BY ORDER OF THE COMMANDER
AIR FORCE RESERVE COMMAND

AIR FORCE INSTRUCTION 21-101_AFRCSUP 911 AIRLIFT WING Supplement

16 JULY 2021
Incorporating Change 1, 28 SEPTEMBER 2022

Maintenance

AIRCRAFT AND EQUIPMENT MAINTENANCE MANAGEMENT

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RELEASABILITY: There are no releasability restrictions on this publication.

OPR: 911 MXG/MXQ

Certified by: 911 MXG/CC
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Supersedes: AFI21-101_AFRCSUP_911AWSUP,1 April 2019
911AWI15-101, 13 April 2007
LCL 911AW-40-2, 25 November 2019

Pages: 17

This supplement implements Air Force Instruction (AFI) 21-101, Aircraft and Equipment Maintenance Management with AFRC Supplement 1. This supplement describes 911th Airlift Wing (AW) procedures to be used in conjunction with the basic instruction and AFRC supplement. This instruction is applicable to all personnel with applicable responsibilities in the 911th AW. This publication may be supplemented at any level, but all supplements must be routed to the Office of Primary Responsibility (OPR) listed above for coordination prior to certification and approval. Refer recommended changes and questions about this publication to the OPR listed above using the AF Form 847, *Recommendation for Change of Publication*; route AF Forms 847 from the field through the appropriate chain of command. The authorities to waive wing/unit level requirements in this publication are identified with a Tier ("T-0, T-1, T-2, T-3") number following the compliance statement. See DAFI 90-161, *Publications and Forms Management*, Table A10.1 for a description of the authorities associated with the Tier numbers. Submit requests for waivers through the chain of command to the appropriate Tier waiver approval authority, or alternately, to the Publication OPR for non-tiered compliance items. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Manual (AFMAN) 33-322, *Records Management and Information Governance Program*, and disposed of in accordance with Air Force Records Information Management System (AFRIMS) Records

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SUMMARY OF CHANGES

This interim change deletes the requirement to follow LCL 911AW 40-2 as part of the Dropped Object Prevention Program (DOPP) program. Paragraph numbers are changed to correct past errors in paragraph numbering sequence. Responsibility to close the flightline was corrected.

2.4.53.1.1. **(Added)** All maintenance will be documented in the applicable aircraft/equipment forms and in the MIS no later than the end of the day on which the maintenance was accomplished. Section supervisors are responsible for reviewing aircraft/equipment forms and the MIS for all maintenance actions on a daily basis. This review will ensure that at a minimum:

2.4.53.1.1.1. **(Added)** Discrepancies are corrected and accurately cleared in the aircraft/equipment forms and in the MIS. Note: MIS only during paperless inspections.

2.4.53.1.1.2. **(Added)** Discovered discrepancies are accurately entered in the aircraft/equipment forms and in the MIS. Note: MIS only during paperless inspections.

2.4.53.1.1.3. **(Added)** Maintenance which takes place across multiple shifts is properly documented in the aircraft/equipment forms and in the MIS. Note: MIS only during paperless inspections.

2.4.53.2.1. **(Added)** The Production Superintendent (Pro Super) will ensure that the status of an aircraft under their control is accurately reflected in the aircraft/equipment forms and in the MIS prior to returning an aircraft to service from extensive periods of maintenance or down time.

2.4.53.2.2. **(Added)** The Pro Super will verify with all applicable sections that maintenance performed on an aircraft is complete and has been documented accordingly before scheduling the aircraft for a sortie or mission.

2.4.53.2.3. **(Added)** Section supervisors will ensure all maintenance actions, IPIs, and operational checks are accurately documented in the forms and the MIS. Section supervisors will report their findings to the Pro Super.

2.4.53.3.1. **(Added)** Maintenance supervision will coordinate with the Pro Super and the Quality Assurance FCF/OCF Program Manager to determine if an FCF/OCF is applicable IAW MDS specific TOs and directives.

5.2.5.3.6.2. The DIT will include, at a minimum, a primary and alternate from each work center. DIT members should be ARTs/AGRs/fulltime personnel and cannot be work center supervisors.

5.2.5.3.6.2.1. **(Added)** DIT representatives will ensure squadron/work center members are made aware of commonly seen errors and instructed on proper MDC documentation.

5.2.5.3.6.5.3.1. Work center DIT representatives will run a Global Reach "Status vs MDC WUC/REFDES Mismatch Report" for their respective unit on the first duty day of each week. All mismatches will be validated with the AMXS Production Superintendent, and if required the MXS Production Superintendent.

5.2.5.3.6.5.3.1.1. **(Added)** Once validated, the DIT will notify the MOC of any required aircraft status history changes. If the wrong WUC is utilized on the MDC record, the owning work center will correct the discrepancy.

5.2.5.3.6.5.3.2. Identify suspected errors using G081 DIT MDC/Error Correction (G081 screen 9153). All data will be checked, errors flagged and corrections made using this process.

5.2.5.3.6.5.3.3. Required tracking and report capabilities are provided using the Supervisor/DIT Selector reports on Global Reach.

5.2.5.3.6.5.3.3.1. **(Added)** Errors flagged by DIT members will be corrected by the user who made the error whenever possible. This will be done using the 'USER' role on G081 screen 9154 (Supervisor MDC Review/Error Correction).

5.2.5.3.6.5.3.3.2. **(Added)** MDC entries reviewed, errors identified and corrected using G081 DIT MDC/Error Correction (G081 screen 9153) and Supervisor MDC Review/Error Correction (G081 screen 9154) will be stored on the mainframe and readily available via Global Reach Data Integrity reports for data analysis and monthly tracking of required statistics by the units and HQ AFRC.

5.2.5.3.6.5.3.5. **(Added)** For repeat MDC errors, ensure squadron/work center members are made aware of TO 00-20-2 rules for proper MDC documentation.

6.4.8.1. **(Added)** QA Inspectors will submit inspection findings to applicable supervision using the 911 MXG/QA SharePoint LEAP Supervisory Response Function. Supervisors will have a 10 working day suspense to submit a completed root cause analysis to MXQ via the 911 MXG/QA SharePoint at **https://afrc.eim.us.af.mil/sites/911aw/MXG/MXGQA/SitePages/Home.aspx**.

6.12.7. **(Added)** Local Procedures for FCF/OCF:

6.12.7.1. **(Added)** FCF/OCF's will be conducted as determined by requirements in Technical Order (TO) 1-1-300, Maintenance Operational Checks and Check Fights, TO 1C-17A-6 Inspection Requirements Manual, and as directed by the 911th MXG/CC.

6.12.7.1. 1 (Added) Current technical orders do not contain any OCF requirements or procedures. Should an OCF be required/directed the following FCF procedures will apply.

6.12.7.2. **(Added)** Aircrews at the 911th AW, Pittsburgh IAP/ARS are not qualified to perform C-17A FCF/OCFs. If it becomes necessary to accomplish an FCF/OCF at the 911th Airlift Wing, the 911 MXG/CC will request 911 PS&D office to coordinate/schedule a qualified FCF/OCF crew.

6.12.7.3. **(Added)** For C-17A FCF's: Contact Boeing using an expedited Air Logistics Center (ALC) 107, Internal Routing Process, to request an FCF crew. Boeing will provide a flight crew under the current Global Improvement Sustainment Program for any FCF required at the 911 AW. Process is to submit an ALC 107 Support Request by e-mail from the Wing through 911 PS&D, approved by Air Mobility Command (AMC/A4QA), Air Force Reserve Command (AFRC/A4MA) and forwarded to C-17 AFLCMC/WLMC. Send informational copy of request to 4AF/A4M.

6.12.7.4. **(Added)** 911 MXG/MXQ office and the applicable maintenance flight chief will serve as the focal point to brief the FCF aircrew on matters concerning the discrepancies and/or conditions prompting the necessity of the FCF.

6.14.4. **(Added)** Local High Speed Taxi Check procedures:

6.14.4.1. **(Added)** High Speed Taxi Checks require an FCF qualified aircrew. Should the need for a High Speed Taxi Check arise, the procedures in **paragraph 16.12.7** will be followed.

7.2.1.1. Local impoundment checklists are available on the 911th MXQ SharePoint site at **https://afrc.eim.us.af.mil/sites/911aw/MXG/Pages/MXG%20QA%20Homepage.aspx** and in the Aircraft/Equipment Impoundment Binder located in the QA office.

7.3.1.1.1. **(Added)** Due to the potential conflict of interest, the Impoundment Authority shall not select the DCC of the affected aircraft to serve as the Impoundment Official.

7.3.1.1.2. **(Added)** In the absence of the designated Impoundment Official (e.g., sickness, scheduled leave, etc.), the Impoundment Authority may appoint in writing, an alternate Impoundment Official for the duration of the absence of the originally designated individual.

7.3.1.1.3. **(Added)** If an impoundment investigation is to be continued over multiple shifts, the Impound Authority may elect to authorize, in writing, an additional Impoundment Official to continue the investigation on the next shift.

7.3.1.1.3.1. **(Added)** The additional Impoundment Official will provide a comprehensive turnover of the maintenance/troubleshooting actions to the primary Impoundment Official prior to the end of their scheduled shift.

7.6.2.1. **(Added)** MOC will notify all applicable agencies using applicable QRC.

7.6.3.1.1. **(Added)** Applicable records will be secured in PS&D.

7.6.3.6. **(Added)** The designated Impoundment Official will conduct a meeting with the Pro Super, Senior Leadership, QA representative, and any necessary specialists to discuss the circumstances and procedures surrounding the impoundment action.

7.6.4. The Impoundment Official will brief the Impoundment Authority daily on the status of the impoundment.

7.6.6. When all maintenance actions related to the aircraft/equipment impoundment have been completed, the Impoundment Official will review all associated maintenance documentation and notify 911 MXG/MXQ when complete. After a QA review, the Impoundment Official will notify the Impoundment Authority that the aircraft/equipment is ready for release.

7.6.6.1. **(Added)** Upon release, the Impoundment Official will return the aircraft/equipment Impoundment Binder to 911 MXG/MXQ, and notify MOC, PS&D, and MMA to unlock all secured digital records for the affected aircraft/equipment.

8.1.1. **(Added)** Non-maintenance units may utilize a standard EID and TCMax® provided they contact 911 MXG/MXQ for assignment of the third and fourth character for shop identification, and for TCMax® site licenses. Contractors are not required to use an EID until the contract requires the use of TCMax®.

8.2. Units assigned to the 911th AW that enter the flight line or aerospace equipment maintenance areas will establish a tool/equipment control program in accordance with (IAW) this instruction. Units with specific, published tool control guidance will follow those directives, provided the intent of this instruction for inventory, lost tool notification, control, and accountability is achieved.

8.2.2.1.1. **(Added)** Quarterly replacement tool inventories will be documented in TCMax®.

8.2.3.1.1. **(Added)** All broken or unserviceable tools will be given to the applicable Support Section NCOIC/CTK Custodian to determine if the item is under warranty or if it can be repaired.

8.2.3.1.2. **(Added)** The Support Section NCOIC/CTK Custodian will ensure that the unserviceable tool is annotated as broken in TCMax® and on the AFRC Form 175, Broken/Missing/Removed Tools and Equipment.

8.2.3.1.3. **(Added)** All sections will have a location designated for the storage of warranty tools. Tools that are deemed unserviceable and under warranty will be issued to and stored in this location while they await replacement or repair.

8.2.3.1.3.1. **(Added)** The Support Section NCOIC/CTK Custodian will ensure the location is secured under lock and key and is labeled as "Warranty Tools." Warranty tools issued to this storage location will not be de-etched until warranty repair or replacement determination is made.

8.2.3.1.3.2. **(Added)** Access to this storage location will be limited to the Support Section NCOIC and the CTK Custodian.

8.2.3.1.3.3. **(Added)** Keys for the Warranty Tools storage location will be issued to the Support Section NCOIC/CTK Custodian in TCMax® prior to opening. Inventory of warranty tools awaiting replacement will be conducted upon issue and prior to turn-in of the keys and will be verified against the issued items report in TCMax®.

8.2.3.1.4. **(Added)** The Support Section NCOIC/CTK Custodian will remove the warranty tool from the storage location and will have the tool de-etched once the provisions of **paragraph 8.2.3.2** have been accomplished and a replacement tool has been obtained.

8.2.4.2. **(Added)** Expendable tools contained within CTKs that become unserviceable or broken will be replaced from the spare tool inventory on a one for one basis.

8.2.4.3. **(Added)** Consumable pharmacy items will be tracked in TCMax®. The applicable Support Section NCOIC/CTK Custodian will track expiration dates/inspection requirements for pharmacy items in TCMax.

8.2.4.4. **(Added)** Consumable replacement tools will be tracked in TCMax®. Each type of replacement item will be assigned a WWID to track the number of replacement items of that type. The first four characters of the WWID will be the section's assigned first four characters and the final five characters will be created to identify that specific type of replacement item. (e.g., all replacement apex bits are assigned a generic WWID of W1XX00001).

8.2.4.4.1. **(Added)** For accountability purposes, replacement tools that are issued a WWID will be stored in a "Replacement Tools" storage location. The storage location must be locked and access limited to the Support Section NCOIC and CTK Custodian.

8.2.4.4.2. **(Added)** The TCMax® generated MIL for the replacement tools storage location will be printed and stored by the CTK Custodian when completing the quarterly inventory requirement, and will be verified against the TCMax® database when completing the next scheduled inventory. The signature and date block on the hard copy MIL will reflect the inventory dates in TCMax®.

8.2.8.3. **(Added)** At least annually, or when the CTK custodian changes, all long term issued tools will be turned in and visually inventoried. This inventory will be documented in TCMax®. Upon completion of this inventory, the item(s) may be re-issued long term.

8.2.9.4. **(Added)** Rags will be issued as a one-for-one swap.

8.2.9.4.1. **(Added)** Rags will be issued in containers with the number of rags marked on each container.

8.2.9.5. **(Added)** Rags will be treated as tools and tracked in TCMax® using the rag control feature.

8.2.9.6. **(Added)** CTK custodians will ensure that clean and dirty/oily rags are segregated.

8.2.9.7. **(Added)** CTK custodians will conduct a weekly physical inventory of their rags and verify it against the TCMax database. This inventory will be documented in TCMax®.

8.2.10.1. **(Added)** CTK Custodians and using work centers will submit their request for tools through their flight chief. Flight chiefs will validate the need for the requested tools prior to submitting the order request to applicable Maintenance Supervision.

8.2.11.1. **(Added)** Locally manufactured tools or equipment will be controlled in the same manner as tools procured from a vendor. Locally manufactured tools will be etched or permanently identified with an EID as defined in **paragraph 8.2.7**.

8.2.11.2. **(Added)** Locally manufactured tools and equipment will be inspected by the owning section or applicable support section and will be reviewed IAW the provisions of **paragraph 9.17.3**.

8.2.12.1. **(Added)** When FSRs/DFTs/CFTs perform maintenance on equipment at the 911th AW, they will adhere to the procedures in this instruction for tool and equipment management. If the contractor's procedures for tool and equipment management do not meet the requirements of this instruction, the team leader/supervisor will coordinate with 911 MXG/MXQ to develop procedures for tool and equipment management. The procedures will be put in letterform and signed by the team leader/supervisor and a representative from 911 MXG/MXQ. The team leader/supervisor and MXQ will maintain a copy of the letter for the duration of the team's stay.

8.2.13.2. **(Added)** Decentralized CTKs, tools, and equipment will be locked and secured when they are not in use. Keys for each decentralized CTK, tool, or equipment will be controlled in the main CTK and signed out in TCMax®. Keys will be issued at the beginning of the shift and turned in at the end of the shift. The AFRC Form 177, Consolidated Tool Kit Inventory and Control Log, will be used to document beginning and end of shift inventories and all jobsite tool transfers from a decentralized CTK.

8.2.14.1. **(Added)** Response equipment stored/located in trailers or vehicles will be inventoried annually. This inventory will be tracked in TCMax®.

8.2.14.2. **(Added)** All response equipment will be tracked in TCMax®. Procedures outlined in **paragraph 8.2.13.1.2** will be followed for inventory and access control.

8.2.15.2. **(Added)** A second individual from a different section/flight/squadron will inventory the items and complete the turn-in procedures in TCMax®.

8.2.16.1. **(Added)** Personnel authorized to enter the controlled area of tool rooms will be documented on an Entry Authorization List (EAL). The EAL will be validated by the CTK Custodian and signed by the applicable squadron commander.

8.2.16.1.1. **(Added)** The EAL will be reviewed and renewed at least annually, or when the primary CTK Custodian changes.

8.2.16.1.2. **(Added)** Changes in personnel requiring access to the controlled area of tool rooms constitutes the need for a new EAL.

8.2.17.1. **(Added)** All dispatchable eTools will be tracked in TCMax®. Missing, removed and/or broken plugs/cover/doors do not require replacement unless replacement is deemed necessary by the CTK custodian. Broken/removed pieces will be accounted for in TCMax®. The remaining broken edge will be colored with permanent marker so future breakage can be easily detected.

8.2.17.2. **(Added)** Land Mobile Radios (LMRs) dispatched to any maintenance areas (flightline, hangars, back-shops, etc.) will be tracked and accounted for in TCMax®. LMRs issued to maintenance supervision may be long-term issued, provided they are accounted for annually.

8.2.18.1. **(Added)** FOD bags/pouches are required for all dispatchable CTKs. FOD bags/pouches will be marked with the WWID of the CTK and included on the MIL.

8.3.7.2. **(Added)** These items will be given a WWID and be included in TCMax® for inventory purposes.

8.4.1.1. **(Added)** Section PMEL monitors will track calibration due dates for all TMDE possessed by work center in TCMax®.

8.4.1.2. **(Added)** In TCMax®, the PMEL monitor will issue all TMDE requiring calibration to PMEL.

8.4.1.3. **(Added)** The PMEL monitor will submit a locally produced manifest documenting all TMDE requiring calibration to DMS.

8.4.1.4. **(Added)** DMS will coordinate with LRS to inspect and transport the equipment to the PMEL servicing location.

8.4.1.5. **(Added)** Upon receipt from PMEL, DMS will notify all pertinent work centers that equipment has been received.

8.4.1.6. **(Added)** PMEL monitors will inspect all returning equipment for completeness and damage. Upon completion of this inspection, the equipment calibration dates will be updated and the equipment signed in using TCMax®.

8.5.3.4. **(Added)** The annual inventory will be tracked in TCMax® and the hard-copy MIL will be annotated with “See TCMax®” for due date tracking. This inventory does not constitute the need for a new MIL to be printed as long as there have been no updates to the listing as identified in paragraphs **8.3.6.7.3** and **8.3.6.7.5**.

8.5.3.4.1. **(Added)** When the CTK Custodian changes, a new hard-copy MIL for the tool room will be generated. This MIL will be signed and dated by the new CTK Custodian upon assignment of their duties.

8.6.1.2.1.4. **(Added)** All squadrons/sections assigned to the 911th AW will request changes to WWID’s through 911 MXG/MXQ.

8.6.1.2.2. **(Added)** WWID’s for the 911 AW:

8.6.1.2.2.1. **(Added)** 911 AMXS:

8.6.1.2.2.1.1. **(Added)** W1FL - Flightline

8.6.1.2.2.1.2. **(Added)** W1FS – Support Section

8.6.1.2.2.2. **(Added)** 911 MXS:

8.6.1.2.2.2.1. **(Added)** W1ME - Electro/Environmental

8.6.1.2.2.2.2. **(Added)** W1MF – Fuel Systems

8.6.1.2.2.2.3. **(Added)** W1MH – Hydraulics

8.6.1.2.2.2.4. **(Added)** W1MZ – HSC

8.6.1.2.2.2.5. **(Added)** W1MW – Wheel and Tire

8.6.1.2.2.2.6. **(Added)** W1MP – Propulsion

8.6.1.2.2.2.7. **(Added)** W1MG – Aerospace Ground Equipment

8.6.1.2.2.2.8. **(Added)** W1MU – Structural Maintenance

8.6.1.2.2.2.9. **(Added)** W1MM – Aircraft Metals Technology

8.6.1.2.2.2.10. **(Added)** W1MN – Non-Destructive Inspection

8.6.1.2.2.2.11. **(Added)** W1MB – Munitions

8.6.1.2.2.2.12. **(Added)** W1MQ – Quality Assurance

8.6.1.2.2.3. **(Added)** 758th Airlift Squadron

8.6.1.2.2.3.1. **(Added)** W1LM – Loadmaster Section

8.6.1.2.2.4. **(Added)** 911th Operations Support Squadron

8.6.1.2.2.4.1. **(Added)** W1OA – Aircrew Flight Equipment

8.6.1.2.2.5. **(Added)** Boeing Field Integrated Services – Pittsburgh Air Reserve Station

8.6.1.2.2.5.1. **(Added)** W1BP – Boeing FETS

8.9.1.1. **(Added)** Individuals that are granted the authority to clear Red X's for a lost tool will be placed on the Special Certification Roster (SCR) and tracked in the MIS using the G081 code "INSP 000145."

8.9.2.6.2.2. **(Added)** The original AFRC Form 174, Lost Tool/Object Report, will be given to the Wing FOD monitor assigned to 911 MXG/MXQ once the search and documentation has been completed.

8.9.2.6.2.3. **(Added)** 911 MXG/MXQ will maintain the original AFRC Form 174 in a file until the lost tool is recovered or for a period of one year.

8.9.3. **(Added)** Pilots and aircrew members will account for all equipment and personal items after each flight and ensure any items that become lost during flight are documented in the aircraft AFTO Form 781A, Maintenance Discrepancy and Work Document.

8.9.3.1. **(Added)** The reporting procedures of **paragraph 8.9** apply to pilots and aircrew members.

8.9.4. **(Added)** Procedures for Lost Items/Tools Discovered after Aircraft Taxi/Takeoff: If a tool or object is discovered missing and the affected aircraft has taxied, the procedures to hold or recall the aircraft are as follows:

8.9.4.1. **(Added)** The person making the discovery will immediately notify the MOC through the most expedient means possible. Additional notifications will be made to the expediter or work center supervisor, and the maintenance officer/supervisor on duty.

8.9.4.2. **(Added)** MOC will notify the Command Post. The Command Post/Squadron operations center will instruct the aircrew to return to the parking spot.

8.9.4.3. **(Added)** If the aircraft is airborne at the time of notification, the aircraft will be directed to return to base with minimal maneuvering. If the aircraft is out of the immediate area the aircraft commander will determine where to land and the appropriate procedures.

8.9.4.4. **(Added)** Once the aircraft has landed, an AFRC Form 174 will be completed following the instructions outlined in **paragraph 8.9**.

9.17.3. **(Added)** Procedures for Locally Manufactured Items:

9.17.3.1. **(Added)** The Flight Chief for the section requesting the locally manufactured item will be the final approval authority for requests. The approval authority will ensure all documentation is completed as required.

9.17.3.2. **(Added)** The requesting organization will obtain the 911MXG Local Manufacture Worksheet from Decentralized Materiel Support (DMS) or the 911th MXG Quality Assurance SharePoint Site at **https://afrc.eim.us.af.mil/sites/911aw/MXG/MXGQA/SitePages/Home.aspx**. The requesting organization will consult with the manufacturing shop to determine the feasibility, estimated costs, materials, and the additional sections required to manufacture the item.

9.17.3.3. **(Added)** The requesting organization will forward the completed 911MXG Local Manufacture Worksheet and all supporting documentation, including drawings obtained from the appropriate repository, to the final approval authority for local manufacture requests. The approval authority will forward a copy of the Local Manufacture Worksheet to 911 MXG/MXQ and send the original Local Manufacture Worksheet to DMS for processing. 911MXG/MXQ will determine if records for the applicable item are required to be tracked and maintained.

9.17.3.4. **(Added)** DMS will assign a specific JCN designated for locally manufactured items (eg. 4500-4599). DMS will send the Local Manufacture Worksheet, the DD-Form 1348-6, Single Line Item Requisition System Document, or AF Form 2005, Issue/Turn-in Request, (as applicable), an estimation of the price, and all other pertinent information to base supply for processing. DMS will create a job work order and an AFTO Form 350, Repairable Item Processing Tag, through the G081 system and assign it to the primary manufacturing shop.

9.17.3.5. **(Added)** If coordination between multiple sections is required, the primary manufacturing shop will route the AFTO Form 350 tag through G081 to the other applicable sections. Upon completion of all manufacturing processes, the AFTO Form 350 tag will be returned to the primary manufacturing shop in G081 for final MDC. The primary manufacturing shop will close the work orders in G081 and forward the completed AFTO Form 350 tag to the DMS Office. DMS will annotate the completion in the local manufacturing log. DMS will maintain the completed AFTO Form 350 tag and the Local Manufacture Worksheet in a file. DMS will notify base supply and 911MXG/MXQ (as required) upon completion.

11.6.6. Red Ball MIS down Procedures:

11.6.6.1. **(Added)** If the MIS is down, all maintenance records for Red Ball actions will be maintained in the aircraft forms. Maintenance actions will be cleared using AFTO Form 781As as applicable and the MIS will be updated as soon as it becomes operable.

11.8.3.6.1. Remove restricted area badge within 25 feet of an aircraft with engine(s) operating. Ensure line badge clips are secured to prevent loss. For those individuals using the cord/rope for security, pass the cord/rope through the clip eyelet.

11.8.3.6.6. **(Added)** The wear of headgear is prohibited on the flight line, except for required safety items and the following:

11.8.3.6.6.1. **(Added)** Knit caps, winter hats, helmet liners may be worn as authorized by the installation Commander during inclement/cold weather. "Boonie" hats may be worn during the summer months as authorized by the installation Commander but must be secured snugly with a non-metallic fastener.

11.8.3.6.6.2. **(Added)** During special events, such as ceremonies and festivals, hats may be worn provided there are no aircraft operating in the immediate area.

11.8.3.6.7. **(Added)** Glass bottles and aluminum cans are not authorized on the flight line. Plastic beverage containers are authorized, but must have sealable lids and be secured prior to engine operation.

11.8.3.10. FOD walks will be conducted once per month at a minimum. Determination for completing FOD walks during times of inclement weather will be made by the Wing FOD monitor in the 911MXG/MXQ office.

11.8.3.10.2. **(Added)** The FOD Boss® will be utilized once per week by AMXS and MXS on a rotating schedule as determined by squadron supervision. This equipment will be used per the manufacturer's recommendations. The FOD Boss® equipment will be maintained by the AMXS Sortie Support Flight and checked out from the AMXS CTK for flight line use.

11.8.3.11.3.1. **(Added)** Deployed 911AW personnel will follow FOD program requirements of the location assigned.

11.8.3.15.1. **(Added)** All vehicles entering the flight line will perform a thorough FOD check to ensure vehicle is free of FO. Vehicle operators will perform a vehicle roll-over check on all tires. Vehicle roll-over is defined as checking all areas of the vehicle's tires, to include the portion contacting the ground while parked. This is accomplished by moving the vehicle forward enough to expose the portion of tire that was in contact with the ground. Inspect tires, inside and outside of vehicle, and bumper magnet (if installed). Failure to accomplish FO checks may result in temporary suspension of AF Form 483, Certificate of Competency, IAW Department of the Air Force Instruction (DAFI) 13-213, Airfield Driving.

11.8.3.15.2. **(Added)** Emergency vehicles responding to emergencies are exempt from vehicle FOD checks unless time permits (i.e., if emergency aircraft will not land for more than 15 minutes).

11.8.3.15.3. **(Added)** A flashlight will be utilized to accomplish FO checks during hours of darkness.

11.8.3.15.4. **(Added)** For vehicles transporting equipment and other items, operators will inspect vehicles to ensure items are secured.

11.8.3.15.5. **(Added)** Metal valve stem caps will be removed (plastic caps are required on all GOV tires).

11.8.3.15.6. **(Added)** During winter operations, remove snow/ice build-up from vehicle wheel well, bumper and under carriage.

11.8.3.15.7. **(Added)** Metal tire chains and/or studded traction devices are not authorized on the flight line road, ramp, taxiways, or runway. EXCEPTION: Aircraft tow, aircraft servicing vehicles, and snow removal chemical dispensing vehicles may use metal chains in extreme weather conditions, such as packed snow or ice, after coordination with Airfield Management, Safety and CES IAW DAFI 13-213. Tire chains and/or studded traction devices will be removed from vehicles prior to entering hangars. MXG agencies will receive authorization from the MXG/CC or delegated authority prior to coordinating approval through Wing Safety, Airfield Management, and Civil Engineering.

11.8.5.2.1. **(Added)** Weekly FOD spot checks will be recorded and documented during MSEP evaluations completed by 911MXG/MXQ in the LEAP QA database. FOD prevention measures are a standard item evaluated in all rated MSEP production evaluations.

11.9.1.3. **(Added)** It is the responsibility of all personnel to immediately report objects that have fallen from an aircraft. Aircrew and/or maintenance personnel who observe or discover an object that has been dropped from an aircraft will make the appropriate entries in the AFTO Form 781-series forms.

11.9.4.1. **(Added)** Initial MDS specific DOP training will be accomplished for all incoming maintenance personnel during their QA Newcomer's Briefing.

11.9.4.2. **(Added)** The DOP monitor will ensure that incoming maintenance personnel are aware of aircraft structures specific to their MDS that are prone to be involved in Dropped Object (DO) incidences.

11.9.5. DELETED

11.9.5.1. DELETED

11.9.6. **(Added)** Reporting Dropped Object (DO) Incidences:

11.9.6.1. **(Added)** Any individual that suspects a DO incident will immediately notify Maintenance Production. No maintenance of any type will be accomplished in the DO area until after the DOP monitor has investigated the incident.

11.9.6.2. **(Added)** The Pro Super will notify the 911 MOC of the DO incident and obtain a JCN immediately upon discovery. The Pro Super will ensure the DO is recorded in the aircraft forms and notify the DOP monitor.

11.9.6.3. **(Added)** The DOP monitor will perform a preliminary DO investigation using **Attachment 14**. When a material failure or design deficiency is determined, the section responsible for the system will submit a quality deficiency report to 911MXG/MXQ.

11.13.3.1.1. **(Added)** The Pro Super is designated as the primary CA for the 911MXG. In their absence, a CANN action may be authorized by the Maintenance Group Commander (MXG/CC), Deputy Maintenance Group Commander (MXG/CD), Maintenance Squadron Commander (MXS/CC), MXM/MXA Superintendent, or any other individual listed on the Special Certification Roster (SCR).

11.13.5.3. **(Added)** In the event of expedited or Red Ball maintenance, documentation will be completed as soon as possible and no later than the end of the day on which the CANN action occurs.

11.13.5.4. **(Added)** In the event the MIS is not available, a manual JCN will be created. If a manual JCN is created, the CANN will be input into the MIS as soon as possible.

11.13.10. **(Added)** Cannibalization Procedures:

11.13.10.1. **(Added)** CA will:

11.13.10.1.1. **(Added)** Coordinate with applicable sections to ensure the CANN action is feasible and necessary.

11.13.10.1.2. **(Added)** Notify MOC of the part requirement.

11.13.10.1.3. **(Added)** Provide a document number to MOC.

11.13.10.1.4. **(Added)** Provide the aircraft tail number or equipment end item serial number to MOC for the CANN action.

11.13.10.1.5. **(Added)** Ensure complete documentation is accomplished for each CANN action in the aircraft forms and MIS.

11.13.10.2. **(Added)** MOC will:

11.13.10.2.1. **(Added)** Create a CANN action discrepancy in G081 using the 9050 screen and issue a CANN JCN.

11.13.10.2.2. **(Added)** Notify PS&D and DMS of the CANN action and provide all the required information.

11.13.10.3. **(Added)** The CANN documentation and process will be IAW TO 00-20-1, Aerospace Equipment Maintenance Inspection, Documentation, Policy and Procedures, and TO 00-20-2, Maintenance Data Documentation.

11.13.10.4. **(Added)** Local Procedures for Engine In-Shop CANN:

11.13.10.4.1. **(Added)** The CA will:

11.13.10.4.1.1. **(Added)** Coordinate CANN action with Engine Management, MXS supervision, and the Propulsion Flight Chief.

11.13.10.4.1.2. **(Added)** Contact the Propulsion Flight Chief for access to and location of engines.

11.13.10.4.2. **(Added)** Items to be cannibalized must be on order and have a document number. Consumable parts which cannot be reused (O-rings, seals, crush gaskets, etc.) must also be on order.

11.13.10.4.3. **(Added)** Prior to CANN, properly annotate item description and fill out necessary information in the CANN log book, located on the CANN engine.

11.13.10.4.4. **(Added)** Ensure that fittings, caps, plugs, etc. that are not part of the CANN action remain with the CANN engine. All open lines and disconnected cannon plugs will be properly capped and fluid spills cleaned up.

11.46. (Added) Procedures for Adverse Weather Conditions:

11.46.1. **(Added)** Weather Notification Responsibilities:

11.46.1.1. **(Added)** The 911AW Command Post will notify the 911 MOC when notification of an adverse weather condition is received. MOC will inform the AMXS Pro Super upon notification. The Pro Super will determine what actions will be accomplished due to the pending weather situation.

11.46.1.2. **(Added)** MOC will immediately complete the applicable QRC, notifying all MXG personnel of any watches, warnings, and advisories. MOC will contact any shop that is in the process of explosive operations. For flight-line explosive operations, contact will be made with the explosive operations team via radio.

11.46.1.3. **(Added)** MXG supervisors will ensure all personnel are made aware of a weather advisory, watch or warning and take the appropriate actions.

11.46.1.4. **(Added)** In the event that severe weather is not reported by the 911 Command Post and appears to be imminent, the determination to take appropriate actions on the flightline will be coordinated through Airfield Management, BDOC, or Command Post by the acting AMXS Pro Super. Operational Risk Management (ORM) will be used to ensure safety of all personnel and equipment.

11.46.2. **(Added)** Three - Tiered Lightning Notification System:

11.46.2.1. **(Added)** General: The Precision Lightning Warning System (PLWS) installed at the Pittsburgh International Airport receives data from two sources:

11.46.2.1.1. **(Added)** Electric Field Mills (EFMs). The EFMs at Pittsburgh are located on the Grant-Oliver Building at the exit from the public parking lots at the airport and on the 14-32 electrical field Vault. These EFMs identify potentially dangerous lightning conditions and initiate appropriate safety procedures. EFMS DO NOT PREDICT IF LIGHTNING WILL OCCUR. EFMs merely indicate that conditions are unsafe as measured by the safety criteria.

11.46.2.1.2. **(Added)** Real-time lightning data obtained from the National Lightning Detection Network.

11.46.2.2. **(Added)** Warning Levels: Using the two sources above, multiple levels of warning are generated by the PLWS system and users are alerted by a Yellow/Red indicator light or a message over the Com-net system.

11.46.2.2.1. **(Added)** Condition: Green (Color Sequence: No visible color indications) EFMs do not exceed the alarm thresholds and there are not lightning strikes within 17 miles. No storm activity is indicated that will affect local operations.

11.46.2.2.2. **(Added)** Condition Yellow (Color Sequence: Yellow): Triggered when two EFMs have reached the alarm threshold, a lightning strike has occurred within 17 miles of the field and 1 EFM has attained alarm threshold, or a lightning strike has occurred within 12.5 miles of the field and no EFMs have attained alarm threshold. Storm activity is close and will influence operations.

11.46.2.2.3. **(Added)** Condition Red (Color Sequence: Red): Triggered when a lightning strike occurs within 5 miles or a lightning strike has occurred within 12.5 miles and two EFMs have reached the alarm threshold. The storm activity is having direct impact on operations.

11.46.2.2.3.1. **(Added)** Allegheny County Airport Authority (ACAA) Operations will make a "one-call" radio broadcast on all county radio frequencies stating "LIGHTNING WARNING IN EFFECT." The ACAA Flex Alert system will notify the 911 AW 474-8255 (after hours), 474-8146/8148/8163 (0630L-2300L Mon-Fri). PANG 474-7374. (Note: ACAA Operations will not reference if the storm is approaching, skirting or leaving the area.)

11.46.2.2.3.2. **(Added)** All personnel will suspend work in open areas.

11.46.2.2.3.3. **(Added)** Fueling operations will cease.

11.46.2.2.3.4. **(Added)** Tenant employees will refer to their company policies.

11.46.2.2.4. **(Added)** Condition All Clear (Color Sequence: No visible color indications): EFMS do not exceed the alarm thresholds and there are not lightning strikes within 17 miles of the field within the preceding 600 seconds (10 minutes).

11.46.2.2.4.1. **(Added)** ACAA Operations will make a "one-call" radio broadcast on all County radio frequencies stating "Lightning Warning All Clear." The ACAA Flex Alert system will also notify the agencies as listed in **paragraph 11.40.2.2.3.1**.

11.46.2.2.4.2. **(Added)** Com-net Indication: Lightning Warning Level Clear. Sent as information only.

11.46.2.2.4.3. **(Added)** On Base: Wait 10 minutes before making calls of "All-Clear" following periods of Lightning Condition Red.

11.46.3. **(Added)** High Wind Procedures:

11.46.3.1. **(Added)** All high wind procedures will be complied with unless physically prohibited. Maintenance supervisors will be notified of any condition that would prevent the accomplishment of these procedures.

11.46.3.1.1. **(Added)** Supervisors will assess all maintenance activities to ensure safety of personnel and security of equipment during high wind situations. Maintenance tasks will be evaluated to avoid injury to personnel or damage to aircraft/equipment.

11.46.3.1.2. **(Added)** Personnel will exercise caution while performing on-stand maintenance to prevent personal injury or damage to equipment. Additionally, extreme caution will be exercised when removing/installing aircraft components.

11.46.3.2. **(Added)** When a Wind Condition of 25 - 40 Knots Exists:

11.46.3.2.1. **(Added)** The production superintendent will terminate all outside maintenance activities deemed unsafe due to high winds. All aircraft and maintenance support activities will be suspended if safety is jeopardized.

11.46.3.2.2. **(Added)** Personnel will not access the top of the fuselage or aircraft wings when winds are equal to or greater than 25 knots.

11.46.3.2.3. **(Added)** Personnel will secure all loose aircraft components and support equipment. Ensure all AGE is in an AGE Safe Area.

11.46.3.2.4. **(Added)** Hangar operations will be assessed by management to determine if doors need to be closed due to high winds.

11.46.3.2.5. **(Added)** Suspend operations that require the use of Condors, JLGs and B-2 or B-7 stands.

11.46.3.2.6. **(Added)** Cease all aircraft forward and complete fuselage jacking operations if winds are in excess of 26 knots. Aircrafts on jacks must be lowered. Exception: An aircraft that is fully enclosed in a hanger may remain on jacks if the hangar doors remain closed.

11.46.3.2.7. **(Added)** Do not perform maintenance on the horizontal stabilizer.

11.46.3.2.8. **(Added)** Cease all outdoor fuel system in-tank operations and secure all fuel tank access panels.

11.46.3.2.9. **(Added)** Do not allow any aircraft panels to hang from lanyards while open. Such panels will be either fully installed or fully removed.

11.46.3.3. **(Added)** When a Wind Condition of 41 Knots or Greater Exists:

11.46.3.3.1. **(Added)** Suspend operations that require the use of the Universal Maintenance Stands, B-1, B-4, and B-5 maintenance stands.

11.46.3.3.2. **(Added)** Remove or lay down all fire extinguishers. Note: Fire Bottles must be returned to the upright position after termination of wind conditions.

11.46.3.3.3. **(Added)** Discontinue integral jacking operations.

11.46.3.4. **(Added)** When a Wind Condition in Excess of 70 Knots Exists (Dry Ramp Condition):

11.46.3.4.1. **(Added)** Moor the aircraft IAW TO 1C-17A-2-10JG-10-1, Organizational Maintenance Ground Handling Parking/Mooring, move aircraft to a protected area (e.g., hangar) or fly to a safe location.

11.46.3.4.2. **(Added)** When mooring is required, aircraft gross weight may be increased by addition of fuel, cargo, or both.

11.46.3.4.3. **(Added)** Mooring requirements vary for other ramp conditions, i.e. snow, ice. For other than dry ramp conditions refer to TO 1C-17A-2-10JG-10-1 for specific wind/aircraft weight limitations.

11.46.4. **(Added)** Tornado Procedures:

11.46.4.1. **(Added)** Designated tornado shelters for the 911AW will be posted on all building/hangar safety boards. Supervisors will be responsible that each employee is aware of their designated shelter.

11.46.4.2. **(Added)** Tornado warning procedures when issued:

11.46.4.2.1. **(Added)** Take immediate shelter at the closest designated shelter. Ensure accountability of personnel and report to the MOC if possible.

11.46.4.2.2. **(Added)** If outdoors and time does not allow access to a designated shelter, get inside a building and maintain a safe distance from all windows. If not able to access a building, lie in a ditch or low-lying area or crouch near a strong building and be aware of flooding. Use arms to protect head and neck.

11.46.4.2.3. **(Added)** If in a vehicle never try to out-run a tornado. Get out of the vehicle and take immediate shelter.

11.46.4.3. **(Added)** After a tornado has passed, consideration should be given to the following:

11.46.4.3.1. **(Added)** Help injured or trapped personnel. Render first aid as required.

11.46.4.3.2. **(Added)** Be aware of gas leaks, electrical system damage, and sewer/water line damage that may pose potential injury or death.

11.46.5. **(Added)** Cold Weather Procedures:

11.46.5.1. **(Added)** When snow or ice is present, the Pro Super will evaluate conditions of the ramp prior to personnel performing maintenance on the flight line. The Pro Super will notify MOC when the ramp is safe for maintenance activities.

11.46.5.2. **(Added)** Thrust reversers will not be opened for convenience reasons, i.e. to prevent engine wind milling, during periods of freezing precipitation or left open with the aircraft unattended when freezing precipitation is forecasted.

11.46.6. **(Added)** Heat Related Procedures:

11.46.6.1. **(Added)** Maintenance Group supervisors will closely monitor personnel when the ambient dry bulb temperature is above 85 degrees Fahrenheit. Supervisors will ensure there is plenty of cool water available for personnel.

11.46.6.2. **(Added)** Base Bioenvironmental Engineering (BEE) is responsible for producing the Wet Bulb Globe Thermometer (WBGT) measurements during thermal stress periods IAW AFI 48-151, Thermal Injury Prevention Program.

11.46.6.3. **(Added)** MOC will obtain the WBGT readings during thermal stress periods and provide information to supervision. When the WBGT reading reaches 85 degrees Fahrenheit, readings are taken hourly until the index goes below 85 degrees Fahrenheit.

11.46.6.4. **(Added)** Supervision will take appropriate measures to avoid heat related injuries.

BRYAN M. BAILEY, Colonel, USAF
Commander, 911th Airlift Wing

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

TO 1C-17A-6, Inspection Requirements Manual, 29 June 2022

TO 1C-17A-2-10JG-10-1, Organizational Maintenance Ground Handling Parking/Mooring, 16 June 2022

DAFI 13-213, Airfield Driving, 4 February 2020

911 AWI 13-213, Airfield Driving, 9 March 2018

AFI 48-151, Thermal Injury Prevention Program, 2 May 2022

Adopted Forms

AFRC Form 174, Lost Tool/Object Report

AFRC Form 175, Broken/Missing/Removed Tools and Equipment

AFRC Form 177, Consolidated Tool Kit Inventory and Control Log

AFTO Form 350, Repairable Item Processing Tag

AF Form 483, Certificate of Competency