

**BY ORDER OF THE COMMANDER,
15TH AIRLIFT WING**

15TH AIRLIFT WING INSTRUCTION 21-104

1 FEBRUARY 2004



Maintenance

**DROPPED OBJECT PREVENTION PROGRAM
(DOPP)**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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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 Aircraft 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.

SUMMARY OF REVISIONS

This document is substantially revised and must be completely reviewed.

All personnel should read this instruction carefully.

1. References.

AFI 21-101, Maintenance Management of Aircraft

AFI 91-204, Investigation 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 Procedure

2. Terms.

2.1. 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 purpose of this instruction, a sec-

ondary structure refers to any door, panel, cover, or cowling designed to be removed from the aircraft for maintenance purposes.

2.2. Preventable Dropped Object. Any item lost due to negligence during inspection or installation.

3. General.

3.1. The inflight loss of aircraft panels, parts, access doors, and other object is a continuing command-wide problem. The situation persists in spite of equipment modifications, technical data, and special inspection. 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.

3.2. Dropped Object Prevention (DOP) is the responsibility of all aircraft operators and maintainers. Prevention begins when aircraft panels are removed, access doors opened, or when maintenance is performed on an exterior component. All personnel working in, on, and around aircraft must comply with the requirements of this instruction.

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

4.1. Individuals tasked to remove external panels, fairings, engine cowling, 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 cowling, 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.

4.4. When installing aircraft panels, doors, and components, place special emphasis on the condition of latches, fasteners, hinge pins, and hinge lobes. Ensure panels, doors, and components fit properly and are attached securely, greatly reducing the chances for dropped objects.

4.5. If a portion of the inspection can not be accomplished for any reason (i.e. adverse weather or conditions), document the areas not inspected on the AFTO Form 781A, on a "Red Dash" symbol, IAW TO 00-20-1, paragraph 3-2.6.4.

5. Dropped Object Prevention Inspection (Panel Inspection).

5.1. A certified inspector for these purposes will be a highly qualified 5-level, 7-level, or civilian equivalent and will be annotated on the special certification roster, identified with a course code in the CAMS Core Automated Maintenance System.

5.2. Personnel will inspect the upper and lower fuselage, wings, vertical stabilizers, 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 by a trained inspector who is certified on the special certification roster.

5.4. 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.

5.5. 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 Aircraft Maintenance Squadron 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 failure or design deficiency is determined, or a suspected cause, the owning unit will submit a Quality Deficiency Report to Quality Assurance Office 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 Aircraft Maintenance Squadron Commander (if transient aircraft)	15 AMXS/CC
15 AW Maintenance Operating Center	15 AMXS/MXO
Appropriate Production Supervisor	15 AMXS
15 AW Safety Office	15 AW/SE
Appropriate Maintenance Superintendent	15 AMXS

Departing base and owning organization (if transient aircraft)

NOTE: Production Supervisor will coordinate repair and replacement actions.

7. Dropped Object Prevention Program Management.

7.1. Wing DOP Program Manager. The 15th Airlift Wing Vice Commander is the Dropped Object Prevention Program Manager.

7.2. The program manager will appoint the DOPP NCO and assistant NCO from the 15 AMXS Quality Assurance Office. The Vice Commander will assign all duties and responsibilities to the DOPP NCO(s). The minimum responsibilities of the DOPP NCO(s) are:

- 7.2.1. Conduct all dropped object investigations and ensure corrective actions are sound.
- 7.2.2. Monitor the wing-level DOPP prevention training program and recommend changes when necessary.
- 7.2.3. Maintain dropped object historical data.

8. Training.

8.1. 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).

8.2. 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.

RAYMOND G. TORRES, Colonel, USAF
Commander, 15th Airlift Wing

Attachment 1

DROPPED OBJECT INVESTIGATION CHECKLIST

A1.1. Mission Designed Series (MDS): _____

A1.2. Owning 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. 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:

A2.1. 15 AMXS Quality Assurance: DATE _____ TIME _____

A2.2. 15 AW Maintenance Operating Center: DATE _____ TIME _____

A2.3. Appropriate Chief of Maintenance: DATE _____ TIME _____

A2.4. Command Post: DATE _____ TIME _____

A2.5. 15 AW Safety: DATE _____ TIME _____