

**BY ORDER OF THE COMMANDER
SPACE LAUNCH DELTA 45**

**SPACE LAUNCH DELTA 45
INSTRUCTION 21-103**



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Maintenance

***FOREIGN OBJECT DAMAGE
(FOD)/DROPPED OBJECT
PREVENTION PROGRAM (DOPP)***

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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(Maj Matthew B. Edwards)

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This publication implements Department of the Air Force Instruction (DAFI) 21-101, *Aircraft and Equipment Maintenance Management*, and DAFI 21-101_AFMCSUP_Addendum D, *United States Space Force (USSF) Non-Standard Organization (NSO) Aircraft and Equipment Maintenance Management*. It supplements specific processes and procedures for the Foreign Object Damage (FOD) and Dropped Object Prevention Program (DOPP) that are unique to Patrick Space Force Base (PSFB) and Cape Canaveral Space Force Station (CCSFS). This publication applies to all civilian employees and uniformed members of the Regular Air Force, the Air Force Reserve, the Air National Guard, the United States Space Force; all Department of the Air Force (DAF) civilian employees; and those with a contractual obligation to abide by the terms of DAF issuances. Refer recommended changes and questions about this publication to the office of primary responsibility (OPR) using the DAF Form 847, *Recommendation for Change of Publication*; route DAF Forms 847 from the field through the appropriate functional chain of command. The authorities to waive wing, unit, delta, or garrison level requirements in this publication are identified with a Tier (“T-0, T-1, T-2, T-3”) number following the compliance statement. Submit requests for waivers through the chain of command to the appropriate Tier waiver approval authority, or to the Publication OPR for non-tiered compliance items. Ensure all records generated as a result of processes prescribed in this publication adhere to Air Force Instruction (AFI) 33-322, *Records Management and Information Governance Program*, and are disposed in accordance with the Air Force Records Disposition Schedule, which is located in the Air Force Records Information Management System.

1. Overview. 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 essential elements of a successful program.

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

2. Responsibilities.

2.1. All commanders will ensure compliance with this instruction and establish guidance, as required, so every precaution is taken to prevent FOD and FOD incidents. As applicable, organizations must ensure newly assigned personnel receive a FOD prevention orientation and familiarization briefing during in processing.

2.2. The Space Launch Delta 45 Vice Commander-Installation Support (SLD 45/CV-IS) is responsible for the FOD program, including all prevention practices and procedures. The delta FOD Monitors will manage the delta program and are assigned to the 45th Logistics Readiness Squadron Maintenance Operations (45 LRS/OSM) Transient Alert/Aerospace Ground Equipment section.

2.3. The 45 LRS Commander is responsible for ensuring aircraft pavement surfaces are monitored and all maintenance and cleanliness concerns are coordinated with the 45th Civil Engineer Squadron (45 CES).

2.4. Each organization/contractor operating in/around the airfield will designate, in writing, a primary and alternate Unit FOD Monitor to be a member of the FOD committee. A copy of the appointment letter will be sent to the SLD 45 FOD Monitor. Appointment letters will be updated when changes occur. The designated monitor or a designated representative will attend all FOD meetings.

2.5. Unit FOD monitors will:

2.5.1. Manage the squadron and/or contract FOD prevention programs. Ensure ramps and areas of responsibility are policed for foreign objects.

2.5.2. Attend and participate at the delta FOD Prevention Committee meetings (when required as determined by SLD 45/CV-IS).

2.5.3. Ensure all material concerning FOD (i.e. FOD Prevention Program bulletin board information, posters, committee minutes, cross-tells, etc.) are disseminated throughout areas of responsibility.

2.6. Tenant Unit FOD Prevention Responsibilities. The host base FOD Prevention Program Manager will incorporate tenant units in the host unit program. (T-1)

2.7. It is the responsibility of all personnel to ensure FOD prevention is practiced during all aspects of maintenance, flight operations, and supporting functions.

3. FOD Prevention.

3.1. Flightline clothing policy.

3.1.1. Restricted area badges will be secured with a subdued non-metallic cord or plastic armband when worn on the flightline. (T-1)

3.1.2. Restricted area badges will be removed when performing intake/inlet/exhaust inspections if personnel physically enter these areas. (T-1)

3.1.3. Metal insignias/badges will not be worn on the flightline. (T-1)

3.1.4. Wigs, hairpieces, metal hair fasteners, earrings, or any other jewelry/loose items that may fall off without notice, are not authorized on the aircraft and industrial work areas. (T-1)

3.1.5. Escorts of visiting personnel will ensure FOD prevention measures are taken. (T-1)

3.1.6. Authorized Hats: (1) Sun boonie with breakaway chin lanyard in place under the chin when worn to prevent the possibility of loss in high winds. (2) Watch cap (authorized only in cold weather).

3.1.6.1. Hats will not be worn within 25 feet of running engines.

3.1.6.2. Hats will be marked with: first initial, last name, work center, and man number if applicable.

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

3.2.1. All vehicles driven primarily on the flightline for direct aircraft maintenance support activities must be equipped with secured and lidded FO containers. (T-1) Note: Permanently affixed FO containers must be approved by Vehicle Management prior to installation in accordance with (IAW) AFI 24-302, *Vehicle Management*.

3.3. FOD inspections of the aircraft parking areas will be conducted by the maintenance/Transient Alert personnel before and after aircraft taxi and all aircraft tows. After all maintenance actions are completed and prior to leaving the work area, a FOD check will be conducted and will include a consolidated tool kit inventory.

3.4. At the discretion of the SLD 45/CV-IS, base organizations will participate in mass FOD walks. Tasked organizations are required to supply all necessary resources to accomplish the FOD walk. Airfield Management will coordinate airfield closure and will provide personnel to ensure the airfield remains safe for the durations of the FOD walk.

3.5. When FOD is discovered on a transient aircraft the SLD 45 FOD monitor or aircrew will notify the owning organization.

3.6. Vehicle operators will stop and perform a visual FOD inspection on all vehicles equipment and tires prior to entering the airfield. Vehicle operators will also ensure that all equipment is completely secure prior to entering the airfield.

3.7. All grounding points will be kept clean of debris at all times and must be a high interest item for FOD walks. (T-1)

3.8. 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 number. (T-2)

4. FOD Investigation and Reporting.

4.1. When suspected or confirmed FOD is discovered, Airfield Management will be notified immediately. (T-1)

4.1.1. Upon notification, Airfield Management will immediately notify the SLD 45 FOD Monitor and Delta Safety as required, IAW DAFMAN 91-223, *Aviation Safety Investigations and Reports*. (T-1)

4.1.2. The SLD 45 FOD Monitor, IAW DAFI 21-101 and DAFI 21-101 AFMC Sup Addendum D, will provide an initial report of all FOD incidents to the owning organization Major Command (MAJCOM) FOD monitor and Safety Office within 24 hours of occurrence and courtesy copy the servicing MAJCOM FOD monitor using the AFMC/A4M Workflow at AFMC.A4M.Workflow@us.af.mil and HQ AFMC/A4M Propulsion Management SharePoint® site: <https://usaf.dps.mil/teams/22355/Lists/ALC%20FOD%20Incident%20Report/Stand%20ard%20View.aspx>.

4.2. All FOD mishaps will be investigated by the SLD 45 Safety Office and FOD monitor, except those involving 920th Rescue Wing (920 RQW) aircraft and equipment, which will be investigated by the 920 RQW Safety Office.

5. Dropped Object Prevention Program (DOPP). A dropped object is 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.

5.1. The SLD 45/CV-IS serves as the Delta DOPP Manager and will appoint a Delta DOPP Monitor. (T-1)

5.2. Investigation. The DOPP Monitor will investigate each dropped object incident to include dropped objects from a transient aircraft. (T-1)

5.2.1. The DOPP Monitor IAW DAFI 21-101 and DAFI 21-101 AFMC Sup Addendum D, will provide the home station Wing DOPP Monitor with sufficient data to generate a report for trending and tracking purposes and courtesy copy the servicing MAJCOM DOPP monitor using the AFMC/A4M Workflow at AFMC.A4M.Workflow@us.af.mil and upload data into the HQ AFMC/A4M Propulsion Management SharePoint® site: <https://usaf.dps.mil/teams/22355/Lists/ALC%20FOD%20Incident%20Report/Stand%20ard%20View.aspx>.

KRISTIN L. PANZENHAGEN
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Commander

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

AFI 24-302, *Vehicle Management*, 21 Feb 2020

AFI 33-322, *Records Management and Information Governance Program*, 28 Jul 2021

DAFI 21-101, *Aircraft and Equipment Maintenance Management*, 08 Nov 2022

DAFI21-101_AFMCSUP_Addendum D, *United States Space Force (USSF) Non Standard Organization (NSO) Aircraft and Equipment Maintenance Management*, 08 Nov 2022

DAFMAN 91-223, *Aviation Safety Investigations and Reports*, 20 Sep 2022

Adopted Forms

AF Form 847, *Recommendation for Change of Publication*

Abbreviations and Acronyms

AFI—Air Force Instruction

AFMAN—Air Force Manual

AGE—Aerospace Ground Equipment

CCSFS—Cape Canaveral Space Force Station

CES—Civil Engineer Squadron

DAF—Department of the Air Force

DOPP—Dropped Object Prevention Program

FO—Foreign Object

FOD—Foreign Object Damage

IAW—In Accordance With

LO—Low Observable

LRS—Logistics Readiness Squadron

MAJCOM—Major Command

NSO—Non-Standard Organization

OPR—Office of Primary Responsibility

SLD—Space Launch Delta

USSF—United States Space Force