

**BY ORDER OF THE COMMANDER
920TH RESCUE WING**

**920TH RESCUE WING INSTRUCTION
21-117**



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Maintenance

**TOOL AND EQUIPMENT
MANAGEMENT**

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This instruction implements Air Force Policy Directive (AFPD) 21-1, *Managing Aerospace Equipment Maintenance*. It establishes and identifies procedures to effectively manage and safeguard composite tool kits (CTK) in accordance with Air Force Instruction (AFI) 21-101, *Aircraft and Equipment Maintenance Management*, AFI 11-301V1, *Aircrew Flight Equipment*, AFI 11-301 AFRC Supplement, *Aircrew Flight Equipment*. This publication is applicable to all personnel assigned to the 920th Rescue Wing. Ensure that all records created as a result of processes prescribed in this publication are maintained IAW Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of IAW Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS). Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Form 847, *Recommendation for Change of Publication*; route AF Forms 847 from the field through the appropriate functional chain of command. This publication cannot be supplemented. 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 AFI 33-360, *Publications and Forms Management*, 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.

SUMMARY OF CHANGES

This document has been substantially revised and needs to be completely reviewed. Major changes include Accountability, Inventory Requirements, Procedures for Warranted Tool Management, Procedures for Transfer of Tools/CTKs at the Job Site, Procedures for Issue and Control of Personal Protection Equipment (PPE), Procedures to Ensure Positive Control of Rags, Personnel Authorized to Procure Tools, Locally Manufactured or Developed Tools and Equipment, Tool Control Procedures for Depot Teams, Factory Representatives, and Contract Field Team (CFT) when Working on Equipment within the Unit, Procedures and Responsibilities for Situations Where Two or More Work Centers Operate a Single Tool Room/Support Section, or When Work Centers Elect to Distribute CTKs or Peculiar Support/Test Equipment to Decentralized Locations, Procedures for Control of Crash, Damaged, or Disabled Aircraft Recovery (CDDAR) Response Equipment Permanently Stored/Located in Trailers or Vehicles, Procedures for Requiring a Second Party or On-Duty Supervisor Inspection of CTKs When Conditions Warrant a Single Person Shift, Procedures for Controlled Access to Tool Rooms, and Procedures to Control Aircrew Tools and AFE Tool Kits that are Dispatchable to the Flightline.

1. Responsibility: This instruction applies to all 920 RQW personnel and visitors at home station or deployed. 943 RQG refer to 943 RQGI 21-101, Chapter 5 for location specific instructions. Supervision will ensure all personnel involved in operating or performing maintenance on aircraft are in compliance with this instruction.

2. Standardized Procedures for Security, Control and Accountability of Tools.

2.1. Security:

2.1.1. Support Sections and assigned tool rooms control dispatchable aircraft, vehicle and trailer-mounted CTKs IAW this publication and AFI 21-101 AFRC Sup.

2.1.1.1. Special Purpose CTKs are defined as small individually issued tool kits that because of the nature of contents or type of container could preclude shadowing or silhouetting.

2.1.2. Dispatched CTK's are inventoried and locked with wheels locked/chocked when left unattended. Tools shall be placed back in the appropriate inlays when unattended or when the job is complete.

2.1.3. In-shop CTK's must remain locked when not in use unless they are stored in a location that is constantly manned or secured. When a CTK custodian is not assigned, the shop supervisor is responsible for an itemized inventory of all tools and equipment at the beginning and end of each shift.

2.1.4. Unattended CTKs that have inoperable brakes are kept locked and secured to a permanent fixture (such as grounding point or a post) for stability and protection against wind forces or when applicable. Tools shall be placed back in the appropriate inlays when not in use or when the job is complete.

2.1.5. When CTKs, equipment or consumables are transported to the flightline on push carts with no brakes, the push cart will be chocked or secured in a manner that does not allow it to roll.

2.1.6. Small items, including consumables and electronic devices (eTools), not part of a CTK, that present a Foreign Object Damage/Debris (FOD) hazard and can fit inside the CTK shall be stored in the CTK when left unattended.

2.1.7. Large items, not part of the CTK, are kept neatly organized and away from work areas, when unattended. Items equipped with locking devices are secured to the CTK or a permanent fixture.

2.1.8. CTKs, equipment, and consumables are inventoried and returned to the Support Section or assigned tool room no later than the end of each shift, unless an in-place tool transfer is authorized and accomplished by a Support Section/tool room representative using an AFRC Form 177, *Consolidated Tool Kit Inventory and Control Log*.

2.1.9. Aircraft test equipment that is connected to the aircraft can be left connected. However, it must be written up in the aircraft forms. Furthermore, any open lines or connectors must have suitable protective devices installed. In addition, test equipment must not be left connected unattended overnight unless approved by the MXG/CC.

2.1.10. All dispatchable CTKs will have a FO container available and it will be properly emptied prior to returning CTK to the Support Section or designated tool room.

2.1.11. Store CTKs, tools, electronic devices (eTools), and equipment in a designated location for positive control and ease of inventory. Personnel are responsible for control of the CTK and equipment when in their possession and signed out to them.

2.1.12. Ensure all tools are returned to their appropriate place in the tool kit/CTK and perform a thorough inventory prior to aircraft launch procedures.

2.1.13. A permanently removed (without planned replacement) item/tool shall have its inlay/silhouette, marked as deleted or compartments filled-in. Ensure filler doesn't pose a FOD hazard.

2.2. **Accountability:**

2.2.1. All 920 MXG maintenance areas that use CTK's/Equipment on the flight line or maintain related parts/equipment shall use the TcMax® tool accountability system.

2.2.2. Contractors and depot field teams are not required to mark their tools and equipment with the Equipment Identification Designators (EID) or to use TcMax®. However, they will account for all tools, equipment and electronic devices taken to aircraft parking/runway/taxi areas and aircraft maintenance areas prior to performing maintenance and prior to leaving these areas.

2.2.3. The individual that signs for the CTK is responsible for accountability of all issued items.

2.2.4. Aircrew Flight Equipment (AFE) sections shall follow CTK guidance given in AFI 11-301V1, *Aircrew Flight Equipment Program*.

2.2.5. All 920 RQW CTK's shall be marked with a nine-digit EID as identified in [paragraph 6](#)

2.2.6. The AFRC Form 175 *Broken/Missing/Removed Tools and Equipment* will be used in all decentralized CTKs and follow the same guidance as dispatch CTKs regarding the use of this form.

2.2.7. 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.

2.2.8. All vehicles/trailers that permanently store tools, equipment, and/or technical data will have an inventory list in the vehicle/trailer at all times and will comply with all directives pertaining to tool control. A copy of the Master Inventory List (MIL) will be filed in the owning work center Master Continuity Binder and approved by the Flight Section Chief.

2.2.9. A FOD container may be kept in or attached to a tool kit. It must be emptied before turn in. Loose FO may not be placed in the tool kit outside of the FOD container.

2.2.10. Commercial Mobile Devices (CMDs/eTools) that are shipped for mobility requirements are packed up along with other CTK equipment. All deployed CMDs/eTools will be tracked in TcMax® and signed out from the home station TcMax® database as deployed (long term) by the assigned deployed Support Section/tool room custodian. Refer to TO 00-5-1 (5.12.5.) for additional requirements.

2.2.11. Items signed out beyond daily use, such as Precision Measurement Equipment Lab (PMEL) or broken, will either be labeled accordingly in the silhouette/shadow spot, or the AFRC form 175 will be utilized in the same manner as dispatchable/decentralized CTKs.

2.2.12. Engine blade blending blue dye, weapons load crew crimpers, die, lead seals, and any other tool/equipment or consumable dispatch items, will be tracked in TcMax® and follow the same procedures as all dispatch equipment in this publication.

3. Inventory Requirements.

3.1. **Annual** . All tools and equipment are completely inventoried at least annually or when the CTK custodian changes. The purpose of this inventory is to perform a comprehensive inspection of all tools and equipment and is more extensive than the daily beginning and end of shift inventory. The CTK custodian/alternate performs the annual inventory. When CTK custodians change, the outgoing and incoming custodians perform the inventory together. Document inventories on the AF IMT 3136 *General Purpose* form. CTK custodians shall maintain a Master Inventory Listing (MIL) for each type of kit assigned to the work center. The listings shall be updated annually if changed and when the CTK custodian changes to ensure MIL accuracy. MILs shall be signed by the applicable flight Officer in Charge (OIC), Non-commissioned Officer in Charge (NCOIC), Flight or Section Chief.

3.2. Annual inventory will be performed by task qualified personnel in Training Business Area (TBA) and shall consist of:

3.2.1. Ensuring the MIL in the CTK matches the MIL in TC-MAX. This also applies to Support Equipment (SE) with accessories.

3.2.2. Ensuring the MIL matches the contents of the CTK or SE.

3.2.3. Local manufactured tools and consumables are identified on the MIL.

3.2.4. All tools are identified on the MIL with minimum name and size.

3.2.5. All equipment is marked with an Equipment Identification Designators (EID) and the EID are correct and readable.

3.2.6. All tools and equipment are inspected IAW applicable tech data or manufacturer manual. Replace or remove unserviceable tools/equipment and document in TcMax® or MAJCOM/local form.

3.2.7. All tools and equipment are clean and serviceable.

3.2.8. No FO in the CTK, SE, or FO container.

3.2.9. All tools/equipment properly fit in the foam inlay, (if used).

3.2.10. All required forms listed on the MIL, accounted for and correctly documented.

3.2.11. Test, Measurement, and Diagnostic Equipment (TMDE)/PMEL inspections shall be tracked in TcMax®.

3.2.12. Inventory will be documented in TcMax®. The MIL is not required to be updated as a part of the annual inventory however, if items on the MIL have changed a new MIL must be produced

3.3. **Daily:** A visual “hands-on” CTK and equipment inventory shall be performed when signed in and out of the tool storage facility, prior to operation of aircraft or equipment of which maintenance was performed, at the completion of a job or task, and upon return to the work area after sheltering from a real world/exercise event.

3.3.1. Inventory CTK/tools or SE prior to signing out and check for serviceability.

3.3.2. All SE accessories are accounted for and inside the container.

3.3.3. Torque wrenches are set to the lowest setting.

3.3.4. Torque wrenches are set to the lowest setting and exercised prior to use.

3.3.5. No FOD is in the CTK or SE when, in storage, or signed in or out of the tool storage facility.

3.3.6. CTK MIL, AFRC Form 175, *Missing/Removed Tools and Equipment*, and AFRC Form 177 complete and current.

3.3.7. All iPads are serviceable, are updated with current technical data, and any missing plugs/covers are documented per AFI21-101, AFRC SUP 1, [para 8.3.6.7](#)

3.4. **Master Continuity Binder(s).** Each tool room/workcenter will develop a Master Continuity Binder(s).

3.4.1. CTK custodians will maintain CTK Master Binder. These binders will remain in the shop at all times except when deployed. 943 RQG CTK Master Binder Organization is located in the 943 RQGI 21-101 Chapter 5. The binder will be organized as follows:

3.4.1.1. TAB A: CTK Custodians Letter of Appointment.

3.4.1.2. TAB B: 920 RQW CTK Annual Inventory Log. (See [Attachment 2](#) for details).

- 3.4.1.3. TAB C: Master Inventory List (MIL) for all CTK's assigned to work center to include shadow boards items and equipment. The MILs in the Master Binder will be signed and demonstrate work center supervisor approval.
 - 3.4.1.4. TAB D: AFRC Form 177, *Consolidated Tool Kit Inventory* and Control Log.
 - 3.4.1.5. TAB E: AFRC Form 175, *Missing/Removed Tools and Equipment*.
 - 3.4.1.6. TAB F: Blank AFRC Form 174, *Lost Tool/Object Report*.
 - 3.4.1.7. TAB G: Tool/Equipment Warranty Documents.
 - 3.4.1.8. TAB H: Local Manufacture Tool Drawings and Approval Forms.
- 3.4.2. The work center supervisor approved/signed MIL resides with the CTK Continuity Binder. The hard copy MIL in the CTK does not need to be signed.

4. Procedures for Warranted Tool Management.

- 4.1. Warranty tool program procedures outlined in AFI 21-101, AFRC SUP 1, *Aircraft and Equipment Maintenance Management*, shall be followed.
- 4.2. All sections that possess warranty tools will contact the appropriate local vendor (Snap-On, Grainger, etc.) for replacement of broken or damaged tools as soon as the damage/breakage is discovered. Replacement tools will be marked with Equipment Identification Designator (EID) prior to placing tool in service.
- 4.3. Owning section supervisor or tool room facility shall retain tool/equipment warranty documents.
- 4.4. Warranted tools and equipment shall not be modified when such modification voids the warranty.
- 4.5. Unserviceable warranty tools will be tagged with a DD Form 1500 *Series Condition Tag* or AFTO 350 *Reparable Item Processing Tag* and will be physically segregated from non-warranty tools.

5. Procedures for Control and Management of Replacement, Expendable and Consumable Hand Tools, Hazardous Material (HAZMAT), and Other Items Contained in CTKs.

- 5.1. All consumables located in a CTK shall be identified on the MIL.
 - 5.1.1. All consumables that are on bench stock and are included in a CTK shall be maintained in a secure location and will only be issued by the CTK monitor, alternate or tool room personnel.
 - 5.1.1.1. Consumable tools (safety wire, solder) may be stored on bench/shop stock.
 - 5.1.1.2. All items (bench stock consumables) included in a CTK will be strictly issued by CTK custodians, tool room personnel, or a supervisor to ensure accountability.
- 5.2. Expendable hand tools, (apexes, blades, grinding wheels etc.) that are included in a CTK will be maintained in a secure location and shall only be issued by the tool room personnel or the supervisor.

5.2.1. CTK Custodians will secure and track all broken tools in a controlled, lockable area, until they are processed for disposal.

5.2.2. 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*.

5.2.3. All expendable tools will be replaced on a one-for-one case basis, to include but not limited to the following items: apexes, blades, grinding wheels, drill bits, rotary attachments/accessories, files, and file cleaners..

5.2.4. Authorized tool room personnel update the spare tool inventory in TcMax® to reflect the amount taken to replenish the applicable CTK(s).

5.3. Replacement/Spare/Expendable Tool Control: All replacement/spare/expendable tools shall be inventoried and documented quarterly in TcMax®.

5.3.1. Replacement tools are divided into three categories; spare tools, expendable tools and consumable tools. Spare tools are screwdrivers, wrenches, sockets etc. Expendable tools are drill bits; saw blades, apexes, etc. Consumable tools are safety wire, solder, file cleaners etc.

5.3.2. All spare and expendable tools will be stored in a secured cabinet/bin and will be tracked in TcMax®. The spare and expendable tool quarterly inventory will be documented in TcMax®.

5.3.3. Replace unserviceable tools to the specified quantity and update TcMax® spare tools inventory.

5.4. The CTK EID shall be etched on larger consumable items such as spools of safety wire. Smaller items such as pin hole plugs, splices, split pins, etc., shall be placed in a container or holder with the CTK EID and quantity marked on the outside of the container by etching, marking with permanent marker or labeling tape.

5.5. The container of consumables shall be inventoried after each job completion or when the CTK is turned in or transferred to another person. Each container shall be opened and inventoried during sign-in and sign-out.

5.6. Upon return to the tool room, each container shall be refilled to the specified quantity. If adequate consumables are not available for replacement, the quantity missing shall be annotated as missing on AFRC Form 175.

5.6.1. Upon return to the tool room, tools in each CTK including consumables, are inspected for serviceability.

5.6.2. 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.

5.7. The individual that signs the CTK out is responsible for full accountability of all consumables.

5.8. 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. Tool room personnel update TcMax® accordingly.

6. Procedures for Transfer of Tools/CTKs at the Job Site.

6.1. In-place tool transfer will be accomplished by the receiving and losing technician performing an inventory at the job site and documenting an AFRC Form 177, *Consolidated Tool Kit Inventory and Control Log*.

6.1.1. If tools are found missing, lost tool procedures shall be implemented.

6.1.2. If no tools are missing, the incoming individual shall sign the AFRC Form 177, accepting responsibility for the CTK contents.

6.2. The losing technician will deliver the AFRC Form 177 to the support section.

6.3. The support section will then transfer the items in TcMax® to the new user.

6.4. This procedure will not exceed two shifts unless approved by the Maintenance Production Superintendent.

7. Procedures for Lost or Missing tools.

7.1. Refer to AFI 21-101, para 10.8 for aircraft lost tool procedures.

7.2. If a tool or object is lost by an individual and is recovered by the same individual within one hour, no further action is required.

7.3. If the tool/object is not found within one hour a TAS generated product (form) or AFRC Form 174, *Lost Tool/Object Report* is completed for each lost tool/object. The CTK custodian will maintain a copy of completed AFRC Form 174 in the CTK Continuity Binder on suspense and will provide Quality Assurance (QA) with the original for control log purposes. Destroy suspense report when it has been on file for 1 year. Segregate copies "recovered" and "not recovered".

7.4. If an item is missing after on aircraft/equipment maintenance the Lost/Missing Tool Checklist must be completed.

7.4.1. **(920 MXG only)** The Maintenance Operations Center (MOC) and QA will be informed. The MOC will notify 920 MXG/CC or his/her representative of the missing tool immediately if it is mission impacting (any delay in launch sequence i.e.: preflight, end of runway, take-off time, etc.). If non-mission impacting the 920 MXG/CC or their representative will be notified immediately unless loss occurs after 2300 hours local; then notify within the first hour of the next duty day.

7.4.1.1. **(943 MXS only)** The Expeditor or Production Superintendent will run the Lost/Missing Tool Checklist and notify Maintenance Operations Center (MOC). The MOC will run complete the Lost/Missing Tool Checklist and also the Aircraft Recall Checklist (if applicable). They will notify 943 MXS/CC or his/her representative of the missing tool immediately if it is mission impacting (any delay in launch sequence i.e.: preflight, end of runway, take-off time, etc.). If non-mission impacting the 943 MXS/CC or their representative will be notified immediately unless loss occurs after 2300 hours local; then notify within the first hour of the next duty day.

7.4.2. If any item is lost within the maintenance complex, an AFRC Form 174, *Lost Tool/Object Report*, will be initiated after an initial search.

7.4.3. Immediately notify Pro Super, flightline expediter and MOC.

7.4.4. Upon notification, MXG/MOC initiates and completes the Lost Tool/Item Procedures checklist as required.

7.4.5. The wing FOD NCO or MXG/MXQ will issue a control number for the lost tool/object report.

7.4.6. The squadron maintenance officer/superintendent or production supervisor ensures a thorough search is conducted to include utilizing x-ray, borescope, and other state of the art equipment to locate tools/objects in inaccessible areas if required.

7.5. AFRC Form 174 must be turned into QA within 24 hours of item missing. QA verifies the form is correctly filled out, signed by the proper official, and documents the database or local tracking log after a thorough investigation.

7.5.1. QA will segregate completed AFRC Form 174, “recovered” and “not recovered.” These forms will be maintained on file for 1 year.

7.6. Lost Tool/Object Procedures for Taxied Aircraft:

7.6.1. If a tool or object is discovered missing and the affected aircraft have taxied, the following procedures to hold or recall the aircraft are followed:

7.6.2. The person making the discovery will immediately notify the MOC through the most expedient means possible. Additional notifications are made to the expediter or work center supervisor, and the maintenance officer/supervisor on duty.

7.6.3. The MOC notifies the Command Post. The Command Post/squadron operations center instructs the aircrew to return to the parking spot. If the aircraft is airborne at the time of notification, the aircraft is directed to return to base with minimal maneuvering.

7.6.4. Once aircraft has landed initiate Lost Tool/Object investigation report.

7.6.5. The Maintenance Squadron Superintendent (MXM) or Aircraft Maintenance Squadron Superintendent (MXA) will ensure the AFRC Form 174 is completed in a timely manner and will maintain a file of completed forms for trend history.

8. Assignment of Equipment Identification Designators (EID) for CTKs, non-CA/CRL Equipment (*Why Non-CA/CRL? Test equipment is CA/CRL and has EIDs*), and Assignment of CTK Numbers for Tools:

8.1. All tools will be marked in accordance with tool marking directives as outlined in AFI21-101 AFRC Sup and this publication, incorporating the World Wide Identifier (WWID).

8.2. The first and second characters will be the assigned TcMax® identifier based on the PAS Code.

8.3. The first three positions of the 920 MXG and 301 RQS WWID are “U19.” The fourth character is designated as the owning shop.

8.3.1. AMXS/MXATR (H-60) U19J.

- 8.3.2. AMXS/MXATR (C-130) U19K.
- 8.3.3. AMXS/MXATR (iPads) U19C.
- 8.3.4. AMXS/MXAAW (Weapons) U19W.
- 8.3.5. MXS/MXMTA (Phase Dock) U19P.
- 8.3.6. MXS/MXMTB (ISO Dock) U19I.
- 8.3.7. MXS/MXMCE (Electro/Environmental) U19E.
- 8.3.8. MXS/MXMCF (Fuels) U19F.
- 8.3.9. MXS/MXMCP (Pneudraulics) U19H.
- 8.3.10. MXS/MXMFM (Metals) U19M.
- 8.3.11. MXS/MXMFN (NDI) U19N.
- 8.3.12. MXS/MXMFS (Structures) U19S.
- 8.3.13. MXS/MXMG (AGE) U19G.
- 8.3.14. MXS/MXMP (Engines) U19T.
- 8.3.15. MXS/MXMRA (AMMO) U19X.
- 8.3.16. MXS/MXMV (Avionics) U19A.
- 8.3.17. MXG/MXQ (Quality Assurance) U19Q.
- 8.3.18. OG/AFE (Aircrew Flight Equipment) U19L.
- 8.3.19. 301RQS (Flight Engineers) U19R.
- 8.3.20. 943 MXS (Davis-Monthan) DF30.

8.4. Each section establishes the remaining five characters for tool and equipment identification.

8.5. The 9-digit EID must be placed on the outside of all dispatchable CTKs.

8.5.1. Tools located inside the tool box may be marked with less than 9-digits but must contain the 4-digit WWID and identifying character(s) that ties the tool back to the CTK. For example, tools inside an assigned dispatchable CTK “U19Q00001” may be marked “U19Q1”.

9. Procedures for Issue and Control of Personal Protection Equipment (PPE).

9.1. PPE (ear defenders, reflective belts, etc.) shall be controlled by one of the three procedures listed below:

9.1.1. When PPE is part of a tool kit, the Support Sections and assigned tool rooms identifies it by etching the CTK EID on the item and it is controlled as a regular tool within the CTK.

9.1.2. PPE will be issued daily as individual tools stored in a central location for the shop.

9.1.3. Maintenance personnel are responsible for maintaining and controlling long term issued PPE in their possession. As a minimum, this PPE shall be marked with the World-Wide Identification code (WWID) of the individual's assigned work center and their employee number.

9.1.4. The initial issue is recorded in TcMax® and shall be inventoried annually. The supervisor may require an individual to produce their issued personal equipment for inspection at any time.

10. Procedures to Ensure Positive Control of Rags.

10.1. Use bulk ordered non uniform lint free rags or uniform size rags to facilitate control procedures.

10.2. Secure all clean and dirty rag containers to ensure accountability and no unauthorized access.

10.2.1. Rags may be controlled as kits from TcMax® and issued in a container holding a predetermined quantity, and during turn-in that same quantity is returned after use. In the event a rag is not returned, follow missing item procedures in [paragraph 7](#) and subsequent paragraphs.

10.2.1.1. Dirty rags will not be mixed with clean rags.

10.2.2. The spare rag supply point will be secured to prevent uncontrolled rags from entering the work area.

10.2.2.1. Only personnel working in the Support Section are authorized access to the replacement rags.

10.2.3. Rags will be stored in a container with a self-closing lid. Containers will be clearly marked: "CLEAN RAGS" or "DIRTY RAGS" and will be locked when unattended if kept outside CTK.

10.2.4. Contents of the "CLEAN RAG" and "DIRTY RAG" bins will match the "Quantity on Hand" in TcMax®.

10.3. Sign-out required number of rags to users in TcMax®.

10.4. Verify accurate rag count upon return and verify the quantity in TcMax®.

10.5. Follow lost tool procedures, if a rag is lost.

10.6. 920 MXG/943 RQG Deployments:

10.6.1. Rags for deployments shall be bundled in the same quantities as home-station and the same rag size requirements shall be maintained.

10.6.2. The deployed CTK custodian shall sign rags in/out on an AFRC Form 177 if TcMax® is unavailable.

10.6.3. If a rag is lost, home-station lost tool procedures shall be followed unless procedures are provided at deployed location.

11. Personnel Authorized to Procure Tools.

11.1. CTK custodians, section level supervisors, or higher level authorities are the only personnel authorized to procure (purchase) tools in coordination with MXG Government Purchase Card (GPC) cardholders.

11.2. CTK appointed custodians are the only personnel authorized to procure (purchase) spare tools for replacing broken/removed items in CTKs.

11.3. Tools covered by a warranty will be the first choice when tools are procured.

12. Locally Manufactured or Developed Tools and Equipment. See 920 MXG Operating Instruction (OI) 21-147, *Local Manufacture Procedures* for local manufacture of tools and equipment. Local Manufactured Tools and equipment shall be controlled as a tool/equipment IAW AFI 21-101, AFRC SUP, and this instruction. The 943 RQG will follow 943 RQGI 21-101 *Aircraft and Equipment Maintenance Management*.

12.1. Locally manufactured tools or equipment will be controlled in the same manner as tools procured from a vendor. Locally manufactured tools will be identified with a WWID as defined in [paragraph 8](#)

12.2. Locally manufactured tools and equipment will be subject to inspection by the owning section or applicable support section and will be reviewed IAW the provisions of [paragraph 3.2](#)

12.3. Inspections for Locally manufactured tools and equipment shall be tracked in TcMax®.

13. Tool Control Procedures for Depot Teams, Factory Representatives, and Contract Field Team (CFT) when Working on Equipment within the Unit. Depot teams, factory representatives, and contract field teams shall maintain full accountability for tools in accordance with the applicable portion of the contract or will comply with this publication. A listing of CTK numbers or other means of tool identification will be coordinated with QA.

13.1. Field Service Representatives (FSR)/Depot Field Team (DFT)/CFT shall show full accountability for tools in accordance with the applicable portion of the contract or comply with this publication. A listing of CTK numbers or other means of tool identification is obtained by MXG/QA for coordination and accountability. MXG/QA will ensure that CTK procedures meet the intent of this document and procedures contained within AFI 21-101_AFRCSUP. MXG/QA personnel will inventory contractor tools before work begins and before the team departs.

14. Procedures and Responsibilities for Situations Where Two or More Work Centers Operate a Single Tool Room/Support Section, or When Work Centers Elect to Distribute CTKs or Peculiar Support/Test Equipment to Decentralized Locations.

14.1. Procedures: The NCOIC of the Tool Room/Support Section shall provide a secure area to store CTK's, tools, equipment and Technical Orders, Personal Protection Equipment (PPE), bench and operating stock, consumables and chemicals needed to support flight-line or back shop maintenance and generation activities. The Flight/Section Chiefs shall coordinate with the Tool Room/Support Section NCOIC on the CTK's, tools, equipment and Technical Orders, PPE, bench and operating stock, consumables and chemicals they need to have stored in the tool room or within the work center.

14.2. Responsibilities:

14.2.1. Flight/Section Chiefs are responsible to:

14.2.1.1. Manage CTK's, tools and equipment stored in the tool room or within the work center.

14.2.1.2. Ensure the MIL is accurate for each CTK and test equipment item requiring an MIL.

14.2.1.3. Ensure periodic and scheduled inspections of CTK's and equipment are accomplished to include forms documentation.

14.2.1.4. Inform Tool Room/Support Section of needed PPE, consumables, chemicals, bench and operating stock.

14.2.1.5. Ensure the turn-in inventory is thorough so as to be sure there are no broken/missing tools and no FOD in the CTK and equipment.

14.2.2. Tool Room/Support Section is responsible to:

14.2.2.1. Maintain a secure and limited access entry into the tool room.

14.2.2.2. Maintain established personal protective equipment (PPE), consumables, chemicals, bench and operating stock.

14.2.2.3. Insure that a thorough visual turn-in inventory of CTK's, equipment, chemicals is complied with.

14.2.2.4. Notify owning work centers when inspections are due or equipment damage is noted.

15. Procedures for Control of Crash, Damaged, or Disabled Aircraft Recovery (CDDAR) Response Equipment Permanently Stored/Located in Trailers or Vehicles. Crash Recovery Trailer (owned by 45SW): The Crash Recovery Trailer and truck shall be controlled much like a CTK. Items within the trailer that are not part of an actual CTK shall be marked "Crash Trailer (CT)" and shall have specific locations shadowed, cut-out, or labeled so a thorough inventory can be easily accomplished. Actual CTK's permanently assigned to the Crash Recovery truck & trailer shall be signed out on AFRC Form 177 or TC-MAX to the Crash Recovery Trailer. An AFRC Form 177 kept within the trailer shall be used for daily sign out/in procedures.

16. Procedures for Requiring a Second Party or On-Duty Supervisor Inspection of CTKs When Conditions Warrant a Single Person Shift. When only one individual is available in a work center due to leave, TDY, or any other circumstance, and there is a Flight/Section Chief on duty within the Group, the individual shall contact a Flight/Section Chief who shall verify the inventory was properly accomplished. If Flight/Section Chief has no access to TC-MAX he/she shall sign the AFRC Form 177 in the sign-in block as inventoried and secure the CTK/equipment in the tool room or a secure shop. The individual shall then notify his supervisor and MOC by e-mail that the CTK/equipment needs to be signed-in, (in TC-MAX) prior to CTK/equipment use.

16.1. When only one individual is available in a work center, the individual contacts a Flight/Section Chief or Mx Super who verifies the inventory is properly accomplished, signs the AFRC Form 177 in the sign-in block and secures the CTK/SE in the tool room or a secure location.

17. Procedures for Controlled Access to Tool Rooms. Tool Rooms are locked when unattended. When no tool room personnel are available, only the Flight/Section Chiefs or shift supervisor are authorized entry.

17.1. All 920 MXG members who sign in/out tools in TcMax® and inspect/perform CTK inventories will be task qualified in TBA.

17.2. Maintain security of and limit access to the tool storage area. When no tool room personnel are available, only the Flight/Section Chiefs or shift supervisor are authorized entry and will control access to tool rooms.

17.3. 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.

17.4. The EAL will be reviewed and renewed at least annually, or when the primary CTK Custodian changes.

17.5. Changes in personnel requiring access to the controlled area of tool rooms constitutes the need for a new EAL.

17.6. Tool rooms will be locked at all times when left unattended.

18. Procedures to Control Aircrew Tools and AFE Tool Kits that are Dispatchable to the Flightline. Life Support and 920 Operations Group (OG) personnel shall follow all procedures outlined in AFI 11-301V1 for all tools and equipment brought and used on the flightline. Use of TC-MAX is not required.

18.1. The Life Support Supervisor ensures only authorized tools and equipment is dispatched to the flight line and is controlled IAW this instruction.

JOHN C. DOBBIN, Colonel, USAF
Commander

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

AFI 11-301, *Aircrew Flight Equipment (AFE) Program 10 Oct 2017*

AFI 21-101, *Aircraft and Equipment Maintenance Management 16 Jan 2020*

AFI 21-101 AFRC Supplement, *Aircraft and Equipment Maintenance Management 24 Aug 2015*

AFPD 21-1, *Air and Space Maintenance 1 Aug 2018*

920 MXGOI 21-147, *Local Manufacture Procedures 15 Jun 2017*

943 RQGI 21-101 *Aircraft and Equipment Maintenance Management 13 February 2018*

Adopted Forms

AFRC Form 177, *Consolidated Tool Kit Inventory and Control Log*

AFRC Form 174, *Lost Tool/Object Report*

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

AFTO 350, *Reparable Item Processing Tag*

DD Form 1500, *Series Condition Tag*

AF 3136, *General Purpose*

Abbreviations and Acronyms

AFE—Aircrew Flight Equipment

AFI—Air Force Instruction

AFPD—Air Force Policy Directive

CDDAR—Crashed, Damaged, or Disabled Aircraft Recovery

CFT—Contract Field Team

CT—Crash Trailer

CTK—Composite Tool Kit

DFT—Depot Field Team

EAL—Entry Authorization List

EID—Equipment Identification Designator

FO—Foreign Object

FOD—Foreign Object Damage/Debris

FSR—Field Service Rep

GPC—Government Purchase Card

HAZMAT—Hazardous Material
MIL—Master Inventory Listing
MOC—Maintenance Operations Center
MX—Maintenance
MXG—Maintenance Group
NCO—Non-Commissioned Officer
OPR—Office of Primary Responsibility
PMEL—Precision Measurements Equipment Lab
PPE—Personal Protective Equipment
QA—Quality Assurance
RQW—Rescue Wing
SE—Support Equipment
TBA—Training Business Area
TcMax®—AFRC Tool Accountability System
TMDE—Test, Measurement, or Diagnostic Equipment
WWID—Worldwide Identification Code

Attachment 2

920 RQW CTK ANNUAL INVENTORY LOG

Table A2.1. 920 RQW CTK Annual Inventory Log.

COMPOSITE TOOL KIT ANNUAL / CHANGE OF CUSTODIAN INVENTORY LOG FOR: _____ WORK CENTER: _____

ITEM #	TYPE (ANNUAL OR CUSTODIAN)	DATE COMPLETED	NAME	SIGNATURE	NEXT DUE	REMARKS
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						
13.						
14.						
15.						
16.						
17.						
18.						
19.						

Reference: AFI 21-101 / 10.4.2.2.

AF IMT 3136, 20060216, V1 GENERAL PURPOSE (11 X 8 1/2")

Note: Form Available At
M:\MXG Staff\QA\Quality Assurance & Wing\CTK-FORMS