

UNITED STATES MARINE CORPS

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AIR STATION ORDER 3715.1C

From: Commanding Officer, Marine Corps Air Station, Cherry Point

To: Distribution List

Subj: FOREIGN OBJECT DAMAGE (FOD) PREVENTION PROGRAM

Ref: (a) OPNAVINST 3750.6S

(b) ASO 3710.5L

Encl: (1) General FOD Regulations aboard MCAS CHERPT

(2) Airfield FOD Walk Procedures and Responsibilities

(3) Airfield Surface FOD Removal Schedule

- 1. Situation. This Order provides policy designed to prevent foreign object damage to any aircraft, especially aircraft engines, operating on the airfield surfaces of Marine Corps Air Station (MCAS CHERPT) Cherry Point. It is the responsibility of everyone to include all military personnel, airfield operators, contractors, vendors, and visitors to mitigate the occurrences of Foreign Object Debris (FOD) accumulating on airfield surfaces where aircraft may operate. Damage caused by ingestion, impact or simple location of objects in aeronautical equipment renders systems or equipment unsafe for operation. FOD is the leading cause of premature removal of jet engines in Marine Corps aircraft. FOD consumes maintenance funds, requires excessive maintenance man-hours, increases workloads, and results in critical shortages of engines. Controlling this costly hazard requires a constant awareness of the problem by all personnel, particularly those involved in aircraft maintenance and operations. All actions occurring on the airfield must always be conducted with FOD mitigation in mind. This Order establishes guidelines for the effective management of a FOD prevention program, and provides a structure for collecting data and monitoring trends to enable allocating resources when required. Marine Aircraft Group 14 (MAG-14) and the 2d Marine Aircraft Wing (2d MAW) FOD Local Command Procedure (LCP) provide guidance for 2d MAW tenant units. Fleet Readiness East (FRCE) provides LCP for FOD control in and around the FRCE complex.
- 2. Cancellation. WGO and ASO 3715.1B.
- 3. <u>Mission</u>. To update the FOD Prevention Program aboard MCAS CHERPT per reference (a). The goal is to identify, correct and eliminate FOD hazards which could be causal factors resulting in damage or destruction to aircraft and aviation support equipment.

4. Execution

- a. <u>Commander's Intent</u>. All personnel shall be familiar with the procedures and prevention measures pertaining to FOD. Compliance is mandatory.
- b. <u>Concept of Operations</u>. All personnel involved in operations aboard the airfield at MCAS CHERPT, to include the 2d MAW, Fleet Readiness Center East (FRCE), deployed transient units to the

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airfield, and contract personnel performing work on the airfield shall comply with the provisions of this order. The following units are assigned specific duties.

(1) MCAS Safety and Standardization Directorate

- (a) The Aviation Safety Officer (ASO) is assigned as the Airfield FOD Coordinator and shall have oversight of the Air Station FOD Prevention Program. The ASO is responsible for coordinating, announcing and executing biennial post air show FOD Walks or any other unscheduled airfield FOD walks that may be directed as the result of destructive weather. Specific FOD walk responsibilities are listed in enclosure (2).
- (b) Coordinate with COMMSTART for the release of "all-hands" e-mails announcing any airfield FOD walks and unit responsibilities.
- (c) In coordination with the Airfield Operations FOD Cell Supervisor, track and report any FOD analysis and trends in order to recommend corrective actions and the procurement of new equipment.
- (d) As required, conduct FOD prevention working groups with MAG-14 FOD Prevention Officers, unit coordinators, Cherry Point FOD Cell and Airfield Operations to review any emergent airfield related FOD concerns, review trends, and formulate long-range plans.
- (e) The Station ASO shall attend airfield pavement design/repair project review meetings and provide coordination comments as required with respect to FOD Control measures and aviation safety concerns.
 - (f) Provide FOD Prevention promotional material as requested by airfield operators.

(2) MCAS Airfield Operations Department

- (a) Manage and oversee a dedicated Airfield FOD Cell that is responsible for the daily blowing and sweeping of FOD from airfield surfaces. The FOD Cell supervisor reports directly to the Airfield Operations Officer or Assistant Airfield Operations Officer and coordinates actions with the Station FOD Coordinator (ASO) as required. The FOD Cell Supervisor shall attend any Station FOD Working and FOD Walk Coordination meetings.
- (b) Post FOD Walk announcements on the weather vision and ensure a Notice to Airmen (NOTAM) closing the airfield is published 72 hours in advance of scheduled FOD Walks and monthly airfield surface check closures.
- (c) Ensure Airfield Operations Duty Officers (AODO) are familiar with their responsibilities as outlined in this order.
- (d) Coordinate with Facilities Maintenance Department for routine and unscheduled maintenance and repair of airfield sweeper/blower trucks and related equipment.

(3) Local Unit Commanders/FRCE Commander

(a) Assign a FOD Prevention Officer/Coordinator to attend any scheduled Station FOD Working Group or FOD Walk coordination meetings. All 2d MAW tenant units on the airfield are expected to participate in biennial post air show Station FOD walks unless deployed.

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- (b) Forward, via the chain of command, the name, e-mail address and work telephone number of unit FOD Prevention Officer(s)/Coordinator(s) to the MCAS Aviation Safety Officer/Air Station FOD Coordinator.
- (4) <u>FOD Prevention</u>. It is the responsibility of all military personnel, civilians and contractor employees working aboard MCAS CHERPT to ensure FOD prevention is practiced during all aspects of maintenance, flight operations, and supporting functions. Enclosure (1) provides basic regulations concerning FOD control aboard MCAS CHERPT. All personnel are responsible for maintaining good housekeeping practices in and around hangars, ramps, aprons, taxiways, landing pads and runways. The MCAS CHERPT FOD Prevention Program is applicable to all operations within the confines of the AOA.
- (5) <u>Airfield Operating Area (AOA)</u>. The area on the ground aboard MCAS CHERPT in which both aircraft, support equipment and motor vehicles share common operating space. Painted roadways on the aircraft parking area, adjacent hangars, and inactive areas from gate 9 to the Airfield Operations building are a part of the AOA.

(6) Maintenance

- (a) Anyone observing pavement deterioration or accumulation of small rocks, dirt, or gravel on surfaces in the AOA shall immediately contact the Airfield Operations Duty Officer (AODO) at 466-2233. The Airfield Operations Department will initiate corrective action, and determine whether continued flight operations through the afflicted area are safe. The AODO will coordinate with the FOD Cell for removal of debris and contact the Station FOD Coordinator in order to track potential FOD pavement and safety of flight hazards. Areas deemed unsafe for flight operations will be closed.
- (b) The Airfield Operations Department, in conjunction with the Safety and Standardization Directorate (Aviation Safety), will initiate work requests to correct discrepancies noted in general operating areas. Units will submit work requests, via the Airfield Operations Department, for deterioration found within their squadron's flight line.
- (c) The Airfield Operations Department along with the Air Station FOD Coordinator will participate in planning sessions for large and contracted maintenance projects. All Airfield construction or repair projects will be reviewed by the Station FOD Coordinator to ensure all reasonable FOD mitigation procedures are implemented. An Airfield Operations representative will periodically inspect work sites to ensure that all contractual FOD mitigation procedures are being practiced. The Airfield Operations Officer will ensure maintenance personnel understand the Air Station FOD prevention program prior to commencing any maintenance on the airfield. Maintenance personnel will ensure that their work sites are FOD free and take measures to correct discrepancies noted by operations personnel during periodic inspections. Contractors required to traverse the AOA with trucks filled with debris will ensure that the debris is properly covered and secured so that no debris falls from the vehicle. A sweeper, to be provided by the contractor, will follow the all trucks hauling debris. The Airfield Operations Department shall inspect all completed work to ensure that the area has been cleaned and is ready for flight operations. Contractors and Air Station Facilities will be held responsible for any remaining FOD until released by the Airfield Operations Department.
- (7) <u>Vehicular Access</u>. Motor vehicle access to the AOA will be controlled by the Airfield Operations Department. Reference (b) outlines procedures for controlling vehicular access to the airfield.
- (8) <u>Vehicular FOD Control</u>. All motor vehicle drivers shall check vehicle tires and remove any stones and other debris that may be stuck in the treads prior to entering an AOA. Drivers will also secure

any loose items in pickup truck beds and check for any debris inside the front and rear bumpers. Vehicles caked with dried mud will be washed prior to entering any AOA. Vehicles shall only depart the hard surface of the AOA when it is essential to complete the assigned mission. (Drivers who depart hard surfaces within an AOA will check their tires again before proceeding back onto the airfield.) Any drivers observed not complying with vehicle FOD checks will be referred to appropriate authority for disciplinary action. Only government vehicles or approved contractor vehicles are permitted beyond FOD control check points. No privately owned vehicles (POV) are authorized. Anyone observing noncompliance with vehicle FOD Control will contact the AODO (466-2233) and report the violation with a description of the vehicle and license plate number.

- (9) <u>Vehicular Traffic Pattern</u>. Motor vehicles shall utilize the inactive portion when traveling on a runway. Motor vehicles will keep to one side when traveling on taxiways. Specific travel routes will be designated by the Airfield Operations Department for travel to and from construction sites. Air Traffic Control (ATC) Tower personnel will be alert for temporary FOD producing/hazard areas and will review and change, if necessary, aircraft taxi routing which could endanger aircraft or contribute to spreading FOD.
- (10) <u>Vehicle Restrictions</u>. A collision hazard exists when there is too much unnecessary vehicle traffic operating on the flight line. Vehicle traffic is the primary contributor to FOD being deposited on the airfield taxiways and runways. To mitigate this FOD hazard, barricades will be placed at the following flight line entrance points along with permanent signs referencing this order and conveying which specific vehicles are authorized to proceed (Ground Support Equipment (GSE), Marine Aviation Logistics Squadron (MALS), Emergency Medical Services (EMS), Aircraft Rescue and Fire Fighting (ARFF), etc.).
- (a) Intersection adjacent to the flight line and Gate 9 Tower access (prevents unauthorized vehicles from turning left after entering Gate 9).
 - (b) Between Hangars 131S and 3998.
- (c) On the Flight line perimeter road on both the north and south ends of Hangar 250. This area is off limits to all vehicles except for GSE, fuel trucks, and emergency vehicles.
- (d) On the northeast corner of Hangar 131 (presently occupied by H&HS UC-35D aircraft) to assist in keeping unauthorized vehicles from proceeding around Hangar 131 to the Marine Attack (VMA) hangars.
- (11) <u>Contractors</u>. Unless necessary for job requirements, contractors shall park outside the airfield and access the airfield through either a turnstile or guarded entrance. If contract work requires a job delivery of heavy items or is specifically required to perform repair work then flight line access will coordinated through Air Operations.

(12) Airfield Surface Cleaning

- (a) FOD removal from all airfield operating surfaces (primarily runways, taxiways, Vertical Take-off and Landing (VTL) pads, and fuel pits) shall be conducted by the Airfield Operations FOD Cell. First priority is given to the centermat and duty runway.
- (b) The FOD Cell Supervisor shall be responsible for initial and periodic training for all FOD Cell employees to ensure movement patterns, radio communications, and FOD removal procedures are followed correctly.

- (c) All FOD Cell equipment is maintained by the Motor Transport Department, MCAS CHERPT.
- (d) The FOD Cell normally operates Monday through Friday from 0600-1400 with the exception of Federal holidays. With prior coordination through Airfield Operations and the FOD Cell supervisor, airfield surface cleaning hours can be adjusted earlier, later or extended to meet special circumstances.
- (e) Areas of responsibility for airfield surface cleaning and the process by which FOD removal equipment operates aboard MCAS CHERPT are outlined in enclosure (3).
- (f) Requests by any unit for FOD removal for a specific surface area not normally covered under the FOD Cell's daily/weekly responsibilities shall be submitted to the AODO in advance for coordination.
- (13) <u>Disposition of FOD</u>. Debris that accumulates daily on airfield surfaces is either blown clear into the grassy portion of the airfield or collected by sweeper trucks and disposed of routinely off-airfield. Every effort is made by the FOD Cell to identify and collect metal objects observed on airfield surfaces before these objects are blown or swept. Metal debris that can be positively identified as having fallen from an aircraft is forwarded to MALS-14 Quality Assurance (QA) for Things Falling Off Aircraft (TFOA) analysis. Non-aircraft metal is collected and documented by the FOD Cell in order to determine the source.

(14) Record Keeping

- (a) The FOD Cell will normally publish a daily FOD report when any metal is discovered on airfield surfaces during that morning's FOD removal operation. The report consists of a single power point slide diagram of the airfield with inserted photos of the metal discovered. The size of the FOD and specific location where the object was found are annotated on the diagram. No daily report is published if there is no metal debris observed that day. FOD reports are sent via e-mail to Airfield Operations, Station Operations, the Station Aviation Safety Officer, MAG-14 DOSS and MALS-14 QA. Requests to be added to the FOD report e-mail distribution list can be sent to the FOD Cell Supervisor. Any observed airfield damage to runways, taxiways, or airfield lighting, signs, or other equipment is reported directly to the AODO.
- (b) The Air Station FOD Coordinator will maintain a record of all FOD reports and conduct trend analysis as required.
- 5. <u>Administration and Logistics</u>. Recommendations concerning the contents of this Order may be forwarded the MCAS CHERPT Aviation Safety Officer or the Airfield Operations Officer.

6. Command and Signal

- a. Command. This Order is applicable to the Marine Corps Reserve and all transient personnel.
- b. Signal. This Order is effective the date signed.

M. R. HUBEI

General FOD Regulations for Personnel in the MCAS Cherry Point AOA

- 1. The following regulations are mandated for personnel working in Aircraft Operating Areas (AOA).
- a. All pockets shall be free of loose objects (pins, pens, glasses, coins, loose paper, etc.) which could come loose and become FOD. Personnel with long hair shall not wear hair-restraining devices (clips, pins) that can also easily come loose. Rubber bands are authorized if they are not susceptible to coming loose.
- b. All apparel will be free of devices that are not sewn on or affixed with Velcro. This includes, but is not limited to, patches, badges, tie tacks, clipon ties, and pins.
 - c. Hats/Covers shall not be worn in the AOA.
- d. Food and drink items (soda cans, cups or food wrappings) shall not be consumed in the AOA unless inside or in a designated break area.
- e. All units shall conduct daily FOD walks on their flight lines in accordance with local procedures.
- f. Unit maintenance personnel utilizing the High Power Area (Kilo Taxiway) shall ensure a FOD walk of the area is completed prior to conducting high power run-ups in accordance with the procedures outlined in ref (b).
- g. Every person in an AOA is responsible for picking up any noticeable FOD, regardless of its origin. Flight safety is everyone's responsibility.
- h. Keep parts, carts and conveyors free of debris. Use only approved types of containers.
 - i. Return fixtures and tools to proper storage areas upon job completion.
- j. Police outside areas adjacent to the AOA daily, paying particular attention to debris that can blow onto the AOA.
- k. When potential FOD conditions cannot be corrected on the spot, report the situation to either the immediate supervisor or the AODO for corrective action.
- 1. All trash placed in dumpsters inside the flight line fence shall be bagged and tied before disposal to prevent FOD being blown onto the AOA during the emptying of the dumpster.

AIRFIELD FOD WALK PROCEDURES AND RESPONSIBILITIES

1. The Station FOD Coordinator shall:

- a. Serve as a liaison with tenant unit FOD control representatives to coordinate availability and assigned areas of responsibility for any scheduled airfield FOD walks. Airfield FOD walks are normally conducted biennially in May following the air show, or as directed after destructive weather.
- b. Coordinate FOD Control Working Group and unit FOD coordinator meetings with Airfield Operations/FOD Cell prior to any airfield FOD walk or on an asneeded basis. An All Hands e-mail shall be released via COMMSTRAT at least 48 hours prior to the Friday FOD Coordinators meeting.
- c. Coordinate with the AODO to ensure that a NOTAM closing the airfield for the duration of the FOD walk is issued.
- d. Be present on the airfield during the FOD walk to manage and coordinate activities as necessary (NCOICs for Flight Clearance and Visiting Aircraft Line (VAL) can assist if needed).
- e. In the absence of the Station FOD Coordinator, the FOD Cell Supervisor shall provide assistance in managing and coordinating the activities during that particular FOD walk.
- f. Maintain radio contact with the Ground Control and all other vehicles and participating units throughout the FOD walk.
- g. Upon completion by all units, patrol the airfield to ensure that all personnel and any FOD trash bags are cleared of runways, taxiways, ramps and VTL pads. When the FOD Coordinator has determined that the airfield is clear, he or she will advise Ground Control and the AODO that the airfield is ready to be reopened. Only Ground Control can close and open the Airfield.
- h. Compile after action reports from unit FOD Prevention Officer/Coordinators and brief the Airfield Operations Officer of any significant pavement or airfield related FOD hazards discovered (i.e. lighting strike damage to the pavement, damaged runway lighting, etc.).

2. Unit FOD Prevention Officer/Coordinator's shall:

- a. Ensure that their unit has maximum participation, covers the entire assigned AOR, collects all debris found, and remove all FOD/trash bags before leaving the area. Ensure inactive portions of the runway and at least ten feet into the grass are included in the FOD Walk.
- b. Ensure any aircraft related parts, fasteners, etc. are collected and turned into either the Station FOD coordinator or to the airfield FOD Cell. Any other debris collected can be disposed in the FOD/trash bags.
- c. Ensure unit personnel are dressed appropriately for the weather. PT gear is not authorized. No Food or drink is to be brought onto the airfield.
- d. Units requiring ground transportation to their assigned area of responsibility shall make their own arrangements. The Station FOD Coordinator will coordinate the movement of any transportation arranged within the AOA during the FOD walk.

- g. The Station FOD Coordinator will initiate check-in precisely at the scheduled time of field closure and not any earlier. Ensure radio contact is made with the Station FOD Coordinator prior to proceeding to the assigned AOR and only after the airfield is closed as broadcasted by Ground Control. Radio contact must be maintained with the Station FOD Coordinator throughout the FOD walk. Under no circumstances shall personnel walk onto a controlled area without clearance via radio from the Station FOD Coordinator. This is a safety issue to ensure that all aircraft have departed prior to field closure. Units are responsible for obtaining their own radios. When complete and clear of the airfield, unit FOD Coordinators shall notify the Station FOD Coordinator that they are complete with the AOR and clear of the airfield. All communication will be over the Ground Control net.
- e. Submit an e-mail after action report as needed to the Station FOD Coordinator for any observation of pavement deterioration, lighting strike damage, or damage to any airfield equipment.

Airfield Surface FOD Removal Schedule

1. FOD Cell Availability. The FOD Cell shall provide airfield surface FOD removal equipment Monday through Friday from 0600 to 1400.

2. Procedures

- a. The airfield surface cleaning equipment will be used only for airfield sweeping and blowing except in emergencies.
- b. Each day, FOD Cell employees will report for duty at 0600 to begin airfield surface FOD removal operations.
- c. The FOD Cell supervisor will notify employees of any areas of concern outside of the normal FOD removal schedule.
- d. FOD removal equipment may operate on squadron parking ramps without clearance from ground control.
- e. FOD removal equipment operating on runways, taxiways and Vertical Take-off & Landing (VTL) pads will maintain two-way radio communications at all time with ground control.
- f. Extreme caution shall be exercised by FOD removal equipment operators at all times to avoid conflict with aircraft.
- 3. <u>Inclement weather procedures</u>. FOD removal operations shall cease during extreme weather conditions. FOD Cell operators shall be advised by Ground Control when inclement weather is approaching (T1, L10/L5, etc.) Failure to do so could render the FOD removal equipment unusable due to mechanical failure. Extreme caution should be exercised to avoid standing water puddles on airfield surfaces.

4. Emergency Requests

- a. Requests for emergency use of FOD removal equipment, shall be forwarded to the AODO (466-4757). The AODO will contact the FOD Cell and thoroughly brief the emergency requirements.
- b. The AODO shall forward after hour requests for emergency use of FOD removal equipment to the FOD Cell Supervisor (466-2226).
- c. Non-emergency requests for FOD Removal Equipment received by the AODO, will be referred to the FOD Cell Supervisor.

5. <u>Daily/Weekly FOD removal Schedule</u>. In order to ensure that all airfield surface areas are cleared of FOD on a routine basis, the following schedule shall be followed to the maximum extent possible to ensure critical surfaces are cleared daily and other less frequently used surfaces are cleared at least weekly.

a. DAILY

- (1) Center Mat and first 5,000 feet of the duty departure runway prior to flight operations commencing for the day.
- (2) First 5,000 feet of duty approach runway prior to flight operations.
- (3) VTL Pads (N, NE, S, SE) prior to flight operations and as required if heavily used.
 - (4) Taxiways B, C, D, G, M, and N.
 - (5) Warm-up Areas 1 and 2 prior to flight operations.
 - (6) Fuel Pits 1 9.

b. WEEKLY

- (1) Taxiways A, E, L, J, and I.
- (2) Warm-up 3 and 4 (or as required depending on use).
- (3) FRCE flight line.
- (4) Combat Arms Loading Area (CALA)
- (5) Heavy Fuel Pits 10 14.
- (6) Taxiways F, K, and ARFF ramp (or depending on use).
- (7) Fuel Farm