

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

**MACDILL AIR FORCE BASE
INSTRUCTION 21-108**

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Maintenance



**FOREIGN OBJECT DAMAGE/DROPPED
OBJECT PREVENTION PROGRAM**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This instruction implements Air Force Instruction (AFI) 21-101, *Aircraft and Equipment Maintenance Management*, and establishes management, control, and procedures for the Foreign Object Damage (FOD) prevention program and the Dropped Object Prevention Program (DOPP). It announces policies, assigns responsibilities, prescribes procedures, and directs actions at MacDill Air Force Base (AFB) in accordance with AFI 21-101, Chapter 14. This instruction applies to all military and civilian personnel who work in, around, or drive through the operational airfield area. 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/afrims/afrims/afrims/rims.cfm>. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the Air Force (AF) Form 847, *Recommendation for Change of Publication*; route AF Forms 847 from the field through the appropriate functional chain of command.

SUMMARY OF CHANGES

This is a rewrite of MacDill AFB Instruction (MACDILLAFBI) 21-101, same subject. The number was changed to reduce confusion with AFI 21-101, AFI 21-101_Air Mobility Command Supplement (AMCSUP), and 6th Maintenance Group (6 MXG) Operating Instruction (OI) 21-101. This document has been substantially revised and must be completely reviewed. Major changes include: 6 MXG Commander (6 MXG/CC) updated; completely revised FOD walk

guidance (paragraph 1.8). Added Parts and Hardware Control (paragraph 1.5.); Tool, Equipment, and Material Control (paragraph 1.6.); and FOD Inspection Criteria (paragraph 1.9.). Added new FOD Worksheet (Attachment 2); new MXG Form 145, *Lost Tool/Object Report* (Attachment 5), and Dropped Object Report Worksheet (Attachment 6).

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Chapter 1

FOREIGN OBJECT DAMAGE

1.1. General. Foreign Object Damage (FOD) prevention is the responsibility of every individual who works or operates in or around the airfield. Awareness and vigilance are two of the most important elements of a successful program.

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

1.2. Responsibilities.

1.2.1. The Vice Wing Commander, 6th Air Mobility Wing (6 AMW/CV), is responsible for the Wing FOD Prevention Program and will chair the quarterly FOD meeting. In the 6 AMW/CV's absence, the Commander, 6th Maintenance Group (6 MXG/CC), will chair the meeting. The 6 AMW/CV will appoint personnel from the Quality Assurance (QA) Office (6 MXG/MXQ) as the Wing FOD Prevention Program Monitor in accordance with AFI 21-101 and AFI 21-101_AMCSUP I.

1.2.2. The Wing FOD Prevention Program Monitor will:

1.2.2.1. Manage the FOD Prevention Program in accordance with AFI 21-101 and AFI 21-101_AMCSUP I.

1.2.2.2. Inform all wing/center agencies of FOD hazards.

1.2.2.3. Investigate FOD incidents and report findings per AFI 21-101 and AFI 21-101_AMCSUP I.

1.2.2.3.1. Be involved in each FOD investigation and help ensure corrective actions are sound.

1.2.2.4. Ensure all units are in compliance with the FO Prevention Program through spot checks of maintenance areas, aircraft, taxiways, aircraft parking spots, vehicles, hangars, access roads to the flight line, and grass areas between the airfields. Periodic spot checks will be annotated for follow-up when areas of concern are discovered during these assessments. Concerns will be brought to the attention of the area supervisor, commander, or Airfield Manager.

1.2.2.5. Schedule monthly/quarterly FOD/DOPP meetings in accordance with AFI 21-101_AMCSUP I.

1.2.3. The Airfield Manager or designated representative will:

1.2.3.1. Conduct daily FO checks of the primary takeoff, landing, and taxi surfaces prior to the start of flying activities.

1.2.3.2. Request sweeper trucks as required.

1.2.3.3. Notify the FOD Program Manager of any changes in airfield conditions that may cause a potential FO hazard.

1.2.3.4. Attend the quarterly FOD meeting and brief status of airfield conditions and construction projects.

1.2.3.5. Ensure individuals authorized to operate privately owned vehicles (POV) on the flight line are held to a minimum and briefed on FO prevention.

1.2.3.6. Ensure positive control of engineering or contractor personnel working on the airfield, and inspect these areas during daily airfield inspections.

1.2.3.7. Forward a copy of all hazards/discrepancies identified in airfield inspections to the appropriate agencies.

1.2.3.8. The 6th Civil Engineer Squadron (6 CES) is responsible for the Airfield Sweeping Operations Plan (Attachment 4). This plan is coordinated between the 6 CES and Airfield Manager.

1.2.4. Unit Responsibilities:

1.2.4.1. Each unit commander, to include tenant units, who have personnel that work or operate within the airfield will appoint a primary and alternate Unit FOD Monitor and forward a copy of the appointment letter to 6 MXG/MXQ. The following organizations are considered members of the Wing FOD Committee and are required to attend all FOD meetings:

6th Air Mobility Wing, Wing Safety (6 AMW/SE)
927th Air Refueling Wing, Wing Safety (927 ARW/SE)
6th/927th Aircraft Maintenance Squadron (6/927 AMXS)
6th/927th Maintenance Squadron (6/927 MXS)
6th/927th Maintenance Operations Squadron (6/927 MOS)
6th Operations Support Squadron, Airfield Management (6/ OSS/OSAA)
6th/Operations Support Squadron, Aircrew Flight Equipment (6/ OSS/)
927 th Operations Support Flight, Aircrew Flight Equipment (927 OSF)
6th/927th Security Forces Squadron (6/927 SFS)
6th/927th Communications Squadron (6/927 CS)
6th/927th Logistics Readiness Squadron (6/927 LRS)
6th Civil Engineer Squadron (6 CES)
310th Airlift Squadron (310 AS)
91st Air Refueling Squadron (91 ARS)
63d Air Refueling Squadron (63 ARS)
National Oceanic and Atmospheric Administration (NOAA)
C-37 Contract Logistic Support (CLS)

Transient Alert (TA)

23d Wing Detachment 1 (23 WG, Det. 1)

373d Wing Detachment 2 (373 WG, Det. 2)

1.2.4.1.1. Minimum attendee representation is all group commanders, directors, commanders of units with maintenance personnel, safety, CES, Airfield Manager, and security forces. Associate units will be part of the host program and will not establish an independent FOD program. Tenant units should establish their own unit FOD committee, but will still participate in the host program and comply with host program requirements. The FOD meeting may be combined with other meetings.

1.2.4.2. The Unit FOD Monitor will attend FOD meetings and assist the FOD Program Manager in corrective actions needed to prevent recurrences of FOD mishaps.

1.2.4.3. Units will ensure all personnel receive initial and annual refresher FOD awareness training. MXG personnel will receive initial training through Maintenance Qualification Training Program (MQTP) Phase I. Recurring training (annual) and initial (for those who do not attend MQTP) will be provided through the unit training program monitor. Training will be tracked in Maintenance Information Systems (MIS) for MXG personnel. All other units will use an AF Form 1098, *Special Task Certification and Recurring Training*, or automated training program.

1.2.4.4. Units will conduct weekly FOD walks within their areas of responsibility (AOR) (Attachment 3) on the first duty day of each week prior to the start of the flying period, and will conduct additional FOD walks as required to ensure safe operations. The only acceptable changes for the date a FOD walk is performed are environmental hazards, weather, mission requirements, and seasonal hours of darkness. If a squadron cancels due to any of these issues, the FOD walk will be accomplished on the next acceptable duty day. In the event the FOD walk is cancelled, the Squadron FOD Monitor will notify the Maintenance Operation Center (MOC), the appropriate unit Flight Safety Officer, and the 6 AMW FOD/DOPP Monitor with a rescheduled date/time.

1.2.4.5. FOD walks will be accomplished in the following manner: Personnel will line up side-by-side with appropriate spacing and perform a sweeping pass of their respected AOR. This may take several passes depending on the amount of people and the size of the AOR to be walked.

1.2.4.6. MXG personnel will perform a FO checks of their work area after the completion of any maintenance. In addition, personnel will be constantly alert for any form of FO during all phases of maintenance and ensure work areas are continually policed to eliminate FO.

1.3. FOD Reporting Procedures. The following will be accomplished upon discovery of any actual or suspected FOD mishap:

1.3.1. Incidents (tire, engine, and blade blending) will be reported to the Production Superintendent on duty.

1.3.1.1. Notify the Wing/Center FOD Monitor prior to blade blending anytime FOD is identified, other than for minor sand nicks or scratches (e.g. blending with emery cloth).

1.3.2. The Production Superintendent will:

1.3.2.1. Notify the MOC.

1.3.2.2. In coordination with the flight chief, designate an individual to initiate an investigation of the incident and generate a FOD Report Worksheet (Attachment 2) due to the Wing FOD monitor within 12 hours of incident.

1.3.3. The MOC will notify 6 MXG/CC/CD, 6 MXG/MXQ FOD monitor, and Wing Safety.

1.3.4. Wing FOD monitor will:

1.3.4.1. Provide an initial report of all FOD incidents to Lead Command FOD monitor by telephone, fax, or e-mail as soon as the damage is known, but not later than 24 hours after occurrence. A follow up report will be required every 45 days until closeout.

1.3.4.2. Conclude the investigation.

1.3.4.3. Brief 6 MXG/CC on the results of the investigation.

1.3.4.4. Report the FOD incident to Headquarters (HQ) AMC/A4MY in accordance with AFI 21-101 and AFI 21-101_AMCSUP I.

1.3.4.5. Coordinate with Wing Safety as necessary.

1.3.5. Wing Safety will:

1.3.5.1. Report the FOD incident in accordance with AFI 91-204, *Safety Investigations and Reports*, as required.

1.4. Vehicle Operation on Flight Line.

1.4.1. FOD prevention is the responsibility of all personnel who operate vehicles within and around the airfield in accordance with AFI 91-203, Air Force Consolidated Occupational Safety Instruction, and AFMAN 24-306_IP/TC 21-305-20, *Manual for the Wheeled Vehicle Operator*.

1.4.2. Personnel will, before entering any area of the airfield, stop their vehicle and check tires and wheel wells for debris before proceeding onto the airfield.

1.4.2.1. A FOD check will, at a minimum, consist of the following:

1.4.2.1.1. Inspect your tires; to include roll over inspections (pull forward to check tire in contact with pavement).

1.4.2.1.2. Ensure all external vehicle components are secured.

1.4.2.1.3. Secure any/all items loaded on payload vehicle, to include all tie-down device loose ends such as chains, ropes, packaging, or other item that may become dislodged during movement while on the flight line area.

1.4.2.1.4. A thorough walk around of the vehicle will be accomplished to check for damaged, loose, or worn parts.

1.4.2.1.5. Vehicle operators will stop and perform a visual FOD inspection on all equipment and tires prior to entering the flight line areas.

1.4.3. If the driver leaves the vehicle during this tire FOD check, the vehicle ignition will be turned off, the parking brake set, and the gear lever will be put in reverse gear for vehicles with manual transmissions and in the 'park' position for vehicles with automatic transmissions.

1.4.4. If only the passenger leaves the vehicle to check tires for FO, the parking brake will be set and vehicle taken out of gear or put in the 'park' position as applicable.

1.4.5. Personnel are required to drive on paved surfaces when operating a vehicle on the flight line and taxiway areas. In the event a vehicle leaves the pavement or travels across a heavily graveled area, all four tires will be checked and debris removed from the tire tread and wheel wells **BEFORE** resuming operation on airfield pavement (see paragraph 1.4.2.1 for FOD check requirements). Vehicles observed violating these procedures will be reported to the vehicle driver's commander with the following information: vehicle number, date, time, driver's name, and organization. All drivers will notify the MOC or Base Operations when FO materials are detected anywhere on the airfield that cannot be immediately picked up. Airfield Management will initiate necessary action to have the area cleaned up.

1.5. Tools, Equipment, and Material Control.

1.5.1. Personal tools (e.g., Leatherman and Gerber's, flashlights, buck knives, etc.) are not authorized on or around the airfield. All personal issue equipment will be etched/marked in accordance with MACDILLAFBI 21-107, AFI 21-101, and AFI 21-101_AMCSUP_I.

1.5.2. Discard readily removable pocket clips from tools prior to placement in tool kits. Do not disassemble/ damage tools for sole purpose of removing clips, rubber switch guards, etc.

1.5.3. 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 identification (ID) number.

1.5.4. All units that use the flight line will establish a tool control program and maintain control of all items while operating on the airfield. If an item becomes lost or cannot be accounted for maintenance group personnel will follow lost tool guidance in MXG OI 21-101. Non-maintenance group functions will immediately notify the MOC and Airfield Management Operations (AMOPS) providing them with a description of the item and all areas traveled while on the airfield. AMOPS will initiate a lost tool/item report (Attachment 5). The Airfield Manager will coordinate a search effort and notify 6 MXG/MXQ of the incident and result of the search.

1.5.5. Pilots and aircrew members must account for all equipment and personal items after each flight and ensure any items that became lost during the flight are documented in the Air Force Technical Order (AFTO) Form 781A, *Maintenance Discrepancy and Work Document*, as prescribed by Technical Order (T.O.) 00-20-1, *Aerospace Equipment Maintenance General Policy and Procedures*, AFI 21-101 and AFI 21-101_AMCSUP_I. If the item is not recovered, aircrew must initiate a lost tool/item report (Attachment 5).

1.6. Parts & Hardware Control.

1.6.1. A "parts bag" (cloth bag(s) with draw strings or plastic bags that can be sealed) will be used and securely attached to the removed panels/components to store hardware and small

parts. Annotate/label the parts bag with the aircraft/equipment serial number and component nomenclature.

1.6.2. Strictly control all hardware and expendable items. Issue all bench stock items on a “take what you need” basis to the maximum extent possible. Under no circumstances will these items exceed the amount that can be accounted for. Bench stocks will be strictly controlled and monitored to prevent personnel from taking excess quantities into work areas.

1.6.3. Control all work order residue used on or around aircraft, uninstalled engines, and Aerospace Ground Equipment (AGE).

1.6.4. Scrounge bags or excess hardware storage collections are NOT authorized.

1.7. Daily Operations.

1.7.1. All maintenance production areas must have FO containers readily accessible to workers. All vehicles normally driven on the flight line must be equipped with secured and lidded FO containers. Units will follow guidance in AFI 21-101 and AFI 21-101_AMCSUP I for proper marking of FO containers.

1.7.1.1. Pintle hook pins of all types will be secured by cable and swedge or chained to the pintle hook. Safety wire will not be used to secure pins. Pins will be installed in pintle hook at all times.

1.7.2. While maintenance is being performed on aircraft, uninstalled engines, and AGE, openings, ports, lines, hoses, electrical connections, and ducts will be properly plugged, capped, or covered to prevent FO from entering the systems, both installed or when removed for storage. **At no time will non-essential items be placed in or on engine intakes.**

1.7.2.1. Maintenance personnel will properly store all hardware when working on the aircraft (e.g. parts bag, FOD bag).

1.7.2.2. Accomplish after-task FOD checks and thoroughly inspect work areas during and after completion of maintenance tasks to ensure all tools and equipment are accounted for.

1.7.2.3. All lines that are exposed after a component has been removed or cannibalized will be capped/plugged. Cannon plugs and quick disconnects exposed after a component has been removed may be either covered, bagged, or capped.

1.7.2.4. All removed aircraft panels will have associated compartments inspected for foreign objects before closing panels.

1.7.3. The wearing of headgear (uniform/organizational hats) while on the flight line and flight line apron/ramp up to facility doors facing the flight line, extending from Building 524 (Wash Rack Storage Building) to the South parking ramp (Calibration Dock) is not authorized. **Exceptions:** Berets/Headgear for personnel carrying arms are authorized but will not be worn within 50 feet of operating jet engines or in PL2 areas. A watch cap may be worn during cold weather and must comply with AFI 36-2903, *Dress and Personal Appearance of Air Force Personnel*.

1.7.3.1. Anyone performing maintenance on or around the aircraft will secure restricted area line badges to their outer clothing by subdued nylon/cotton cord, quick disconnect necklace style holder, or plastic armband.

1.7.3.2. Wigs, hairpieces, metal hair fasteners, earrings, or any other jewelry that may fall off without notice are not authorized on the flight line.

1.7.3.3. A pocketless, zipperless, buttonless bunny-suit is required when physical entry into an inlet/intake or exhaust is required. Additional requirements/exceptions can be found in AFI 21-101 and AFI 21-101_AMCSUP I.

1.7.4. All support equipment; to include AGE, will be inspected prior to use for potential FO hazards (e.g., safety wire, trash, hardware, empty oil/hydro cans).

1.7.4.1. Special emphasis is required for items such as: remove before flight streamer attachment, safing pin condition, hinge pin security, aircraft forms binder condition, aircraft dust covers, and FO prevention covers for condition/security.

1.7.4.2. Two Allen head screws, or equivalent, will be used to secure static grounding cables to grounding clamps. Coat screws to prevent them from backing out. Unused screws will be removed.

1.7.5. Special attention will be paid to the flight deck, cargo compartment, and boom pod during all maintenance inspections.

1.7.5.1. Remove all foreign objects, unnecessary items, and check equipment accountability.

1.7.5.2. Pay close attention to obscure areas under the rudder pedals, pilot, co-pilot and forward boom operator seats, under the navigation table and behind wanes coating behind the crew entry grate.

1.7.6. Maintenance personnel will inspect aircraft parking spots for foreign objects prior to an aircraft blocking in and prior to an aircraft launch. After the aircraft departs, the parking spot will be cleaned of all non essential equipment, liquid spills, and foreign debris.

1.7.6.1. All grounding points will be kept clean of debris at all times.

1.7.7. Cell phones, pagers, etc., used on the flight line or in maintenance work areas will only be used for official/authorized business. Cell phones will not be used while actively performing maintenance. During maintenance actions, cell phones and other electronic devices (e.g., PDAs, pagers) not required in the performance of maintenance, will be turned off. This restriction does not apply to personnel performing maintenance management duties (e.g., Pro Super, Expediter). Personnel will also comply with restrictions in T.O. 00-25-172, AFMAN 91-201, AFI 91-207, and AFI 31-218.

1.7.8. All building custodians are responsible for FO in the immediate areas around their building to include smoking areas and parking lots.

1.7.9. Implement and enforce the "Clean as You Go" concept while performing maintenance.

1.7.9.1. Aircraft hangars and maintenance facilities will be kept FO free. The organization that uses the hangar will be responsible for ensuring it is FO free.

1.7.9.2. An organization performing maintenance in a hangar will accomplish a FOD walk immediately following the removal of aircraft.

1.7.9.3. Empty all trash receptacles/containers when full. Trash should not be overflowing the trash can.

1.7.10. Glass containers (other than those in sample kits and cleaning kits) are prohibited on the flight line.

1.7.11. Utilize the FOD BOSS to the maximum extent within the areas of the aircraft maintenance units as available. AMXS/MXS will develop a schedule and maintain FOD BOSS assemblies as required.

1.7.12. Any FOD or potential FOD problems outside the unit's ability to resolve will be reported to 6 MXG/MXQ at DSN 968-9626.

1.8. Areas of Responsibility.

1.8.1. Foreign object control in the maintenance complex and particularly on the flight line is everyone's responsibility. For specific areas of responsibility, see Attachment 3. Contractors are responsible for any and all debris produced during and after construction. This includes roadways and hangars in the construction area (call 6 CES Customer Service at DSN 968-4531, Commercial 813-828-4531, for any questions regarding construction sites). These guidelines only provide a basic framework for keeping areas free of foreign objects.

1.8.2. AMXS: North and South parking ramps inside the restricted area (red line) and all facilities in use by AMXS.

1.8.2.1. 91 ARS, 63 ARS, 6 OSS, and 927 OSF: Participate in North Ramp FOD walks with AMXS as available; to include policing FO around occupied facilities.

1.8.3. MXS: Building 552, AGE parking area, North ramp area between red line and fence line to include apron access road starting at AGE fueling station to MacDill Distinguished Visitor lead sign past building 193, Building 1071, Fuel Cell Apron to North Ramp access Entry Control Point (ECP), Hangars 1/2/3/4, and any facilities in use by MXS.

1.8.3.1. MXG, MOS, and 373 WG, Det. 2: Will participate in FOD walks as available in respective areas to include policing FO around occupied facilities.

1.8.4. Transient Alert/Airfield Management: DV parking spots 1/2/3 and Tango Row.

1.8.5. Contract Logistic Support (C-37): Area located between 50 Row and Heron Place flight line ECP starting at the apron access road out to taxi line and Hangar 4.

1.8.6. NOAA: Area located between Heron Place and Condor Street flight line gate ECPs starting at the apron access road out to the taxi line and Hangar 5.

1.8.7. 23 WG, Det 1: Deployed Unit Complex (DUC) flight line area prior to use.

1.8.8. 6 LRS (Petroleum, Oil, and Lubricants Flight): All North ramp fuel pits when utilized, Building 1065 to include fuel truck parking area, Building 1061 and entire flight line access apron between fence line to North Ramp redline/ECP.

1.8.9. Users of the South Apron, North Ramp outdoor wash rack, Alert Pad, and Alternate Fuel Cell are responsible for FOD walking or sweeping the area as required before use.

1.8.10. All Base Personnel: Mass FOD walks will be conducted after air shows, airfield construction/maintenance projects, and any special events performed on the airfield as necessary.

Chapter 2

DROPPED OBJECT PREVENTION PROGRAM (DOPP)

2.1. General. The Wing Vice Commander (CV) serves as the DOPP manager. The 6 AMW/CV will appoint personnel from the Quality Assurance (QA) Office (6 MXG/MXQ) as the Wing DOPP monitor in accordance with AFI 21-101 and AFI 21-101_AMCSUP I.

2.1.1. Definition. A dropped object is any aircraft part, component, surface, or other item lost during aircrew operations, unless intentionally jettisoned, from engine start to engine shutdown.

2.2. Responsibilities.

2.2.1. 6 AMW/CV is responsible for the Wing DOPP and will chair the quarterly DOPP meeting. In his absence, the 6 MXG/CC will chair the meeting. The 6 AMW/CV will appoint personnel from 6 MXG/MXQ as the Wing DOPP monitor in accordance with AFI 21-101 and AFI 21-101_AMCSUP_I.

2.2.2. The Wing DOPP monitor will:

2.2.2.1. Manage the DOPP in accordance with AFI 21-101 and AFI 21-101_AMCSUP_I.

2.2.2.2. Investigate DOPP incidents and report findings per AFI 21-101 and AFI 21-101_AMCSUP_I.

2.2.2.3. Be involved in each DOPP investigation and help ensure corrective actions are sound.

2.2.2.4. Identify and develop training standards in accordance with AFI 21-101 and AFI 21-101_AMCSUP_I.

2.2.2.5. Send out cross tell information (DOPP ALERTS) of all Dropped Object Reports received from HQ AMC/A44MP to all Mission Design Series (MDS) maintainers, operators, and wing safety.

2.2.3. Unit Responsibilities:

2.2.3.1. All units that fly, service, or maintain aircraft will develop a DOPP.

2.2.3.2. All maintenance personnel involved in on-equipment maintenance will receive annual DOPP awareness training. This training will consist of viewing the DOPP video, "Dropped Object Prevention Program." Training will be tracked in the MIS.

2.3. Prevention.

2.3.1. Effective prevention of dropped objects starts when an aircraft door, panel, or cowl is opened for maintenance and during munitions build-up, loading, and arming. Maintenance personnel will ensure the serviceability of fasteners and the proper fit of doors, panels, connectors, etc. Place special attention on the correct length of fasteners and condition of nut plates and other securing devices. Supervisors place special emphasis on these areas during the inspection of completed maintenance actions. All discrepancies pertaining to defective fastening devices will be entered in the AFTO Form 781A and/or automated forms.

2.4. Procedures.

2.4.1. The DOPP inspection checklist items in T.O. 1C-135-6WC-1 are used to facilitate thorough inspections and prevent dropped objects. DOPP inspections are to be performed in conjunction with all Preflight, Thruflight and Quick-turn inspections.

2.4.1.1. Complete all inspection requirements when performing the DOPP inspection in conjunction with a Preflight or Thruflight inspection.

2.4.1.2. When performing the DOPP inspection in conjunction with a Quick-turn inspection, do only those inspection requirements identified in T.O. 1C-135-6WC-1 with a dollar sign (\$) and bold text. These workcards list items are common to all KC-135 aircraft. Some equipment may or may not be installed based on specific aircraft configuration and mission requirements.

2.4.1.2.1. This inspection is intended to be a visual inspection accomplished from the ground unless otherwise noted. There is no requirement to use a ladder or stand unless a discrepancy is suspected that requires closer inspection.

2.4.1.2.2. Inspection methodology of look, touch, tap and feel applies and should be used to ensure security of all items identified.

2.4.1.2.3. DOPP inspection items are items all technicians are required to understand and inspect in order to be qualified on and perform proper Preflight, Thruflight, Quick-turn, Hourly Post Flight and all flightline T.O. 1C-135-6WC-1 inspections. No separate 7-level follow-up is required. AFTO Form 781H certification of these inspections constitutes signed accomplishment of DOPP inspections as mandated above. No separate inspection entry is required in the AFTO Form 781A. As with any inspection, if any portion of the inspection is unable to be completed, annotate the unfinished portion of the inspection (state reason, date/time) on a red dash in the AFTO Form 781A per T.O. 00-20-1.

2.4.2. Periodic Inspection.

2.4.2.1. Each aircraft panel/door that remains open when the aircraft leaves the inspection dock will be placed on a separate Red "X" entry in the aircraft AFTO Form 781A and/or automated forms (G081/MIS).

2.5. Investigation

2.5.1. The DOPP monitor will investigate each dropped object incident. Every effort will be made to determine the precise cause to ensure positive corrective action is accomplished. Anytime a materiel or design deficiency is the cause, or suspected cause, a deficiency report (DR) will be submitted in accordance with TO 00-35D-54, even when an exhibit is not available. Investigation results will be distributed to each appropriate work center for inclusion in personnel training and education programs.

2.6. DOPP Reporting Procedures. The following will be accomplished upon discovery of a dropped object in accordance with AFI 21-101 and AFI 21-101_AMCSUP_I:

2.6.1. Assigned (Home station) Aircraft: Incidents will be reported to the Production Superintendent on duty.

2.6.1.1. The Production Superintendent will:

- 2.6.1.1.1. Notify the MOC.
- 2.6.1.1.2. Ensure proper documentation of aircraft AFTO Forms 781 and MIS.
- 2.6.1.1.3. In coordination with the flight chief, designate an individual to initiate an investigation of the incident and generate a Dropped Object Report Worksheet (Attachment 3) due to the Wing FOD monitor within 12 hours of incident.
- 2.6.1.2. The MOC will:
 - 2.6.1.2.1. Upon notification of a dropped object or lost panel, notify the MXG/CC, MXG/CD, MXG/CCC, AMOPS, and QA/DOPP monitor with all available information to include the aircraft tail number, parking location, time of discovery, and nomenclature of the lost object.
- 2.6.1.3. QA/DOPP Monitor will:
 - 2.6.1.3.1. Report initial dropped objects via telephone, e-mail, or message within 24 hours of occurrence to HQ AMC/A4MMP and input data into the AMC DOPP website.
 - 2.6.1.3.2. Conclude the investigation.
 - 2.6.1.3.3. Brief 6 MXG/CC on the results of the investigation.
 - 2.6.1.3.4. Submit final report within 3 duty days and it will be approved by MXG/CC or equivalent prior to being sent. Send reports to HQ AMC/A4MMP in accordance with AFI 21-101, AFI 21-101_AMCSUP_I, and AFI 10-206, *Operational Reporting*, as applicable.
- 2.6.1.4. Notify the Wing Safety Office (AMW/SE) in accordance with AFI 21-101.
 - 2.6.1.4.1. Wing Safety will report the DOPP incident in accordance with AFI 10-206.
- 2.6.2. Transient Aircraft:
 - 2.6.2.1. The DOPP monitor will be responsible to investigate dropped objects from a transient aircraft. The DOPP monitor will provide the home station DOPP monitor with sufficient data to generate a report for trending and tracking purposes.
- 2.6.3. United States Central Command Air Forces (USCENTAF)/AOR Tasked Aircraft:
 - 2.6.3.1. Notify deployed group leadership, Combined Air and Space Operations Center, Logistics Readiness (CAOC LR), USAFCENT MAIN, and the home station DOPP Monitor.
 - 2.6.3.2. The unit discovering the dropped object will ensure completeness of the report. The home station will coordinate MXG/CC review/approval and forward approved reports to HQ AMC/A4MMP.
 - 2.6.3.3. Once the reports are released by HQ AMC/A4MMP, the home station DOPP monitor will update the DOPP database website.

SCOTT V. DETHOMAS, Colonel, USAF
Commander

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

AFI 10-206, *Operational Reporting*, 15 October 2008

AFI 13-213, *Airfield Management*, 29 January 2008

AFI 21-101, *Aircraft and Equipment Maintenance Management*, 26 July 2010

AFI 21-101_AMCSUP, *MAF Aircraft and Equipment Maintenance Management*, 14 February 2011

AFI 36-2903, *Dress and Personal Appearance of Air Force Personnel*, 2 August 2006

AFI 65-503, *US Air Force Cost and Planning Factors*, 4 February 1994

AFI 91-204, *Safety Investigations and Reports*, 24 September 2008

AFMAN 24-306_IP/TC 21-305-20, *Manual for the Wheeled Vehicle Operator*, 1 July 2009

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

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

MACDILLAFBI 32-100, *Airfield Sweeping Operations*, 7 January 2003

TO 00-20-1, *Aerospace Equipment Maintenance General Policy and Procedures*, 1 September 2006

TO 00-35D-54, *USAF Deficiency Reporting and Investigating System*, 1 October 2009

Forms Prescribed

None

Forms Adopted

AF Form 847, *Recommendation for Change of Publication*

AF Form 1098, *Special Task Certification and Recurring Training*

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

Abbreviations and Acronyms

6 AMW—6th Air Mobility Wing

6 AMW/SE—Wing Safety

6 AMXS—6th Aircraft Maintenance Squadron

6 AMXS/MXAD—Transient Alert

6 CES—6th Civil Engineer Squadron

6 CS—6th Communications Squadron

6 LRS—6th Logistics Readiness Squadron

6 MOS—Maintenance Operations Squadron
6 MSG—6th Mission Support Group
6 MXG—6th Maintenance Group
6 MXG/MXQ—Quality Assurance Office
6 MXS—6th Maintenance Squadron
6 OSS—6th Operations Support Squadron
6 OSS/OSAA—Airfield Management
6 SFS—6th Security Forces Squadron
6 SVS—6th Services Squadron
63 ARS—63rd Air Refueling Squadron
23 WG, Det 1—23rd Wing, Detachment 1
91 ARS—91st Air Refueling Squadron
927 ARW—927th Air Refueling Wing
927 ARW/SE—Wing Safety
927 AMXS—927th Aircraft Maintenance Squadron
927 MXS—927th Maintenance Squadron
927 OSF—927 th Operations Support Flight
310 AS—310th Airlift Squadron
AF—Air Force
AFB—Air Force Base
AFI—Air Force Instruction
AFMAN—Air Force Manual
AFOSH—Air Force Occupational Safety and Health
AFOSHSTD—Air Force Occupational Safety and Health Standards
AFTO—Air Force Technical Order
AGE—Aerospace Ground Equipment
AMC—Air Mobility Command
AMCSUP—Air Mobility Command Supplement
AMOPS—Airfield Management Operations
AOR—Area of Responsibility
AQL—Acceptable Quality Level
CAOC LR—Combined Air and Space Operations Center, Logistics Readiness

CC—Commander
CD—Deputy Commander
CLS—Contract Logistic Support
CTK—Composite Tool Kit
CV—Vice Wing Commander
DOPP—Dropped Object Prevention Program
DR—Deficiency Report
DUC—Deployed Unit Complex
DV—Distinguished Visitor
ECP—Entry Control Point
FO—Foreign Object
FOD—Foreign Object Damage
FY—Fiscal Year
HQ AMC/A4MJP—Headquarters, Air Mobility Command, Command Engine Management
ID—Identification
MACDILLAFBI—MacDill AFB Instruction
MDS—Mission Design Series
MIS—Maintenance Information Systems
MOC—Maintenance Operation Center
MQTP—Maintenance Qualification Training Program
NOAA—National Oceanic and Atmospheric Administration
OPR—Office of Primary Responsibility
POC—Point of Contact
POV—Privately Owned Vehicle
QA—Quality Assurance
RDS—Records Disposition Schedule
SSN—Social Security Number
TDY—Temporary Duty
T.O.—Technical Order
USAFCENT—United States Air Forces Central Command
WUC—Work Unit Code

Attachment 2

FOD REPORT WORKSHEET

1. Basic Information.

FOD program report number
Date and Time of Incident:
Base of Incident:
When discovered:
Base:
MDS:

Type of report:
Unit:
Origin of Sortie:
Owning Unit:
MAJCOM:
Tail Number:

2. Engine Data (if applicable).

Engine Type:
Series:
Engine Position (If Applicable):

Make:
Engine S/N:
Time Since Overhaul:

3. Description of Incident (Use back if necessary)

Material Failure: (Yes or No)
Preventable/Non-Preventable:

Tech Data Deficiency: (Yes or No)

4. Investigation Findings (Use back if necessary).

5. Action Taken to Prevent Recurrence (Use back if necessary).

6. Cost.

Parts Cost:

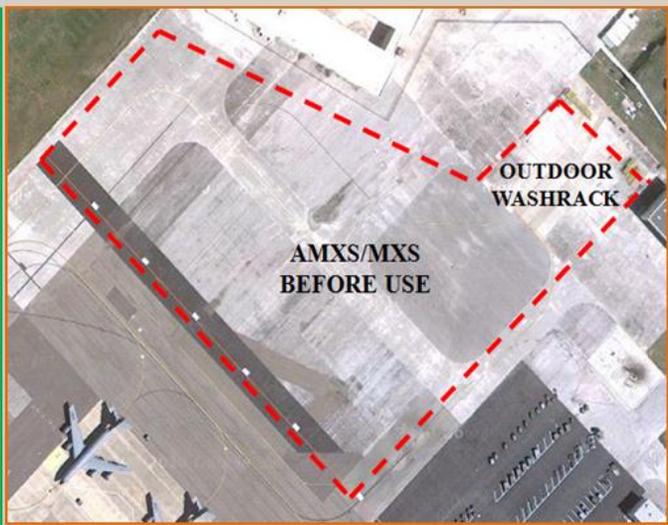
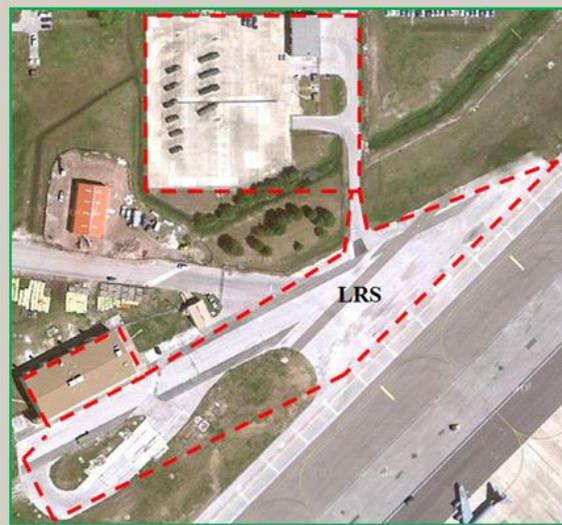
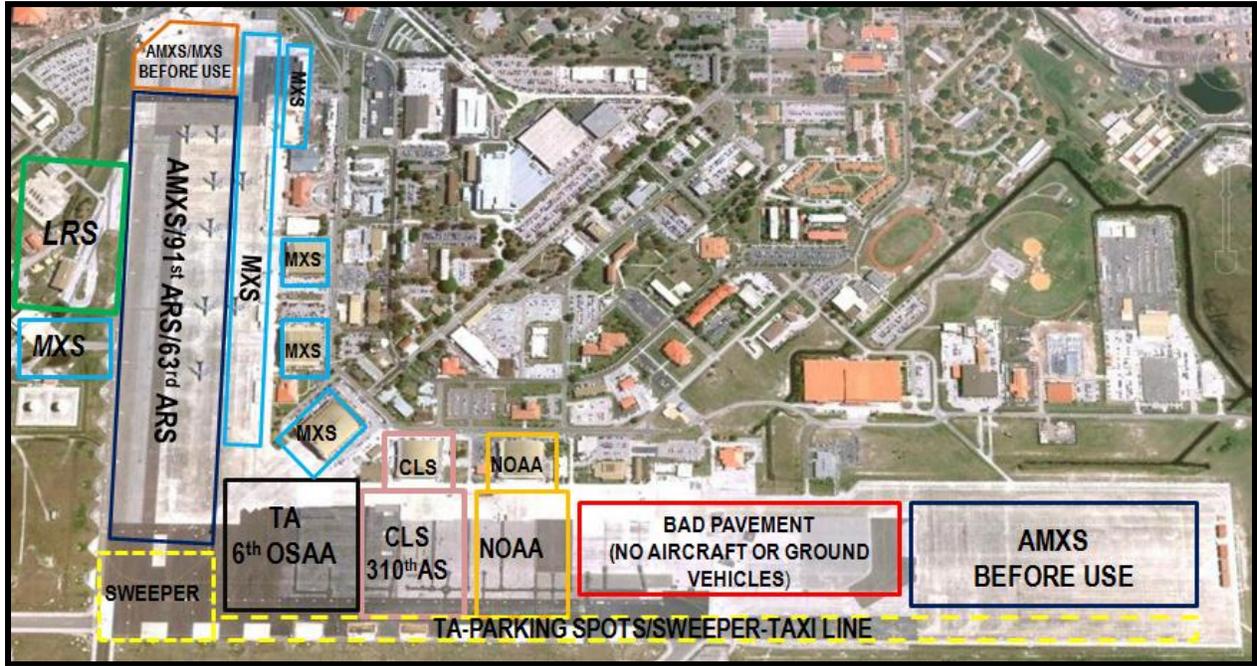
Labor Cost:

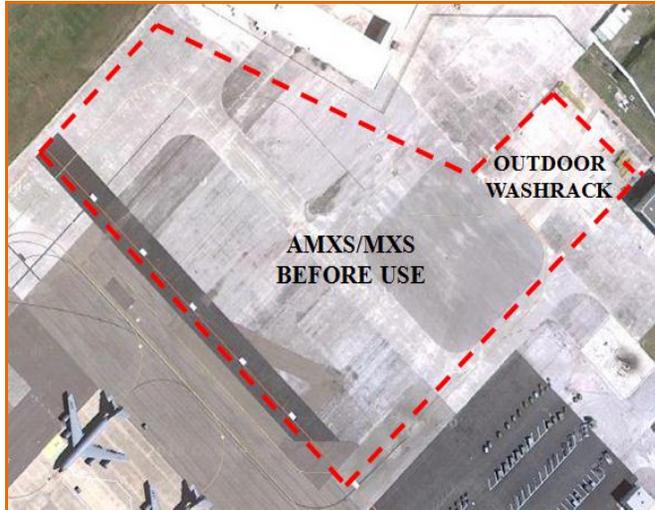
Total Cost:

7. Additional Comments (Use back if necessary).

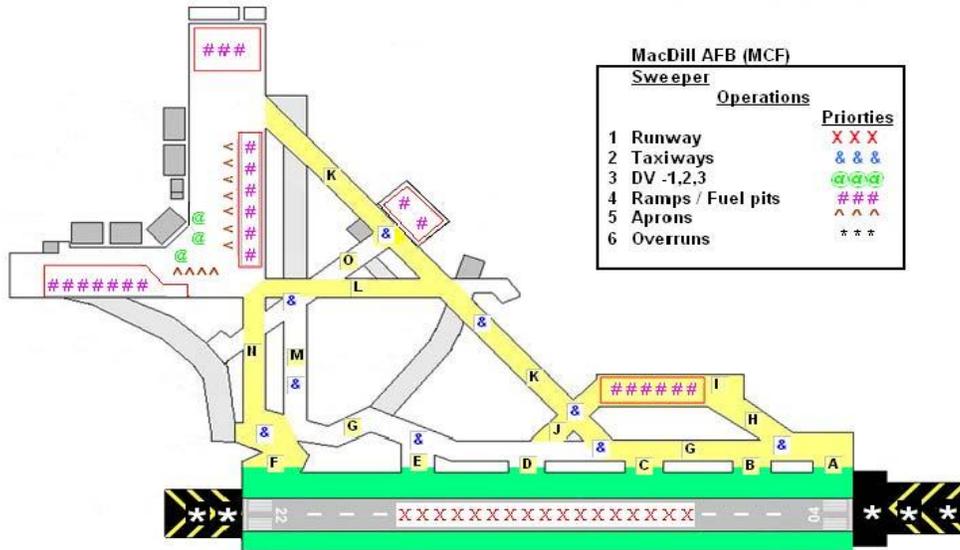
Attachment 3

FOD AREAS OF RESPONSIBILITY





Attachment 4 SWEEPER OPERATIONS MAP



Attachment 5

MXG FORM 145 LOST TOOL/OBJECT REPORT

REPORT NUMBER: _____ *(MXG QA assigns this number)*

The Squadron Production Super will: 1) Enter date, organization/workcenter and time the item was discovered missing. 2) Ensure the form is completed prior to shift change. 3) Ensure that squadron supervision receives a copy of the report NLT 1200 the next duty day. A copy of the final report will be forwarded to QA NLT 1200 the next duty day.

Date:	Organization / Workcenter:	Time Tool/Chit/Item Was Discovered Missing:
Individual Who Discovered Item Missing (Name and Rank):		Status (circle one): Found/Not Found
ID/CTK Number:	Description/Nomenclature(s):	Aircraft Impounded (circle one): Yes/No
Aircraft Serial Number or Last Known Location of Lost Item:		
Type Work Being Performed When Item Was Lost:		
The following individuals/agencies will be notified when initiating a Lost Tool/Chit/Item Report.		
Individual/agency notified:	Name	Date/Time Notified
1. Production Superintendent		
2. Flight Chief		
3. MOC		
4. Maintenance Operations		
5. Squadron Commander		
6. PS&D (only if lost on aircraft)		
7. QA Office		
Action Taken: <i>(Use this block to specifically list aircraft, vehicles, equipment, and work areas searched. Continue on a blank sheet, if necessary).</i>		
8. Squadron Maintenance Operations Signature:		open / closed

Attachment 6

DROPPED OBJECT REPORT WORKSHEET

(Aircrew AFTO 781, Maintenance Debrief, and the following information are required for all dropped object reports)

1. Basic Information.

Report Number:	MDS Involved:
Type Mission/Mission Profile:	Serial Number:
Owning Organization:	Origin of Sortie:
Owning Base:	Date of Incident:
Geographic Location of Object:	Discovery Location:
Item (4 Series TO):	TO Number:
TO Figure and Index:	Part Number:
Work Unit Code:	Last PDM:
Last HSC:	Last ISO:

Last Maintenance Performed and Date:

2. Investigation Findings (Use back if necessary).**3. Cost Analysis.**

Replacement Cost:	Average Man Hour:
Man Hours:	Man Hour Cost:

4. Actions Taken to Prevent Recurrence (Use back if necessary).**5. Additional Information (Use back if necessary).****6. Deficiency Report.****7. Type Failure.****8. Drafter.**