

**BY ORDER OF THE COMMANDER
302 AIRLIFT WING (AFRC)**

302 AIRLIFT WING INSTRUCTION 21-108

10 SEPTEMBER 2009

Certified Current on 18 December 2012

Maintenance



TOOL AND EQUIPMENT MANAGEMENT

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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RELEASABILITY: There are no releasability restrictions on this publication.

OPR: 302MXG/MXQ

Certified by: 302 MXG/CC
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Pages: 8

This instruction implements Air Force Policy Directive (AFPD) 21-1, *Air and Space Maintenance and AFI 11-2C-130, Volume 3, C-130 Operations Procedures*. It establishes procedures, and assigns responsibilities for maintaining, monitoring and controlling an effective Composite Tool Kit (CTK) Program for all tools that may be dispatched to the flightline. This instruction is applicable to all military, civilian and contractor personnel assigned to the 302d Airlift Wing (AW). Refer recommended changes and questions about this publication to the OPR using the Air Force Form (AF Form) 847, *Recommendation for Change of Publication*; route AF Forms 847 from the field through 302 MXG/MXQ. 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 the Air Force Records Disposition Schedule (AFRDS) located at <https://www.my.af.mil/gcss-af61a/afrims/afrims.mil/>.

1. Responsibilities: Each individual is responsible for ensuring Tool and Equipment Management programs are effective and assure the best control possible. This policy is applicable to all personnel under the functional control of the 302d Airlift Wing Commander.

2. 302d Maintenance Group (MXG) Tool and Equipment Management:

2.1. Security, Control and Accountability: The Tool Accountability System (TAS) will be used to track, issue and receipt all assigned tools, equipment, tool kits, hazardous materials (HAZMART) and Technical Orders (TO). HAZMART items that are not dispatched and are kept in a back shop environment are exempt from TAS.

2.1.1. Dispatchable and non-dispatchable HAZMART items will be maintained in a separate cabinet or stored in the same cabinet but clearly separated on different shelves unless space prevents.

2.2. Chemicals not authorized for use on Aircraft will be marked: "Not For Aircraft Use".

2.3. Crash and Recovery Trailers are considered Tool Storage Facilities. The Crash, Damaged or Disabled Aircraft Recovery (CDDAR) team chief shall provide accountability, security, and control of the CDDAR tools and support equipment.

2.3.1. The CDDAR tools, support equipment and shop stock will be maintained and accounted for on a locally approved inventory list.

2.3.2. Inventories will be accomplished annually in accordance with AFI 21-101 Chapter 14 by a current member of the CDDAR team. Inspections will be documented and tracked in the CDDAR continuity binder.

2.4. When TAS is not available due to unforeseen circumstances such as loss of building power, computer malfunction, and deployments etc. work centers shall revert back to use of the AFRC Forms 174, 175 and 177 (TAS Disaster Plan).

2.5. The Maintenance Squadron Superintendent or designated representative, along with Quality Assurance will review and approve Depot Teams, Factory Representatives, and Contract Field Teams tool control procedures and ensure compliance with CTK guidance. In the event teams do not have all required tools, a 302d representative will issue CTK items through TAS and brief the team on positive tool control requirements.

3. 302d MXG Inventory:

3.1. Each section is required to notify their Superintendent and Quality Assurance POC in writing, with the number of CTKs assigned and Equipment Identification Numbers (EID). Updated letters are required whenever an addition or deletion of EIDs take place within the tool storage facility/tool crib.

3.2. When tool storage facilities/tool cribs lack the room necessary to secure tool's, CTK's and dispatchable equipment, the section NCOIC will take measures to implement a process to prevent unauthorized use or access of tools and equipment.

3.3. Tool storage facilities/tool cribs will be signed in and out daily by the CTK Custodian or authorized representative. For sections with one employee a qualified individual from the same flight should verify tool accountability daily.

3.3.1. When unique mission requirements facilitate a one person inventory (i.e. broken transit aircraft over an off weekend), that individual will perform an inventory and document the AFRC Form 177 (Consolidated Kit Inventory and Control) or TAS generated product to include the sign out/in portion of the form. The member will use the long term sign out feature in TAS. On the next available shift the CTK monitor, supervisor, or any qualified technician will re-inventory the CTK and sign in TAS.

3.4. CTKs that have been sub located to an area other than the owning section will be the responsibility of the owning section; this will include inventory and accountability. The keys should be available to the section where the CTK is sub-located in the event the CTK must be moved or relocated.

3.4.1. CTKs sub located will be signed out using long term mode in TAS. During long term use, the issue and turn-in inspections will be documented on an AFRC Form 177.

3.5. Dispatchable kits, test sets used on the Flightline will be marked with reflective tape/paint on each corner of the box. The tape/paint must clearly show the outline of the box during the hours of darkness. AMXS CTKs assigned to specific aircraft do not require reflective tape.

3.6. When mission dictates an on site transfer of tools, CTKs and dispatchable equipment, the individuals involved will conduct a joint inventory of the CTK, document on the AFRC Form 177 and transfer possession in TAS prior to the end of shift.

3.7. CTKs will be inspected for foreign object debris (FOD) during issue and turn in. A bag to capture foreign objects, marked with the CTK EID, will be attached to dispatchable CTKs and will be emptied during issue and turn in inspections. The bags will be marked with the word "FOD" in two inch letters. Detachable FOD bags will be listed on the MIL.

4. 302d MXG Warranted Tool Management:

4.1. Replacement tools are issued on a "one for one" exchange basis. When tools have been damaged and require replacement, notify the section CTK Custodian and if applicable the Company Warranty Tool Representative. Damaged XF3 or XD3 tools will be turned in to the Defense Reutilization and Marketing Office (DRMO), XB3 tools will be turned into the CTK monitor.

5. 302d MXG Lost Tool/Object Procedures:

5.1. All lost tool/object procedures listed in AFI 21-101, AFRC Sup 1 must be followed to ensure safety. A copy of the completed AFRC Form 174, Lost Tool/Object Report will be forwarded to Quality Assurance (QA) for entry into Quality Assurance and Trend Analysis System (QANTTAS).

5.2. A lost tool/object is any item, to include aircraft job guides, technical orders, hardware, knobs, lens covers, test equipment, tools, rags and PPE discovered to be unaccounted for at the time of inventory, turn in, or personal inspection. If a tool/object or portion of a tool/object is discovered missing, the following procedures apply:

5.2.1. If the tool/object is not found during the initial search, notify Maintenance Operations Control (MOC) and initiate an AFRC Form 174, Lost Tool/Object Report in accordance with (IAW) AFI 21-101, AFRC Sup 1. If the tool or object is found during the initial search an AFRC Form 174, Lost Tool/Object Report, is not required. The initial search shall not last longer than 1 hour.

5.2.2. Thorough searches will be concluded within 3 hours of confirmation of the lost tool/object or the end of the shift, whichever comes first. If the missing tool/object is located during the thorough search the AFRC Form 174, Lost Tool/Object Report must still be completed and routed. If the tool/object is not found after the 3 hours the Maintenance Group Commander or designee will determine whether to continue or discontinue the search. If the tool/object cannot be located, only the Maintenance Group Commander or designee in his/her absence may clear the Red X in the aircraft forms.

5.2.3. If a tool/object is lost or believed to be lost on a non-flying aircraft, notify the flight line expediter or production supervisor prior to starting the thorough search. The

expediter or production supervisor will notify MOC and QA immediately and initiate the AFRC Form 174, Lost Tool/Object Report. MOC will issue a job control number for the lost tool/object and a Red X will be placed in the AFTO Form 781A, prohibiting operation or movement of all aircraft involved. A finalized report must be submitted to QA no later than 24 hours from the time the tool/object was reported missing.

5.2.4. If a tool/object is believed lost on an aircraft that has taxied or is flying, the Production Supervisor will immediately notify the MOC with the nomenclature of the item, and where and how it could affect safety of flight. MOC will then contact Command Post to inform the aircrew. Upon the return of the aircraft follow the procedures outlined in 5.2.3 or the Impound Authority will impound the aircraft in IAW 302 AWI 21-101, Aircraft Impoundment Procedures. The Impound Authority will determine whether impounding the Aircraft is necessary. The finalized Lost Tool Investigation Report must be forwarded to the QA office within 24 hours of the tool/object being reported missing.

5.2.5. If a tool/object is lost and no aircraft are involved, notify the supervisor or equivalent for that section immediately. After the initial search, not to exceed 1 hour, notify MOC, initiate an AFRC Form 174, Lost Tool Report and initiate a thorough search of the area. The thorough search will be concluded within 3 hours of confirmation of the lost tool/object or the end of the shift, whichever comes first. The AFRC Form 174, Lost Tool Report must be finalized and forwarded to the QA office within 24 hours of the tool/object being reported missing.

5.2.6. If the tool/object is located, the appropriate section supervisor is responsible for clearing the "Red X".

5.2.7. If the lost tool/object is not located after the 3 hour period, the Impoundment Authority may elect to impound the aircraft In Accordance With (IAW) 302 AWI 21-101, Aircraft Impoundment Procedures.

6. 302d MXG Assignment of World Wide Identification Designator (WWID):

6.1. The WWID markings (**Attachment 2**) will be used for CTK, tool and dispatchable equipment identification.

6.1.1. The first four digits of the WWID are as follows: W8MQ - W8 is Peterson AFB (Reserve), M is Maintenance and the fourth character is the shop identifier, (example: Q is for Quality Assurance). All work center assigned WWID codes will be reviewed by QA annually.

7. 302d MXG Issue and Control of Personal Protective Equipment (PPE):

7.1. PPE such as headsets, ear defenders, medically supplied ear plug cases, reflective belts and eye protection that are issued to an individual must be secured in their personal locker, tool room or work stations. As a minimum, these items will be marked with the WWID and signed out as an initial issue through TAS.

8. 302d MXG Rag Control:

8.1. All rags used will meet military specifications (MIL SPEC) as directed in applicable technical data.

8.1.1. Rag use on the flight line and in performance of maintenance creates a potential for FOD and will be controlled and tracked in TAS. Sections with back shop rags that are not dispatched do not need to be tracked in TAS. These sections will develop a positive rag control program to prevent unauthorized use and maintain accountability. The responsibilities for the control of rags fall under the section CTK custodian and section supervisor. Dirty or unserviceable rags will be appropriately disposed of IAW all applicable Hazardous Material/Hazardous Waste procedures. Separate containers for oily and solvent rags will be established and marked as such. Solvent/oily rags will be placed in separate garbage bags and disposed of accordingly in a dumpster outside of the building to prevent a fire hazard at the end of each shift.

8.1.2. Sections using rags not tracked in TAS will establish a control center, typically the tool storage facility/tool crib. A control log will be established for signing rags in and out. The control log will have as a minimum the following: issue date, employee number, quantity issued, sign in/out column and quantity disposed.

8.2. The expeditor truck will contain rags for issue out/in. Rag sign out/in will be documented on AFRC Form 177 or TAS generated product for accountability.

9. 302d MXG Locally Manufactured, Developed or Modified Tools and Equipment:

9.1. Sections requiring locally manufactured items will fill out Department of Defense (DD) Form 1348-6 and route to the Fabrication Flight Chief for processing. The request will then be coordinated and approved through the QA office. These items will be marked, stored and secured in the same manner as purchased tools and equipment. For further guidance see MOI 23-103, Local Manufacture Procedures.

10. 302d MXG Locally Developed Tool and Equipment Management Program:

10.1. When deploying to a location that does not have TAS capabilities, the CTKs, tools, equipment or accessories (including rags or bags of rags) will be signed out at home station using the long term issue mode. During the deployment the issue and turn in inspections will be documented on an AFRC Form 177.

10.1.1. The superintendent/custodian will be responsible for procurement and management of tools required for the mission. Documentation will be entered on an AFRC Form 175 or TAS generated product.

10.1.2. Upon return to home station open entries on the AFRC Form 175 will be transferred into TAS.

11. 731st Airlift Squadron (AS) Tool and Equipment Management and Inventory:

11.1. Aircrew Flight Equipment will track all CTKs and tools through the ALERTS data base. ALERTS will select a random fourteen digit identifier for each CTK and each tool associated with it. In addition, a nine digit local ID will be assigned by the Aircrew Flight Equipment shop.

11.2. Each aircraft has assigned to it a Flight Engineer tool box secured, locked and sealed under the crew bunk. Each tool box complies with AFD 21-1. The tool box is assigned a box number, along with a box car seal number for the Hostile Environment Repair Kit (HERK). Tool boxes contain a complete inventory list of tools, and a SF 702 to track use of the tool box.

11.3. Aircrew Flight Equipment will store all CTKs and tools in building 207 (chute room, flotation room, flightline and oxygen section) POC: OSF/OSL.

11.4. Aircrew Flight Equipment CTKs and tools will be signed out by the technician using the item. When the item is no longer needed or being used that technician will turn in the item and have another technician sign the tool kit and/or equipment back in.

11.5. In order to provide accountability for tools in the Flight Engineer tool kit, the following procedures will be implemented. Should a Flight Engineer or Loadmaster need a tool from the kit, the individual needing the tool will initial the toolbox "OPENED BY" on the SF 702, located in the tool box. A crew member who has not used any tools will initial "CLOSED BY" to verify the tool is returned and the tool box is locked and secured under crew bunk.

11.6. Each flight engineer will carry a list to include the specific tool box number assigned to each individual aircraft. This list includes aircraft tail number, tool box number, and a seal number for HERK kit. On every 1C-130(K) H-1 preflight inspection, Flight Engineer's are required to check that the aircraft tail number matches tool box number and seal number, and that the tool box is still locked and secured. In addition once annually, all tool boxes are inventoried by individuals designated by the 731 AS Chief Flight Engineer.

12. 731st AS Lost Tool/Object Procedures:

12.1. Aircrew Flight Equipment will follow lost tool procedures as outlined in 302 OSF/OSL Operating Instruction 21-101, AFI 21-101 and AMCI 11-301. In the event an Aircrew Flight Equipment item is misplaced or lost on an aircraft the maintenance control (MOC) will be notified immediately.

12.2. Should a tool be discovered missing, aircraft will remain on the ground until tool is accounted for. Report the missing tool to MOC, 302 OGV, and 731 AS Chief Flight Engineer.

JACK H. PITTMAN, JR., Colonel, USAFR
Commander

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

AFI 11-2C-130, V3, *C-130 Operations Procedures*

AFI 21-101, AFRC SUP1, *Aerospace Equipment Maintenance Management*

AFI 90-821, *Hazard Communication*

AFPD 21-1, *Air and Space Maintenance*

AMCI 11-301, *Aircrew Life Support (ALS) Program*

AWI 302 21-101, *Aircraft Impoundment Procedures*

MOI 23-103, *Local Manufacture Procedures*

Abbreviations and Acronyms

AFI— Air Force Instruction

AFPD— Air Force Policy Directive

AFRC— Air Force Reserve Command

AFSC— Air Force Specialty Codes

AW— Airlift Wing

AWI— Air Wing Instruction

CDDAR— Crash Damaged or Disabled Aircraft Recovery

CP— Command Post

CTK— Composite Tool Kit

EID— Equipment Identification Identifier

FOD— Foreign Object Damage

GPC— Government Purchase Card

MIL— Master Inventory Listing

MIL SPEC— Military Specification

MOC— Maintenance Operations Center

MXS— Maintenance Superintendent

QA— Quality Assurance

QANTTAS— Quality Assurance Tracking and Trend Analysis System

TAS— Tool Accountability System

TDY— Temporary Duty

Attachment 2

WORLD WIDE IDENTIFICATION (WWID)

WORKCENTER	OFF SYM	WWID
Quality Assurance	MXQ	W8MQ*****
Electro-Environmental	MXMCE	W8ME*****
Pneudraulics	MXMCP	W8MH*****
Fuels	MXMCF	W8MF*****
Aircraft Inspection	MXMTC	W8MI*****
Aero Repair	MXMTR	W8MR*****
ASM	MXMFB	W8MB*****
Metals Tech	MXMFM	W8MM*****
Survival Equip	MXMFS	W8MU*****
NDI	MXMFN	W8MN*****
Engine/Propulsion	MXMPE	W8MP*****
AMXS	MXA	W8ML*****
AGE	MXMG	W8MA*****
Support Equipment	MXAS	W8MS*****
ECM	MXMVE	W8MC*****
Munitions	MXMW	W8MW*****
COMM/NAV	MXMVC	W8MD*****
Guidance Control	MXMVG	W8MG*****
MOCC	MXO	W8MO*****

* Denotes characters assigned by the accountable workcenter