

**BY ORDER OF THE COMMANDER
21ST SPACE WING**

AIR FORCE INSTRUCTION 21-101



**21ST SPACE WING
Supplement 1**

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Maintenance

**AEROSPACE EQUIPMENT MAINTENANCE
MANAGEMENT**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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The OPR for this supplement is 21 MOF/MXOA (TSgt Floyd D. Martinez). This supplement implements and extends the guidance of Air Force Instruction (AFI) 21-101, *Aerospace Equipment Maintenance Management*, 1 Oct 02. It establishes a Base Foreign Object Damage (FOD) Prevention Committee, FOD Officers, and FOD Prevention Noncommissioned Officers (NCO). This publication does not conflict with, or is at least as restrictive as, Air Force-level guidance. It prescribes operating procedures, identifies specific responsibilities for FOD inspection, incident reporting, and routing. It is applicable to all activities that use the military parking ramp at Peterson Air Force Base for any purpose. This publication is consistent with Air Force Occupational Safety and Health (AFOSH) standards or Department of Labor Occupational Safety and Health Act (OSHA) standards. This publication applies to US Air Force active duty/reserve units and contractors assigned/attached to Peterson AFB. Maintain and dispose of records created as a result of prescribed processes in accordance with AFMAN 37-139, *Records Disposition Schedule* (will become AFMAN 33-322 Volume 4).

18.23. All commanders will ensure compliance with this supplement and establish guidance, as required, so every precaution is taken to prevent FOD. As applicable, organizations must ensure newly assigned personnel receive FOD Prevention Orientation/Familiarization Briefing during in processing. The Newcomers' FOD briefing will be documented by the responsible organization. Airfield Management will ensure flightline driver's training program stresses the importance of FOD prevention, control of vehicles on the flightline, and precautions to be taken prior to driving onto the airdrome hard surfaces from unpaved areas. The 302 AW Reserve unit has their own FOD Program due to mission requirements and AFRC Instruction requirement. It is at least as restrictive as Air Force-level guidance.

18.23.2.12.1. (Added) Personnel will not wear hats on the flightline. Wear of the winter watch cap is authorized and may be worn during aircraft launch, when using the following procedures:

Ear defender/communication headsets devices can be worn over the watch cap.

Watch cap must be firmly set on individual's head, ensured by pulling watch cap down over the ears, to prevent it from inadvertently coming off, and posing a FOD hazard.

EXCEPTION: When conducting official protocol duties on the flightline, the senior officer present, or his/her representative, will consider risk factors including weather and proximity to operating aircraft engines, and dictate if hats are to be worn for a particular occasion (this does not include baggage and aircraft support personnel). No individual wearing a hat, regardless of rank, will pass within 25 feet of an operating engine.

18.23.2.14. Government employees will not use or possess personal tools in any aircraft maintenance area. Contractors will comply with their contract concerning tool control and accountability.

18.23.2.19.1. (Added) Aircraft/weapons safety pins will not be placed on or left unsecured on aircraft parking ramps/movement areas at any time.

18.23.2.19.2. (Added) At no time will aircraft forms be left unsecured on the ramp or any external area of the aircraft.

18.23.2.19.3. (Added) Drinks may be consumed inside vehicles and the empty containers must be disposed of properly. Soda cans are prohibited outside of the vehicles on the flightline. Glass bottles are prohibited on the flightline, with the exception of sample kits.

18.23.2.19.4. (Added) Smoking on the flightline is prohibited, including inside vehicles, except in designated areas approved by the Fire Chief.

18.23.2.20. (Added) Flightline Vehicle FOD Prevention:

18.23.2.20.1. (Added) Vehicle operators (including contractors) will inspect the cab interior, cargo bed area, and tires prior to use and remove all foreign material that could inadvertently fall on the ramp creating FOD hazard.

18.23.2.20.2. (Added) All flightline vehicles will be equipped with a suitable covered FO container. Storage containers on tugs and in tractors may be used in place of self-closing containers. Containers will be secured so as not to tip over when vehicle is in motion. Containers will be emptied at the end of each shift.

18.23.2.20.3. (Added) Vehicle operators will make every attempt to enter the military aircraft parking ramp via paved surfaces using flightline gate entrances. Vehicles proceeding on the flightline from unpaved surfaces will pull the vehicle onto the flightline, then check tires. This ensures no FO (i.e. rocks or stones, etc.) is tracked onto the ramp. To ensure that vehicle tires remain free of small rocks and other debris, vehicles entering or returning to the flightline will perform a tire FO check prior to entering the flightline area. Emergency response vehicle operators responding to emergencies will ensure a foreign object check of all vehicles is conducted in the emergency area before departing. Rescue personnel must also ensure that the flightline is policed of all foreign objects that could be dropped by their vehicles in the area of the emergency.

18.23.2.20.4. (Added) Prior to start of any vehicle on the ramp, the driver will ensure that all objects which could fall off the vehicle and become FOD hazards are secured. Vehicles regularly operating on the ramp, excluding fuel-servicing vehicles will have a covered can for disposal of the debris.

18.23.7.1.1. (Added) 21 MSG and MXG Commanders will ensure FOD prevention practices and procedures are implemented at all times.

18.23.7.1.2. (Added) 21 CES Commander will have the primary responsibility for maintenance and cleanliness of military aircraft parking ramp surfaces.

18.23.7.1.3. (Added) The Chief of Airfield Management Operations (OSA) is responsible for inspection of the military aircraft-parking ramp twice daily. Airfield Management will coordinate with 21 CES (Contract Management) to ensure continual inspection of areas where construction is in progress and will ensure that special requests for sweeper operations are met promptly during operating hours.

NOTES:

During inclement weather conditions, OSA will increase inspections of military aircraft parking ramp.

Colorado Springs Aviation Division is responsible for all runway and taxiway inspections. Any reports of FOD seen on the runways or taxiways by military aircraft will be reported to Base Operations, who will, in turn, notify the city.

18.23.7.1.4. (Added) Contractor maintenance personnel will comply with their contract, which will establish their foreign object damage prevention programs and procedures for the reporting of foreign object damage incidents.

18.23.7.3. (Added) Ramp Policing:

18.23.7.3.1. (Added) Commanders, including those of TDY units, will ensure areas designated below are policed daily by foreign object (FO) crews. Special attention will be given to cleaning of cracks and expansion seams in hard surfaced areas where engines will be operated. All personnel will take an active part in daily policing to effectively reduce the FOD potential to engines and tires.

18.23.7.3.2. (Added) Each operational unit will be responsible for their aircraft parking area, the adjacent portions of the access road, as well as their assigned hangar space. The transient parking area is the responsibility of transient alert personnel.

18.23.7.3.3. (Added) A sweeper truck is scheduled to clean one of five ramp zones each day, Monday through Friday. Additional areas identified for cleaning by Airfield Operations during daily inspections will be reported to the sweeper driver for action. Contact Airfield Operations if a sweeper is needed for unscheduled sweeps.

18.23.7.3.4. (Added) Facilities adjacent to aircraft parking ramps, taxiways, or engine run areas, as well as any shops or hangars used for aircraft/component maintenance, will be policed by the owning organization. Particular attention to closing dumpster lids during high winds must be addressed by each facility manager.

18.23.7.3.5. (Added) Personnel will be constantly alert for any form of FO during all phases of a job. Special attention must be given to small items of debris, such as safety wire, bolts, nuts, screws, etc. Loose materials of this kind will be placed in FO containers during the normal course of job performance. After the job is completed, a final check of the entire work area will be made and all FO removed.

18.23.8.6. (Added) The Wing FOD Prevention NCO will perform random Foreign Object (FO) inspections. The contractor's Program Managers will ensure a similar program is carried out. All FOD incidents will be discussed at FOD Prevention Committee meetings to ensure information regarding FOD hazards receives base wide dissemination along with the appropriate corrective action.

18.23.9.1. Any aircraft maintenance activity discovering foreign object damage to any aircraft/engine will report findings to its Maintenance Officer/Supervisor. The Wing FOD Prevention NCO will be noti-

fied and, in turn, will contact the Wing Safety office and Airfield Management. The Maintenance Officer/Superintendent or Federal Aviation Administration (FAA) representative will impound the aircraft, whichever is appropriate (primary) or a representative from Wing Safety (alternate) until the damage can be evaluated. No maintenance action will be accomplished without the concurrence of the impoundment official. The Wing FOD NCO and a representative from Wing Safety will jointly investigate foreign object damage on all military and contracted aircraft. They will perform the initial investigation following AFI 91-204, *Safety Investigations and Reports*.

NOTES:

Civilian aircraft that are owned or operated by the Air Force fall under the control of the FAA and the National Transportation Safety Board (NTSB). The Air Force will work with the FAA and the NTSB during investigation to ensure safety and liability issues are covered.

The impoundment official for aircraft not assigned/attached to Peterson AFB will automatically be the Superintendent of Maintenance. The impoundment will be released to the maintenance team chief of the owning organization, upon the team's arrival.

18.23.9.1.1. (Added) The Wing Safety office and FOD NCO will investigate the FOD mishap and provide an initial report, in accordance with AFI 91-204, of all circumstances surrounding the incident. The 21 SW/CV, 21 MSG/CC, and 21 MXG/CC will be briefed within 12 hours of the incident and reporting will be done in accordance with AFI 91-204.

18.23.9.1.2. (Added) The Wing FOD Prevention NCO or Safety NCO will give a written end report, on each FOD incident, to the 21 SW/CV NLT seven working days after completion of the investigation. The report will be in accordance with the format in AFI 91-204.

18.23.9.1.3. (Added) The Wing FOD Prevention NCO will ensure the written end report is coordinated through the Wing Safety office, 21 MSG/CC, and 21 MXG/CC prior to being sent to the 21 SW/CV for review and signature.

18.23.9.2.1. Bird damage to engines is not chargeable as FOD, but must be investigated and documented to preclude the 21 SW from being charged with a FOD incident. Such incidents may be reportable under the Bird Avoidance Strike Hazard (BASH) Program. Contact Wing Safety with details as soon as possible after discovering bird related engine damage.

18.23.10.2. (Added) The Peterson AFB FOD Committee will meet quarterly, unless the MAJCOM standard FOD rate is exceeded. In the event that MAJCOM standards are exceeded, the committee will meet monthly until the standards are met. The committee chairperson may direct additional meetings as necessary.

18.23.10.2.1. (Added) Representatives from each of the agencies listed below are appointed as members of the Peterson AFB FOD Committee. Personnel occupying these positions or their alternates will attend the meetings. All appointments will be coordinated through the Wing FOD Prevention NCO by letter, appointing a primary and an alternate member. Committee members are:

21 MSG/CC, Chairperson

21 MOF/MXOA, Wing FOD Prevention NCO

21 CES/CEF, Fire Department

21 LRS/LGRR

21 OSS/OSA, Airfield Management

21 SFS/SPOS

21 SW/SEG

21 SVS/SVBP, Aero Club

302 LGQ

84 ALF, QAR

200 AS, QAR

98 FTS (UV-18)

PMI/LGS (POL)

COWGCAP/GROUP3-CC, Civil Air Patrol

18.23.10.2.2. (Added) The Wing FOD Prevention NCO will develop the meeting agenda and brief the members of the FOD Prevention Committee.

18.23.10.2.3. (Added) The Wing FOD Prevention NCO will be appointed by the Wing Vice Commander in writing. The appointee should have an aircraft maintenance background when possible.

18.23.10.2.4. (Added) The 21st Mission Support Group Commander will serve as wing FOD Prevention Committee Chairperson. He/she will monitor all phases of the program implementation within the Wing to ensure the FOD incidents are thoroughly investigated and adequate corrective action is taken.

18.23.10.2.5. (Added) Each operational, maintenance, and civil engineering squadron commander/project manager will:

18.23.10.2.5.1. (Added) Appoint a Unit FOD Prevention Officer/NCO, or manager. These individuals will manage the squadron/contract program and make sure that ramps/areas of responsibility are policed daily.

NOTE: A letter of appointment will be forwarded to the Wing FOD Prevention NCO.

18.23.10.2.5.2. (Added) Make sure all squadron/contract maintenance personnel are made aware of this supplement and comply with the provisions therein.

18.23.10.2.5.3. (Added) Be a participating member of the Wing FOD Prevention Committee and attend scheduled meetings.

18.23.10.2.5.4. (Added) Make sure all publicity material concerning FOD (such as, FOD bulletin board, posters, committee minutes, and so forth) is disseminated throughout the area of responsibility.

Duane W. Deal, Brigadier General, USAF
Commander