

**BY ORDER OF THE COMMANDER
301ST FIGHTER WING**



**AIR FORCE INSTRUCTION 21-
101_AFRCSUP_301 FIGHTER WING
Supplement**

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MAINTENANCE

**AIRCRAFT AND EQUIPMENT
MAINTENANCE MANAGEMENT**

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This publication implements Air Force Policy Directive (AFPD) 21-1, Maintenance of Military Material, AFI 21-101_AFRCSUP, Aircraft and Equipment Maintenance Management. It is a supplement to the Air Force Reserve Command (AFRC) Supplement to the basic Air Force Instruction (AFI). It provides guidance and procedures to safely and effectively maintain, service, and repair weapon systems and support equipment for members of the 301 Fighter Wing (FW). It applies to individuals at all levels in the 301 FW which includes the 301 Maintenance Group (MXG). This publication may not be supplemented. 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. Ensure all records created as a result of processes prescribed in this publication are maintained in accordance with AFI 33-322, *Records Management and Information Governance Program*, and disposed of in accordance with the Air Force Records Disposition Schedule (RDS) located in the Air Force Records Management System. The use of the name or mark of any specific manufacturer, commercial product, commodity, or service in this publication does not imply endorsement by the Air Force.

1.15.2. **(301FW)** Personal items, such as electronic devices (cell phones, laptops, etc.) are not authorized on the flightline or any other aircraft maintenance areas.

1.15.3. **(301FW)** Exception for electronic devices. Only official government issued electronic devices/cell phones may be carried and used on the flightline or maintenance areas. Devices will

not be used within 25 feet of live munitions. Devices must not be carried/used in fuel servicing safety zones and be at least 50 feet away from aircraft when being used.

2.4.26. **(301FW)** Due to extreme hazards involved in this task, procedures below will be strictly followed.

2.4.26.1. (Added-301FW) All explosives for weapons systems, countermeasures and their components will be completely removed when public access is permitted.

2.4.26.1.1. (Added-301FW) The Egress System is de-armed based on the nature of the static display. I.E. Public access with cockpit restricted, Public Access, Cockpit Open, Cockpit Open, Alternate Method. Ensure the correct task is completed.

2.4.26.1.2. (Added-301FW) Weapons personnel will remove live ordnance from aircraft.

2.4.26.1.3. (Added-301FW) Crew Chiefs prepare aircraft for static display, if access is granted for the public to enter the cockpit all procedures will be accomplished.

2.4.26.2. (Added-301FW) Assigned escort carrying a Land Mobile Radio (LMR) will brief and ensure visitors do not smoke or utilize electronic devices, (i.e. cell phones) within 50 feet of the aircraft.

2.4.26.2.1. (Added-301FW) Cameras are not allowed. Photo passes are obtained from the 301st Public Affairs and kept on file with the 301 MXG/MOC. Pictures of the crew station are not permitted under any circumstances.

2.4.26.3. (Added-301FW) During an emergency, the assigned escort immediately evacuates all personnel in the area to a minimum distance of 300 feet.

2.4.26.3.1. (Added-301FW) Notify the 301 AMXS, MXS, MOC and flightline expediter as applicable via LMR.

2.4.68.1. (Added-301FW) 301MXG/CC mandates the use of antipersonnel run screens at all times. Any deviation requires prior approval by the MXG CC/CD.

2.4.68.1.1. (Added-301FW) During TDY or deployments, the OIC or Superintendent will be the approving official.

2.7.13. **(301FW)** An aircraft is considered “de-armed” when fuel tanks are mechanically safe; when all impulse carts are removed; stations loaded with missiles are electrically isolated; gun clearing cam holdback tool and gun electrical safety pin are installed, rounds counter set to 990 and “On”; chaff/flare and 2.75” rockets electrically/mechanically safe.

2.7.13.1. (Added-301FW) All aircraft are required to be de-armed and downloaded prior to hangar entry. An aircraft is considered “de-armed and downloaded” when all impulse carts are removed, all munitions are downloaded, gun clearing sector holdback tool and gun electrical safety pin installed, rounds counter set to 990 and “On”, all 20MM ammunition is removed, chaff/flare removed, and 2.75” rockets downloaded.

2.7.13.1.1. (Added-301FW) Safety-wired cartridge retainer breeches certify that impulse cartridges are removed. A breech will be considered “armed” if the safety wire is broken or not present.

2.7.13.2. (Added-301FW) Maintenance personnel follow all safety instructions as well as wearing of PPE and clothing required by the applicable technical orders, manuals, Air Force Occupational Safety and Health (AFOSH) standards and operating instructions.

2.7.13.3. (Added-301FW) Ensure that only authorized maintenance is performed on explosive loaded aircraft. All personnel who may be dispatched to work on explosives loaded aircraft receive explosive loaded aircraft training per TO 11A-1-33. Each section is responsible for training and tracking their assigned personnel.

2.7.13.4. (Added-301FW) Only trained personnel under the supervision of an individual who understands the hazards and risks involved in these operations are to use these procedures. In addition, only personnel possessing at least a 2W1 7-level or above will perform visual verification that rounds are in the clearing or firing cycle, including all End of Firing Day and gun thru flight inspections.

2.7.13.5. (Added-301FW) Aircraft being towed to or from taxiways Alpha, Echo, Bravo, Delta, Papa, Live Ordnance Loading Area (LOLA), or End of Runway (EOR) , do not require de-carting or downloading of training munitions; 20MM TP ammunition, chaff/flares, captive missiles, impulse cartridges, inert bombs, or BDU-33s.

2.7.13.6. (Added-301FW) Aircraft will not be towed to the Spad Ramp while loaded with 20MM High Explosive (HE) ammunition, live bombs, 2.75” rockets and/or missiles. Any exceptions to this policy must receive MXG/CC approval.

2.7.13.7. (Added-301FW) When an aircraft loaded with live ordnance requires towing to LOLA, qualified personnel will ensure it is safe for maintenance and all live munitions are made safe prior to towing. No other maintenance will be performed, until downloaded.

2.7.13.8. (Added-301FW) Prior to performing the following maintenance, aircraft will be de-armed and all munitions downloaded:

2.7.13.8.1. (Added-301FW) Scheduled washing and/or painting of the aircraft.

2.7.13.8.2. (Added-301FW) Fuel system maintenance requiring hangar entry or placement on alternate fuel cell.

2.7.13.8.3. (Added-301FW) Trim Pad or Hush House high power runs.

2.7.13.8.4. (Added-301FW) X-Ray.

2.7.13.9. (Added-301FW) Prior to performing the following maintenance, aircraft will be de-armed, missiles electrically isolated from launcher(s), and 2.75” rockets downloaded:

2.7.13.9.1. (Added-301FW) Anytime the Stores Management System (SMS) switch is required to be turned on.

2.7.13.9.2. (Added-301FW) All maintenance engine runs.

2.7.13.9.3. (Added-301FW) During jacking of aircraft, more than one gear, captive missiles and 20MM may remain loaded.

2.7.13.10. (Added-301FW) Aircraft storage for weather and short periods of time; aircraft is de-armed and partially downloaded, only captive missiles and 20MM TP ammunition may remain loaded but must be approved by 301 AMXS/MXS commanders or superintendents. However, all

other 20MM with a HE component are not authorized to be in aircraft maintenance hangars, transient or Spad Ramp.

2.7.13.10.1. (Added-301FW) When towing aircraft to an enclosed facility, the tow team supervisor initiates the LCL-301MXG-10-21 Hangar Entry Checklist, prior to starting the towing operation.

2.7.13.10.2. (Added-301FW) Items 1 thru 1.3 shall be completed prior to movement of the aircraft. Complete and secure LCL301MXG-10-21 to aircraft in plain view when towing operation is finished

2.7.13.10.3. (Added-301FW) Weapons loading personnel ensure aircraft are properly prepared for hangar entry IAW applicable job guides, TOs, and this publication, when notified by the expediter.

2.7.13.11. (Added-301FW) Live ordnance is only permitted to be loaded on aircraft at the LOLA and alert facility. All other locations are permitted to have aircraft loaded with 20MM TP and Target Practice Tracer (TPT) ammunition, chaff/flare, captive carry training missiles, inert bombs and BDU-33s provided the trailers servicing these aircraft do not remain at the designated parking areas longer than the loading or unloading operation being conducted.

2.7.13.11.1. (Added-301FW) Anytime an abnormal condition is encountered, all operations will cease.

2.7.13.11.2. (Added-301FW) In case of drop/collision or partially armed condition, the area will be evacuated initially to a minimum of 300 feet until On Scene Commander/Explosive Ordnance Disposal (EOD) personnel either extends distance or determines it is safe to resume operations.

2.7.13.11.2.1. (Added-301FW) Contact the supervisor, maintenance expediter, and MOC.

2.7.13.11.3. (Added-301FW) In the event of fire, evacuate non-essential personnel to minimum withdrawal distances based on the type munitions loaded.

2.9.22. (Added-301FW) Evaluates maintenance quality, the qualifications of personnel, and training deficiencies by working with Flight Commander/Flight Chief and by observing personnel performance. Review MSEP results and trends, target areas for improvement, validates all self-inspection results within their span of control. Thoroughly investigate all assigned work center failed task evaluations and non-compliant self-inspection items. Review corrective action summaries submitted by the immediate supervisor for all failed task evaluations on a monthly basis.

2.10.4.1.1. (Added-301FW) Double hearing protection shall be worn within 50 feet of operating jet engines and -60 power units.

2.10.32. (Added-301FW) Ensure maintenance is performed by personnel who are trained, qualified, and certified, unless under the direct supervision of a trainer or certifier. Evaluate maintenance quality and training deficiencies by working with element supervisors and by observing personnel performance. Review MSEP results and trends, target areas for improvement, and validate all self-inspection results within their span of control.

2.12.28. 1 (Added-301FW) Work center supervisors will track PE's for all assigned personnel and coordinate with QA to schedule upcoming evaluations.

2.12.29. (Added-AFRC) Schedule test sets, support equipment, and shop equipment into the corrosion control facility (T-3).

2.12.30. (Added-301FW) Attend quarterly MSEP meetings. Thoroughly investigate all assigned work center failed task evaluations and non-compliant self-inspection items. Submit corrective action summaries for evaluations in accordance with Local QA Procedures.

3.6.12. (Added-301FW) Track all discrepancies identified during "Red Ball" maintenance and ensure documentation is accomplished in accordance with TO 00-20-1.

3.7.11. (301FW) If IMDS goes down, debrief will manually debrief the pilot. Debrief will complete an AFTO Form 349, retain one copy and provide specialists and expeditors with an additional copy. Once IMDS is restored, debrief will upload completed 349s. Manually assigned job numbers that were used to debrief the pilot will be used when entering the discrepancies into IMDS.

3.8.3. (Added-301FW) MXG/CC authorizes the establishment of a DCC program.

3.8.3.1. (Added-301FW) The objective of a DCC program is to directly assign a maintenance person to each aircraft to provide continuity/accuracy of aircraft forms, aircraft status, scheduled maintenance, and improve aircraft appearance. DCCs manage and supervise maintenance on their aircraft. DCCs are selected on the basis of initiative, management, leadership ability, and technical expertise.

3.8.3.2. (Added-301FW) DCC/ADCC will:

3.8.3.2.1. (Added-301FW) Work with structures workcenter to ensure DCC, ADCC and pilot stencils are created and attached to correct locations on aircraft.

3.8.3.2.2. (Added-301FW) Accompany aircraft to phase; assist the inspection dock NCOIC as needed.

3.8.3.2.3. (Added-301FW) Assist the phase dock NCOIC with completing the required document review and validation at the end of the inspection.

3.8.3.2.4. (Added-301FW) Monitor overall status of aircraft to include:

3.8.3.2.4.1. (Added-301FW) Daily review of IMDS 380 screen to ensure IMDS matches AFTO 781 forms.

3.8.3.2.4.2. (Added-301FW) Daily review of AFTO 781 forms for accuracy. Ensure forms are complete and match the Forms Master in QA.

3.8.3.2.4.3. (Added-301FW) Ensure delayed discrepancies are correctly deferred with parts on order as required.

3.8.3.2.4.4. (Added-301FW) All parts serially tracked by IMDS are properly loaded and installed against the aircraft.

3.8.3.2.5. (Added-301FW) Coordinate downtime with production to work delayed discrepancies, as required.

3.8.3.2.6. (Added-301FW) Maintain daily cleanliness of aircraft and serviceability of all -21 equipment.

3.8.3.2.7. (Added-301FW) Monitor the overall flow of maintenance and aircraft forms/IMDS during prolonged amounts of down time, scheduled maintenance, CANN, etc.

3.8.3.2.8. (Added-301FW) Perform scheduled document reviews/records checks using applicable MIS and automated aircraft forms.

3.8.3.2.9. (Added-301FW) Identify aircraft discrepancies, maintenance and support requirements to the expeditor.

3.8.3.2.10. (Added-301FW) Coordinate with supervision to be assigned to their aircraft as much as the schedule will allow. When not assigned, the DCC/ADCC is still responsible for all DCC/ADCC responsibilities described above.

3.8.3.3. (Added-301FW) APG Section will:

3.8.3.3.1. (Added-301FW) Ensure each assigned aircraft has a SrA or above assigned as a DCC and at least one ADCC, as required.

3.8.3.3.2. (Added-301FW) Conduct formal DCC Induction Ceremonies for newly assigned DCCs.

3.9.7. (Added-301FW) Specialist Expeditor will:

3.9.7. 1 (Added-301FW) Ensure all maintenance is accomplished IAW the Production Superintendent's priorities.

3.9.7.2. (Added-301FW) Coordinate on all aircraft maintenance actions with the Flightline Expeditor.

3.9.7.3. (Added-301FW) Remain on the flightline, to the fullest extent possible, when maintenance personnel are performing flightline maintenance and launching/recovering aircraft.

4.4.3.1.4.1. (Added-301FW) During maintenance actions within the Egress facility, all doors will be secured and marked to prevent unauthorized access. The applicable Hazard Class/Division fire symbol will be posted on shop access doors to notify non egress personnel of ongoing explosive operations.

4.4.3.1.4.2. (Added-301FW) Only egress section personnel will be authorized unescorted entrance to the egress licensed explosive location.

4.4.3.1.4.3. (Added-301FW) Ejection seat/canopy will not be removed/installed on the flightline, unless deemed absolutely necessary by maintenance supervisor.

4.4.3.1.3.4. (Added-301FW) Egress maintenance will NOT be performed on an aircraft on jacks when landing gear is clear of ramp or floor.

4.4.3.1.3.5. (Added-301FW) No hand held radio or cell phone use is permitted within 10 feet of Egress explosive operations.

4.4.3.2.6.2.2.4. (Added-301FW) A QA Egress Augmentee Inspector will be used when no Egress personnel are assigned to the QA Section.

4.5.1.9. (Added-301FW) Ensure AGE is used to support aircraft and/or flightline operations. If AGE is required for mission essential operations outside NAS JRB Fort Worth for more than 48 hours, it shall require MXG/CC coordination and/or approval.

4.9.4.9. (Added-301FW) Aircraft Inspection Zones:

4.9.4.9.1. (Added-301FW) Zone inspections are conducted to verify accomplishment of phase inspection work cards; to include, security of components, structural integrity, chafing and FOD.

4.9.4.9.2. (Added-301FW) Zone inspections will be predetermined in coordination with QA and MXS leadership, identified on the monthly E&I plan and approved by MXG CC/CD.

4.9.4.9.3. (Added-301FW) Each zone will be rated independently. Each zone shall include a chafing inspection.

4.9.4.9.4. (Added-301FW) No maintenance shall be performed in any zones between the Inspection Flight Final Inspection and QA QVI.

4.9.4.9.5. (Added-301FW) QA has the authority to waive the requirement to have all maintenance completed in a zone prior to conducting a zone inspection. This process shall be kept to a minimum wherein not performing the inspection will halt the Phase flow. Waiver requires approval from QA Superintendent, Chief Inspector in the absence of the Superintendent, or MXG CC/CD.

4.9.4.9.6. (Added-301FW) Any incomplete maintenance actions or discrepancies discovered during a zone inspection shall be documented and identified to the QA inspector prior to inspection.

4.9.4.9.6.1. (Added-301FW) Any IMDS and/or aircraft forms discrepancies discovered by a qualified QA inspector will be rated for category/class against the responsible workcenter of the phase workcard(s). Non phase work maintenance related fails will be rated as a quality verification inspection (QVI) fail against the applicable workcenter and will not reflect as a fail for the applicable zone and/or Inspection Flight.

4.9.4.10. (Added-301FW) The Inspection Flight Supervisor/Section/Dock Chief will:

4.9.4.10.1. (Added-301FW) Ensure all maintenance is completed in an aircraft zone prior to initiating a final inspection.

4.9.4.10.2. (Added-301FW) Ensure only qualified personnel perform final inspections for aircraft zones.

4.9.4.10.3. (Added-301FW) Ensure IMDS and/or aircraft forms, as applicable, are documented prior to coordinating QA inspection.

4.9.4.10.4. (Added-301FW) When determined a zone is ready for inspection, coordinate through MOC to dispatch QA.

6.5.7. (Added-301FW) Review and submit wing depot-level assistance requests developed in accordance with TO 00-25-107.

6.6.9.1. (Added-301FW) A qualified (7-level or above) NDI technician will be assigned as a QA augmentee. (T-2).

6.6.12. (Added-301FW) QA Augmentation. If a functional area does not warrant a full time position in QA, but specialized expertise is required, the QA Superintendent will select qualified technicians to augment QA in coordination with the affected unit Maintenance Supervision.

6.6.12.1. (Added-301FW) The QA Superintendent will maintain a current listing of augmentees.

6.6.12.2. (Added-301FW) The QA Superintendent will establish the duties of the augmentee.

6.6.12.3. (Added-301FW) QA augmentees require the same training and EPE requirements of other QA inspectors.

6.7.2.7.4.4.6. (Added-301FW) Wing Wire Harness Installation (prior to LEF install)

6.7.6.1.3.2. (Added-301FW) No-notice PEs are authorized without prior coordination.

6.9.5. (301FW) PIM responsibilities may be delegated or shared across QA.

6.10.4.4. (Added-301FW) Ensure locally developed products are reviewed for safety and adequacy of procedures by the QA SME.

7.2.4. (301FW) QA will ensure that copies of finalized impoundment reports are maintained and disposed of in accordance with applicable guidance.

7.3.1.2.4. (Added-301FW) When a system malfunction repeats for a third time, the Pro Super will inform the applicable Commander/MX Officer/Superintendent for consideration of impoundment.

7.4.1. (301FW) Only individuals directly involved in the management, safe for maintenance procedures, troubleshooting, or repair of impounded aircraft or equipment, or their related records; are authorized access to such aircraft/equipment.

7.4.4. (Added-301FW) Convene an impoundment meeting with the necessary team members and develop a plan using established checklists/technical orders to guide sequence of actions.

7.4.5. (Added-301FW) Ensure all blocks on impoundment checklist are complete prior to submitting aircraft/equipment forms to QA for review.

7.5.1. (301FW) The decision to impound aircraft/equipment is made by the Impoundment Authority (IA) who appoints the impoundment official.

7.6.2.1. (Added-301FW) MOC will notify appropriate individuals and staff agencies of aircraft/equipment impoundments.

7.6.3. (301FW) MOC will notify PS&D Section to limit access to aircraft/equipment historical records. MOC will also notify Analysis, MIS and DBM to isolate the aircraft or equipment in order to prevent any changes and maintain the integrity of the automated historical data until the aircraft or equipment is released.

7.6.5.1. (301FW) The Impoundment Official will determine whether impoundment team members will be relieved of all other duties until released.

8.2.1.3. (Added-301FW) Unattended CTKs that have inoperable or no brakes are kept locked and secured to a permanent fixture for stability and protection against wind forces or when applicable.

8.2.1.4. (Added-301FW) When CTKs, equipment or consumables are transported to the flightline on push carts with no brakes, the push cart will be chocked or restrained to prevent from rolling away or into aircraft.

8.2.1.5. (Added-301FW) Small items, including consumables and electronic devices (eTools), not part of a CTK, that present a Foreign Object hazard and can fit inside the CTK shall be stored in the CTK when left unattended.

8.2.1.6. (Added-301FW) When unattended, large items, not part of the CTK, such as fuel wrap-around hose or tire jack cart shall be kept neatly organized and away from work areas. Items equipped with locking devices shall be secured to the CTK or a permanent fixture.

8.2.1.7. (Added-301FW) Personnel are permitted to leave their communication cord and head set connected to the aircraft unattended, if the aircraft is scheduled to fly within thirty minutes. Otherwise, the equipment will be stored in the CTK.

8.2.1.8. (Added-301FW) Store CTKs, tools, electronic devices (eTools), and equipment in designated locations for positive control and ease of inventory. Personnel are responsible for control of the CTK and equipment while in their possession and signed out to them.

8.2.1.9. (Added-301FW) All wing agencies and Temporary Duty (TDY) units will control CTKs, tools, electronic devices (eTools, test sets) and other equipment, dispatched to the flightline, runways, taxiways and maintenance areas IAW this instruction.

8.2.2.2. (Added-301FW) Annual inventory will be performed by task qualified personnel and will include the following:

8.2.2.2.1. (Added-301FW) Ensure the Master Inventory List (MIL) matches the contents in the CTK.

8.2.2.2.2. (Added-301FW) Local manufactured (LM) tools are identified on the MIL.

8.2.2.2.3. (Added-301FW) All tools are identified on the MIL with minimum description and size.

8.2.2.2.4. (Added-301FW) All equipment is properly marked with Equipment Identification Designators (EID).

8.2.2.2.5. (Added-301FW) All tools and equipment are inspected IAW applicable tech data or manufacturer manual. Ensure removal and replacement of tools is documented in TcMax® and local forms as required.

8.2.2.2.6. (Added-301FW) All tools and equipment are clean and serviceable.

8.2.2.2.7. (Added-301FW) No FO in the CTK, SE, or FO container.

8.2.2.2.8. (Added-301FW) All tools/equipment properly fit in the foam inlay (when used).

8.2.2.2.9. (Added-301FW) CTK MIL, AFRC Form 175, Missing/Removed Tools and Equipment, and AFRC Form 177 accurate and complete.

8.2.2.3. (Added-301FW) Inventory CTKs/tools or SE prior to signing out and check for serviceability.

8.2.2.3.1. (Added-301FW) All SE accessories are accounted for and inside designated containers.

8.2.2.3.2. (Added-301FW) Torque wrenches set to lowest increment and exercised prior to use.

8.2.2.3.3. (Added-301FW) No FO in the CTK, SE, or FO container.

8.2.3.2.5. (Added-301FW) Owning section supervisor or tool room manager files tool/equipment warranty documents in the CTK program binder.

8.2.3.2.5.1. (Added-301FW) Warranted tools and equipment shall not be modified when such modification voids the warranty.

8.2.3.2.5.2. (Added-301FW) Unserviceable warranty tools will be tagged with a AFTO 350 Tag and will be physically segregated from non-warranty tools.

8.2.4. (301FW) Upon return to the tool room, tools in each CTK including consumables, are inspected for serviceability.

8.2.4.1. (Added-AFRC) Expendable hand tools such as blades, apexes, files, and file cleaners consumed during use will be tracked in TcMax® (T-2).

8.2.4. 2 (Added-301FW) The individual that signs for the CTK is responsible for accountability of all issued items.

8.2.4.3. (Added-301FW) Inventory is checked by both the responsible individual and Support Section/tool room personnel.

8.2.4.4. (Added-301FW) Replace unserviceable tools to the specified quantity and update TcMax® spare tools inventory.

8.2.4.5. (Added-301FW) If spare items, to include consumables, are not available for replacement, the quantity removed shall be annotated accordingly on the AFRC Form 175 of the applicable CTK.

8.2.4.6. (Added-301FW) HAZMAT is replaced on a one-for-one case basis. The consumed HAZMAT package/container is turned in to the tool room personnel for the replacement HAZMAT item. This applies to HAZMAT in CTKs as well as individually issued HAZMAT. Tool room personnel update TcMax® accordingly.

8.2.5. **(301FW)** During circumstances where there is an increased operational tempo, such as an exercise or sortie surge, it may be necessary to authorize line turnover of tools to effectively execute the mission. When or if that occurs, the below accountability procedures will be utilized.

8.2.5.1. (Added-301FW) With Squadron Superintendent or higher approval, line turnover of tools can commence at shift change. Normal tool turn in procedures should be followed to the maximum extent possible.

8.2.5.2. (Added-301FW) In the event line turnovers are conducted, the AFRC Form 177 must be utilized. In addition to the minimum requirements of the 177, the form will be completed as follows when turning over a CTK.

8.2.5.2.1. (Added-301FW) An AFRC Form 177 will be maintained in each CTK and used to record CTK turnover.

8.2.5.2.2. (Added-301FW) Outgoing shift personnel must complete a tool inventory and coordinate with a work center supervisor or CTK custodian to accomplish a Line Turnover.

8.2.5.2.3. (Added-301FW) A workcenter supervisor (MSgt or above) or CTK custodian will then accomplish a supervisory inventory verifying all tools and equipment are accounted for and the AFRC Form 177 is completed correctly. They will then complete the "IN TIME/SIGNATURE" block of the AFRC Form 177.

8.2.5.2.4. (Added-301FW) Incoming shift personnel will then inventory the box; if everything is accounted for they will complete the next available row and sign the "OUT TIME/SIGNATURE" block of the AFRC Form 177.

8.2.5.3. (Added-301FW) In addition to the CTK turnover requirements, the following must be accomplished to ensure accountability of all CTKs, iPADS, and equipment and properly documented in TC-MAX.

8.2.5.3.1. (Added-301FW) Both incoming and outgoing individuals will inventory all items.

8.2.5.3.2. (Added-301FW) List all items to be transferred on an AF IMT 1297. For each item, put the EID in the “Stock Number” block and nomenclature in the “Description of Item” block.

8.2.5.3.3. (Added-301FW) The incoming individual will print and sign in the “Issued To” blocks.

8.2.5.3.4. (Added-301FW) The inventory will also be verified by one of the following: workcenter supervisor (MSgt or above) or CTK custodian.

8.2.5.3.5. (Added-301FW) The individual verifying the inventory will sign in the “Issued By” block of the AF Form 1297.

8.2.5.3.6. (Added-301FW) The outgoing individual will take the AF IMT 1297 to the support section that issued the items. The support section representative will transfer accountability of the items listed on the AF IMT 1297 to the incoming individual in TC-MAX.

8.2.5.3.7. (Added-301FW) The outgoing individual will verify all accountable items have been transferred in TC-MAX before departing.

8.2.6.1. **(301FW)** If it is suspected that a tool or object may be aboard an aircraft already in operation, the expediter shall notify MOC immediately.

8.2.6.1.1. (Added-301FW) If the aircraft is already in flight, MOC shall then notify the MXG/CC, QA, and AMXS/MXS CC or designated senior officer in charge for a coordinated decision to recall the aircraft if necessary.

8.2.6.1.2. (Added-301FW) If the aircraft has not taken off, MOC shall notify SOF.

8.2.6.1.2.1. (Added-301FW) The SOF shall notify the pilot and advise him to stand-by until the determination is made to recall the aircraft.

8.2.8.1. **(301FW)** Mark all individually issued equipment with the owner’s first initial, last name and employee number (i.e., J. Doe, 01234).

8.2.9.4. (Added-301FW) Keep all rag containers secured to ensure accountability.

8.2.9.5. (Added-301FW) Dirty rags will not be mixed with clean rags.

8.2.9.6. (Added-301FW) The spare rag supply point will be secured to prevent uncontrolled rags from entering the work area.

8.2.9.7. (Added-301FW) Only personnel working in the Support Section are authorized access to the replacement rags.

8.2.9.8. (Added-301FW) Rags in Hydrazine Response kits are bundled in predetermined quantities to allow expedient accountability without hindering emergency actions. All dirty rags must be accounted for prior to replenishment.

8.2.14. **(301FW)** Vehicles and trailer mounted CTKs are signed out/in of TCMax® at the beginning and end of each shift, and upon transfer to a different individual.

8.2.14.1. (Added-301FW) Permanently stored response equipment in vehicles or trailers will be secured and assigned to a vehicle CTK.

8.2.16.1. (Added-301FW) Maintain security of and limit access to the tool storage area. When no tool room personnel are available, Flight/Section Chiefs or shift supervisor will control access to tool rooms.

8.5.4.1.1. (Added-301FW) Personnel involved in aircraft launch activities to include Redball maintenance will perform an inventory of CTKs and other equipment prior to aircraft taxi.

8.9.2.3.1.1. (Added-301FW) Personnel have one hour, or prior to aircraft operation to perform their initial search. If item is found within the initial hour you are not required to complete the AFRC Form 174.

8.9.2.3.2. **(301FW)** If any item is lost within the maintenance complex, an AFRC Form 174, Lost Tool/Object Report, will be initiated after an initial search. Once initiated, follow procedures on filling out the form in the following paragraphs.

8.9.2.3.2.1. (Added-301FW) Immediately notify Pro Super, expediter and MOC.

8.9.2.6.4. (Added-301FW) Local procedures for a lost tool/object report are as follows:

8.9.2.6.4.1. (Added-301FW) Fill out all fields in the form according to their respective titles.

8.9.2.6.4.2. (Added-301FW) Print Last name and first initial of the personnel notified.

8.9.2.6.4.3. (Added-301FW) Provide a detailed description in the "Area Item Lost" block for search purposes.

8.9.2.6.4.4. (Added-301FW) Item No. 1, Name of Individual(s) that Lost Object, is adapted with appropriate terms of circumstance when the field does not accurately describe the incident. For example, if an item is discovered missing or broken and the broken piece is not found from an aircraft during an inspection, the individual lines through "Lost," and writes "identified missing," or "found broken" unless the technician actually did lose the item. In either case, write the names of the individuals involved in losing or identifying missing/broken items.

8.9.2.6.4.5. (Added-301FW) Items are legibly completed with individual initials, time, and date.

8.9.2.6.4.6. (Added-301FW) For all "Not Found" lost items, block #8 of AFRC Form 174 is signed by a SCR qualified maintenance superintendent or officer. Signing authorities legibly print their name next to their signature.

8.9.2.6.4.6.1. (Added-301FW) The section supervisor verifies AFRC Form 174 is completely filled out and filed accordingly. The supervisor will ensure a completed copy is given to QA for documentation in a MAJCOM approved database or local tracking log immediately after incident release.

8.9.2.6.4.7. (Added-301FW) When the lost item is from aircraft/AGE and components thereof, the lost item is written up on a Red X in the associated forms. If later found, sign off the affected aircraft/equipment forms by Red X qualified personnel.

8.9.2.6.4.8. (Added-301FW) For lost and later found CTK items and any item other than aircraft/AGE/components thereof, block #8 of the AFRC Form 174 will be signed by the section supervisor minimally and a copy provided to QA for documentation in the MAJCOM approved database and/or tracking log.

8.9.2.6.4.9. (Added-301FW) AFRC Form 174 must be turned into QA within 24 hours of completion. QA will verify the form is correctly filled out, signed by the proper official, and document the database or local tracking log.

9.19.6. (Added-301FW) Items placed in TNB will be identified on AFTO Form 350. Minimum information required on AFTO Form 350 for serviceable assets place in TNB will be as follows.

9.19.6.1. (Added-301FW) Block 1 - JCN

9.19.6.1.1. (Added-301FW) JCN shall match IMDS & aircraft forms.

9.19.6.2. (Added-301FW) Block 2 - ID/SER NO.

9.19.6.3. (Added-301FW) Block 14 - DISCREPANCY

9.19.6.3.1. (Added-301FW) Discrepancy shall describe part removed, reason for removal, and its condition (serviceable / removed to FOM)

11.6.6. (Added-301FW) A requirement for Red Ball maintenance may be initiated by maintenance personnel by notifying the production superintendent, expediter, or by the aircrew notifying Supervisor of Flying (SOF).

11.6.6.1. (Added-301FW) The SOF will notify the expediter, MOC and the production superintendent.

11.6.7. (Added-301FW) Technicians responding to the Red Ball will exercise caution, particularly if the engines are operating. Until the engine has been shut down, no panels or doors will be opened where there is a possibility of FOD to engine.

11.6.8. (Added-301FW) If engines are running, two-way communication will be established with the aircrew prior to attempting any maintenance actions. Aircraft will be chocked while maintenance is being performed.

11.6.9. (Added-301FW) The aircraft will be made safe for maintenance in accordance with all applicable technical data prior to maintenance being performed. Technical data will be available and used during all Red Ball maintenance activities.

11.6.10. (Added-301FW) All maintenance requiring change to aircraft status will be documented in IMDS and acft forms. If IMDS is down, a manual job number will be generated by MOC and Debrief/Dispatch. Debrief/Dispatch will enter the discrepancy in IMDS when the MIS is operational.

11.6.11. (Added-301FW) An Exceptional Release (ER) is required following Red Ball maintenance to ensure all follow-on requirements have been met.

11.7.3. (Added-301FW) Ensure MOC is informed of personnel and equipment deployed in MRTs and status of the recovery.

11.8.3.6.1.1. (Added-301FW) Neck lanyards will be stowed when within 25 feet of operating engines.

11.8.3.6.1. (301FW) If an armband is used it shall be worn on the upper part of the arm between the shoulder and the elbow.

11.8.3.6.4. (301FW) Jewelry, such as rings (any material), watches, bracelets and necklaces, that presents a potential for catching, snagging, pulling or tearing shall be removed prior to entering industrial areas i.e. hangar and flightline.

11.8.3.6.4.1. (Added-301FW) Watches are authorized to be worn on the flightline and maintenance areas, however, watches shall be removed and stored prior to performing any maintenance or inspection.

11.8.3.6.6. (Added-301FW) Hearing protectors are inspected for serviceability and securely worn around running engines and not left unattended on the flightline.

11.8.3.6.6.1. (Added-301FW) Ear protectors, communication headsets and eyewear are the only headgear authorized for wear while working on or within danger zones of aircraft with operating engines. Double hearing protection shall be worn within 50 feet of operating jet engines and -60 power units.

11.8.3.6.6.2. (Added-301FW) Exception for drink containers. Personnel are authorized to use plastic and metal drink containers with attached/secured lid on the flightline/hangar bays. Glass drink containers and metal cans are prohibited. In addition, when not being consumed or when aircraft engines are operating, the drink containers must be stored/secured. Drink containers are prohibited on top of CTKs, carts, equipment and in the vicinity of any maintenance activity that involves the use of POL or chemical products.

11.8.3.6.7. (Added-301FW) Wear of the seasonal watch cap is authorized. Watch cap shall be removed when within 50 feet of any operating aircraft engine.

11.8.3.10. (301FW) FOD walks shall be accomplished prior to the start of the daily flying period by all available aircraft/equipment maintenance personnel. All aircraft operating areas up to the adjacent taxiways areas are to be inspected and made free of FO. Special attention will be given to cleaning of cracks and expansion seams in hard surfaced areas where engines will be operated.

11.8.3.10.1.1. (Added-301FW) Maintenance flight chiefs and section supervisors ensure The FOD Boss (if available) is utilized on the flightline by the applicable maintenance organization that is tasked to manage the daily FOD walk before the first flight(s) of the day.

11.8.3.10.1.2. (Added-301FW) FOD roller magnets (if available) are used during the FOD walk. Areas of coverage on the flightline shall be determined by the organization leading the FOD walk that day.

11.8.3.10.1.3. (Added-301FW) Vehicles equipped with magnets will be driven and magnets inspected twice daily and all FOD collected will be turned into the QA FOD Monitor for tracking purposes.

11.8.3.10.2. (Added-301FW) AMXS personnel report to the aircraft parking ramp with appropriate hearing protection and line up by direction of the assigned supervisor from the section in charge. Drinking containers are not authorized during FOD walk (i.e. coffee cups, water bottles).

11.8.3.10.3. (Added-301FW) MXS personnel will report to the ECP facing the hangar and perform FOD walk from that point through the entire hangar. Returning to main hangar doors to conclude FOD walk. Drinking containers are not authorized during FOD walk (i.e. coffee cups, water bottles).

11.8.3.10.4. (Added-301FW) Common use areas such as the EOR, LOLA, Hot Pit area, Aircraft Wash Rack, Trim Pad and the Hydrazine Pad shall be FOD walked prior to use by the using organization.

11.8.3.10.5. (Added-301FW) Aircraft parking spots will be thoroughly inspected for foreign objects immediately after safe for maintenance procedures are accomplished by all maintainers in the area. Parking spots will also be inspected after aircraft launch.

11.8.3.15. (301FW) Vehicle operators will perform a visual FOD inspection prior to driving on taxiways and other aircraft parking ramps. Verify all tire air valve covers/caps are accounted for. Any vehicle leaving the paved surface while on above mentioned areas must re-accomplish the FO check upon re-entry onto the paved surface. Vehicles stop at Entry Control Points (ECPs), remove FO from tires, roll forward to inspect portion of tire not visible during initial tire inspection, place FO in vehicle FO container, and proceed.

11.8.3.15.1. (Added-301FW) LM or purchased FO removal tools are authorized. If used, they shall be etched with the vehicle identification number and secured to the vehicle keyring.

11.13.3.3. (Added-301FW) AMXS supervision identifies cannibalization aircraft.

11.13.3.3.1. (Added-301FW) Appoints a Cannibalization Manager.

11.13.3.3.1.1. (Added-301FW) CANN Manager reviews IMDS and aircraft forms daily for accuracy in documentation.

11.13.3.3.1.2. (Added-301FW) Tracks, monitors and accounts for all hardware of cannibalized parts.

11.13.3.3.1.3. (Added-301FW) Briefs the CA daily of status and limiting factors that will affect CANN rebuild.

11.13.3.3.1.4. (Added-301FW) Conducts a bi-weekly and final forms review prior to QA review.

11.13.3.4. (Added-301FW) PS&D creates a JCN for weekly forms reviews during the aircraft CANN period.

11.13.3.5. (Added-301FW) QA conducts a bi-weekly aircraft forms review for CANN documentation.

11.13.3.5.1. (Added-301FW) After CANN rebuild, QA will conduct a final forms review to verify complete documentation.

11.13.3.5.2. (Added-301FW) Form reviews are SI tracked in LEAP and all findings shall be documented.

11.13.3.6. (Added-301FW) The CA approves/disapproves all CANN requests.

11.13.3.6.1. (Added-301FW) Directs Supply Section to process cannibalization paperwork.

11.13.3.6.2. (Added-301FW) Briefs MXG CC/CD weekly of status and limiting factors that would affect CANN rebuild.

11.13.3.7. (Added-301FW) Maintenance technicians verify that mission impairment exists.

11.13.3.7.1. (Added-301FW) Confirm a JCN exists in IMDS for the item being cannibalized.

11.13.3.7.2. (Added-301FW) Order CANN parts as required.

11.13.3.7.3. (Added-301FW) Notify the Pro Super and expediter of grounding condition.

11.13.3.7.4. (Added-301FW) Ensure CANN JCN and supply document numbers are entered into aircraft AFTO 781A or equipment AFTO Form 244 of both aircraft/equipment forms.

11.13.3.7.5. (Added-301FW) Notify the CANN Manager prior to performing maintenance on the aircraft.

- 11.13.3.7.6. (Added-301FW) Initiate CANN paperwork.
- 11.13.3.8. (Added-301FW) Propulsion Section supervision will identify a CANN engine.
 - 11.13.3.8.1. (Added-301FW) Prior to any CANN of an engine SRU or LRU, EM will be notified to ensure sufficient time remaining on the LRU or SRU meets or exceeds the next scheduled maintenance visit.
 - 11.13.3.8.2. (Added-301FW) Schedules CANN JCNs in MIS and provides action taken code T and U action WCE to Propulsion Section supervision.
 - 11.13.3.8.3. (Added-301FW) Engine-to-engine CANN is documented using MIS.
 - 11.13.3.8.4. (Added-301FW) If the LRU or SRU is already removed in IMDS due to JEIM, the CANN will be documented using local forms.
- 11.13.3.9. (Added-301FW) Supply will transfer on-equipment supply documentation to Propulsion Section after the CANN action is completed.
 - 11.13.3.9.1. (Added-301FW) Deployed engine CANN procedures will follow these same guidelines. In addition, EM will be notified of any operational checks that are required on cannibalized spare engines.
- 11.13.3.10. (Added-301FW) AGE flight supervision will approve all AGE CANN actions.
 - 11.13.3.10.1. (Added-301FW) Technician will schedule a job in IMDS against the equipment requiring the part and in turn, place the part on order.
 - 11.13.3.10.2. (Added-301FW) Technician will schedule CANN JCN in IMDS using procedures outlined in AGE flight CANN log book.
- 11.13.9. (301FW) Phase Dock CANN actions will be coordinated through the designated MXS CA and appointed CANN Manager.
 - 11.13.9.1. (Added-301FW) The need for a CANN action will be determined between MXS and AMXS Production.
 - 11.13.9.2. (Added-301FW) The CA directs Supply Section to process CANN paperwork.
 - 11.13.9.2.1. (Added-301FW) Briefs MXG CC/CD weekly of status and limiting factors that will affect CANN rebuild.
 - 11.13.9.3. (Added-301FW) The appointed CANN Manager reviews IMDS daily for accuracy in documentation.
 - 11.13.9.3.1. (Added-301FW) Confirms a JCN exists in IMDS for the item being cannibalized.
 - 11.13.9.3.2. (Added-301FW) Orders CANN parts as required.
 - 11.13.9.3.3. (Added-301FW) Ensures CANN JCN and supply document number are entered into IMDS.
 - 11.13.9.3.4. (Added-301FW) Tracks, monitors and accounts for all hardware of cannibalized parts.
 - 11.13.9.3.5. (Added-301FW) Briefs the CA daily of status and limiting factors that will affect CANN rebuild.

11.13.9.4. (Added-301FW) After CANN rebuild and prior to post-dock a final IMDS review is conducted to verify complete CANN actions documentation in conjunction with the Phase package review.

11.14.5.2.1. **(301FW)** An initial and bi-weekly forms review will be conducted by the HQM prior to the initial and bi-weekly QA reviews, until the aircraft is released and has flown.

11.43.1.4.1. (Added-301FW) MXG/CC is the waiver authority.

14.2.6.1. **(301FW)** The Maintenance Data System Analysis (MDSA) section will notify flights/sections of any scheduled/unscheduled downtime and advise when to implement manual data collection.

14.2.6.2. **(301FW)** Work Center supervisors are responsible for maintaining AFTO Form 349, Maintenance Data Collection Record, or copies of IMDS screens on hand as backup for data collection and documentation while IMDS is inaccessible.

14.2.6.2.5. (Added-301FW) Supervisors should ensure all employees accomplish documentation of these forms on each task, when required.

14.2.6.2.6. (Added-301FW) Supervisors will ensure accuracy of data entered on the forms within their sections.

14.2.6.2.7. (Added-301FW) Supervision will create and use an internal tracking log to ensure all data is entered into IMDS once the system is accessible.

14.2.6.2.8. (Added-301FW) For cannibalization, the tool room/expediter will initiate an AFTO Form 349 and forward copies to appropriate work centers.

14.2.6.2.9. (Added-301FW) Munitions controller will forward AFTO Form 349 to Plans, Scheduling & Documentation (PS&D) for input into the weekly maintenance plan.

14.2.6.2.10. (Added-301FW) For TCI and TCTO items, PS&D will initiate an AFTO Form 349 and forward copies work centers.

14.2.6.2.11. (Added-301FW) For scheduled inspections, work centers will initiate an AFTO Form 349 and forward copies to PS&D. AFTO Form 349 will be filed in aircraft jacket file until information is loaded into MIS.

14.3.5.2.1. (Added-301FW) Technical Assistance (107-T)

14.3.5.2.1.1. (Added-301FW) The organization that requires the technical assistance will be responsible for initiating the request.

14.3.5.2.1.2. (Added-301FW) The initiating organization will produce an e-mail with digital pictures (if applicable) and the following required information:

14.3.5.2.1.2.1. (Added-301FW) Noun, Part Number, National Stock Number, Aircraft Tail Number, T.O. Figure Index, Aircraft Deficiency Region, Aircraft Block, Aircraft Flying Hours, and Deficiency and Recommendations.

14.3.5.2.1.3. (Added-301FW) The initiating organization will forward their request to their squadron superintendent for approval. The squadron superintendent will review the request for accuracy and forward the request by e-mail with their approval to the 301st Quality Assurance superintendent for processing.

14.3.5.2.2. (Added-301FW) Quality Assurance will:

14.3.5.2.2.1. (Added-301FW) Review all requests for technical accuracy.

14.3.5.2.2.2. (Added-301FW) Notify 301 MXG CC/CD for approval to transmit request.

14.3.5.2.2.1. (Added-301FW) Brief the status of open 107's daily MXG production meetings.

14.3.5.2.2.2. (Added-301FW) Provide copies of completed requests to pertinent parties.

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