BY ORDER OF THE COMMANDER
15TH WING

AIR FORCE INSTRUCTION 21-101

PACIFIC AIR FORCE
Supplement

15TH WING
Supplement

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Maintenance

AIRCRAFT AND EQUIPMENT MAINTENANCE MANAGEMENT

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This supplement implements and extends the guidance of Air Force Instruction (AFI) 21-101, Aircraft and Equipment Maintenance Management, and AFI 21-101_ PACAFSUP, Aircraft and Equipment Maintenance Management. This supplement provides the minimum essential guidance and procedures to safely and effectively maintain, service, and repair aircraft and support equipment utilized by 15th Maintenance Group and 154th Maintenance Group personnel, Joint Base Pearl Harbor Hickam, Hawaii. (JBPHH). Failure to comply to this publication is punishable as a violation of Article 92, of the UCMJ. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using AF Form 847, Recommendation for Change of Publications; route the AF Form 847 from the field through the appropriate functional's chain of command. Ensure that all records created as a result of the processes prescribed in this publication are maintained in accordance with the Air Force Manual (AFMAN) 33-363, Management of Records, and disposed of in accordance with Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS) located at **https://www.my.af.mil/afrims/afrims/afrims/rims.cfm**.

SUMMARY OF CHANGES

This publication has been substantially revised and must be completely reviewed. Changes include the addition of cyber hygenie requirements, re-designation of AGE ready lines and sub-pools, listing manual job control numbers and World Wide Identifying codes for Joint Base Pearl Harbor-Hickam. Additionally, specific safety consideration with mishap notification procedures, the daily schedule process with the addition of 2407 routing and approval coordination, One Time Inspection (OTI) requests, impound procedures with training requirements, clarification of items too small to be etched, missing and lost tool/item procedures, local manufacturer process, Due in For Maintenance (DIFM) Monitor requirements, and added processes to the Foreign Object Prevention (FOD) program.

1.7.2.2. **(Added)** All base agencies dispatched to aircraft runway, taxiway, parking apron, or maintenance areas will adhere to proper cyber hygiene by ensuring all annual computer security training is complete and up-to-date. Additionally, personnel will not use mission related portable electronic devices for anything other than their mission related purpose.

1.12.3. **(Added)** MIS (G081) Access

1.12.3.1. **(Added)** Personnel requiring access to the G081 system will digitally fill out a DD Form 2875, *System Authorization Access Request (SAAR)*, with supervisor and security manager signature. The completed DD form 2875 will then be turned into the Analysis Section.

1.12.3.2. **(Added)** Once G081 user ID and passwords are established, personnel will have access to the programs assigned to their workcenter. Personnel who need access to different programs will contact the Analysis Section.

1.12.3.3. **(Added)** Access to the training, MOC, debrief, aircraft statusing, and configuration management associated screens/programs should be strictly controlled due to the impact these screens can have on the mission.

1.13.1.1. **(Added)** Safety must be a primary consideration in all MXG activities; it only takes a second for someone to get hurt or to damage an aircraft. There is a chain of events leading to every mishap; our job is to break that chain in any way possible. Sometimes, however, it is difficult for junior members to break the chain due to their position in the organization and the perception that those who are higher ranking might not listen to their concerns. The "Knock It Off" procedure was specifically developed to remedy that situation.

1.13.1.2. **(Added)** The use of "Knock It Off" will:

1.13.1.2.1. **(Added)** Safely stop all activities in question. The initiating member will voice their concerns to the team. This will raise awareness of the uncertainty felt by the team member due to safety concerns or decision making that does not have written guidance. Most importantly, the "Knock It Off" provides an opportunity to break the error chain prior to a possible mishap from occurring.

1.13.1.2.2. **(Added)** Following the "Knock It Off" call, the senior team member (e.g. team supervisor, task lead, Tiger Team lead, highest skill level, etc.) will provide all other team members the opportunity to voice inputs relative to the stated concerns.

1.13.1.2.3. **(Added)** After considering all inputs, the senior member will direct the team to continue with the current course of action or direct a new course of action based upon the previous team discussion. NOTE: The senior team member is the on-scene decision authority. If necessary, the applicable Production Superintendent or senior shift supervisor, will be the final authority. Finally, if an individual believes their concerns were not properly addressed, they may pursue the issue through their chain of command/management structure without reprisal or punishment or without fear of reprisal or punishment. Commanders at all levels are to investigate any alleged reprisal and take appropriate corrective actions.

1.13.3. **(Added)** Mishap Notification Procedures:

1.13.3.1. **(Added)** Workcenter supervisors must ensure all personnel understand their responsibility to report mishaps promptly and accurately. Timely investigation of mishaps depends on prompt notification. Mishaps are defined as unplanned or unsought events, or series of events, resulting in death, injuries, occupational illness, or damage to or loss of equipment and/or property.

1.13.3.2. **(Added)** Squadron commanders shall ensure military on- and off-duty injuries, civilian employee on-duty injuries, and damage to any property as a result of military operations are reported to the MXG/CC.

1.13.3.3. **(Added)** Both on- and off-duty mishaps must be reported immediately. The unit safety representative will ensure a preliminary AF Form 978, *Supervisor's Mishap Report,* is completed. If the mishap involves injury to civilian personnel, the supervisor may be required to submit a Form CA-1 or Form CA-16 to the Base Civilian Personnel Office. Supervisors will immediately notify MOC, who will then complete the applicable Quick Response Checklist (QRC) when personnel are injured on duty or if there is damage to DoD property or equipment.

1.13.4. **(Added)** Hearing Protection:

1.13.4.1. **(Added)** Personnel will ensure proper hearing protection is used within the following decibel cordons. Hearing protection will be worn within cordons regardless of duration of exposure.

Table 1.1. (Added) Decibel Rating Chart.

Equipment	Manufacturer	Results (dBA)	Noise Hazard Distance	Hearing Protection Required?	Hearing Protection Type
Jacking Manifold	Heco Div. Barker Rockford Co.	86.7	8 ft.	Yes	Single
Heater Cart	Polartherm Oy	91.3	5 ft.	Yes	Single
A/M32A-95/60	Libby Welding Co.	101.2	27 ft.	Yes	Dual
Universal Hydraulic Test Stand	Hydraulics International	100.7	35 ft.	Yes	Dual
Lowpack (MC-20)	Clark Equipment	93.2	15 ft.	Yes	Single
Power Cart (A/M32A-86)	John R. Hollingsworth Co.	96.2	20 ft.	Yes	Single
Power Cart (B809)	Essec Electro Engineers	96.2	20 ft.	Yes	Single
A/C Cart (MA-3D)	HDT Global	94.5	20 ft.	Yes	Single
A/C Cart (AC-25)	TUG Technologies	88.6	16 ft.	Yes	Single
Nitrogen Cart	Pacific Consolidated Industries	97.0	28 ft.	Yes	Dual
Light Cart (FL-1D)	Pow'd Gard Co.	83.0	N/A	No	N/A
Universal Maintenance Stand	MCT Industries	79.7	N/A	No	N/A

Medium Pressure Compressor (MC-7)	Ingersoll Rand Co.	84.4	N/A	No	N/A
Genie Lift	Genie	81.8	N/A	No	N/A

1.15.2.1. **(Added)** Cell phones and other personal electronic devices possessed on the flight line or in maintenance work areas will only be used for official/authorized business. Cell phones will not be used while actively performing maintenance. This restriction does not apply to personnel performing maintenance management duties (e.g. Pro Super, Expediter) or official duties while TDY. Cell phone cameras are to be used for official use only, and only by persons with a restricted area badge. Pictures are not releasable for unofficial use without the written approval from base Public Affairs.

1.15.2.2. **(Added)** Personnel will also comply with restrictions in TO 00-25-172, AFMAN 91-201, AFI 91-207, AFI 11-218, AFMAN 17-1301 and aircraft and equipment TOs.

1.15.2.3. **(Added)** In the event, classified information is to be utilized on the aircraft by the aircrew, they will notify all personnel in the immediate area. Maintenance Group personnel will remove all E-tool laptops and Infrared (IR) or Radio Frequency (RF) communication devices (e.g., cell phones) from the flight deck. Equipment must be no closer than the cargo compartment (e.g., bottom of the ladder) of the particular MDS until cleared by the aircrew to return to Maintenance Group activities in the flight deck/relief crew compartment. If Maintenance Group activity is required to occur simultaneously during communication of classified information, Maintenance Group personnel will use current paper copies of appropriate technical data.

2.4.36.1. **(Added)** The open fuel tank repair areas are as follows: Aircraft Fuel Systems Repair Facility (Bldg 2135/Hangar 19), Open Repair Area (Fuel Cell Charlie), KC-135 Fuel Shop (Bldg 3004).

2.4.44.1. **(Added)** Only 7-level and higher, or civilian equivalent personnel will sign off repeat, recurring and CND discrepancies.

2.4.52.1. **(Added)** All 15 MXG eTools will be tracked on a dedicated eTool Information Technology Equipment (ITE) account. The eTool ITE Custodian (ITEC) will produce an annual eTool forecast for assigned accounts. Forecasted needs should ensure adequate replacement of unserviceable and out of warranty eTools.

2.4.52.2. **(Added)** All sections with eTools will monitor eTool availability and report shortages to ITEC for annual forecast.

2.4.53.1.1. **(Added)** Production Superintendents, Expediters and/or section supervisors will verify correct status is reflected in maintenance forms and MIS (MIS only for aircraft/equipment in paperless/virtual forms) at the beginning and end of each shift, or when there is a change in status or condition.

2.4.53.2.1. **(Added)** Maintenance Supervision will determine when independent screening is required. At a minimum, this should include aircraft recovering from hangar queen status, extensive CANN actions or when extensive maintenance (outside of MDS -6 requirements) has been accomplished. Screening should be conducted by production personnel in conjunction with PS&D.

2.4.53.3.1. **(Added)** Under circumstances other than specified in MDS -6 inspection manuals, the MXG/CC, in coordination with Boeing, PS&D, and QA will determine if an OCF or FCF is required.

3.5.1.1. **(Added)** Inform MOC when a delay exists for a mission limiting discrepancy that cannot be worked.

3.6.12. **(Added)** Ensure unattended aircraft are configured with all exposed manually actuated windows, hatches and doors closed.

3.7.13. **(Added)** Be familiar with mandatory impoundment situations and impoundment procedures outlined in **Chapter 7** of this instruction.

4.5.2.13.1. **(Added)** AGE Sub-pools are located at following locations (See **Table 4.1** and **Attachment 16**). AGE Sub-Pools are defined as designated locations that are parked in close proximity to support aircraft. They are the authorized parking areas for AGE on the flight line for serviceable equipment not in use.

Table 4.1. (Added) 15WG AGE Sub-Pool Locations.

Sub-Pool Name	Location	Figure
16 Row Sub-Pool	South side of ground tower	A16.1
AMC Sub-Pool	End of air freight terminal	A16.2
23 Row Sub-Pool	North side of ground tower	A16.6
DV Sub-Pool	Between Hangars 9 & 13	A16.3
NPAGE Sub-Pool	Behind aircraft wash rack	A16.5
CMC	Southwest parking lot of Bldg. 315	A16.4

4.5.2.13.2. **(Added)** AGE Ready Lines are located at the following locations (See **Table 4.2** and **Attachment 16**). Ready Lines are defined as authorized designated parking for AGE on the flight line that will have a current service inspection conducted by a qualified AGE technician. Flight line operators will not park equipment in these locations without first notifying the AGE Flight.

Table 4.2. (Added) 15 WG AGE Ready Line Locations.

Ready Line Name	Location	Figure
NPAGE	Inside Bldg. 2030 (South Side)	A16.7
Powered AGE	North Side of Bldg. 2030	A16.7
UMS	Southwest side of Bldg. 2030	A16.7

4.5.2.13.3. 15 MXG personnel should not utilize Hawaii Air National Guard (HIANG) marked AGE without prior approval.

4.5.5. **(Added)** AGE Operator/User Responsibilities. Operators/Users have key responsibilities to help reduce unnecessary wear/tear, premature failure, and unauthorized use of AGE equipment.

4.5.5.1. **(Added)** Qualified Users can tow AGE from the sub-pools provided they are properly licensed to operate towing vehicles and are trained on the equipment.

4.5.5.2. **(Added)** If equipment discrepancies are discovered, users will notify 15 MOC or AGE flight and document discrapancy. For Non Powered AGE (NPAGE) also display the red streamer (located in forms bag) so it is visible outside the unit.

4.5.5.3. **(Added)** Aircraft jack trailers must be used to transport aircraft tripod/axle jacks long distances to prevent wear and tear on wheel casters. When jacks are transported using a jack trailer ensure that jacks are secured with tie down straps.

4.5.5.4. **(15 WG)** Universal Maintenance Stand (UMS)/Split Deck and Man-lifts (GENIE) will not be driven from hangars/nose docks to aircraft parking area or vice versa. Contact 15 MOC or AGE drivers for towing of universal maintenance stand.

4.5.5.5. **(Added)** Oil/Hydraulic carts. If engine oil carts and hydraulic carts require fluids to service aircraft, the user will furnish fluids and service carts to proper fluid levels. If necessary, transient alert will coordinate JOAP samples for transient aircraft.

4.5.5.6. **(Added)** All LOX carts will have a current AFTO Form 134 at all times. The 15 AMXS CTK Section maintains the form 134 for all LOX carts. All users will be responsible for documenting product usage on the AFTO Forms 134. If not properly annotated with accurate usage, the LOX cart will not be accepted for servicing at cryogenics facility.

4.5.5.7. **(Added)** Users will ensure the LOX carts are not depleted below 10 gallons during aircraft servicing to prevent time consuming purging of the cart.

4.5.5.8. **(Added)** The LOX status slide will be monitored/updated by 15 AMXS CTK on a daily basis. As a minimum, after users sign in LOX cart keys/AFTO Form 134s, the LOX product quantity will be updated on the LOX status slide, along with current location and current ready status.

4.5.5.9. **(Added)** When a request is submitted by requesting agencies and approved for off-base/non-aircraft support agencies, the requesting agency will send an appropriate transportation vehicle and a qualified AGE operator to the AGE flight, building 2030, hangar 15, to sign for the loaned equipment. The AF Form 1297, Temporary Issue Receipt will be used to issue out equipment.

4.8.1.1.1. **(Added)** Identify shops having local manufacture capability and advise supply on which shop code to request.

4.8.1.1.2. **(Added)** Allow manufacture of procurable items as an exception to standard procedure for mission-essential needs when authorized by proper authority.

4.8.1.1.3. **(Added)** Provide supply a daily update on all local manufacture requests and notify supply/requestor of any change(s) to the scheduled completion date and reason.

4.8.1.1.4. **(Added)** Perform annual review of local instruction for procedures covering items coded local manufacture or whenever requirements or processes change significantly to warrant implementation of new procedures.

4.11.1.3.1.1. **(Added)** Local product is provided by Boeing base level EM to Propulsion Flight Chief.

5.2.2.1.14.2. **(Added)** Update G081 screen 9146 when a delay exists for a mission limiting discrepancy that cannot be worked.

6.7.1.2.1. **(Added)** A copy of the signed quarterly MSEP contract will be published on the 15 MXG/QA SharePoint Site.

6.7.2.7.2.1.3. **(Added)** QA will track all KTLs called in by entering the KTL into the LEAP database. The MXG/CC, MXG/CD, and MXG/CCC are designated KTL waiver authorities. Any KTL waived will be tracked by the QA Chief Inspector and added to that month's MSEP summary slideshow.

6.7.6.1.5.3.1. **(Added)** Graduate Assessments will not fulfill 18 month requirements.

6.8.5. **(Added)** In the event of a network/power outage or LEAP is not accessible, QA will document inspections on a locally developed product with the same input fields as LEAP. The paper evaluations will be given to the Chief Inspector at the end of each shift. Once LEAP is accessible, all paper evaluations will be input into the LEAP database.

6.10.4.1.1. **(Added)** TODO will coordinate with Maintenance Supervision for review, before requesting publishing approval from MXG/CC or equivalent.

6.10.4.1.2. **(Added)** TODO will assign a control number for locally developed products.

6.10.4.2.1. **(Added)** Any user discovering an error or cause for rescission will contact the 15 MXG/QA Chief Inspector.

6.10.7.1.1. **(Added)** Appointment of a new TODA or changes to current TODA information will be submitted to the TODO via the 15 WG Form 23.

6.10.8.2. **(Added)** Any eTool(s) issued out at the time of the mishap will be recalled to the applicable work center and quarantined. Work centers will immediately notify QA when eTool is quarantined.

6.10.8.2.1. **(Added)** The applicable work center will ensure all eTools are disconnected from the LAN. Unplug the network cables from each eTool. Do not allow the eTool(s) to sync. Once the affected eTool(s) have been identified and removed from the work-center, re-attach network cables to the remaining eTools.

6.10.9.3. **(Added)** In the event of a lost paper TO, submit a lost tool report through normal channels. A copy of the lost tool report must be submitted to the TODO, prior to ordering a replacement copy. If the TO was lost during a mission, the lost tool report must include a list of all stations at which the aircraft stopped.

6.11.1. **(Added)** OTI requests will be submitted to the QA OTI Program Manager. Requestor will contact QA for local OTI format and coordinate the review process.

6.11.2. **(Added)** OTI will be routed through squadron Maintenance Supervision and QA supervision with technical information during initial review.

6.11.3. **(Added)** Contact QA TODO for local OTI number and data code.

6.11.4. QA TODO will:

6.11.4.1. **(Added)** Assign OTI number and data code IAW 00-20-1.

6.11.4.2. **(Added)** Assign a TCTO category of Immediate, Urgent, or Routine.

6.11.4.3. **(Added)** Coordinate local OTI with appropriate Maintenance Supervision and QA supervision for final review before presentation to the MXG/CC for approval.

6.11.4.4. **(Added)** Date and stamp, approved OTI. Copies will be distributed to OPR, PS&D, and performing workcenter(s).

6.11.5. **(Added)** PS&D will assign JCNs as applicable.

6.11.6. **(Added)** QA Supervision may waive AF IMT 2410 meeting if previously coordinated.

6.12.1.2. **(Added)** An OCF is a check flight conducted after maintenance action(s) to ensure aircraft mission specific equipment is operational when ground operational checks do not exist to adequately verify proper operation. OCFs do not include in-flight checks requested by maintenance to corroborate satisfactory ground test results or to aid in troubleshooting (i.e. inflight radio check requests).

6.12.1.3. **(Added)** Current C-17 technical orders do not contain any OCF requirements or procedures. C-17 OCFs will be conducted as determined by the requirements in Technical Order (TO) 1-1-300 *Maintenance Operational Checks and Check Flights*, as directed by the 15 MXG/CC. OCF aircrews will include at least one instructor pilot.

6.12.2.2.1. **(Added)** Joint Base Pearl Harbor-Hickam (JBPHH) aircrews are not qualified to perform C-17 FCFs. Boeing C-17 flight crews, under the current Flex Sustainment Contract, will fly any FCF required for C-17 aircraft at JBPHH. If an FCF is necessary, the FCF manager will coordinate with PS&D to request a qualified FCF crew.

6.12.2.2.2. **(Added)** The FCF Manager will schedule the date/time/location for the FCF/OCF pre-briefing. Attendees should include applicable AMXS and/or MXS representative(s), the FCF crew, and OG Standardization/Evaluation.

6.12.2.2.3. **(Added)** 15 AMXS and/or 15 MXS will have maintenance representatives available for FCF/OCF pre-brief to ensure all questions are answered pertaining to why the FCF/OCF is required.

6.14.1.3. **(Added)** The 15 MXG/QA FCF Manager will schedule the date, time, and location for High Speed Taxi Check pre-briefing and notify all attendees to include AMXS and/or MXS representative(s), aircrew and OGV representative.

6.15.1.1.1. **(Added)** The primary weight and balance handbook shall be stored in the QA office.

6.15.1.1.2. **(Added)** C-17 supplemental weight and balance handbooks shall be stored on each aircraft in the compartment at right-hand fuselage station 380.

6.15.2.1. **(Added)** The C-37A and C-40B aircraft assigned to Hickam Field are CLS-supported aircraft and weight and balance management will be in accordance with applicable contract Performance Work Statements (PWS).

6.15.3.3.2. **(Added)** When scheduling TCTOs or maintenance that requires W&B updates, Production should give consideration to availability of QA W&B technicians.

6.15.3.3.3. **(Added)** When a TCTO requires a Chart A and/or Chart C update to weight and balance records as specified in the TCTO Supplemental Information section, the individual accomplishing the TCTO will enter a discrepancy in the 781A for the W&B update requirement and will request that a W&B technician be dispatched to accomplish the update.

6.15.3.3.4. **(Added)** When scheduled or unscheduled maintenance drives a Chart A and/or Chart C update to weight and balance (W&B) records, the individual accomplishing the maintenance will enter a discrepancy in the 781A for the W&B update requirement and will request that a W&B technician be dispatched to accomplish the update. Examples include aircraft scheduled to fly with life rafts removed or installation of monitoring equipment such as Boeing CMC. A listing of Chart A items can be found in technical order 1C-17A-5-1.

7.2.1.2.1. **(Added)** Impound Official training will be provided by QA as required, prior to individuals being qualified as assigned as an Impound Official.

7.2.5. **(Added)** Upon notification of an impoundment decision, QA will:

7.2.5.1. **(Added)** Verify Impoundment Authority is listed on SCR.

7.2.5.2. **(Added)** Verify Impoundment Official has completed the Impound Official training course, and is listed on SCR.

7.2.5.3. **(Added)** Assign the impoundment a local control number using internal control log.

7.4.5.3. **(Added)** Deliver an impoundment control folder with impoundment checklist to the Impoundment Official.

7.4.5.4. **(Added)** Provide an impoundment control folder with impoundment checklist to the Impoundment Official.

7.4.5.5. **(Added)** In the event G081 is down for any reason, QA will provide an AFTO 781A/AFTO 244 preprint with appropriate entries.

7.3.2. **(Added)** Notify QA when Contractor Logistics Support (CLS), aircraft, are involved. The CLS COR will serve as the Impoundment Authority.

7.4.4. **(Added)** Upon notification of selection as an Impoundment Official the individual will coordinate with QA and MOC.

7.4.5. **(Added)** Work closely with AW/SE investigation officer to ensure timely repairs while preserving valuable evidence. AW/SE will determine whether formal investigation is required. Do not alter, disrupt, tear down, or test parts until cleared by AW/SE investigation officer.

7.6.3.6. **(Added)** Start Impoundment Investigation Checklist, to gather information for official report on reason(s) for impoundment and areas of improvement to eliminate recurrence.

7.6.3.7. **(Added)** Review historical record(s) and analysis data to identify any contributing discrepancies.

7.6.5.2. **(Added)** Impoundment Officials will log all events, data and related information, combine investigation results. This data will accompany impounded forms to the Impoundment Release Authority to inform them of significant findings.

7.6.8.1. **(Added)** Prior to release from impoundment the appropriate squadron Maintenance Operations Officer (MOO) or Superintendent (SUPT) will conduct a thorough forms review of corrective actions. Document forms review in appropriate block of AFTO Form 781A or AFTO 244.

7.6.8.2. **(Added)** Once the MOO/SUPT complete the forms review and concur with all associated corrective actions the Impoundment Official will sign the "Corrected by" block of the impoundment discrepancy.

7.6.8.3. **(Added)** QA will review the aircraft/equipment forms prior to impoundment release and annotate the review in the appropriate block of the AFTO Form 781A.

7.6.8.4. **(Added)** The Impoundment Release Authority officially releases the aircraft/equipment from impoundment by reviewing the corrective actions in the AFTO Form 781A or AFTO 244 and signing the "Inspected by" block.

7.6.8.5. **(Added)** Once released from impoundment, the Impoundment Official will return completed checklist and final report within 7 calendar days of aircraft or equipment release to 15 MXG/QA for historical filing.

8.2.1.2. **(Added)** All organizations who routinely bring tools/equipment to the flight line or aerospace equipment maintenance areas in the course of their duties will establish tool control procedures in order to reduce the chance of a FOD incident.

8.2.3.2. **(Added)** The CTK custodians control warranty tools. Identify warranty tools in the Tool Accountability System and ensure broken or damaged warranty tools are isolated and under strict control until replaced or exchanged. All tools under warranty will be replaced with another warranted tool using established tool replacement procedures.

8.2.3.3. **(Added)** CTK custodians will establish controls to ensure tools not in service are tagged, secured, and accounted for until processed by the vendor. Tools removed from service will be de-etched unless it would void the manufacturers warranty.

8.2.4.1. **(Added)** Expendable and consumable items (e.g., wire/acid brushes, razor blades, tape etc.) used to perform aircraft maintenance and not included in a CTK must be accounted for. Units will establish a means for positive control of these items (e.g., AF Form 1297, Temporary Issue Receipt, TCMax®, sign-out/sign-in log, etc.). Regardless of condition, these items will be returned to the tool room for foreign object damage (FOD) control purposes. Proper disposal will be accomplished by tool room personnel.

8.2.4.2. **(Added)** Dispatched Hazmat items will be accounted for in TCMax®. Hazmat items will be properly labeled to identify contents.

8.2.5.2. **(Added)** Tool/equipment turnover at the job site may be accomplished but should be limited to only when absolutely necessary and authorized by the Prodiction Superintendent. A joint inventory of items will be conducted by the person transferring custody and the person gaining custody of the tools/equipment and will be documented on an AF Form 1297. A copy of the AF Form 1297 will be turned into the applicable CTK custodian to update the tool accountability system.

8.2.8.2. **(Added)** Only unit purchased and properly marked/etched individual equipment items are authorized for use in maintenance work centers and on the flightline. The Resource Advisor, Government Purchase Card holder, Section Chief, or CTK custodians may issue unit purchased individual equipment items. Individual items will be marked/etched prior to issuing them to the individual. Once issued, the individual is responsible for accountability of their assets and will report any item missing IAW lost tool/item procedures.

8.2.9.4. **(Added)** Rags will be tracked and issued in TCMax ®.

8.2.9.5. **(Added)** Cloth type rags are not disposable or consumable and will be controlled as tools and replaced on a one-for-one basis. All rags not accounted for will be treated as a lost tool and will be reported.

8.2.10.1. **(Added)** CTK custodians and specifically designated government purchase cardholders are the only personnel authorized to procure tools.

8.2.11.1. **(Added)** Approved locally manufactured tools or equipment items will be controlled and accounted for by the applicable support section. All locally manufactured items will have a completed 15WG Form 26 on file with QA prior to use.

8.2.12.1. **(Added)** MXG/QA representatives will brief Depot Field Teams, Contract Field Teams, Field Service Representatives and other agencies on proper procedures for tool and equipment control prior to work starting and will monitor throughout for compliance. Contractors working on the airfield will be briefed on tool control, accountability responsibilities, and lost tool reporting procedures by the coordinating agency.

8.2.13.2. **(Added)** Units may store oversized CTKs or equipment outside of a designated tool room when size makes it impractical to store within. The CTK custodian must ensure all program requirements meet the intent of this instruction.

8.2.14.2. **(Added)** Response trailers that dispatch to the flightline and are not tracked in a tool accountability system will be inventoried annually. Inventories will be accomplished prior to removal from the flightline once used to ensure equipment accountability.

8.2.15.2. **(Added)** In the event that there is only one person in the work center to sign a tool kit in or out, the individual will request a second party NCO, Production Supervisor or shift supervisor to perform inventory and sign in the CTK.

8.2.16.1. **(Added)** Tool rooms will be secured at all times when not occupied by tool room personnel. Personnel authorized unescorted access to the tool room will be identified by the Support Section Chief. Units will establish procedures for situations where access is required when a tool room employee is absent.

8.3.6.6.2. **(Added)** All dispatchable CTK items will be marked, etched or stamped to the max extent possible.

8.3.6.6.3. **(Added)** Items less than 0.25” in diameter, or made of materials unable to be etched (such as Tungsten) are not required to be marked, etched or stamped. These items will be maintained in a container marked with the EID and an identifying character(s) that ties the tool back to the CTK along with the number of tools contained. The container will count as one item. (Example: Allen wrench set - 9 each allen wrenches + container for a total of 10).

8.3.6.6.3.1. **(Added)** These following common items too small to be marked, etched, or stamped do not require QA approval: any hardware with a diameter less than 0.25", standard drill bits less than 0.25" shank diameter, stubby terry drill bits, short & long terry drill bits less than 0.25" shank diameter, reamers less than 0.25" shank diameter, rotary files less than 0.25" shank diameter, allen keys less than 0.25" and 6mm, transfer punches less than 0.25", countersinks, arbors less than 0.25", jewelers files, EZ outs less than 0.25" shank diameter, apex bits less than 0.25" hex shank, dial indicator contact pads, optical micrometer eyepieces & object lenses, depth micrometer rods less than 0.25", reverse counter bores less than 0.25", UT transducers (w/ or w/out delay line), UT wedges, bolt hole probe, composite reamers less than 0.25" shank diameter, reverse countersink kit, carbide drill bits less than 0.25" shank diameter, carbide router bits less than 0.25", counter bores less than 0.188" (aka 3/16") pilot shank, inspection gauge stem assembly 04—parts less than 0.25", tubing debur stem 04 – parts less than 0.25", blade blending swiss files less than 0.25", support bracket reverser duct shear bolts, engine borescope optical tips, hardware for borescope turning tool.

8.3.6.6.3.1.1. **(Added)** All common items too small to be marked, etched, or stamped not outlined in **paragraph 8.3.6.6.3.1** of this instruction will use 15WG Form 33 to document and annotate the items and routed to QA for final approval.

8.3.6.6.4. **(Added)** Items that cannot be marked, etched or stamped due to tool function (such as drill bits, reamers, countersinks, transducers, wedges etc.) will be maintained in a container as outlined in **paragraph 8.3.6.6.2** of this instruction.

8.3.6.6.5. **(Added)** All kits that contain items too small or unable to be marked/etched will be annotated on the MIL with tool size and quantity.

8.3.6.7.1.1. **(Added)** Units will annotate missing, removed and/or broken tools/items on the hard copy MIL.

8.5.1.2.1.2. **(Added)** Return all unused portions or extinguished containers of Hazardous Material (HAZMAT) items, such as dyes, lubricants, containers, caps, sealants, and/or cleaning agents to the unit's HAZMAT Custodian or CTK Monitor for proper storage, documentation, and replenishment.

8.5.1.3.1. **(Added)** The 15WG Form 27, Composite Tool Kit (CTK) Log will be utilized to sign-out/sign-in each CTK/item when TCMax ® is unavailable. These procedures are considered a back-up system for TCMax ®.

8.5.2.3. **(Added)** When CTKs and/or equipment are returned to the tool room/work center, the CTK custodians or work center personnel will conduct a visual inventory for foreign objects and missing or damaged items before transferring accountability back to the tool room/work center.

8.5.3.2.1. **(Added)** Each flight and/or tool room will conduct and document a comprehensive inventory and inspection of each CTK at least every 180 days. Except as described in **paragraph 8.8.1.4** of this instruction.

8.6.1.2.2. **(Added)** Units will use only the approved World Wide Identification Designators (WWID) in **Attachment 14**. Designators not listed in are not authorized.

8.6.1.4.4.1. **(Added)** To the maximum extent possible and if feasible, EID should be removed from Hazmat items prior to placing in disposal bins.

8.6.8. **(Added)** CTKs, test equipment, and storage containers subject to use on the flightline will have reflective paint or tape on all sides to outline the container.

8.7.1.1. **(Added)** QA is the focal point for locally designed tools or equipment. Requests for locally designed tools or equipment will be routed on the 15WG Form 26 per this instruction.

8.8.1.4. **(Added)** Mobility CTKs, stored in a Container Express (CONEX) or other deployable container, and not used, issued, or opened will be inspected on a 12-month interval and/or prior to deployment. If a Mobility CTK is opened, or used for any reason, it must be thoroughly inspected and documented on an AFTO Form 244, Industrial/Support Equipment Record, prior to it being returned to storage. Minimum inspection requirements:

8.8.1.4.1. **(Added)** Free of corrosion and foreign objects.

8.8.1.4.2. **(Added)** Inventory of all content contained in Mobility CTK.

8.9.2. **(Added)** A lost item/tool includes, but is not limited to: CTK controlled item/tool, aircraft equipment or On Board Loose Equipment (OBLE), personal issued items (backpacks, ear defenders, reflective belts, etc.), consumables, hardcopy MIL, hardcopy page(s) from tech data, aircraft hardware, and bench stock.

8.9.2.3.2.1. **(Added)** If the tool/item is not found within one hour, the person issued the tool/item will initiate a 15 WG Form 25, 15 MXG Lost Tool/Item Investigation Worksheet Report. The 15 WG Form 25 will be used for reporting lost tools/items and initiated by the individual reporting the incident. MOC will assign the control number and run the appropriate Quick Reaction Checklist (QRC).

8.9.2.4.2. **(Added)** If the item/tool is believed lost on an aircraft that has taxied or is flying, the production supervisor will immediately notify MOC with the nomenclature of the item, and where and how it could affect safety of flight. MOC will then contact Command Post to inform the aircrew.

8.9.2.4.3. **(Added)** All base agencies that dispatch to the flightline and taxiways will account for all tools and equipment, and will notify MOC immediately upon discovery of a lost tool/item. MOC will dispatch the appropriate owning agency if the lost tool/item is believed to be lost on an aircraft to initiate lost tool procedures.

8.9.2.6.2.1. **(Added)** Ensure 15 MXG/QA is notified of the results and provide the original completed 15WG Form 25 to 15 MXG/QA within 2 duty days. Fill out a 15 WG Form 25 as completely as possible and ensure completion with all signatures. The 15 WG FOD Monitor will be the last signature on the form and will file as required.

9.17.3. **(Added)** Local Manufacture (LM) procedures:

9.17.3.1. **(Added)** All LM tools, equipment items and non-aircraft related requests will be submitted on the 15WG Form 26, *Local Manufacture Request Worksheet.*

9.17.3.2. **(Added)** All LM tools, equipment items and non-aircraft related requests will be approved by the MXG/CC or designated representative. The approval authority will reside within the MXG and should not be designated lower than the Quality Assurance (QA) Superintendent.

9.17.3.3. **(Added)** 15 MXS Maintenance Supervision will be the approval authority for all aircraft related items. Authority may be delegated to the 15 MXS Lead Production Superintendent or Fabrication Flight Chief.

9.17.3.4. **(Added)** All LM request for field level LM items needed to satisfy internal maintenance requirements do not need to be processed through LRS per AFMAN 23-122.

9.17.3.5. **(Added)** Approval authority will:

9.17.3.5.1. **(Added)** Review all submitted documentation to verify the request meets its intended purpose.

9.17.3.5.2. **(Added)** Ensure fabricating unit has the capabilities to manufacture requested asset.

9.17.3.5.3. **(Added)** Provide justification for all denied requests.

9.17.3.6. **(Added)** QA will:

9.17.3.6.1. **(Added)** Review all LM tools, equipment items and non-aircraft related requests and provide inputs to approval authority.

9.17.3.6.2. **(Added)** Maintain copies for all approved 15WG Form 26 for all LM tools, equipment items and non-aircraft related requests.

9.17.3.7. **(Added)** Procedures for the local manufacture of tools, equipment and non-aircraft related parts requests:

9.17.3.7.1. **(Added)** The requesting unit will:

9.17.3.7.1.1. **(Added)** Coordinate with fabrication unit on feasibility and capability to manufacture asset.

9.17.3.7.1.2. **(Added)** Obtain and complete 15WG Form 26.

9.17.3.7.1.3. **(Added)** Obtain T.O. references, drawings, or plans applicable to use of requested asset.

9.17.3.7.1.4. **(Added)** Verify all T.O. reference(s), drawing(s), plans or other applicable reference material is obtained from most up to date versions available at time of the request.

9.17.3.7.1.5. **(Added)** Provide justification for what LM asset will be used for. If asset will be used to perform on and or off-equipment maintenance, the T.O. reference for the task will be provided in the justification.

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

9.17.3.7.1.7. **(Added)** Route 15WG Form 26 to fabricating workcenter for concurrence.

9.17.3.7.1.8. **(Added)** Obtain approval from approval authority.

9.17.3.7.1.9. **(Added)** Provide QA and fabricating workcenter with completed and approved 15WG Form 26.

9.17.3.8. **(Added)** The fabricating workcenter will:

9.17.3.8.1. **(Added)** Fill out the applicable section of the 15WG Form 26.

9.17.3.8.2. **(Added)** Advise approval authority of feasibility to manufacture requested asset.

9.17.3.8.3. **(Added)** Assist requestor in determining required material and quantities needed to complete request.

9.17.3.8.4. **(Added)** Complete applicable sections of the AFTO Form 350, *Reparable Item Processing Tag.*

9.17.3.9. **(Added)** Procedures for local manufacture of aircraft related parts:

9.17.3.9.1. **(Added)** The requesting unit will:

9.17.9.1.1. **(Added)** Coordinate with fabrication unit on feasibility and capability to manufacture asset.

9.17.9.1.2. **(Added)** Obtain T.O. references, drawings, or plans applicable to use of requested asset.

9.17.9.1.3. **(Added)** Verify all T.O. reference(s), drawing(s), plans or other applicable reference material is obtained from most up to date versions available at time of the request.

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

9.17.9.1.5. **(Added)** Obtain approval from approval authority.

9.17.9.1.6. **(Added)** Create a JCN in MIS for the fabricating workcenter.

9.17.9.1.7. **(Added)** Order all parts and materials required for the request as specified by the appropriate TO, drawing, or plan.

9.17.9.1.8. **(Added)** Store parts and materials until all required components are on-hand.

9.17.9.1.9. **(Added)** Deliver parts and all applicable paperwork to the fabricating workcenter.

9.17.3.10. **(Added)** The fabricating workcenter will:

9.17.3.10.1. **(Added)** Advise the approval authority as to the feasibility of the request.

9.17.3.10.2. **(Added)** Assist requesting unit in determining required material and quantities as needed.

9.17.3.10.3. **(Added)** Verify all T.O. reference(s), drawing(s), plans or other applicable reference material is obtained from most up to date versions available at time of the request.

9.17.3.10.4. **(Added)** Complete applicable sections of the AFTO Form 350, *Reparable Item Processing Tag.*

9.17.3.10.5. **(Added)** Complete corrective actions for assigned JCN in MIS.

9.18.5. **(Added)** Each workcenter should assign a primary and alternate DIFM monitor for managing DIFM assets.

9.18.5.2. **(Added)** Work center DIFM monitors will:

9.18.5.2.1. **(Added)** Ensure correct and timely turn-in of DIFM assets ERRC codes of XD or XF for their work center.

9.18.5.2.2. **(Added)** If DIFM assets are delinquent for more than 72 hours, DIFM monitors will brief the section supervision of current status.

9.18.5.2.3. **(Added)** Maintain a DIFM log to record ordered and turned-in assets.

9.18.5.2.4. **(Added)** Notify section supervision of DIFM parts approaching the 60 day turn in mark for TNB items**.**

9.18.5.3. **(Added)** Expediters & Work Center Supervisors will:

9.18.5.3.1. **(Added)** Account for all DIFM assets and/or turn in at the end of each shift.

9.18.5.3.2. **(Added)** Prioritize repair and return of DIFMS assets, expedite delivery to applicable back shop and notify the flightline Service Center with update.

9.18.5.4. **(Added)** Technicians will:

9.18.5.4.1. **(Added)** Log all DIFM parts into workcenter log.

9.18.5.4.2. **(Added)** After a DIFM part is signed for, promptly turn in the unserviceable part within 72 hours unless the part was put in TNB, sent on a Maintenance Recovery Team (MRT), or the job is still in work.

9.18.5.4.3. **(Added)** Completely and correctly fill out all AFTO Forms 350, *Reparable Item Tag*, and condition tags. When turning in an engine/APU fire bottle, the appropriate condition tag will include the following statement: "This item has been inspected by and to the best of my knowledge and belief is inert and/or free of explosives or other dangerous materials." Prominently stamp shipping containers in half-inch letters "EXPLOSIVES REMOVED."

9.18.5.4.4. **(Added)** Ensure all DIFM parts are accompanied with a Standard Asset Tracking System (SATS) label, a fully completed AFTO Form/Automated 350 tag, appropriate condition tags, and drain and purged tags when required.

9.18.5.4.5. **(Added)** If DIFM part cannot be accounted for, the responsible individual (last person who signed for part) will have 72 hours to locate the part. If the part cannot be located within 72 hours, the unit commander (organization issued DIFM part from supply) will appoint an investigating officer to initiate a Report of Survey.

9.24.1. **(Added)** 15 MXG Quality Assurance Project Improvement Manager (PIM) is the focal point for all DR's.

9.24.2. **(Added)** Reporting procedures for CAT 1 and 2 DRs:

9.24.2.1. **(Added)** DR originator will:

9.24.2.1.1. **(Added)** Coordinate with expediter, shift chief, production superintendent, and maintenance supervision immediately to confirm CAT 1 criteria as outlined in T.O. 00-35D-54. (Note: if CAT I DR is submitted, notify squadron maintenance supervision).

9.24.2.1.2. **(Added)** Initiate all applicable action items at Joint Deficiency Reporting System (JDRS) website at: **https://jdrs.mil/public/menuSiteAccess.cfm** within 24 hours.

9.24.2.1.3. **(Added)** Upload all available pictures of part data plate(s), any applicable damage, serviceable tag(s), certificate of conformance and DD Form 1348 to JDRS site.

9.24.2.1.4. **(Added)** Isolate DR part from other DIFM items until approved for turn-in by PIM.

9.24.2.1.5. **(Added)** Provided PIM with two AFTO Form 350 tags, and two appropriate condition tags.

9.24.2.1.6. **(Added)** Provide PIM with one AFTO Form 20 for parts requiring draining and purging.

9.24.2.1.7. **(Added)** Ensure DR originator/SME has detailed data regarding deficiency and is available for further information if required by the PIM.

11.6.5. **(Added)** Technicians will complete an AFTO Form 349 and input the information as soon as the MIS is operational.

11.6.7. **(Added)** Procedures. When a Red Ball occurs:

11.6.7.1. **(Added)** MOC will be notified immediately of a Red Ball discrepancy which will be assigned a job control number. All updates/changes will be coordinated through the Production Superintendent and MOC.

11.6.7.2. **(Added)** Supervisors will ensure that the appropriate work center is dispatched, parts are ordered correctly and picked up from supply. All required maintenance actions performed will be documented prior to aircraft launch.

11.8.3.1.3. **(Added)** Personnel will inventory tools and perform FO check of the work area upon completion of maintenance actions. Special attention must be given to small items or debris (i.e. safety wire, cotter pin clippings, bolts, nuts, screws, etc.). Loose materials and/or hardware will be placed in parts bags or FOD containers during normal job performance.

11.8.3.3. **(Added)** Personnel will follow MDS specific technical order requirements for engine inlet/exhaust and pitot tube cover installation.

11.8.3.6.4. **(Added)** Headgear that cannot be secured with a chin strap is not authorized for use near aircraft engines in operation.

11.8.3.6.4.1. **(Added)** Metallic necklaces are not authorized for use on the flight line unless they are required for official duties, or other approved use (i.e. dog tags, medical condition(s) etc.). Note: Personnel will adhere to aircraft specific technical data and AFMAN 91-203 regarding metal objects and energized systems.

11.8.3.6.4.2. **(Added)** All unsecured metallic objects, i.e., pens, loose change, etc., will be secured/stored prior to performing maintenance in all areas on the flight line. Additionally, all unsecured metallic objects will be accounted for after performing maintenance and/or when exiting the fightline.

11.8.3.6.5. **(Added)** Escorts of visiting personnel will ensure FOD prevention measures are taken. Escorts will ensure personnel have proper Personnel Protective Equipment (PPE) before entering the flight line.

11.8.3.6.5.1. **(Added)** All personnel exposed to a traffic environment or flight line operations during hours of darkness, periods of reduced visibility or as part of construction or maintenance activities, shall be provided and use reflective vests/accessories or shall use organizational clothing with sewn-on reflective tape (red or orange reflective colors provide better contrast in a snowy environment). **Note:** Personnel whose job requires them to perform some function in the traffic/flight line environment shall be provided reflective equipment to enhance their visibility. For personnel transiting this environment incidental to their assigned task(s), issue of reflective equipment shall be at the discretion of the supervisor/commander.

11.8.3.7.1. **(Added)** The FOD prevention monitor for Airfield Management will ensure the driver's training program stresses the importance of FOD prevention and control applicable to vehicle operations on the flight line.

11.8.3.7.1.1. **(Added)** Vehicles will only access the aircraft parking areas, taxiways and runway by entry points approved by Airfield Management. Rollover FOD checks will be accomplished on vehicles and towed trailers or equipment at these entry points prior to entering the airfield. If leaving a paved surface becomes necessary, re-check all tires for debris before re-entering.

11.8.3.7.1.2. **(Added)** All removable items permanently assigned to a vehicle will be marked with the vehicle ID number or registration number and annotated on the vehicle's AF Form 1800/1806 other block to ensure accountability. If lost or misplaced, these items will be reported in accordance with lost tool/items procedures.

11.8.3.7.1.3. **(Added)** Containers will be marked with the letters "FOD". FOD containers must be secured to the vehicle in a manner that would prevent the container from tipping over while the vehicle is in motion. The lid must be secured to prevent the container from inadvertently opening.

11.8.3.10.3. **(Added)** To ensure adequate flight line FOD WALK coverage, the 15 WG/CV or designated representative may assign additional wing units to perform weekly, monthly or before the first flight of the day FOD walks.

11.8.3.10.4. **(Added)** Areas of Responsibilities for unit FOD walks will be maintained by the 15 WG FOD Monitor. FOD monitor will ensure all unit FOD representatives are aware of their AOR. Units will assign a supervisor for each FOD walk.

11.8.3.10.5. **(Added)** FOD walk procedures:

11.8.3.10.5.1. **(Added)** Supervisors will contact the MOC prior to the beginning and at the completion of all FOD walks.

11.8.3.10.5.2. **(Added)** Organizing and controlling the walk at all times and ensuring the team concentrates on the task at hand (looking for FO). Distance between individuals should permit adequate coverage and prevent overlooking any area of responsibility. Maintain effectiveness of the walk by ensuring team members remain abreast of each other in a line formation and pause to reform line when required. The Golden Bolt Program is in effect in accordance with local guidance. Squadron representatives may obtain the Golden Bolt from the Wing FOD Monitor. Representatives are responsible for the control of the Golden Bolt and will be returned to the Wing FOD Monitor after each use. Note: Representative must maintain visual awareness of the Golden Bolt at all times when on the flightline.

11.8.3.10.5.3. **(Added)** Ensure all grounding points are kept clean of debris at all times and be of high interest item for FOD walks. Units will use a vacuum or hand clean the grounding points on the parking ramp when needed.

11.8.3.12.4. **(Added)** All personnel entering aircraft cockpits/flight decks and engine inlets will ensure that personal belongings are properly secured to prevent FOD.

11.8.3.20.1. **(Added)** FO found but not accessible will be documented in AFTO 781 series forms with the exact location to facilitate removal.

11.8.21.1. **(Added)** Maintenance will document pre and post engine intake and exhaust inspection in the AFTO 781 Series Forms.

11.8.4.4. **(Added)** Units will appoint a primary and alternate FOD monitor for their respective FOD AOR. Appointment letters will be provided to the Wing FOD Prevention Program Office (15 MXG/QA).

11.8.5.4.3. Unit FOD monitors will:

11.8.5.4.3.1. **(Added)** Post the names of the unit FOD representatives and the Wing FOD Manager in the units designated location.

11.8.5.4.3.2. **(Added)** Update the designated location with FOD related items from the Wing FOD Monitor**.**

11.8.5.4.3.3. **(Added)** Coordinate the weekly FOD walk and report findings to Wing FOD Monitor after the event.

11.8.5.5.1. **(Added)** Production Superintendents or expediters will report any \area of the flight line requiring repair to Airfield Management through the MOC.

11.8.6.1.2. **(Added)** After notification to MOC, conduct an initial investigation to determine the cause of the FOD mishap. The initial investigation will be accomplished immediately after receipt or discovery of damage to an engine/aircraft. All maintenance will cease in the mishap area until cleared by the Production Supervisor in coordination with QA**.**

11.8.8.1. **(Added)** Procedures for Bird Strikes to engine:

11.8.8.1.1. **(Added)** Bird strike damage to engines is not chargeable as FOD, but must be investigated to preclude the 15 WG from being charged with a FOD incident.

11.8.8.1.2. **(Added)** Upon discovery of a bird strike to the intake area, a Red X entry will be placed in the AFTO Form 781A requiring an inlet inspection by a qualified technician. Particular attention is required to the leading edges of second stage fan blades. The Production Supervisor will notify the MOC to initiate a QRC. Flight Safety Office, Wing FOD Monitor and QA Investigator must be notified and recorded on the QRC.

11.8.8.1.3. **(Added)** Inspect engine intake and air/oil coolers for bird remains.

11.8.8.1.4. **(Added)** Any damage noted will be documented in the engine records and aircraft AFTO Form 781A and reported to the wing FOD monitor.

11.8.8.1.5. **(Added)** Bird remains will be collected IAW AFMAN 91-223. Note: These procedures should be followed for all wildlife strikes.

11.8.8.1.5.1. **(Added)** Individuals will use PPE (non-sterile vinyl or nitrile gloves, safety goggles/glasses, and coveralls) that are on the unit's certified PPE list for the removal of contaminants (bird remains) on exterior and interior aircraft surfaces.

11.8.8.1.6. **(Added)** AF Form 853, *Air Force Wildlife Strike Report*, will be completely filled out and brought to 15 MXG/QA along with the remains.

11.8.8.1.7. **(Added)** 15 MXG/QA will contact 15 WG/SE to pick up remains and AF Form 853.

11.8.9. **(Added)** Foreign Object Damage Prevention Incentive Program.

11.8.9.1. **(Added)** The wing FOD Prevention Incentive Program consists of FOD Find of the Quarter and FOD Poster of the Quarter. An annual winner is chosen from the four quarterly winners in both categories.

11.8.9.2. **(Added)** Nominations for FOD Find of the Quarter and FOD Poster of the Quarter must be submitted to the 15 WG FOD Monitor. Contest winners are selected by the Wing FOD Monitor prior to the quarterly meeting. Winners are notified and presented awards/certificates at the Quarterly FOD prevention committee meeting. In order to promote maximum participation, individuals may not win awards in two consecutive cycles.

11.8.9.3. **(Added)** The following is a list of gratuities for:

11.8.9.3.1. **(Added)** FOD Find of the Quarter Winner: Certificate and 1-day pass.

11.8.9.3.2. **(Added)** FOD Poster of the Quarter Winner: Certificate and 1-day pass.

11.8.9.3.3. **(Added)** Annual Winners: Certificate and 3-day pass.

11.8.9.3.4. **(Added)** Golden Bolt Award: Certificate and 1 day pass.

11.9.2.3.1. **(Added)** To assist in the investigation, units will collect all information related to the dropped object. Units will utilize the 15 WG Form 24 to gather and document information related to the incident. The completed form will be forwarded to the DOP Monitor in QA.

11.9.4. **(Added)** Upon initial discovery of a dropped object, immediately notify the Production Superintendent, MOC, and QA.

11.9.5. **(Added)** The owning agency discovering the dropped object will submit *Dropped Object Report* to the Wing DOP Monitor within 24 hours of discovery. Units will identify if dropped object was due to material, personnel, or non-preventable failure.

11.9.6. **(Added)** A cost analysis report will be sent to the Wing DOP monitor following the repair. The report should include all parts and maintenance actions associated with the repair. The section responsible for the repair action will provide a breakdown of the total cost of repair within 48 hours of initial dropped object notification (i.e. labor, parts, and associated hardware.)

11.10.4.1.1. **(Added)** The 15 AMXS will appoint a primary and alternate squadron Aircraft Structural Integrity Program (ASIP) Monitor. At a minimum these individuals should be a 2A8X2 5-level technician.

11.10.4.1.2. **(Added)** The 15 AMXS ASIP monitor will:

11.10.4.1.2.1. **(Added)** Develop and maintain an SFDR data accountability and training program to include SFDR data upload, extraction, and archiving procedures for both home station and deployed locations.

11.10.4.1.2.2. **(Added)** Maintain functional access to all databases and websites necessary to upload and archive SFDR data.

11.10.4.1.2.3. **(Added)** The AMXS IFCS Technicians will:

11.10.4.1.2.3.1. **(Added)** Perform SFDR downloads to laptops and uploads to ADADS. Ensure aircraft data is archived.

11.10.4.1.2.3.2. **(Added)** Notify support section personnel of equipment malfunctions or unsatisfactory conditions.

11.10.4.1.2.3.3. **(Added)** AMXS Support section will notify the AMXS ASIP monitor prior to turning in SFDR laptops for maintenance.

11.10.4.1.2.3.4. **(Added)** Ensure all personnel required to maintain SFDR systems are trained and kept up to date on local procedures. Training will be documented in individual TBA records.

11.10.4.1.2.3.5. **(Added)** Cross Utilization Training (CUT) for personnel outside the 2A8X2 career field will be documented in TBA using the applicable task(s) from the 2A8X2 CFETP.

11.10.4.3.1.1. **(15 WG)** Qualified personnel will download all Data Acquisition System (DAS) information IAW the requirements outlined in TO 1C-17A-6. DAS information will then be transferred via an approved media storage and transfer device (CD- R or a removable hard drive) from the Support Equipment Computer (SEC laptop) to the Aircraft Data Acquisition and Distribution System (ADADS) for submittal. Once verified as successfully submitted, files may be deleted at the discretion of the ASIP monitor. In the event electronic transfer of files is unavailable, copies of files sent by mail will be saved until receipt of the data is verified. The ASIP monitor may delete local files once files are confirmed in ADADS.

11.10.4.3.1.2. **(Added)** Download of C-17 data will be documented on the AF Form 781A (G081 for aircraft in paperless or virtual forms) by the IFCS technician who accomplishes the download.

11.10.4.4.1. **(Added)** Supporting ASIP Aircraft at Deployed Locations: Maintenance teams deployed in support of operations with L/ESS equipped aircraft will adhere to this guidance.

11.10.4.4.2. **(Added)** Deployed Technicians will:

11.10.4.4.3. **(Added)** Ensure they have all equipment needed for download of SFDR data.

11.10.4.4.4. **(Added)** Maintain and document all downloads until they can be returned to home station for transmission to Tinker AFB.

11.10.4.5.1. **(Added)** Download of C-17 data will be documented on the AF Form 781A (G081 only when in HSC paperless process) by the IFCS technician who accomplishes the download.

11.10.4.6.1. **(Added)** The 15 AMXS IFCS Lead Technician will ensure all C-17A IFCS personnel are properly trained on procedures for documentation and submittal of ASIP data to the ADADS database. Training will be documented in individual TBA records.

11.10.4.6.2. **(Added)** Users must request account access at the ADADS website (**https://asimis.tinker.af.mil/ADADS/**).

11.13.4.1. **(Added)** CA will determine when a CANN is necessary due to supply shortfalls and determine which donor aircraft is most operationally feasible.

11.13.4.2. **(Added)** CA will ensure a valid CANN JCN is assigned to donor aircraft by MOC, valid document number is issued from supply and inoperable part is turned in for DIFM (see **paragraph 9.18** of this instruction). All aircraft forms will be annotated to reflect CANN action. (For PMC discrepancy, defective part may be installed on donor aircraft to meet weight and balance requirements).

11.17.4.6. **(Added)** Complete local training checklist and all prerequisites prior to attending hands on simulator training.

11.17.4.7. **(Added)** Engine certification run should be completed within 30 days of formal simulator training. Extensions will be coordinated with section supervisors and Maintenance Traiing Section (MTS).

11.20.5.6.2.1. **(Added)** Requests for FCC support on operational missions will be requested from the Wing Current Operations office. FCC support decisions will be based on mission priority and FCC manning. The AMXS/CC, after coordination with the Operations Squadron/CC, is the final approval authority for missions when FCCs are requested.

11.20.5.6.2.2. **(Added)** FCCs should accompany all strategic airlift aircraft to locations away from home station, where MDS qualified maintenance does not exist, if the aircraft is expected to remain off station overnight.

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

11.28.2.5.2.1. **(Added)** CDDAR Vehicle and Support Equipment List:

11.28.2.5.2.1.1. **(Added)** On hand recovery equipment (i.e., slings, consoles, lifting bags, etc.) will be inspected IAW applicable directives or at least semiannually if no directive is available. Weatherproof storage for equipment, tools and other supplies will be provided to ensure equipment serviceability and accessibility.

11.28.2.5.2.2. **(Added)** All of the equipment and vehicles listed below with 24-hour availability may be found at the following locations:

11.28.2.5.2.2.1. **(Added)** 15 AMXS, Consolidated Maintenance Complex, 315 Mamiya Ave, Building 2133, JBPHH, HI: Aircraft tow vehicle, tow bars

11.28.2.5.2.2.2. **(Added)** 15 MXS, Maintenance Shop Facility, 315 Mamiya Ave, Building 2131, JBPHH, HI: General purpose truck with radio, suitable trailer and tow vehicle (for storage and transportation of recovery equipment), lifting bags and control consoles, slings, belly bands, snatch cables, chains, etc., wood or plastic/composite dunnage as required.

11.28.2.5.2.2.3. **(Added)** 15 MXS, Aerospace Ground Equipment Shop, Building 2030, Hangar 15, B. Street, JBPHH, HI: aircraft jacks, air compressors, light carts.

11.28.2.5.2.2.4. **(Added)** 647 LRS, Vehicle Operations, 135 A Street, Building 2003, JBPHH, HI: All Terrain forklift, bulldozer, 40 ft. flatbed semi-trailer and tractor, NAVFAC PWD, crane (e.g., 20-50 ton, as applicable), 8’X8’ ¾ plywood as required, steel, aluminum, or fiberglass (types of runway matting for removing aircraft from unprepared/soft ground surfaces).

11.28.3. **(Added)** Joint Base Pearl Harbor-Hickam (JBPHH) 15 WG CDDAR Responsibilities:

11.28.3.1. **(Added)** 15/154 WG MRP 91-1 implements the base CDDAR program. This instruction defines CDDAR Team response capabilities in support of the 15 WG CDDAR program.

11.28.3.2. **(Added)** Initial response to in-flight emergencies (IFE) and ground emergencies are the responsibility of the owning/managing unit (15 AMXS, Transient Alert or tenant units (154 WG, 735 AMS). When the scope of response is beyond the unit's capabilities, they may request assistance from the JBPHH CDDAR Team. The CDDAR Team (15 MXS/MXMT) will jointly respond with the 15 AMXS, Transient Alert, or tenant units (154 WG, 735 AMS) to affected crash damaged or disabled aircraft when dispatched by proper authority. Dispatches are made per CDDAR Team Recall Procedures through the MXS Production Supervisor.

11.28.3.3. **(Added)** Contact 15 MOC DSN 448-6919 for CDDAR Team support. Normal duty hours for CDDAR are between 0530-2230, Monday through Friday. For after duty hours, weekends, holidays and down days, contact 15 MOC.

11.28.4. **(Added)** CDDAR Procedures:

11.28.4.1. **(Added)** Upon declaration of a major aircraft accident, all accident response agencies are notified and will follow procedures for response according to the 15/154 WG MRP 91-1.

11.28.4.2. **(Added)** Upon notification of a mishap involving a disabled aircraft requiring recovery, which does not meet the severity of enacting MRP 91-1, the following will occur:

11.28.5. **(Added)** 15 Maintenance Operations Center (MOC) will:

11.28.5.1. **(Added)** Ensure applicable first responders are contacted immediately.

11.28.5.2. **(Added)** Notify the MXS Production Superintendent of the requirement to recall and assemble the CDDAR team or Transient Alert (if required) at a designated point. If the MXS Production Superintendent cannot be reached, contact the CDDAR Team Chief directly. Provide the aircraft type and tail number, location of incident, extent of damage if known, and any other known information.

11.28.5.3. **(Added)** Coordinate required support equipment and other necessary supplies as requested by the CDDAR Team and On-Scene Commander (OSC) for the recovery/removal actions. In the event it becomes necessary to immediately clear the runway without consideration of additional damage to the aircraft, MOC will coordinate expediting any additional heavy equipment items.

11.28.5.4. **(Added)** Upon request, contact the transient aircraft home base and request Technical Order guidance for aircraft recovery operations.

11.28.5.5. **(Added)** In the event that an aircraft recovery requires movement of cargo by normal or alternate means, contact ATOC Squadron Ops Officer and 15 OG/OGV Standardization & Evaluation.

11.28.6. **(Added)** The MXS Production Superintendent will:

11.28.6.1. **(Added)** Act as the On-Scene Commander and focal point for dispatch of recovery operations. This authority may be delegated to the CDDAR Team Chief when necessary.

11.28.6.2. **(Added)** Ensure first responders have assessed and declared the scene safe.

11.28.6.3. **(Added)** If the fire department has departed the scene without providing turnover or accountability of the site, please contact them via MOC or at 474-2222.

11.28.6.4. **(Added)** Maintain the necessary certifications to drive on the Airfield Operating Area in order to perform duties as On-Scene Commander.

11.28.6.5. **(Added)** Dispatch Transient Alert personnel when requested by MOC.

11.28.6.6. **(Added)** Notify the CDDAR team Chief of the requirement to recall and assemble the CDDAR team at a designated point. Provide all known information, and coordinate all requests between the CDDAR team chief and MOC.

11.28.7. **(Added)** The CDDAR/Crash Recovery Team Chief (CRTC) Will:

11.28.7.1. **(Added)** Provide initial response assessment and determines required personnel based on scenario.

11.28.7.2. **(Added)** Take into account the need for the following certifications: flight line driver's license, forklift driver, and carbon fiber containment training.

11.28.7.3. **(Added)** Ensure that the recovery team, at a minimum, will consist of the CRTC and a team of personnel based upon the following recovery actions; keep in mind all recovery actions are not identical:

11.28.7.4. **(Added)** Aircraft tow using main landing gear tow adapter will consist of supervisor, UKE driver, brake operator, and a crew of four tow qualified personnel.

11.28.7.5. **(Added)** Aircraft lift using aircraft tripod jacks will consist of supervisor, manifold operator, plumb bob monitor, and one person per aircraft jack.

11.28.7.6. **(Added)** Aircraft lift using air lifting bags will consist of supervisor, manifold operator, plumb bob monitor, and one person per airbag station.

11.28.7.7. **(Added)** Assemble Crash Recovery Team (CRT) at a designated meeting area.

11.28.7.8. **(Added)** Notify MXS Production Superintendent of assembly completion time.

11.28.7.9. **(Added)** Notify vehicle management flight dispatch office of possible requirement for CDDAR equipment transportation.

11.28.7.10. **(Added)** Brief the CRT on the situation, required actions, and known safety hazards.

11.28.7.11. **(Added)** Monitor situation, review safety procedures and aircraft TOs, and stand by until requested by the Incident Commander to proceed to the accident scene.

11.28.7.12. **(Added)** Respond to the accident scene when requested, assess the situation, and plan for recovery.

11.28.7.13. **(Added)** Coordinate with manufacturers/engineers for work outside the scope of technical data or for required deviations.

14.1.2.1.2.1. **(Added)** C-17 configuration items will be verified during #2 and #4 180D HSCs using locally developed Configuration Verification Excel spreadsheet and reconciled with G081 screen 8110.

14.2.6.1.2. **(15 WG)** Manual Job Control Listing; When G081 is not available for more than 48 hours, analysis will assign a sufficient amount of JCN to each section as follows: See **Attachment 15**

14.2.7.2.1. **(Added)** Upon notification of an accident, mishap or impoundment, PS&D will complete the following actions:

14.2.7.2.1.1. **(Added)** Secure / freeze aircraft jacket file

14.2.7.2.1.2. **(Added)** Notify shops that have decentralized AFTO Form 95s and any other aircraft forms (781s) and instruct them to return them to the PS&D office immediately. Note: See aircraft jacket file for DD Form 2861, Cross-Reference, to determine decentralized records.

14.2.7.2.1.3. **(Added)** Consolidate all aircraft/equipment records and assemble in aircraft jacket file for pick-up by Impoundment official. Ensure a signed AF Form 614, Charge Out Record, is filed in place of the aircraft jacket file.

14.3.1.1.1. **(Added)** PS&D will order HAZMAT TCI using AF IMT 2005. HAZMAT parts for TCTOs will be ordered by the performing Work Center.

14.3.3.3.2.3.1.1. **(Added)** PS&D will develop and maintain a Master TCTO folder that will be standardized across the wing.

14.5.6.3.2.2. **(Added)** Daily Scheduling Process:

14.5.6.3.2.2.1. **(Added)** The daily schedule refines the weekly schedule and will be published each day following the MXG 1400 Production Meeting. Exception, on the last duty day of the week, the daily schedules will be published through the next duty day. Example: Friday after the MXG 1400 Production Meeting, the daily schedule for Saturday, Sunday and Monday will be published, assuming Friday was the last duty day, and Monday is the next duty day.

14.5.6.3.2.2.2. **(Added)** AF Form 2407s will only be processed for changes affecting the published daily schedules. Only exceptions are those identified in **para 14.5.6.3.9**.

14.5.6.3.9. **(Added)** 15 OG/CC and 15 MXG/CC are the approval authorities for all C-17, C-37, C-40 mission/local additions, and static displays to the current signed schedule. If the 15 OG/CC or 15 MXG/CC is not available, only the designated representatives identified in writing have the authority to approve these changes. See **Attachment 17** for all 2407 required coordination.

14.5.6.3.9.3. **(Added)** AF Form 2407 Coordination Procedures:

14.5.6.3.9.3.1. **(Added)** Any change to the published daily schedule initiated after the daily MXG 1400 Production Meeting will require an AF Form 2407 initiated by the requestor. Except those requirements identified in **para 14.5.6.3.9**.

14.5.6.3.9.3.2. **(Added)** Any change to the published daily schedule initiated after the daily MXG 1400 Production Meeting by 618 AOC will be received by command post/current ops and will be coordinated to the maintenance group and affected agencies via MOC.

14.5.6.3.9.3.3. **(Added)** Coordination & Distribution Process:

14.5.6.3.9.3.3.1. **(Added)** The initiator will submit the AF Form 2407 to PS&D during normal duty hours (M-F, 0500-1600) or MOC during off-shift hours (M-F, 1600 to 0500 and weekends/holidays/down days).

14.5.6.3.9.3.3.2. **(Added)** When the initiator is OPS, they will route through OG/CC before submitting to PS&D/MOC if the request is to add or cancel sorties, missions or statics.

14.5.6.3.9.3.3.3. **(Added)** The MOC may use a QRC in lieu of an AF Form 2407, as authorized in **para 14.5.6.3.8.1**.

14.5.6.3.9.3.3.4. **(Added)** PS&D or MOC will contact each required agency depending on the request utilizing **Attachment 17**. If an agency non-concurs, PS&D or MOC will document why on 2407, however the routing process continues through approval agency from **Attachment 17**.

14.5.6.3.9.3.3.5. **(Added)** If the final approving agency denies the request, MOC or PS&D will notify the requesting agency and communicate to the affected agencies.

14.5.6.3.9.3.3.6. **(Added)** MOC will distribute AF Form 2407/QRC to all affected agencies.

DANIEL A. DOBBELS, Colonel, USAF
Commander

Attachment 1 (Added)

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

Prescribed Forms

15WG Form 23, *TODA Designation and Data Form*

15WG Form 24, *Dropped Object Investigation Checklist*

15WG Form 25, *15th Maintenance Group Lost Tool/Item Investigation Worksheet*

15WG Form 26, *Local Manufacture Request Worksheet*

15WG Form 27, *Composite Tool Kit (CTK) Log*

15WG Form 28, *Broken/Removed Tool Log*

15WG Form 29, *Blade Blending Worksheet F-117 Engine*

15WG Form 30, *Incident and Cost Analysis*

15WG Form 31, *Items too Small to be Marked/Etched*

Adopted Forms

AF Form 853, *Air Force Wildlife Strike Report*

Attachment 2 (Added)

WWID CODE FOR JOINT BASE PEARL HARBOR HICKAM

Table A2.1. WWID Listing.

PAS code	SQ	Section		CTK/Shadowboard/Cabinet	Tool # Non-Dispatchable CTK
15 WG					
1st & 2nd	3rd	4th		5 & 6th	7, 8 & 9th
HL	A= 15 AMXS	A	FL/ KITS		
HL	B= 15 MXS	B	FL / MAIN		
HL	C = 15 MOS	C	Flying C/C		
HL	D= 15 MXG	D	HSC / MX Shops		
HL	E= 535 AS	E	E & E		
HL	F= 65 AS	F	Fuels		
HL	G= 204 AS	G	AGE		
HL	H= Wash Contract	H	Pneudraulics		
HL	I=	I	Auto Test		
HL	J=	J	Wash Rack		
HL	K=	K	EW		
HL	L=	L	Wheel &Tire		
HL	M= 735 AMS	M	Munitions		
HL	N=	N	NDI		
HL	O=	O			
HL	P= TMDE (PMEL)	P	Propulsion		
HL	Q=	Q	QA		
HL	R=	R	Survival		
HL	S=	S	Structural (SM)		
HL	T= Trans Alert	T	Metals Tech		
HL	U=	U	Life Support		
HL	V=	V			

HL	W=	W			
HL	X=	X			
HL	Y= Boeing (C-40)	Y	Main CTK/Contractor		
HL	Z= Gulfstream	Z	AR / Crash Recovery		

Attachment 3 (Added)

MANUAL JOB CONTROL NUMBERS FOR 15 MXG

Table A15.2. 15 WG Manual Jcn Listing.

AIRCRAFT	MANUAL JCN
05-5146	0100-0150
05-5147	0151-0200
05-5148	0201-0250
05-5149	0251-0300
05-5150	0301-0350
05-5151	0351-0400
05-5152	0401-0450
05-5153	0451-0500
90-0533	0501-0550
01-0015	0551-0600
01-0065	0601-0650
15 MAINTENACE SQUADRON (15 MXS)	
#1 180-Day HSC (HSC)	E001-E999
#2 180-Day HSC (HSC)	F001-F999
#3 180-Day HSC (HSC)	G001-G999
#4 180-Day HSC (HSC)	H001-H999
Refurbishment (HSC)	6500-6899
Munitions (AMMO)	3111-3120
All Avionics Sections (AVEWS/AVGCS/AVIS)	3121-3150
Wheel & Tire	3171-3190
Electrical/Environmental (ELEN)	3191-3210
Hydraulics (HYDR)	3241-3260
Metals Technology (MTECH)	3261-3270
Non-Destructive Inspection (NDIS)	3271-3280
Sheet Metal (SMCO)	3281-3290
All AGE Sections (AGEFM/AGEIR/AGEPU)	3331-3370
Fuels (FUEL)	3401-3430
Engine Management/Propulsion (ENGM)	3431-3460
15 MAINTENANCE GROUP (15 MXG)	
Maintenance Operations Center (MOC)	3071-3090
Quality Assurance (MXGQA)	3091-3100
ADDITIONAL/MISCELLANEOUS	
Aircrew Flight Equipment (LIFES)	3291-3310
Cannibalizations	5200-5299
Contract Washes (WASH)	3311-3320
Contract Field Team (RAMS)	3371-3080

Impoundment	5320-5340
TCTO	9500-9699
Hard-Point Inspection	L001-L999
-6 Inspection & Time Change	1600-1699
735th Air Mobility Squadron	4000-4500
All Others	3431-3500

Attachment 4 (Added)

15 WG READY LINE AND SUB-POOL LOCATIONS

Figure A4.1. 15 WG Ready Line and Sub-Pool Locations.


23 Row Sub-pool
16 Row Sub-pool


AMC Sub-pool

Attachment 5 (Added)

2407 APPROVAL COORDINATION

Table A15.3. C-17 2407 Routing.

	Add Mission /Sorties	Cancel Missions	Cancel Local Sorties	Increase Flying Window	Config Changes/ Tail Swap	Fuel Load Changes/Call Sign/Comments
OSS	Coord	Coord	Coord	Coord	Coord	Coord
OG/CC Rep	Approve	Approve	Approve	Approve		
Production	Coord	Coord	Coord	Coord	Coord	Coord
AMXS Supervision	Coord	Coord	Coord	Coord	Info	Info
MXG/CC Rep	Approve	Approve	Approve	Approve		
PS&D	Coord	Coord	Coord	Coord	Coord	Coord
MOC	Coord	Coord	Coord	Coord	Coord	Coord

Table A15.4. C-37/C-40 2407 Routing.

	Add Mission/ Sorties	Cancel Missions	Cancel Local Sorties	Increase Flying Window	Config Changes/ Tail Swap	Fuel Load Changes/Call Sign/Comments
65 AS	Coord	Coord	Coord	Coord	Coord	Coord
OG/CC Rep	Approve	Approve	Approve	Approve		
MXG/CC Rep	Approve	Approve	Approve	Approve		
PS& D	Coord	Coord	Coord	Coord	Coord	Coord
MOC	Coord	Coord	Coord	Coord	Coord	Coord