BY ORDER OF THE COMMANDER
TRAVIS AIR FORCE BASE (AMC)

TRAVIS AIR FORCE BASE
INSTRUCTION

21-106

1 SEPTEMBER 2024

Maintenance

FOREIGN OBJECT DAMAGE, DROPPED OBJECT PREVENTION (FOD/DOP) AND TOOL/EQUIPMENT ACCOUNTABILITY

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This instruction implements Air Force Policy Directive (AFPD) 21-1, *Maintenance of Military Materiel,* AFI 21-101 Air Mobility Command Supplement (AMCSUP), *Aircraft and Equipment Maintenance Management* and standardizes procedures for implementing the Foreign Object Damage (FOD) and Dropped Object Prevention Program (DOPP) and for the security and accountability of all tools and equipment maintained on Travis Air Force Base (TAFB). This instruction pertains to all personnel assigned or attached 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*; routeAF Form 847s from the field through Major Command (MAJCOM) publications/forms managers. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Instruction (AFI) 33-322, *Records Management and Information Governance Program*, and disposed of in accordance with Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS) located at **https://www.my.af.mil/gcssaf61a/afrims/afrims/.** 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 is substantially revised and must be completely reviewed. Major changes include merging TAFBI 21-106 and TAFBI 21-107 into one FOD prevention focused publication applicable to all squadrons who work or traverse the flight line and eliminated the need for two separate publications. Changes include: Expanded general FOD prevention responsibilities, FOD reporting standards, and the FOD prevention award program. Added (1) Civil Engineering (CE) and Airfield Management responsibilities, (2) FOD Prevention program objectives, (3) standard reporting instructions for unidentified FOs and damaged surfaces found on flight line, (4) instructions for adapting the AF enterprise Tool Accountability System TCMax, and (5) COR responsibilities. Clarified Deficiency Reporting for Dropped Objects caused by Material Failure. Unit Safety Representatives (USRs) will serve as the FOD/DOP monitor unless otherwise designated in writing by the unit commander.

Chapter 1

PROGRAM OBJECTIVE AND RESPONSIBILITIES

1.1. FOD/DOP Prevention Program Definitions.

1.1.1. Foreign Object Damage (FOD): Any damage to an aircraft, engine, aircraft system, component, tire, munitions, or special equipment (SE) caused by a foreign object(s) (FO) which may or may not degrade the required safety and/or operational characteristics of the aforementioned items.

1.1.2. Dropped Object Prevention (DOP): Any aircraft part, component, surface, low observable (LO) coating exceeding 8 inches in any dimension or other item lost during aircrew operations (unless intentionally jettisoned) from engine start to engine shutdown. Inadvertently released munitions are not considered dropped objects and will be reported IAW DAFI 91-204.

Note: Missing Chaff/Flare/Decoy end-caps are not reportable dropped objects.

1.1.3. Flight line & aircraft maintenance area: The flight line and aircraft maintenance area is defined as any area where maintenance on aircraft, aircraft parts, or equipment takes place. This includes any area where tools are used on equipment or where tools and equipment may be loaded onto an aircraft

1.2. FOD/DOP Prevention Objective

1.2.1. To raise FOD/DOP awareness and enhance prevention methods for all personnel to obtain positive results.

1.2.2. To standardize prevention and reporting procedures for FOD/DOP related incidents.

1.2.3. An effective Wing FOD and DOP prevention program requires coordinated effort from wing leadership, unit leadership, and active personnel participation from all units. Methods include reporting dropped objects, removing foreign objects, annual awareness training, standardized tool, equipment, and item accountability and management processes.

1.3. FOD/DOP Prevention Responsibilities and Requirements

1.3.1. All Personnel Responsibilities

1.3.1.1. All personnel (military, civilian, and contractors) working in, on, around, or traveling through areas near aircraft, flight line munitions, Aerospace Ground Equipment (AGE), engines, or components thereof will comply with FOD prevention.

1.3.1.2. All personnel who must comply with FOD prevention must complete and document annual FOD/DOP training developed by the Wing FOD/DOPP Monitor. The current training material can be requested from 60MXG.MXQ.FODDDOPP@us.af.mil or from the FOD/DOPP SharePoint https://usaf.dps.mil/teams/60MXG/QA/Forms/AllItems.aspx?id=%2Fteams%2F60MXG%2F

QA%2FF%29%20FOD%2DDOP&viewid=f947a0f9%2Da9b8%2D4bf4%2Da96a%2D5719
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1.3.1.3. All personnel are responsible for the removal of Foreign Objects (FO). If you see FO, pick it up, or if the volume exceeds the finder's removal capabilities, notify Airfield Management and request a sweeper be dispatched to clean the area.

Note: MXG personnel utilize MOC to coordinate with Airfield Management.

1.3.1.4. Individuals who discover lost Tool/Items or FOD/DOP incidents must immediately report IAW this instruction.

1.3.1.5. Report all airfield damage that poses a FOD threat to Airfield Management at 424-2836.

1.3.1.6. All unidentifiable FO found on taxiways or the runway that is suspected to have come from aircraft and/or equipment should be turned in to the wing FOD monitor to determine source, compare dropped object incidents, and/or lost tool records. The wing FOD/DOPP monitor can be contacted at 424-5541 or 60MXG.MXQ.FODDDOPP@us.af.mil and is located inside building 31.

1.3.1.7. Personnel performing any type of activity, operation or maintenance in, on, or around aircraft, munitions, AGE, or components thereof will practice good housekeeping and ensure all trash, loose hardware, and other FO are removed when the activity is complete.

1.3.1.8. All maintenance production areas must have FO containers readily accessible.

1.3.1.9. Drink containers are authorized and must be accounted for (i.e., not left in an unsecured location unattended). Glass drink containers are prohibited.

1.3.1.10. Restricted area badges and any other passes or badges will be secured to the individual to prevent risk of damage or loss of accountability when worn on the flight line. Badges worn around the neck must use a non-metallic breakaway cable with plastic carrier. Armbands with plastic carriers are also authorized. Users are responsible for the serviceability and security of the carrier and will not disassemble for the sole purpose of removing clips/metal pieces.

1.3.1.11. Loose/unsecured items that may fall off without notice, are susceptible to be carried by strong winds, or would create a significant FOD threat to taxiing aircraft or if ingested by an aircraft engine, are not authorized on the aircraft and/or industrial work areas unless authorized during special events such as ceremonies and festivals (e.g., OCP patrol cap, flight caps, wigs, hairpieces, metal hair fasteners, earrings – to include transparent piercing spacers, jewelry bracelets, etc.). Items well fitted/secured to the individual and/or used for personal protection from hazards/weather may be worn (e.g., watches, hearing protection earmuffs, fitted knit/winter caps, hard hats, etc.). Authorized bump caps may be worn on flight line while performing any type of activity, operation or maintenance in, on or around aircraft, munitions, or AGE.

Note: Rings, watches, and jewelry may not be worn while actively performing maintenance.

1.3.1.12. Remove any items that may easily separate or come loose from an individual

when within 25 feet of an aircraft with engines operating (e.g., pens, pencils, line badges, metal insignias, etc.)

1.3.1.13. Personal (non-government issued) electronic and communication devices (e.g., smart phones, cell phones, tablets, laptops, personal fitness devices, portable music/video players, electronic games) possessed on the flight line, munitions maintenance areas, hangars, and (or) other industrial work areas will only be used for official/authorized business. Personal electronic and communication devices will not be used while actively performing maintenance or as eTools. This restriction does not apply to personnel performing management duties (e.g., Pro Super, Expediter), or official duties while TDY.

1.3.1.14. Personal wireless speakers are authorized and will not be placed in FOD critical areas at any time, used within fuel safety zones, or within 25 feet of an operating aircraft and must be marked IAW paragraph 2.3.

1.3.1.15. Escorts of visiting personnel will ensure FOD prevention measures are taken.

1.3.1.16. Coordinate FOD abatement plans with the Wing FOD/DOP Monitor, Airfield Management, and all other agencies as applicable when construction is in progress on or near the flight line or other areas determined to be susceptible to FOD. Provide FOD abatement plans to the Wing FOD/DOPP Monitor @ 60MXG.MXQ.FODDDOPP@us.af.mil.

1.3.1.17. Special emphasis for FO prevention is needed for items that have the potential to be easily carried in wind, jet blast, or readily come disassembled. Periodically inspect these items for security and accountability.

1.4. Squadron Commander FOD Prevention Responsibilities

1.4.1. Squadron commanders of maintenance, operations, and base support squadrons whose personnel perform duties in, on, or around aircraft, munitions, AGE, or components thereof ensure personnel receive both initial and annual refresher FOD/DOPP training to 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.

1.5. Squadron FOD/DOPP Monitor Responsibilities

1.5.1. The squadron's Unit Safety Representative (USR) will perform the duties of the Squadron FOD/DOPP Monitor unless otherwise appointed in writing by the squadron commander. Forward the appointment letter to the Wing FOD/DOPP Monitor if applicable. Wing FOD/DOPP Monitor organizational email: 60MXG.MXQ.FODDDOPP@us.af.mil.

1.5.2. Serve as a liaison between the Wing FOD/DOPP Office and the unit.

1.5.3. AMXS/MXS DOP Monitors: refer to general program guidance located in DAFI 21-101_AMCSUP. FOD/DOP reports are due to the Wing FOD/DOPP Monitor office within 3 duty days.

1.5.4. Post the Wing FOD Monitor developed visual aid in a prominent place within their unit.

1.5.5. Ensure FOD/DOP investigation and/or lost tool paperwork is completed at the unit

level.

1.5.6. Coordinates with their squadron training section to ensure all individuals receive and document annual FOD prevention training. Special emphasis needs to be placed on newly assigned personnel.

1.5.7. Organizes and conducts squadron FOD walks, ensuring sufficient personnel participate to adequately cover the assigned inspection area.

1.5.8. Ensures personnel participating in FOD walks have the appropriate personal protective equipment and have a restricted area badge or are escorted while on the flight line.

1.5.9. Notifies the Wing FOD Monitor and 60 MXG Quality Assurance when scheduled FOD walks will not be conducted as scheduled. Notification must include a justification and date/time the FOD walk has been rescheduled to.

1.5.10. Unit FOD/DOPP monitors will provide personnel for FOD walks upon request from the Wing FOD/DOPP monitor when unusual circumstances occur (weather, air shows, etc.).

1.6. Civil Engineering Squadron Responsibilities

1.6.1. Develop a schedule for use of mechanical airfield sweepers in coordination with Airfield Operations. Provide equipment and personnel to support this schedule and distribute the schedule to all agencies concerned.

1.6.2. Maintain the capability to clean paved flight line areas after mishaps or upon request (24-hour basis with 30-minute response).

1.6.3. Inform the Wing FOD/DOPP Monitor the status of mechanical/vacuum sweepers.

1.7. Airfield Management Responsibilities

1.7.1. Airfield managers are responsible for controlled movement area (CMA) FOD inspections. This includes immediate special inspections when there is an aircraft dropped object or other potential source of FOD suspected to be present on the runway.

1.7.2. Coordinate with applicable base agencies and commanders to identify and properly mark permanent or temporarily established FOD check points.

1.7.3. Serves as the focal point for airfield damage reporting such as damaged pavement.

1.7.4. Publishes airfield construction updates and distributes to all applicable agencies.

1.8. Contracting Officer Representative (COR) & Other Agencies Responsibilities

1.8.1. Contracting Officer Representative (COR) will develop primary work statements (PWS) that follow all prescribed FOD/DOP prevention methods identified in this instruction and DAFI 21-101.

1.8.2. Coordinate FOD prevention requirements written in renewed or newly developed PWS from the Wing FOD Monitor.

1.8.3. Depot field 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 prescribed

requirements provided during in-brief prior to work starting and will be monitored throughout for compliance by MXG/COR or applicable Squadron Maintenance Officer or Superintendent.

1.9. Flight Line Area Vehicle Operators Responsibilities

1.9.1. All vehicles primarily driven on the flight line for direct aircraft support must be equipped with secured and lidded FO containers.

> **Note**: Permanently affixed FO containers must be approved by Vehicle Management prior to installation IAW AFI 24-302.

1.9.2. Personnel entering the aircraft parking ramp in vehicles from unpaved roads or surfaces shall stop and check vehicle tires for rocks or other types of FO before entering the aircraft parking ramp. Temporary FOD checkpoints may be established with coordination from Airfield Management, Safety, 60 MXG Line Chief, Civil Engineering, and the FOD Monitor. All other FOD checks have been waived for Travis AFB. Any FO removed from vehicles tires will be disposed of in the vehicle's FOD container. During hours of darkness, personnel will use flashlights to perform FOD checks. A locally manufactured tool for removing debris from tire treads is authorized for use and will be identified to the vehicle by using the vehicle ID number and or EID.

1.9.3. Vehicle operators are responsible for monitoring and emptying the FOD container prior to returning the vehicle to the owning work-center.

1.10. MXG Personnel Responsibilities

1.10.1. Maintenance personnel must follow all general FOD prevention guidance listed in DAFI 21-101_AMCSUP in addition to specific MDS instructions in applicable technical data and the following:

1.10.1.1. Restricted area badges will be removed when performing intake/inlet/exhaust inspections if personnel physically enter these areas.

1.10.1.2. Personal tools are not authorized in any maintenance area.

1.10.1.3. Keep loose hardware secured and accounted for at all times.

1.10.1.4. Prior to installing any door or panel a visual FOD inspection must be completed.

1.10.1.5. All metal shavings, lock wire, tie wraps, rivets, excess sealant, etc., will be removed and disposed of in the nearest FOD container.

1.10.1.6. Components removed to facilitate other maintenance (FOM), awaiting parts (AWP), or awaiting maintenance (AWM), will have all fasteners/screws etc., removed and stored in the tail number bins (TNBs).

1.10.1.7. A FOD walk will be performed before and after an aircraft is taxied (i.e., arrival and departure), towed on or off of a parking spot, or into or out of a hangar.

1.10.1.8. All flight critical areas must remain FO free at all times with special emphasis on before and after flights:

1.10.1.8.1. Critical areas:

1.10.1.8.1.1. Flight deck forward of the back of the pilot/co-pilot seat.

1.10.1.8.1.2. Any area within close proximity of moving parts.

1.10.1.8.1.3. Flight control component.

1.10.1.8.1.4. Area inside the engine kit or nacelle.

1.10.1.8.1.5. Open electronic components or junction boxes.

1.10.1.8.1.6. Wet/dry bays, aircraft tires.

1.10.1.8.1.7. Any area within close proximity to moving parts/components on AGE. Any area within 25 feet forward an air intake (e.g., engine, APU/GTC, and A/C pack). Any FO found within the dual rails system.

Chapter 2
FOD PREVENTION PROCEDURES

2.1. Engine Intake Maintenance Documentation Requirements

2.1.1. During engine intake maintenance personnel shall use rubber matting to protect the inlet. A separate Red X entry is required in the AFTO Form 781A, *Maintenance Discrepancy and Work Document*, when the inlet mat is installed.

2.1.2. Following engine intake maintenance, ensure tool and FO/FOD inspections are conducted. A tool and FOD check discrepancy shall be entered as a Red X on the AFTO Form 781A which will be signed off prior to engine operation.

2.2. FOD Walks

2.2.1. Unit FOD Monitors are responsible to oversee and complete FOD walks. Unit leadership will actively support unit FOD walks. FOD prevention is part of the Evaluation and Inspection program and is subject to inspection.

2.2.2. The schedule and areas of responsibility for each squadron's FOD walk is located on the 60 MXG QA SharePoint at the following link: https://usaf.dps.mil/teams/60MXG/QA/Forms/AllItems.aspx?id=%2Fteams%2F60MXG%2FQA%2FF%29%20FOD%2DDOP&viewid=f947a0f9%2Da9b8%2D4bf4%2Da96a%2D57192343a13b

2.2.3. All grounding points will be kept clean of debris at all times and should be a high interest item for FOD walks.

2.2.4. FOD walks will be accomplished during daylight hours**.**

2.3. Tool and Equipment Management.

2.3.1. Tools, equipment, and other items left unattended in, on, or around aircraft or other aerospace equipment pose a potential source of FOD and therefore are required to be adequately controlled and accounted for. The Tool and Equipment Management Program objective is to prevent and eliminate FOD to aircraft, engines, missiles, training and support equipment, and to reduce costs through strict effective control and accountability of assets.

2.3.2. All squadrons assigned or attached to TAFB or other personnel who require the use of items such as, but not limited to, tools, equipment, rags, electronic devices, and/or personal equipment (e.g., ear protectors, reflective belts, headsets, etc.) which can make their way into any aircraft maintenance area must have procedures in place to account for them. This includes items that have occasion to traverse the flight line to include being loaded as cargo onto an aircraft

2.3.3. As a minimum, procedures must be documented and 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: Any part of a social security number cannot be used for identification.

2.4. Tool and Equipment Accountability Systems

2.4.1. Currently, TCMax is the AF enterprise Tool Accountability System which can be used to track and provide positive accountability for items that are used on the flight line.

2.4.2. Approval requests for TCMax software licenses will be sent to HQ AMC/A4MP by emailing ORG.AMCA4-35@us.af.mil.

2.4.3. Chits are not authorized.

2.5. Unit Tool and Equipment Management Responsibilities

2.5.1. CTKs, equipment, and other items belonging to units that are utilized on the flight line or other Aircraft Maintenance Area will use the standard Equipment Identification Designators (EID) listed in **Attachment 2**.

2.5.2. Equipment cases, aerospace equipment, large tools, or similar items that are primarily dispatched for flight line use will have reflective tape viewable from all angles to increase visibility during hours of darkness and avoid potential FOD.

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

2.5.4. All personnel must not use items that readily fall apart on the flight line or aircraft maintenance area. This includes items with detachable items that are not secured/lanyard or unserviceable items (i.e. broken pieces falling off). Special emphasis is required for items such as: remove before flight streamers, aircraft safety pin condition, hinge pin security, dust and FO prevention cover condition/security, and aircraft forms binder condition, etc. Periodically check these types of items for FO prevention compliance.

2.5.5. Crash, Damaged and Disabled Aircraft Recovery (CDDAR) trailer/vehicle and contents will be tracked in TCMax®.

2.6. Personal Issue Equipment

2.6.1. All personal issue equipment (e.g., Personal Protective Equipment (PPE), ear defenders, headsets, reflective belts, goggles, etc.) will be either etched, have a sticker or permanently marked with first initial, last name and individual's employee number (MX units) or squadron (all other units) so that the item can be positively identified and returned to the applicable squadron. Personal issued items not marked are not authorized on the flight line or aircraft maintenance area.

> **Note**: Any part of a social security number cannot be used to mark personal items. Equipment previously marked with other identifying methods do not need to be replaced solely to comply with this marking requirement.

Chapter 3

REPORTING PROCEDURES

3.1. FOD/DOP Incident Reporting

3.1.1. When any FOD or DOP is discovered on an aircraft the individual that discovers the discrepancy will immediately notify MOC at 424-5641 and the appropriate Production Superintendent.

Note: FOD identified in an aircraft engine that does not require the use of a metal file to blend (i.e. minor nicks that can be repaired with sandpaper, emery cloth, or a stone, etc.) do not need to be reported to the Wing FOD Monitor or MOC. A blade blend worksheet is still required to be completed and turned into engine management.

Note: Additional reporting requirements for FOD from a bird strike can be located in DAFMAN 91-223.

3.2. Production Superintendent Responsibilities for FOD/DOP Incidents

3.2.1. In the event of a FOD/DO incident the Production Superintendent will run Quick Reaction Checklist (QRC) #209, notify MOC to obtain a job control number, and MOC will dispatch QA for pictures prior to any repair.

3.2.2. The Production Superintendent will ensure the discrepancy, all evaluations, and repairs are documented in the AFTO Form 781A and notify Engine Management for any AFTO 95, Significant Historical Data, and entries when necessary.

3.2.3. The Production Superintendent will ensure a 60 AMW IMT 511 is initiated and the squadron FOD/DOPP Monitor is notified.

3.3. Maintenance Operations Center (MOC) Responsibilities for FOD/DOP Incidents

3.3.1. MOC shall notify the 60 MXG/CC and 60 MXG Quality Assurance (60 MXG/MXQA) and Wing FOD/DOPP Monitor of all FOD/DOP incidents.

3.3.2. MOC will dispatch 60 MXG/MXQA to take pictures if the damage is determined to be a result from FOD/DOP. Pictures will be taken before any repairs (i.e. blade blending) can begin.

3.3.3. Pictures will be e-mailed to the following offices: 60 MXG/CC; 60MXG/CD; 60 MXG/CCC; 60AMW/SEF; 60 MOS MOC1; 60 MXG QA Members; and affected squadron supervision distribution listings.

3.3.4. MOC shall run QRC #209 and provide copies of all information to 60 MXG QA & Wing FOD/DOPP Monitor within 8 hours.

3.4. Squadron Supervision Responsibilities for FOD/DOP Incidents

3.4.1. The owning unit will conduct a preliminary investigation to determine specific cause and include all supporting information. A 60 AMW IMT 511 will be utilized to document preliminary investigation findings.

3.4.2. Squadron Supervision will review the preliminary investigation findings and direct

the squadron FOD/DOPP Monitor to forward all findings to the Wing FOD Monitor within 3 duty days of the incident. Finalized DOPP information will be provided to the Wing FOD/DOP Monitor within 3 duty days.

3.4.3. A Deficiency Report (DR) is required to be submitted if the cause was determined to be material IAW DAFI 21-101_AMCSUP. The owning unit of the aircraft where the dropped object originated will be considered the originator and is responsible to submit the DR IAW Technical Order (TO) 00-35D-54.

3.4.4. Dropped objects resulting from maintenance malpractice are referred to the Maintenance Group Commander for action. Dropped objects resulting from aircrew malpractice are referred to Operations Group Commander.

3.5. Procedures for FOD/DOP Incidents Away From Travis AFB

3.5.1. The Flying Crew Chief (FCC) or crew member (if no FCC is present) will use the 60 AMW IMT 511 to document as much information about the incident as possible. Provide photographs if possible.

3.5.2. The FCC or crew member will notify Travis AFB MOC as soon as possible, to include e-mailing the completed 60 AMW IMT 511.

3.5.3. The FCC or crew member will provide updates to the MOC with all new information regarding the FOD/DOP investigation.

3.6. Procedures for FOD/DOP Incidents Involving Transient Aircraft

3.6.1. For military aircraft:

3.6.1.1. The on-shift Transient Alert (TA) supervisor will notify the MOC to obtain a job control number and ensure the FOD/DO incident is documented in the AFTO Form 781A.

3.6.1.2. TA will complete a 60 AMW IMT 511 and email or provide a hard copy to a 60 MXG Contracting Officer's Representative (COR) and the Wing FOD/DOPP Monitor. The Product Improvement Manager (PIM) with assistance provided from applicable AMXS specialists will be responsible to submit the DR if the cause was determined to be material failure.

3.6.2. For commercial/contract aircraft:

3.6.2.1. The on-shift TA supervisor will notify the MOC and the owning organization.

3.7. Lost Tool/Item Incident Reporting

3.7.1. 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.

3.7.2. Every effort should be made to retrieve any item lost on the flight line.

Note: Items that would not cause damage to an operating aircraft do not require a lost tool report (e.g., sheets of paper, MILs, paperwork, paper towels, tech wipes, etc.). This does not include rags or rag like items (e.g., cheesecloth, clothing, etc.).

3.7.3. An individual who loses a tool or object on the flight line or corresponding maintenance area must immediately notify their applicable Maintenance Production team who will then notify 60 MXG Maintenance Operations Center (MOC) at 424-5641 and their unit FOD/DOP monitor.

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

3.7.5. Production Superintendent, expeditor, or section/shop supervisor will put together a team and initiate an in-depth search over the area where the item was last seen.

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

3.7.7. If at any time during the investigation the item/tool is found and retrieved, or found but is inaccessible, the lead will notify MOC, MXQA, Director of Operations (DO) and/or Maintenance Superintendent.

3.7.8. 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.

3.7.9. On taxiing or departed aircraft, MOC-1 will be responsible for ensuring the Aircraft Commander, 60 MXG/CC, and 60 OG/CC are immediately notified of the lost tool.

3.7.10. The DO, Maintenance Superintendent, or equivalent will determine when the search may be discontinued and will ensure MOC is notified. Authorization to clear Red X's when an item cannot be located is limited to no lower than the DO/Maintenance Superintendent.

3.7.11. Squadron leadership is responsible to ensure the 60 AMW Form 514, lost item paperwork has been routed and filled out completely and correctly. The squadron FOD Monitor will ensure the Travis FOD/DOPP Office receives a copy of all lost tool reports from their squadron.

3.7.12. If the item is lost on an aircraft or engine and not found, a copy of the 60 AMW Form 514 will be forwarded 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.

3.8. Aircrew Lost Tool Reporting Procedures

3.8.1. 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.

3.8.2. The Aircraft Commander will immediately notify the Expediter/Production Superintendent of the lost item and complete a 60 AMW Form 514 if the item/tool is not located within one hour of searching.

3.8.3. The Aircraft Commander will ensure the 60 AMW Form 514 report is complete and accurate prior to giving that form to the Production Superintendent or sending it back to home station if the item/tool is lost off station.

3.8.4. 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, DO, and/or Maintenance Superintendent.

3.9. Found Item Reporting Procedures

3.9.1. 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.

3.9.2. Anyone qualified to sign off Red X's can clear the lost tool entry for items only if they 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.

3.9.3. Contact the Travis FOD/DOPP Office for historical data concerning lost or missing tool information.

3.10. Airfield Damage Reporting

3.10.1. Report airfield damage to Airfield Management at 424-2836. This includes cracked pavement, broken pavement, ponding (water standing after rain), spalling (pits start to form in concrete), etc.

Chapter 4
FOD PREVENTION AWARD PROGRAM

4.1. Outstanding FOD Prevention Award

4.1.1. This is an award for individuals who make a significant contribution(s) towards FOD prevention. Individuals can either be nominated by their unit FOD/DOPP monitor, section chief, QA inspectors, or other leadership as applicable or handpicked by the Wing FOD Monitor(s) when observed making a significant contribution to the FOD prevention program.

4.1.2. To nominate an individual document the contributions the individual made for the FOD prevention program on a form 1206 (no more than 5 lines) and submitted to the FOD Monitor(s) and/or the organizational box at 60MXG.MXQ.FODDDOPP@us.af.mil.

4.1.3. The winner is selected by the Wing FOD/DOPP office and receives a one-day-pass and certificate signed by the WG/CV.

4.2. The Golden Bolt

4.2.1. The Golden Bolt is intended to increase awareness of FO. A conspicuous object, clearly marked as the “golden bolt” will be placed in FOD walk areas by the Wing FOD/DOP Monitor or a 60 MXG QA member.

4.2.2. Individuals who find the golden bolt will return it to the Wing FOD Monitor and are eligible to receive the Outstanding FOD Prevention Award.

STEVEN S. BYRUM, Colonel, USAF
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Attachment 1
GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AFPD 21-1, *Maintenance of Military Materiel,* 1 August 2018

AFI 21-101_AMCSUP, *Aircraft and Equipment Maintenance Management,* 2 August 2020

DAFI 91-204, *Safety Investigations and Reports,* 9 March 2021

DAFMAN 91-223, *Aviation Safety Investigations and Reports, 2* August 2021

32-1-101, *Use and Care of Hand Tools and Measuring Tools,* 5 October 2020

Prescribed Forms

60 AMW IMT 511, *Foreign Object (FOD)/Dropped Object*

60 AMW FORM 514, *Lost Tool/Item Report*

60 AMW IMT 512, *Government Property Damage Cost Worksheet*

Adopted Forms

AFTO Form 781A, *Maintenance Discrepancy and Work Document*

AFTO Form 95, *Significant Historical Data*

AF Form 847, *Recommendation for Change of Publication.*

AF IMT 1297, *Temporary Issue Receipt*

AFTO FORM 244, *Industrial/Support Equipment Record*

Abbreviations and Acronyms

AFI—Air Force Instruction

AFMAN—Air Force Manual

AFPD—Air Force Policy Directive

AMCSUP—Air Mobility Command Supplement

CE—Civil Engineering

CMA—Controlled movement area

COR—Contracting Officer Representative

CTK—Composite Tool Kit

DO—Director of Operations

DOP—Dropped Object Prevention

DOPP—Dropped Object Prevention Program

EID—Equipment Identification Designators

FCC—Flying Crew Chief

FO—Foreign Object

FOD—Foreign Object Damage

IAW—In Accordance With

LO – Low Observable

MAJCOM—Major Command

MIL—Master Inventory List

MOC—Maintenance Operations Center

MXG—Maintenance Group

OPR—Office of Primary Responsibility

PWS—Performance Work Statement

QA—Quality Assurance

QRC—Quick Reaction Checklist

RDS—Records Disposition Schedule

SE – Special Equipment

TA—Transient Alert

TO—Technical Order

USR—Unit Safety Representative

Attachment 2

COMPOSITE TOOL KIT (CTK) NINE DIGIT IDENTIFICATION SYSTEM

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

60 MXG	
Quality Assurance	TPQA #####
Aircraft Repair Enhancement Program	TPQP #####
Transient Maintenance	TPQT #####
Wash rack	TPQW #####
60 MXS	
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 #####
60 AMXS	
Aircraft Maintenance Squadron	TP60 #####
660 AMXS	
Aircraft Maintenance Squadron	TP46 #####

860 AMXS	
Aircraft Maintenance Squadron	TP86 #####
60 MOS	
MQTP	TPTQ #####
373 TRS	
Detachment 14	TPTD #####
60 OG	
60 OSS	
Aircrew Flight Equipment Flight Line	TPFC #####
Aircrew Flight Equipment Customer Support	TPOS #####
Aircrew Flight Equipment Mobility	TPDL #####
USAFEC	
621 CRW	TP61 #####
349 OG	
349 ALCF	TPAL #####