

**BY ORDER OF THE CHIEF,  
NATIONAL GUARD BUREAU**

**AIR NATIONAL GUARD POLICY  
DIRECTIVE 90-2136**

**14 MAY 2003**

**Command Policy**



**COMPLIANCE AND STANDARDIZATION  
REQUIREMENT LIST (C&SRL) FOREIGN  
OBJECT DAMAGE (FOD)**

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OPR: ANG/LGMM (CMSgt D. Riese)  
Supersedes ANGPD 90-2136, 14 January 2000

Certified by: NGB/CF (Col M. Hillestad)  
Pages: 8  
Distribution: F

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This directory implements Air Force Policy Directive (AFPD) 90-2, *The Inspection System*, and is applicable to all Air National Guard (ANG) flying units. Compliance with this directory and its parent instruction Air National Guard Instruction (ANGI) 21-101, *Maintenance Management of Aircraft*, is mandatory. Units will supplement this publication with items developed from appropriate technical data, Air Force Occupational Safety and Health (AFOSH) Standards (STD), local operating instructions (OI), etc., to assess internal compliance. Higher Headquarters/Inspector General (HHQ/IG) may use this directory in whole or in part during evaluations and exercises.

**SUMMARY OF REVISIONS**

**This document is substantially revised and must be completely reviewed.**

**1.** The items listed do not constitute the order or limit the scope of the inspection/assessment. As a minimum, units will use this directory in conjunction with the annual unit self-inspection. The objective is to identify deficiencies that preclude attainment of required capabilities.

**Table 1. Foreign Object Damage (FOD)**

ITEM NO.	ITEM AND REFERENCES (All references are to ANGI 21-101 unless otherwise indicated)	YES	NO	N/A
1.	Foreign Object Damage (FOD)			
1.1.	Is the Vice Wing Commander responsible for ensuring an effective FOD prevention program has been established? (18.23.)			
1.2.	Do all personnel (military, civilian, and contractors) working in, on or around, or traveling through areas near aircraft, munitions, AGE, engines, or components comply with FOD prevention? (18.23.)			
2.	FOD Prevention			
2.1.	When maintenance is being performed on aircraft, uninstalled engines, and AGE, are openings, ports, lines, hoses, electrical connections, and ducts properly plugged or capped to prevent FOD from entering the systems? (18.23.2.1.)			
2.2.	Are items (e.g., aircraft forms binders, video tape recorder (VTR) tapes, checklists, etc) prohibited from being placed in or on engine intakes at all times? (18.23.2.1.)			
2.3.	Prior to performing maintenance in or around engine intakes, are intake plugs, FOD strips, or tape installed? (18.23.2.2.)			
2.3.1.	Do personnel use engine inlet run-up screens and anti-personnel guards as required by applicable weapons system TOs? (18.23.2.2.)			
2.3.2.	Are engine inlet run-up screens and anti-personnel guards used as required by applicable weapon system TOs? (18.23.2.2.)			
2.3.3.	Prior to engine start/after engine shutdown on maintenance/test cell runs and after any engine intake maintenance, do each affected engine intake and exhausts receive a FOD inspection? (18.23.2.3.)			
2.3.4.	Are FOD inspections documented with a Red X symbol in the applicable form (AFTO Form 781A, or AFTO Form 349)? (18.23.2.3.)			
2.3.5.	Are FOD inspections performed on uninstalled test cell engines documented on the test cell worksheet? (18.23.2.3.)			
2.4.	Do engine, aircraft and seat pitot tube covers remain installed on aircraft as close to crew show as possible, based on MDS and local conditions? (18.23.2.4.)			
2.5.	Do personnel use light source of sufficient illumination to inspect the aircraft intakes and exhaust for foreign objects/damage? (18.23.2.5.)			

ITEM NO.	ITEM AND REFERENCES (All references are to ANGI 21-101 unless otherwise indicated)	YES	NO	N/A
2.6.	Are pocketless, zipperless, buttonless bunny-suit worn whenever physical entry into an aircraft intake or exhaust is required? (18.23.2.5.)			
2.7.	When performing intake inspections while wearing a chemical ensemble, do personnel ensure all pockets are emptied and accessories removed? (18.23.2.5.)			
2.8.	If chemical warfare ensemble metal zippers are exposed, are they covered with any type of tape and is the tape accounted for upon completion of the inspection? (18.23.2.5.)			
2.9.	Do flashlights with metal clips have the clips removed prior to use on or around aircraft, uninstalled engines, and AGE? (18.23.2.6.)			
2.10.	Do all maintenance production areas have approved foreign object (FO) containers readily accessible to workers? (18.23.2.7.)			
2.11.	Are vehicles that are normally driven on the flight line equipped with secured and lidded FO containers and stenciled with the word "FOD" in contrasting letters no smaller than two inches? (18.23.2.7.)			
2.12.	Do back shops use an area collection can or locally manufactured FO containers? (18.23.2.7.)			
2.13.	Are FO collection containers emptied when full or once a day, whichever comes first? (18.23.2.7.)			
2.14.	Are measures in place to control work order residue used on or around aircraft, uninstalled engines, and AGE? (18.23.2.8.)			
2.15.	Are Rag Control procedures established for organizations and/or personnel performing on-equipment aircraft maintenance, jet engine maintenance, and other areas as designated by group commanders? (18.23.2.9.)			
2.16.	Has an OI been developed for rag accountability? (18.23.2.9.)			
2.17.	Do personnel remove the AF 1199, USAF Restricted Area Badge, when performing intake/exhaust inspections if they physically enter these areas? (18.23.2.10.)			
2.17.1.	Are Restricted Area Badges secured with a subdued nylon/cotton cord or plastic armband? (18.23.2.10.)			
2.18.	Are metal insignias/badges restricted from being worn on the flightline? (18.23.2.10.)			
2.19.	Are FOD walks mandatory? (18.23.2.11.)			
2.20.	Has a policy been established for local flightline clothing aimed at FOD Preventions? (18.23.2.12.)			

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2.21.	Are personnel prohibited from wearing hats/berets within the danger area of an operating jet engine (as defined in the applicable aircraft-specific TO)? (18.23.2.12.)			
2.22.	Are wigs, hairpieces, metal hair fasteners, earrings, or any other jewelry that may fall off without notice, prohibited on the flightline? (18.23.2.12.)			
2.23.	When FOD is discovered on a transient aircraft, depot input/output, or a “Queen Bee” engine, does the host FOD monitor or aircrew notify the owning organization immediately? (18.23.2.13.)			
2.24.	Is an informational copy of the FOD report provided to the owning organization’s safety office to ensure compliance with AFI 91-204? (18.23.2.13.)			
2.25.	Do aircrews ensure proper documentation in the AFTO Form 781A has been completed? (18.23.2.13.)			
2.26.	Are personal tools prohibited from use on the flightline or in any maintenance area (e.g., mini-mag flashlights, leathermans, buck knives, etc)? (18.23.2.14.)			
2.27.	Are government tools permanently assigned to individuals or duty positions marked and controlled? (18.23.2.14.)			
2.28.	Are personally purchased communication devices prohibited (not allowed) on the flight line or hanger areas? (18.23.2.14.)			
2.29.	Do pilots and aircrew members account for all equipment and personnel items after each flight and ensure that any item that becomes lost during flight is documented in the aircraft AFTO Form 781A? (18.23.2.15.)			
2.30.	Does the local FOD prevention program address the elimination of foreign objects in aircraft cockpits and flight decks prior to flight? (18.23.2.16.)			
2.31.	Do personnel use extreme care during engine ground runs? (18.23.2.17.)			
2.32.	Are newly assigned structural repair technicians trained and certified on engine intake maintenance? (18.23.2.18.)			
2.33.	Is special emphasis provided to periodically check for FO prevention in such items as: remove before flight streamer attachment, safing pin condition, hinge pin security, dust and FO prevention cover condition/security, and aircraft forms binder condition? (18.23.2.19.)			
2.34.	Does the MXG/CC, in coordination with the OG/CC, establish a lost object program? (18.23.2.20.)			

ITEM NO.	ITEM AND REFERENCES (All references are to ANGI 21-101 unless otherwise indicated)	YES	NO	N/A
2.35.	Are two Allen Head screws or equivalent utilized to secure cable to grounding clips? (18.23.3.1.)			
2.35.1.	Are screw holes filled with sealant or screws staked to prevent screws from backing out? (18.23.3.1.)			
2.35.2.	Are unused screws removed? (18.23.3.1.)			
2.36.	Are grounding and tie down points kept clean of debris at all times and a high interest item for FOD walks? (18.23.3.2.)			
2.37.	If magnetic bars used on the flight line, are they towed by or attached to selected vehicles primarily used on the flightline? (18.23.4.)			
2.38.	Are magnetic bars inspected and made FOD free prior to the beginning of each shift? (18.23.4.)			
2.39.	If a locally manufactured tool for removing debris from tire treads is used is it marked with the vehicle ID number. (18.23.4.)			
2.40.	Are metal identification bands removed from all tubing, (except aircraft installed egress system components), and cables on the aircraft prior to use around aircraft? (Ensuring not to remove the manufacturer installed metal identification bands from hydraulics hoses) (18.23.5.)			
2.41.	Are hydraulic lines marked IAW TO 42E-1-1-1, Aerospace Hose Assembly? (18.23.5.)			
2.42.	Are X-ray, borescope, and other state-of-the-art equipment used to locate FOD in inaccessible areas? (18.23.6.)			
3.	FOD Prevention Responsibilities			
3.1.	Is the Vice Wing Commander assigned as the FOD Prevention Program Manager? (18.23.7.1.)			
3.2.	Has the Vice Commander appointed a qualified technical sergeant (or above), or contractor in the maintenance field to the position of FOD monitor? (18.23.7.1.)			
3.3.	Is the Wing FOD monitor's name posted in a prominent place within the unit on a locally developed visual aid? (18.23.7.1.)			
3.4.	Does the Vice Wing Commander ensure unit commanders, maintenance supervision actively support the FOD Prevention Program? (18.23.7.2.1.)			
3.5.	Does the Vice Wing Commander provide local guidance to ensure that each FOD mishap is investigated and necessary action is taken to solve any underlying problems? (18.23.7.2.2.)			

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3.6.	Does the Vice Wing Commander review all unit FOD mishap reports and analyzes the report and other data for trends identifying areas that require management action? (18.23.7.2.3.)			
3.7.	Does the Vice Wing Commander coordinate FO Prevention needs with the airfield manager and other agencies when constructions is in progress or near the flight line, or other areas where FOD incidents could occur? (18.23.7.2.4.)			
3.8.	Does the Vice Wing Commander ensure FOD prevention is a part of QA inspections? (18.23.7.2.5.)			
4.	FOD Monitor			
4.1.	Does the FOD monitor inform all wing agencies of potential FOD hazards? (18.23.8.1.)			
4.2.	Has the FOD monitor developed a form to document and perform spot checks of selected areas monthly? (18.23.8.2.)			
4.3.	Is the FOD monitor involved in each FOD investigation and help to ensure corrective actions are sound? (18.23.8.3.)			
4.4.	Does the FOD monitor ensure an initial FOD awareness and responsibilities briefing is given to all newly assigned personnel? (18.23.8.4.)			
4.5.	Does the FOD monitor periodically inspect and report damage pavement, flight line construction, or other hazards in or near aircraft parking ramps or taxiways to the airfield manager and monitor status to ensure timely repairs? (18.23.8.5.)			
5.	FOD Investigation and Reporting			
5.1	Does the unit investigate each case of FOD to determine its cause? (18.23.9.)			
5.2.	Does the unit report FOD mishaps IAW AFI 91-204, <i>Investigating and Reporting US Air Force Mishaps</i> ? (18.23.9.)			
5.3.	When suspected or confirmed FOD is discovered, is MOC immediately notified? (18.23.9.1.)			
5.4.	Once the MOC is notified of suspected or confirmed FOD does the MOC notify QA? (18.23.9.1.)			
5.5.	When an aircraft sustains FOD damage from an unknown cause, is the aircraft considered for impoundment? (18.23.9.1.)			
5.6.	Is FOD that is caused by natural environment or wildlife, including hail, ice, animals, insects, and birds, reported according to AFI 91-204, <i>Safety Investigations and reports</i> ? (18.23.9.2.1.)			

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5.7.	In FOD incidents leading to blade blending (other than for minor sand nicks or scratches) is the Wing FOD Manager (or monitor) notified prior to blade blending? (18.23.9.3.4. and 18.12.9.1.)			
5.8.	Does the appropriate ANG office assist in resolving any FOD issues that are questionable (i.e., preventable or non-preventable)? (18.23.9.4.)			
6.	FOD Prevention Committee Meeting			
6.1.	Has a FOD Prevention Committee established? (18.23.10.)			
6.2.	Does the Wing FOD Prevention Committee ensure the FOD prevention program is sound and meeting unit needs? (18.23.10.)			
6.3.	Does the CV chair the Wing FOD Prevention Committee meetings? (18.23.10.)			
6.4.	Does the MXG/CC chair the meeting in the absence of the CV? (18.23.10.)			
6.5.	At a minimum, do group commanders, director(s), and commanders of units with maintenance personnel, safety, CE, Airfield Manager, and Security Forces attend FOD prevention meetings? (18.23.10.)			
6.6.	Has the chairperson designated additional attendees (agencies, detachments, etc.) as required? (18.23.10.)			
6.7.	Has the host base FOD Prevention Committee chairperson directed/incorporated tenant unit in the host unit program? (18.23.10.)			
6.8.	Do tenant units establish their own unit FOD committee, but still participate in the host program and comply with host program requirements? (18.23.10.)			
6.9.	Are FOD prevention meetings conducted quarterly? (18.23.10)			
6.10.	Does the meeting identify negative trends and develop action plans to resolve them? (18.23.10.)			
6.11.	Does the meeting recognize personnel making significant contributions to FOD prevention (i.e., FOD poster contest, or other FOD recognition programs locally developed at each unit, etc.)? (18.23.10.)			
7.	Dropped Object Prevention (DOP) Program			
7.1.	Has the unit developed a Dropped Object (DOP) Program? (18.23.11.1.)			
7.2.	Has the Vice Wing Commander appointed the wing DOP Monitor? (18.23.11.1.1.)			

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7.3.	Do maintenance personnel ensure the serviceability of fasteners and the proper fit of doors, panels, connectors, etc., paying special attention on the correct length of fasteners and condition of nut places and other securing devices? (18.23.11.2.)			
7.4.	Do supervisors place special emphasis on these areas during the inspection of completed maintenance actions? (18.23.11.2.)			
7.5.	Does the DOP monitor investigate each dropped object incident? (18.23.11.3.)			
7.6.	When a material or design deficiency is the cause, or suspected cause, is a Deficiency Report submitted IAW TO 00-35D-54, even when an exhibit is not available? (18.23.11.3.)			
7.7.	Are the investigation results distributed to each appropriate workcenter for inclusion in personnel training and education programs? (18.23.11.3.)			
7.8.	Does the ANG unit safety office coordinate with the unit MXG/CC to ensure maintenance personnel notify the safety office of dropped object incidents and help with part number identification and associated costs? (18.23.11.4.1.)			
7.9.	Are reports submitted via the internet at <a href="https://airguard.ang.af.mil/se/droppedobjects">https://airguard.ang.af.mil/se/droppedobjects</a> as soon as all the requested information is collected? (18.23.11.4.1.)			
7.10.	Are reports maintained for a minimum of 24 months? (18.23.11.4.1.)			
7.11.	Is a follow-up formal report made to the Air National Guard Safety (ANG/XOS) within 3 duty days after the occurrence? (18.23.11.4.2.)			

DANIEL JAMES III, Lieutenant General, USAF  
Director, Air National Guard