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**Maintenance**

**DROPPED OBJECT PREVENTION PROGRAM**

**COMPLIANCE WITH THIS PUBLICATION IS MANDATORY**

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OPR: 15 OG/OGQ (MSgt Tyrone Faulkner)

Certified by: 15 OG/CC (Lt Col Frank R. Sizemore)

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This instruction implements AFD 21-1, Managing Aerospace Equipment Maintenance, and establishes responsibilities and procedures for conducting the Dropped Object Prevention Program (DOPP). It applies to all assigned aircraft and transient aircraft that are maintained by the Transient Alert element within the 15th Maintenance Squadron. All requirements are outlined in AFI 21-101, and Technical Order (TO) 00-35D-54. This instruction does not apply to USAF Reserve and Air National Guard Units.

**1. References.**

AFI 21-101, Maintenance Management of Aircraft

AFI 91-204, Investigating and Reporting US Air Force Mishaps

TO 00-35D-54, USAF Material Deficiency Reporting and Investigating System

TO 00-25-107, Maintenance Assistance

PACAFI 21-101, PACAF Aircraft Maintenance Organization and Procedures

**2. Terms.** Dropped Object (DO). A dropped object is any item that falls from an aircraft from the time the aircraft aligns on the runway for takeoff to engine shutdown. For the purposes of this instruction, a secondary structure refers to any door, panel, cover, or cowling designed to be removed from the aircraft for maintenance purposes.

**3. General.** The inflight loss of aircraft panels, parts, access doors, and other objects is a continuing command-wide problem. The situation persists in spite of equipment modifications, technical data, and special instructions. Therefore, all maintenance personnel must be aware of the potential for dropped objects. Supervisors must ensure the proper installation of panels and doors, and the quality of maintenance performed on structural components.

**4. Procedures.**Removal, installation, and opening and closing documentation:

4.1. Individuals tasked to remove external panels, fairings, engine cowls, radomes, antennas, windshields, and external light assemblies will enter a Red X in the aircraft forms prior to starting the removal/opening action.

4.2. The Red X will not be signed off in the forms until the panel, fairing, engine cowl, radome, antenna, windshield, or light assembly/subassembly is properly installed/closed and inspected.

4.3. Whenever feasible, the individual tasked to perform the removal/installation or opening/closing action will remain assigned to the task until the action is completed and properly documented.

**5. Dropped Object Prevention Inspection (Panel Inspection).**

5.1. All personnel authorized to perform this inspection will be listed on the Special Certification Roster.

5.2. Personnel will inspect the upper and lower fuselage, wings, vertical stabilizer and engines for panel security and streamlining on all assigned and transient aircraft. In addition to the checklist, the forms will be reviewed and special attention will be paid to areas where maintenance has been performed.

5.3. The inspection will be accomplished prior to flight when the aircraft is fully mission capable. Every effort should be made to accomplish the panel inspection just prior to crew show.

5.4. The inspection will be accomplished by a trained inspector who is certified on the special certification roster.

5.5. The write-up will be entered on AFTO Form 781A, Maintenance Discrepancies and Work Document, with a RED DASH. The inspector performing the inspection will sign-off the entry by signing the "INSPECTED BY" block and initialing over the symbol.

5.6. If additional maintenance is performed prior to aircraft departure, the person signing the exceptional release will ensure any affected panels are properly documented and secured.

**6. Dropped Object Incident Reporting.**

6.1. Anyone suspecting a dropped object will immediately notify the appropriate production supervisor.

**Note:** No maintenance of any type will be accomplished in the dropped object area until the production supervisor and Logistics Group or Operations Group Quality Assurance performs an investigation (i.e., removing damaged parts, etc.).

6.2. The production supervisor will notify appropriate agencies in accordance with the Dropped Object Reporting Checklist (Attachment 2).

6.3. The production supervisor will review the aircraft forms and verify the item is a dropped object and was not removed by maintenance personnel.

6.4. Upon verification of the dropped object, the production supervisor or Quality Assurance Office will immediately conduct an investigation in accordance with the Dropped Object Investigation Checklist (attachment 1) to determine the cause. The investigation will attempt to determine and identify any material design deficiency/failure, personnel error, or repeat trends. When material fail-

ure or design deficiency is determined, the Quality Assurance Office will submit a Quality Deficiency Report in accordance with TO 00-35D-54. When trends are identified, the Quality Assurance Office will initiate referral reports to ensure actions are taken to correct the problem.

6.5. Upon completion of the investigation, the Quality Assurance Office will provide a copy of the Dropped Object Investigation checklist (Attachment 1) to the following:

15th Operations Group Commander	15 OG/CC
15th Logistics Group Commander (if transient aircraft)	15 LG/CC
15 ABW Maintenance Operating Center	15 ABW/OCM
Appropriate Production Supervisor	15 MXS or 65 AS
15 ABW Safety Office	15 ABW/SE
Appropriate Maintenance Superintendent	15 MXS or 65 AS

Departing base and owning organization (if transient aircraft)

**Note:** Production Supervisor will coordinate repair and replacement actions.

## **7. Training.**

7.1. All maintenance personnel will receive dropped object prevention training upon initial assignment to Hickam AFB. Training will be documented in personnel's AF Form 623, On the Job Training Record, or entered in the Core Automated Maintenance System (CAMS).

7.2. Trainers will familiarize trainees with the aircraft to identify the locations of inspection items. Trainees will be briefed on possible reasons why checklist items are lost and ways to prevent such losses.

BRUCE A. BROWN Colonel, USAF  
Commander, 15th Air Base Wing

**Attachment 1 DROPPED OBJECT INVESTIGATION CHECKLIST**

**A1.1.** Mission Designed Series (MDS): \_\_\_\_\_

**A1.2.** Owing Organization and Base: \_\_\_\_\_

**A1.3.** Origin of Sortie: \_\_\_\_\_

**A1.4.** Date of Incident or Discovery: \_\_\_\_\_

**A1.5.** Aircraft Tail Number: \_\_\_\_\_

**A1.6.** Item, Noun, and Description: \_\_\_\_\_

**A1.7.** Technical Order: \_\_\_\_\_ Figure: \_\_\_\_\_ Index: \_\_\_\_\_

**A1.8.** Part Number: \_\_\_\_\_

**A1.9.** Work Unit Code (WUC): \_\_\_\_\_

**A1.10.** Date of Last Inspection: Home Station Check (HSC): \_\_\_\_\_ Isochronal (ISO): \_\_\_\_\_

**A1.11.** Last maintenance performed in the area and date: \_\_\_\_\_  
\_\_\_\_\_

**A1.12.** Investigation findings: (i.e., What was the cause?) \_\_\_\_\_  
\_\_\_\_\_

**A1.13.** Cost in Dollars: \_\_\_\_\_ Man hours: \_\_\_\_\_ (Circle One) Repair or Replace the Object.

**A1.14.** Actions taken to prevent reoccurrence: \_\_\_\_\_  
\_\_\_\_\_

**A1.15.** 15. Other pertinent information (i.e., any related damage): \_\_\_\_\_  
\_\_\_\_\_

**Attachment 2 DROPPED OBJECT REPORTING CHECKLIST**

Upon notification of a dropped object, the production supervisor will immediately notify:

- 1. Appropriate Quality Assurance:           DATE \_\_\_\_\_           TIME \_\_\_\_\_
- 2. 15 ABW Maintenance Operating Center:   DATE \_\_\_\_\_           TIME \_\_\_\_\_
- 3. Appropriate Chief of Maintenance:       DATE \_\_\_\_\_           TIME \_\_\_\_\_
- 4. Command Post:                               DATE \_\_\_\_\_           TIME \_\_\_\_\_
- 5. 15 ABW Safety:                              DATE \_\_\_\_\_           TIME \_\_\_\_\_