

**BY ORDER OF THE COMMANDER  
TRAVIS AIR FORCE BASE**

**TRAVIS AIR FORCE BASE  
INSTRUCTION 21-107**



**12 JUNE 2020**

**Maintenance**

**TOOL AND  
EQUIPMENT MANAGEMENT**

**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

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This instruction implements Air Force Policy Directive (AFPD) 21-1, *Maintenance of Military Material*, Air Force Instruction (AFI) 21-101 Air Mobility Command Supplement (AMCSUP), *Aircraft and Equipment Maintenance Management*, and standardizes procedures for the security and accountability of all tools and equipment maintained on Travis Air Force Base (TAFB). This publication establishes local guidance for the approval and use of locally manufactured tools and equipment. Additionally, this document provides procedures for lost tools, the use and marking of personal equipment, the control of absorbent materials and the management of warranted tools. This operating instruction pertains to all personnel attached or assigned to TAFB. 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*. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of in accordance with Air Force Records Information Management System (AFRIMS). Records Disposition Schedule (RDS) located at <https://www.my.af.mil/afirms/afirms/afirms/rims.cfm>. 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.

***SUMMARY OF CHANGES***

This document has been substantially revised and must be completely reviewed. Changes include: Removal/streamline of duplicate requirements found in 21-101 AMCSUP; revised on-the-line turnover procedures; clarified lost tool procedures; Maintenance Group local manufacture procedures have been moved to MXGI 21-101.

## 1. General Responsibilities

1.1. All squadrons assigned or attached to TAFB or other personnel who require the use of items such as, but not limited to: tools, equipment, electronic devices and/or personal equipment (e.g. ear protectors, reflective belts, headsets, etc.) which can make their way into any aircraft maintenance area or have occasion to traverse the flight line to include being loaded as cargo onto an aircraft must have procedures in place to account for them. As a minimum, procedures must be detailed enough that items can be positively accounted for and if an item is lost and found, it can be identified and returned to the owning squadron. **Note:** Aircraft maintenance area is defined as any area where maintenance on aircraft, aircraft parts, or equipment takes place, or anywhere on the flight line to include any tools loaded onto or used on equipment that may be loaded onto an aircraft

1.2. Squadron commanders with personnel who use items in an aircraft maintenance area will ensure all assigned personnel are familiar with lost tool/item procedures and the tool control program for all tools and equipment used on the flight line or in aircraft maintenance areas.

## 2. User Responsibilities

2.1. All personnel will maintain positive control over all items they bring into the aircraft maintenance area and ensure accountability prior to leaving the area.

2.2. Users will inspect all tools and equipment for serviceability prior to use IAW TO 32-1-101, *Use and Care of Hand Tools and Measuring Tools*.

2.3. Users will never use unserviceable tools and will only use tools and equipment for their intended purpose.

2.4. Individuals signing out tools and/or equipment are responsible for the condition of the tools and/or equipment issued and for any damage incurred until relieved by the Composite Tool Kits (CTK) custodian at turn-in.

2.5. Individuals signing in/out tools and/or equipment are required to report any discrepancies with the item to the CTK custodians at time of sign in/out.

2.5.1. If there are missing, removed and/or broken tools/items that cannot be replaced immediately the CTK Custodian is responsible for documenting discrepancies in TCMAX and on the hard copy Master Inventory List (MIL).

2.6. Personnel electronic devices will be used IAW 21-101 AMCSUP.

## 3. Marking/Security

3.1. CTKs will be labeled with the standard Equipment Identification Designators (EID) listed in [Attachment 4](#).

3.2. Items too small to etch will be marked IAW 21-101 AMCSUP 8.6.1.3.5. and in addition, the type and size of the items must be listed on the CTK Master Inventory List (MIL).

3.3. Dispatched and mobility toolboxes will have reflective tape on their sides and ends.

#### 4. Tools Accountability and Control

- 4.1. AF Form 1297, *Temporary Issue Receipt*, may be used in addition to TCMAX, for increased accountability or as a TCMAX backup. Chits are not authorized.
- 4.2. Units will conduct and document an annual inventory of all tools and equipment.
- 4.3. Individuals involved with job site transfer of tools or equipment will conduct a joint inventory with a maintenance production member present who observes the inventory. Document the transfer on AF Form 1297. After inventory is complete, hand-carry AF Form 1297 to the tool room and give it to the CTK custodian. The CTK custodian is responsible to ensure the 1297 is accurate and complete before transferring the items in TCMAX.
- 4.4. Tools and support equipment will not be kept out longer than 24 hours unless required for extended heavy maintenance and/or approved by the production supervisor or expediter. **Note:** Land mobile radios may be signed out long term to key Squadron positions as designated by the Squadron Commander or Squadron Superintendent.
- 4.5. CTK custodians will ensure spare tools/items (e.g. expendable, replacement, and consumable items) are controlled at all times to prevent fraud, waste, and abuse by locking them in a secure place, keeping them separated from tools issued every day, and inventoried.
- 4.6. Personnel authorized to procure tools will be limited to officers, NCOs, and civilian equivalents who operate and manage support/CTK sections.
- 4.7. CTK custodians will not etch replacement tools until they are put into service.
- 4.8. Expendable tools (e.g. apex bits) and consumable tools (e.g. safety wire spools) will be accounted for in TCMAX and will be turned into the CTK custodian for proper disposal.
  - 4.8.1. One-time use HAZMAT items will be accounted for IAW 21-101 AMCSUP and will be returned to the CTK custodian for proper disposal. All other HAZMAT items will be accounted for in TCMAX.
- 4.9. Secure all broken tools in a controlled area until they are processed for disposal and remove EID IAW 21-101 AMCSUP.

#### 5. Tools Room, CTK Control Procedures

- 5.1. Only authorized personnel designated by the squadron/flight will be able to gain unescorted entry into tool rooms.
- 5.2. CTK and peculiar test equipment stored outside of a centralized tool room are subject to the same security, inspection, and accountability requirements as tools located within the centralized facility. These include items/tools permanently stored/located in trailers and vehicles. These CTKs will be locked when unattended with the keys controlled by the CTK custodian or tool room manager when not signed out.

5.2.1. Mobility and crash recovery tools and equipment can be sealed and stored until needed. While in storage those items will be inspected at a minimum of 180-day intervals. Those items must be tamper-proof sealed and stored in a secure location. A thorough inspection for serviceability and accountability will be performed prior to placing crash recovery and mobility CTKs or equipment into service and returning them back to storage. All mobility CTKs and equipment will be inspected at 30-day intervals at deployed locations.

5.2.2. Crash recovery tools and equipment will be part of the Aero-Repair (A/R) shop main inventory (i.e. tracked in TCMAX) and must meet the requirements of this instruction if applicable. The A/R shop will identify these items as being sub-located to the crash recovery trailer.

5.3. For back shops that do not use a centralized tool room where tools and equipment do not leave the shop area, it is permissible for one person to sign out a tool cabinet (e.g. Stanley Vidmar, roll-away, etc.) and allow an entire work crew to use tools from that cabinet, as long as the person signing out the CTK is able to maintain positive control of the contents. The contents of the cabinet will be inventoried prior to any member of the work crew departing the work area in excess of two hours.

5.4. Due to shortages of personnel, it might be necessary for a single person to sign-in and sign-out a CTK. If this should become necessary, at the start of the next work shift, the shift supervisor will inventory the CTK prior to the individual leaving the work area. That inventory must be documented. **Note:** The same individual who signs out a CTK cannot sign it back in.

## 6. Rag/Absorbent Material Control

6.1. Work centers will treat rags as issued tools. CTK custodians will not issue more than 10 rags to an individual at one time. **Note:** At no time will rags be used to plug holes or ports on aircraft or subassemblies.

6.2. Rags received from a supplier will be counted upon receipt and annotated in a log. The number of rags placed in bins for contract cleaning will also be annotated on the log to ensure accountability.

6.3. Cheesecloth and absorbent material (this does not include paper towels or chem-wipes) will be cut into squares, as applicable, and packaged in bundles of 10. At no time will those materials be used on aircraft or in aircraft maintenance areas in any form other than in bundles of 10 each. **Note:** Emergency Response Spill Team Operations are an exception.

## 7. Lost Item/Tool Procedures

7.1. All personnel will initiate a lost tool investigation for any lost or missing tools, CTKs, test equipment, aircraft/equipment parts, technical data, PPE, or any personal issue items, etc. lost anywhere in an aircraft maintenance area.

7.2. Ensure the Red X discrepancy input into the aircraft/equipment forms for a lost tool includes tool description and last known location.

7.3. Production supervisor, expeditor, or section/shop supervisor will put together a team and initiate an in-depth search over the area where the item/tool was last seen and follow procedures outlined in AFI 21-101 AMCSUP.

7.3.1. If the item/tool is not found within one hour of searching, a 60 AMW Form 514, *Lost Tool Report* will be completed.

7.4. When an item is lost by a flight crew member or FCC, the aircraft commander will place a RED X symbol in the aircraft forms along with a description of the item and a specific last-known location.

7.4.1. The aircraft commander will immediately notify the expediter/production supervisor of the lost item and complete a 60 AMW Form 514 if the item/tool is not located within one hour of searching.

7.4.2. The aircraft commander will ensure the 60 AMW Form 514 report is complete and accurate prior to giving that form to the production supervisor or sending it back to home station if the item/tool is lost off station.

7.4.3. If at any time during the investigation the item/tool is found and retrieved, or found but is inaccessible, the aircraft commander will notify MOC, who in turn will notify MXQA, Maintenance Operations Officer (MOO) and/or Maintenance Superintendent.

7.5. MOC will be responsible for notifying the 60 MXG/CC or designated representative of the lost tool and request impoundment guidance from the applicable impound authority. On taxiing or departed aircraft, MOC-1 will be responsible for ensuring the aircraft commander, 60 MXG/CC and the 60 OG/CC are immediately notified of the lost tool.

7.6. The MOO, Maintenance Superintendent, or equivalent will determine when the search may be discontinued and will ensure MOC is notified. Authorization to clear RED Xs when an item cannot be located is limited to no lower than the MOO/Maintenance Superintendent.

7.7. Squadron leadership is responsible to ensure the 60 AMW Form 514 has been routed and filled out completely and correctly. The squadron USR will ensure the 60 MXG safety office receives a copy of all lost tool reports from their squadron.

7.8. If the item is lost on an aircraft or engine and not found, 60 MXG safety will forward a copy of the 60 AMW Form 514 to PS&D (aircraft) and/or Engine Management (engines) to file in aircraft jacket file or annotate AFTO Form 95, *Significant Historical Data*, with the appropriate information.

7.9. Whenever tools/equipment are found on an aircraft, notify maintenance supervision, production, MOC, QA, and the affected support section. MOC will notify 60 MXG/CC or designated representative. Anyone qualified to sign off Red Xs can clear the lost tool entry for tools that are found. If the tool/equipment belongs to a squadron located on Travis AFB, that custodian will ensure the original 60 AMW Form 514 is annotated and routed back through the established channels as prescribed in AFI 21-101 AMCSUP. Contact 60<sup>th</sup> Maintenance Group Safety (MXQS) for historical data concerning lost or missing tool information.

## 8. Personal Equipment

8.1. All personal issue equipment (e.g. Personal Protective Equipment (PPE), ear defenders, headsets, reflective belts, goggles, etc.) will be either etched or permanently marked legibly IAW AFI 21-101 AMCSUP and/or so that the item can be positively identified and returned to the applicable squadron. Personal issued items not marked are not authorized in the aircraft maintenance area. **Note:** Any part of a social security number cannot be used.

## 9. Locally Manufactured/Modified Tools

9.1. Local Manufactured tools will be controlled and accounted for like all other items in this instruction.

9.1.1. **Note:** Local Maintenance Group manufacture procedures are outlined in MXGI 21-101.

## 10. Warranted Tool Management

10.1. CTK custodians will manage warranted tools and equipment in the same manner as other tools and equipment IAW AFI 21-101 AMCSUP, and follow the tool manufacturer's warranty guidelines.

10.2. When warranted tools or equipment are no longer serviceable, they will be verified by the CTK custodian, EID removed, identified as a warranty item, documented on an unserviceable log, and placed in a secure area. The unserviceable log will be maintained until the item is disposed of/turned in.

## 11. Other Agencies

11.1. Depot teams, factory representatives, contract field teams, and other agencies that work on aircraft or associated equipment will follow tool and equipment control procedures IAW the current performance work statement (PWS) and/or applicable company tool control policy prior to work starting and will be monitored throughout for compliance by MXG/COR.

JEFFREY W. NELSON, Colonel, USAF  
Commander

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

AFPD 21-1, *Maintenance of Military Material*, 1 Aug 2018

AFI 21-101 AMCSUP, *Aircraft and Equipment Maintenance Management*, 9 Feb 2016

32-1-101, *Use and Care of Hand Tools and Measuring Tools*, 7 Feb 2019

***Prescribed Forms***

60AMW FORM 514, *Lost Tool Report*

***Adopted Forms***

AF IMT 1297, *Temporary Issue Receipt*

AFTO FORM 244, *Industrial/Support Equipment Record*

AFTO FORM 95, *Significant Historical Data*

***Abbreviations and Acronyms***

**AFI**—Air Force Instruction

**AFMAN**—Air Force Manual

**AFPD**—Air Force Policy Directive

**AMCSUP**—Air Mobility Command Supplement

**A/R**—Aero-Repair

**COR**—Contracting Officer Representative

**CTK**—Composite Tool Kit

**EID**—Equipment Identification Designators

**MIL**—Master Inventory List

**MOO**—Maintenance Operations Officer

**MXG**—Maintenance Group

**MXQS**—Maintenance Group Safety

**OPR**—Office of Primary Responsibility

**PWS**—Performance Work Statement

**QA**—Quality Assurance

**RDS**—Records Disposition Schedule

**SPO**—System Program Office

**USR**—Unit Safety Representative



Attachment 2

COMPOSITE TOOL KIT (CTK) NINE DIGIT IDENTIFICATION SYSTEM

Table A2.1. Work centers are numbered as follows:

<b>60 MXG</b>	
Quality Assurance	TPQA #####
Aircraft Repair Enhancement Program	TPQP #####
Transient Maintenance	TPQT #####
Wash rack	TPQW #####
<b>60 MXS</b>	
Accessories Flight	
Fuel Cell	TPCF #####
Pneudraulic	TPCP #####
Electro-Environmental	TPCE #####
Avionics Flight	
Avionics Back Shop	TPCN #####
TMDE Flight	
PMEL	TPPL #####
Munitions	TPMW #####
Structural Repair/Corrosion	TPFB #####
Fiberglass	TPFF #####
Aircraft Metals Technology	TPFA #####
NDI	TPFN #####
C-17 HSC	TPTH #####
KC-10 A-Check	TPTC #####
Aero Repair	TPTA #####
AGE Insp/Repair	TPGR #####
AGE Servicing	TPKS #####
AGE Production	TPGP #####
<b>60 AMXS</b>	
Aircraft Maintenance Squadron	TP60 #####
<b>660 AMXS</b>	
Aircraft Maintenance Squadron	TP66 #####

