical Order Distribution Office (TODO) and Product Improvement Manager (PIM).

6.3.17. **(Added)** The QA Division Chief will designate individuals to be the W&B and FCF Program managers.

6.3.23. **(Added)** The QA Division Chief is the selecting/hiring official for QA inspectors.

6.4.4.1. **(Added)** QA inspection/evaluation reports that are disputed and not resolved at the time of discovery will be addressed to the Chief Inspector for resolution within 2 duty days of the original inspection/evaluation date. If no dispute is identified, after 2 duty days the report will remain as documented.

6.7.1.3.2. **(Added)** Not applicable at Edwards AFB due to scope of program operability and scope of knowledge of manning processing as per AFMC QA Working Group guidance

6.7.6.2.2.1. **(Added)** A periodic evaluation performed on Temporary-2 (T2) special instrumentation personnel will include an evaluation of all applicable technical data to include any engineering drawings, schematics, checklists, Instrumentation Work Requests (IWR), manufacturer guidance and other engineering or technical directives applicable to the task(s) under evaluation.

6.10.1.2.1. **(Added)** To determine applicability of Commodity TCTOs including Depot only Commodity TCTO's, a Letter of Applicability will be attached to the TCTO by the QA TCTO monitor and sent to the affected maintenance units and the 412 LRS/LGRM for TCTO verification. The letter will be returned to the QA TCTO Monitor within 5 working days.

6.12.1.1.1. **(Added)** An Operational Check Flight (OCF) may be approved on a case-by-case basis by the 412 MXG/CC, 412 MXG Deputy Commander (CD) or designated representative. An OCF is intended for extensive maintenance or a history of a maintenance discrepancy exists that does not require an FCF.

6.12.1.1.2. **(Added)** OCF profiles will be determined by the maintenance organization and the 412 OG/CC, or designated representative. Profiles will be either clean external configuration or tailored to the conditions related to the OCF requirement. When conditions merit configuration exceptions the aircraft will be configured as close as possible to the original configuration when the discrepancy/malfunction in question occurred.

6.12.1.1.3. **(Added)** When maintenance requiring a FCF is performed, the organization responsible for the aircraft will inform the MOC. The MOC will notify QA of the FCF requirement.

6.12.1.1.4. **(Added)** The 412 MXG/CC, 412 MXG/CD or designated representative may direct the accomplishment of an FCF on any assigned aircraft at their discretion.

6.12.2.1.1.1. **(Added)** For FCF or OCF the following applies:

6.12.2.1.1.1.1. **(Added)** QA will perform a review of AFTO 781 forms and MIS.

6.12.2.1.1.1.2. **(Added)** QA will coordinate with the AMU and accomplish the appropriate aircraft QVI as follows:

6.12.2.1.1.1.2.1. **(Added)** On fighter and trainer aircraft, QA will perform a Basic Post-/Pre-flight QVI.

6.12.2.1.1.1.2.2. **(Added)** On bomber, cargo and tanker aircraft, QA will perform a preflight, or equivalent QVI.

6.12.2.1.1.1.2.3. **(Added)** The maintenance organization will provide all aircraft AFTO 781 records since the last scheduled flight to QA.

6.12.2.1.1.1.3. **(Added)** If an FCF/OCF is Commander directed, QA will document the write- up on a Red Dash in the AFTO Form 781A. The following description will be used in the discrepancy block: "Aircraft FCF/OCF required due to (state specific reason for the FCF/OCF)". The border of the entry will be highlighted with yellow highlighter.

6.12.2.2.1. **(Added)** For an FCF, an aircrew briefing will be coordinated and conducted by QA with an AMU and/or Engineering representative present during the briefing.

6.12.2.2.2. **(Added)** For an OCF, an aircrew briefing will be conducted by QA. An AMU/ENI/MXI Special Instrumentation representative (as applicable) will accompany QA to assist briefing the reason for the OCF, maintenance performed and flight profile (if required) or other pertinent information concerning the OCF.

6.12.3.4.1. **(Added)** The owning unit MOO/Maintenance Superintendent will review all aircraft AFTO 781 records since last scheduled flight.

6.12.3.4.2. **(Added)** Once reviewed by the owning unit, all aircraft forms since the last flight will be provide to QA for review. The active aircraft forms will be released to the respective AMU for required servicing and preparation for the FCF. After exceptional release the forms will remain with QA until the FCF requirement for that day has occurred or is released.

6.12.3.4.2.1. **(Added)** If the aircraft releases, all forms will be returned to the AMU. If the aircraft requires an additional FCF attempt, the pulled forms to include T2 Modification and AFTO Form 781A records, will remain with QA and the active forms will be returned to the AMU.

6.12.3.4.3. **(Added)** After the forms review has been accomplished by both QA and the owning unit, QA will notify the Operations Scheduler and coordinate aircrew schedule for FCF.

6.12.3.4.3.1. **(Added)** Once FCF aircrew and schedule are confirmed, QA will notify the MOC and the AMU.

6.12.3.5.2. **(Added)** If an FCF requirement arises on transient aircraft the 412 MXG/CC and 412 OG/CC or designated representatives will coordinate requirements through the aircraft owning organization.

6.12.4.3.1. **(Added)** The FCF upgrade can be accomplished on actual FCFs in some cases (refer to AFMAN 11-202 Volume 1, Aircrew Training, and AFMAN 11-2FT volume 1, Flight Test Aircrew Training, as supplemented by MAJCOM and the Air Force Test Center). A FCF combined with another mission can only be accomplished with approval of the 412 OG/CC or designated representative.

6.12.4.4. **(Added)** All aircraft FCF will be flown in a clean configuration unless unique troubleshooting circumstances dictate. All deviations from a clean configuration will be in accordance with the applicable aircraft technical data and approved by the 412 OG/CC or designated representative. (See supplemental **paragraph 6.13.1.1.2** for OCF configuration requirements.)

6.12.4.5. **(Added)** If an FCF requires procedures not found in applicable -6CF-1 or -6CL-1, QA will add the required events to the applicable checklist. The amended checklist will then be coordinated through the 412 OG/CC and 412 MXG/CC or their designated representatives for approval prior to flight. If flight maneuvers required are beyond normal procedures in the aircraft flight manual (-1 or CL-1), the 412 TW Test Safety Process must be used to approve the flight.

6.12.4.5.1. **(Added)** Engine FCFs in single-engine aircraft will be conducted within gliding distance of Edwards AFB until normal engine operation is confirmed.

6.12.4.5.2. **(Added)** Engine air starts are only authorized when required by the applicable FCF checklist.

6.12.4.6. **(Added)** If an FCF cannot be completed by sunset, then it must be rescheduled, (next duty day is preferred). Weekend or holiday FCF will not normally be accomplished, but if required, must be approved by the 412 OG/CC and the 412 MXG/CC or their designated representatives.

6.12.5.2. **(Added)** For an FCF that does not release, all discrepancies documented in the aircraft AFTO Form 781A records by aircrew must be highlighted in yellow.

6.12.5.3. **(Added)** The PS&D Section will not schedule the aircraft for missions until the MOC reports the aircraft has been released from FCF/OCF.

6.12.6.2. **(Added)** The MOC will be notified when a home station aircraft requires an FCF off-station.

6.12.6.3. **(Added)** 412 MXG QA will coordinate FCF requirements through transient/host base QA office.

6.12.6.4. **(Added)** Once the aircraft has been prepared for FCF, the team chief must notify the MOC that the aircraft is ready. All documentation will be coordinated with home station QA.

6.15.4.5. **(Added)** W&B will submit a monthly forecast consisting of periodic aircraft inventories and weighing requirements NLT the 15th of the month to the owning organizations the month prior to the W&B actions being due. W&B Office will maintain a copy.

6.15.4.6. **(Added)** W&B will schedule all non-interval W&B issues to include IMDS/G081 and AFTO 781 Form actions. Owning organizations will schedule all interval W&B actions related to organizationally assigned aircraft in the MIS no later than 15 days prior to due date.

6.15.4.7. **(Added)** Owning organizations will coordinate with W&B on all aircraft transfers (i.e., Program Depot Maintenance, permanent change of station, TDY, or newly assigned aircraft). Enter a Red X in the aircraft's AFTO Form 781A and the MIS for "CHART A INVENTORY DUE" (PWC: QUAL, WUC: 04150). AMU schedulers will then coordinate with the W&B Office for exact date and time of inspection. If a basic weighing is required due to aircraft modifications

or a Test/Basic weigh is written into the Test Program, then a Chart A inventory will be accomplished in conjunction with the weigh. The W&B Program Manager or appointed designee may require the aircraft to be weighed for discrepancies that affect aircraft center-of-gravity. A Red X will be entered in the aircraft's AFTO Form 781 A for "AIRCRAFT WEIGHING DUE." (PWC: QUAL, WUC: 04150). Only W&B Personnel will clear this discrepancy.

6.15.4.8. **(Added)** W&B will coordinate Annual W&B "CHART A" inventories on all aircraft physically located at Edwards AFB. AMU schedulers will schedule job in the MIS "W&B ANNUAL CHART A INVENTORY DUE" (PWC: QUAL, WUC: 04150) as a RED DASH, according to the W&B monthly forecast. Aircraft will be grounded 30 days after the inventory due date has passed unless the inventory requirement has been extended by the W&B Program Manager.

6.15.4.9. **(Added)** For physical weighing's, organizations will deliver the aircraft to hangar 1830 or appropriate designated hangar. If using a portable weighing system, assist W&B personnel in weighing equipment set-up, prepare the aircraft for jacking/towing in accordance with TO 1-1B-50, applicable aircraft -5 series TO and applicable jacking/towing Job Guides (JG). Organizations will provide any specialists needed to assist in accomplishing the W&B "CHART A" inventory.

6.15.4.10. **(Added)** W&B will attend TCTO meetings involving W&B and ensure the AF Form 2410 is annotated whenever a W&B update is required.

6.15.4.11. **(Added)** Owning organizations will notify Wing PS&D and the W&B Office when a TCTO affecting an aircraft W&B has been accomplished. The scheduler will load a TCTO work center event (WCE) into the applicable MIS, Performing Work Center (PWC): QUAL, WUC: 04150.

6.15.4.12. **(Added)** When notified of any TCTOs accomplished on any affected aircraft, W&B will update the aircraft records in accordance with TO 1-1B-50 and clear the event in the applicable MIS.

6.15.4.13. **(Added)** W&B will verify authorized stores from applicable flight manuals and/or certified supplemental data provided by the requesting organizations. The standard Form F loading arrangement for aircraft will consist of a clean, full internal fuel ("001 or 002") "CANNED" Form F configuration. "CANNED" Form Fs will be on file in the W&B Office, and digitally signed automated versions will be available on the COOL database. Additional configuration requests will be issued on an "AS REQUIRED" basis.

6.15.4.14. **(Added)** The requesting operations flight will contact W&B at (661) 277-3349 as soon as new requirements for "TEST LOAD" (One Time Use) clearance Forms F are known. When W&B issues a "TEST LOAD" DD Form 365-4, Weight and Balance Clearance Form F – Transport/Tactical for an Edwards AFB assigned aircraft, it will only be valid for the specific loading and the calendar date on the form. If the aircraft configuration changes for the same calendar date or calendar date changes, the requesting operations flight must submit another EDWARDSAFB Form 5397, Weight and Balance Configuration Request for a new "TEST LOAD".

6.15.4.15. **(Added)** Organizations requesting a DD Form 365-4 will complete a configuration request on an EDWARDSAFB Form 5397 and submit it to W&B for appropriate action within 48 hours prior to flight. This form must be filled out completely to include equipment versions, references and Job Order Numbers (JON) in order to expedite the process.

6.15.4.16. **(Added)** Whenever an F-16 or T-38 engine is installed or re-installed, a WCE for QA (PWC: QUAL, WUC: 04199) will be put into IMDS and the AFTO Forms 781A, stating 'Post-Engine QVI serial number verification due.' The QA inspector accomplishing the QVI will close out the WCE in IMDS and sign off the AFTO Forms 781A when the QVI is complete. The QA Supervisor will review the QA database information and forward the information to W&B for AWBS input and aircraft records update.

6.15.4.17. **(Added)** T-2 Mod Dock Chief or designative representative is responsible for submitting and EDWARDSAFB Form 5210, Weight and Balance Data Reporting, for all aircraft and engine modification or de-modification. Items 1 through 15 will be completed and identify items on either the Chart A or Chart C, or Form F. A Red X will be entered in the AFTO Forms 781A and applicable MIS (PWC: QUAL, WUC: 04150) for "W&B UPDATE REQUIRED." The EDWARDSAFB Form 5210 will be submitted to the W&B Office no later than 2 weeks prior to the first flight.

6.15.4.18. **(Added)** For B-1, B-2, B-52, C-12, C-17, C-130, KC-46 and KC-135 aircraft, the following procedures will apply: Deliver the EDWARDSAFB Form 5210 containing original entries and signatures on blocks 1 through 15, the Supplemental W&B Handbook and the AFTO Form 781A to the W&B Office whenever modifications or equipment changes have occurred.

6.15.4.19. **(Added)** Whenever the supplemental handbook requires update due to changes during the T-2 Mod process, the T-2 Mod Dock Chief will treat the supplemental handbook as a required component. The T-2 Mod Documentation Office will place the appropriate RED 'X' symbol in the MIS stating "W&B supplemental handbook removed for update." The T-2 Mod Dock Chief will enter a RED 'X' in the orange-bordered AFTO Form 781A section of the aircraft's form documenting the handbook's removal.

6.15.4.20. **(Added)** W&B will physically verify all T-2 mod configuration changes documented on the EDWARDSAFB Form 5210. W&B will update the Automated Weight and Balance System (AWBS) and aircraft records to include posting a new Chart C into the supplemental handbook as required. W&B will complete corrective action entries in the AFTO Forms 781A and applicable MIS.

6.15.4.21. **(Added)** When an organization does a T-2 Mod configuration change, they are responsible for submitting a completed EDWARDSAFB Form 5210 to the W&B Office no later than 3 business days prior to flight.

7.2.1.3. **(Added)** Impoundment authority directs impoundment and assigns an impoundment official. Impound Official will meet with QA to start the Impoundment Checklist. Refer to **Attachment 7**, **Para. A7.1** for Local Impoundment Checklist.

7.2.1.4. **(Added)** Enter a Red X in the applicable forms and MIS indicating the reason for impoundment and the name of individual assigned as impoundment official.

7.2.1.5. **(Added)** Notify the MOC of impoundment decision.

7.2.1.6. **(Added)** Select a team of highly qualified technicians to determine cause of problem that led to the impoundment.

7.2.1.7. **(Added)** Control access to impounded aircraft or equipment and determine if an entry control point (ECP) is required. If ECP is established, use an access control log.

7.2.1.8. **(Added)** Determine necessary controls required for aircraft and equipment records.

7.2.1.9. **(Added)** Review aircraft or equipment forms and MIS for historical data related to the malfunction causing the impoundment.

7.2.1.10. **(Added)** Ensure maintenance is limited until the cause of impoundment is determined.

7.2.1.11. **(Added)** Ensure parts removed are carefully controlled.

7.2.1.12. **(Added)** Once the cause of the malfunction has been determined and corrected, determine if an OCF or FCF is necessary or required.

7.2.1.13. **(Added)** Ensure QA is intimately involved in the impoundment process and has reviewed all actions taken to correct the malfunction.

7.2.1.14. **(Added)** QA determines the need for cross-tell based on the potential effect to other aircraft and equipment.

7.2.1.15. **(Added)** Brief release authority on findings and corrective actions, and request release from impoundment.

7.2.1.16. **(Added)** Impoundment release authority clears or directs the impoundment be cleared in the applicable aircraft or equipment forms.

8.2.1.2.1. **(Added)** Clecos will be maintained in accordance with AFI 21-101 paragraph 8.6.1.4.5. Weapons load crew crimpers, die and lead seals are not applicable to Edwards AFB maintenance practices.

8.2.2.1. **(Added)** Refer to AFI 21-101 paragraph 8.3.6 and local supplemental procedures concerning annual inventory of all tools and equipment.

8.2.3. **(Added)** Warranted tools and E-Tools will be maintained by using manufacturer’s instructions included in the catalog or brochure affecting the specified tools for use, repair and replacement. Each company (e.g., Snap-on, Craftsman, Granger, etc.) has their own version of a warranted tool contract.

8.2.3.1.1. **(Added)** The status of all removed and/or missing tools, E-Tools and equipment (i.e., broken, unserviceable, etc.) will be identified in red by changing the status in TCMax®. The CTK Broken Tool Log, Unserviceable and On Order reports will be printed out from TCMax® and a copy of the applicable page(s) will be added to the affected toolbox or cabinet with the associated broken tools and E-Tools highlighted. All broken tools (except E-Tools) accumulated by the tool custodians will be disposed of at least quarterly. Respective organization support section/tool rooms, TODA custodians and the TODO will be notified of E-Tools requiring repair/service. Following notifications, E-Tools will be turned into the E-Tool ADPE custodian. If an E-tool is damaged, the AMU/Section TO account custodian will initiate a report detailing the damage, the extent, cause, etc., email the report along with pictures of damage to the 412 MXQ Workflow mailbox, and title it "E-Tool Damage Report".

8.2.3.2.1. **(Added)** Tool Support Section Supervisors (or Flight Chief if tool room is not located in a support section) will determine which method to use based on the tool and warranty of each specific tool.

8.2.3.3.1. **(Added)** Support Section Supervisors (or Flight Chief if tool room is not located in a support section) will maintain replacement tools and the quantity of tools stocked.

8.2.4.1. **(Added)** Replacement (spare) tools and E-Tools will be loaded in the Tool Accountability System (TCMax®) as a CTK for inventory purposes only. Multiple like items loaded in the spare tools CTK may have a quantity greater than one. Items located in the spare tool cabinet do not require shadowing. Items will not be etched with anything more than the World Wide Identification (WWID). Multiple like items do not need to have a unique identifier for each item in a spare tool CTK. Spare tools shall not be used and/or loaned out until they have been formally added to a CTK or prepared for individual issue in accordance with AFI 21-101, **Chapter 8** and all MAJCOM and local supplemental guidance (LSG).

8.2.4.2. **(Added)** Expendable and consumable hand tools will be controlled in TCMax® when taken to the flight line. One of the following tracking methods will be used prior to being taken to the flight line. They may be prepared for individual issue in accordance with AFI 21-101, **Chapter 8** and all MAJCOM and local supplemental guidance. Tracked similarly to rags or small tools in accordance with supplemental paragraph **8.2.9.3.1** or **8.6.1.3.5** In addition, the quantity issued function in TCMax® may also be used. If the quantity issued function is used, the WWID will be applied to the tool by etching, permanent marker, or a printed barcode sticker.

8.2.5.2. **(Added)** Only with a squadron's Production Superintendent or above approval, CTKs, E-Tools and equipment turnover will be allowed at the job site. If a turnover is approved, the transfer of responsibility for tools/equipment kits (i.e., borescopes, rig pin kits, testers) will be annotated on an AFMC Form 62, CTK Inventory and Control Log.

8.2.6.1.2. **(Added)** If an aircraft is involved and has already taxied or is airborne, immediately notify the MOC, which will initiate the Emergency Aircraft Recall Checklist. The MOC will also notify the 412 MXG/CC, CD or Superintendent (CEM).

8.2.6.1.3. **(Added)** Refer to AFI paragraph 8.9 for procedures for tools lost on the aircraft during maintenance.

8.2.7.1. **(Added)** The TCMax® program manager is assigned to 412 MXG/MXOOA.

8.2.7.2. **(Added)** 412 MXG/MXQ is the POC for the assignment of WWID codes. Units must receive approval from 412 MXG/MXQ before using new WWIDs. When WWIDs become obsolete/no longer necessary, the using organization must notify 412 MXG/MXQ. EIDs will be assigned by the support section supervisor.

8.2.8.1. **(Added)** All newly arriving personnel shall work with their supervisor to obtain the necessary PPE. To ensure proper item control, supervisors shall confirm that all PPE issued to an individual has the necessary markings in accordance with supplemental **paragraph 8.2.8.2** If an individual has an item of individually issued PPE that they deem unserviceable, they will report the discrepancy to their supervisor who will confirm the condition of the item and approve issue of replacement equipment.

8.2.8.2. **(Added)** Only personal equipment items issued for duty use from Edwards AFB or previous AF installations are authorized for use. These items will be marked with the individual's initials or first name initial and last name and employee number. If an attaching device is used to hold personal equipment to belts, it must be made of a non-metallic material.

8.2.8.2.1. **(Added)** There will be no eating or drinking in areas where any maintenance is performed (back shops, hangars or the flightline) except for approved capped water bottles or reusable sealable containers. Reusable containers will be marked in accordance with **paragraph 8.2.8.2** All personnel will be responsible for preventing damage to equipment as a result of using hydration packs or water containers. Section supervisors may restrict use in sensitive areas or to increase control. Vehicles may dispense beverages contained in paper or foam cups that must be consumed and disposed of at the vehicle. All other consumption will be limited to authorized break areas only and all personnel will be responsible for properly disposing of their personal trash.

8.2.9.1.1. **(Added)** Paper products will not be controlled. Trash will be disposed of properly.

8.2.9.3.1. **(Added)** All rags will be issued in a bag, in groups of 2, 5, 10 or 15 rags as deemed necessary. The bag will be marked with the shop code and rag information will be entered in TCMax®. Rags will be issued by using TCMax® and controlled only through the tool room or support section.

8.2.10.1. **(Added)** Personnel authorized to procure tools will be limited to Commander- approved purchase card holders. This may or may not be support section supervisors. If not, the authorized card holder will coordinate with support section supervisors to determine what items are desired/required for purchase.

8.2.11.1. **(Added)** Approved tools will be assigned a Local Manufactured Number by QA that will be etched onto the tool, see AFI paragraph 6.3.9. If the tool cannot be etched follow guidance in AFI 21-101 **Chapter 8**.2.4.2. Locally manufactured tools will also follow procedures in AFI and supplemental **paragraphs 8.3** for control on the flightline. Locally manufactured tools that are part of a CTK will have the local manufacturer number annotated in TCMax® and the MIL.

8.2.13. **(Added)** Units may elect to decentralize some CTKs and support equipment. If this occurs, all issue/turn-in inventories and inspections apply.

8.2.14.1. **(Added)** Crash Recovery and Hydrazine Response equipment.

8.2.14.1.1. **(Added)** Tools and equipment maintained in the crash recovery trailers and vehicles and hydrazine response vehicles will be loaded into TCMax® and will be used and maintained in accordance with the provisions of this instruction.

8.2.14.1.2. **(Added)** Hydrazine response vehicles will have their tools, equipment and consumables inventoried and accounted for at the beginning and end of each shift.

8.2.14.1.3. **(Added)** All consumables used during a response will be accounted for and replaced after each response.

8.2.15.2. **(Added)** In the event that only one person is available for CTK/equipment turn in, they will return their items to the support section or shop and a representative from that work center will take responsibility to validate turn in of the items on the next shift.

8.2.15.3. **(Added)** In the event there is no Tool Room Monitor, the shift supervisor will ensure that all CTKs are properly inspected and accounted for during the sign in and/or sign out procedure. Tool Room Monitor/shift supervisor will ensure E-Tools have connectivity for Information Technology and electronic TO updates and are serviceable with charged batteries. They will also verify E-Tool viewer has been updated in accordance with TO 00-5-1.

8.2.16.1. **(Added)** Subordinate organizations operating a tool room will develop a local memorandum identifying unit personnel who are granted unrestricted access to the tool room. Note: Duty titles and/or offices may be used in lieu of listing authorized individuals by name to prevent the requirement to constantly update the memorandum. A copy of this memorandum shall be posted in a conspicuous area in the tool room. Any individual not listed on this memorandum will obtain verbal permission from support section personnel before entering the restricted tool control/storage area.

8.2.17.1. **(Added)** All tool kits placed in long-term storage will have a one-time inspection completed (using same criteria for annual tool box inspection) and then the kit will be sealed to prevent tampering. The kit will be identified in TCMax® as being in long-term storage. When returning the kit to use it will be inspected for content and corrosion. If returning the kit to use, restart the annual inspection interval from the return to use date. Kits placed in long-term storage will be inspected in accordance with AFI 21-101 paragraph 8.2.2.

8.2.18.1. **(Added)** Test, Measurement and Diagnostic Equipment (TMDE) items will be issued/dispatched using the same guidance as hand tools/CTKs. Support personnel issuing TMDE items shall confirm that calibration is not overdue by inspecting the due date on the calibration label.

8.2.19.1. **(Added)** Workcenters operating shop machines will maintain an inventory of all accessories and/or attachments utilized by a specific piece of equipment. At a minimum, the inventory shall include the name of each individual accessory/attachment and the quantity (for identical items). Inventory shall be kept with the shop machine unless doing so presents a safety hazard (in which case it shall be stored in the workcenter supervisor's office.)

8.2.20.1. **(Added)** Upon receipt of a TCTO/Mod kit, the organization performing the maintenance will verify the contents of the tooling against what is required by the TCTO guidance and/or packing manifest (if one is included). Refer to AFMC supplemental **paragraph 14.3.3.3.2.19.3** for guidance concerning storage of TCTO kits for waivered TCTOs. While in use, the organization performing the maintenance will inventory the contents of the TCTO/Mod kit at the beginning and end of each shift. Any items that are consumed during the maintenance procedure or are installed on the aircraft should be indicated on the TCTO guidance and/or packing manifest. TCTO/Mod kits shall be logged into TNB (if on-site turnover to on-coming shift personnel is not possible). Missing items will be reported and investigated in accordance with AFI 21-101 paragraph 10.9.

8.2.21.1. **(Added)** Loaned out tools will be tracked using the TCMax® 1297. Loaning of tools requires supervisory approval and will be limited to a maximum of 30 days. Special circumstances such as in support of a program may extend this limitation. The loaning organization reserves the right to recall the tool from the loaned organization. If the loaned organization is unable to immediately return the item (i.e. removing the item from use would cause damage to an aircraft or would otherwise result in significant negative impacts) the loaned organization will provide the loaning organization with specific justification for continued use of the item and identify the procedures that must be taken to allow return of the item to include a date of delivery

8.2.22.1. **(Added)** Newly assigned personnel will review and understand the requirements of AFI 21-101, **Chapter 8** and all applicable MAJCOM and local supplements. Supervisors are responsible for ensuring this is accomplished and will document completion of this requirement in the individual's training records before the individual will be granted permission to sign out local tools and equipment.

8.2.22.2. **(Added)** Before depot teams, factory representatives, and/or CFTs begin working on equipment within the unit; they will be briefed on the local tool and equipment management guidance established by this supplement.

8.2.23. **(Added)** Wire cutting tools will have room temperature vulcanizing (RTV) sealant or other suitable material in the jaws of the cutting section to prevent pieces of wire from flying into someone's eyes or causing a potential FOD hazard. Wire cutters that are 4 1/2 inches or smaller or marked "Oxygen Use Only" and wire cutters used solely for the purpose of cutting string or cord material are not required to have the RTV in the jaws.

8.3.6. **(Added)** A new MIL does not have to be printed annually if no changes have been made and the form is still legible. Line through the old annual review signature and date then sign above or below the old signature and annotate the new date. Support Section Supervisors are equivalent to the flight/section chief and are authorized to sign the annual MIL.

8.3.6.7. **(Added)** Tools/items that have missing pieces (see AFI para 8.9) that do not affect serviceability will have the damage marked with a contrasting marker or a similar method to readily identify known missing pieces. The damage will be annotated in TCMax® in the Notes field (Additional Details tab). If an AFMC Form 310 was issued for the missing piece, include the 310 tracking number in TCMax® with the description of the damage.

8.3.7. **(Added)** Test benches with associated items (i.e., test leads) will be loaded in TCMax® for inventory and inspection purposes. Associated items used with this type of equipment will be maintained in a designated storage location (drawer or cabinet).

8.5.1.2.3.1. **(Added)** All TMDE possessed by the unit, along with the required inspection/calibration due dates will be loaded in TCMax®. The serial number (if known) will go in the serial number field. Exception: TMDE possessed by PMEL will be tracked in PAMS.

8.5.1.2.7.1. **(Added)** Dispatchable TOs will be loaded in TCMax® as a NEW ITEM, and under the ADDITIONAL DETAILS TAB, use the CHECK BOX to mark it as a TECHNICAL ORDER. TO binder numbers will be loaded in the book number block. A single binder may contain more than one TO. Multiple binders can be loaded as one book number (e.g., Binder 1a, Binder 1b, etc.)

8.5.1.2.7.2. **(Added)** Tools, E-Tools and equipment issued LTI/TDY are identified in blue in the issue/turn-in window of TCMax®. The item will be identified by using SHOW ISSUED ITEMS screen, and using the ISSUED AS LTI/TDY or ISSUE AS LONG TERM button for applicable item, or by setting the issued location as LONG TERM or LTI/TDY, with details on location in the NOTES under ADDITIONAL DETAILS tab.

8.5.1.2.7.3. **(Added)** Tools and equipment issued to go to an "inspection" activity will be identified in YELLOW (Imminent Inspection) or RED (Overdue Inspection) in the issue/turn-in window of TCMax®. The item will be identified by using the INSPECTIONS tab on the ITEM DETAILS screen and filling in the destination description in the "Issued Dest" block or using the ADDITIONAL NOTES tab in the ITEM DETAILS screen.

8.5.5.3.1. **(Added)** E-Tools will be checked for damage, screens wiped down (as needed) and placed in an E-Tool cabinet. Ensure E-Tool and E-Tool cabinet power is 'ON'.

8.5.5.7.1. **(Added)** Due to the variety of aircraft at Edwards, support section supervisors will determine procedures within AF guidelines for shipping TOs, eTools, and associated support equipment with eTools to support mobility requirements on case by case bases.

8.6.2.3. **(Added)** HAZMAT is controlled locally through a centralized dispatch/issue facility. Grease guns will be tracked in TCMax® or EESOH-MIS. Grease guns that are stored in support sections will be kept in an approved flammable storage locker/facility. HAZMAT labels will be placed on the outside of grease guns to reflect contents. If additional tubes of grease are signed out from the pharmacy, the user is responsible for pealing the label off the tube and applying it to the grease gun at time of change. The label will be returned to the pharmacy with the tube at the end of use. If the tube is going to be removed from an AMU owned grease gun and returned to the pharmacy within 24 hours the label may stay on the tube. "Hand pack" grease gun labels only require changing if the source container is changed and varies information.

8.8.1.1.1. **(Added)** At a minimum, tool room turnover procedures will include a shop inventory by a 2-person team consisting of personnel from the out-going and on-coming shift. Any items not shelved will be confirmed as signed out in TCMax®. If any dispatchable item/CTK is not in its designated storage location and not signed out in TCMax®, follow lost item/tool procedures as outlined in **paragraph 8.9** and all MAJCOM and local supplemental instructions.

8.8.1.1.2. **(Added)** All items issued and not identified as long term issue (LTI) and/or TDY, must be returned to the tool room for inventory after each shift and before being dispatched to another user. Items issued LTI/TDY are the responsibility of the individual.

8.9.2.3.4. **(Added)** Complete blocks 2 thru 10, 12, 13 and 15 of the AFMC Form 310, Lost/Found Item Report. A description of the item and the suspected area where the tool/item was lost will be included in block 8. A phone number of the individual and supervisor signing blocks 9 and 10 will also be included. Following a review for completeness, QA will assign the control number.

8.9.2.3.5. **(Added)** If the tool, E-Tool or item is found, if applicable, the Red X entry in the AFTO Form 781A will be cleared by an all systems Red X certified individual. The unit will complete blocks 14, 16, 17A (Work Center Supervision), 17B (Flight/AMU Supervision) and 17C (Squadron/Division Supervision) of the AFMC Form 310 and return the original form to QA.

8.9.2.3.6. **(Added)** Cockpit Foreign Object (FO) Recovery Procedures Requiring Ejection Seat Removal.

8.9.2.3.6.1. **(Added)** Conduct a thorough visual and bore scope inspection of the suspect area.

8.9.2.3.6.2. **(Added)** If item is not found, false panels and console components will be removed to facilitate further inspection. Perform another visual and borescope inspection.

8.9.2.3.6.3. **(Added)** If item is still not found then raise/tilt aircraft ejection seats to the maintenance position (if capability exists depending on system) to further aid in the inspection and recovery effort. Perform another visual and borescope inspection of the suspect cockpit area.

8.9.2.3.6.4. **(Added)** If item is still not found, then any remaining panels or components will be removed to facilitate and further widen the FO search area. Perform another visual and borescope inspection of the suspect area.

8.9.2.3.6.5. **(Added)** If after a comprehensive search the FO recovery is still negative following ejection seat raise/tilt, the ejection seat(s) will be removed (depending on the type of aircraft) to aid in the recovery of FO. A thorough visual and borescope inspection will be conducted to find and remove FO. The seats will not be reinstalled until after the FO discrepancy is cleared from the aircraft maintenance forms and the AFMC Form 310 has been cleared.

8.9.2.3.6.6. **(Added)** MXG Supervision may approve deviations from this procedure at their discretion.

8.9.2.6.2.1. **(Added)** The Red X will be cleared only after a comprehensive search has been conducted and approval given by MXG Supervision or MXG Production Coordinator. The unit will complete blocks 14, 16 17A (Work Center Supervision), 17B (Flight/AMU Supervision) and 17C (Squadron/Division Supervision) of the AFMC Form 310. The completed AFMC Form 310 will be reviewed by QA. For aircraft related Lost/Found Item Report, a QA representative will schedule an appointment and accompany the organization for AFMC Form 310 and Aircraft 781 Forms sign-off of the lost tool for termination of the search. The 412 MXG/CC or individual designated on the SCR to clear lost tools/items will sign the "Inspected By" block of the AFTO Form 781A to clear the aircraft Red X (maintenance unit will clear the "corrected by" block) and Block 18 of the AFMC Form 310. For non-aircraft Lost/Found Item Report will be signed off by initiating organization CC/CL, Superintendents, Maintenance Operations Officer or Maintenance Superintendent by signing block 18. QA will provide a AFI21-101_AFMCSUP_EDWARDSAFBSUP copy of the completed AFMC Form 310 to the MOC and retain the original form.

9.5.2.1. **(Added)** Items containing precious metals on bench stock will be identified using the color blue on the bin label.

9.5.2.2. **(Added)** A container identified with the color blue will be used for the recovery of precious metals.

9.5.4. **(Added) Bench Stock Monitors will:**

9.5.4.1. **(Added)** Bench Stock bins/locations will have Base Supply System (BSS) printed labels per AFMAN 23-122 and AFH 23-123 attached to bins or sub-locations.

9.5.4.2. **(Added)** Bench Stock labels will be requested by the monitor through BSS for replacements whenever quantity changes are made, labels are damaged beyond readability, or additions/deletions are made.

9.5.4.3. **(Added)** Optional: Bench Stock labels can be maintained in a folder stored with the Bench Stock cabinets or Sub-Locations. Each Bin or Sub-Location will have an identifier on them to identify it with the specific account number and item number on the bin/location that corresponds to the labels for easy identification. Ex: 188SV 001.

9.5.5. **(Added)** Remove unidentifiable items, items whose serviceability is unknown or are co-mingled in bins/locations, from bench stock, operational stock, shop stock, or work order residue bins/locations and process them as shop scrap through DLADS.

9.11.1.1. **(Added)** Bench stock shelf life items will be identified using the color green on the bin label.

9.17.4. **(Added)** Edwards AFB Local Manufacture (LM) Parts Procedures.

9.17.4.1. **(Added)** To prevent abuses, all Local Manufacture requests will be coordinated through their respective MOO/Squadron Superintendent and 412 MXG/MXQ prior to submission to the MXG Supervision for final approval.

9.17.4.2. **(Added)** Specific Standard Base Supply System processing requirements for LM of mission capable (MICAP) items are found in AFI 23-101, Air Force Materiel Management and AFMAN 23-122, Materiel Management Procedures. Supply Customer Service personnel or contract equivalent processes the issue request (**Section 11C**) if a LM item satisfies a MICAP condition.

9.17.4.3. **(Added)** The requesting activity will inquire, process and order required parts and items through the appropriate MIS to determine if the item is procurable and meets mission requirements. The applicable unit Maintenance Supply Liaison can assist.

9.17.4.4. **(Added)** As needed, the requester will create/establish an end item document number to order the necessary bits and pieces.

9.17.4.5. **(Added)** LM coded component drawings and blueprints can be obtained by contacting Quality Assurance Product Improvement TODO section in Bldg 1600. Contact QA Inspection Section directly for support after normal duty hours.

9.17.4.6. **(Added)** The requester will create the initial off-equipment WCE for all local manufacture items in IMDS.

9.17.4.7. **(Added)** Procurable or Long Lead Time Procedures:

9.17.4.8. **(Added)** For items that are not coded local manufacture per the Source, Maintenance and Recoverability code using the applicable TO or items that are available with a long lead time that does not meet mission requirements through supply, the requester will initiate and complete section 1 of the Local Manufacture Worksheet. Contact QA to obtain correct template.

9.17.4.9. **(Added)** The requester will deliver the 412 MXG Local Manufacture Worksheet form to the Maintenance Supply Liaison to complete section 2.

9.17.4.10. **(Added)** The requester will hand deliver the Local Manufacture Worksheet to the fabricating workcenter assigned to the 412 MXS/MXMF Fabrication Flight to determine manufacture feasibility. The fabricating work center will complete section 3 of the Local Manufacture Worksheet and return the work order request to Stock Control along with the reason for non-manufacture should it find the Local Manufacture is beyond its capability to produce.

9.17.4.11. **(Added)** When the local manufacturing is completed, the fabricating workcenter notifies the customer that the serviceable asset has been manufactured and have the unit sign the DD Form 1348-1 for Supply. The fabricating work center will ensure total cost is documented on the DD Form 1348-1. If the local manufactured item is being returned directly to supply, the fabricating work center ensures two copies of the DD Form 1574 Serviceable Tag-Materiel, accompanies the property. If the local manufactured item is given to the customer in lieu of going to supply, the AFTO Form 350 tag will be used as the historical document for serviceability.

9.19.1.1. **(Added)** Documentation of Items Stored on Panel Racks. During maintenance where numerous panels are removed from the aircraft, an individual AFTO Form 350 does not need to be attached to each panel. The panel rack must be placarded with the aircraft tail number and each panel must also be identified with the applicable aircraft tail number.

10.3.3.2.3. **(Added)** A training munition is required to support initial and recurring training. In the event a training munition is not available, the actual munition will be used for initial training and certification. Initial load training is required for weapons load crews involved in test program support. Recurring training is required for these crews on a quarterly basis in order to support any live weapons handling and/or releases for the duration of the weapon's testing.

10.4.3. **(Added)** The LSC will coordinate with the 412 MXS/MXMW Munitions Flight to store transient Navy, Marine, foreign and certain specific Air Force aircraft munitions items.

10.4.3.1. **(Added)** During duty hours, Weapons Standardization and/or weapons sections will coordinate with 412 MXS/MXMW Munitions Flight for storage of transient aircraft munitions not listed on the applicable storage license. Document transient aircraft tail number, lot number and quantity of munitions items on the container and applicable control documents. During non- duty hours, coordinate through the MOC to contact the 412 MXS/MXMW Munitions Flight storage on-call personnel to arrange storage.

10.7.2. **(Added)** For AMUs with aircraft modifications that render some systems not weapons capable, assigned load crews will not be trained or qualified on the applicable munitions. For example, if internal gun systems have been removed from all aircraft in the AMU to facilitate instrumentation modifications, the load crews assigned to the AMU will not be trained or qualified on internal gun loading or unloading.

10.11.2.2.1.1. **(Added)** 2W1X1 and non-2W1X1 personnel performing as QA Evaluator (QAE) Inspectors providing oversight of civilian contractor F-35 and FMS munitions loading/unloading operations are authorized to stop loading operations if safety, reliability or lack of technical proficiency is demonstrated. Inspector will immediately contact Weapons Standardization to determine decertification action. The Lead Contractor Maintenance authority may also recommend decertification of F-35 and FMS munitions loading/unloading contract personnel to Weapons Standardization.

10.17. (Added) Load time standards are considered goals for civilian load crew members. Civilian loaders will not be failed solely for exceeding time standards.

10.18. (Added) Weapons Loading Operations.

10.18.1. **(Added)** During loading/unloading operations, all munitions will be secured by the load crew with a tie-down strap regardless of handling device (i.e., steel rollers, rubber rollers, LAU-117, AGM-88 preload, ADU-537).

10.18.2. **(Added)** During weapons transfer and loading operations, positive control of the weapon will be maintained at all times. Strapping the weapon after removal from munitions trailer is authorized as long as positive control is maintained and the strap is installed as soon as possible. Strapping is not required during transfer operations utilizing a cargo hook and while transferring the AGM-158.

10.18.3. **(Added)** Weapons installed onto lift trucks or mechanical ram assemblies that do not utilize a center weapon tie down strap attachment point will have the tie down strap attached between the bomb lugs, if possible, with the strap located toward the aft bomb lug or tail of the weapon.

10.18.4. **(Added)** The ADU-537 & Load Cradle Adapter will be set to middle (fully cradled) position with the detent plunger centered and engaged when transporting an asset or munition

10.18.5. **(Added)** Ladders will not be left unattended in the upright position during loading operations. Load crew members will not climb up/down ladders with tools/equipment in their hands. Positive control with both hands must be maintained at all time while climbing up/down ladders.

10.18.6. **(Added)** Load crews will not place munitions components (i.e., fuses, wings, fins, etc.) or tools directly on the ground or in/on a trailer. Appropriate containers or rubber mat, will be used.

10.19. (Added) Weapons Supervisory Post-Load Inspections.

10.19.1. **(Added)** A weapons supervisory post-load inspection will be performed prior to the first flight of the day on any aircraft with loaded munitions. Additional inspections are required between flights on any aircraft loaded with munitions.

10.19.2. **(Added)** Weapons supervisory post-load inspections may be performed by the weapons expediter, section chief or a 7-level designated by the Weapons Section Chief. The weapons supervisory post-load inspection will not be performed by a team member who performed the loading operation.

10.20. (Added) Verification of Empty Impulse Cartridge Retainers/Breeches. Personnel will remove impulse cartridges in accordance with applicable technical data. Empty cartridge retainers/breeches may be removed, installed and safety wired, or reversed to certify the impulse cartridges are removed. BRU-46/47/57 arm/de-arm indicators, 14/30 inch ejector racks and TERs will be visually checked to ensure impulse cartridges are removed. If retainers/breeches are removed or reversed on an aircraft, a Red X will be entered in the aircraft forms. For example: "*AIRCRAFT DE-ARMED, BREECHES/RETAINERS NOT SECURED FOR FLIGHT*." Verify impulse cartridges are removed before equipment is removed from an aircraft, entered into the repair cycle, put into storage or when an aircraft is in a hangar for maintenance or a scheduled inspection.

10.21. (Added) IMF Operations.

10.21.1. **(Added)** Individuals who accomplish load frame munitions loading within the 912 AMXS/MXMB IMF Function will first be certified/qualified on the aircraft equivalent by Weapons Standardization. The Wing Weapons Manager must approve the use of the applicable -33 series TO prior to performing any loading in the load frame. Exception: The AGM-86 will be loaded in the load frame using Nuclear Weapon Mate & Demate procedures provided in the applicable 11N series TO. This is not considered a weapons loading certification/qualification task when the 11N series tech data is used.

10.21.2. **(Added)** Load frame loads do not constitute any portion of Weapons Standardization training and crews will not be given initial, Minimum Proficiency Requirement Loading or semi-annual evaluation credit based on load frame loading.

11.6.1.1. **(Added)** The Expediter or Production Superintendent will notify the MOC of the Red Ball discrepancy and enter the Red Ball JCN assigned by the MOC into the aircraft AFTO Form 781A.

11.6.2.1. **(Added)** The affected AMU Dispatch/Debrief section or technician will:

11.6.2.1.1. **(Added)** Enter the Red Ball discrepancy in the applicable MIS using the JCN assigned by the MOC.

11.6.2.1.2. **(Added)** Clear the Red Ball discrepancy from the applicable MIS when directed by the Expediter or Production Superintendent.

11.6.5.2. **(Added)** If the applicable MIS is unavailable when the Red Ball discrepancy is completed, the Production Superintendent may complete the Exceptional Release and allow the aircraft to depart. However, the Red Ball JCN must be cleared in the applicable MIS as soon as the system is available.

11.8.3.1.1.1. **(Added)** Unmated electrical connectors (including waveguide connections) that are not exposed to physical or environmental damage (extreme moisture), may be covered with an ESD bag/moisture proof paper (not approved for flight). Use SAE-AMST-22085 Type II (MIL-T-22085) or A-A-59163-1 pressure sensitive tape or string to hold barrier material in place.

11.8.3.1.1.2. **(Added)** If slip on plastic caps (not approved for flight) are used the number of plastic caps installed on the AIRCRAFT side will be annotated in the removal discrepancy in the AFTO Form 781A. For example in the "DISCREPANCY" block, enter "Component removed to FOM, 3 each caps installed".

11.8.3.1.1.3. **(Added)** In the "CORRECTIVE ACTION" block annotate the total number of caps removed from the AIRCRAFT side. For example enter "Component installed, 3 each caps removed."

11.8.3.3.1. **(Added)** After flight, the intake covers or plugs must be installed once engine maintenance inspections are completed. Note: In the interest of safety, if inlet covers are not installed on large aircraft prior to winds reaching gusts of 25 knots, squadron maintenance supervision may delay the installation of covers until wind speed drops below 25 knots.

11.8.3.3.2. **(Added)** Engine covers or plugs removed for ground test/maintenance runs, may remain removed as long as testing or maintenance is being conducted. Required maintenance must be properly documented to show it is in work. When work is complete or stopped for the day, the covers or plugs must be installed.

11.8.3.5. **(Added)** Personnel entering aircraft cockpits will ensure that personal belongings are properly secured to prevent FOD. Before climbing into the cockpits of fighter or trainer-type aircraft, all open pockets must be emptied, unless pockets can be sealed, zipped or otherwise closed to prevent items from falling out

11.8.3.6.2.1. **(Added)** All badges will be removed when within 25 feet of an operating jet engine inlet.

11.8.3.8. **(Added)** Containers will be stenciled with the word "FOD" in contrasting letters no smaller than two inches. All FOD containers, regardless of location, will be emptied when full or once a day, whichever comes first. **Exception**: Flightline entry gate FOD containers will be emptied per the Wing FOD Monitors discretion or when full.

11.8.3.8.1.1. **(Added)** Obtaining FO containers used in vehicles is the responsibility of the organization using and operating the vehicles. Fuel bowsers will not be used for FO or trash disposal.

11.8.3.8.3. **(Added)** Cleanliness of maintenance and manufacturing areas will be maintained at all times. Keep areas free of FO. A thorough cleanup will be accomplished upon completion of each task and at the end of the shift. A thorough CTK and FO search will be accomplished prior to engine start, launch or movement of any aircraft. Additionally, all parts and hardware (fasteners, screws, clamps, etc.) removed during on- and off-equipment maintenance will be bagged and tagged with the number of items removed and the aircraft or equipment serial number. CTKs will not be used to store loose hardware. Any hardware temporarily stored in a CTK during completion of an on-going task will be stored in a screw bag or sealed container and removed prior to turn-in.

11.8.3.10.2. **(Added)** FOD walks will be accomplished prior to the start of the day's flying period (the flying period at Edwards AFB begins prior to the first flight of the day and ends after the last scheduled aircraft lands) by all available physically capable personnel (regardless of grade or status) engaged in aircraft maintenance. All aircraft operating areas are to be inspected and made free of FO up to the adjacent taxiways.

11.8.3.10.2.1. **(Added)** Local FOD Walk Areas of Responsibility. Note: In addition to all below assigned FOD walk areas, aircraft owning units are responsible to FOD walk any outdoor parking locations and hangars where they have assigned aircraft located. The identified areas below, except for the wash rack, only require FOD walk when aircraft are present.

11.8.3.10.2.1.1. **(Added)** 412 MXS/412 MXIS – Ramp 1, Rows A thru F. The wash rack will have a FOD walk accomplished on Wednesdays.

11.8.3.10.2.1.2. **(Added)** 412 AMXS (Raptor CTF) – Ramp 7

11.8.3.10.2.1.3. **(Added)** 412 AMXS (JSF ITF) – Ramp 8 & 9

11.8.3.10.2.1.4. **(Added)** 412 AMXS (Shadow AMU) – Ramp 1, Rows K thru L and Ramp 2

11.8.3.10.2.1.5. **(Added)** 412 AMXS (Falcon AMU) – Ramp 1, Rows M thru P

11.8.3.10.2.1.6. **(Added)** 912 AMXS (Heavy AMU) – Ramp 6

11.8.3.10.2.1.7. **(Added)** 912 AMXS (Bomber AMU) – Ramp 1, Rows G thru J

11.8.3.10.3. **(Added) FOD*BOSS® Usage Requirements:**

11.8.3.10.3.1. **(Added)** FOD*BOSS® may be used to supplement (not take the place of) daily FOD walks on days when ramps have flight and maintenance operations taking place.

11.8.3.10.3.2. **(Added)** Equipment owning organizations will be responsible for equipment storage and maintenance in accordance with the owner's manual and clean-up at the end of each duty day.

11.8.3.10.3.3. **(Added)** FOD*BOSS® equipment will utilize AFTO Form 244 to document inspections.

11.8.3.10.4. **(Added)** Ensure fire extinguishers that are carried on or mounted to vehicles have safety chains or cables attached to the extinguisher's safety pins to prevent FOD.

11.8.3.10.5. **(Added)** When vehicle tire FO inspection is accomplished by the driver, the vehicle will be turned off and placed in park or lowest gear with brakes set to prevent vehicle movement. Any vehicle leaving the paved surface while on the flight line must re-accomplish the FO check upon reentry. Note: Emergency vehicles responding to a flight line emergency are exempt from the tire FO check requirement. During towing operations, the maintenance crew must perform an FO inspection of the intended parking spot prior to moving the aircraft into position.

11.8.5.4.1. **(Added)** Training monitors or the Unit FOD Prevention Monitor of each organization will provide FOD prevention training as required for all their assigned personnel using the wing FOD monitors training program.

11.8.6.1. **(Added)** The 412 MXS Director will ensure the NDI Lab furnishes the installation FOD Monitor or 412 MXG/MXQ with a completed checklist of all aircraft x-rayed for FOD - related reasons as they occur and the 412 MXS Wheel/Tire/Tow Target Section furnishes the installation FOD Monitor or 412 MXG/MXQ with a report on all tires damaged due to FO, as they occur.

11.8.6.1.3. **(Added)** Any time a lakebed landing has occurred or Compass Rose area is used, the following inspections will be conducted at a minimum, with a Red Dash placed in the AFTO Form 781A: tires for cuts and damage, wheel wells, landing gear struts and lower areas of aircraft for damage.

11.8.6.1.4. **(Added)** Ensure the MOC is notified immediately upon discovery of any damage to aircraft or equipment caused by FO to include bird strikes. The MOC will notify the 412 MXG Command Section, 412 OG/CC and 412 MXG/MXQ. The 412 MXG/MXQ will determine if it is a FOD incident and if further action is needed. In addition to the reporting procedures outlined in AFI 21-101 paragraph 14.19.5, the FOD prevention monitor will also notify the following offices whenever a FOD incident occurs: 412 TW/CV, 412 MXG/CC, 412 MXG/CD and 412 TW/SE.

11.8.7.1.2. **(Added) FOD Prevention Committee:** Will be comprised of representatives from organizations having a direct responsibility for flightline use and chaired by the 412 TW/CV. If the 412 TW/CV is not available, the committee will be co-chaired by the 412 OG/CC or designated representative and the 412 MXG/CC. At a minimum, Flight & Ground Safety (412 TW/SE), 412th Civil Engineer Group (412 TW/CEG), 412th Security Forces Squadron (412 SFS), 412th Operations Support Squadron (412 OSS), 412th Maintenance Group Quality Assurance (412 MXG/MXQ) and AFGE Local 1406, will appoint members to this committee. At a minimum, meetings will be held quarterly. Attendance is mandatory for each member or their designee.

11.8.7.2.13.1. **(Added) Edwards AFB FOD Prevention Awards Program**

11.8.7.2.13.2. **(Added)** Golden Washer Award: 412 MXG/MXQ will conduct four random housekeeping inspections per month in accordance with the established and published QA Plan for all units. The unit that demonstrates the best housekeeping and FOD prevention practices will be selected as the quarterly winner (determined by calculating the total number of passed housekeeping inspections.) The award is a certificate of recognition.

11.8.7.2.13.3. **(Added)** Golden Bolt Award: A 4-inch gold colored bolt with a red aircraft streamer attached, will be placed on the aircraft parking ramp, inside of a vehicle or in a maintenance area that will be monitored by the installation FOD Program Monitor or alternate. The individual who finds the item and turns it over to the FOD Program Monitor is the winner. This will be done quarterly. The awards presented will be: a Certificate of Recognition signed by the 412 TW/CV, 412 OG/CC or the 412 MXG/CC and a 412 TW FOD Prevention Coin. In addition, military members will receive a 1-day pass. Civilian Time-Off Awards may also be earned when justification meets or exceeds guidelines established in DODI1400.25V451_AFI36-1004, Civilian Recognition Program, **Chapter 3**.

11.8.7.2.13.4. **(Added)** FOD Poster of the Quarter: Posters depicting FOD messages must be submitted to the installation FOD Program Monitor assigned to 412 MXG/MXQ located in Building 1600, no later than 5 days before the quarterly meeting. A winner will be selected and honored at the quarterly meetings. The winning poster will be displayed inside the FOD display case in Building 1600. The awards presented will be: a Certificate of Recognition signed by the 412 TW/CV, 412 OG/CC or the 412 MXG/CC and a 412 TW FOD Prevention Coin. Additionally, military members will receive a 1-day pass. Civilian Time-Off Awards may also be earned when justification meets or exceeds guidelines established in DODI1400.25V451_AFI36-1004, **Chapter 3**.

11.8.7.2.13.5. **(Added)** FOD Fighter of the Month: This award recognizes FOD awareness through outstanding contribution to the installation FOD Prevention Program. The installation FOD Program Monitor selects this winner from supervisory input. Supervisors should nominate personnel via e-mail to the installation FOD Program Monitor no later than the first duty day of the month. Content of the nomination is limited to 500 words (paragraph format) and should describe the specific actions of the nominee and the concrete/quantifiable benefits their accomplishments had on the organization. Individuals selected as monthly winners are automatically entered into the annual FOD Fighter of the Year contest. The awards presented will be: a Certificate of Recognition signed by the 412 TW/CV, 412 OG/CC or the 412 MXG/CC and a 412 TW FOD Prevention Coin. Additionally, military members will receive a 1- day pass. Civilian Time-Off Awards may also be earned when justification meets or exceeds guidelines established in DODI1400.25V451_AFI36-1004, **Chapter 3**.

11.8.9. **(Added)** The American Federation of Government Employees (AFGE), Local 1406, has been and shall continue to be actively involved in all aspects of this FOD Prevention Program. Base contracting office will ensure the contractual requirements for FOD prevention are adhered to for the contracts it administers.

11.9.1.3. **(Added)** Unit Commanders, Directors and/or Division Chiefs having direct responsibility for aircraft maintenance operations will appoint unit FOD Prevention monitors in writing, by forwarding an appointment letter to the installation FOD Prevention Monitor.

11.9.1.3.1. **(Added)** Unit FOD Prevention Monitors will conduct bi-monthly FOD inspections and report their findings and corrective actions to the area supervisor. Monitors will also oversee their respective areas and report all FOD incidents or mishaps, including minor nicks and blemishes on jet engine blades, to the MOC and the installation FOD Prevention Program Monitor, (661) 277-3410, DSN 527-3410.

11.9.1.3.2. **(Added)** Unit FOD monitors will be responsible for maintaining continuity books for their sections. The books will contain current letters of appointment for the following individuals: the 412th Test Wing FOD Prevention Program Monitor and the unit's FOD Prevention Program Monitor. In addition, the books will contain a copy of the latest quarterly FOD Prevention Committee Meeting minutes and a copy of the most current monthly FOD meeting minutes.

11.9.1.3.3. **(Added)** Unit FOD monitors will ensure that FOD awareness is promoted by the use of visual aids (posters, pictures, etc.) posted throughout their areas of responsibility.

11.9.3.2. **(Added)** The aircraft owning organization will appoint an individual in the grade of TSgt or above (or civilian equivalent) to serve as the POC for the duration of the investigation and reporting of the dropped object incident. This individual will be responsible for assisting the wing Dropped Object Prevention (DOP) Program monitor with the incident investigation. Additionally, the unit POC will initiate a DOP Program worksheet. Once completed, this information will be sent electronically to QA and the MOC. The wing DOP Program monitor will validate and include the findings in the construction of subsequent reports.

11.9.3.3. **(Added)** Upon discovery of a suspected dropped object, personnel will immediately notify their expediter or production superintendent of the incident. Unit production personnel shall notify the MOC and QA of the incident and provide the name and contact information for their appointed unit POC. The MOC will forward the notification to the Edwards AFB Command Post and Base Operations and/or Airfield Management for a runway and taxiway check (if necessary).

11.9.3.3.1. **(Added)** The following agencies will be included in the routing of the initial dropped object report: HQ AFMC/A4M, 412 TW/CP, 412 TW/SEF, 412 TW/CV, 412 MXG/CC and 412 MXG/CD.

11.9.3.3.2. **(Added)** The following agencies will be included in the routing of the follow-up final report: HQ AFMC/A4M, 412 TW/CP, 412 TW/SEF, 412 TW/CV, 412 MXG/CC, 412 MXG/CD and the initiating unit's maintenance supervision.

11.10.1.2. **(Added) The Aircraft Maintenance Units (AMU) will:**

11.10.1.2.1. **(Added)** Ensure all required forms, hardware and technical data are accurate and current to efficiently operate the ASIP.

11.10.1.3. **(Added)** Coordinate with 412 MXG PS&D Section to ensure that ASIP tasks and ASIP serially controlled items are documented in the applicable MIS.

11.10.1.4. **(Added)** The 412 MXG PS&D Section is responsible for scheduling ASIP scheduled downloads, Individual Aircraft Tracking inspections, serially controlled items, time changes and control point inspections in the appropriate MIS.

11.10.1.5. **(Added)** After completion of the NDI portion of scheduled ASIP inspections, NDI personnel will submit the results to Tinker AFB via the IAT website.

11.10.1.6. **(Added)** The 412 MXS will provide back-shop support for all organizations involved in the ASIP by maintaining ASIP component repair capabilities as outlined by applicable MDS specific TOs.

11.10.1.6.1. **(Added)** AMUs will develop unit specific procedures to collect and submit ASIP aircraft usage data.

11.10.1.7. **(Added)** Home station ASIP procedures will also apply when aircraft are TDY/deployed.

11.10.1.8. **(Added)** All procedures will be consolidated in the unit specific procedures addressed in AFI paragraph 11.10.1.7.1.

11.10.1.9. **(Added)** AMU's will develop MDS specific ASIP training and/or qualification requirements and ensure ASIP training/qualifications is documented in individual's training records.

11.10.1.10. **(Added)** Documentation requirements will be included within unit specific procedures addressed in AFI paragraph 11.10.1.7.1.

11.10.1.11. **(Added)** The required data capture rate is 90% per MIL-STD 1530C, Aircraft Structural Integrity Program.

11.13.3.3. **(Added) The CANN Authority will:**

11.13.3.3.1. **(Added)** Identify appropriate/compatible aircraft to CANN part from. When the CANN involves two or more units (AMU/phase dock/mod dock/outside agency), the CANN must be coordinated and approved by the 412 MXG Supervision at either the MXG Production Meeting or by prior approval.

11.13.3.3.2. **(Added)** Upon being notified of CANN requirement, assign a CANN Control Number, notify and coordinate with MOC to acquire a manual CANN Control number.

11.13.5.1. **(Added)** Once CANN control number is obtained from MOC, the CA will ensure the CANN action is processed in MIS to transfer the "mark for" to the new aircraft/equipment.

11.15.6. **(Added)** Scope of training functions for F-16B aircraft 83-1172 as a Ground Instructional Trainer Aircraft (GITA) includes Weapons Load Training (WLT), Egress Training, Fire Department Training and Field Training Detachment. Additional usage of GITA for training functions not listed above and/or static display requires approval of MXG Supervision. GITA utilization is prioritized in the following order: WLT, ancillary training and then static display.

11.15.6.1. **(Added)** Funds for maintenance and repair will be managed and provided through the 412 MXG Resource office.

11.15.6.2. **(Added)** The responsible AMU PS&D is responsible for GITA records management. These responsibilities include maintaining the aircraft jacket file for pulled forms and ensuring the 60-day records checks are complied with and documented in the active 781 series forms. Permanently grounded aircraft or GITA are not required to use automated forms.

11.15.6.3. **(Added) GITA Maintenance Management Responsibilities (416 AMU).**

11.15.6.3.1. **(Added)** Perform all necessary maintenance actions on the GITA aircraft in accordance with applicable technical data. Coordinate with QA personnel for additional guidance if necessary current technical data does not or no longer exists.

11.15.6.3.2. **(Added)** Perform all scheduled maintenance. Tire and strut servicing will be completed on an "as-needed" basis to facilitate aircraft towing and/or WLT activities.

11.15.6.3.3. **(Added)** Aggressively pursue correction of any discrepancies affecting the usability of systems required for training. Coordinate with applicable workcenters/backshops as required for necessary maintenance support.

11.15.6.3.4. **(Added)** Order parts as required and track/follow up on any discrepancies in awaiting parts status.

11.15.6.3.5. **(Added)** Coordinate with local database managers to obtain necessary authorization to GITA records in IMDS. Access shall be the same as what individual would have for operational aircraft.

11.15.6.3.6. **(Added)** Follow-up on and correct any discrepancies identified during QA inspections. This includes drafting/uploading necessary responses into the QA Galaxy database.

11.15.6.4. **(Added) General GITA maintenance requirements:**

11.15.6.4.1. **(Added)** GITA cannibalization actions are not authorized under any circumstances.

11.15.6.4.2. **(Added)** GITA active forms will be transcribed during the 60-day document review and pulled forms will be routed to 412 MXG/MXT for filing in Aircraft Jacket File.

11.15.6.4.3. **(Added)** General maintenance actions such as scheduled maintenance will be documented utilizing assigned manual JCNs 6595 thru 6599.

11.15.6.4.4. **(Added)** Document GITA training utilization in the form of an INFO NOTE in the AFTO Forms 781A. This entry will identify the date, shift, what type of training (weapons or egress), number of trainees and the number of hours the GITA was utilized per shift.

11.15.6.4.5. **(Added)** Weapons Standardization personnel are responsible for maintaining the GITA aircraft parking area within hangar 1600 to facilitate WLT.

11.15.6.5. **(Added) Operations/Scheduling and Configuration Requirements:**

11.15.6.5.1. **(Added)** All GITA maintenance training activities will be coordinated through the responsible AMU Pro-Super.

11.15.6.5.2. **(Added)** Weapons Standardization will forward the F-16 WLT schedule to the 416th FLTS Operations scheduler and PS&D by the 15th of the month for incorporation into the weekly scheduling process. PS&D will deconflict requests for GITA use after the WLT schedule is added to the weekly flying schedule. Requests for GITA use after the weekly flying schedule is printed will be coordinated through the responsible AMU Production Superintendent and Weapons Standardization.

11.15.6.5.3. **(Added)** Weapons Standardization will coordinate with the applicable AMU to ensure the aircraft is properly configured for WLT. The AMU requiring/scheduled for WLT will ensure that all maintenance and inspections for utilized AME and NIE are complied with in accordance with appropriate technical data. The using AMU will properly tag and route all AME and NIE to the armament shop for repair/inspection when required.

11.15.6.6. **(Added)** QA will brief the 416 AMU Supervision on any inspections conducted on the GITA. The 412 MXG/MXL is responsible for correction of discrepancies identified with aircraft housekeeping directly related to WLT.

11.28.3. **(Added)** Refer to Edwards AFB Installation Emergency Management Plan (IEMP) 10-2 and TO 00-80C-1, Crashed, Damaged, Disabled Aircraft Recovery Manual, for specific responsibilities of key personnel involved in CDDAR operations.

11.28.3.1. **(Added)** The Crash Recovery Team (CRT) provides expertise in operating specialized support equipment required for the recovery of crashed, damaged and disabled aircraft and implements the instructions of the Emergency Operations Center (EOC) Director/Incident Commander (IC) with respect to CDDAR operations.

11.28.3.1.1. **(Added)** F-22/B-2/F-35 Special Augmentation Teams (SAT) are comprised of designated Combined Test Force/Integrated Test Force (ITF) personnel and function to minimize possible loss or compromise of classified materials, assist with debriefing personnel (as required) and ensure proper precautions are taken with advanced composite materials. The SAT responds to applicable emergencies/mishaps in conjunction with the CRT as called upon. All SAT personnel must have Composite Hazard Awareness training prior to responding to an incident/accident requiring CDDAR support.

11.28.3.1.2. **(Added)** Appropriate weapons personnel will assist during ground/in-flight emergencies and CDDAR operations involving munitions/weapons for the purpose of safing the weapons systems as required.

11.28.3.1.3. **(Added)** MOC personnel will coordinate maintenance activities, distribute messages and information and conduct emergency recall procedures as required to support CDDAR operations.

11.28.3.1.4. **(Added)** The 31st Test & Evaluation Squadron (31 TES) is responsible to supply CDDAR equipment not already possessed/maintained by the host unit in support of CDDAR operations on their assigned aircraft.

11.28.3.1.5. **(Added)** During CDDAR operations, the 416 AMU, 412 AMU and NASA are responsible for performing End of Runway (EOR) inspections on their assigned aircraft until the 412 MXS/MXMXI Inspection Team crash recovery duties are complete.

11.28.3.1.6. **(Added)** The 412 MXS/MXMXF Fuels Systems Team provides a Hydrazine Response Team (HRT) to support in-flight emergency (IFE)/CDDAR operations. Refer to supplemental **paragraph 11.44** for specific HRT guidance.

11.28.3.1.7. **(Added)** If CDDAR operations become necessary for transient aircraft, (includes aircraft not operating out of Edwards AFB, but become disabled within base boundaries) standard CDDAR procedures in accordance with TO 00-80C-1, MDS-specific technical data and the local IEMP 10-2 may be used to facilitate the safe recovery or removal of the aircraft. Prior to any recovery actions, the MOC will notify the appropriate MAJCOM/unit for specific handling instructions/request technical support and relay information to the EOC Director/IC. If the owning unit is on TDY at Edwards AFB, the MOC will notify the TDY unit and request an aircraft technician and specialized equipment be dispatched to the scene. TDY aircraft technician will report to the CDDAR team chief.

11.28.3.2. **(Added)** The CRT is staffed primarily by the 412 MXS/MXMXI Inspection Team personnel, but will also be augmented as required by MDS-specific SAT personnel and/or owning unit aircraft maintenance personnel. The CRT will be composed of at least four members including a qualified team chief, tow supervisor, tow vehicle operator and an aircraft brake operator.

11.28.3.2.1. **(Added)** During CDDAR activities, the CRT falls under the jurisdiction of the EOC Director/IC. CDDAR instructions from the EOC Director/IC flow to the CRT through the CDDAR team chief. All CDDAR operations will have EOC Director/IC approval before commencing.

11.28.3.3. **(Added)** Equipment, tools, vehicles and other supplies/consumables required for CDDAR operations.

11.28.3.3.1. **(Added)** CDDAR equipment is maintained and stored by the 412 MXS/MXMXI Inspection Team. Refer to T.O. 00-80C-1 for specific equipment used during CDDAR operations.

11.28.3.3.2. **(Added)** CDDAR tools are controlled in accordance with AFI 21-101, **Chapter 8** and all MAJCOM and local supplemental instructions.

11.28.3.3.3. **(Added) CDDAR vehicle requirements.**

11.28.3.3.3.1. **(Added)** A radio-equipped general purpose truck is assigned to the 412 MXS/MXMXI Inspection Team for CDDAR response capability.

11.28.3.3.3.2. **(Added)** Tow vehicle support for CDDAR trailer, flatbed semi-trailer and tractor (if required) is provided by 412 MXS/MXMW Munitions or Airdrop.

11.28.3.3.3.3. **(Added)** Bulldozer support (if required) is provided by local Civil Engineering flight.

11.28.3.3.3.4. **(Added)** Aircraft tow vehicles are provided by owning units.

11.28.3.3.4. **(Added)** CDDAR supplies/consumables (i.e., floor wax, duct tape, etc.) are not CTK items and not controlled as tools/equipment. Minimum on-hand quantities are determined by the CDDAR team chief and stored by the 412 MXS/MXMXI Inspection Team.

11.28.3.4. **(Added)** In addition to standard PPE requirements for aircraft maintenance personnel, the following PPE will be available for use during crash recovery operations: Tyvek suits/coveralls, gloves, respirators, eye protection, safety vests, and hard hats. Crash Recovery Team Chief will consult with the IC and Base Environmental Engineering before beginning crash recovery operations to determine what PPE is required for the specific CDDAR operation.

11.28.3.5. **(Added)** Procedures for responding to government-owned aircraft requiring CDDAR support outside the boundary of Edwards AFB are located in the local IEMP 10-2, Appendix 2, Annex A, Tab B. IC will communicate CDDAR team support requirements based on specific location and nature of incident/accident.

11.28.3.5.1. **(Added)** Upon notification of a crash, the MOC will notify the CDDAR team chief who will relay the message to the CRT members. These individuals will then report to building 1600, room 534 and await further instructions from the EOC Director/IC.

11.28.3.6. **(Added)** If CDDAR support is required after normal duty hours the MOC will notify the 412 MXS/MXMXI Inspection Team personnel via the on-call duty roster. The MOC will notify the SAT and/or owning unit aircraft maintenance personnel (if required) via their unit maintenance supervision.

11.28.3.7. **(Added)** Upon notification of an IFE, the MOC will alert the CRT and owning unit production personnel (if aircraft is locally assigned).

11.28.3.7.1. **(Added)** The CRT will standby at mid-field and await further instruction from the Incident Commander (IC).

11.28.3.7.2. **(Added)** The owning unit production personnel will dispatch a tow team with ground safety devices (when requested by CRT). The aircrew may elect to taxi in if the aircraft is capable.

11.28.3.7.3. **(Added)** All CRT members and unit augmentees will not proceed with response operations until cleared by the EOC Director/IC. The CRT assists the fire department in making the aircraft safe as requested. When the IFE is terminated, the CRT coordinates aircraft removal with the IC.

11.28.3.7.4. **(Added)** The CRT and unit augmentees/tow crews may be called upon to assist with aircraft recovery after a barrier engagement. Note: Barrier engagement may or may not be pursuant to a declared IFE.

11.28.3.7.5. **(Added)** Landing gear safety devices will be installed before the aircraft is marshaled or towed if any question regarding whether the landing gear is fully down and locked exists. The aircraft may be pinned and taxied clear of the active runway prior to shutdown to expedite operations when the aircraft commander, IC and CRT agree.

11.28.3.7.6. **(Added)** The owning maintenance organization provides towing and tire change crews for assigned aircraft and ensures their availability for timely response to aircraft emergencies. When tow operations are necessary, tow team supervisors exit the active runway as rapidly as possible, consistent with safety and IC instructions.

11.28.3.8. **(Added)** Refer to local IEMP 10-2, Appendix 2, Annex A, paragraph 3.1.2 concerning procedures for identifying and handling of classified equipment.

11.28.3.9. **(Added)** The CDDAR team chief will also coordinate with QA, AMUs, Maintenance Training and host entities external to the 412 MXG (as required) to execute their training plan.

11.28.3.10. **(Added)** If a crane is required to support CDDAR operations, consult with base contracting office to acquire necessary vehicle and vehicle operator (if needed) from local supplier.

11.30.2. **(Added)** All non-egress personnel must complete egress familiarization training for each type of aircraft cockpit they are required to enter.

11.30.2.1. **(Added)** Flight training monitors should forecast non-egress personnel recertification training requirements approximately 1 month in advance to allow for adequate local course scheduling/planning.

11.30.2.2. **(Added)** 412 MXG/MXT will coordinate with AMUs to ensure aircraft equipped with ejection seats and canopies are available for scheduled training events. The aircraft owning organization will ensure the aircraft is positioned inside a hangar and will coordinate delivery of all necessary AGE equipment. Note: An aircraft that is already in a hangar undergoing maintenance may be used for training provided it is equipped/configured as required and the training does not interfere with the maintenance in progress.

11.30.2.3. **(Added)** F-35 egress certification will be accomplished by a certified F-35 egress instructor. The class consists of a seat de-arm/arm taught with an inert seat and seat/canopy removal and installation performed on aircraft. The certifications will be documented in accordance with AFI 36-2670, Total Force Development.

11.34.1.14.1. **(Added)** Manages all wing assigned Two-Level Maintenance (2LM) Pods.

11.34.5.2.1. **(Added)** Notify the 412 MXS/MXMF Fabrication Flight Chief or Superintendent, and 412 MXS, 412 AMXS and/or 912 AMXS Maintenance Supervision. Contractors will be notified through their MCD Program Monitors.

11.34.5.4.1. **(Added)** MCDs are purchased by individual AMUs. Owning unit personnel must ensure the OAP lab is provided with enough spares to accommodate turn-in of numerous items for inspection (to prevent extended delays/mission impacts).

11.34.5.4.2. **(Added)** AMUs shall not remove serviceable MCDs from ready boxes of other units without the approval of the owning unit and NDI lab personnel.

11.34.7.2.1. **(Added)** The status codes will be as follows:

11.34.7.2.2. **(Added)** LEVEL 0 - Full Mission Capable. No or little material has been detected.

11.34.7.2.3. **(Added)** LEVEL 1 - Material detected, but within limits.

11.34.7.2.4. **(Added)** LEVEL 2 - Material Limit Exceeded. Troubleshoot engine in accordance with T.O.

11.34.7.2.5. **(Added)** LEVEL 3 - Severe Material. Aircraft grounded pending further action.

11.34.8.3. **(Added)** NDI will provide transient aircraft SEM/EDX analysis reports to accompany cross-country flights, as needed, for engine transfer, maintenance actions, etc.

11.38.2.3.1. **(Added)** During short-term/temporary power outages, Edwards OAP laboratory may restore power/sustain operations by utilizing gas-powered portable emergency generator that is connected to external building plug box. JOAP units will be plugged into specially marked plugs on the interior of the JOAP lab that are powered by emergency generator. For long-term outages (greater than 24 hours), all oil sampling will be taken and then delivered to/analyzed at the alternate OAP laboratory at Nellis AFB NV.

11.38.3.3.1. **(Added)** The letter will be signed by the individual's Flight Chief.

11.38.3.3.2. **(Added)** Training for unqualified personnel required to work with OAP will be provided via one of the following training sources and tracked using IMDS course code 032142.

11.38.3.3.2.1. **(Added)** Advanced Distributed Learning Service online CBT – Joint Oil Analysis Program (JOAP) Course, (Course ID C2ADU00TCB9638). Access training via **https://a4mxtng.csd.disa.mil**.

11.38.3.3.2.2. **(Added)** Audiovisual DVD-ROM – Joint Oil Analysis Program, (Course ID C6ANU00TIV1001V1). UTM may procure no-cost hard copy of training media via **https://productions.dodmedia.osd.mil/DAVIS/**

11.38.3.4. **(Added)** Quarterly meetings are conducted on the first Thursday in the months of January, April, July and October.

11.38.4.2. **(Added)** Circle in red any errors submitted on the DD Form 2026 and immediately report all errors to the respective units through the MOC.

11.38.4.5.1. **(Added)** Provide samples from all assigned oil servicing carts on the first duty day of the week or upon notification from MOC of an engine serviced by the OAP cart that has been placed on a special OAP code.

11.38.4.5.2. **(Added)** Ensure all aircraft which are on a special sampling code are not called in "crew ready" without the known results of the OAP samples from the NDI Lab.

11.38.6.5. **(Added)** Ensure the NDI Lab has access to the daily flying schedule and equipment listing and is notified of any daily changes to the flying schedule (i.e., cancellations and replacement of aircraft).

11.38.6.6. **(Added)** Exception: Contractor samples will go directly to the contractor.

11.38.7.3.1. **(Added)** Immediately notifies test cell and the 412 MXS/MXMP Propulsion Flight Chief when abnormal OAP results are discovered on engines installed in aircraft. Additionally notifies the 412 MXS/MXMF Fabrication Flight Chief or Superintendent, MOC, 412 MXS, 412 AMXS and/or 912 AMXS Maintenance Supervisions. Contractors will be notified through their OAP Monitors.

11.38.8. **(Added)** Sample response time will not exceed 2 hours for all aircraft/engines for routine samples.

11.38.8.4.1. **(Added)** Special samples (red cap) will be accomplished immediately and ensure DD Form 2026, Oil Analysis Request, and sample envelopes are marked predominately in red (such as red borders).

11.38.8.4.2. **(Added) Red cap samples will be required:**

11.38.8.4.2.1. **(Added)** When directed by the NDI Lab IAW TO 33-1-37-3 WP 003 00 and WP 050 00

11.38.8.4.2.2. **(Added)** For any abnormal engine condition or incident occurring from either a malfunction of the oil lubricated system from loss of oil or low/fluctuating/zero oil pressure.

11.38.8.4.2.3. **(Added)** When metallic particles, in excess of those allowed in applicable technical data, are noted on screens, filters or chip detectors during maintenance of jet engine oil lubricated system.

11.38.8.4.2.4. **(Added)** For excessive engine vibration, IFE or oil wetted-related component problems.

11.38.8.4.2.5. **(Added)** For operational engine run following installation of a new, overhauled or repaired engine.

11.38.8.4.2.6. **(Added)** DD Form 2026 Time since Overhaul information must come from the CAT 77 for sample monitoring. Any other CAT used will be considered an error or Code Delta per T.O. 33-1-37-1 WP 003 00.

11.42. (Added) 412 MXG Aircraft Inspection and Heavy Maintenance Dock Operations.

11.42.1. **(Added)** Local Policies.

11.42.1.1. **(Added)** The 412 MXS will perform inspections, maintenance and operational checks outlined in technical orders for F-16 and T-38 aircraft to include engine inspections and bore scopes that are due during the aircraft inspection (accomplished by engine shop), time changes, Special Inspections (SI), One-Time Inspections (OTI) and, if coordinated in advance, TCTOs. Wing Training days, Safety days, Family days, Holidays and Weekends are not considered Inspection/Heavy Maintenance Dock flow days.

11.42.1.2. **(Added)** Parts cannibalized from inspection or heavy maintenance aircraft will be coordinated between the owning AMU Production Superintendent and the Inspection/Heavy Maintenance Production Superintendent and Dock Chief. The owning AMU Production Superintendent understands that the aircraft may be returned without the accomplishment of tasks or inspections that were associated with the cannibalized part(s) if a serviceable part has not been installed prior to the completion of the inspection, the part results in an excessive delay of the inspection or causes a work stoppage.

11.42.1.3. **(Added)** Requests for personnel (in addition to those specified herein) to support accelerated inspection and/or maintenance must be coordinated and agreed upon between 412 MXS Maintenance Supervision and the owning AMU Supervision.

11.42.1.4. **(Added)** Attrition T-38 aircraft should be flown prior to going into periodic inspection to reduce downtime FCFs.

11.42.1.5. **(Added)** No aircraft with an on-going impoundment will be accepted by the Inspection/Heavy Maintenance Dock unless specifically directed by the 412 MXG Supervision and released for maintenance by the impound official.

11.42.1.6. **(Added)** Aircraft delivery time will be coordinated during the pre-dock inspection meeting and annotated on the AF Form 2410.

11.42.1.7. **(Added)** Additional Heavy Maintenance Dock Operations Requirements.

11.42.1.7.1. **(Added)** A Pre-dock meeting with a typical “buy and sell” process will be maintained for aircraft entering the Heavy Maintenance Dock.

11.42.1.7.2. **(Added)** The 412 MXS Maintenance Flight Superintendent will attend the scheduling meeting on Wednesdays. All Heavy Scheduled Maintenance Dock work will be scheduled during this meeting. Scheduled maintenance can, and should be, incorporated with other maintenance being performed in the dock. In order for this effort to be successful, the owning unit’s PS&D section must coordinate appropriately. Requests for previously uncoordinated/unscheduled maintenance must be coordinated and agreed upon between 412 MXS Maintenance Supervision and the owning AMU Supervision.

11.42.1.7.3. **(Added)** The owning unit will deliver aircraft to the Heavy Scheduled Maintenance Dock. Once maintenance is completed, the Heavy Scheduled Maintenance Dock will deliver the aircraft to the owning unit.

11.42.2. **(Added) Individual Responsibilities for Scheduled Inspection Operations.**

11.42.2.1. **(Added)** 412 MXS Inspection Section Responsibilities.

11.42.2.1.1. **(Added)** Load JSTs and incorporate information into Aircraft Forms.

11.42.2.1.2. **(Added)** Coordinate with the MOC regarding aircraft status.

11.42.2.1.3. **(Added)** Upon delivery of aircraft, dock chief will up channel discrepancies concerning aircraft cleanliness and/or forms documentation standards to appropriate AMU production section.

11.42.2.1.4. **(Added)** Perform all maintenance operations annotated on the AF Form 2410 as agreed upon at the pre-dock meeting for both Inspection and Heavy Maintenance Docks.

11.42.2.1.5. **(Added)** Pull forms prior to releasing the aircraft back to the owning unit.

11.42.2.1.6. **(Added)** Tow aircraft back to assigned AMU after completion of inspection.

11.42.2.1.7. **(Added)** Return the aircraft with pre-flight accomplished.

11.42.2.2. **(Added)** AMU Responsibilities.

11.42.2.2.1. **(Added)** Deliver aircraft configured in accordance with **paragraph 11.42.3** of this instruction (with the exception of any discrepancies resulting from fuel inspection and/or NDI checks).

11.42.2.2.2. **(Added)** Wash aircraft after last flight in accordance with technical data.

11.42.2.2.3. **(Added)** Complete an aircraft Basic Post Flight Inspection and pull all completed or transcribed forms prior to entry into Inspection/Heavy Maintenance Dock. All SIs, OTIs, TCTOs, Time Changes and delayed discrepancies to be accomplished during the scheduled inspection will be entered and/or transferred to the AFTO Form 781A before entry into inspection dock.

11.42.2.2.4. **(Added)** Reinstall all aircraft parts canned by AMU technicians from aircraft undergoing scheduled inspection and/or heavy maintenance.

11.42.2.2.5. **(Added)** Provide specialist support personnel for their aircraft. This includes Electro-Mechanical, Guidance and Control, Communication and Navigation, F-16 Avionics, Weapons, Electronic Warfare and engine run qualified personnel. If mission priorities prevent AMUs from providing specialist support, additional specialist requirements will be coordinated through the 412 MXS/MXMXI Inspection Team.

11.42.2.2.5.1. **(Added)** AMU specialist personnel will report to the Inspection Section/Heavy Maintenance Dock Chief prior to and upon completion of maintenance performed on inspection aircraft. Additionally, they will immediately inform the Inspection Section/Heavy Maintenance Dock Chief of any problems that may delay the inspection operation.

11.42.2.2.6. **(Added)** Provide any necessary technical data not already possessed by the Inspection Section/Heavy Maintenance Dock.

11.42.2.2.7. **(Added)** Perform hot LOX purge and service aircraft with LOX at post phase (to alleviate conflict with LOX cart schedules).

11.42.2.3. **(Added)** Dedicated Crew Chief/Assistant Dedicated Crew Chief Responsibilities.

11.42.2.3.1. **(Added)** Aggressively work delayed discrepancies (DD). Ensure all DDs have parts ordered with valid document numbers. DDs should not restrict the inspection flow (inform Dock Chief at the pre-dock meeting if applicable).

11.42.2.3.2. **(Added)** Complete Configuration Management Sheet/Jacket File inspection as required. Refer to additional requirements listed in AFI 21-101, **Chapter 7** and all supplemental instructions.

11.42.2.3.3. **(Added)** Accomplish aircraft document review.

11.42.2.3.4. **(Added)** Accomplish aircraft lubrication.

11.42.2.4. **(Added) QA Responsibilities.**

11.42.2.4.1. **(Added)** Perform a QVI of the aircraft when the inspection and/or repairs that can be worked are completed. Portions of the aircraft (as agreed upon prior to start of the inspection) may have the QVI done at the completion of the inspection and repair actions pertaining to that portion of the aircraft. The QVI will be accomplished prior to the aircraft or that portion of the aircraft being re-paneled.

11.42.2.4.2. **(Added)** Review the aircraft forms when the entire aircraft inspection is complete.

11.42.3. **(Added) Scheduled Inspection Aircraft Configuration Requirements.**

11.42.3.1. **(Added)** F-16 Configuration Requirements.

11.42.3.1.1. **(Added)** Mono check completed and AFTO Form 781K times updated.

11.42.3.1.2. **(Added)** Full fuel load.

11.42.3.1.3. **(Added)** Pre-inspection fuel leak checks accomplished.

11.42.3.1.4. **(Added)** External fuel tanks removed.

11.42.3.1.5. **(Added)** Under-wing pylon attachment covers removed.

11.42.3.1.6. **(Added)** All Dash-21 equipment installed.

11.42.3.1.7. **(Added)** Munitions and following AME downloaded:

11.42.3.1.7.1. **(Added)** Wing Weapons Pylons (MAU-12s).

11.42.3.1.7.2. **(Added)** Centerline Pylons (MAU-12s).

11.42.3.1.7.3. **(Added)** Wing Tip Launchers.

11.42.3.1.7.4. **(Added)** LAU-129.

11.42.3.1.7.5. **(Added)** 370 Pylons.

11.42.3.1.7.6. **(Added)** Under Wing Adapters.

11.42.3.2. **(Added)** T-38 Configuration Requirements.

11.42.3.2.1. **(Added)** Center pylons will be removed (B models only).

11.42.3.2.2. **(Added)** Full fuel load.

11.42.3.2.3. **(Added)** Pre-Confi engine run accomplished to allow for:

11.42.3.2.3.1. **(Added)** Marking of the 95% throttle positions.

11.42.3.2.3.2. **(Added)** Checking anti-ice valves for proper operation.

11.42.3.2.3.3. **(Added)** Setting aileron and stab trims to zero (prior to engine shut down).

11.42.4. **(Added) 412 MXG F-16 Phases Paperless Forms Procedures.**

11.42.4.1. **(Added)** Phase Dock Chief Responsibilities.

11.42.4.1.1. **(Added)** Will validate all forms entries in IMDS during aircraft pre-dock.

11.42.4.1.2. **(Added)** After all entries are validated in IMDS, Dock Chief will pull aircraft forms from the aircraft forms binder and process them for turn-in. These pulled forms will be considered permanently inactivated.

11.42.4.1.3. **(Added)** Will attach a locally developed cover sheet (See **Attachment 13**, Paperless Phase Inspection Validation Coversheet) to the front of the aircraft forms, in lieu of utilizing normal transcribing procedures set out in TO 00-20-1.

11.42.4.1.3.1. **(Added)** The cover sheet will include the following: Aircraft Tail Number, Aircraft forms From Date, date inactivated, and date reactivated, reason for deactivation (i.e. paperless phase inspection), number of pages removed from each type of form (i.e. 781A, 16 pages inactivated), and the statement, "I verify that all open entries have been entered/validated in IMDS", printed name, and employee number of the Dock Chief, followed by the Dock Chief's signature. (See **Attachment 14**, Paperless Phase "Aircraft Forms Inactivated" Sheet.)

11.42.4.1.4. **(Added)** Will ensure the deactivated forms remain locked up in the phase dock box and not utilized during the entire phase process.

11.42.4.1.5. **(Added)** Will at the end of the phase inspection, place the date the aircraft forms are reactivated on the appropriate block on the coversheet (Required for Plans and Scheduling (P&S) tracking purposes).

11.42.4.1.6. **(Added)** Will give the permanently inactivated forms to the aircraft's assigned AMU at the post-dock for their review and then given to P&S to file in the aircraft's jacket file.

11.42.4.1.7. **(Added)** Will print an IMDS screen 380 with all work center entries (WCE) at the beginning of their shift. It will be maintained in the dock box next to the IMDS terminal.

11.42.4.1.7.1. **(Added)** Will have an updated IMDS screen 380 open on their terminal ready to print in case of IMDS falling off-line.

11.42.4.2. **(Added) General Procedures.**

11.42.4.2.1. **(Added)** Panel sheets and "Gig" sheets will be approved and stamped by 412 MXG/MXQ.

11.42.4.2.2.1. **(Added)** Phase "Gig" sheets will still be utilized, but IMDS employee number will be put into "Corrected by" block and the symbol will be initialed.

11.42.4.2.3. **(Added)** Panel sheets must have, at a minimum, aircraft tail number, job control number (JCN), date started, title of panel sheet, all applicable panels/doors opened or removed for a specific task, and "Removed", "Installed" and "In-Progress Inspection" (IPI) blocks for signatures.

11.42.4.2.3.1. **(Added)** Aircraft panel sheets will be utilized and kept with the phase "Gig" sheets.

11.42.4.2.3.2. **(Added)** A separate Red-X entry will be made in IMDS stating, "Aircraft de-paneled for phase, see consolidated panel sheet". These entries will not be loaded in IMDS and the completed panel sheets will be turned in to P&S, along with "Gig" sheets during the aircraft post-dock.

11.42.4.2.3.3. **(Added)** When the aircraft forms are reactivated, if there are any panels not signed off on the panel sheet, at that time , those panels will be documented in the AFTO 781A and into IMDS. After the documentation is complete the panel sheets will be signed and given to P&S.

11.42.4.2.4. **(Added)** Locally approved Workcard Tracking sheet will be utilized to account for all phase workcards accomplished during the phase inspection.

11.42.4.2.4.1. **(Added)** Completed workcards will annotated by employee number by applicable step on each card.

11.42.4.2.4.2. **(Added)** After the post dock the Workcard Tracking sheet will be turned in with the phase package.

11.42.4.2.5. **(Added)** In the event of a power outage, or when IMDS is off-line, the AFTO 781-series forms will be reactivated. When power is restored, or IMDS comes back on-line, deactivate the aircraft forms.

11.42.4.2.6. **(Added)** All personnel will check out with the dock chief prior to leaving the aircraft. The dock chief will verify all documentation is completed and accurate.

11.42.4.2.7. **(Added)** All maintenance actions related to the phase will use one Fix Phase JCN (IMDS screen 103) for each maintenance action, with attached WCEs, to describe follow-on maintenance, to facilitate other maintenance, and to describe operational checks. In this format cross referencing follow-on maintenance and operational checks is not required.

11.42.4.2.8. **(Added)** All paperless phase procedures will be followed while the aircraft is in the fuel barn during the phase process.

11.42.4.2.8.1. **(Added)** A Warning Tag board will be located in fuels while the aircraft is located in the fuel barn.

11.42.4.2.9. **(Added)** All lost tools or parts will be documented by an AFMC Form 310. Also a red X will be placed into IMDS documenting the item lost, location on the aircraft, and equipment effected (if applicable).

11.42.4.2.10. **(Added) Warning Tags**

11.42.4.2.10.1. **(Added)** "Do Not Apply" entries will be made in the MIS in the discrepancy or WCE that created the condition. Warning Tags will be used on the aircraft as long as the "Do Not Apply" condition exists.

11.42.4.2.10.2. **(Added)** A separate IMDS entry will be made for the Warning Tag, identifying where the Warning Tag is attached to the aircraft and the reason causing the Warning Tag conditions.

11.42.4.2.10.3. **(Added)** The perforated bottom portion of the Warning Tag will be inserted into the first available Warning Tag status board slot located near the phase dock box.

11.42.4.2.10.4. **(Added)** The Warning Tag will be attached to the aircraft during maintenance actions, as required by the applicable TO.

11.42.4.2.10.4.1. **(Added)** An IMDS entry will be made identifying where the Warning Tag is attached to the aircraft and the cause of the Warning Tag conditions.

11.42.4.2.10.5. **(Added)** When the Warning Tag condition no longer exists, remove the Warning Tag from the aircraft. Document the Warning Tag removal in IMDS, according to the corresponding WCE and remove the perforated bottom portion from the Warning Tag status board.

11.42.4.2.11. **(Added)** After the phase is completed, but prior to the post-dock, all write-ups that are in IMDS, but not in the aircraft forms, will be entered into the aircraft forms.

11.42.4.3. **(Added) IMDS Documentation**

11.42.4.3.1. **(Added)** IPIs will be documented in IMDS as they currently are in the forms. The following will be typed in the "Discrepancy" block in IMDS: IPI REQUIRED AT STEP (TO REF, PAGE, PARAGRAPH, FIGURE, and/or STEP). When signing off of the IPI in IMDS, the individual will type "IPI C/W", name, rank, and employee number prior to the job being closed out. Example: IPI C/W BY J. DOE, SSGT, 00123

11.42.4.3.2. **(Added)** All IMDS entries will include the TO references in the IMDS "Corrective Action" block for Red-Xs. (e.g. TO number and paragraph/figure number for conventional TOs, function number/fault code for MIDAS based TOs, System/Sub- System/Subject Number (SSSN) or equivalent reference)

11.42.4.3.3. **(Added)** Informational notes, listing the equipment identification number for servicing equipment, such as nitrogen carts, hydraulic carts, oil carts, and fuel trucks, will be entered in the IMDS "Corrective Action" block that generated the need for servicing equipment.

11.43. (Added) Local Requirements for Requesting Technical Assistance.

11.43.1. **(Added)** Electronic Technical Assistance Request (ETAR)/107 Procedures:

11.43.1.1. **(Added)** Any maintenance section confronted with a technical problem that cannot be solved at the unit level using approved technical data, will submit all available information and/or research to the applicable MDS SPO Engineering Group following instructions on the 107/ETAR distribution process.

11.43.1.2. **(Added)** Owning AMU maintenance supervision will review all available data provided by the maintenance section/technician(s) to ensure the problem exceeds technical data guidance and/or local capabilities.

11.43.1.2.1. **(Added)** If the determination is made that the existing problem is not within the scope of available technical data, the appropriate AMU or an affected back shop supervision will complete a Depot/ALC/Engineering Request Worksheet. Contact QA to obtain correct format.

11.43.1.2.2. **(Added)** All requests for assistance and outgoing communications, excluding engineering support requests for T-2 modifications, to applicable MDS SPO Engineering Group must be approved by 412 MXG Supervision.

11.43.1.3. **(Added)** Once drafted, the owning organization will submit the request for review to their Maintenance Operations Officer (MOO) or equivalent.

11.43.1.3.1. **(Added)** The MOO will review the request for accuracy and content. When review is completed the MOO will forward the request to MXG QA for review.

11.43.1.3.2. **(Added)** If additional information is required in support of a request, the affected maintenance organization will work through their MOO to provide necessary data.

11.43.1.3.3. **(Added)** After review, QA will submit the request to the 412 MXG Supervision for final review/approval to proceed with formal technical assistance request.

11.43.1.3.4. **(Added)** Once approved, QA will submit the request to the appropriate MDS SPO Engineering Group and advise the affected organization and MOC of the submission.

11.43.1.4. **(Added)** QA will monitor the status of the request. When a response is received, it will be distributed through the appropriate organizational workflow. Dispositions/instructions received will only apply to the specific aircraft/equipment identified. Note: In some cases ALC, SPO or engineering group may request additional information prior to providing final recommendation. In these cases, QA will coordinate with the affected aircraft/equipment organization (107/ETAR Worksheet OPR) through the "412 MXQ 107 ETAR" email distribution mailbox.

11.43.1.5. **(Added)** If verbal directions are given by a manufacturer and a comparable depot engineering section is involved in the same subject, the depot will be contacted to give the final approval for the manufacturer's directives. If verbal directions are given regarding the writing.

11.43.2. **(Added) 412 MXS/MXMP Propulsion Flight Engineering Assistance/Waiver Requests:**

11.43.2.1. **(Added)** When the determination is made to request engineering assistance or waivers from depot, 412 MXS/MXMP Propulsion Flight will:

11.43.2.1.1. **(Added)** Compose request and forward to 412 MXS/MXM (MOO) for review. When review is complete, request will be forwarded to 412 MXG Supervision for approval. Once approved, 412 MXS/MXMP Propulsion Flight will electronically submit all engineering assistance/waiver requests, following the established format provided by the ALCs to HQ AFMC/A4M (HQ AFMC/A4M workflow mailbox) for coordination/approval and up channeling to the necessary depot organizations.

11.43.2.1.2. **(Added)** Ensure QA receives an electronic courtesy copy of all engineering/waiver requests.

11.43.2.1.3. **(Added)** Upon receipt of all dispositions, approved or disapproved, forward the information to all affected organizations and QA.

11.43.2.2. **(Added)** Any instructions provided will apply only to the equipment in question.

11.43.3. **(Added)** Egress Engineering Assistance Requests (EAR):

11.43.3.1. **(Added)** When an ejection seat related EAR is needed Egress will:

11.43.3.1.1. **(Added)** Complete an EAR (EAR-001) located on the Ejection Seat Repair data base for electronic submittal. **https://afkm.wpafb.af.mil/community/views/home.aspx?Filter=OO-EN-MC-44**

11.43.3.1.2. **(Added)** Contact QA to include any necessary images with the EAR.

11.43.3.1.3. **(Added)** Include necessary information concerning the discrepancy of the item and possible recommendations.

11.43.3.1.4. **(Added)** Ensure QA and 412 MXS/MXA review the request and forward it to 412 MXG Supervision for final approval. Once final approval is received submit EAR and provide a courtesy copy to QA.

11.43.3.1.5. **(Added)** Coordinate with engineer concerning any additional information needed during the process.

11.43.3.2. **(Added)** Upon receipt of EAR disposition, proceed with instructions and retain EAR in Egress historical records once accomplished.

11.43.3.3. **(Added)** F-35 egress maintenance issues that cannot be resolved using applicable JTD, JSF Aerospace Equipment Instruction (AEI), and Engineering Inspection Requirement (EIR) will be coordinated through QA to Lockheed Martin for technical assistance.

11.43.4. **(Added) Depot Field Team (DFT) request procedures.**

11.43.4.1. **(Added)** When the determination is made to request depot support for on-site assistance, QA will:

11.43.4.1.1. **(Added)** Ensure units follow the same process identified in supplemental **paragraph 14.45.1** to initiate a DFT request. QA may act as the liaison between the DFT and maintenance agencies.

11.43.4.1.2. **(Added)** Advise and assist the AMU to draft the DFT request and provide request status.

11.43.4.1.3. **(Added)** Provide the DFT supervisor with a local POC and telephone numbers.

11.43.4.1.4. **(Added)** Advise the MOC when a DFT request is made.

11.43.4.1.5. **(Added)** Provide qualified inspectors to evaluate in-progress and follow-up review of DFT work.

11.43.4.2. **(Added)** The MOC will place the aircraft in appropriate depot status.

11.43.4.3. **(Added)** The AMU will:

11.43.4.3.1. **(Added)** Identify a POC to work with the DFT members and make the selected person available to the DFT upon their arrival.

11.43.4.3.2. **(Added)** Coordinate and prep the aircraft prior to DFT arrival, order parts and/or hardware for the repair, as needed/directed by DFT.

11.43.4.3.3. **(Added)** Coordinate required security arrangements for the DFT members (e.g., security badges, escorts, safety briefings, etc.) and as warranted, local Flightline driver training/qualifications.

11.43.4.3.4. **(Added)** Arrange for pickup and delivery of special gear sent ahead by DFT. Arrange for transportation to provide delivery service, as required.

11.43.4.3.5. **(Added)** Meet the DFT members and escort them to the work area.

11.43.4.3.6. **(Added)** When the DFT begins work, contact the MOC to change the Possession Status Code to “DM” (Depot Maintenance In-Progress).

11.43.4.3.7. **(Added)** Coordinate introduction of the DFT leader with the 412 MXG/CC, if requested.

11.44. (Added) Hydrazine Response Procedures and Requirements.

11.44.1. **(Added)** Terms and Definitions.

11.44.1.1. **(Added)** Recovery Team – A team consisting of Fire Department, HRT, crew chief, a tow team and medical personnel.

11.44.1.2. **(Added)** IC – The on-scene Senior Fire Official (SFO). This individual is charged with overall oversight, to include evacuation of the area, cordon establishment, egress/rescue of aircrew and coordination/communication with all base agencies. The IC performs all command and control duties during recovery of aircraft with activated emergency power unit (EPU) and during containment and neutralization of hydrazine spills and aircraft fire protection.

11.44.1.3. **(Added)** HRT – Specially equipped, three-member team assigned to the 412 MXS/MXMXF Fuel Systems Team, trained to detect, isolate, contain and neutralize hydrazine following EPU activations and/or suspected ground emergencies involving activated and/or leaking aircraft hydrazine systems.

11.44.1.4. **(Added)** Emergency Response – Those actions that require utilization of the Fire Department, HRT and other base agencies resulting from aircraft with an in-flight or ground emergency, suspected/confirmed hydrazine leak, contamination or spill.

11.44.1.5. **(Added)** Initial Aircraft Recovery – Actions taken by the Fire Department and HRT personnel immediately following EPU activation.

11.44.1.6. **(Added)** Post-Recovery Maintenance Actions – Actions taken by aircraft maintenance personnel returning the emergency power system to operational status after initial aircraft recovery actions are complete. Refer to "Returning the Emergency Power System to Operational Ready Status" procedures in the MDS-specific 49GS-00-1 technical order.

11.44.1.7. **(Added)** Deemed Safe – Term describing that the aircraft nitrogen system has been depressurized and the immediate area has been tested for the presence of hydrazine and determined by the SFO and HRT supervisor to be safe for the aircraft to be towed to the hydrazine maintenance/servicing area.

11.44.1.8. **(Added)** Hydrazine Maintenance – Tasks performed by the 412 MXS Aircraft Fuel Systems Repair Team personnel including, but not limited to: purging the EPU system, EPU refurbishment and EPU component and hydrazine bottle replacement.

11.44.1.9. **(Added)** Air start mission – a scheduled, deliberate and planned activation of the EPU for the purpose of testing aircraft engine, systems or part of the Test Pilot School curriculum.

11.44.1.10. **(Added)** Sniff check – The use of a multi-gas detector to determine if hydrazine is present.

11.44.1.11. **(Added)** Leak detection – The use of Litmus paper to determine if a liquid is hydrazine.

11.44.2. **(Added) Controlled Areas.**

11.44.2.1. **(Added)** Restricted Area Cordon is defined as a 100-foot cordon around aircraft with activated EPU, suspected/confirmed hydrazine leak or hydrazine spill/contamination. Note: Cordon size may be increased at the discretion of the IC as determined by winds and the severity of a hydrazine leak.

11.44.2.1.1. **(Added)** Only certified Fire Department personnel and HRT members wearing proper personal protective equipment will enter restricted area cordon. No other personnel will enter the area until deemed safe by the IC or HRT supervisor. The only exception to this situation is where there is immediate danger to human life or the aircraft is on fire.

11.44.2.2. **(Added)** A location a minimum distance of 75 feet upwind will be established as the decontamination area for any personnel exposed to hydrazine as confirmed by HRT personnel.

11.44.3. **(Added) EPU activation recovery locations.**

11.44.3.1. **(Added)** Primary EPU activation recovery location is runway 23L/R or 05L/R hammerhead.

11.44.3.2. **(Added)** Alternate EPU activation recovery location is runway 23L/R or 05L/R hammerhead.

11.44.3.3. **(Added)** Lakebed runway landings with activated EPU recover at Taxiway Delta.

11.44.3.4. **(Added)** Taxiway Bravo shall only be used if the departure end hammerhead has on-going activities.

11.44.4. **(Added) EPU Maintenance/Servicing Areas.**

11.44.4.1. **(Added)** Primary hydrazine maintenance/servicing area is Pad 5 and/or Pad 6. During inclement weather or if other aircraft are occupying Pad 5 and/or Pad 6, the Hush House may be used as an alternate EPU maintenance/servicing location.

11.44.4.2. **(Added)** F-16 aircraft H-70 systems that have been purged and disconnected for phase or other H-70 system maintenance may be reconnected inside fuel systems repair Buildings 1624 and 1622.

11.44.5. **(Added) Scheduled Air Start Mission Procedures.**

11.44.5.1. **(Added)** Pre-coordinated/scheduled in-flight EPU activations will not be declared an in-flight or ground emergency unless an aircraft safety-of-flight/life threatening condition exists or a hydrazine leak is detected. Prior to landing, the pilot must notify approach control that a scheduled in-flight EPU activation has occurred. All unscheduled EPU activations or suspected hydrazine leaks, whether in-flight or on the ground, will be declared an emergency.

11.44.5.2. **(Added)** Scheduled air start missions will be pre-coordinated through 412 OSS/OSR Scheduling and 412 AMXS/MXAA, and the 412 MXS/MXMXI Inspection Team Production Superintendents to ensure personnel and equipment are available prior to aircraft launch. The 412 OSS personnel will also coordinate with the fire department and control tower personnel. Pre-coordination will include the following:

11.44.5.2.1. **(Added)** Aircraft launch time and sortie duration (all agencies).

11.44.5.2.2. **(Added)** EPU activation recovery location (when known).

11.44.5.2.3. **(Added)** Pre-positioning of aircraft boarding ladder and fire bottle prior to scheduled air starts at the recovery location (aircraft owning unit).

11.44.5.2.4. **(Added)** Pre-positioning of support equipment at the EPU maintenance area (B-1 or B-4 maintenance stand, electrical power unit and an “EPU Only” designated nitrogen cart).

11.44.6. **(Added) Hydrazine Response Team Responsibilities.**

11.44.6.1. **(Added)** Personnel shall refer to “Recovery, Isolation, and Support of Aircraft After In-Flight Operation of the EPU” and “Returning the Emergency Power System to Operational Ready Status” procedures found in the MDS-specific 49GS-00-1 technical order during initial response and post-recovery maintenance.

11.44.6.2. **(Added)** The HRT supervisor will coordinate with the IC upon arrival at the recovery location. The IC will determine when the aircraft is safe to be approached by the HRT.

11.44.6.3. **(Added)** The IC and HRT will maintain direct communications by monitoring Fire/Crash Tactical Channel 1 (TAC 1) during all phases of the response.

11.44.6.4. **(Added)** The IC and HRT supervisor will remain at the aircraft during all phases of aircraft recovery.

11.44.6.5. **(Added)** The Fire Department will provide an IC and a tender truck as minimum support for all scheduled air start recoveries.

11.44.6.6. **(Added)** For in-flight activation, IC will establish radio or visual communications with pilot (UHF radio communication frequency determined by Supervisor of Flying) and ensure aircraft is positioned at the recovery location with left wingtip pointed upwind. Note: If the aircraft is incapable of being marshaled into proper position, all responding personnel will position themselves upwind and proceed with the recovery.

11.44.6.7. **(Added)** Post-recovery maintenance actions shall not begin until all Initial Response actions are completed.

11.44.6.8. **(Added)** Once the aircraft is deemed safe, the HRT supervisor may clear Special Instrumentation and/or Jet Engine personnel into the area to download any mission data and/or retrieve tapes as necessary.

11.44.6.9. **(Added)** Accomplish Crash-Survivable Flight Data Recorder download and comply with EPU preflight maintenance requirements.

11.44.7. **(Added)** Procedures for Personnel Exposed to Hydrazine.

11.44.7.1. **(Added)** Anyone who suspects they have been exposed to hydrazine, either liquid or vapor, will evacuate to the decontamination area and remove exposed clothing. Exposed personnel will identify themselves to the IC or HRT. Unless already initiated, a ground emergency will be declared and medical personnel will be called.

11.44.7.2. **(Added)** Exposed personnel will decontaminate with water for a minimum of 15 minutes. Any external area that came in contact with liquid hydrazine will also be decontaminated. Runoff will be collected for testing.

11.44.7.3. **(Added)** Any clothing that has been contaminated with hydrazine will be removed at the scene and given to HRT for decontamination and disposal. Contaminated clothing shall not leave the area without first being decontaminated.

11.44.7.4. **(Added)** After decontamination, exposed personnel will be evaluated by medical personnel. After initial evaluation, exposed personnel will be transported to appropriate medical facility as deemed necessary by medical personnel.

11.44.8. **(Added) Priority Support for Hydrazine Response Aircraft.**

11.44.8.1. **(Added)** Aircraft with an activated EPU or suspected hydrazine leak will be supported on a priority basis by owning unit personnel until aircraft is safely relocated to the EPU maintenance/servicing area.

11.45. (Added) Radiation Protection Program.

11.45.1. **(Added)** Refer to AFI 48-109, Electromagnetic Field Radiation (EMFR) Occupational and Environmental Health Program, and/or the unit EMFR safety awareness training program for specific requirements for the safe operation of hazardous EMFR emitters. All personnel, to include contractors and temporary duty military and civilians working/driving on the flightline, will receive EMFR Safety Awareness training. The briefing will incorporate at a minimum the EMFR Training requirements identified in AFI 48-109. This training will be tracked via IMDS course code 029101.

11.45.2. **(Added)** Individuals operating high power emitters on the flightline will contact the MOC prior to operation for training verification and authorization. The MOC will utilize the Radio Frequency/Radiation Hazard Clearance checklist to confirm safety requirements are met.

11.45.3. **(Added)** When base assigned aircraft are parked in designated areas and if prescribed safety measures are adhered to, then separation between aircraft and structures is adequate except as specified below:

11.45.3.1. **(Added)** If the RF hazard area encompasses an entry control point, vehicles and pedestrians will use an alternate entry control point to gain access to the flight line area.

11.45.3.2. **(Added)** F-22 during high power RF operational checks will use Pad 19 as primary and taxiway D or Pad 15 as a secondary location. Aircraft will be parked facing the lakebed from either of the three locations listed and the wing tip lights will be turned on to identify the radiation hazard. In addition, three evenly spaced radiation cones will be placed aft of the aircraft.

11.46. (Added) T2 Modification Operations and Maintenance Support (412 MXIS/MXIO):

11.46.1. **(Added)** Once installed modifications are released for flight, any direction to perform maintenance and troubleshooting on special instrumentation will be directed through the 412 TENG/ENI or contractor engineering per program specifics.

11.46.1.1. **(Added)** Instrumentation Operations Engineers will direct the accomplishment of workload by generating an engineering and/or contractor equivalent directive to include, but not limited, to drawings, schematics, blueprints or commercial equivalents. This directive will guide 412 MXIS/MXIO technicians to perform maintenance actions such as, but not limited to, periodic inspections, troubleshooting, removal and installation of components, perform operational checkouts and accomplish pre-flight/post-flight work events.

11.46.2. **(Added)** 412 MXIS/MXIO is responsible to maintain all special instrumentation for as long as the T-2 modifications are installed and coordinate any maintenance support through the owning maintenance organization as required.

11.47. (Added) "Repeat", "Recur", and "Cannot Duplicate" (CND) discrepancies.

11.47.1. **(Added)** When clearing a Repeat/Recur and CND discrepancy the AMU Supervision will ensure an adequate corrective action was accomplished and the following procedures are strictly adhered to:

11.47.2. **(Added)** The discrepancy will be investigated using the most highly qualified technician(s) available. In addition, aircraft forms, MIS and other source documents will be thoroughly reviewed using a minimum 90-day look back. Consult with Air Force Engineering and Technical Services (AFETS)/Tech Reps for additional technical assistance as necessary. Follow procedures of TO 00-25-107 for engineering assistance requests.

11.47.3. **(Added)** Parts removed for most probable cause will be bench checked if capability exists and AFTO Form 350 tag will be annotated with "Repeat/Recur".

11.47.4. **(Added)** If further investigation determines the discrepancy cannot be duplicated, an appropriate entry will be made on the AFTO Form 781A to read "Cannot Duplicate Malfunction, Failure, Discrepancy, etc." followed by a comprehensive corrective action statement detailing the troubleshooting procedures accomplished. A corresponding entry will be made in the MIS.

11.47.5. **(Added)** Only individuals possessing a 7-level or higher in the affected system are authorized to clear repeat/recur/CND discrepancies in the aircraft forms and MIS.

11.48. (Added) Support Equipment/AGE.

11.48.1. **(Added)** Documentation of the Operator's Inspection in Part II of the AFTO Form 244 is only required for powered Support Equipment prior to the first use of the day in accordance with TO 00-20-1 Para 7.3.2. Note: Stationary support equipment such as a cantilever/panel rack used to store items awaiting use or maintenance are exempt from the requirement to maintain an AFTO Form 244, however the user is responsible to maintain serviceability of the rack.

11.48.2. **(Added)** The AFTO Form 244 may be maintained in a separate file when equipment use or size make it hazardous or impractical for the form to accompany the equipment.

11.48.3. **(Added)** When technical data does not exist for commercially obtained support equipment, the work center supervisor in coordination with Quality Assurance (QA) shall use the criteria in TO 34-1-3, Inspection and Maintenance – Machinery and Shop Equipment, paragraph 4(f) as general guidance to aid in the inspection of equipment.

11.48.4. **(Added)** Prior to using all Hydraulic Test Stands, Hydraulic Service Carts and Oil Carts, AGE users will annotate 412 MXG/MXQP Form 56 and keep it with the AFTO Form 244. When the form is full (or if missing), notify the AGE Servicing Section for a replacement. Old forms will be placed in the respective equipment historical record.

11.48.5. **(Added)** All AGE users will immediately report any damage involving AGE to the appropriate squadron maintenance supervision, QA, AGE and MOC.

11.48.6. **(Added)** Movement of all cryogenic equipment [e.g., Liquid Oxygen (LOX), Gaseous Oxygen and Liquid or Gaseous nitrogen systems (excluding the AGE maintained Self- Generating Nitrogen Servicing Carts)] for off-base temporary duty (TDY) support must be coordinated with the 412 MXS/MXMAM Component Repair Flight (Armament shop) and the MOC.

11.49. (Added) Squadron Land Mobile Radio (LMR).

11.49.1. **(Added)** The radio net manager for the 412 MXG will be the MOC supervisor.

11.49.2. **(Added)** Squadron Directors/Commanders will appoint custodians for their squadron's intra-base radio net equipment.

11.49.3. **(Added)** Any custodial change requires a joint inventory by the gaining and losing custodian at least 30 days prior to the effective date of the account change. As a minimum, a 100 percent inventory will be conducted annually.

11.49.4. **(Added)** Routine repair requirements will be handled by the owning custodian through the 412 CS/SCOSC at 7-3444. If a replacement radio is essential and the squadron cannot support their requirement through temporary reallocation, the squadron custodian will contact the 412 CS/SCOSC to request a spare radio.

11.49.5. **(Added)** Change requests for groups on the trunk radio net must be coordinated with the 412 MXG Radio Net Manager.

11.49.6. **(Added)** Supervisors will educate their personnel on radio operation procedures to include airfield operations in accordance with local communications security requirements, radio discipline and radio call signs (see **Attachment 12**).

11.49.7. **(Added)** Custodians will immediately contact the 412 CS/SCOSC with any changes to their radio account to adjust radio maintenance contracts.

11.49.8. **(Added)** All call signs will be coordinated through the 412 MXG Radio Net Manager.

11.49.9. **(Added)** The host squadron Land Mobile Radio (LMR) custodian will handle all temporary duty radio support requirements.

11.49.10. **(Added)** The MOC senior controller will precede all emergency and information notification transmissions with an “alert” tone. During these transmissions all other transmissions will be terminated automatically. At the end of the transmission the senior controller will request all receiving agencies respond with their call sign.

11.49.11. **(Added)** During emergency situations all non-emergency related transmissions shall cease until the emergency situation has been resolved and announced by the MOC senior controller.

11.50. (Added) Flightline Engine Run.

11.50.1. **(Added)** Contact the MOC and provide the controller with the following information to obtain engine run clearance prior to engine start:

11.50.1.2. **(Added)** The run person's name and employee number.

11.50.1.3. **(Added)** Aircraft MDS and tail number. For F-16 aircraft, also include type of engine.

11.50.1.4. **(Added)** Aircraft location.

11.50.1.5. **(Added)** Number of engines to be operated and power setting.

11.50.1.6. **(Added)** Reason for run.

11.50.2. **(Added)** Authorized low power run areas are the designated parking area. Authorized high power (above 85% for F-16 aircraft, above 80% for all others) run areas are as follows:

11.50.1.1. **(Added)** Fighters and Trainers – Pads 5, 6 (Gun Butt), 14, 16, 18, 19, 21A Left and Right, 22B Left and Right and 29 Left and Right.

11.50.1.2. **(Added)** Bombers and Cargo (except C-130) – Pads 4, 8, 14, 19, 26, 27, 29, Spurs 1-6, 8 and 9.

11.50.1.3. **(Added)** Turboprop (C-130) – Pads 4, 8, 14, 19, 28 and 29.

11.50.1.4. **(Added)** Global Hawk (RQ-4A) – Parking ramp locations D1 and F1.

11.50.1.5. **(Added)** Aircraft with reciprocating engines may perform high power runs at the designated parking location.

11.50.2. **(Added)** An individual with a maintenance net radio will remain in close visual contact with the engine run supervisor during the engine run. Immediately after engine start, the individual with the radio or the run supervisor will contact Edwards Ground Control if using aircraft radio (UHF 225.4) and advise them of the maintenance start. Individual with maintenance net radio will provide ground control with aircraft tail number and location (Command Post will be notified when Ground Control is not in operation using (UHF 304.0).

11.50.3. **(Added)** Areas around aircraft intakes or propellers will be illuminated for engine runs performed after sunset and before sunrise.

11.50.4. **(Added)** Established quiet hours are from 2200 to 0500. AMU supervision shall ensure that noise abatement procedures are implemented during ceremonies or other events where quiet hours are deemed necessary outside the established timeframe.

11.50.4.1. **(Added)** If engine operation above low power/unrestrained settings is required during, or expected to extend into established quiet hours, the applicable Production Superintendent will contact the MOC to provide justification for engine run clearance. The MOC Supervisor will contact 412 MXG/CC or designated representative for approval.

11.51. (Added) Aircraft Forms Documentation.

11.51.1. **(Added)** Aircraft and/or equipment maintenance tasks requiring a system bleed as prescribed by technical data will be documented in the applicable forms using a Red X. Bleed may be documented in the maintenance action similarly to operational check documentation provided it is completed concurrently with or immediately after completion of the maintenance.

11.51.2. **(Added)** If IMDS (CAMS) is not available, the preferred local method is for workcenters to use the AFTO Form 349, Maintenance Data Collection Record, for maintenance data collection whenever IMDS is unavailable. Alternatively, workcenters may opt to utilize printed screen shots of the most commonly used IMDS screens in lieu of the AFTO Form 349. If this option is utilized, workcenter supervisors will determine which screens shall be utilized in this manner.

11.51.2.1. **(Added)** All completed AFTO Forms 349 or IMDS (CAMS) screen shots will be reviewed by the on-duty senior-ranking individual within the workcenter. The review must include at a minimum, an examination of the aircraft 781-series forms to ensure that all discrepancies requiring manual job data documentation have the required documentation completed and a validation of the accuracy of each field entry.

11.51.2.2. **(Added)** Refer to **Attachment 11** for a listing of all locally approved manual job control numbers (JCN).

11.52. (Added) Accountability, Control and Storage of Alternate Mission Equipment (AME)/Normally Installed Equipment (NIE).

11.52.1. **(Added)** While primary equipment accountability rests with the servicing armament shop, peculiar test-related equipment (e.g., Advanced Range Data System pods and Air Intercept Missile-9 camera pods) and related non-NIE items, must be controlled, stored and maintained by the owning organizations.

11.52.2. **(Added) Local Organization Responsibilities.**

11.52.2.1. **(Added)** The AMUs will:

11.52.2.1.1. **(Added)** The 412 AMXS will ensure AME and or NIE due scheduled maintenance is delivered to 412 MXS/MXMAM Mechanical Element (Armament) no later than the Friday of the week prior to the scheduled due date. The 912 AMXS/MXAB will ensure scheduled AME and or NIE is removed from aircraft for pick up by 912 AMXS/MXMW Integrated Maintenance Facility (IMF) Function no later than the Friday of the week prior to the scheduled due date.

11.52.2.1.2. **(Added)** Ensure that all equipment delivered to 412 MXS Mechanical Element (Armament) or picked up by 912 AMXS/MXMB IMF Function for storage, scheduled and unscheduled maintenance:

11.52.2.1.2.1. **(Added)** Is properly tagged. Add: The tag must indicate if the equipment is involved in an Impound, weapons incident, or Repeat/recur.

11.52.2.1.2.1.1. **(Added)** 412 MXS/MXMAM Mechanical Element (Armament) or 912 AMXS/MXMB IMF Function will notify the owning AMU and WWM of findings for AME/NIE brought in for troubleshooting. No further inspections will be accomplished on the equipment until it is released by the owning unit.

11.52.2.1.2.2. **(Added)** Contains all associated cables, safety gear, pins/pin bags, protective caps and plugs.

11.52.2.1.2.3. **(Added)** Has fuel and impulse cartridges removed.

11.52.2.1.3. **(Added)** Empty cartridge retainers/breeches may be removed, installed and safety wired, or reversed to indicate the impulse cartridges are removed. BRU-46/47/57 arm/de- arm indicators, 14/30 inch ejector racks and triple ejection racks (TER) will be visually checked to ensure impulse cartridges are removed.

11.52.2.1.4. **(Added)** Establish internal procedures to control AME or NIE taken off station.

11.52.2.1.5. **(Added)** Provide 412 MXG/MXOO with transfer or deployment letter and provide the 412 MXS/MXMAM Mechanical Element (Armament) or 912 AMXS/MXMW IMF Function a signed AF 2692, listing all deployed AME by National Stock Number or part number (P/N) and serial numbers (S/N) before aircraft or AME leaves Edwards AFB.

11.52.2.1.6. **(Added)** Document AME and/or NIE replaced at the deployed location (both requisitions and exchanges with host units) and inform 412 MXS/MXMAM Mechanical Element (Armament) or 912 AMXS/MXMB IMF Function upon return from deployment.

11.52.2.1.7. **(Added)** Appoint two individuals (primary and alternate) for controlling AME/NIE physically stored within AMU or on aircraft and AME/NIE not being accounted for or controlled by 412 MXS/MXMAM Mechanical Element (Armament) or 912 AMXS/MXMB IMF Function.

11.52.2.1.7.1. **(Added)** Accountability and control will be transferred to new individuals at least 30 days prior to reassignment or departure. A copy of the updated appointment letter will be forwarded to the appropriate armament shop. Both the gaining and losing custodians will conduct a 100% inventory, using the 412 MXS/MXMAM Mechanical Element (Armament) or 912 AMXS/MXMB IMF Function master listing prior to signing over the account.

11.52.2.1.8. **(Added)** Provide at least 24-hour notice to 412 MXS Mechanical Element whenever additional AME has to be signed out from AME storage building 1605 for mission requirements.

11.52.2.1.9. **(Added)** Track malfunctions, corrective actions and coordinate with 412 MXS/MXMAM Mechanical Element (Armament) or 912 AMXS/MXMB IMF Function to perform maintenance on associated equipment.

11.52.2.1.10. **(Added)** Deliver malfunctioning equipment as soon as possible or upon release of aircraft from impoundment during normal day shift duty hours. If malfunction occurs after normal day shift duty hours, the item will be turned in by 1200 the next duty day. The owning AMUs will create a computer generated Integrated Maintenance Data System (IMDS) work order for 412 MXS Mechanical Element (Armament) or 912 AMXS/MXMB IMF Function (for Bombers)

11.52.2.1.11. **(Added)** Ensure adapter cables are returned with equipment turned in for maintenance due to malfunctions.

11.52.2.1.12. **(Added)** Coordinate with 412 MXS/MXMAM Mechanical Element (Armament) or 912 AMXS/MXMB IMF Function to conduct a complete semi-annual physical inventory of all assigned AME/NIE, and reconcile all disparities.

11.52.2.2. **(Added) The 412 MXS Electronics Element will:**

11.52.2.2.1. **(Added)** Coordinate with 412 MXS/MXMAM Mechanical Element (Armament) when a Conventional Remote Interface Unit (CRIU) or Missile Remote Interface Unit (MRIU) requires Not Repairable this station (NRTS) action.

11.52.2.3. **(Added) The 412 TENG/ENIMM T-2 Modification Office will:**

11.52.2.3.1. **(Added)** Coordinate all T-2 modifications and modification notes with 412 MXS/MXMAM Mechanical Element (Armament) or 912 AMXS/MXMB IMF Function that applies to any assigned equipment.

11.52.2.3.2. **(Added)** Provide modification documents to 412 MXS/MXMAM Mechanical Element (Armament) or 912 AMXS/MXMB IMF Function for historical purposes.

11.52.2.3.3. **(Added)** Notify 412 MXS/MXMAM Mechanical Element (Armament) or 912 AMXS/MXMB IMF Function of modification meetings affecting any assigned AME/NIE.

11.52.2.3.4. **(Added)** Notify owning unit Nuclear Certified Equipment (NCE) monitor of T-2 modifications to NCE.

11.52.2.4. **(Added) The 412 MXG PS&D Section will:**

11.52.2.4.1. **(Added)** Forward all weapons AME and/or NIE and AFTO Form 95, for newly assigned aircraft to either 412 MXS/MXMAM Mechanical Element (Armament) or 912 AMXS/MXMB IMF Function. Note: All AFTO Forms 95 are maintained at the appropriate armament shop.

11.52.2.5. **(Added) The 412 MXS/MXMAM Mechanical Element (Armament Shop) and 412 MXS/MXMW IMF Function back shop will:**

11.52.2.5.1. **(Added)** Coordinate with 412 MXG PS&D Section to schedule assigned AME and NIE for periodic in-shop inspections. The schedule must be established no later than 1200 on the Friday before the inspection is due.

11.52.2.5.2. **(Added)** Forecast schedules for inclusion into the monthly and weekly maintenance plans.

11.52.2.5.3. **(Added)** Perform transfer inspections and account for transferred or deployed AME.

11.52.2.5.4. **(Added)** Provide storage and control for AME and/or NIE through the following methods:

11.52.2.5.4.1. **(Added)** In ready or extended storage.

11.52.2.5.4.2. **(Added)** Undergoing scheduled inspections.

11.52.2.5.4.3. **(Added)** Awaiting parts.

11.52.2.5.5. **(Added)** Issue all equipment, subassemblies (MRIUs, CRIUs, etc.) and associated hardware using AF Form 1297, Temporary Issue Receipt, listing or equivalent.

11.52.2.5.6. **(Added)** Perform pre- and post-modification inspections on all T-1 and T-2 modifications or permanent-safety modified equipment.

11.52.2.5.7. **(Added)** The 412 MXS/MXMAM Mechanical Element (Armament Shop) will maintain a serviceable F-16 Gun and Handling System stored within section's gun room. Whenever a situation arises when an F-16 Gun and Handling System being worked in the section cannot be completed within mission requirements, the 412 MXG/CC or CD can authorize the use of the on- hand Gun and Handling System to replace the in-work Gun and Handling System. The 412 MXS/MXMAM Mechanical Element Scheduler will document actions within IMDS. The in-work gun and handling system will then replace the section's on-hand serviceable Gun and Handling System stored in the Gun Room.

11.53. (Added) Aircraft Hangars.

11.53.1. **(Added)** Any special events planned for inside an aircraft hangar will be coordinated through the 412 MXG Facilities Management Office. The organization requesting the use of the hangar for an event must provide a person that will be the point of contact and receive all necessary instructions involving logistics and requirements to conduct the event. The using organization must provide up-to-date information and concerns to Facilities Management.

11.53.2. **(Added)** Each hangar assigned to the 412 MXG will have an appointed Hangar Chief and Assistant Hangar Chief. A copy of the appointment letter will be retained in the QA Letters of Designation Log. The names and telephone numbers of both the primary and assistant hangar chiefs will be posted at all personnel and aircraft entry door controls.

11.53.2.1. **(Added)** The Hangar Chief is responsible for the general condition to include hangar defect reporting. Hangar repairs will be reported to Facilities Management Office. During or after normal duty hours reports can be made to Civil Engineering emergency hotline (7-3330).

11.53.2.2. **(Added)** The Hangar Chief will notify the MOC of any hangar maintenance that may restrict aircraft movement in hangar.

11.54. (Added) Liquid Oxygen (LOX) and Gaseous Oxygen (GOX) cart Maintenance, Control, and Operations.

11.54.1. **(Added)** 412 MXS/MXMAM Mechanical Element Liquid Oxygen (LOX) Maintenance Area has primary responsibility for controlling, monitoring and coordinating the use of LOX and GOX carts. These items are sub-pooled to AMU's for support as necessary.

11.54.1.1. **(Added)** Each organization having or using LOX or GOX carts will:

11.54.1.1.1. **(Added)** Designate and maintain a covered area within each flight or major work area for storage of oxygen-servicing equipment. When not in actual use on an aircraft, park oxygen-servicing equipment in this area. **NOTE: 1.** LOX carts shall be parked with the vent valve open and transported with the vent valve closed. **2.** Do not open Vent Valve to the full open position to prevent liquid from spilling. Only open valve enough to vent gas vapor on pressure gage. **3.** Do not park GOX carts in areas that are sodded or grassy. Do not park LOX carts in areas that are sodded, grassy, or asphalt covered. Note: Asphalt covered areas should not be used for long term storage of GOX carts. (Exception: LOX carts may be temporarily parked on asphalt, provided that drip pans, used exclusively for LOX servicing, are placed under the overflow vent of the cart.)

11.54.1.1.2. **(Added)** Ensure liquid level in LOX carts does not fall below 10 gallons (this helps prevent carts from going flat and requiring unnecessary purges. Organizations will deliver LOX carts for servicing to the Cryogenics servicing area from 0800 to 1200 Monday through Friday. Filling LOX carts will normally be done once daily in the morning. Any carts received after 1200 will be serviced the following day. The handling and transfer of cryogenic **WARNING** fluids into a servicing cart is a two-person operation; the second person will serve as a safety observer and will also wear PPE. When a second 412 LRS/LGRF person is not available, the organizational representative delivering the cart will be a LOX qualified person to stand by as the safety observer during the filling operation. Safety person can bring PPE or don PPE provided at cryogenic facility. **NOTE .**LOX Carts will not be routinely serviced without annotation of aircraft serviced tail numbers unless released by MXMAM following maintenance.

11.54.1.1.3. **(Added)** Ensure AFTO Form 134 is with LOX/GOX carts and properly annotated with the owning organization, aircraft serial number being serviced, user's initials, employee number and any remarks.

11.54.1.1.4. **(Added)** Document all required inspections, usage and service history on AFTO Forms 244 and AFTO Form 134 for all oxygen equipment.

11.54.1.1.5. **(Added)** Ensure LOX carts are picked up after servicing.

11.54.1.1.6. **(Added)** Ensure GOX carts requiring servicing or maintenance 0are delivered to 412 MXS/MXMAM Mechanical Element LOX Area (Building 1717), during normal business hours. Contact the LOX area at 7-3477. If unavailable and immediate assistance is required contact the Mechanical Element Supervisor at 7-9691.

11.54.1.1.7. **(Added)** Ensure LOX/GOX carts that are dropped off after normal hours for servicing or maintenance at the LOX Maintenance Area (Building 1717) are parked on the concrete pad next to the building and grounded properly.

14.1.6.6.1. **(Added)** Ensure aircraft on special sampling status are not scheduled for sorties that would violate the restrictions imposed by the NDI Lab.

14.2.2.1.1. **(Added)** MXG PS&D Section will control and limit access to the aircraft jacket file and historical records as directed by the accident investigation or impounding official.

14.2.2.1.2. **(Added)** MXG PS&D Section will comply with any additional records management as directed by the accident investigation or impounding official.

14.2.2.2.1.1.1. **(Added)** Decentralized records will be reviewed annually using the standard jacket file review checklist. A computer generated AF Form 2411, Inspection Document, will be maintained through the 412 MXG PS&D Section website with the next due date and the name of the person who accomplished the last review.

14.2.2.2.1.2. **(Added)** Pulled forms will be delivered to the 412 MXG PS&D Section within 10 days of close-out date. Note: A pulled set of 781-series forms are defined as the forms that were closed out and removed from the binder. These inactive sets may or may not include an AFTO Form 781J, Aerospace Vehicle – Engine Flight Document and AFTO Form 781K, Aerospace Vehicle Inspection, Engine Data, Calendar Inspection and Delayed Discrepancy Document and will not be filed separately.

14.2.2.2.1.3. **(Added)** Jacket file review checklist template is located in the "Procedures and Guidance" document available from the PS&D webpage. Changes to the master jacket file review checklist template will be coordinated with and approved by the PS&D supervisor.

14.2.3.3.1. **(Added)** PS&D will utilize the 412 MXG PS&D Section developed aircraft document review cover sheet to ensure all required areas are covered during the aircraft document review (ADR). The master document review check sheet is available on the PS&D shared drive. Changes to the master document review check sheet will be coordinated with and approved by the PS&D supervisor. See AFI paragraph 15.2.3 and all MAJCOM and local supplemental information.

14.2.3.4.5. **(Added)** For units using G081, the crew chief conducting the ADR shall:

14.2.3.4.5.1. **(Added)** The workcenter and minimum signature (as defined by TO 00-20-1) of all individuals conducting required ADR functions shall be included in the corrective action block of the aircraft forms entry.

14.2.3.4.5.2. **(Added)** Print screens 8005, 8035, 8040, 8044 and 9078 and screen 8038 (for the last 31 days) and validate/correct the status and accuracy of all open discrepancies between the aircraft forms and G081.

14.2.3.4.5.3. **(Added)** Verify delayed discrepancies for correct deferred codes.

14.2.3.4.5.4. **(Added)** The crew chief completing the review will enter their name and employee number in the signature block area.

14.2.3.4.5.5. **(Added)** For aircraft with installed or in-progress modifications, deliver the aircraft forms and ARC to the 412 TENG/ENIMM T-2 Modification Office for review and update (if changes have been recorded since the previous ADR).

14.2.3.4.5.6. **(Added)** The ADR process checklist is an embedded function within the ALIS.

14.2.3.4.6. **(Added)** For units using IMDS, the crew chief conducting the ADR shall:

14.2.3.4.6.1. **(Added)** Enter their name and employee number in the signature block area of the ARC and return it to PS&D no later than the duty day following the completion of the ADR.

14.2.3.4.6.2. **(Added)** Print an automated AFTO Form 781A, Maintenance Discrepancy and Work Document, and validate/correct the status and accuracy of all open discrepancies between the aircraft forms and IMDS.

14.2.3.4.6.3. **(Added)** Annotate jet fuel starter cycles on the last page of the automated records check (ARC) in the comments section. Annotate any errors detected during the ADR on the ARC with changes in red ink.

14.2.3.4.6.4. **(Added)** Contact the NDI section to verify JOAP samples have been updated. Verify engine total operating hours, time since oil change, oil serviced since last records check, engine serial number(s) and aircraft serial number.

14.2.3.4.6.5. **(Added)** For aircraft with installed or in-progress modifications, deliver the aircraft forms and ARC to the 412 TENG/ENIMM T-2 Modification Office for review and update (if changes have been recorded since the previous ADR).

14.2.3.4.7. **(Added) PS&D will:**

14.2.3.4.7.1. **(Added)** Provide current aircraft ARC or G081 products to the crew chief and ensure AMU maintenance supervision has access to the supplied aircraft ARC or G081 products.

14.2.3.4.7.2. **(Added)** Review the returned ARC or G081 products for any changes in the special inspection and time change sections and update database, if necessary.

14.2.3.4.7.3. **(Added)** Verify any identified overdue conditions and schedule events. Any overdue conditions must have an explanation with a JCN included.

14.2.3.4.7.4. **(Added)** Confirm that discrepancies noted on the ARC or G081 products have been corrected and match IMDS or G081 database prior to signing off the ADR JCN. Reconcile any uncorrected/unidentified discrepancies and coordinate with crew chief on source of errors. Ensure crew chief's name and employee number are annotated on ARC/G081 product and file the completed document review in the aircraft jacket file.

14.2.4.3.5.5.1. **(Added)** Ensure aircraft delivery time is established by owning unit Production Superintendent and Inspection Section Dock Chief. Annotate agreed upon delivery time on AF Form 2410, Inspection/TCTO Planning Checklist.

14.2.4.3.5.10. **(Added)** Follow-up with an informational meeting between the Inspection Section Dock Chief and the owning unit Production Superintendent (or designated representative) the day prior to the actual inspection start date to recap the contractual agreement and conduct final aircraft forms review.

14.2.4.3.6. **(Added)** Once all documentation to support the inspection has been generated, disseminate the information to all required attendees via e-mail 10 days prior to the scheduled inspection start date. Schedule the Pre-Dock meeting to take place approximately 5 days prior to actual date of the aircraft entering inspection and notify required attendees with the date, time and location.

14.2.5.1.4.1. **(Added)** Pulled forms from the aircraft inspection will be delivered to the PS&D Office within 7 days and filed in the last Phase/Periodic/Isochronal/Home Station Check tab of the jacket file.

14.2.6.4. **(Added)** In the event that the Maintenance Scheduling Application Tool or MIS are temporarily unavailable, download the files located in the 412 MXG PS&D Section share drive folder located at \\AFFTC-TW\MOS$\ROC\Scheduling\SCH MEETING\MAINT SLIDE DATA\MIS MANUAL UPDATE. This folder will have the most up to date files prior to the system going down from IMDS.

14.2.6.4.1. **(Added)** Once the system is up; ensure all changes are updated in the MIS. Once the new MIS product is received, verify that the new information is listed correctly on the new MIS product. Complete a line by line comparison of the manual product with the newly printed product.

14.3.2.4.2. **(Added)** The AMU PS&D will process all inspection suspense's via IMDS screen #128. AMU PS&D will ensure all information is accurate before processing data, (e.g. Date completed, time correct, part/serial numbers (PSN), Date of Installation (DOI), Date of Manufacture (DOM), lot number, position, Automated History Entry Indicator, etc.).

14.3.3.4. **(Added)** Wing TCTO manager will ensure affected TCTO kits, parts and tools are inventoried and monitored in the Tail Number Bin (TNB) or Base Supply Storage facility.

14.3.3.5. **(Added)** If TCTO waiver is necessary, owning organization will contact their PS&D section to obtain local TCTO waiver request template.

14.3.3.5.1. **(Added)** Once TCTO single manager concurrence for TCTO waiver is granted, the owning organization will coordinate local waiver concurrence and signatures with applicable agencies.

14.3.3.5.2. **(Added)** Wing TCTO manager shall ensure correct TCTO code is loaded in the MIS before waiver request is forwarded off station.

14.3.4.3.2.2. **(Added)** When JST are written or revised they must be routed for coordination by the organization through their MOO, to QA and then to PS&D. PS&D will forward a copy of the final JST back to the organization.

14.3.4.3.4.5. **(Added)** Verify the item is installed and IMDS is updated to reflect the new part number/serial number before destroying the waiver or extension.

14.3.4.3.6.1.1. **(Added) TCI Ordering Requirements.**

14.3.4.3.6.1.1.1. **(Added)** AMU PS&D will schedule and order the item in IMDS. The AMU supply personnel will place the item(s) on order and record the supply document number. If the item is an issue, support personnel will log the parts into TNB.

14.3.4.3.6.1.1.2. **(Added)** The MAE will requisition CAD/PAD items. AMU PS&D will forward all requirements to the MAE 120 days prior to the date required. To ensure accurate accountability between the annual forecast and the quarter requested, the AMU PS&D and the MAE will verify all requested items. The AMU PS&D will contact the MAE for delivery prior to the date required.

14.3.4.3.6.1.1.3. **(Added)** Computing Next Replacement Date or Time: All calculations will use months instead of days, unless the TO or -6 manual states otherwise.

14.3.4.3.6.1.1.4. **(Added)** Mandatory IMDS Entries: Part number, serial number, work unit code, standard reporting designator, manufactures lot number [if unknown, use the DOM, if both are unknown, consult TO 00-20-1 for proper calculation of next due criteria (CAD/PAD only)], date of manufacture and date of installation.

14.3.4.3.7.1. **(Added)** Use the Maintenance Scheduling Application Tool or IMDS products to ensure all aircraft have the required number of time changes loaded. This will be done on a weekly basis and as scheduled time changes occur.

14.3.4.3.8.1. **(Added)** Ensure correct PSNs are entered into IMDS during suspense validations (IMDS screen #128). Additionally, ensure DOI, DOM, Lot number and positions are correct. Also, load part to the correct job standard (JST) number with correct due date.

14.3.4.3.9.1. **(Added) 412 MXS/MXMAG Component Repair Flight (Egress Section) will:**

14.3.4.3.9.1.1. **(Added)** Update Egress related IMDS actions, to include removal or installation actions and load new PSN items and enter information into IMDS. Update the corrective action block upon completion of task. Exception: F-22A Egress related items.

14.3.4.3.9.1.2. **(Added)** Initiate, maintain and ensure currency of AF Form 68, Munitions Authorization Record, for egress items.

14.3.4.3.9.2. **(Added) 412 OSS/OSLL (Aircrew Flight Equipment) will:**

14.3.4.3.9.2.1. **(Added)** Load new PSN items and enter the following information into the corrective action block upon completion of task in IMDS:

14.3.4.3.9.2.2. **(Added)** New P/N and S/N installed.

14.3.4.3.9.2.3. **(Added)** New DOM, DOI and lot number. If the data is not known, report the unknown data elements to the AMU PS&D for guidance.

14.3.4.3.9.2.4. **(Added)** Ensure IMDS inspection dates match with PSN dates. Prior to installing the chute or kit, print or compare to an IMDS screen 892 against the end item part/serial number and ensure all installed parts are loaded correctly.

14.3.4.3.11.2. **(Added)** Ensure Aircrew Flight Equipment submits their portion of the forecast to the 311 HSW/YACS. Ensure a courtesy copy is received by Maintenance Operations Flight PS&D.

14.3.5.3.4. **(Added) Additional Local Responsibilities.**

14.3.5.3.4.1. **(Added)** All Specialists and Weapons personnel will accomplish AF Form 68 and route through MAE for approval.

14.3.5.3.4.2. **(Added) 412 MXS/MXMXF Fuel Systems Team will:**

14.3.5.3.4.2.1. **(Added)** Maintain and update aircraft AFTO Form 95 on fuel cells.

14.3.5.3.4.2.2. **(Added)** Notify AMU PS&D of any unscheduled foam changes for the purpose of scheduling the TCI in IMDS (only applicable to aircraft with foam installed).

14.3.5.3.4.2.3. **(Added)** Update Fuels related IMDS action to include removal and installation actions, load new PSN items and enter the following information into the corrective action block upon completion of task: New P/N and S/N of fuel cells and new DOM, DOI and lot number. If data is not known, report unknown data elements to AMU PS&D.

14.3.5.3.4.3. **(Added) 412 MXS/MXMW Munitions (Mechanical Team) will:**

14.3.5.3.4.3.1. **(Added)** Load the original PSN to IMDS.

14.3.5.3.4.3.2. **(Added)** Update Armament related IMDS actions to include removal and installation actions, load new PSN items and enter following information into the corrective action block upon completion of task: New P/N and S/N of fuel cells and new DOM, DOI and lot number. If data is not known, report unknown data elements to AMU PS&D.

14.3.5.3.4.3.3. **(Added)** Process IMDS screen 372 to load new due date or time to IMDS.

14.3.5.3.4.3.4. **(Added)** Review IMDS screens 469, 810 and background products (i.e. PRA) for errors and corrections. If discrepancies are found, contact the AMU PS&D of changes to the database.

14.3.5.4. **(Added)** For F-35 major maintenance work processing PS&D will coordinate on AR submissions through the ALIS CRM application in accordance with **paragraph 14.9** SOI 1514.02.

14.3.5.5. **(Added) AMU PS&Ds will:**

14.3.5.5.1. **(Added)** Initially load PSN items and install the items during gaining transfer of newly assigned aircraft and/or equipment. Egress Cartridge Activated Device/Propellant Activated Device (CAD/PAD) items will be loaded after verification by Egress section.

14.3.5.5.2. **(Added)** Generate a work order (IMDS screen 86) for all TCIs in IMDS. Order all non-munitions items through the appropriate MIS not later than 45 days prior to the beginning of the required month.

14.3.5.5.3. **(Added)** Initiate issue requests and provide them to the 412 MXS/MXMA Component Repair Flight, Munitions Accountability Element (MAE) per the CAD/PAD forecast schedule.

14.3.6.1.3.1. **(Added)** Notify the NDI lab of aircraft transfer at least 1 day prior to transfer to allow preparation of MCD Program analysis reports.

14.3.6.1.5. **(Added) Additional Losing Unit Transfer Inspection Requirements.**

14.3.6.1.5.1. **(Added)** The MOC will plot projected aircraft departure date and monitor progression of transfer activities using information provided by the AMU Production Superintendent and the applicable MIS. For F-22 transfers, the Logistics Coordination Center (LCC) will plot projected aircraft departure dates and monitor progression of transfer activities in IMIS and provide daily updates to the MOC.

14.3.6.1.5.2. **(Added)** Aircraft managed by a specific AMU and associated Armament Section will depart with the same equipment that was installed upon its arrival. It is the AMU and Armament Section’s responsibility to ensure this occurs. The 412 MXS/MXMAM Armament Flight will fill out AF Form 2692, Aircraft/Missile Equipment Transfer/Shipping Listing.

14.3.6.12. **(Added) 412 MXG Plans Scheduling & Documentation Section will:**

14.3.6.12.1. **(Added)** Inform the responsible activities by letter and/or AFTO Form 345, Aerospace Vehicle Transfer Inspection Checklist and Certification, of an impending aircraft movement. Notify Maintenance Analysis, Engine Management and Fuels Section if the transfer is permanent. These offices will provide any required documents for transfer to 412 MXG PS&D Section no later than 3 duty days before departure. Weight & Balance will provide documents no later than 1 duty day before departure.

14.3.6.12.2. **(Added)** Annotate aircraft hours, destination and reason for departure in aircraft AFTO Form 95 and IMDS automated history.

14.3.6.12.3. **(Added)** QA will conduct a preflight quality verification inspection (QVI) after the aircraft is prepared for its outgoing transfer flight.

14.3.6.13. **(Added) Additional Gaining Unit Transfer Inspection Requirements.**

14.3.6.13.1. **(Added)** The MOC will ensure possession code "BT" status is reflected upon aircraft arrival and does not exceed time limits set by AFI 21-103 and MAJCOM supplements. The F-22 LCC will show F-22 aircraft in transfer inspection and monitor progression of inspection as required via IMIS and provide daily updates to the MOC.

14.3.6.13.2. **(Added)** PS&D shall disseminate records to the applicable activities, obtaining signature of shop representative for aircraft records going to decentralized activities. File completed transfer check sheet with transfer documentation in aircraft jacket file.

14.3.6.13.3. **(Added)** EM section will review aircraft and engine records, update CEMS and IMDS or G081 as applicable and schedule engine TCTOs or special inspections that are needed.

14.3.6.13.4. **(Added)** Conduct a part/serial number inventory of AME. This inventory will be delivered to either the bomber or fighter Armament Section (as applicable) to be loaded into IMDS.

14.3.6.13.5. **(Added)** For aircraft returning from modification or depot repair facility, the gaining AMU will coordinate with the Documentation Section to determine the extent to which the modification affected recurring special inspections and time changes.

14.3.6.13.6. **(Added)** When an aircraft is newly assigned or an aircraft is returning after transfer, a DD Form 365-1, Weigh Checklist Record, Chart A - Basic will be accomplished by qualified Weight and Balance personnel in accordance with TO 1-1B-50, Weight and Balance. If a basic weigh is required due to the aircraft modifications or if a basic weight is written into the test program then a weight and balance inventory will be required prior to first flight. The Weight and Balance Program Manager (or appointed designee), may require the aircraft to be weighed should discrepancies that affect aircraft center-of-gravity be discovered. A Red X will be entered in the AFTO Form 781A, stating "CHART A INVENTORY DUE." Only qualified Weight and Balance personnel may clear this discrepancy.

14.3.6.14. **(Added) 412 MXG Quality Assurance will:**

14.3.6.14.1. **(Added)** Review completed DD Form 365-4, Weight and Balance Clearance Form F, for accuracy and distribute signed copies to affected aircrew operations.

14.3.6.14.2. **(Added)** Perform a jacket file inspection to verify correct serial number change and major maintenance (i.e., landing gear, fuel cell work) were properly documented using the AFTO Form 95 and IMDS screen #810 (Parts Tracked Inquiry).

14.3.6.14.3. **(Added)** Forward an informational memorandum listing defects to the ALC, contractors (if applicable) and the losing organization.

14.3.6.14.4. **(Added)** Perform an inspection of the T-2 modification package to support current equipment configuration.

14.3.6.14.5. **(Added)** Conduct a preflight quality verification inspection after all other on-aircraft (physical) transfer inspection requirements have been completed.

14.3.8. **(Added) Specific Local Responsibilities.**

14.3.8.1. **(Added)** The Integrated Maintenance Information System (IMIS) is unique to the Air Force and is designed specifically for the F-22. Non-production F-22 aircraft do not interface with IMDS or Reliability and Maintainability Information System (REMIS). The 411 AMU is responsible for maintaining the F-22 IMIS database.

14.3.8.2. **(Added)** The 412 MXG Aircraft Configuration Manager will provide training and assistance to appointed configuration monitors on duties and responsibilities.

14.3.8.2.1. **(Added)** Configuration Management (CM) is managed by the contractor through the ALIS. (Added) The ALIS is designed specifically for the F-35. ALIS does not interface with IMDS or REMIS. The 461 AMU is responsible for maintaining the F-35 ALIS database.

14.3.8.3. **(Added) Each AMU PS&D will:**

14.3.8.3.1. **(Added)** Ensure verified items are in MIS. Maintain current verification listings and corresponding MIS screens in appropriate aircraft jacket file.

14.3.8.3.2. **(Added)** Forward a copy of returned verification listings to 412 MXG aircraft configuration manager two duty days prior to post-dock meetings.

14.3.8.3.3. **(Added)** Load all Time Change Items (TCI), Special Inspection Items, TCTOs, AFTO Form 95 items and installed components into MIS for all new, permanently assigned aircraft via REMIS pseudo-file push down during Aerospace Vehicle Distribution Officer initial gain in MIS.

14.3.8.3.4. **(Added)** Provide assistance to schedule JCNs for the Aircrew Flight Equipment (AFE) Section to remove and/or kits and schedule inspection and/or repack survival kits.

14.3.8.3.5. **(Added)** Provide assistance to change mismatched Standard Reporting Designator in MIS for chutes and/or kits to be installed on aircraft upon request by the AFE Section.

14.3.8.4. **(Added) 412 OSS AFE Section will:**

14.3.8.4.1. **(Added)** Maintain applicable AFTO Forms 392, Parachute Repack, Inspection and Component, for all drogue chutes and personnel parachutes. Note: Flight Equipment Record Management System (FERMS) and Defense Priorities and Allocations System (DPAS) will be source document and program used by AFE for all time change and inspection data.

14.3.8.4.2. **(Added)** Document and update maintenance data necessary to keep MIS current (actual items installed on chutes hierarchy, to include inspection and/or time change records matching what is in MIS).

14.3.8.5. **(Added) The 412 MXS/MXMAM Armament System Flight will:**

14.3.8.5.1. **(Added)** Load time changes, inspections and automated AFTO Forms 95 in IMDS for all equipment maintained by the Armament system flight shop.

14.3.8.5.2. **(Added)** Document and update maintenance data necessary to keep MIS current (actual items installed on kits hierarchy, to include inspection and/or time change records matching what is in MIS).

14.3.8.6. **(Added) AMUs will:**

14.3.8.6.1. **(Added)** Load, edit and maintain all serially controlled items in MIS to reflect proper aircraft configuration in accordance with the respective aircraft configuration table, work unit code manuals or IMDS screen 668, Work Unit Code (WUC)/LCN Inquiry.

14.3.8.6.2. **(Added)** Initiate new AFTO Form 95 transactions in MIS when an applicable item is changed, scheduled or unscheduled.

14.3.8.6.3. **(Added)** Perform routine physical audits of serially controlled items during extensive downtime, cannibalization periods or Chart A inventories when required.

14.4.1.2.20.2. **(Added)** In the event that the MIS or CEMS database is down for over 48 hours, the information will continue to be tracked in the system that is operating. Once the down system is operating, the system will be updated.

14.4.1.2.20.3. **(Added)** In the event that the MIS and CEMS databases are both down, data will be maintained in chronological order in the Comprehensive Engine Trending and Diagnostic System for the F100-PW-220, F100-PW-229, TF34-GE-100, F110-GE-129 and F110-GE-100 engines.

14.4.1.2.20.4. **(Added)** Once the system(s) comes back up, all manually documented information will be input in chronological order.

14.4.1.2.21.3. **(Added)** Engines that are at deployed location will be transferred in CEMS to the deployed location and will be maintained and updated in CEMS by the deployed location. Engines that are at deployed location and cannot be transferred in CEMS will have at least two maintenance personnel appointed to report all engine downloads, removal and installation of components, completion of special inspections and TCTOs via e-mail or FAX to the home station BEM no later than 0900 the day after occurrence.

14.4.1.3.2.1. **(Added)** Monitor and police the accuracy and timeliness of CEMS in accordance with TO 00-25-254-1, Comprehensive Engine Management Configuration, Engine Configuration, Status and TCTO Reporting Procedures. The reporting systems must maintain accurate and timely engine inventory, surveillance of the base repair, transportation, overhaul segments of the engine pipeline and historical data to forecast funding and replacement requirements.

14.4.1.3.4.2.1. **(Added)** All maintenance workcenters must ensure engine component removals and installations, time update data, borescope compliance and findings, blade blending, cannibalization (CANN) action, unknown serial number verification and TCTO status changes are reported to EM no later than close of business the first duty day after the event.

14.4.1.3.4.3.1. **(Added)** Tenant unit responsibilities to include transportation, maintenance, aircraft distribution, supply and support personnel requirements will be identified in local Memorandum of Agreements or Intra Service Support Agreements as applicable.

14.4.1.3.4.4. **(Added)** Address propulsion assets temporarily possessed by a Contract Field Team (CFT) Facility. Procedures must:

14.4.1.3.4.4.1. **(Added)** Identify who maintains responsibility for propulsion assets.

14.4.1.3.4.4.2. **(Added)** Establish a point of contact at the CFT Facility and the proper method of communication for reporting status changes, and updates in CEMS.

14.4.1.3.4.4.3. **(Added)** Develop clear guidance for documentation, shipping responsibilities and reporting procedures for engine and serial controlled component removal and installations in accordance with TO 00-25-254-1.

14.4.2. **(Added)** Upon notification of an aircraft engine mishap, coordinate with the Database Manager (412 MXG/MXOO) to ensure all affected records are frozen in the applicable MIS. Provide QA with all engine records (i.e., engine/accessory work packages, paper and/or automated historical records) on behalf of the Chief of Safety. A QA representative will sign for the engine records.

14.5.6.3.5.1. **(Added)** The Wash Rack facility is designated as an approved aircraft engine wash and motoring area.

MATTHEW W. HIGER
Brigadier General, USAF
Commander

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AFH 23-123V3, *Air Force Equipment Management*, 29 Sep 2017

AFI 21-101, *Aircraft and Equipment Maintenance Management*, 16 Jan 2020

AFI21-101_AFMCSUP, *Aircraft and Equipment Maintenance Management*, 10 Nov 2020

AFI 21-103, *Equipment Inventory, Status, and Utilization Reporting*, 21 Jan 2020

AFI 23-101, *Air Force Materiel Management*, 12 Dec 2016

AFI 32-1065, *Grounding Systems*, 14 Jun 2017

AFI 33-322, *Records Management and Information Governance Program*, 23 Mar 2020

AFMAN 11-202 VOLUME 1, *Aircrew Training*, 26 Sep 2019

AFMAN11-2FTV1, *Flight Test Aircrew Training*, 26 Feb 2019

AFMAN23-122, *Material Management Procedures*, 26 Oct 2020

AFMCI21-105, *Corrosion Program and Marking of Aerospace Equipment*, 19 Feb 2019

AFTCI 63-101_20-101, *Technical Order Writing Procedures*, 2 Nov 2018

DAFI 33-360, *Publication and Forms Management*, 1 Dec 2015

DODI1400.25V451_AFI36-1004, *Civilian Recognition Program*, 25 Apr 2019

IEMP 10-2, *Installation Emergency Management Plan*, 21 Jun 2019

TO 00-5-1, *AF Technical Order System*, 15 Feb 2019

TO 00-20-1, *Aerospace Equipment Maintenance Inspection, Documentation, Policies, and Procedures*, 6 Sep 2019

TO 00-25-107, *Maintenance Assistance*, 1 Oct 2015

TO 00-25-254-1, *Comprehensive Engine Management System (CEMS) (D042) Engine Status, Configuration, and TCTO Reporting Procedures*, 15 Aug 2018

TO 1-1B-50, *Basic Technical Order for USAF Aircraft Weight and Balance*, 1 Aug 2015

TO 33-1-37-1, *Joint Oil Analysis Program Laboratory Manual, Volume I*, 15 Sep 2014

TO 34-1-3, *Machinery and Shop Equipment*, 21 Dec 2017

Prescribed Forms

EDWARDSAFB Form 5210, *Weight and Balance Data Reporting*

EDWARDSAFB Form 5397, *Weight and Balance Configuration Request*

Abbreviations and Acronyms

2LM—Two-Level Maintenance

ADCC—Assistant Dedicated Crew Chief

AGE—Aerospace Ground Equipment

AEI—Aerospace Equipment Instruction

AFB—Air Force Base

AFI—Air Force Instruction

AFMAN—Air Force Manual

AFMC—Air Force Material Command

AFRIMS—Air Force Records Information Management System

AME—Alternate Mission Equipment

AMU—Aircraft Maintenance Unit

ALIS—Autonomic Logistics Information System

ASIP—Aircraft Structural Integrity Program

BSS—Base Supply System

CANN—Cannibalization

CD—Deputy Commander

CDDAR—Crashed, Damaged, Disabled Aircraft Recovery

CEMS—Comprehensive Engine Management System

CND—Cannot Duplicate

CRIU—Conventional Remote Interface Unit

CRT—Crash Recovery Team

CTF—Combined Test Force

CTK—Composite Tool Kits

DCC—Dedicated Crew Chief

DFT—Depot Field Team

DOD—Department of Defense

DoL—Director of Logistics

DOP—Dropped Object Prevention

DT&E—Developmental Test and Evaluation

DR—Deficiency Report

ECP—Entry Control Point

EIR—Engineering Inspection Requirement

EM—Engine Management

EMFR—Electromagnetic Field Radiation

EOC—Emergency Operations Center

EOR—End of Runway

EPU—Emergency Power Unit

ETIC—Expected Times in Commission

FCF—Functional Check Flight

FO—Foreign Object

FOD—Foreign Object Damage

GITA—Ground Instructional Trainer Aircraft

HAZMAT—Hazardous Material

HRT—Hydrazine Response Team

IC—Incident Commander

IFE—In-Flight Emergency

IMDS—Information Maintenance Data System

IMF—Integrated Maintenance Facility

ITF—Integrated Test Force

IWR—Instrumentation Work Requests

JCN—Job Control Number

JG—Job Guide

JTD—Joint Technical Data

LCN—Minimum Essential Function Listing, Logistic Control Number

LM—Local Manufacture

LMR—Land Mobile Radio

LOX—Liquid Oxygen

LSC—Load Standardization Crew

LTI—Long Term Issue

MCD—Magnetic Chip Detector

MDS—Mission Design Series

MIS—Maintenance Information System

MIL—Master Inventory List

MOC—Maintenance Operations Center

MOO—Maintenance Operations Officer

MRIU—Missile Remote Interface Unit

NCE—Nuclear Certified Equipment

NCOIC—Noncommissioned Officer in Charge

NDI—Non Destructive Inspection

NIE—Normally Installed Equipment

NLT—No Later Than

OCF—Operational Check Flight

OPR—Office of Primary Responsibility

OT&E—Operational Test and Evaluation

PIM—Product Improvement Manager

POC—Point of Contact

PPE—Personal Protective Equipment

PS&D—Plans and Scheduling

PWC—Performing Work Center

QA—Quality Assurance

QVI—Quality Verification Inspection

RDS—Records Disposition Schedule

RTV—Room Temperature Vulcanizing

SAT—Special Augmentation Teams

SCR—Special Certification Roster

SE—Support Equipment

SFO—Senior Fire Official

SPO—System Program Office

T2—Temporary-2

TDY—Temporary Duty Assignment

TMDE—Test, Measurement and Diagnostic Equipment

TO—Technical Order

TODO—Technical Order Distribution Office

TCTO—Time Compliance Technical Order

USAF—United States Air Force

WAM—Wing Avionics Manager

W&B—Weight and Balance

WCE—Work Center Event

WLT—Weapons Load Training

WUC—Work Unit Code

WWID—World Wide Identifier

WWM—Wing Weapons Manager

Terms

412MXG Production Coordinator—412 MXG Production Coordinators are assigned to the 412 MXG/CD and aid in the allocation of MXG resources and coordinate the scheduling efforts of resources between outside agencies, MXG Squadron Supervisions and MXG Supervision to meet the 412 TW mission.

412MXG Supervision—412 MXG Supervision is comprised of the CC, CD, CEM and Technical Director (DT)

Attachment 7 (Added)

LOCAL IMPOUNDMENT CHECKLIST

A7.1. Impoundment Checklist. The following checklist is not all-inclusive; it is provided to ensure a reliable method of impounding aircraft and equipment both on and off station. If off-station, the deployed commander, Maintenance Operations Officer/MX SUPT, or designated individual will notify home station of any impoundments involving 412 MXG aircraft and coordinate with 412 MXQ on completing the impoundment checklist. The Status column to the right of each step is provided to ensure that the step has been completed. Each step will be checked off as soon as possible after it has been performed. Aircraft or equipment impounded for reasons other than stated in AFI 21-101_ AFMCSUP 1, will be determined by the owning organization's impoundment authority, or as directed by the 412 MXG/CC or designated representative. Once it has been determined that an aircraft or equipment will be impounded, the following will be complied with by the owning organizations.

Table A7.1. (Added) Local Impoundment Checklist.

***** Potential safety related incidents: Ensure the Cockpit Voice Recorder (CVR)/Flight Data Recorder (FDR) circuit breakers are pulled immediately after engine shutdown or before applying external power to safeguard CVR/FDR data, if equipped.**

Quality Assurance Will:	**Status**
1) Initiate Impoundment Record, assign Impoundment number (found in the front of the Master Impoundment Log), and document the top portion of the Impoundment Record and Impoundment Log (found in the Impoundment Folder). Notify the Maintenance Operation Center (MOC) of the Equipment or Aircraft that you are impounding and why.	_____
a. Obtain the Impoundment Authority's name, (verify SCR in IMDS).	_____
2) The following items will be briefed to either the Impoundment Official, team chief or assistant team chief and documented in the Impoundment Log as applicable. This briefing will be accomplished in the MXQ office:	
a. Enter the impoundment discrepancy in the appropriate forms using the following statement:	
"ACFT/EQUIP Impounded for _____. Impoundment official is (Name, rank and squadron)". See Pg.____Blk.____	_____
b. Reason for impoundment.	_____
c. Items on Impoundment Official's Checklist (see below).	_____
d. Content and use of impoundment folder and Impounded sign.	_____
e. Requirement for return of all documents (impoundment folder, A/C forms, 0900/1530 Briefs) to MXQ office prior to release.	_____
f. Off-station requirements as applicable (see below).	_____

Impounded Official will:	**Status**
1) Receive briefing and Impoundment Log Binder from MXQ.	_____
2) Post Impoundment Signs around ACFT/EQUIP.	_____
3) Determine the requirement for an Entry Control Point	
a. Will an ECP be required/established:	**Y/N**
b. If "yes", ensure an access control log is utilized and maintained.	_____
4) Select Impoundment Team.	_____
5) At his/her discretion, control aircraft/equipment forms. When required:	
a. Obtain and secure current aircraft forms, jacket file or AFTO Form 244 for equipment.	
b. Notify MXG, AMU, P&S, and IMDS DB Management Sections.	_____
c. Obtain personnel records, as needed.	_____
	_____
6) Limit maintenance actions until root cause of mishap is determined.	_____
7) Daily Impoundment Log Notes will have every action performed on the Impounded item documented whether it is Impound related or not.	_____
8) 0900/1530 Brief will be TYPED twice a day and 2 copies will be printed. One copy will go to the meeting and be handed to the Colonel/Rep, the other will go into the Impound Folder as a historical document.	_____
9) If impoundment transfer is required refer to Impoundment Transfer Checklist. Both Checklists must be completed.	_____
10) Properly tag and control all removed parts. Hand deliver parts to back shop supervisors and brief them of the Impound and importance of control on those parts in their custody. Submit Deficiency Reports (DRs) as needed.	_____
11) Obtain information from the Impoundment Release Authority as to whether a "one time flight" will be required.	_____
12) Impoundment Log Narrative of Cause and Corrective Action is filled out prior to Impound sign off and is a brief summary of the events during the impound.	_____
13) Ensure all Impoundment documentation is reviewed by the AMU supervision prior to Impound Release request.	
14) Ensure all Impoundment documentation is reviewed by the MOO Pit prior to Impound Release request.	_____
15) Return all reviewed documentation to MXQ for final review.	_____

Quality Assurance Final Review	**Status**
1) Review aircraft/equipment forms and Impoundment folder/book for accuracy, corrective actions and related maintenance.	_____
2) Review Impoundment Daily Log and 0900/1530 Briefing entries.	_____
3) Sign Impoundment Log.	_____
4) Enter corrective action in the appropriate forms by entering the following statement in the "Corrective Action" block: **"Investigation complete, all corrective actions have been reviewed. Aircraft/equipment released IAW AFI 21-101_AFMCSUP Chapter 7,, see Pg. _____ Blk. _____ for original discrepancy"**	_____
5) QA and IO or representative will hand carry all documentation to appropriate release authority (MXG/CC or CD only) for review and authorization to release.	_____
6) If impoundment release is approved, MXQ will sign off the "Corrected by" block and the release authority (MXG/CC or CD only) the "Inspected by" block of the appropriate forms entry and Impoundment Log.	_____
7) Ensure impoundment is cleared in IMDS.	_____
8) Notify MOC of impoundment release.	_____
9) Complete impoundment record and Impoundment # log in master log.	_____
10) Return all impoundment documentation to MXQ for filing.	_____

Additional Off-Station Requirements	**Status**
MOC receives notification of an aircraft off station that may require Impound. If it is determined an impoundment is warranted the owning organization and QA will initiate the impoundment checklist. **NOTE:** The following requirements will be accomplished in addition to the Impoundment Checklist.	
1) The off-station ranking maintenance individual must be put on an Impoundment Release Authority letter of designation signed by MXG/CC or CD in order to sign off the impoundment discrepancy once directed by MXG/CC or CD to do so in their absence. This letter will be maintained with the impoundment folder. Start this process now.	_____
2) Home station will complete the Impoundment Checklist, in coordination with maintenance personnel at the off-station location.	_____
3) Off-station maintenance personnel will accurately document <u>all actions</u> taken to troubleshoot/repair the malfunction in the Impoundment Daily Log Notes.	_____

Table A7.2. Impound Checklist.

	Impoundment Actions	Status
1	Impoundment authority directs impoundment and assigns an impoundment official.	
2	Enter a Red X in the applicable forms and MIS indicating the reason for impoundment and the name of individual assigned as impoundment official.	
3	Notify the MOC of impoundment decision.	
4	Select a team of highly qualified technicians to determine cause of problem that led to the impoundment.	
5	Control access to impounded aircraft or equipment and determine if an entry control point (ECP) is required. If ECP is established, use an access control log.	
6	Determine necessary controls required for aircraft and equipment records.	
7	Review aircraft or equipment forms and MIS for historical data related to the malfunction causing the impoundment.	
8	Ensure maintenance is limited until the cause of impoundment is determined.	
9	Ensure parts removed are carefully controlled.	
10	Once the cause of the malfunction has been determined and corrected, determine if an OCF or FCF is necessary or required.	
11	Ensure QA is intimately involved in the impoundment process and has reviewed all actions taken to correct the malfunction.	
12	QA determines the need for cross-tell based on the potential effect to other aircraft and equipment.	
13	Brief release authority on findings and corrective actions, and request release from impoundment.	
14	Impoundment release authority clears or directs the impoundment be cleared in the applicable aircraft or equipment forms.	

Attachment 11 (Added)

LOCALLY APPROVED GENERAL USE AND MANUAL JOB CONTROL NUMBERS

A11.1. General use and manual JCNs: Will be used during MIS outages to control and identify maintenance actions. The 9-digit code consists of the current Julian date followed by the four-digit code assigned below.

Table A11.1. General Use JCNs.

USAGE	JCN		
Aircraft Scheduled Maintenance Inspections	5301	thru	5350
Aircraft TCI	5351	thru	5400
Aircraft TCTO	5401	thru	5499
Cannibalization Actions MIS	5250	thru	5299
Engine TCI	7080	thru	7099
Engine TCTO	7050	thru	7079
IMIS--(On/Off line)	3000	thru	4999
Major Aircraft Inspection	*301	thru	*601
Unscheduled Maintenance	5000	thru	5200

NOTE: * Indicates an alpha character in the sixth position of the JCN. Refer to TO 00-20-2, *Maintenance Data Documentation,* Figure 4-1, for guidance on which alpha character to use.

Table A11.2. Manual JCNs.

UNIT	USAGE	JCN		
412 MXS	Armament System Flight	7500	thru	7509
412 MXS	Electro-Environmental	7165	thru	7169
412 MXS	Electronic Warfare	7110	thru	7119
412 MXS	F-16 Avionics Intermediate Shop	7130	thru	7139
412 MXS	F-16 Avionics Test Station	7100	thru	7109
412 MXS	F-16 Avionics Test Station	7140	thru	7149
412 MXS	Sensors	7280	thru	7289
412 MXS	Egress	7150	thru	7164
412 MXS	Main Base AGE Repair/Inspection	7290	thru	7339
412 MXS	South Base AGE Repair/Inspection	7510	thru	7559
412 MXS	Pneudraulics	7180	thru	7189
412 MXS	Transient Alert/Crash Recovery	7420	thru	7469
412 MXS	Fuels Element	7170	thru	7179
412 MXS	Machines/Metals Tech	7360	thru	7369
412 MXS	Plastics and Patterns	7380	thru	7389
412 MXS	Structures	7340	thru	7349
412 MXS	Corrosion Control	7350	thru	7359
412 MXS	Non-Destructive Inspection	7370	thru	7379
412 MXS	Welding Shop	7400	thru	7409
412 MXS	Non-Powered AGE	7190	thru	7194
412 MXS	Propulsion Branch	7195	thru	7209
412 MXS	Test Cell Element	7210	thru	7219
412 MXIS	F-16 Support	7640	thru	7649
412 MXIS	F-22 Support	7670	thru	7679
412 MXIS	General Support	7600	thru	7609
412 MXIS	Strat Systems	7650	thru	7659
412 MXIS	T-2 Mod Electrical	7610	thru	7619
412 MXIS	T-2 Mod Mechanical	7620	thru	7629
412 MXIS	Test Cell Element	7660	thru	7669
412 AMU	APG	7785	thru	7794
412 AMU	Cannibalizations	8950	thru	9000
412 AMU	Debrief	7680	thru	7694
412 AMU	Inspection	7795	thru	7844
412 AMU	Specialists	7994	thru	8054
412 AMU	Weapons	7845	thru	7854
412 AMU	General Aircraft Support (T-38)	5541	thru	5580

412 AMU	General Aircraft Support (T-38)	5591	thru	5640
412 AMU	General Aircraft Support (T-38)	5651	thru	5690
412 AMU	General Aircraft Support (T-38)	5711	thru	5720
412 AMU	General Aircraft Support (T-38)	5931	thru	5960
412 AMU	General Aircraft Support (T-38)	6181	thru	6195
416 AMU	APG	7855	thru	7874
416 AMU	Cannibalizations	8900	thru	8949
416 AMU	Debrief	7695	thru	7704
416 AMU	Inspection	7875	thru	7904
416 AMU	Specialists	7905	thru	7924
416 AMU	Weapons	7925	thru	7944
416 AMU	General Aircraft Support (Falcon)	6261	thru	6330
416 AMU	General Aircraft Support (Falcon)	6341	thru	6350
416 AMU	General Aircraft Support (Falcon)	6361	thru	6370
416 AMU	General Aircraft Support (Falcon)	6381	thru	6390
416 AMU	General Aircraft Support (Falcon)	6401	thru	6429
418 AMU	APG	8280	thru	8289
418 AMU	Cannibalizations	5200	thru	5250
418 AMU	Debrief	8055	thru	8154
418 AMU	Inspection	8390	thru	8509
418 AMU	Specialists	8300	thru	8309
418 AMU	Weapons	8310	thru	8319
418 AMU	Offshore Aircraft Support	5300	thru	5325
419 AMU	APG	7705	thru	7724
419 AMU	Cannibalizations	8500	thru	8550
419 AMU	Debrief	8380	thru	8389
419 AMU	Inspection	7725	thru	7734
419 AMU	Specialists	7735	thru	7784
419 AMU	Weapons	8370	thru	8379
419 AMU	General Aircraft Support (Bombers)	6021	thru	6050
419 AMU	General Aircraft Support (Bombers)	6761	thru	6770
F-22/F-35	APG	9000	thru	9024
F-22/F-35	Cannibalizations	9200	thru	9250
F-22/F-35	Debrief	9125	thru	9149
F-22/F-35	Inspection	9025	thru	9074
F-22/F-35	Scheduling	9250	thru	9299
F-22/F-35	Specialists	9075	thru	9099
F-22/F-35	TCTO	9150	thru	9224
F-22/F-35	General Aircraft Support (F-22/F-35)	6071	thru	6100

412 FLTS	Speckled Trout	5811	thru	5820
Contractor	General Aircraft Support (Contract)	6721	thru	6740
Reserved	General Aircraft Support (Reserved)	5901	thru	5910
Reserved	General Aircraft Support (Reserved)	6196	thru	6205
Reserved	General Aircraft Support (Reserved)	6531	thru	6540
Reserved	General Aircraft Support (Reserved)	8610	thru	8950
412 OSS	Aircrew Flight Equipment	8560	thru	8609
MOC	Redball Maintenance	2501	thru	2599
MOC	Assigned by MOC as needed	6600	thru	6720
MOC	Assigned by MOC as needed	6861	thru	6989
MOC	Assigned by MOC as needed	7470	thru	7499
MOC	Assigned by MOC as needed	9300	thru	9999
MDSA	Assigned by MDSA as needed	5581	thru	5590
MDSA	Assigned by MDSA as needed	5821	thru	5830
MDSA	Assigned by MDSA as needed	6111	thru	6180
MDSA	Assigned by MDSA as needed	7120	thru	7129
MDSA	Assigned by MDSA as needed	7630	thru	7639
G081 Aircraft	Cannibalizations	5200	thru	5299
G081 Aircraft	Offshore Aircraft Support	5300	thru	5325

Attachment 12 (Added)

412 MXG AUTHORIZED LMR CALL SIGNS AND TALK GROUPS

Table A12.1. 412 MXG Authorized Radio Talk Groups for Maintenance Zone Channel 1.

MOC Common	B1 – B2 SI	Maintenance
Airlift	MXS FAB	Air
Bomber	BOMBER	Bomber
Falcon F-16	MXS CRF	OSC
F-16 SI	AGE	JOTT 1 (31 TES)
Shadow T-38	AMMO	JOTT 2 (VMX-1)
Global Hawk	TA	JOTT 3 (17R-UK)
Raptor	Tower	JOTT 4 (VX-9)
JSF	POL	JOTT 5 (323 TES)
Viper	LG-UCC	JOTT SI

Table A12.2. 412 MXG Authorized Radio Call Signs.

FUNCTION	CALL SIGN	TALK GROUP
MXG CC	Maintenance 1	MOC Common
MXG CD	Maintenance 2	MOC Common
MXG DT	Maintenance 2 Alpha	MOC Common
MXG Production Super	Maintenance 2 Bravo	MOC Common
Maintenance Weekend Duty Officer	Maintenance 3	MOC Common
MXG Superintendent	Maintenance Chief	MOC Common
MXG Operations Flt Commander	Maintenance Lead	MOC Common
MOC Superintendent	MOC Super	MOC Common
MOC Mobile	MOC Mobile	MOC Common
GCC	Maintenance GCC	MOC Common
MXG Facilities	Facilities	MOC Common
Computer Resources	Hard Drive	MOC Common
Quality Assurance	QA 1	MOC Common
Quality Assurance Mobile	QA 2 thru 7	MOC Common
Wing Weapons Manager	Weapons Chief	MOC Common
Weapons Standardization Supervisor	Prowler Super	MOC Common
Weapons Standardization Mobile	Prowler Fighter	MOC Common
Aircrew Flight Equipment	Life 1	MOC Common
POL	POL	MOC Common
Bomber Weapons Standardization	Prowler Bomber	MOC Common

412 AMXS Supervision		
Commander	Dawg 1	MOC Common
Supervisor	Dawg Lead	MOC Common
Superintendent	Dawg Chief	MOC Common
Production Supervisor	Dawg Super	MOC Common
UCC	Dawg UCC	MOC Common
Reserved Call Signs	Dawg 2 thru 4	MOC Common
411 AMU (412 AMXS)		
OIC	Raptor Maintenance 1	Raptor
Contractor Production Supt	Raptor Lead	Raptor
Boeing Maintenance Supervision	Raptor Lead 2	Raptor
Superintendent	Raptor Chief	Raptor
Production Superintendent	Raptor Super	Raptor
Operations	Raptors OPS	Raptor
Aircraft Maintenance for tail # 6	Raptor 6	Raptor
Aircraft Maintenance for tail #7	Raptor 7	Raptor
Aircraft Maintenance for tail #9	Raptor 9	Raptor
Aircraft Maintenance for tail #132	Raptor 2	Raptor
Ground Ops	Ground OPS 6,7,9,2	Raptor
APG Flight	Raptor APG	Raptor
Specialist Flight	Raptor Specialist	Raptor
Weapons Flight	Raptor Weapons	Raptor
LO/Structures Flight	Raptor Structures	Raptor
Safety	Raptor Safety	Raptor
Supply	Raptor Supply	Raptor
Instrumentation	Instro	Raptor
Engine Shop/Pratt & Whitney	Pratt 1 & 2	Raptor
Material Review Board	MRB	Raptor
Civilian Security	Security	Raptor
412 AMU (412 AMXS)		
Civilian in Charge	Shadow Lead	Shadow T-38
Maintenance Manager	Shadow Super	Shadow T-38
Debrief	Shadow Debrief	Shadow T-38
Supply	Shadow Supply	Shadow T-38
T-38 Production Supervisor	Shadow 1	Shadow T-38
T-38 Expediter	Shadow 2	Shadow T-38
T-38 Specialist	Shadow 3	Shadow T-38
T-38 Specialist	Shadow Maintenance	Shadow T-38
T-38 Tow	Shadow Tow	Shadow T-38

Instrumentation	Spin 1 thru 16	Shadow T-38
TPS SI	TPS SI 1 thru 4	Shadow T-38
416 AMU (412 AMXS)		
Officer/Civilian In Charge	Falcon Lead	416th
Superintendent	Falcon Chief	416th
Maintenance Manager	Falcon Manager	416th
Lead Production Superintendent	Falcon Lead Pro	416th
Production Superintendent	Falcon Super	416th
Flightline Expediter 1	Falcon 1	416th
Flightline Expediter 2	Falcon 2	416th
Specialist Expediter	Falcon 3	416th
Weapons Expediter	Falcon 4	416th
Maintenance	Falcon Maintenance	416th
Tow	Falcon Tow	416th
Weapons Supervisor	Load Base	416th
Load Crews	Load 1thru 8	416th
Debrief/Dispatch	Falcon Dispatch	416th
461 AMU (412 AMXS)		
JSF Aircraft Manager	Lightning Lead	JSF
Gov. Superintendent	Lightning Chief	JSF
LM/Gov. MX Production Super	Lightning Super	JSF
Maintenance Control	Maintenance Control	JSF
ITF Security	Lightning Security	JSF
Tool Crib	Tool Crib	JSF
Gov. Instrumentation 1	Instro 1	JSF
Gov. Instrumentation 2	Instro 2	JSF
Gov. Instrumentation 3	Instro 3	JSF
Gov. Instrumentation 4	Instro 4	JSF
Gov. Instrumentation 5	Instro 5	JSF
Gov. Instrumentation 6	Instro 6	JSF
LM/Gov. AGE	Lightning AGE	JSF
LO Section	Lightning LO	JSF
Supply	Lightning Supply	JSF
Tow Team	Lightning Tow	JSF
Weapons Section	Lightning Weapons	JSF
Hot Pit Supervisor	Lightning Hot Pits	JSF
Range	Lightning Range	JSF
AF-1 Acft Supervisor	Lightning 1	JSF

AF-2 Acft Supervisor	Lightning 2	JSF
AF-3 Acft Supervisor	Lightning 3	JSF
AF-4 Acft Supervisor	Lightning 4	JSF
BF-4 Acft Supervisor	Lightning 5	JSF
BF-5 Acft Supervisor	Lightning 6	JSF
AF-1 FTCE	Control 1	JSF
AF-2 FTCE	Control 2	JSF
AF-3 FTCE	Control 3	JSF
AF-4 FTCE	Control 4	JSF
BF-4 FTCE	Control 5	JSF
BF-5 FTCE	Control 6	JSF
LT&E	Lightning 7	JSF
Special Projects	Lightning 8	JSF
Special Projects	Lightning 9	JSF
Pratt & Whitney 1	Pratt 1	JSF
Pratt & Whitney 2	Pratt 2	JSF
461st Aircrew Flight Equipment	Life 1	JSF
461st Commander	Jester Lead	JSF
461st Operations	Jester Ops	JSF
Lockheed Director	Mayhem 1	JSF
912 AMXS Director		
Director	Griffin 1	MOC Common
Supervisor (MOO)	Griffin 2	MOC Common
Superintendent	Griffin 3	MOC Common
418 AMU (912 AMXS)		
Civilian in Charge	Airlift Lead	Heavy
Maintenance Manager	Airlift Chief	Heavy
Production Supervisor	Airlift Super	Heavy
APG Expediter	Airlift 2	Heavy
LCC/Debrief/Dispatch	Airlift Dispatch	Heavy
Reserved Call Signs	Airlift 3 thru 8	Heavy
Maintenance	Airlift Maintenance	Heavy
Tow	Airlift Tow	Heavy
C-17/C-130 DCC	Airlift (Tail #)	Heavy
KC-135 Tanker	Airlift 320	Heavy
Tanker Business Effort	Ghost (Tail #)	Heavy
Boeing Quality	Globemaster Quality	Heavy
Boeing Engineering	Globemaster Engineering	Heavy

419 AMU (912 AMXS)		
Civilian in Charge	Bomber Lead	Bomber
Maintenance Manager	Bomber Chief	Bomber
Lead Production Supervisors	Bomber Base	Bomber
Production Supervisors	Bomber Super	Bomber
APG Expediter	Bomber 2	Bomber
APG	Bomber (Tail#)	Bomber
Transient Bomber	Bomber 3	Bomber
Specialist Expediter	Bomber 4	Bomber
Weapons	Bomber 5	Bomber
Maintenance	Bomber Maintenance	Bomber
Tow	Bomber Tow	Bomber
Reserved Call Signs	Bomber 6 thru 10	Bomber
LCC/Dispatch/Debrief	Bomber AGE	Bomber
AGE	Bomber AGE	S/B Back Shop
Com Nav Mission System	Bomber CNMS	Bomber
Electro-Environmental Systems	Bomber EES	Bomber
Electronic Warfare Systems	Bomber EWS	Bomber
Instrument/Flight Controls	Bomber IFC	Bomber
Instrumentation	Bomber SI 1 thru 5	Bomber
Bomber IMF	Bomber IMF 1-4	Bomber
412 MXS		
Director	Dragon 1	CRF
Maintenance Officer	Dragon Lead	CRF
Superintendent	Dragon Senior	CRF
Production Supervisor	Dragon Super	CRF
COMPONENT REPAIR		
Flight Chief	CRF Lead	CRF
Production Supervisor	CRF Super	CRF
Egress Element	Egress Base	CRF
Egress Vehicle	Egress 1 thru 5	CRF
Electronic Element	AIS 1 & 2	CRF
Mechanical Element	Armament 1	CRF
FABRICATION		
Flight Chief	Fabrication (FAB) Chief	FAB
Production Supervisor	Fabrication (FAB) Super	FAB
Structural Maintenance	Rivet Base	FAB
Structural Maintenance Mobiles	Rivet 1 thru 3	FAB
NDI Mobile	X-Ray 1 & 2	FAB
Corrosion/Composites Supervisor	Corrosion Base	FAB

Corrosion Mobile	Corrosion 1	FAB
Machine/Weld Supervisor	Machine Base	FAB
Machine/Weld Mobile	Machine 1	FAB
MUNITIONS		
Flight Chief	Ammo Chief	AMMO
Munitions Superintendent	Ammo 1	AMMO
Munitions Production Super	Ammo 2	AMMO
Munitions Material Super/MASO	Ammo 3	AMMO
Munitions Systems Super	Ammo 4	AMMO
Munitions Control	Ammo Control	AMMO
Munitions Inspection	Jaguar	AMMO
Munitions AFK	MASE	AMMO
Conventional Maintenance	Bullet 1 thru 30	AMMO
Munitions Missile Maintenance	Maverick 1 thru 15	AMMO
Munitions Storage	Mongoose 1 thru 15	AMMO
Storage Dispatch	Mongoose Den	AMMO
PROPULSION		
Flight Chief	Propulsion Chief	CRF
Production Super	Propulsion Super	CRF
Engine Dispatch	Engine Base	CRF
Engine Mobile	Engine 1,2 & 3	CRF
Engine Mobile (S Base)	Engine 2	CRF
Hush House	Hush 1	CRF
AGE FLIGHT		
Flight Chief	AGE Chief	AGE
AGE Supervision	AGE Super	AGE
AGE Dispatch	AGE Dispatch	AGE
AGE Dispatch Mobile	AGE 1 thru 10	AGE
AGE Trailer Maintenance	Trailer Maintenance 1-3	AGE
HEAVY MAINTENANCE FLIGHT		
Flight Chief	Inspection Lead	CRF
Production Supervisor	Inspection Super	CRF
Inspection Section Supervisor	Phase 1	CRF
T-38 Phase	T-38 Phase	CRF
F-16 Phase	F-16 Phase	CRF
KC-135 Phase	Phase 4	CRF
Tire Mobile	Tire Base	CRF
Fuel Element	Fuels Base	CRF
Hydrazine Response Vehicle	Fuels 1	CRF

Fuel Vehicle	Fuels 2 & 3	CRF
Crash Recovery Supervisor	Crash Super	T/A
Crash Recovery	Crash 1	T/A
Crash Recovery Flatbed	Crash 2	T/A
Transient Alert Supervision	TA Super	T/A
Transient Alert Mobile	Alert 1 & 2	T/A
End of Runway	Last Chance	T/A
TMDE FLIGHT		
Flight Chief	PMEL Chief	CRF
C-12		
Maintenance Manager	C-12 Super	MOC Common
C-12 Production Supervisor	C-12 Maintenance	MOC Common
Flightline Expediter	C-12 (Tail #)	MOC Common
VISTA		
Maintenance Manager	VISTA SUPER	VIPER
Production Supervisor	VISTA Maintenance	VIPER
Flightline Expediter	VISTA (Tail #)	VIPER
LEAR Maintenance	LEAR 1	VIPER
Global Hawk		
Maintenance Manager	Global Hawk SUPER	VIPER
Production Supervisor	Global Hawk Maintenance	VIPER
Flightline Expediter	Global Hawk (Tail #)	VIPER
JOTT 1 Not Currently In Use		JOTT 1
JOTT 2 Not Currently In Use		JOTT 2
17(R) CALL SIGNS (UK)		
OC TES	Fortress Sunray	JOTT 3
SEngO	Fortress SEngO	JOTT 3
WO Eng	Fortress Warrant	JOTT 3
FS Eng	Fortress Warrant 2	JOTT 3
Rects Control	Fortress Rects Control	JOTT 3
Line Control	Fortress Line Control	JOTT 3
Line Walker	Fortress Line Walker	JOTT 3
Line Team 1	Fortress Line Team 1	JOTT 3
Line Team 2	Fortress Line Team 2	JOTT 3
Wpns Chief	Fortress Weapons Chief	JOTT 3
Wpns Tradesman	Fortress Weapons 1	JOTT 3
Wpns Tradesman	Fortress Weapons 2	JOTT 3
Avionics Chief	Fortress Avionics Chief	JOTT 3
Avionics Tradesman	Fortress Avionics 1	JOTT 3

Avionics Tradesman	Fortress Avionics 2	JOTT 3
Mechanical Chief	Fortress Mechanical Chief	JOTT 3
Mechanical Tradesman	Fortress Mechanical 1	JOTT 3
Mechanical Tradesman	Fortress Mechanical 2	JOTT 3
EGR Team	Fortress Ground Runner	JOTT 3
QA	Fortress QA	JOTT 3
AC Tow Team 1	Fortress Tow Team 1	JOTT 3
AC Tow Team 2	Fortress Tow Team 2	JOTT 3
Wpns Load Team 1	Fortress Load Team 1	JOTT 3
Wpns Load Team 2	Fortress Load Team 2	JOTT 3
Supplier	Fortress Supplier	JOTT 3
Life Support	Fortress Life Support	JOTT 3
VMX-9 CALL SIGNS (NAVY)		
Maintenance Control	Vampire Maintenance	JOTT 4
Quality Assurance	Vampire QA	JOTT 4
Flight Line Coordinator	Vampire Mobile	JOTT 4
Squadron Duty Officer	Vampire Duty	JOTT 4
Ordnance	Red Baron	JOTT 4
Line	Vampire Line	JOTT 4
Troubleshooters	Vampire Shooters	JOTT 4
JOTT 5 Not Currently In Use		JOTT 5
Joint Operational Test Team	Shocker Super	JOTT 5
FUNCTION	**CALL SIGN**	**TALK GROUP**
CC	JOTT 1	ALL JOTT NETS
COTF CC	JOTT 2	ALL JOTT NETS
UK CC	JOTT 3	ALL JOTT NETS
NLD CC	JOTT 4	ALL JOTT NETS
Test Director	JOTT 5	ALL JOTT NETS
AFOTEC DO	JOTT 6	ALL JOTT NETS
Effectiveness Lead	JOTT 7	ALL JOTT NETS
Suitability Lead	JOTT 8	ALL JOTT NETS
Analysis Lead	JOTT 9	ALL JOTT NETS
Logistics Lead	JOTT 10	ALL JOTT NETS
Superintendent	JOTT Chief	ALL JOTT NETS
Crew Chief Suitability Evaluator	JOTT APG	ALL JOTT NETS
Avionics Suitability Evaluator	JOTT Avionics	ALL JOTT NETS
Weapons Suitability Evaluator	JOTT Weapons	ALL JOTT NETS
LO Suitability Evaluator	JOTT LO	ALL JOTT NETS
JOTT Tool Room/Support Section	JOTT Tool Room	ALL JOTT NETS

Attachment 13 (Added)

PAPERLESS PHASE INSPECTION VALIDATION

Figure A13.1. Paperless Phase Inspection Validation.

AIRCRAFT_____

AIRCRAFT FORMS

DATE FROM:__ DATE INACTIVATED: _____
DATE REACTIVATED: _____

___781H inactivated
___pages of 781As inactivated
___pages of 781Ks inactivated

FORMS REMOVED FOR PAPERLESS PHASE INSPECTION

I VERIFY THAT ALL OPEN ENTRIES HAVE BEEN ENTERED/VALIDATED IN IMDS

_____
(Printed Name, Rank, Duty Title, Employee #)

_____
(Signature, Date)

These inactive forms to be filed in aircraft jacket file after review |

Attachment 14 (Added)

PAPERLESS PHASE "AIRCRAFT FORMS INACTIVATED" SHEET

Figure A14.1. Paperless Phase "Aircraft Forms Inactivated" Sheet.