

Army Regulation 59-4
OPNAVINST 4630.24C
AFJ 13-210(I)
MCO 13480.1B

Air Transportation

Joint Airdrop Inspection Records, Malfunction Investigations, and Activity Reporting

Headquarters
Departments of the Army,
the Navy,
the Air Force,
and the Marine Corps,
Washington, DC
1 May 1998

UNCLASSIFIED

SUMMARY of CHANGE

AR 59-4/OPNAVINST 4630.24C/AFJ 13-210(I)/MCO 13480.1B
Joint Airdrop Inspection Records, Malfunction Investigations, and Activity
Reporting

This revision--

- o Aligns procedures with AFPD 13-2 and changes the convening of Malfunction Review Boards from quarterly to tri-annually (chap 1).
- o Incorporates new Air Force Specialty Codes (chap 6).
- o Revises DD Form 1748 (Joint Airdrop Inspection Record (Platforms)); DD Form 1748-1 (Joint Airdrop Inspection Record (Containers)); DD Form 1748-2 (Airdrop Malfunction Report (Personnel--Cargo)); and DD Form 1748-3 (Joint Airdrop Summary Report).
- o Deletes the use of DD Form 1748-4 (Joint Airdrop Inspections Record (Containers)).
- o Expands joint airdrop inspector duties and provides checklists for malfunction officer investigation (appendixes B, C, and D).

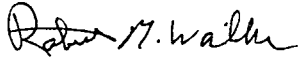
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Joint Airdrop Inspection Records, Malfunction Investigations, and Activity Reporting



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History. This printing publishes a revision of this publication. Because the publication has been extensively revised, the changed portions have not been highlighted.

Summary. This regulation prescribes policy and identifies procedures and forms used in preparing joint airdrop inspection records, airdrop malfunction investigations, and airdrop activity reports.

Applicability. This regulation applies to all DOD components, to include the Active Army, the Army National Guard, and the United States Army Reserve involved in the premeditated airdrop of personnel, supplies, and equipment. It remains in effect during all levels of mobilization.

Proponent and exception authority. The proponent of this publication is the Deputy Chief of Staff for Logistics (DCSLOG). The DCSLOG has the authority to approve

exceptions to this publication that are consistent with controlling law and regulation. The DCSLOG may delegate this approval authority, in writing, to a division chief within the proponent agency in the grade of colonel or the civilian equivalent.

Army management control process. This regulation contains management control provisions in accordance with AR 11-2, and contains checklists for conducting management control reviews.

Supplementation. Services involved in unilateral operations may supplement this publication; however, airdrop malfunction and activity reporting requirements will not be supplemented. Send supplements to this regulation to Director, Aerial Delivery and Field Service Department, ATTN: ATSM-ADFSD, 1010 Shop Road, Fort Lee, VA 23801-1502.

Suggested Improvements. All services

utilizing this regulation will submit recommendations for improvements or revisions to Director, Aerial Delivery and Field Services Department, ATTN: ATSM-ADFSD, 1010 Shop Road, Fort Lee, VA 23801-1502.

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Navy: SNDL

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*The regulation supersedes AR 59-4, 27 November 1984; AFJ 13-210, 27 November 1984; OPNAVINST 4630.24C, 27 November 1984; and MCO 13480.1B, 27 November 1984.

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Chapter 1 Introduction

1-1. Purpose

This regulation provides policies and assigns responsibilities for initial notification, investigation, reporting, and submitting reports of parachute malfunctions. In addition, it standardizes joint airdrop inspections, responsibilities and duties of the malfunction officer, malfunction investigation procedures, and activity reporting for all Department of Defense (DOD) components engaged in premeditated airdrop operations.

1-2. References

Required and related publications and prescribed and referenced forms are listed in appendix A.

1-3. Explanation of abbreviations and terms

Abbreviations and special terms used in this regulation are explained in the glossary.

1-4. Responsibilities

a. *Army.* The Deputy Chief of Staff for Logistics (DCSLOG) and the Office of the DCSLOG is the office of primary responsibility for the Army. Submit recommendations for improvements or revisions to this regulation on DA Form 2028, Recommended Changes to Publications and Blank Forms to ODCSLOG, ATTN: DALO-TST, 500 Army Pentagon, Washington DC 20310-0500.

b. *Air Force.* The Deputy Chief of Staff, Plans and Operations, Mobility Forces Division, and the office of the ODSOPS (HQ USAF/XOTT) is the office of primary interest for the Air Force. Air Force units will submit recommendations for improvements or revisions to this regulation on AF Form 847, Recommendation for Change of Publications.

c. *Navy.* The Deputy Chief of Naval Operations and the office of The Deputy Chief of Naval Operations (OPNAV 414), Washington DC 20350 is the office of primary interest for the Navy. Appropriate forms will be provided upon receipt of written request for recommended changes or revisions.

d. *Marine Corps.* The Deputy Chief of Staff for Aviation, and the office of The Deputy Chief of Staff for Aviation, Headquarters, Marine Corps (Code APW) Washington DC 20380 is the office of primary interest for the Marine Corps.

e. *Commanders.* Commanders will ensure that qualified personnel are ready and available for the purpose of recording the joint airdrop inspection, conducting malfunction investigations, and providing timely and accurate reporting of airdrop malfunctions and activities.

f. *Aerial Delivery Review Panel.* Air Force Operations Group commanders will appoint an aerial delivery review panel to investigate airdrop malfunctions, incidents, and off DZ airdrops occurring within their command area of responsibility. Panel members should include the chief of tactics (chairperson), tactics pilot, navigator and loadmaster; standardization pilot, navigator, and loadmaster; airdrop inspector loadmaster, flying safety officer, maintenance representative, aerial port representative, and crewmembers from the incident aircraft. The chairperson will determine panel composition based on the nature of the situation under review. Combat control and pararescue aerial delivery review panels will consist of the unit commander, the malfunction officer, and the chief of standardization. The review panel will convene the next duty day after the airdrop if the incident occurs in the local area. If the incident occurs away from home station, convene the panel within 5 duty days (10 days for the Air Reserve Component) after the aircrew returns to home station. Send results of the review panel to the owning MAJCOM and if applicable, to the command having command and control of that aircraft with an information copy to the Director, Aerial Delivery and Field Services Department ATTN: ATSM-ADFS, Fort Lee VA 23801-1502.

g. *Airlift unit.* The airlift unit will secure all airdrop loads and

personnel in the aircraft, complete rigging the aircraft, and accomplish the extraction or release of personnel, supplies, and equipment from aircraft in flight.

h. *Transported force.* The transported force will prepare and deliver supplies and equipment to be air dropped to the airdrop support unit, and assist with rigging and transportation.

i. *Airdrop support unit.* The airdrop support unit will—

(1) Rig, deliver, and assist with airdrop cargo as outlined in AFJI-24-108, MCO 4660.1B, and DOD 4500.9-R. For services supporting their own unilateral training, the aerial delivery function will assume the responsibilities of the transported force. For personnel airdrops, the jumpmaster's unit of assignment will assume the responsibilities of the transported force.

(2) Ensure that inspector, safety, malfunction, and medical personnel are appointed as required.

(3) Ensure that a malfunction officer is present on the drop zone (DZ) during all airborne operations. This malfunction officer maintains contact with the DZ control party and the Air Force Combat Control Team (CCT), if present.

(4) Ensure the applicable field manual or technical order is available to all JAIs.

(5) Provide joint airdrop inspection records to be used as a checklist for joint airdrop inspections.

1-5. Use of reported data

a. The U.S. Army Quartermaster Center & School (USAQMC&S), Aerial Delivery and Field Services Department, Fort Lee, VA 23801-1502 reviews, analyzes, and publishes reported airdrop malfunction and activity data in a Tri-annual-Annual Airdrop Review and Malfunction Analysis Board.

b. Reporting of airdrop activities is only useful if that information is used to analyze and improve existing procedures and technology. Therefore, the USAQMC&S, Aerial Delivery and Field Services Department, Fort Lee, VA 23801-1502 will be the proponent activity in receiving, tabulating, and developing airdrop malfunctions/incidents for review and analysis.

1-6. Airdrop Malfunction Review Meeting

The USAQMC&S Aerial Delivery and Field Services Department will host a Tri-annual meeting for representatives from airdrop units throughout the Department of Defense. All DOD units having an airdrop capability are encouraged to attend these meetings to ensure the highest standards of airdrop are maintained through interaction with those individuals responsible for this activity. Representatives from each Air Force MAJCOM will convene at every other Tri-annual conference to attend to matters of common concern for their commands. They will also be responsible to the board to review and analyze incidents for trends concerning Joint Inspection of airdrop loads. The meeting will consist of as a minimum, but not exclusively, the following topics:

a. Presentations of new systems or procedures pertinent to the airdrop community as a whole.

b. Presentations of previous malfunctions/incidents.

c. Review and analysis of malfunctions/incidents.

d. Presentation of findings.

Chapter 2 Joint Airdrop Inspections, Procedures, and Records

2-1. Joint airdrop inspection

Personnel of the participating services perform the joint airdrop inspection of rigged airdrop loads. The USAQMC&S certifies inspectors. Certification requires successfully completing the USAQMC&S resident or Mobile Training Team Airdrop Load Inspector Certification Course presented by the Aerial Delivery and Field Services Department at Fort Lee, VA.

2-2. Inspection procedures

a. Prior to airdrop, loads or containers rigged for airdrop will be inspected at three separate times.

(1) The first inspection is a rigger inspection required by the Field Manual or Technical Order for that particular load. Use of DD Form 1748 series is not necessary for this inspection. When the load has been completely rigged, a certified airdrop support unit AJAI performs the rigger inspection.

(2) The second inspection is the before-loading inspection. A certified airdrop support unit AJAI and an AFJAI conduct it jointly. Inspectors will complete the proper joint airdrop inspection form in the DD Form 1748-series and both will sign the appropriate blocks to certify correct rigging of the load.

(a) Primary area of concern for the Air Force Inspector will be for safety of flight and aircrew. The AFJAI will focus on dimensions of rigged airdrop loads in accordance with applicable rigging FM/TO; extraction/deployment systems; platform/skid condition; lashings to load for required restraint; emergency aft restraint provisions; type and number of recovery parachutes; hazardous cargo certification; and locks.

(b) As the inspections take place, the AFJAI will bring to the attention of the airdrop support unit AJAI, any item other than listed above that is found to be incorrect or in question. If the airdrop support unit AJAI accepts the condition of the item, they will annotate the "Remarks" section of the form with the discrepancy. The user then delivers and offers the airdrop load to the aircrew. Upon delivery, the aircraft loadmaster will review the form indicating inspections are complete.

(c) If the aircrew rejects the rigged load or any portion of the load offered for that sortie at the aircraft, annotate the reason in the "Remarks" section of the appropriate inspection form. The aircraft loadmaster, AFJAI, and the airdrop support unit AJAI will retain appropriate copies and forward a copy to the transported force's appropriate command headquarters.

(3) After the aircraft loadmaster completes the loading and in-aircraft rigging, the AFJAI, an airdrop support unit AJAI, and the aircrew loadmaster together, accomplish the third inspection which is the after-loading inspection.

(4) After completion, the two inspectors and the aircrew loadmaster sign the form certifying that the load is ready for airdrop.

Note. When authorized by Air Force MAJCOM, an airdrop-qualified loadmaster (qualified on the specific type of aircraft and associated airdrop system) who is not assigned to the aircrew or performing aircrew duties, may conduct the after-loading inspection as the aircraft loadmaster.

b. The before and after-loading inspections ensure compliance with appropriate rigging instructions, field manuals, technical orders, and this publication. The airdrop support unit will furnish an up-to-date copy of the appropriate field manual or technical order to the inspectors.

2-3. Inspection records

Use the joint airdrop inspection forms listed below as a guide for joint airdrop inspections. The airdrop support unit provides the following forms. Completion instructions are printed on the reverse side of the forms.

a. DD Form 1748 (Joint Airdrop Inspection Record (Containers)). Complete one form (set of three copies) for each low-velocity platform load to be air dropped.

b. DD Form 1748-1, Joint Airdrop Inspection Record (Containers). Complete one form (set of three copies) for each load of containers rigged for airdrop. Use only one form per aircraft when multiple containers are to be air dropped for one pass.

c. For DD Forms 1748 and 1748-1; the airdrop support AJAIs unit retains the first copy; the AFJAI's unit retains the second copy; and an aircrew loadmaster from the aircraft that performs the airdrop, retains the third copy, as applicable.

d. DD Forms 1748 and 1748-1, Joint Airdrop Inspection Records, do not outline or specify the proper inspection sequence for all loads peculiar to special operations. Inspectors must refer to the appropriate rigging manual for the proper inspection procedure. Annotate

any deviations to set procedures in the "Remarks" section of the DD Form 1748.

2-4. Disposition instructions

If a malfunction occurs, retain the inspection form for use during the investigation or analysis. Dispose as appropriate service directives authorize for investigative documents. A copy of the inspection must accompany the DD Form 1748-2 (Joint Airdrop Malfunction Report (Personnel-Cargo)) (see chap 5). If there is no malfunction, dispose of the form according to appropriate service directives.

2-5. Exceptions

a. Door loads rigged for paratroop doors, or using A7A slings or A21 containers and manually ejected/released from the aircraft, do not require a before or after-loading inspection. However, the jumpmaster of the airdrop unit and aircraft loadmaster will perform an inspection for proper rigging of break-away or non break-away systems, connection to aircraft equipment, and clear route of exit.

b. All other loads such as Rigging Alternate Method Zodiacs (RAMZs) and bike bundles with specific rigging procedures require a joint inspection by JAI personnel.

Chapter 3 Malfunction Officer

3-1. Malfunction Officer qualifications and duties

a. The malfunction officer must be a commissioned officer, warrant officer, or non-commissioned officer (NCO) minimum grade of E-5. The malfunction officer must be a trained parachute rigger (92R, 921A, 92D) who is familiar with airdrop, parachute recovery, and aircraft personnel parachute escape systems. Exception: For Air Force unilateral training loads, the DZ Malfunction Officer will be a minimum grade of E-4. Specific AFSCs of personnel will be identified in the MAJCOM supplement to this instruction.

b. The organization that provides the air items will provide the malfunction officer. He or she will be present on the drop zone (DZ) during all personnel and equipment drops and will be familiar with requirements. The malfunction officer must have the following minimum equipment in his or her possession during duty performance:

(1) A communication capability with the DZ control party.

(2) A good quality camera to take photos of malfunctions or incidents (video camera preferred). Photographic equipment is essential for the proper performance of malfunction officer duties. Pictures of malfunctions greatly assist in investigations. If necessary, cite this publication as the authority to requisition a camera for unit malfunction officers.

(3) The forms and clerical supplies necessary to tag equipment and initiate reports.

(4) Binoculars or night vision devices.

(5) Transportation to move around the DZ.

c. Air Force personnel from unilateral training units performing Drop Zone Malfunction Officer duties will assure all personnel under their control are off the drop zone during actual Door Bundle, Low Velocity Aerial Delivery (LVAD), and Container Delivery System (CDS) deliveries. Drop zone recovery personnel at Air Force unilateral training units who meet the qualifications of paragraph 3-1a will perform initial identification of malfunctions, isolate the affected load, and immediately notify the designated malfunction officer. There is no requirement for a Drop Zone Malfunction Officer while dropping Air Force Standard Airdrop Training Bundles (SATB).

3-2. Investigation malfunctions

a. In all incidents involving a malfunction, the malfunction officer will immediately conduct an on-site investigation to determine if possible, the cause(s) of the malfunction using the checklist guides in the appendixes of this regulation. Physical evidence and other factors which contribute to the incident are extremely perishable and

must be protected from the environment in which the on-site investigation must be accomplished. Efficient and effective measures must be taken without delay to document the incident and complete the on-site investigation. At no time will the on-site investigation interfere with any medical support required.

b. In the event of partial/total malfunctions during personnel parachute jumps where there are no serious injuries, the Malfunction Officer will investigate the malfunction in accordance with appendixes B and C. The scene will be documented (photographs and a sketch). Items of physical evidence will be collected by the malfunction officer and released only to the appropriate subject matter expert (SME) appointed to assist in the investigation. The chain of custody (malfunction officer and SME) must be established, as required, and appropriate security for all equipment involved in parachute malfunctions must be maintained as required by AR 195-5. If warranted, the malfunction officer carries out any subsequent investigations as required. Access to the evidence and equipment must be limited to the malfunction officer and designated SME. If the preliminary investigation reveals suspected or intentional acts of tampering or sabotage, the military police will be immediately notified by the drop zone safety team leader (DZSTL). Upon arrival of the responding criminal investigation organization (for example, CID, OSJ, etc.), the malfunction officer will brief the CID on the investigation and actions taken. In this instance, the evidence will be released to the investigating CID. The investigative activity should interfere as little as possible with the post jump. However, the criminal investigation will take priority.

c. In the event of partial/total malfunctions during personnel parachute jumps where there is serious injuries or death resulting from a parachute jump, the malfunction officer immediately places the impact site off-limits and posts a guard(s) to ensure the integrity of the accident scene. In the event of death, ensure DZSTL notifies military police. Access to the scene will be limited to the malfunction officer, SME assisting malfunction officer, responding CID, and medical personnel. The scene will be documented and evidence collected as required in the preceding paragraph. Security of the scene will not interfere with medical support or delay life saving measures. The malfunction officer will immediately initiate an investigation prior to CID arrival and ensure that the scene is not altered. If failure to immediately collect items of evidence would result in degradation or destruction, that evidence will be properly documented and secured. Upon arrival of the CID, the malfunction officer will brief CID on actions that have been taken and whether the malfunction officer believes that suspected or intentional acts of tampering or sabotage exists. If the criminal investigator accepts a recommendation of no tampering or sabotage, the evidence will be retained by the malfunction officer. If suspected or intentional acts of tampering or sabotage is determined, the examination and investigation is terminated and the evidence, along with all copies of reports, findings, and statements to include photographs, is then released to the criminal investigator. When the decision has been made that the physical evidence will remain with the malfunction officer, physical evidence and security must be maintained by the chain of custody (malfunction officer and SME appointed by the investigating Safety Board).

3-3. Reporting malfunctions

Use DD Form 1748-2 to report all airdrop malfunctions (see chap 5). The malfunction officer selected to cover the airdrop operation completes this report.

Chapter 4 Malfunction Investigations

4-1. Investigations by the Malfunction Officer

a. Malfunction investigations cover two areas: personnel parachute malfunctions and airdrop load malfunctions. The depth of any investigation varies according to the severity of the malfunction and

resultant injuries. In cases apparently not involving misconduct, serious injury, or death, the malfunction officer conducts the on-site investigation solely to determine the cause of the malfunction and actions required to prevent future occurrences.

b. In cases apparently involving misconduct, serious incident, injury, or death, a SME will be appointed to conduct the follow-on investigation according to service directives and this regulation. The malfunction officer makes investigation notes, insights, reports, and physical evidence available to these investigations. The malfunction officer will exercise great care so the government avoids compromising the rights of involved personnel. During the investigation, the malfunction officer gathers items, information, and evidence that are sensitive in nature. The malfunction officer must ensure that after the component-by-component examination is completed, the equipment involved in the malfunction is secured and allow no one access except appointed investigating (SME). He or she should take great care to release information pertaining to the investigation only to authorized personnel on a need-to-know basis.

4-2. Priority of malfunction investigations

The investigation of personnel parachute and equipment malfunctions should receive the highest priority, secondary only to medical aid for the injured. It should supersede all other aspects of the operation, including ground tactical play. Prompt and accurate investigation and reporting could save lives and equipment. Data gathered can help determine whether a system change is necessary to prevent future occurrences. The malfunction officer should enlist as many personnel as needed to investigate for possible causes of the malfunctions. These personnel will identify any unusual occurrences to the malfunction officer, who will take actions as prescribed in this publication.

4-3. General guidance on malfunction investigations

a. The malfunction officer will investigate and report all airdrop malfunctions through the appropriate DOD component to the USAQMC&S. Conduct the investigation as expeditiously as possible after the malfunction or incident to preclude confusion of facts and loss of data. In all cases, the malfunction officer who is on location at the time of the malfunction plays a key role in the overall investigation as a direct source of information. The malfunction officer provides his or her on-site and follow-on investigation reports to the investigating agency. Appendix B and C provides a guide to follow in both the on-site and follow-on investigations. It is not all inclusive. A specific investigation can disclose other items that should be checked.

b. Air Force units involved with malfunctions or incidents involving injury or death to personnel, off DZ drops, aircraft airdrop systems, malfunctions, or aircraft damage, will notify the nearest Air Force command post. If possible, the Air Force unit will not derig the aircraft or reprogram navigation aids used in determining the load release point. After landing, the appropriate wing or group tactics and maintenance representatives will inspect the aircraft before it is released for subsequent flights. For missions away from home station, notify the command and control center having operational control of the mission to determine the recovery airfield where the aircraft can be inspected. If operational requirements prevent recovery and inspection by an appropriate Air Force unit, then the aircrew will submit a detailed report to their unit of assignment to help in analysis of the malfunction or incident. If applicable, notify the owning MAJCOM's nearest command post or Command and Control Center.

4-4. Disposition of air items

All air items involved in a fatality must be secured until 90 days after completion of the investigation and upon submission of all reports required by this publication. At that time, the appropriate supply officer will prepare supply documentation to remove these items from accountability. He/she will attach an unsigned certificate of destruction. This certificate should list the date, time, method of destruction, and witnesses to be present. Allow 30 days for processing the supply documents before setting the destruction date. When

the documentation is approved, the supply officer will destroy the air items on the preset destruction date. TM 10-1670 series/TO 14D1-2-466-2/MC TM 04296D-23&P/2 states that the items should be burned. After completing the destruction, the designated destruction officer signs the certificate of destruction and furnishes copies to the appropriate supply activities and to the investigation file. The hand receipt holder will be the destruction officer.

4-5. Airdrop load malfunction categories

The malfunction officer will categorize malfunctions by the phase in which they occur and also restrict the investigations to factors that could have caused or contributed to the malfunctions to save time and effort. Observing the incident can nominally determine the phase of the occurrence. Phases are defined as follows:

a. Extraction phase. The period of time that begins with the activation of the aerial delivery system and continues until the extraction force transfers to recovery parachute deployment.

b. Deployment recovery phase. The period of time that begins with the transfer of force from extraction to recovery parachute deployment and continues until load impact.

c. Release phase. This phase necessarily overlaps the deployment recovery phase, but concerns only the functioning of the release assembly. It commences when the time delay cartridge or timer mechanism should actuate and continues until load impact when the parachute release should occur.

Chapter 5 Report Requirements

5-1. General reporting requirements

All malfunctions or damages to air dropped equipment and/or aircraft will be reported through the command channels of the owning unit immediately.

a. Air Force units will immediately report all airdrop malfunctions or incidents involving injury or death to personnel, damage to equipment, and off DZ drops to that command having operational control of the aircraft. Augmenting crews from a separate command will notify their respective commands in addition to the initial report that will be submitted to the controlling command. Air Force aircraft participating in an operation without an Air Force chain of command will notify their respective command headquarters of the incident with follow-up reports as required.

b. All parachute and aerial delivery operations conducted by the Navy will be reported in accordance with OPNAVINST 3504.1 and forwarded through their appropriate channels with a copy forwarded in accordance with chapter 5.

5-2. Quality Deficiency Report

The airdrop support unit commander providing the air items that malfunctioned will prepare a Standard Form 368, Quality Deficiency Report (Category II), if he or she determines the equipment failed because of a manufacture defect.

5-3. Electronic or telephone reports

If serious injury or death results from a malfunction, an electronic mail message will be sent within 12 hours of the malfunction to the Commander, US Army Quartermaster Center & School, Aerial Delivery and Field Services Department, Fort Lee, VA (message address e-mail: atsmabn@lee-DNS1.ARMY.MIL. If electronic mail message capability is not available, dial DSN 687-3178/4782 or (804) 734-3178/4782 (commercial) to report by telephone. Report will include sufficient facts, insights, and tentative ideas on the cause and mechanics of the malfunction in order for the Commander, US Army Quartermaster Center & School, to request grounding of the affected equipment, if required.

5-4. Lost Time Report

Preparation of a service peculiar injury or lost time report is the

parachutist's parent unit responsibility. Upon request, the malfunction officer will provide information for the description of the accident.

5-5. DD Form 1748-2, Airdrop Malfunction Report (Personnel-Cargo)

a. Malfunction reporting procedures. All DOD components involved in the airdrop of personnel, supplies, and equipment, must report all malfunctions of personnel parachutes and airdrop loads rigged by their assigned units and dropped or extracted from aircraft using a DD Form 1748-2. Completion instructions are printed on the front of the form.

b. Exemption to reporting requirements. There are no exemptions.

c. Disposition instructions.

(1) One copy of the completed report will be forwarded through appropriate channels to the Director, Aerial Delivery and Field Services Department, ATTN: ATSM-ADFSD, Fort Lee, VA 23801-1502 within 5 workdays after the malfunction occurs.

(2) If a fatality occurs as a result of a malfunction, one copy of the final investigation report and DD Form 1748-2 will be forwarded to the address in 5-5c(1) within 10 calendar days after completion of the investigation. This copy is in addition to the requirements in paragraph 5-3. DD Form 1748 or 1748-1 must accompany each DD Form 1748-2 for each airdrop load malfunction.

(3) Air Force units will submit a copy of the report to the appropriate MAJCOM with an information copy to the Numbered Air Force (NAF), if applicable, or to their respective command authority. For malfunctions/incidents involving two or more separate commands, a copy will be sent to each command.

(4) Air Force units having a malfunction/incident involving aircraft equipment will submit a copy of the malfunction report to the wing/group Logistics Group (LG) function and the MAJCOM headquarters responsible for that particular design aircraft. MAJCOM representatives will coordinate with their respective headquarters LG function to resolve reoccurring equipment problems.

5-6. DD Form 1748-3, Joint Monthly Airdrop Summary Report

a. Reporting procedures.

(1) All DOD components involved in the airdrop of personnel, supplies, and equipment, must report all monthly airdrop activities their assigned units conduct. Completion instructions are printed on the reverse of the form. Consolidate reports of subordinate units before submitting.

(2) Air Force units will consolidate the number of actual unilateral training loads rigged and dropped, as well as those downloaded after completion of the inspection and submit them on a tri-annual basis to their respective command headquarters. MAJCOMs will consolidate and submit a single report to the Director, Aerial Delivery and Field Services Department, ATTN: ATSM-ADFSD, Fort Lee, VA 23801-1502 on a tri-annual basis.

(3) Air Force units will develop a metric on all scheduled JA/ATT, SAAM, or any scheduled airdrop mission other than unilateral training. The metric will include all successfully completed missions with the number of uncompleted airdrops due to, but not exclusively, maintenance, weather, or mission aborts, etc. Include details in the MAJCOM Sup.

b. Disposition instructions. Forward one copy of the completed reports through appropriate channels to the Director, Aerial Delivery and Field Services Department, ATTN: ATSM-ADFSD, Fort Lee VA 23801-1502. Submit reports by the tenth day of the following month. NEGATIVE reports are required. Air Force units will submit their reports as detailed in paragraph 5-6a(2).

Chapter 6

Air Force Joint Airdrop Inspectors

6-1. Loadmasters

a. Loadmasters assigned to an Air Force: Aerial Delivery Support Function (ADSF), Operational Support Squadron (OSS), or Aerial Port Squadron (APS), must have successfully completed the Joint Airdrop Inspection Course and have been designated in writing by the unit commander, to perform joint airdrop inspections on loads offered for airdrop from Air Force aircraft.

b. Instructor loadmasters assigned to a formal school, certified according to paragraph 2-1 and designated according to paragraph 6-1a, may perform as the aerial delivery inspector for loads generated in support of the formal school.

c. Loadmasters assigned to units specified in paragraphs 6-1a, 6-1b, 6-2d, 6-2e, and 6-3a, who are not presently qualified in their respective model aircraft due to extended duties not including flying (DNIF), professional schools, or other circumstances beyond their control, may continue to perform JAI functions with concurrence of unit commander for up to 6 months from time of disqualification. Extensions beyond 6 months require MAJCOM approval.

6-2. Inspectors

a. AFJAIs will not perform aircrew duties while performing inspection duties unless specifically authorized by their AF MAJCOM.

b. Individuals assigned to special support units may perform before and after loading inspections to meet their specific missions. Individuals assigned to those functions listed in paragraph 6-1c are authorized to perform these inspections provided they meet all certifications requirements.

c. Active duty AFJAIs are mobility resources susceptible to world-wide tasking to support DOD-sponsored airdrop operations. Therefore, active duty JAIs must be assigned to a unit separate from an active duty flying unit.

d. The US Air Force Liaison non-commissioned officer assigned to the USAQMC&S, Aerial Delivery and Field Services Department, Fort Lee, VA may perform as an AFJAI.

e. Personnel assigned to the AMWC/33 Flight Test Squadron, USAF CADS/TTD, AFSOC/18th Flight Test Squadron, Natick RD&EC/SSCN-UT, and Air Force Test Center (AFTEC) may perform as an AFJAI.

f. With MAJCOM approval, Air Force Transportation Specialists, AFSC 2T251, or higher, trained and certified through the Army's Fabrication of Aerial Delivery Loads Course (FADLC), may perform before-loading inspection and sign the appropriate inspection form as the AF inspector for their unilateral training loads in support of Air Force training requirements.

6-3. Guard and Reserve units

a. Due to their unique manning issues and requirements which do not allow world-wide deployable AFJAI resources, Guard and Reserve units are authorized to have no more than 20% of flying unit Assigned Loadmasters designated as AFJAIs and certified personnel must be full time Air Reserve Technicians (ARTs). Those certified in writing are authorized to perform as the AFJAI on all Guard and Reserve unilateral training loads and in support of Joint Airborne/Air Transportability Training (JA/ATT) and Special Assignment Airlift Mission (SAAM) airdrops on any other Guard and Reserve unit having like aircraft. Guard and Reserve AFJAIs may perform inspections with active duty units in conjunction with joint Guard and Reserve training with their MAJCOM approval.

b. Guard and Reserve Transportation Specialists, AFSC 2TX1, (or higher), trained and certified through the Army's FADLC and the JAI course, may perform before and after loading inspection on unilateral training loads in direct support of their units' training requirements. Qualified individuals may sign either block as the Transported Force or Air Force Inspector on the before and after loading.

6-4. Revalidation

Annual revalidation of JAI status is required. Specific outlines of course contents and objectives will be included in the MAJCOM supplement.

Appendix A References

Section I Required Publications

AR 195-5

Evidence Procedures (Cited in para 3-2.)

Section II Related Publications

A related publication is merely a source of additional information. The user does not have to read it to understand this publication.

AFPD 13-2

Air Traffic Control, Airspace, Airfield, and Range Management

AR 385-40

Accident Reporting and Records

AR 385-95

Army Aviation Accident Prevention

AR 750-32

Airdrop, Parachute Recovery, and Aircraft Personnel Escape Systems

DOD 4500.9-R

Defense Transportation Regulation

FM 57-220

Static Line Parachuting Techniques and Training

SH 57-1

Jumpmaster Checklist

OPNAVINST 3504.1

Premeditated Personnel Parachuting Log and Navy Airdrop Malfunction Report

TM 5-4220-201-12

Operator and Organizational Maintenance Manual Life Preserver, Underarm, Parachutist, Type B-7, CO2 Inflated FSN 4220-657-2197

TM 10-1670-269-23&P/TO 14D1-2-462-2/MARINE CORPS TM 01135B-23&P/1

Unit and Intermediate Direct Support (DS) Maintenance Manual (Including Repair Parts and Special Tools List) for Parachute, Personnel Type: 24-Foot Diameter, Troop, Chest, Reserve NSN 1670-00-892-4218, With Deployment Assistance Device NSN 1670-01-420-4256

TM 10-1670-272-23&P/TO 14D1-2-463/2/MARINE CORPS TM 04296C-23&P/1

Unit and Intermediate Direct Support (DS) Maintenance Manual (Including Repair Parts and Special Tools List) for Parachute, Personnel Type: 35-Foot Diameter, MC1-1B Troop Back Parachute NSN 1670-00-598-0751

TM 10-1670-287-23&P/TO 14D1-2-468-2/MARINE CORPS TM 09011A-23&P/NAVAIR 13-1-38

Organization and Direct Support Maintenance Including Repair Parts and Special Tools List for MC-4 Ram Air Free-Fall Personnel Parachute System NSN 1670-01-306-2100

TM 10-1670-292-23&P/TO 14D1-2-466-2/MARINE CORPS TM 04296D-23&P/2

Unit and Intermediate Direct Support (DS) Maintenance Manual (Including Repair Parts and Special Tools List) for Parachute, Personnel Type: 35-Foot Diameter, MC1-1C Troop Back Parachute NSN 1670-01-262-2359

TM 10-1670-293-23&P/TO 14D1-2-467-2/MARINE CORPS TM 01136C-23&P/2

Unit and Intermediate Direct Support (DS) Maintenance Manual (Including Repair Parts and Special Tools List) for Parachute, Personnel Type: 35-Foot Diameter, T-10C Troop Back Parachute NSN 1670-01-248-9502

TM 10-1670-296-20&P

Unit Maintenance Manual Including Repair Parts and Special Tools List for Ancillary Equipment for Low Velocity Air Drop System (LVADS)

TM 10-1670-299-20&P/TO 14d1-2-470-2/NAVAIR 13-1-41

Unit Maintenance Manual Including Repair Parts and Special Tools List for Ancillary Equipment for Personnel Troop Parachute System

Section III Prescribed Forms

DD Form 1748

Joint Airdrop Inspection Record (Platforms) (Prescribed in para 2-3.)

DD Form 1748-1

Joint Airdrop Inspection Record (Containers) (Prescribed in para 2-3.)

DD Form 1748-2

Joint Airdrop Malfunction Report (Personnel-Cargo) (Prescribed in para 2-4.)

DD Form 1748-3

Joint Monthly Airdrop Summary Report (Prescribed in para 5-3.)

Section IV Referenced Forms

SF Form 368

Product Quality Deficiency Report

AF 847

Recommended Changes to Publications and Blank Forms

DA Form 2028

Recommended Changes to Publications and Blank Forms

Appendix B Checklist For Malfunction Officer On-Site Investigations

B-1. Function.

This checklist provides a guide for the conduct of on-site malfunction investigations.

B-2. Purpose.

The purpose of this checklist is to assist investigating officers in evaluating their key management controls. It is not intended to cover all controls. A variety of circumstances which may surround malfunctions prevent an all-inclusive checklist.

B-3. Instructions.

Investigating officers are expected to use prudent judgment when collecting and analyzing information.

B-4. Test questions and procedures.

a. On-site Actions-No Serious Injuries.

(1) Secure and guard the impact site.

(2) Photograph all equipment and obvious defects. Include damage caused by impact.

(3) Obtain the names and units of any involved personnel and witnesses

(4) Sketch the impact site. Show equipment relationships and the exact location of the impact site on or in relation to the DZ.

(5) Gather and secure all clothing, equipment, air items, and personal property involved in the malfunction. Properly identify and tag items to include time, date, location, type of incident, name, and unit of persons involved. Maintain chain of custody for equipment.

(6) Examine equipment component-by-component.

(7) Conduct a TM 10-1670 series/rigger-type inspection in an appropriate area according to the technical manual covering the specific air item and TO 14D1-2 series/NAVAIR 13-1-38.

(8) Ensure all air items and evidence is retained until the investigating authority releases them.

(9) Release equipment not required for further investigations.

(10) Conduct a complete on-site investigation of the malfunction according to this publication.

(11) Prepares and submits required reports according to chapter 5.

b. On-site Actions-Parachutist Injury or Death.

(1) Place impact site off-limits and post a guard so the site remains undisturbed. Allow medical teams access to the injured jumper.

(2) Photograph the parachutist, impact site, and any obvious defects in the equipment. Include any damage caused by the impact.

(3) Record where the parachute harness or component was cut. (Trained medical personnel dictate the method of removal of the parachute harness. The malfunction officer closely observes the cutting of the harness if required for removal of the parachutist.) If possible, do not cut the harness and try not to disturb any evidence.

(4) Immediately impound the parachute log record and limit access to this document ONLY to the appointed investigative officers.

(5) Request medical personnel secure and preserve all clothing and equipment that is removed from the impact site with the parachutist.

(6) Conduct a detailed component-by-component examination of all equipment after the parachutist has been evacuated.

(7) Take statements from the preceding parachutist, the subsequent parachutists, jumpmasters, any ground observers, and other parachutists or aircraft personnel able to provide significant facts.

(8) Record the name and unit of any personnel who observed the incident even if they can provide no new facts to the investigation.

(9) Secure a copy of the jump manifest and reconstruct the jump stick from personnel present, if required. Gather all air items and personal equipment, except weapons, unless part of or possible cause of the malfunction.

(10) Sketch the whole impact site in relation to the DZ and mark the impact location of the parachutist and equipment.

(11) Ensure the aircraft involved is notified as soon as possible. (This enables the air crew to inspect, upon landing, for any defects or damage that may have contributed to or caused the malfunction.) Request segregation and identification of parachute deployment bags from those of other aircraft.

(12) Obtain the deployment bag serial number from the parachute log record. Retrieve and secure the deployment bag with the parachute assembly until the investigation is complete.

(13) Ensure equipment is tagged, parachutes are loosely rolled and bagged when the on-site investigation is complete. (Do not remove entanglements.) Secure and release only to investigating SME.

(14) Ensure the evacuation of all equipment to an area where it is subjected to a TM 10-1670 series rigger inspection according to this regulation and the technical manual covering the specific air item and TO 14D1-2 series/NAVAIR 13-1-38.

c. On-site Actions-Airdrop Load Malfunction.

(1) Move to and secure the impact site as soon as possible.

(2) Determine if the load contained hazardous material, ammunition, explosives, or petroleum, oil, and lubricant (POL). If any are found, direct personnel in the vicinity of the load to evacuate the area (move back at least 500 meters).

(3) Request technical assistance required, such as qualified explosive ordnance disposal (EOD) or POL technicians.

B-5. Supersession.

B-6. Comments.

**Appendix C
Checklist For Personnel Parachute Malfunction
Investigations**

C-1. Function.

This checklist identifies actions required for investigating personnel parachute malfunctions.

C-2. Purpose.

The purpose of this checklist is to assist investigating officers in evaluating key management controls for personnel parachute malfunctions. The variety of circumstances which may surround malfunctions prevents an all-inclusive checklist.

C-3. Instructions.

Investigate malfunctions according to the type of system involved, static line or free fall. Investigate all individual equipment and parachutist activities for every malfunction occurrence. Investigating officers are expected to use prudent judgment when collecting and analyzing information.

C-4. Test questions and procedures.

a. Static Line System Malfunction Investigation. Check for static line system malfunction.

b. Main Parachute (Static Line Deployed).

(1) Compare the log record with the canopy and deployment bag serial numbers.

(2) Check the condition of the harness, to include the quick-fit ejector snaps and canopy release assemblies for proper operation.

(3) Check the method and sequence of the attachment of items of equipment on the main lift web D-rings.

(4) Derig other airdrop loads in the danger area. Use minimum essential personnel after a 30-minute cool-off period with approval of the EOD and POL technicians.

(5) Inform the DZ control party of the malfunction. If the malfunction occurs during the extraction phase, request notification of the aircraft so it can be inspected for damage.

c. On-site Actions-Air Force Unilateral Equipment Airdrops.

(1) Conduct a technical/rigger-type inspection of the equipment and load.

(2) Recover and release equipment not required for further investigations.

(3) Remove/roll and isolate equipment requiring further investigation for return to the home unit for additional analysis as necessary.

(4) Notify MAJCOM and the Air Force Liaison at the USAQMC&S if during the investigation the malfunction warrants immediate attention to the entire airdrop community.

(5) Submit a follow-up report.

(6) Check the condition of the risers, to include the steering line guides and toggles on the steerable parachute.

(7) Check the parachute connector links for missing or loose screws.

(8) Check all suspension and steering lines for breaks, frays, or burned areas.

(9) Check the anti-inversion net for damage.

(10) Check the main canopy gores for holes, tears, broken stitches, or burned areas.

(11) Check the bridle loop for tears, burns, or broken stitches.

(12) Check the condition of the deployment bag, to include the static line and snap hook.

d. Reserve Parachute-Not Activated.

- (1) Check the parachute log record and compare it with the canopy serial number (after the reserve is activated).
 - (2) Check the butterfly snap fasteners for proper operation.
 - (3) Check the pack for holes or tears.
 - (4) Check the pack opening spring bands for proper routing and condition.
 - (5) Check the ripcord pocket, cones, and grommets for damage.
 - (6) Check the ripcord for the steel swage ball on the end of the cable and straightness of the pins.
 - (7) Check the ripcord pocket for debris.
 - (8) Activate the reserve parachute.
 - (9) Conduct the ripcord pull and ripcord test according to the TM 10-1670-269-23&P covering the specific air item and TO 14D1-2-462-2/MC TM 01135B-23&P/1.
- e. Reserve Parachute-Activated.*
- (1) Check the parachute log record and compare it with the canopy serial number.
 - (2) Check the butterfly snap fasteners for damage and proper operation.
 - (3) Check the pack tray for holes or damage.
 - (4) Check the pack opening spring bands for proper routing and condition.
 - (5) Check the ripcord pocket, cones, and grommets for damage.
 - (6) Check the suspension lines for breaks, frays, or burned areas.
 - (7) Check the canopy for holes, tears, or burned areas.
 - (8) Check the pilot parachute for proper attachment.
 - (9) Check the pilot parachute for holes, tears, or burned areas.
 - (10) Check line stowage free bag for holes, tears, or burned areas.
 - (11) Check curved pins for damage.
 - (12) Check bridle line for tears or burned areas.
 - (13) Check canopy staging flaps for tears, holes, or burned areas.
- f. Free Fall System Malfunction Investigation.* Check for free fall system malfunction.
- g. Main Canopy (Free Fall).*
- (1) Check the parachute log record and compare it with the canopy serial number.
 - (2) Check the ripcord assembly if the canopy did not activate. Verify proper routing and installation, to include condition of pins and cones (soft or hard).
 - (3) Check the risers if the canopy was activated. This check should include canopy release assemblies and steering toggles and guides. If a RAM-AIR canopy was used, check the proper setting of the brakes.
 - (4) Check the parachute connector links for proper installation or loose or missing components.
 - (5) Check all suspension and steering lines for breaks, frays, or burned areas.
 - (6) Check the condition of the reefing system on RAM-AIR canopies.
 - (7) Check the main canopy for holes, tears, broken stitching, or burned areas.
 - (8) Check the condition of the stabilizer panels.
 - (9) Check the condition of the retainer line, bridle line, deployment bag, and pilot parachute.
- h. Reserve (Free Fall).*
- (1) Check and compare the parachute log record with the canopy serial number.
 - (2) Check for proper installation or attachment to the main harness.
 - (3) Check the ripcord assembly if the canopy did not activate. Verify proper routing and installation, to include the condition of the pins and cones (soft or hard).
 - (4) Check the condition of risers if the canopy did not activate. Inspect the steering line guides and toggles, if applicable.
 - (5) Check the proper brake setting on RAM-AIR canopies.
 - (6) Check the parachute connector links for proper installation and missing components.
 - (7) Check all suspension and steering lines for breaks, frays, or burned areas.

- (8) Check the condition of the reefing system on RAM-AIR canopies.
 - (9) Check the canopy for holes, tears, broken stitching, or burned areas.
 - (10) Check the condition of the bridle line and pilot parachute.
 - (11) Check the condition of the deployment bag or rapier, if required.
- i. Harness Assembly (Free Fall).*
- (1) Check the condition and setting of the automatic ripcord release to including routing of the power cable housing.
 - (2) Check the condition of the harness, to include the quick ejector snaps and the canopy release and ripcord assemblies.
 - (3) Check the condition of the pack tray and pack opening spring bands.
 - (4) Check the condition of the oxygen system, to include the mask, hose, connector, and oxygen bottles. Secure the oxygen bottle for a determination of the remaining air.
 - (5) Check the type of equipment attached to the harness D-rings.
- j. Individual Equipment Investigation.* Check individual equipment.
- k. M-1950 Weapons Container.*
- (1) Check to see if the quick-release snap has been properly installed.
 - (2) Check to see if the lowering line (if used) has been properly installed and stowed.
 - (3) Verify that bag length is between 33-1/2 and 50-1/2 inches.
 - (4) Check to see if the leg strap has been tied or cut.
- l. H-Harness and Alice Pack with or without Frame.*
- (1) Was H-harness and lowering line properly installed?
 - (2) Were 18-inch connector straps properly routed and installed?
 - (3) Was the bag heavier than 35 lbs?
- m. Harness Single Point Release and Alice Pack with or without Frame.*
- (1) Was HSPR and Hook Pile Tape lowering line serviceable, properly routed and installed?
 - (2) Was Release Handle Assembly secured in place with Hook Pile Tape?
 - (3) Were adjustable D-Ring Straps properly routed and installed?
 - (4) Were Adjustable Leg Straps properly routed and attached (male/female portion)?
 - (5) Was the Lowering Line Adapter Web properly installed and in use?
 - (6) Was the HPT Lowering Line serviceable and modified?
- n. Container, Weapons, and Individual Equipment.*
- (1) Check to see if the bag and the lowering strap were properly rigged and installed.
 - (2) Check to see if the leg strap was secured or cut.
 - (3) Check the push-pull actuator assembly to ensure it functions properly.
 - (4) Verify that the container is not heavier than 95 pounds.
 - (5) Verify that the container is not rigged oversize (greater than 12 inches by 12 inches by 36 inches).
- o. Dragon Missile Jump Pack.*
- (1) Check to see if the missile and individual weapon are properly rigged in or on the pack.
 - (2) Check the hook and pile lowering line.
 - (3) Verify that the attaching adapter was properly rigged on the parachutist.
 - (4) Verify whether the leg straps were secured or cut.
 - (5) Inquire whether the parachutist was within height limitations and if he or she had experience in jumping the Dragon Missile Jump Pack.
- p. Flotation Devices (Life Preservers).*
- (1) Verify whether they were properly worn.
 - (2) Check for proper functioning.
 - (3) Check whether there was corrosion or worn areas on the carbon dioxide (CO₂) inflation valve or if the activator cord was unserviceable.
 - (4) Check to verify whether the combat equipment was worn exposed and if it was worn according to FM 57-220/TO 14D1-2-1-121/FM 7-42 and SH 57-1.

q. *ALICE Pack (Single Point Release).*

- (1) Check the routing of the attaching loops.
- (2) Verify the proper routing of the release handle cable.
- (3) Verify that the handle retainer lanyard is not misrouted.
- (4) Verify proper routing and attachment of the HPT lowering line.
- (5) Verify that the leg straps are attached.

r. *Parachutist Activities.*

- (1) What was parachutist's mental attitude in the aircraft? Was he or she relaxed or tense?
- (2) Were his or her activities sure and coordinated?
- (3) Were all jumpmaster commands performed in a sure and positive manner?
- (4) Was the equipment properly secured to the parachutist during his or her exit?
- (5) Did the parachutist make a satisfactory exit?
- (6) Was the parachutist stable and in control (free fall)?
- (7) How did the parachutist react to the malfunction?

C-5. Supersession.

C-6. Comments.

**Appendix D
Checklist For Airdrop Load Malfunction
Investigations**

D-1. Function.

This checklist identifies actions required for investigating airdrop malfunctions during joint and unilateral operations.

D-2. Purpose.

The purpose of this checklist is to assist investigating officers in airdrop load malfunctions. The variety of circumstances which may surround malfunctions prevent an all-inclusive checklist. Investigating officers are expected to use prudent judgment when collecting and analyzing information.

D-3. Instructions.

Answers must be based on the actual testing of key management controls such as documented analysis, direct observation, interviewing, sampling, and simulation. Answers that indicate deficiencies must be explained and corrective action indicated in supporting documentation. These management controls must be accomplished on DA Form 11-2-R (Management Control Evaluation Certification Statement).

D-4. Test questions and procedures

a. *Low Velocity Airdrop Load Malfunction Investigation.* Check for low velocity airdrop load.

b. *Extraction Phase.* Check all extraction procedures.

c. *Failure of the Extraction Parachute to Deploy or Inflate.*

- (1) Did the aircraft extraction parachute release mechanism function properly?
 - (2) Were bag closing ties correctly made and pendulum lines properly installed?
 - (3) Was the parachute safety loop free from the bent V-ring?
- d. *Failure or Delay in the Load Extraction.*
- (1) Did the extraction parachute appear to fully developed?
 - (2) Was positive aft restraint removed?
 - (3) Was the correct number of detents and restraints settings used for the load?
 - (4) Was the correct extraction line used and connected?
 - (5) Was the platform damaged? (Answer only when a load did not exit.)

e. *Failure to Transfer the Extraction Force to Deployment.* Check extraction force deployment procedures.

f. *Static Line or Connector Strap Extraction Systems.*

(1) Was the static line properly rigged and connected to the anchor cable?

(2) Was the connector strap the correct length and routed through the knives of static lines?

(3) Was the connector strap routed through the type IV link correctly?

(4) Was the connector strap cut?

g. *Extraction Force Transfer Coupling (EFTC) Extraction Systems.*

(1) Were actuators installed in the correct platform rail position (check the arm and foot to indent clearances)?

(2) Were actuator arm safety pins removed and correctly stowed?

(3) Was the release cable secured or attached to the actuator and latch assembly with cable clevis pins installed (EFTC)?

(4) Was the release cable the correct length and properly routed (EFTC)?

h. *Deployment-Recovery Phase.* Check deployment recovery procedures.

i. *Failure of Recovery Parachutes to Deploy.*

(1) Was the deployment line attached to the extraction system and the parachutes?

(2) Was the deployment line misrouted?

(3) Were the parachute restraint and release straps properly attached?

(4) What was the condition of the release knives?

j. *Failure of the Suspension System.*

(1) Did the load suspension points fail?

(2) Did the suspension slings or attaching hardware fail?

(3) Were the correct slings used?

(4) Were the slings correctly attached to the parachute release and the load or platform?

(5) Were slings correctly routed to the suspension points?

(6) Was protective padding used where it was needed?

k. *Failure of Recovery Parachute(s) to Fully Inflate.*

(1) Were reefing line cutters armed and cotter pins removed?

(2) Did the cutters fire?

(3) Was the reefing line the proper length and cut?

(4) Was the reefing line entangled in the reefing rings or suspension lines?

(5) Were the canopy, suspension lines, and connector link ties correctly made?

l. *Release Phase.* Check release procedures.

m. *Midair Release.*

(1) At what point did the midair separation occur?

(2) Did the midair separation occur at the release assembly or at the type IV link that joins the riser extensions?

(3) Did the release activate prior to the load stabilizing?

(4) Were the releases attached to the parachutes and the load?

(5) Were the releases properly rigged?

(6) Were the releases checked for a faulty release pin or weak spinner spring (5,000-pound release)?

(7) Was the timer serviceable when tested after the drop? What deficiencies were noted (specify part, M-1, M-2, or M-3 release)?

n. *Failure to Disconnect.*

(1) *For 5,000-Pound Parachute Releases.*

(a) Did a no-load condition occur on impact?

(b) Was the spinner still seated?

(c) Was the safety pin removed from the delay assembly?

(d) Was a cartridge present in the firing mechanism housing?

(e) Did the cartridge fire?

(2) *For M-1, M-2, and M-3 Parachute Releases.*

(a) Did a no-load condition occur on impact?

(b) Did the release upper-suspension link rotate to the release position?

(c) Was the arming wire pulled from the timer?

(d) Did the timer keys retract and the timer fall in the guide block?

(e) Was the timer serviceable when it was tested after the drop?

o. *Container Delivery System Malfunction Investigation.*

(1) *Failure of the Containers to Exit the Aircraft.*

(a) Was the release gate properly rigged?

- (b) Was the knife sharp and attached?
- (c) Did the aircraft release system function properly?
- (d) What was the condition of the rollers and skid board if the containers were jammed in the aircraft?

(2) *Failure of the Recovery Parachutes to Deploy and Inflate.*

- (a) Were the parachute static lines attached to the anchor cables and were the anchor cable stops installed at the prescribed location?
- (b) Were the parachutes attached to the containers?
- (c) Were the pilot chutes attached to the cargo parachutes?
- (d) Were the bag closing ties made with prescribed materials?
- (e) Were the canopy and suspension line ties properly installed with prescribed material?

D-5. Supersession

D-6. Comments.

Glossary

Section I Abbreviations

ADSF
Aerial Delivery Support Function

AF
Air Force

AFJAI
Air Force Joint Airdrop Inspector

AFJI
Air Force Joint Instruction

AFMAJCOM
Air Force Major Command

AFSC
Air Force Specialty Code

AFTEC
Air Force Test Center

AJAI
Army Joint Airdrop Inspector

APS
Aerial Port Squadron

AR
Army Regulation

ART
Air Reserve Technician

CCT
Combat Control Team

CDS
Container Delivery System

CID
Criminal Investigation Division

CO2
Carbon Dioxide

DA
Department of the Army

DCSLOG
Deputy Chief of Staff for Logistics

DNIF
Did Not Include Flying

DoD
Department of Defense

DZ
Drop Zone

DZSTL
Drop Zone Safety Team Leader

EFTC
Extraction Force Transfer Coupling

EOD
Explosive Ordnance Course

FADLC
Fabrication of Aerial Delivery Loads Course

FM
Field Manual

HPT
Hook Pile Tape

HSPR
Harness, Single Point Release

HQDA
Headquarters Department of the Army

JA/AAT
Joint Airborne/Air Transportability Training

JAI
Joint Airdrop Inspector

LG
Logistics Group

LVAD
Low Velocity Aerial Delivery

MACOM
Major Command

MCO
Marine Corp Order

NAF
Numbered Air Force

NCO
Non-Commissioned Officer

NAVAIR
Naval Air

OPNAVINST
Operational Naval Instruction

OSS
Operational Supply Squadron

POL
Petroleum, Oil, Lubrication

RAMZ
Rigging Alternate Method Zodiacs

SAAM
Special Assignment Airlift Mission

SATB
Standard Airdrop Training Bundles

SME
Subject Matter Expert

TM
Technical Manual

TO
Technical Order

USAQMC&S
United States Army Quartermaster Center & School

Section II Terms

This section contains no entries.

Section III Special Abbreviations and Terms

Air Force Aerial Delivery Support Function

Provides personnel and equipment for the fabrication and delivery of airdrop loads to the aircraft. Performs recovery and management of airdrop loads according to applicable publications.

Air Force Joint Airdrop Inspector (AFJAI)

An Air force loadmaster (Air Force Specialty Code 1A2X1) with a five skill level and minimum rank of E-4 provided by the Air force to perform the AFJAI Function.

Air Item

Special items of equipment such as parachutes, airdrop containers, platforms, slings, tie downs, and related air items to use for the airdrop of personnel, supplies, and equipment.

Airdrop Equipment

Same as air item.

Airdrop Incident

Any occurrence causing injury or death to personnel, damage to equipment, aircraft or aircraft load, or procedure which prevented the successful completion of any planned airdrop operation.

Airdrop Malfunction

The failure of an airdrop item or component of an airdrop system to function as it was intended or designed.

Airdrop Support Unit

The activity that prepares the Transported Force for airdrop.

Airdrop System

A system designed to facilitate the premeditated airdrop of personnel, supplies, and equipment from an aircraft in flight. It consists of parachutes, airdrop containers, platforms, and related air items.

Airlift Unit

An airlift unit is organized, equipped, and trained to airdrop personnel, supplies, and equipment.

Army Joint Airdrop Inspector (AJAI)

The airdrop support unit representative. Must be a parachute rigger (Military Occupational Specialty 92R, minimum grade of E-4), airdrop systems technician (921A), or a parachute maintenance and aerial supply officer

(92D) and certified according to paragraph 2-1.

Chain-of-Custody

The movement, security, and preservation of evidence required by malfunction officer for safekeeping and release of airdrop equipment involved in a personnel parachute malfunction.

Follow-On Investigation

Normally conducted by a board appointed under the appropriate publication of the service involved.

Jargon

A criterion; a standard by which airdrop missions are measured.

Joint Airdrop Inspection (JAI)

The inspection activity of two or more services working together. This inspection is conducted prior to aircraft loading and after loading and rigging is completed. Inspectors must be certified according to paragraph 2-1.

Joint Operation or Airdrop

Airdrop activities involving resources from more than one service.

Malfunction, Partial

The failure of an airdrop system to function properly to the point that the load or parachutist is subject to damage or injury.

Malfunction, Total

The complete failure of the airdrop system to function as designed.

Malfunction Officer

Designated by the commander of the airdrop support unit to observe airdrop operations and investigate airdrop malfunctions.

On-site Investigation

Performed by the malfunction officer to collect data used to determine the cause of the malfunction.

Serious Injury

When a jumper is unconscious or when conscious and complaining of torso, back, neck, or head injuries or having mutilated limbs, compound fractures, or lacerations with excessive bleeding as determined by medical personnel.

Technical/Rigger-Type Inspection

A complete and thorough inspection of an airdrop item that includes associated parts and components. This inspection is conducted according to the TM 10-1670 series covering the specific air item and TO 14D1-2 series/NAVAIR 13-1-38, and MC TM 04296D-23&P/2.

Transported Force

The activity the airlift unit is moving.

Unilateral Operation or Airdrop

An airdrop involving the resources of a single service.

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