

**BY ORDER OF THE COMMANDER
403D WING**



403D WING INSTRUCTION 21-105

4 OCTOBER 2012

Incorporating Change 1, 12 JUNE 2015

Maintenance

**CONSOLIDATED TOOL CONTROL
PROGRAM**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

ACCESSIBILITY: Publications and forms are available on the e-Publishing website at www.e-publishing.af.mil for downloading.

RELEASABILITY: There are no releasability restrictions on this publication.

OPR: 403 MXG/MXQ

Certified by: 403 MXG/CC
(Col Anna M. Schulte)

Supersedes: 403WGI21-105,
10 December 2007

Pages: 9

This Instruction implements AFI 21-101_AFRCSUP_I, *Aircraft and Equipment Maintenance Management*, and TO 00-20-1, *Aerospace Equipment Maintenance Inspection, Documentation, Policies and Procedures*. This Wing Instruction establishes procedures and responsibilities for the Consolidated Tool Control Program (CTK). This Instruction is applicable to 403 Maintenance Group, Operations Group, 815th Airlift Squadron, 53rd Weather Reconnaissance Squadron personnel. Refer any recommended changes to this publication to the (OPR) using the Air Force Information Management Tool (AF IMT) 847, *Recommendation for Change of Publications*: route AF IMTs 847 from the field through the appropriate functional' s chain of command. 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).

SUMMARY OF CHANGES

Updates to incorporate added CTK requirements IAW AFI 21-101_AFRCSUP_I, *Aircraft and Equipment Maintenance Management*. Focus areas were management of Personal Backpacks, Rags, and Laminated Warning Tags.

1. Responsibilities: Squadron commanders/superintendents, with input from Flight/Section Chiefs, are responsible for management of the CTK program within their squadron. Each

individual is responsible for ensuring the CTK Program is effective and assures the best tool control possible. The main responsibility for CTK custodial control lies with the Flight/Section Chiefs and designated CTK custodians. This instruction is not all inclusive: rather supplements responsibilities in AFI 21-101

2. Security, Control, and Accountability of Tool and Equipment:

2.1. The Flight/Section Chiefs designate in writing primary and alternate CTK custodians to manage and control assets located in the tool room and designate individuals permitted to gain access to the CTK secure storage location. Designated CTK custodians are responsible for tool procurement, Hazardous Material (HAZMAT), equipment accountability, and control within their respective areas.

2.1.1. HAZMAT will be tracked in TCMAX (Exception: 1C-130J-21 authorizations).

2.2. All tools and dispatchable CTK's are maintained in a lockable, enclosed secure area or cabinet. This area is secured at all times and access is permitted only by the Flight/Section Chiefs, appointed maintenance supervision, and authorized personnel. It is the sole responsibility of those authorized to ensure items issued are properly accounted for in accordance with the instructions and directives outlined in this instruction.

2.3. All units will use the TCMAX system.

2.4. AFRC Forms 174,175,177 or TCMAX generated products may be used to track tools.

2.4.1. Use AFRC Form 174, *Lost Tool/Object Report*, to annotate each lost tool/object unless the item is immediately recovered. When a tool is reported missing or lost, indicate the date and time lost tool procedures were initiated. The CTK custodian maintains AFRC Form 174 on suspense. Destroy the suspense report when the item is recovered or not found within 1 year.

2.4.2. Use AFRC Form 175 *Missing/Removed Tools Equipment*, to annotate all removed/missing tools and equipment, and all actions taken on these items. This form will be signed and dated when a tool is replaced. A separate AFRC Form 175 is maintained in each aircraft CTK. When the AFRC Form 175 is full, a new form is initiated and all open entries are transcribed to the new form.

2.4.3. Use AFRC Form 177, *Consolidated Tool Kit Inventory and Control Log*, for accountability and control of CTKs, and tools. This form remains in the designated tool room or work center. A separate AFRC Form 177 is maintained for each CTK designator series and aircraft CTK.

2.4.4. AF Form 1297, *Temporary Issue Receipt*: is to be completely filled out and handed to the Flight/Section Chief or CTK custodians for accountability of issued tools/equipment. When tools or equipment are returned to the tool room, the AF Form 1297 is returned to the individual for disposal.

2.4.5. TCMAX generated forms may be used.

2.4.6. Chits are not authorized to be used.

3. Inventory Requirements:

3.1. At least annually, a comprehensive inventory of all tools, equipment, and CTKs will be accomplished by the Flight/Section chief. The Flight/Section Chief signs and dates the CTK Master Inventory Listing (MIL) certifying this yearly requirement was accomplished. When the CTK custodian changes, the old and the new CTK custodians perform a thorough, documented inventory before transition of responsibility occurs. Changes made to the CTK MIL are approved and documented by the Flight/Section Chiefs.

3.2. All CTK, tools, and equipment are accounted for at the beginning and the end of every shift. CTKs present during tool room shift inventories do not need to be opened. This inventory is documented daily using TCMAX or AFRC Form 177, if TCMAX is inoperative.

3.2.1. Electronically back up the respective TCMAX database at least once a month. The backup must be kept separate from the computer that houses the tool control database.

3.3. CTKs are inventoried when issued for use (using either TCMAX or AFRC Form 177) and become the responsibility of the individual who signed out the CTK. CTKs are inventoried at the completion of a job or task, between breaks in a job where the box is locked and left unattended, and when returned to the tool room. A CTK inventory is accomplished prior to operation of any aircraft or equipment when maintenance actions were performed.

3.4. Toolboxes sub located to an aircraft will have keys controlled by the tool room. When the toolbox key has been issued from the tool room, the Aircraft toolboxes must be inventoried at the beginning and end of every shift using the AFRC Form 177 within the toolbox.

3.5. Aircraft off station with an accompanying crew chief will have all tools accounted for, at a **minimum, prior to each flight. The crew chief will inventory and annotate AFRC Form 177 prior** to each flight. Exception: Engine run on/off load (EROs) and quick-turns during which no maintenance was performed. Standard procedures still apply: toolboxes must be inventoried and AFRC Form 177 annotated before and after each use.

3.6. All CTKs are arranged to ensure contents are clearly visible and easily inventoried. CTK contents are standardized to the maximum extent possible within the functional elements of a squadron which maintain similar Mission Design Series (MDS) aircraft.

3.6.1. Each tool will be identified by inlay cuts, shadowed layout, or silhouette. Storage cabinets will be labeled to identify the contents and location of each item for quick inventory.

3.6.2. All tools and equipment (this includes shop equipment) must have a designated storage location established. This includes dispatchable and nondispatchable tools, equipment, and common accessories (waveguides, attenuators, fittings, cables, and adaptors) that are not part of the CTK.

3.6.3. All other dispatchable support equipment (i.e. kits, bags, pans, crates) must have a designated storage location established and will be controlled using TCMAX or AFRC Form 177.

3.7. Single-Person Tool Inventory Accountability:

3.7.1. When a technician is alone, the following CTK sign-in procedure is followed.

3.7.1.1. The technician performs a thorough inventory of all items contained in the CTK.

3.7.1.2. The technician annotates on AFRC Form177 the current military time and signs their name in the "IN" block.

3.7.1.3. At the next possible opportunity the affected CTK will receive another thorough inspection/inventory by a separate technician, before it is used again. If all items are accounted for, the individual who accomplished the 2nd inspection will initial by the original signature.

3.7.1.4. If an item is missing or lost, take the appropriate steps as outlined in this instruction.

4. Dispatchable CTK On-Site Transfer Procedures:

4.1. When additional dispatchable CTKs are available within a shop, technicians sign-out their own CTK, therefore, an on-site transfer will not occur.

4.2. When additional CTKs are not available within a shop, or a situation does not allow a technician to obtain their own CTK, technicians adhere to the following procedures for on-site transfer:

4.2.1. When the relieving technician arrives on site, a complete inventory of the CTK is performed by both individuals.

4.2.2. Once the inventory is completed and all items are accounted for, the technician taking over at the job site issues an AF Form1297 to the technician that signed out the dispatchable CTK. The relieving technician assumes responsibility for the CTK and its contents.

5. Lost/Missing Tool Procedures:

5.1. When a tool cannot be found, the Expeditor/Production Superintendent or their representative (if unavailable, contact any supervisor), is notified so appropriate action can be taken IAW AFI 21-101.

5.1.1. AFRC Form 174 will be completed for each lost/missing tool.

5.1.2. If the item is lost/missing in or around an aircraft, a Red X will be placed in the aircraft forms with a description of the item and last known location.

5.1.3. Only authorized individuals may clear the Red X.

6. CTK Content Management:

6.1. Flight/Section Chiefs are authorized to maintain replacement expendable and consumable tools, as long as they are kept in a lockable, secured location and tracked in TCMAX.

6.1.1. Access to these resources remains exclusively with the Flight/Section Chiefs and/or their designated representative.

6.1.2. A complete inventory is accomplished quarterly using TCMAX or AFRC Form 177 to ensure positive control of these assets.

6.1.3. Replacement items are not issued without receipt of the unserviceable tool and documentation of the AFRC Form 175, or documentation indicating the tool is lost and has been reported lost IAW the lost tool procedures outlined in this instruction.

6.1.4. Industrial shop machinery accessories/attachments (blades, arbors, etc.) are maintained using the same procedures listed in this section, but are not assigned to a CTK.

6.1.5. Items stored in a CTK which contain hazardous materials are managed IAW local HAZMAT procedures.

6.1.6. All other items used in a CTK are maintained by the Flight/Section Chief and/or CTK custodians using the same procedures listed in this section.

7. Warranty Tool Management/ Tool Procurement:

7.1. Warranty tools can be obtained at Base Supply Tool Issue Centers or through local contracts with warranty tool vendors (e.g. Snap-on). Units establishing a Warranty Tool Program coordinate with Base Supply and Contracting. Detailed management procedures are contained in AFI 23-101, *Air Force Material Management*. Tools that are purchased through local contracts, the Flight/Section Chief retains contractual paperwork on warranty tools during the warranty period. Direct contact with local contractors will be maintained for replacement of broken and lost tools only.

7.2. Flight/Section Chiefs and/or assigned CTK custodians are responsible for the ordering, purchasing, and management of tools required in their work centers.

8. Rag Control:

8.1. Flight/Section Chiefs have overall responsibility for implementing the unit's Rag Control Program. Work centers requiring rags for maintenance will establish a control center, typically the same area as the CTK issue area. The Flight/Section Chief will designate points of contact for the sections Rag Control Program.

8.2. Deleted

8.3. Each work center will establish a standard quantity of rags to be issued for use. Rags not part of a CTK are inventoried and accounted for when signed out, before operation of any engine or equipment in which maintenance was performed, before leaving the job site, or when signing them back into their storage locations. For work centers desiring to add rags to a dispatchable CTK, these rags will be on the inventory list for that CTK and inventoried in the same manner as the tools within. Rags will be marked with an appropriate EID number IAW AFI 21-101_AFRCSUP_I, Para. 10.5.

8.4. Each work center that requires usage of rags will:

8.4.1. Maintain documentation to show the amount of rags received and released for cleaning, disposal and replacement.

8.4.2. Maintain a clean rag container.

8.4.3. Maintain a soiled rag container that complies with AFI 91-203, *Air Force Consolidated Occupational Safety Instruction, Chapter 5, paragraph 5.2*.

8.4.4. Ensure the containers are stored in the designated rag control center.

8.4.5. Ensure rags are considered as tools, and that the containers are to be secured in the same manner as outlined in paragraph 2.2, and if lost or missing they will be reported as a lost tool.

8.4.6. Ensure rags assigned to a dispatchable CTK will be exchanged on a one for one basis.

8.4.7. Ensure all aircraft departing on off station missions, that the accompanying technician will sign out a quantity of rags which will be adequate for supporting the mission. Rags used for soaking up jet fuel or other petroleum products will be disposed of prior to flight. Contaminated rags will be disposed of properly and documented on AFRC Form 175 indicating location disposed and number of rags disposed.

9. Locally Manufactured Tool Control:

9.1. Refer to MXG Instruction 21-57, *Local Manufacture Procedures*, for guidance regarding locally manufactured tool control.

10. Equipment Identification Designators (EID) for Equipment, CTKs, & Tools:

10.1. Work centers will use TCMAX, which requires a 9 digit EID; shops will prefix CTKs and tools with the TCMAX number listed below. The last five digits are unique to each CTK or tool. Work centers will need to develop EIDs based on these guidelines.

10.1.1. Accessories Flight: TCMAX # W7ME, W7MH, W7MJ

10.1.1.1. W7ME = Electro-Environmental

10.1.1.2. W7MH = Hydraulic

10.1.1.3. W7MJ = Fuel Cell

10.1.2. Repair & Reclamation: TCMAX # W7MR

10.1.3. Aerospace Ground Equipment Flight: TCMAX# W7MS

10.1.4. Propulsion Flight: TCMAX# W7MP

10.1.5. Fabrication Flight: TCMAX# W7MF, W7MC, W7MN, W7MM

10.1.5.1. W7MF = Survival Equipment

10.1.5.2. W7MC = Structural Repair

10.1.5.3. W7MN = NDI Lab

10.1.5.4. W7MM = Metals Technology

10.1.6. Avionics Flight: TCMAX# W7M3, W7M4, W7M5, W7M6, W7M7

10.1.6.1. W7M3 = Comm Nav

10.1.6.2. W7M4 = ECM

10.1.6.3. W7M5 = IFCS

10.1.6.4. W7M6 = Met shop

10.1.6.5. W7M7 = Munitions

10.1.7. AMXS: TCMAX# W7ML

10.1.8. ISO Dock 1 and ISO Dock 2: TCMAX# W7M1, W7M2

10.1.9. W7MQ – Quality Assurance

11. Issue and Control of Personal Equipment:

11.1. Flight/Section Chiefs ensure work center issued personal equipment is tracked in TCMAX. This equipment is annotated on each individual's AF Form 55, *Employee Safety and Health record*.

11.2. If personal issued equipment is lost or missing, it is reported using the lost tool procedures as outlined in this Instruction.

11.3. Personal tools or equipment not controlled through CTK procedures outlined in this instruction and AFI 21-101, are not authorized on the flight line, or in any maintenance area (e.g. mini-mag flashlight, leather man, knives, etc.).

11.3.1. Personal backpacks/bags may be used by personnel on the flightline for transporting personal items and Individually Issued Personal Protective Equipment (PPE) (i.e. reflective belt, hearing protection). They will not be used to transport tools, test equipment, Hazmat or any aircraft part(s). *Exception:* It is acceptable to transport iPad's (Etool) inside a personal backpack/bag.

11.3.2. Backpacks/bags are not allowed to have any externally attached items (i.e. carabiners, key chains, sunglasses etc.). *Exception:* Headsets/Ear Defenders and Reflective Belts are permitted to be attached externally to factory installed, non-removable attachment points located on the backpack/bag.

11.4. When personal issued equipment is not in use, it is maintained by the individual in a secure location.

11.4.1. All non-dispatchable PPE must have a designated storage location established. Designated locations may be work areas or stations. Storage locations will be labeled to identify the equipment and quantity. The equipment must be clearly identified as to which area it is assigned i.e. room, work area, station, drawer etc.

11.5. Personal issued equipment is not authorized to be stored in CTK's or on aircraft.

12. Multiple Work Center, Single Tool Room Access:

12.1. When two or more work centers use the same tool room for issue of CTK's, equipment, and tools, a common single focal point is assigned for overall responsibility.

12.2. The hosting tool room Flight Chief has overall responsibility to ensure that all procedures outlined in this instruction and AFI 21-101 are met.

12.3. If the tool room is centrally located, the Maintenance Superintendent appoints overall responsibility.

12.4. CTK's equipment, and tools are only issued from the centralized designated workcenter tool room.

13. Crash Recovery Equipment Storage:

13.1. The 403 MXG does not maintain a crash recovery or hydrazine response kit stored on a trailer or vehicle. This is the responsibility of the 81st Training Wing.

14. Aircrew Tool Control:

14.1. Aircrew ensures positive control of tools is accomplished IAW AFI 21-101 and this Wing Instruction.

15. Life Support Control:

15.1. Personnel assigned to the life support section ensure positive control of tools when dispatched to the flight line IAW AFI 21-101 and this Wing Instruction.

16. Post Aircraft Taxi/Takeoff Procedures for Lost Tools:

16.1. If tools used on an aircraft are discovered missing after an aircraft has taxied, do the following:

16.1.1. Notify the expeditor immediately.

16.1.2. The expeditor notifies the Maintenance Operations Center (MOC).

16.1.3. The MOC notifies Command Post to direct the aircraft to be shut down or if airborne, to return to home station.

16.1.4. Once shutdown, the applicable expeditor dispatches a tow team to tow the aircraft back to the parking ramp if needed.

16.1.5. Procedures outlined in this WI will be accomplished before the aircraft is released for flight.

17. Laminated Warning Tags:

17.1. Laminated warning tags will be managed and controlled such as any dispatchable tool/equipment. The Master Inventory List (MIL) will reflect the warning tags and be included in TCMAX. Flight/section chiefs will maintain a current source data spreadsheet that includes references for each tag or set of tags. Laminated warning tags will be reviewed for content and accuracy by using work centers every 2 years or when source data changes. These reviews will be documented.

JAY D. JENSON, Col, USAFR
Commander

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AFI 21-101_ AFRCSUP_I, *Aircraft and Equipment Maintenance Management*.

AFI 91-203, *Air Force Consolidated Occupational Safety Instruction*.

AFI 23-101, *Air Force Material Management*.

403 MXG Instruction 21-57, *Local Manufacture Procedures*.

Abbreviations and Acronyms

AFOSH—Air Force Occupational Safety and Health

CTK—Consolidated Tool Kit

EID—Equipment Identification Designators

ERO—Engine Run On/Off load

HAZMAT—Hazardous Material

MDS—Mission Design Series

MIL—Master Inventory Listing

MOC—Maintenance Operations Center

QA—Quality Assurance

TCMAX®—Tool Control Asset Management Software