

**BY ORDER OF THE COMMANDER
916TH AIR REFUELING WING**

**916TH AIR REFUELING WING
INSTRUCTION 21-102**



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Maintenance*

**FOREIGN OBJECT DAMAGE PREVENTION
PROGRAM**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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Certified by: 916 ARW/CV
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This instruction implements Air Force Policy Directive (AFPD) 21-1, *Manage Aerospace Equipment Maintenance*. This instruction extends the guidance of Air Force Instruction (AFI) 21-101, *Aerospace Equipment Maintenance Management*, Air Force Instruction 91-204, *Safety Investigation and Reports*, Air Force Instruction 91-202, *The U S Air Force Mishap Prevention Program*, and Air Force Pamphlet 91-212, *Bird/Wildlife Aircraft Strike Hazard (BASH) Management Techniques*. This instruction outlines the procedures and responsibilities for the Foreign Object Damage Prevention Program (FODPP). It applies to all 916th Air Refueling Wing (ARW) personnel who perform their duties in, on, around or traveling through areas near aircraft, munitions, Aerospace Ground Equipment (AGE), engines or components thereof. 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*. Ensure all records created as 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/gcss-af61a/afirms/afirms/rds>.

SUMMARY OF CHANGES

This Interim Change (IC) no longer allows the wear of head apparel in an aircraft restricted area. However, cold weather headgear is allowed while in aircraft restricted areas during periods of inclement weather. This IC also changes the designated day of FOD walks from Tuesday to Monday. A margin bar (|) indicates newly revised material.

1. Responsibilities

1.1. As Wing Foreign Object Damage (FOD) Prevention Program Manager the 916th Air Refueling Wing Vice Commander (916 ARW/CV) will ensure each organization assigned to the 916th Air Refueling Wing utilizing the airfield or shop areas complies with this program and the host base FOD prevention program. All squadron commanders, maintenance superintendents and squadron FOD monitors are responsible for total program compliance within their respective areas of responsibility to ensure the objectives of the FOD Prevention Program are met. In addition to the following guidance, all personnel will be familiar with and comply with procedures outlined in AFI 21-101, *Aerospace Equipment Maintenance Management*.

1.2. Each squadron commander who has personnel that must access the flight line or shop areas will appoint a squadron FOD representative. The appointment must be in writing and submitted to the Wing Foreign Object Damage Prevention Program (FODPP) manager. The representative is also responsible for keeping the unit commander informed of the FOD status for their unit and will report all FOD incidences to the unit FODPP.

1.3. The Wing FODPP monitor will:

1.3.1. Act as the focal point for all FOD incidents occurring within functional areas of the 916 ARW. All FOD incidents (except for engine blade minor nicks and scratches) will be reported. The Wing FODPP manager reviews each FOD incident and the Wing FODPP monitor prepares a detailed report using Air Force Reserve Command (AFRC) Form 42, *FOD mishap investigation check sheet*, in accordance with AFI 21-101 AFRC Supplement, *Aerospace Equipment Maintenance Management* and AFI 91-204, *Safety Investigation and Reports*.

1.3.2. Report all FOD incidents to Numbered Air Force (NAF) FOD manager by telephone/email no later than the next duty day after the incident occurs. The 916 Wing FODPP monitor, technician and safety office as applicable will jointly investigate FOD mishaps which meet reportable criteria.

1.3.3. Attend the 4th Fighter Wing Junior FOD meetings.

1.3.4. Conduct a quarterly 916 ARW FOD meeting to ensure compliance with FOD Prevention Program objectives.

1.3.5. Will perform at least one spot FOD inspection a week of the flight line for pavement condition and potential FOD items. The Wing FODPP monitor will document all findings and route them to the 4th Fighter Wing Air Field Manager for identification/repair.

1.3.6. Analyze the results of all FOD inspection reports for trends and notify all the functional area managers of unfavorable trends in their area of responsibilities.

1.3.7. Notify all wing agencies of FOD hazards.

1.4. Aircraft Maintenance Squadron FOD representatives will monitor the aircraft parking ramp to include grounding points. Supervision will be notified when specific areas require attention.

1.5. Squadron Commanders and Superintendents are responsible for ensuring personnel are trained and continually briefed on wing FOD procedures.

1.6. Personnel should understand the effect of FOD contamination of items such as bearings and races, which should be covered, when not installed in their proper position.

1.7. The 916 ARW training manager will ensure the FOD prevention training video is available for their personnel who have access to the flight line and shop areas. Every individual who works on the flight line will view this video (Maintainers and Operators). Individuals will document compliance with the Maintenance Information System course code GENL 000953 or by equivalent means.

1.8. All 916 ARW personnel involved in flight line operations will be continually vigilant of foreign objects and have the following responsibilities.

1.8.1. Head apparel shall not be worn on the flight line or in aircraft restricted areas. During periods of inclement weather, appropriate cold weather head gear is authorized for wear on the flight line or in aircraft restricted areas except within 50 feet of operating aircraft engines. Line badges or passes will not be worn within 50 feet of operating aircraft engines."

1.8.2. Ensure every dispatched Composite Tool Kit has a foreign object bag for the storage of foreign objects during work periods.

1.8.3. Immediately upon completion of maintenance, a foreign object inspection will be made to insure no foreign objects remain in the area. This inspection is to include any loose hardware, safety wire, as well as an inventory of composite tool kit and technical orders.

1.8.4. On aircraft, uninstalled engines and AGE, cover all open oil, fuel, and hydraulics lines, air ducts, and electrical connectors that are opened due to maintenance. Do NOT cover electrical connectors with aluminum foil.

1.9. Aircrew members will account for all equipment and personal items after each flight. Aircrew will document any lost items or FOD in the aircraft forms and notify the Maintenance Operations Center.

2. Procedures

2.1. FOD walks will be conducted weekly. The FOD walk will begin at 0730 hours every Monday, except the Monday following the Unit Training Assembly (UTA) weekend FOD walk. The UTA FOD walk will be conducted quarterly or as directed by the 916 MXG/CC. UTA FOD walk will begin at 0730 hours on Saturday. FOD walks may be delayed due to circumstances such as weather or other mission requirements. All 916 ARW organizations will regularly participate in the weekly FOD walk. Organizations will be scheduled by the 916 ARW/CV and participation is highly encouraged. FOD walk participation by all 916 ARW organizations is highly encouraged.

2.2. The base sweeper will be dispatched, through coordination with the Maintenance Operations Center (MOC), as required. The FOD BOSS (located in the AMXS tool room) will be used a minimum of once per week by qualified personnel. FOD BOSS use may be delayed due to circumstances such as weather or other mission requirements.

2.3. Each day, before any engine start, the Crew Chiefs and or Specialists will inspect the area for foreign objects around the aircraft to include cockpit and flight deck area. Policing efforts will be directed out to the taxi line between their aircraft and the opposite row.

Personnel will check parking spots again after aircraft has taxied away for loose concrete and other foreign objects.

2.4. Run fences will be inspected for deficiencies prior to use. Run fences found with discrepancies will be removed from service and reported to the Aerospace Ground Equipment Section. Run fences will be re-inspected after completion of maintenance engine run.

2.5. During unit deployment, maintenance personnel will conduct initial FOD prevention measures of this instruction upon arrival at the deployed location. A FOD walk of the taxiways and assigned aircraft parking areas designated for 916 ARW aircraft will be conducted. Maintenance supervision will ensure weekly FOD walks are accomplished.

3. Vehicles Operating on the Flight Line

3.1. If vehicles are driven off the flight line or off paved surfaces, the tires and magnetic bars (if installed) will be inspected before the vehicle re-enters the maintenance area. At no time will the vehicle be driven in excess of 15 miles per hour with a FOD magnetic bar in position (either remove FOD bar or raise the bar up as high as possible, to accommodate speeds higher than 15 mph). All vehicles, including golf carts, involved in maintenance on the flight line will have a FOD container attached to the vehicle. Container will be with the word "FOD" in contrasting letters no smaller than two inches.

3.2. All vehicle operators, as part of the daily vehicle inspection, will check for cleanliness, loose hardware, and tire entrapped objects to prevent foreign objects from being transported onto the flight line.

3.3. All vehicles will stop at the designated FOD tire Check Points and perform a rolling FOD check. A FOD removal tool will be added to key rings of all vehicles normally driven on the flight line.

4. FOD Incident Reporting and Data Tracking

4.1. Individuals who discover FOD will report the incident to Maintenance Operations Center (MOC). The MOC will notify Quality Assurance and the Wing FODPP monitor. When FOD is identified, other than minor nicks and scratches on engine fan blades, the Wing FOD monitor will be notified prior to blade blending. The Wing FODPP monitor will ensure blade blending worksheet (Attachment 3) is filled out by the individual that is performing the blend and then forwarded to Engine Management for input into the engines maintenance history records.

4.2. Quality Assurance will calculate the work hours and material cost attributed for each FOD incident and report the cost at each quarterly FOD meeting. Reports are used to track the progress of the FOD inspection program.

4.3. For all incidents involving bird strikes and bird ingestion into the engine during flight, a 916 Form 3, *Aircraft Incident Investigation*, will be accomplished during aircrew debrief. MOC will ensure that the 916 Form 3 and AF Form 853, *Air Force Wildlife Strike Report*, are completed and given to the 4th Fighter Wing BASH Team (in accordance with AFPAM 91-212, *Bird/Wildlife Aircraft Strike Hazard (BASH) Management Techniques*) and the 916 Wing FODPP monitor not later than the next duty day after the incident occurred.

4.4. FOD discovered on post engine run inspections, will be reported immediately to the expediter. The expediter will notify Wing Safety and the Wing FODPP monitor.

4.5. When an aircraft is off station and has a FOD incident, the senior enlisted maintenance personnel will complete the 916 Form 3 and fax it to the Wing FODPP monitor not later than the next duty day after the incident occurred. FAX number DSN 722-2934, Commercial 919-722-2934.

5. Quarterly FOD Prevention Meeting

5.1. The 916 ARW/CV will chair the quarterly FOD prevention meeting. The 916 MXG/CC will chair the chair the meeting in the 916 ARW/CV's absence. All group commanders, director(s), commanders of units with maintenance personnel, safety, CE, Airfield Manager, security forces, and unit FOD representatives will attend. If any of the aforementioned FOD representatives cannot attend, a designated representative from each unit will attend. This meeting will be conducted in conjunction with the quarterly 916 ARW Dropped Object Committee meeting. Agenda for the meeting will include a review of FOD incidents, dropped objects, lost tools/objects, bird strikes, FOD inspection/assessment results, identification of potential FOD sources, and Golden Bolt Award winner(s) being recognized.

6. Golden Bolt Award Program

6.1. The Wing FODPP Monitor or QA representative will place the Golden Bolt on the aircraft parking ramp at least once a quarter at a random time and location. The individual placing the golden bolt will monitor its recovery.

6.2. The individual who finds the Golden Bolt and returns it to the QA office is the winner. The person receiving the golden bolt from the individual will take the finder's full name, supervisor's name and flight assigned. This information will be forwarded to the Wing FODPP Monitor. The individual will then be appropriately recognized or rewarded by the individuals' squadron and/or 916 ARW/CV.

7. Prescribed Forms.

None

8. Adopted Forms.

916 ARW Form 3, *Aircraft Incident Investigation*

AF IMT 847, *Recommendation for Change of Publication*

AFRC Form 42, *Foreign Object Damage Mishap Investigation Check Sheet*

GREGORY S. GILMOUR, Colonel, USAFR
Commander

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

AFPD 21-1, *Air and Space Maintenance*, 25 February 2003

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

AFI 21-101_AFRCSUP, *Aerospace Equipment Maintenance Management, Air Force Reserve Command Supplement 1*, 13 January 2011

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

AFI 91-202, *The U S Air Force Mishap Prevention Program*, 5 August 2011

AFPAM 91-212, *Bird/Wildlife Aircraft Strike Hazard (BASH) Management Techniques*, 1 February 2004

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

Abbreviations and Acronyms

AFI— Air Force Instruction

AFPD— Air Force Policy Directive

AFRC— Air Force Reserve Command

AGE— Aerospace Ground Equipment

AMXS— Aircraft Maintenance Squadron

ARW— Air Refueling Wing

BASH— Bird/Wildlife Aircraft Strike Hazard

CC— Current Commander

CV— Vice Commander

DOPP— Dropped Object Prevention Program

FOD— Foreign Object Damage

FODPP— Foreign Object Damage Prevention Program

IMT— Information Management Tool

MOC— Maintenance Operations Center

MPH— Miles Per Hour

MXG— Maintenance Group

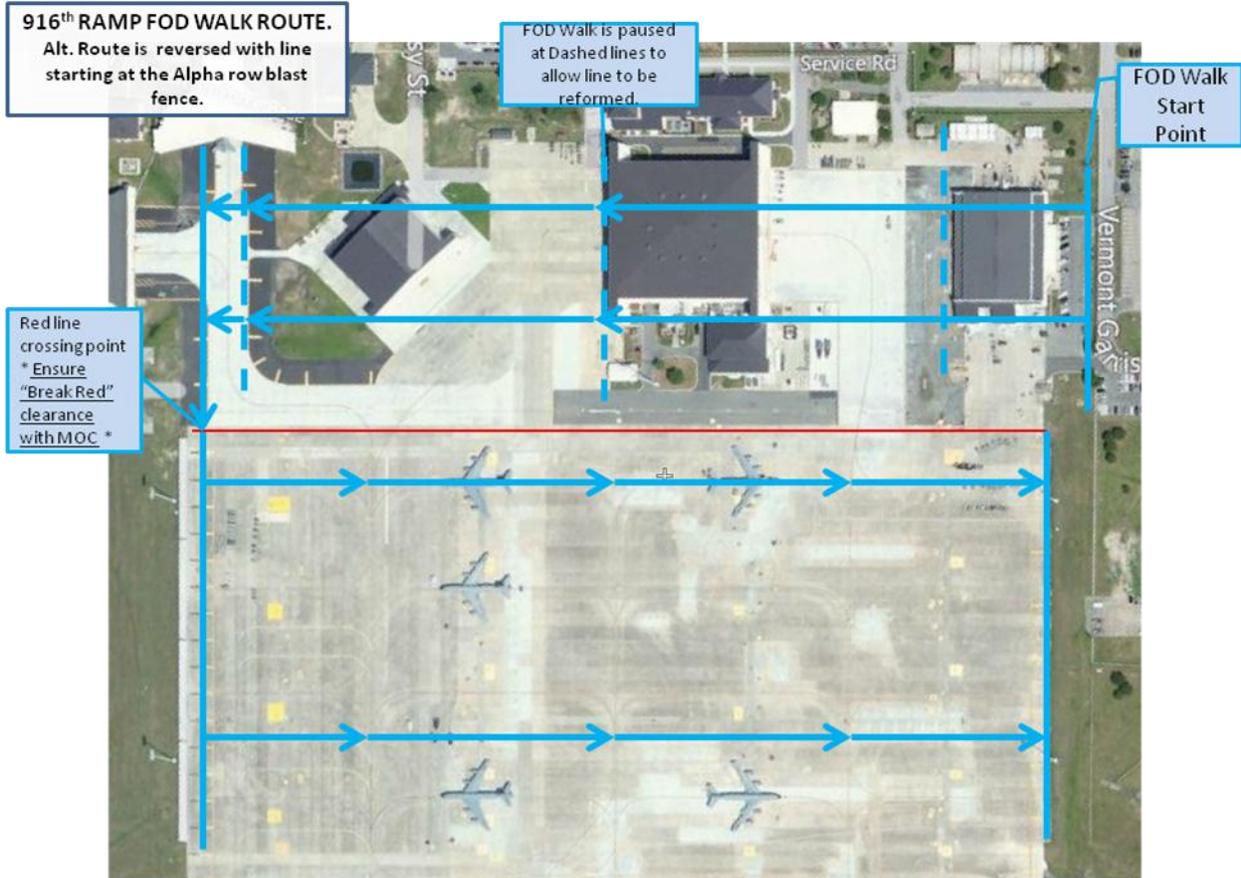
MXS— Maintenance Squadron

MXQ— Quality Assurance

UTA— Unit Training Assembly

Attachment 2

MAP OF 916 ARW FOD WALK ROUTE



Attachment 3

BLADE BLENDING WORKSHEET

A3.1. Notify 916 ARW FOD monitor if fan blade damage is not repairable or out of limits according to T.O. 2J-F108-2-1.

A3.2. The following information will be forwarded to Engine Management so the AFTO Form 95 can be updated.

Aircraft serial number: _____

Job control number: _____

Engine serial number: _____

Stage number/location: _____

Number of blades blended: _____

Depth before and after blend:

Before: _____

After: _____

Area of blend:

Individual that completed blend:

Employee #: _____

Printed Name/Signature: _____