

**BY ORDER OF THE COMMANDER
934TH AIRLIFT WING**

**934 AIRLIFT WING INSTRUCTION
21-109**



16 FEBRUARY 2016

Maintenance

**COMPOSITE TOOL KIT (CTK)
PROGRAM**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This instruction implements Air Force Policy Directive (AFPD) 21-1, Air and Space Maintenance, Air Force Instruction (AFI) 21-101, Air Force Reserve (AFRC) Supplement, AFI 11-2C-130, Volume 3, C-130 Operations Procedures, 934 Maintenance Operating Instruction (MOI), 21-109 Local Manufacture tools, Technical Order (TO) 32-1-101, AFI 10-403, AFI 11-301, Volume 1, 934 Airlift Wing (AW) Supplement, AFI 11-2C-130, Volume 3, 934AW Supplement establishing procedures and assigning responsibilities for maintaining, monitoring and controlling an effective Composite Tool Kit (CTK) Program for all tools which are dispatched to the flight line. It applies to all 934th Airlift Wing (AW) personnel. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the Air Force Form 847, Recommendation for Change of Publication; route AF Form 847s from the field through the appropriate functional chain of command. 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 (RDS) located at <https://www.my.af.mil/afirms/afirms/afirms/rims.cfm>.

SUMMARY OF CHANGES

This publication has been rewritten and must be completely reviewed. Revisions incorporate AFI 21-101 changes and processes clarification.

1. Overview.

1.1. This instruction applies to all members assigned to the 934th Airlift Wing, and other personnel working on or around the aerospace equipment maintenance industrial area.

2. Responsibilities.

2.1. All 934th Airlift Wing personnel will have a tool program for tools, equipment and personal protective equipment that are dispatched to flight line and aircraft maintenance areas.

2.2. A solid tool control program in the context of this instruction will follow guidance in AFI 21-101, AFRC SUP Chap 8.

2.3. As a minimum all CTK monitors will conduct and document an annual inventory of all tools and equipment under their control. This inventory will be documented in the Tool Accountability System (TCMAX) or an AFRC form 177. The Master Inventory List (MIL) is not required to be updated as a part of the annual inventory however, if items on the MIL have changed or a new CTK Custodian has been appointed a new MIL must be produced.

2.4. All sections that possess warranty tools will contact the appropriate local vendor (Snap-On, Granger, 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.

2.5. In addition to the guidelines listed in AFI 21-101, AFRC SUP para. 8.5.1, all sections will use TCMAX to track calibration due dates for Test Measurement and Diagnostic Equipment (TMDE). This prevents overdue TMDE items from inadvertently being signed out.

3. Local Manufacture Tools and Equipment.

3.1. Locally Manufactured Tools and equipment are developed using the procedures outlined in AFI21-101, AFRC Sup 1, and 934 Maintenance Operating Instruction MOI 21-109. These items are controlled through normal Consolidated Tool Kit (CTK) procedures.

4. Depot Contract Field Team (CFT) team tools.

4.1. Quality Assurance (QA) will review and approve Depot Teams, Factory Representatives, and CFT tool control procedures and ensure compliance with CTK guidance.

5. Support Personnel.

5.1. Support personnel (e.g. Civil Engineering and Vehicle Maintenance personnel etc.) working on the flight line or other aircraft maintenance area shall ensure positive control of tools, components, hardware, and consumables. As a minimum, items will be inventoried and accounted for prior to, and at the end of each task. Lost tool procedures must be applied by any work center support organization when items carried by employees cannot be accounted for.

6. Crash Damaged/Disabled Aircraft Recovery (CDDAR) Tool Program.

6.1. CDDAR Team tools and equipment will be controlled/issued/stored in the same manner as all other tools/equipment in AFI 21-101, AFRC SUP Chap 8; and this Airlift Wing Instruction (AWI).

7. Security.

7.1. All CTK keys will be individually etched and issued separately from its corresponding tool kit in TCMAX.

7.1.1. **(AMU Operation)** During Aircraft Maintenance Unit (AMU) tool room operations CTKs may be issued with their corresponding key.

7.2. Access to tool rooms, keys, tools and equipment will be limited to authorized personnel only.

7.3. Sections will have appointed CTK/Tool Custodians, primary and alternate, to manage and control CTKs/Tool rooms.

7.3.1. Only CTK custodians and work center supervisors will procure tools and have access to spare tools.

7.3.2. Tool rooms will be locked at all times when left unattended. Cypher locks and combination locks are not authorized. Access will be limited to primary and alternate CTK custodians, work center supervisors and personnel tasked with being the CTK monitor.

7.4. As a minimum each dispatchable CTK will have a copy of the MIL, AFRC Form 175, and AFRC Form 177.

7.5. 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 (e.g., launch kits, recovery kits, cartridge cleaning kits, oxygen servicing kits, etc.)

8. Second Party Sign In.

8.1. CTKs used after regular work shifts (i.e. a second individual may not be available in shop to sign tool box back in) will be inventoried and signed back in (AFRC Form 177) by someone else working on the aircraft. At the start of the next shift the CTK will be inventoried and signed in before being re-issued.

8.2. In circumstances of a one person shop, that individual will perform an inventory and document sign out, on an AFRC Form 177.

8.2.1. After job is complete individual will perform contents verification and document, sign in, CTK on an AFRC Form 177.

8.2.2. At the earliest opportunity, a Flight Chief or CTK custodian will perform a contents verification and document, sign in, CTK.

9. Rags.

9.1. Rags are considered tools and will be issued and returned to CTK. They will be secured in the same manner as tools, and if lost or missing they will be reported as a lost tool.

9.2. Rags assigned to a dispatchable CTK will be exchanged on a one for one basis.

9.3. Rags will be contained 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.

9.3.1. Contents of the “Clean Rag” and “Dirty Rag” bin will match the “Quantity on Hand” in TCMAX.

10. Personal Protective Equipment (PPE).

10.1. Issued PPE such as ear defenders, communication headsets, reflective belts, gloves, safety glasses etc., will be marked with a unique EID number and tracked in TCMAX.

10.2. Work centers may opt to issue PPE items as a kit/CTK to their members. The kit/CTK will list all PPE items on the MIL. The kit/CTK will be inspected at least annually to verify kit /CTK contents inventory.

10.3. PPE issued to individuals may be stored in personal lockers, and will not be stored/left on aircraft.

10.4. Personally issued tools such as Leatherman’s, Gerber’s, etc. will be signed out in TCMAX. These tools are not authorized to be long term issued to an individual and will be returned to the CTK daily.

10.4.1. Flashlights may only be long term issued when Maintenance (MX) personnel are going off station with aircraft. Flashlights will be checked back in at earliest opportunity when returning to home station.

11. Ipads and Etools.

11.1. Ipads and Etools will be tracked and issued out in TCMAX.

12. Foreign Object Damage (FOD) Container/Pouch

12.1. FOD containers/pouches if included in a CTK will be annotated on the MIL.

13. Assignment of Equipment Identification designators.

13.1. The TCMAX World Wide Identification (WWID) number is nine digits. The first two positions, W3, are the designators for the 934 AW, Minn/St Paul IAP ARS. The third position is “M” designating Maintenance. The fourth position is the particular shop designator. The remaining five positions are reserved for each individual shop:

Figure 1. Assignment of Equipment Identification Designators.

Comm/Nav: W3MU-----	R&R/CDDAR: W3MT-----
EWS: W3MW-----	AGE: W3MA-----
Guidance Control: W3MG-----	Metals Tech: W3MM-----
Inspection Dock: W3MI-----	Structural Repair: W3MS-----
Flight Line: W3ML-----	NDI: W3MN-----
Propulsion: W3MJ-----	Survival: W3MP-----
Pneudraulics: W3MH-----	Munitions: W3MB-----
Electric/Environmental: W3ME-----	Corrosion Control: W3MC-----

Fuel: W3MF-----	Quality Assurance: W3MQ-----
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14. Transfer tools at job site.

14.1. Both parties will inventory the CTK together and after agreeing to its contents, the individual who receives the CTK assumes custodial responsibility by signing the AFRC Form 177 which is maintained in each CTK.

14.2. For decentralized CTKs and vehicle mounted CTKs; such as Flight Line Expeditor truck/large CTKs stored in ISO: The CTK and key will be signed out in TC MAX daily and AFRC Form 177 will be documented at the decentralized location. The person signing the CTK “out” on the AFRC Form 177 will not be the same as the person signing CTK “in”. A second party or on duty supervisor will perform an inspection of the tool kit Not Later Than (NLT) the end of shift and document the AFRC Form 177. The CTK and key will be signed back into TC MAX at the end of the shift.

15. Aircrew.

15.1. Aircrew members inventory all equipment and personal items prior to flight and account for them after flight.

15.2. Document any lost item in the aircraft Air Force Technical Order (AFTO) Information Management Tool (IMT) 781A, Maintenance Discrepancy and Work Document.

15.3. Flight Engineer/ Loadmaster (FE/LM) tool kits that have been issued to be pre-positioned on the aircraft for FEs/LMs in accordance with (IAW) AFI 11-2C-130V3, paragraph 6.2.10 and AFI 11-2C-130V3_934 AW Sup 1.

15.4. The kits and contents will be numbered for accountability. An issue/turn-in log will be maintained. An inventory log of tool bag locations will be kept in the Flight Engineer office.

15.5. FEs/LMs using the tool kit will inventory the tool kit contents and sign off the inventory sheet in the bag and seal the bag with provided seals, any time it is opened/used.

15.6. Any tools or items missing will be identified and reported as a lost tool in accordance with (IAW) section 15 of this Airlift Wing Instruction (AWI).

16. Aircrew Flight Equipment (AFE).

16.1. AFE CTKs will be manually tracked IAW AFI 21-101 and AFI 11-301 v1.

16.1.1. Procedures: In order to accomplish mission requirements and the prevention of foreign object damage (FOD), it is essential that a tool control program be established within the AFE Support Section.

16.1.2. Tools assigned to section will be closely monitored by the supervisor to prevent pilferage and FOD. The overall section tool program will be closely monitored by the CTK Monitor and Non Commissioned Officer In Charge (NCOIC).

16.1.3. All toolboxes, tools and kits will be shadowed to provide a specific place for each tool. All tools will be engraved to identify the tool box to which it belongs.

16.1.4. Tools will be inventoried at the beginning and end of each shift. A CTK Inventory and Control Log will be maintained.

16.1.5. Each individual is responsible for control over tools used within their section. All tools will be placed in the CTK when not in use.

16.1.6. Tools will be inventoried upon completion of task.

16.1.7. Individuals discovering a lost item/tool will follow the lost item/tool procedures in section 15 of this AWI.

17. Lost Item/Tool Procedures.

17.1. Follow all guidance in AFI 21-101 AFRCSUP Ch. 8.

17.2. If an item/tool is discovered missing off station, the Mission Essential Personnel (MEP) or flight crew will conduct an immediate search. If item/tool is not found; enter a Red X in the aircraft forms and inform the Aircraft Commander (AC) of the situation. The aircrew will inform the 934 Command Post, who will contact Maintenance Operations Center (MOC) and Quality Assurance (QA) office of aircraft condition.

17.3. If the tool/item is recovered, the Mission Essential Personnel (MEP) or flight crew will clear the "Red X" in accordance with TO 00-20-1. If the item/tool item cannot be found, the AC will coordinate with the 934 Maintenance Group (MXG)/ Commander (CC) or designated representative to determine aircraft recovery procedures to be followed.

17.4. If an item/tool is discovered missing after taxi/take off ground personal will conduct an immediate search of the area. If item/tool is not found; Steps will be taken to contact the AC and coordinate with the 934 MXG/CC or designated representative to determine aircraft recovery procedures to be followed.

18. Laminated Warning Tag Procedures.

18.1. Work centers maintaining laminated warning tags in their CTKs will document weekly source data reviews on a spreadsheet or equivalent means.

18.1.1. Each work center will review the TO Daily Distribution sheet to check for TO updates that may affect a warning tag set. If a TO has been changed that affects a warning tag set the owning work center will review the content accuracy of the tags and make applicable changes as needed.

ANTHONY G. POLASHEK, Colonel, USAFR
Commander

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

AFI 21-101, AFRCSUP, Aircraft and Equipment Maintenance Management, 24 August 2015

AFI 11-301 V1 934 AWSUP, Aircrew Flight Equipment (AFE) Program, 18 November 2013

AFI 11-2C-130 V3, C-130 Operations Procedures, 23 April 2012

AFI 11-2C-130V3_934AWSUP1, C-130 Operations Procedures, 01 February 2011

AFMAN 33-363, Management of Records, 1 March 2008

MOI 21-109, Local Manufacture tools, 13 December 2013

TO 32-1-101, Use and Care of Hand Tools and Measuring Tools, 01 December 2004

Adopted Forms

AF IMT 847, Recommendation for Change of Publication

AFRC Form 175, Missing/Removed Tools and Equipment

AFRC Form 177 Consolidated Tool Kit Inventory and Control Log

AFTO Form 781A, Maintenance Discrepancy and Work Document

Abbreviations and Acronyms

AC—Aircraft Commander

AFI—Air Force Instruction

AFRC—Air Force Reserve

AFE—Aircrew Flight Equipment

AFMAN—Air Force Manual

AFPD—Air Force Policy Directive

AFTO—Air Force Technical Order

AMU—Aircraft Maintenance Unit

AW—Airlift Wing

AWI—Airlift Wing Instruction

CC—Commander

CDDAR—Crash Damaged/Disabled Aircraft Recovery

CFT—Contract Field Team

CTK—Composite Tool Kit

EID—Equipment Identification Designators

FOD—Foreign Object Damage

FE/LM—Flight Engineer/ Loadmaster
IAW—In Accordance With
IMT—Information Management Tool
MEP—Mission Essential Personnel
MIL—Master Inventory List
MOC—Maintenance Operations Control
MOI—Maintenance Operating Instruction
MX—Maintenance
MXG—Maintenance Group
MXG/CC—Maintenance Group Commander
NCOIC—Non Commissioned Officer In Charge
NLT—Not Later Than
OPR—Office of Primary Responsibility
PPE—Personal Protective Equipment
QA—Quality Assurance
RDS—Records Disposition Schedule
TCMAX—Tool Accountability System
TMDE—Test Measurement and Diagnostic Equipment
TO—Technical Orders
WWID—Word Wide Identification