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SUPERSEDING

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## PERFORMANCE SPECIFICATION

### MANUALS, TECHNICAL AND CHECKLISTS - PREPARATION OF CARGO AIRCRAFT LOADING AND OFFLOADING

This specification is approved for use by all Departments and agencies of the Department of Defense.

#### 1. SCOPE.

1.1 Loading manuals and checklists. This specification covers the preparation of technical manuals and checklists containing information and instructions for loading, securing loads and off-loading cargo aircraft, including handling of airdrop loads and nuclear weapon cargo. Certain provisions (3.2.5a) of this specification are the subject of air standardization agreement ASCC AIR STD 44/16.

1.2 Detail. The level of detail contained in this performance specification is necessary to comply with the requirements of the Joint Computer-aided Acquisition and Logistics Support (JCALS) system.

#### 2. APPLICABLE DOCUMENTS.

##### 2.1 Government documents.

2.1.1 Specifications, standards, and handbooks. The following specifications, standards, and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation.

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Det 2, HQ ESC/AV-2, 4027 Col Glenn Hwy, Suite 300, Dayton, OH 45431-1672; by using the Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A

AREA TMSS

**Distribution Statement A.** Approved for public release; distribution is unlimited.

**MIL-PRF-5288H****SPECIFICATIONS****Military**

- MIL-C-81222 – Checklist, Flight Crew, Preparation of
- MIL-PRF-5096 – Manuals, Technical: Inspection and Maintenance Requirements; Acceptance and Functional Check Flight Procedures and Checklists; Inspection Work Cards; and Checklists; Preparation of

**STANDARDS****Military**

- MIL-STD-38784 – Manuals, Technical: General Style and Format Requirements

(Unless otherwise indicated, copies of federal and military specifications, standards, and handbooks are available from the Standardization Documents Order Desk, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094.)

2.1.2 Other Government documents, drawings and publications. The following other Government documents, drawings, and publications form a part of this document to the extent specified herein. Unless otherwise specified, the issues are those cited in the solicitation (see 6.2).

**PUBLICATIONS****Air Force Technical Manuals**

- 13C7-1-5/FM 10-500 – Airdrop of Supplies and Equipment-General Information for Rigging Airdrop Platforms

**AIR STANDARDS**

- AIR STD 44/16 – Air Standardization Agreement
- AIRLANT/AIRPAC INSTRUCTIONS 8120.1 – Nuclear Weapons Maintenance Manual (The Two Person Concept)

**REGULATIONS**

- AFR 122-4 – Nuclear Weapons Tamper Control and Detection Programs (The Two Person Concept)

(Copies of documents required by contractors in connection with specific procurement functions should be obtained from the acquiring activity or as directed by the contracting officer.)

2.2 Order of precedence. In the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

**3. REQUIREMENTS.**

3.1 Development and preparation. The general manner of development and preparation for manuals and checklists shall be in accordance with MIL-STD-38784 and MIL-PRF-5096.

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3.1.1 Format. Format shall be in accordance with the requirements of MIL-STD-38784. Unless otherwise specified by the acquiring activity, chapters and sections shall be arranged as identified herein (6.2).

3.1.2 Text contents. The manuals shall contain all essential information and instructions for loading, securing loads, and off-loading cargo aircraft. Typical loads will consist of vehicles, weapons, heavy equipment, bombs, warheads, missiles, aircraft, troops, litters, containers, airdrop modular platforms, and general cargo, palletized and unpalletized. The manuals shall contain only handling procedures and associated information used when the aircraft is on the ground. Inflight procedures shall not be included in the manuals.

3.1.3 Illustrations and tables. In addition to those specified herein, illustrations (including charts, diagrams, etc.) and tables which distinctly contribute to the clarity and understanding of instructions and procedures shall be used. Illustrations and tables for each chapter shall be placed at the end of the chapter following the text. Illustrations shall be grouped together followed by the tables.

3.2 Loading instructions manual. The loading instructions manual shall be arranged as follows. Appendix A provides the Document Type Definition (DTD) for the electronic delivery of this manual.

- a. Front Matter.
- b. Chapter 1 – Introduction.
- c. Chapter 2 – Description of Aircraft Features.
- d. Chapter 3 – Aircraft Configuration.
- e. Chapter 4 – General Procedures.
- f. Chapter 5 – Emergency Procedures.
- g. Chapter 6 – Specific Procedures.
- h. Chapter 7 – Airdrop Procedures (Personnel and Cargo).
- i. Alphabetical Index.

3.2.1 Front matter. The front matter shall be in accordance with MIL-STD-38784 except the foreword/preface/introduction requirements of MIL-STD-38784 shall be contained in Chapter 1, Introduction.

3.2.2 Chapter 1 – introduction. Chapter 1 shall state the type of aircraft, series, and model designation and shall briefly describe the aircraft covered by the manual. It shall also provide the following information.

3.2.2.1 Purpose of manual. The following shall be included as a standard paragraph to cover the intended purpose of the manual:

“The purpose of this manual is to provide cargo handling personnel with sufficient information and data to load, secure, and off-load all types of cargo efficiently and safely and to explain the restrictions governing these operations. The manual includes procedures pertaining to ground functions and air drop procedures.”

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3.2.2.2 Brief chapter descriptions. The following brief chapter descriptions shall be included as standard paragraphs in Chapter 1:

- a. “Chapter 2 – Description of Aircraft Features. This chapter presents a general description of the cargo compartment, including profile and cross sections, cargo loading ramp (where applicable), entrances and exits, cargo floor, roller conveyors and guides, restraint rails (where applicable), tiedown fittings, seat and litter provisions, cargo loading aids, and storage provisions for all cargo loading aids and tiedown devices.”
- b. “Chapter 3 – Aircraft Configuration. This chapter presents aircraft preparation instructions with respect to aircraft cargo loading, airdrop provisions and personnel equipment.”
- c. “Chapter 4 – General Procedures. This chapter contains instructions relative to load preplanning, loading, postloading, and off-loading procedures to include checklist.”
- d. “Chapter 5 – Emergency Procedures. This chapter describes all ground preparations required for cargo emergency procedures.”
- e. “Chapter 6 – Specific Procedures. This chapter contains all necessary instructions relative to preloading, loading, postloading, preflight, and off-loading procedures for cargo which, due to physical characteristics, cannot be handled in accordance with the general procedures of chapter 4 and therefore requires special handling.”
- f. “Chapter 7 – Airdrop Procedures. This chapter presents instructions relative to the procedures required for airdrop of personnel and cargo.”

3.2.3 Chapter 2 – description of aircraft features. Chapter 2 shall contain the following information, in the order specified, with necessary explanatory notes, text, and figures.

- a. General aircraft description.
- b. Aircraft cargo area.
- c. Aircraft cargo aids.

3.2.3.1 General aircraft description. A general description of the aircraft and of the aircraft cargo, troop carrying, litter carrying, and airdrop capabilities shall be included. A brief description of safety belts and harnesses shall also be included.

3.2.3.2 Aircraft cargo area. A general description of the aircraft cargo area shall be provided, including, but not limited to, the following:

- a. Cargo compartment. Envelope profile and cross sectional drawings, showing all dimensions in inches and compartment identification by letter, shall be provided. Critical dimensions which limit full use of the cargo compartment shall also be provided. Coverage shall include information pertaining to location of electrical outlets and type of electrical power supplied in the cargo compartment as well as brief coverage of communication systems and lighting equipment which may be used during cargo loading and off-loading. Information on the location, type, and dimensions of each cargo compartment overboard vent shall be provided.

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- b. Cargo area floors. A description shall be given of the main cargo floors, treadways (when required), and maneuvering areas. Plan views of the cargo floor, showing locations of tiedown fittings, roller conveyors, and restraint/guide rails shall also be included.
- c. Cargo loading ramps. Where applicable, description of all parts of the aircraft ramp system (basic ramps, ramp extensions and ramp toes) shall be provided. This shall include the relative angles between system components and between the system, the ground and the cargo floor. Plan views of the ramp system, showing the location of tiedown fittings, roller conveyors, and restraint/guide rails shall also be included.
- d. Personnel and troop provisions and access areas. Personnel and troop entrance and exit doors shall be identified and described with any pertinent features included. A plan view of troop seating arrangement and litter provisions shall be included. A general description of comfort provisions shall also be included. Emergency provisions and exits shall be identified.
- e. Cargo doors. Cargo doors shall be identified and any pertinent features described, including limiting dimensions.
- f. Cargo tiedown fittings. Cargo tiedown fittings shall be described listing type, strength ratings (specify design limit or ultimate), and location in the cargo area, including stowage locations, when applicable. Identifying color codes and markings shall be explained.

3.2.3.3 Aircraft cargo aids. Where applicable, a description of aircraft cargo loading and off-loading aids, and cargo securing equipment shall include, but not be limited to, the following:

- a. Auxiliary ramps/bridges.
- b. Beveled step-up shoring.
- c. Splice plates.
- d. Cargo ramp support stand.
- e. Cranes/hoists.
- f. Snatch blocks.
- g. Pulleys.
- h. Winches.
- i. Tiedown devices.
- j. Roller conveyors/ball transfer pads.
- k. Guide/restraint rails.
- l. Tail support devices.
- m. Pry bars.

3.2.3.3.1 Cargo aid stowage. Stowage provisions shall be described for all cargo aids which are carried on the aircraft.

3.2.4 Chapter 3 – aircraft configuration. This chapter shall be arranged to present all information necessary for aircraft preparation, functional checks and step-by-step installation instructions for the following aircraft equipment:

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- a. Tail supports, ramps, and doors.
- b. Restraint rails and roller conveyors.
- c. Sidewall and centerline seats.
- d. Stanchion kit.
- e. Litter provisions.
- f. Rigid aft or forward facing seats, troop seats, safety belts, and harnesses.
- g. Oxygen system.
- h. Crane and winch.
- i. Load assist devices.
- j. Support jacks.
- k. Airdrop systems installation.
- l. Cargo tiedown fittings.

3.2.5 Chapter 4 – general procedures. This chapter shall contain general instructions relative to load preplanning/planning, loading, postloading, off-loading, and winching/hoisting procedures (charts, scales, drawings, etc.). The data and information presented in this chapter shall pertain to cargo which can be loaded and transported in the aircraft without the use of special handling procedures such as those discussed in 3.2.7. Unless otherwise specified by the acquiring activity (see 6.2), Chapter 4 shall be divided into five sections as follows:

- a. Section I – Load Planning.
- b. Section II – Load Methods and Restraint.
- c. Section III – Winching.
- d. Section IV – On/Off-loading Procedures.
- e. Section V – Charts and Graphs.

3.2.5.1 Section I – load planning. Unless otherwise specified by the acquiring activity (see 6.2), load planning shall present instructions for, but not limited to the following:

- a. Aircraft capability/capacity data.
- b. General weight and balance requirements.
- c. Loading and placement of hazardous cargo.
- d. Maximum weight per mission.
- e. Weight and balance factors and formulas.
- f. Center of gravity computations for aircraft and cargo.
- g. Weight and balance computer operation (if installed).

3.2.5.1.1 Aircraft capability/capacity data. The following strength and physical limitation information for cargo area floors and roller conveyers shall be provided to support load planning.

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- a. Cargo area floors. Strength capability data for the main cargo floors, treadways (if applicable), and maneuvering areas shall be provided. A plan view of the cargo floor showing variations in floor strength and local concentrated load limitations in various areas shall also be included. Strength data for the ramps, where applicable, shall be included. The data provided shall include, but shall not be limited to, the following parameters:
  - (1) Maximum allowable loads on and off treadways, if applicable, for both loading/off-loading and flight conditions, shall be shown for the entire cargo floor area, including the ramp. This information shall be derived from test data and shall represent the actual floor strength capability.
  - (2) Crushing allowable in pounds per square inch (psi), as well as working allowable (in psi), for both loading/off-loading and flight conditions shall be shown for all areas of the cargo floor, including the ramp. This information shall be based on actual floor strength test data.
  - (3) Allowable wheel loads on and off treadways, if applicable, for both loading/off-loading and flight conditions, shall be determined for the entire cargo floor and ramp using actual floor capability test results. These data shall cover solid rubber, pneumatic, and steel wheels, and shall be shown in graphic form for various width wheels, i.e., wheel width versus (vs) allowable load for specified floor regions. The data provided shall also include sample problems for skid and tracked vehicle loads.
  - (4) Shoring requirements shall be established for steel and rubber wheels, pneumatic tires, and for rolling and parking loads on and off the treadway, if applicable. This information shall be derived from test data.
- b. Roller conveyors. Information shall be provided on the load carrying capabilities. Load carrying data provided shall include individual roller strength based on test data and the capabilities of various combinations of rollers (i.e., per row of rollers across the cargo floor, per specific length or given number of rollers in one conveyor, etc.). Locations shall be in terms of aircraft/ramp buttlines and stations. The types of rollers in each conveyor, and conveyor interchangeability information shall also be provided.

3.2.5.1.2 General weight and balance requirements. This paragraph shall include all the factors that must be taken into consideration before actual loading is accomplished.

3.2.5.1.3 Loading and placement of hazardous cargo. This paragraph shall identify the planning required for all classes of hazardous materials that may be transported, their location on the aircraft and appropriate jettison information.

3.2.5.1.4 Maximum weight per mission. A statement shall be included that prior to loading, loading personnel shall assemble data pertinent to the aircraft weight and the item(s) of equipment to be loaded (such as weight, dimensions, center of gravity [CG] location, contact area, and contact area ground pressure) for use in positioning the load.

3.2.5.1.5 Weight and balance factors and formulas. This paragraph shall contain a graph or list of various formulas used in computing aircraft weight and balance calculations (see Figure 1).

3.2.5.1.6 Center of gravity computations for aircraft and cargo. A graph showing approximate allowable net cargo CG vs fuselage stations shall be included. The graph shall include loading from

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zero to maximum cargo and minimum to maximum fuel. The graph shall be based upon a range of aircraft basic weights and CG locations to allow for anticipated variations in these values. The graph shall contain instructions to the effect that final loading for operation of the particular aircraft shall be within the CG range. (Include a reference to the applicable Basic Weight Checklist and Loading Data technical manual.) An example of the computation required to determine the CG of a typical cargo load shall be included (see Figure 2).

3.2.5.1.7 Weight and balance computer operation. A reference to the weight and balance computer (if installed) as the source of information for computation of final load position in the aircraft shall be included.

3.2.5.2 Section II – load methods and restraints. This section shall have the following arrangement. Appropriate warnings, cautions, and notes as required to assure safety of operations shall be included.

- a. General (on/off-loading, restraining and securing cargo).
- b. Loading methods.
- c. General vehicle on/off-loading.
- d. Palletized cargo on/off-loading.
- e. Passenger/troop on/off-loading.
- f. Restraint criteria.

3.2.5.2.1 General. This paragraph shall discuss the general contents of this section relative to cargo on/off-loading and restraints.

3.2.5.2.2 Loading methods. Loading methods shall include information pertaining to floor structure, material handling equipment, and mission accomplishment. Procedures shall be required for specific items of cargo depending on the size, weight, and physical characteristics. Portable loading ramp extension assembly/disassembly information and the use of steel bridge plates, pry bars, winches, and forklifts shall be included.

3.2.5.2.3 General vehicle on/off-loading. Instructions, safety precautions, shoring requirements, and the use of hand signals (Navy only, see Figure 3) for loading and off-loading of equipment and placing it into position by inflight axle loads on the cargo floor shall be included. Instructions for securing vehicles for turbulence and the following procedures shall also be included:

- a. Assembly of equipment for loading (e.g., vehicles, tiedown devices, chocks, and loading aids).
- b. Operation of cargo doors, ramps, load assist devices, aircraft support struts/jacks, etc.
- c. Assembly and checking of off-loading aids.
- d. Releasing of cargo restraint devices.
- e. Preparation of cargo compartment and floor including stowage of seats, installation of fittings, etc.



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3.2.5.2.4 Palletized cargo on/off-loading. Instructions, safety precautions, shoring requirements, and use of hand signals (Navy only, see Figure 3) for loading and off-loading of palletized cargo shall include those requirements in 3.2.5.2.3 (a. through e.) and the following:

- a. Pallet construction.
- b. Pallet load limitations.
- c. Pallet preparation.
- d. Limitations/restraints for shipping of empty pallets.
- e. Aircraft pallet positions and loading procedures.

3.2.5.2.5 Passenger/troop on/off-loading. A description of all steps necessary for loading and off-loading troops shall be included as follows:

- a. Instructions for operation of safety belts and harnesses or a reference to the appropriate flight manual passenger briefing.
- b. Instructions for troop loading procedure.
- c. Instructions for troop off-loading procedure.

3.2.5.2.6 Restraint criteria. Restraint criteria shall be provided, as applicable, for the aircraft model and shall include the following instructions:

- a. Application of applied restraints. This shall include the following as it applies to the load forces encountered during flight and crash landing:
  - (1) Fundamental principles of cargo restraint.
  - (2) Cargo restraint load factors.
  - (3) Minimum resistance force.
  - (4) Effects of applying restraints at angles.
- b. Application of tiedown devices. Application of tiedown devices shall take into account that the load on a tiedown device shall be compatible with the strength of the fitting. Instructions for tying down the equipment or cargo and methods of attaching tiedowns shall include the following:
  - (1) Determination of type and quantity of tiedown devices required.
  - (2) Show location of tiedown rings.
  - (3) General rules for applying tiedowns.
  - (4) Tiedown angles.
  - (5) Tiedown angle ratio method.
  - (6) Tiedown rings – vertical restraint limits.

3.2.5.3 Section III – winching. This section shall have the following arrangement. Appropriate warnings, cautions, and notes as required to assure safety of operations shall be included.

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- a. General.
- b. Friction effects on winching.
- c. Winching procedures.

3.2.5.3.1 General. This paragraph shall discuss the general contents of this section and the need for winching procedures for certain cargo loads.

3.2.5.3.2 Friction effects on winching. The effects of friction during winching operations shall be explained by use of the descriptive requirements identified below:

- a. Friction
- b. Coefficient of friction.
- c. Rolling friction.
- d. Average coefficient of friction.
- e. Winching up an incline.
- f. Winching along horizontal cargo floor.

3.2.5.3.3 Winching procedures. These procedures shall contain instructions for on/off-loading of cargo by winching as identified below:

- a. Preparation.
- b. Winch cables.
- c. Cargo winch operating procedures using cargo winch control panel or remote control grip assembly.
- d. Portable heavy cargo winch (installation, preoperational checkout, and operation).
- e. Winch loading (palletized cargo or airdrop platforms).
- f. External winching using vehicle mounted winch.
- g. Vehicle self winching.

3.2.5.4 Section IV – on/off-loading procedures. This section shall contain checklist format information to be used for quick reference during on/off-loading as identified below. A statement shall be included stating that this section is incomplete without the loadmaster checklist (see Figure 4).

- a. Load planning checklist.
- b. General winching preparation checklist.
- c. General winching checklist.
- d. Palletized cargo loading checklist.
- e. Vehicle inspection checklist.
- f. Vehicle loading checklist.

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- g. Cargo off-loading checklist.
- h. Personnel loading checklist.
- I. Personnel off-loading checklist.

3.2.5.5 Section V – charts and graphs. This section shall contain charts and graphs for determining cargo size, weight, shoring requirements, and loading area clearance limits. The arrangement shall be as shown below. Appropriate warnings, cautions, and notes as required to assure safety of operations shall be included.

- a. General.
- b. Geometric considerations.
- c. Structural considerations.
- d. Shoring requirements.
- e. Roller conveyer limits.

3.2.5.5.1 General. This paragraph shall discuss the general content and purpose of this section.

3.2.5.5.2 Geometric considerations. For the purpose of identifying cargo size limitations based on the internal dimensions of the cargo compartment and forward and aft openings, explanatory text, charts, and graphs shall include but not be limited to, the following:

- a. Cargo size limitations.
- b. Cargo weight loading envelope.
- c. Forward and aft loading area clearance limits.
- d. Forward and aft loading vehicle projection limits.
- e. Vehicle critical dimensions.
- f. Ramp crest heights and crest limits.
- g. Parking overhang clearance limits.
- h. Loading overhang limits.
- I. Cargo compartment plan view.

3.2.5.5.3 Structural considerations. Loading limitations based on the weight of the cargo, cargo floor limits and compartment loads, shall be identified by the use of explanatory text, charts, and graphs, including but not limited to, the following:

- a. Cargo weight and cargo floor limitations.
- b. Typical cargo loading within floor loading limitations.
- c. Forward and aft cargo ramp on/off-loading limitations.
- d. Cargo maximum allowable lateral CG location.
- e. Concentrated floor loads.

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- f. Concentrated floor loads with rubber and non-rubber contact area.
- g. Maximum allowable floor loads for hard rubber, steel wheels, or track pads.
- h. Maximum allowable floor loads for concentrated cargo located over restricted areas.
- I. On/off-loading maximum allowable loads.

3.2.5.5.4 Shoring requirements. Shoring requirements that may be needed for loading concentrated loads to protect the ramp and cargo shall be identified by the use of explanatory text, charts and graphs, including, but not limited to, the following:

- a. Shoring materials.
- b. Shoring for weight distribution.
- c. Rolling, parking, and sleeper shoring.
- d. Calculation of required shoring for concentrated loads.

3.2.5.5.5 Roller conveyer limits. Logistics and Aerial Delivery System (ADS) conveyer limits shall be identified by the use of explanatory text, charts, and graphs to identify unit weight and CG location, contact points on roller conveyors, length of roller conveyors, and roller load factors.

3.2.6 Chapter 5 – emergency procedures. This chapter shall contain all ground preparations required for cargo emergency procedures. It shall include, ground preparation for emergency inflight jettison of cargo loaded on pallets, ADS cargo loaded on airdrop platforms, nuclear weapon cargo, and reference to the applicable service directives pertaining to hazardous cargo. Unless otherwise specified by the acquiring activity (see 6.2), this chapter shall have the following arrangement:

- a. Emergency procedures.
- b. Preflight and postflight emergency procedures.
- c. Inflight jettison procedures.

3.2.7 Chapter 6 – specific procedures. This chapter shall contain specific instructions for preloading, loading, restraining, postloading, preflight, special handling, and off-loading procedures for all cargo which, due to physical characteristics, prevents it from being classified as general cargo (see 6.6.1). Instructions, listed in proper sequence, shall be provided for preparation of the item for loading and safe restraint of the load item, or combination of items. This chapter shall be so arranged that the instructions for each item of outsized cargo are divided into separate sections to enable deletion, if necessary, or addition of new material without affecting other major sections of the manual. Each item covered shall include a general description paragraph and an identification line drawing. Text may reference appropriate paragraphs in Chapters 3 and 4 for applicable configuration and general procedures.

3.2.7.1 Introductory text. A statement shall be included that a loading diagram is not provided for each item listed, but that one diagram may serve for all items grouped according to similarity of special instructions. The applicable diagram for each item can be found in the List of Illustrations.

3.2.7.2 Illustrations. Illustrations shall consist of a floor plan drawing which depicts all floor fittings (see Figure 5). Items such as vehicles showing bumpers, wheels, axle centerline, etc., to indicate the areas for location of the item, or items, can be superimposed over the floor plan drawing

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to show tiedowns and points of attachments. Keyed to the floor plan drawing shall be a tiedown index similar to the one shown in Figure 6. The floor plan illustration shall be large enough to be clearly legible. Foldout pages shall be used for this purpose if required by the acquiring activity (see 6.2). The floor plan illustration and the tiedown index shall be on facing pages but may be on the same page if space allows and clear legibility can be obtained. More than one tiedown index page and floor plan drawing may be used if necessary for clarity of a typical load.

3.2.7.3 Loading data table. A table of loading data shall be furnished for each major item covered. Format shall be similar to that shown in Figure 7. The typical loads used shall not result in values which exceed the approved gross weight or CG limits established for the aircraft. The system of restraint shall be such that the load is in equilibrium when secured in the aircraft.

3.2.7.4 Miscellaneous equipment. Limited instructions and details for outsized cargo not requiring special tiedown features nor the complex detailed data as specified in paragraphs 3.2.7 through 3.2.7.3 shall be included. However, when minor modifications of this equipment is required for loading and off-loading this information shall also be included. The data shall be similar to the miscellaneous equipment loading data table shown on Figure 8.

3.2.8 Chapter 7 – airdrop procedures. This chapter shall contain specific instructions relative to preloading, preflight, loading, and off-loading procedures for airdrop of personnel and cargo. Nomenclature shall be the same as TO 13C7-1-5 (FM 10-500). A chart showing standard extraction parachutes and lock setting data shall be provided and include information similar to that shown in Figure 9. This chart shall have the same criteria as contained in TO 13C7-1-5 (FM 10-500). A rigging material chart (Navy only) similar to the one shown on Figure 10 shall also be provided. This chapter shall be divided into two sections. The sections shall provide all necessary information with respect to aircraft rigging, rigging of extraction parachutes, setting and checking of platform locks, etc. Unless otherwise specified by the acquiring activity (see 6.2), the sections shall include but not be limited to, the following:

- a. Section I – Airdrop of Personnel.
- b. Section II – Airdrop of Cargo.

3.2.8.1 Section I – airdrop of personnel. This section shall have the following arrangement. Appropriate warnings, cautions, and notes as required to assure safety of operations shall be included.

- a. General (personnel airdrop mission).
- b. Preloading procedures.
- c. Equipment installation and checkout.
- d. Preflight procedures.
- e. Loading procedures.
- f. Off-loading procedures.

3.2.8.2 Section II – airdrop of cargo. This section shall have the following arrangement. Appropriate warnings, cautions, and notes as required to assure safety of operations shall be included.

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- a. General (cargo airdrop mission).
- b. System components.
- c. Platform acceptance check.
- d. Loading procedures.
- e. Emergency restraint requirements.
- f. Extraction parachutes release mechanism.
- g. Inspection/rigging of extraction parachutes and sling extraction line bag.

3.2.9 Alphabetical index. An alphabetical index shall be included and prepared in accordance with the requirements of MIL-STD-38784.

3.3 Nuclear weapon cargo loading manual. The nuclear weapon cargo loading manual shall be arranged as follows. Appendix B provides the DTD for the electronic delivery of this manual.

- a. Front matter (see 3.2.1).
- b. Chapter 1 – Introduction.
- c. Chapter 2 – Loading, Off-loading, and General Procedures.
- d. Chapter 3 – Bombs – Specific Procedures.
- e. Chapter 4 – Warheads – Specific Procedures.
- f. Chapter 5 – Missiles and Other Nuclear Weapon Cargo – Specific Procedures.
- g. Chapter 6 – Emergency Procedures.
- h. Chapter 7 – Emergency Logistic Movement Procedures.
- i. Alphabetical index (see 3.2.9).

3.3.1 Chapter 1 – introduction. Chapter 1 shall be prepared in accordance with the requirements of 3.2.2, except that the following information shall also be included:

- a. Nuclear safety certification statement.
- b. Two-person concept.
- c. Designation of bombs, warheads, basic assemblies, and carriers.

3.3.1.1 Nuclear safety certification statement. The following statement shall be included as a standard paragraph:

“The support equipment and procedures contained herein have been evaluated and are acceptable for this prescribed routine use with nuclear weapons.”

3.3.1.2 Two-person concept. Unless otherwise specified by the acquiring activity (see 6.2), the definition of the two-person concept as given in AFR 122-4 (Air Force) and AIRLANT/AIRPAC Instructions (Navy) shall be included in this paragraph.

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3.3.2 Chapter 2 – loading, off-loading, and general procedures. Unless otherwise specified by the acquiring activity (see 6.2), this chapter shall contain loading and off-loading procedures common to all nuclear weapon cargo, using various methods and equipment. This chapter shall have the following arrangement with appropriate warnings, cautions, and notes to assure safety of operation.

- a. General.
- b. General precautions and practices.
- c. Restrictions on tiedown (see 3.2.5.2.6).
- d. Shoring (see 3.2.5.5.4).
- e. Loading aids (see 3.2.3.3).
- f. Winch preparation (see 3.2.5.3.3).
- g. Loading/off-loading and jettisoning (see 3.2.5.2).

3.3.2.1 General. This paragraph shall discuss the general content and purpose of this chapter and shall contain a reference to the appropriate loading instructions manual (see 3.2) and checklist (see 3.4) to be used in conjunction with these procedures.

3.3.2.2 General precautions and practices. Information relative to proper inspections and general precautions to be followed when loading nuclear weapon cargo shall be included.

3.3.3 Chapter 3 – bombs – specific procedures. In addition to the information in 3.2.7 this chapter shall include a general paragraph containing a brief description of each bomb to be loaded and off-loaded.

3.3.4 Chapter 4 – warheads – specific procedures. In addition to the information in 3.2.7 this chapter shall include a general paragraph containing a brief description of each warhead to be loaded and off-loaded.

3.3.5 Chapter 5 – missiles and other nuclear weapon cargo – specific procedures. In addition to the information in 3.2.7 this chapter shall include a general paragraph containing a brief description of each missile or nuclear weapon to be loaded or off-loaded.

3.3.6 Chapter 6 – emergency procedures. Unless otherwise specified by the acquiring activity (see 6.2), this chapter shall contain policies and procedures for communication, firefighting, general accidents, emergency destruction, unscheduled landings, accident/incident follow-up procedures, and applicable information contained in 3.2.6. These procedures shall be covered by reference to other manuals or detailed instructions.

3.3.7 Chapter 7 – emergency logistic movement procedures. This chapter shall cover emergency logistic movement of nuclear weapon cargo for maximum tested and maximum density aircraft loads. Arrangement shall be similar to chapters 2, 3, 4, and 5 except routine loading and off-loading procedures in chapter 2 shall not be repeated in this chapter.

3.4 Checklists. Unless otherwise specified by the acquiring activity (see 6.2), loadmaster checklists and nuclear weapon cargo checklists shall be prepared to cover each phase of the specified procedures. The format shall be as shown in Figure 4 and shall conform to the requirements of MIL-PRF-5096 (Air Force) and the general requirements of MIL-C-81222 (Navy). The checklists

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shall include, but not limited to the categories shown below. Appendix C provides the DTD for electronic delivery of the manual.

- a. Title page.
- b. List of effective pages.
- c. Foreword.
- d. Table of contents.
- e. Load planning.
- f. General winching preparation.
- g. General winching.
- h. Palletized cargo loading.
- i. Vehicle inspection.
- j. Vehicle loading.
- k. Cargo off-loading.
- l. Personnel loading.
- m. Personnel off-loading.

**4. VERIFICATION.**

4.1 Verification. Unless otherwise specified in the contract or purchase order:

- a. Validity of the accuracy and scope of the technical content, shall be the responsibility of the contractor (see 6.2).
- b. The contractor shall provide suitable facilities to perform the validation functions specified herein.
- c. The contractor's existing quality assurance procedures shall be used.
- d. The government reserves the right to review any of the verifications when such reviews are deemed necessary to ensure supplies and services conform to the prescribed contractual requirements.

4.1.1 Minimum verification requirements. As a minimum, verification shall ensure the following:

- a. Suitability of the loading and offloading technical manuals, and checklists for the intended maintenance environment.
- b. Usability by the intended users.
- c. Compatibility with other Government systems.

4.1.2 Compliance. All loading and offloading technical manuals, and checklists shall meet all of the requirements of sections 3 and 5 of this specification and the appropriate DTD Appendix, as required by the acquiring activity (see 6.2). The requirements set forth in this specification shall



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become a part of the contractor's overall inspection system or quality program. The absence of any requirements in this specification shall not relieve the contractor of the responsibility of ensuring that all products or supplies submitted to the Government for acceptance comply with all requirements of the contract. Use of sampling inspections shall be at the discretion of the contractor, and in accordance with commercially acceptable quality assurance procedures. However, use of sampling in QA procedures does not authorize submission of known defective material, either indicated or actual, nor does it commit the Government to accept defective material.

**5. PACKAGING.**

5.1 Packaging. For acquisition purposes, the packaging requirements shall be as specified in the contract or order (see 6.2). When actual packaging of materiel is to be performed by DoD personnel, these personnel need to contact the responsible packaging activity to ascertain requisite packaging requirements. Packaging requirements are maintained by the Inventory Control Point's packaging activity within the Military Department or Defense Agency, or within the Military Department's System Command. Packaging data retrieval is available from the managing Military Department's or Defense Agency's automated packaging files, CD-ROM products, or by contacting the responsible packaging activity.

**6. NOTES.**

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

6.1 Intended use. The technical manuals covered by this specification are intended for use by personnel as guides for properly loading, securing loads, and offloading cargo aircraft.

6.2 Acquisition requirements. Acquisition documents must specify the following:

- a. Title, number, and date of this document.
- b. Issue of the DODISS to be cited in the solicitation, and if required, the specific issue of individual documents referenced (2.1.1, 2.1.2).
- c. If arrangement of chapters and sections are other than as specified in this document (3.1.1).
- d. If load planning is other than as specified in this document (3.2.5.1).
- e. If arrangement of chapter 5 is other than as specified in this document (3.2.6).
- f. If foldout pages are required for floorplans (see 3.2.7.2)
- f. If chapter 7, section arrangement is to be other than as specified in this document (3.2.8).
- g. If chapter 2 is to contain loading and off-loading procedures common to all nuclear weapon cargo (3.3.2).
- h. If chapter 6 emergency procedures are other than as specified in this document (3.3.6).
- i. If checklists are to be prepared as specified in this document (3.4).
- j. If performance of inspection is to be other than as specified in this document (4.1).

6.3 Definitions. To clarify the terms used throughout this specification, the following definitions are given:

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6.3.1. Cargo requiring specific procedures. Items that are transportable but require special instructions regarding loading procedures, restraint, shoring, restricted locations in the aircraft, or which may be transportable if partially disassembled.

6.4 Acronyms. The acronym(s) used in this document are defined as follows:

ADS – Aerial Delivery System

6.5 Subject term (key word) listing.

Aircraft configuration  
General procedures  
Emergency procedures  
Specific procedures  
Airdrop procedures

6.6 Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extensiveness of the changes.

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## 1. WEIGHT AND BALANCE FORMULAS:

$$\text{ARM} \times \text{WEIGHT} = \text{MOMENT}$$

$$\text{MOMENT} \div \text{ARM} = \text{WEIGHT}$$

$$\text{MOMENT} \div \text{WEIGHT} = \text{ARM}$$

$$\frac{\text{LENGTH OF MAC} \times \text{DESIRED \% MAC}}{100} + \text{DISTANCE TO LEMAC}$$

$$\text{DESIRED AIRPLANE CG STATION}$$

$$\text{GROSS MOMENT} \div \text{GROSS WEIGHT} = \text{AIRPLANE CG STATION}$$

$$\frac{\text{AIRPLANE CG STATION} - \text{LEMAC}}{\text{LENGTH OF MEAN AERODYNAMIC CHORD}} \times 100 = \% \text{ OF MAC}$$

## 2. VEHICLE CG FORMULAS:

$$\frac{\text{DISTANCE FROM FRONT AXLE TO CG} \times \text{VEHICLE GROSS WEIGHT}}{\text{WHEEL BASE}} = \text{REAR AXLE WEIGHT}$$

$$\frac{\text{REAR AXLE WEIGHT} \times \text{WHEEL BASE}}{\text{VEHICLE GROSS WEIGHT}} = \text{DISTANCE FROM FRONT AXLE TO VEHICLE CG}$$

**NOTE**

FOR VEHICLES HAVING MORE THAN TWO AXLES, MULTIPLY EACH AXLE WEIGHT BY ITS DISTANCE FROM THE FRONT AXLE, AND ADD THEM ALL TOGETHER, DIVIDE THIS SUM BY THE SUM OF ALL THE AXLE WEIGHTS TO GET THE DISTANCE FROM THE FRONT AXLE TO THE VEHICLE CG

$$3. \frac{\text{AXLE WEIGHT}}{\text{NUMBER OF WHEELS}} = \text{WHEEL LOAD (POUNDS)}$$

## 4. PSI AND PSF FORMULAS:

## A. SQUARE OR RECTANGULAR BOXES:

$$\frac{\text{WEIGHT OF BOX}}{\text{LENGTH} \times \text{WIDTH}} = \text{PSI OR PSF}$$

## B. DRUMS WITHOUT RIMS:

$$\frac{\text{WEIGHT OF DRUM}}{0.785 \times \text{DIAMETER SQUARED}} = \text{PSI OR PSF}$$

## C. DRUMS WITH RIMS:

$$\frac{\text{WEIGHT OF DRUM}}{(\text{OD} \div \text{ID}) (\text{OD} - \text{ID}) \times 0.785} = \text{PSI OR PSF}$$

## D. SKIDDED BOXES:

$$\frac{\text{WEIGHT OF BOX}}{\text{LENGTH OF SKID} \times \text{WIDTH OF SKID} \times \text{NUMBER OF SKIDS}} = \text{PSI OR PSF}$$

## E. BOXES WITH TRIANGULAR SHAPED BASES:

$$\frac{\text{WEIGHT OF BOX}}{\frac{1}{2} \text{ HEIGHT OF TRIANGLE} \times \text{BASE OF TRIANGLE}} = \text{PSI OR PSF}$$

## F. PNEUMATIC TIRES:

$$\frac{\text{TIRE LOAD}}{\text{LENGTH} \times \text{WIDTH} \times 0.785} = \text{PSI OR PSF}$$

## 5. CABLE PULL FORMULA

$$\frac{(\text{COSINE OF RAMP ANGLE} \times \text{FRICTION COEFFICIENT} \div \text{SINE OF RAMP ANGLE}) \times \text{WEIGHT}}{1} = \text{CABLE PULL (POUNDS)}$$

## 6. LOAD SHIFT FORMULA

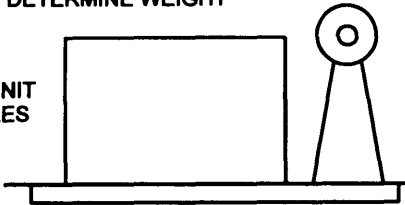
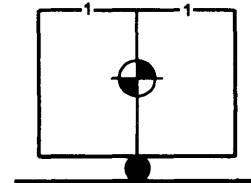
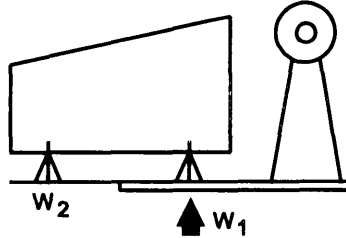
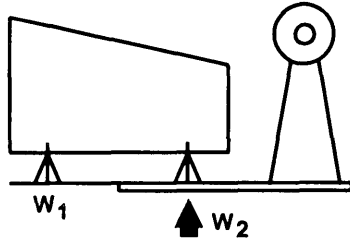
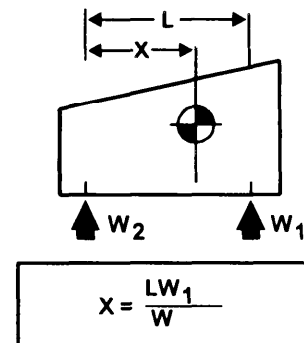
$$\text{LOAD SHIFT ARM} \times \text{LOAD SHIFT WEIGHT} = \text{GROSS WEIGHT} \times \text{CG CHANGE IN INCHES.}$$

$$7. \text{MAC} = 370.52$$

$$\text{LEMAC} = 1254.24$$

FIGURE 1. Typical load planning formulas.

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**I. GENERAL CARGO****A. TO DETERMINE WEIGHT**WEIGH UNIT  
ON SCALES**B. TO DETERMINE CENTER OF GRAVITY**POSITION UNIT  
ON PIPE UNTIL  
IT BALANCES**II. LARGE, OR SKID-MOUNTED CARGO****A. TO DETERMINE WEIGHT****B. TO DETERMINE CENTER OF GRAVITY**

1. IF SCALES CANNOT ACCOMMODATE ENTIRE UNIT, DETERMINE WEIGHT OF EACH END, USING ANGLE IRONS AS FULCRUMS.

**NOTE**

MARK FULCRUM LOCATIONS ON BOTH SIDES OF UNIT WHEN WEIGHING ONE END. LINE UP FULCRUMS WITH MARKS WHEN WEIGHING OPPOSITE END.

2. DETERMINE UNIT WEIGHT BY ADDING END WEIGHTS.

**WHERE**

X = DISTANCE FROM FULCRUM POINT TO CENTER OF GRAVITY

L = DISTANCE BETWEEN FULCRUM POINTS

$W_1$  = WEIGHT OF ONE END OF UNIT

$W_2$  = WEIGHT OF OTHER END OF UNIT

W = TOTAL UNIT WEIGHT ( $W_1 + W_2$ )

1. DETERMINE MOMENT AT FULCRUM POINT W BY MULTIPLYING DISTANCE BETWEEN FULCRUM POINTS(L) BY UNIT WEIGHT AT FULCRUM POINT  $W_1$ .

**NOTE**

THIS FIGURE ILLUSTRATES METHODS OF DETERMINING THE WEIGHT AND CENTER OF GRAVITY LOCATION OF TYPICAL CARGO UNITS. THESE CARGO UNITS INCLUDE GENERAL CARGO AND LARGE OR SKID-MOUNTED CARGO.

FIGURE 2. Example of commutation required for typical cargo load.

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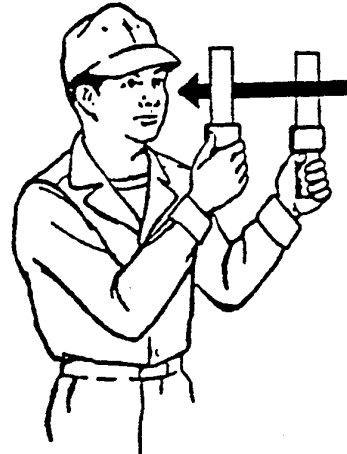
**Signal 1  
Come  
Ahead**

**DAY**



Rapidity of motion to indicate speed.  
Palms in direction of desired motion.

**NIGHT**

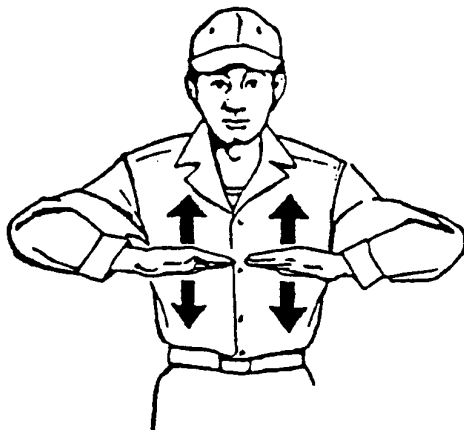


Lights on only when moving in the direction of  
desired vehicle movement.

When conventional flashlights are used, lights shall  
be directed forward.

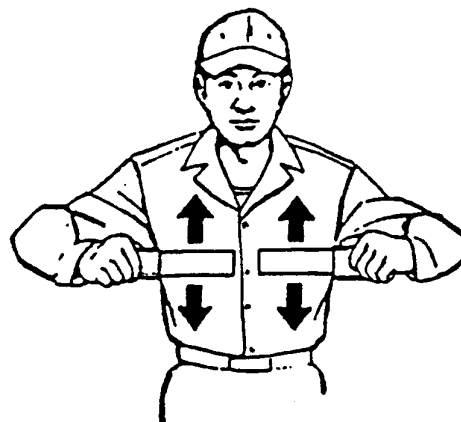
**Signal 2  
Slow Down**

**DAY**



Hands pointed inward, palms flat and  
hands moving up and down.

**NIGHT**



Signal is with two flashlights pointed  
inward, moving up and down.

**FIGURE 3A. Hand signals for directing vehicle movement  
and winching on cargo aircraft (sheet 1 of 10).**

**MIL-PRF-5288H**

**Signal 3  
Stop or Halt**

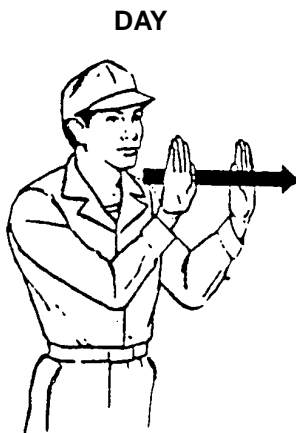


Palms flat, right hand pointed upward, left hand pointed downward.



Night signal with lights in right hand pointed upward, blinking. Left hand with steady light pointed downward. When conventional flashlights are used, light in right hand shall be directed forward blinking.

**Signal 4  
Move in Reverse**



Palms in direction of desired motion.



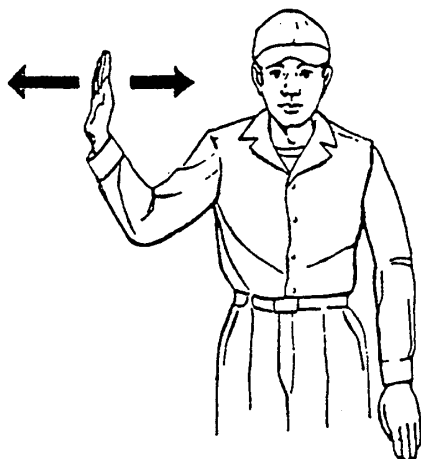
Lights on only when moving in direction of desired movement of vehicle. When conventional flashlights are used, lights shall be directed forward.

**FIGURE 3B. Hand signals for directing vehicle movement and winching on cargo aircraft (sheet 2 of 10).**

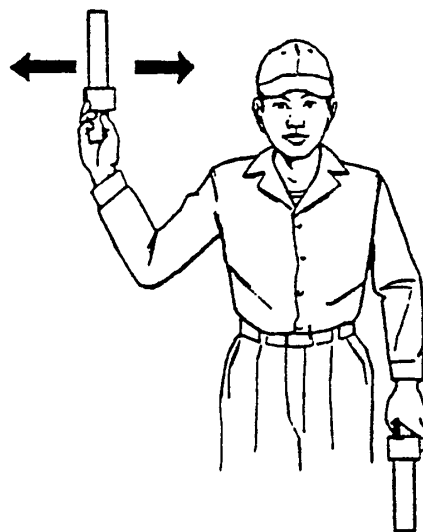
**MIL-PRF-5288H**

**Signal 5  
Turn Left**

**DAY**



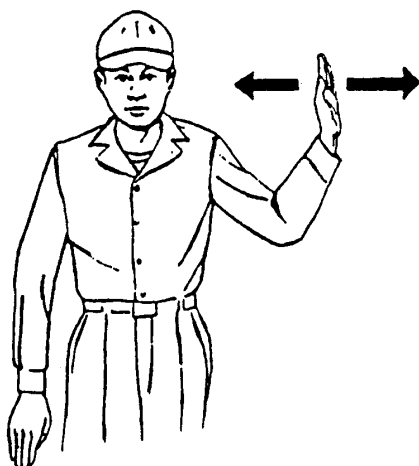
**NIGHT**



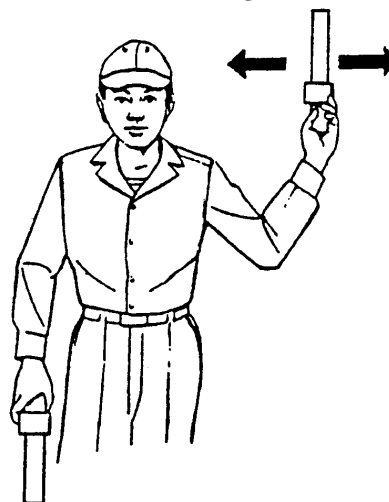
When conventional flashlights are used, light in right hand shall be directed forward.

**Signal 6  
Turn Right**

**DAY**



**NIGHT**



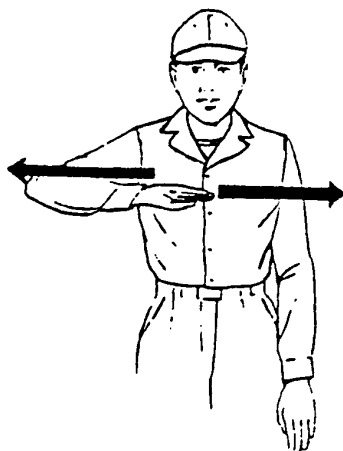
When conventional flashlights are used, light in left hand shall be directed forward.

**FIGURE 3C. Hand signals for directing vehicle movement and winching on cargo aircraft (sheet 3 of 10).**

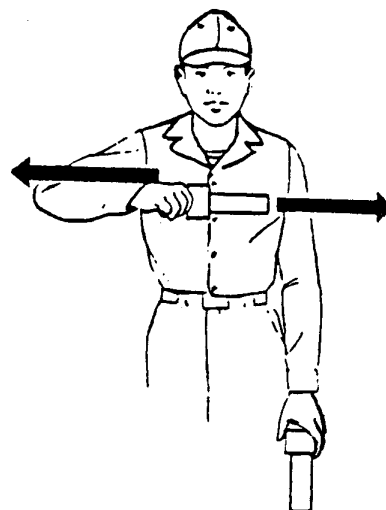
**MIL-PRF-5288H**

**Signal 7  
Turn Off Engine**

**DAY**



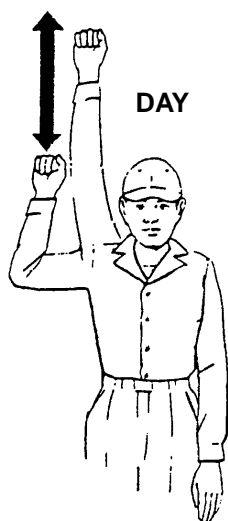
**NIGHT**



Light in left hand pointed downward. When conventional flashlights are used, light in right hand shall be directed forward.

**Signal 8  
Increase Speed**

**DAY**



**NIGHT**



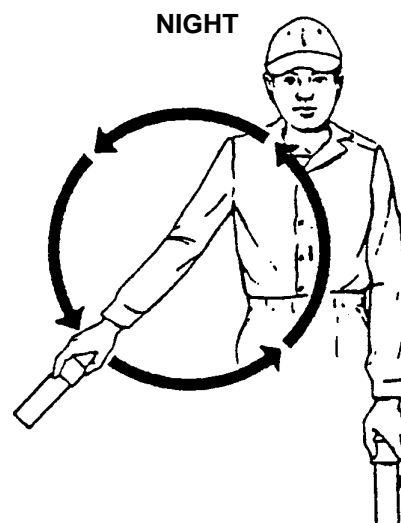
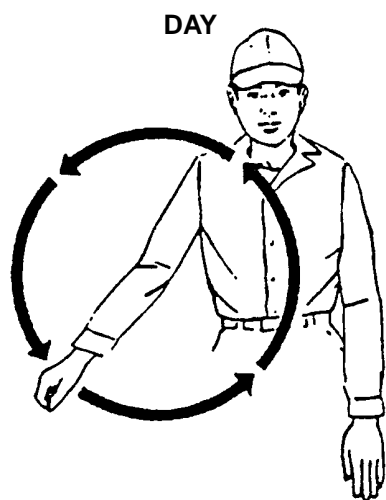
Steady light in right hand. Light in left hand pointed downward. When conventional flashlights are used, light in right hand shall be directed forward.

**FIGURE 3D. Hand signals for directing vehicle movement and winching on cargo aircraft (sheet 4 of 10).**



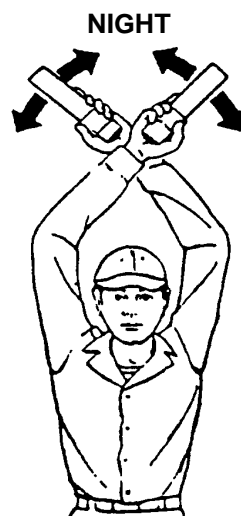
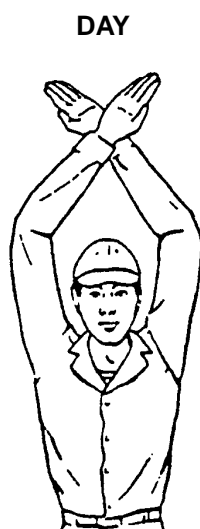
**MIL-PRF-5288H**

**Signal 9  
Start Engines**



Light in right hand rotating. Light in left hand pointed downward. When conventional flashlights are used, light in right hand shall be directed forward.

**Signal 10  
As You Were**

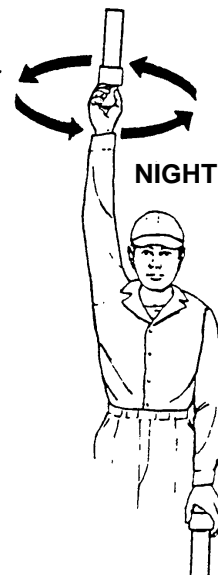
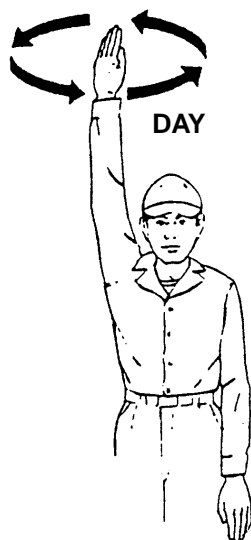


When conventional flashlights are used, lights shall be directed forward

**FIGURE 3E. Hand signals for directing vehicle movement and winching on cargo aircraft (sheet 5 of 10).**

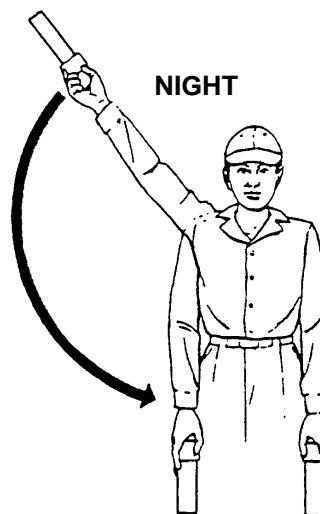
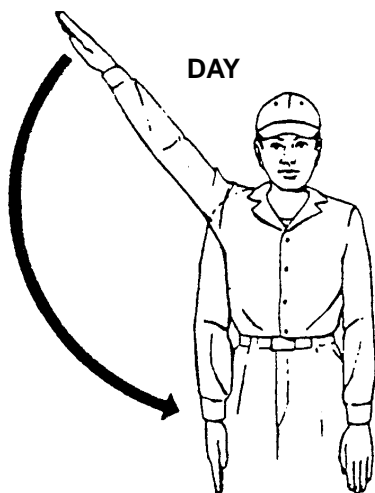
**MIL-PRF-5288H**

**Signal 11  
Assemble**



Move right hand light in circle over head pointed upward. Light in left hand pointed downward

**Signal 12  
Dismount**

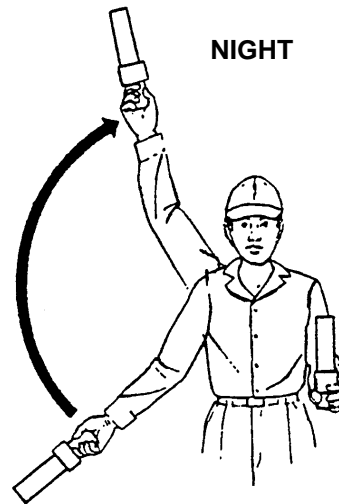
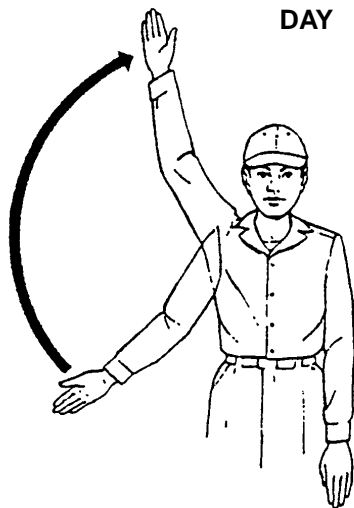


Light in right hand move up and down. Light in left hand pointed downward. When conventional flashlights are used, light in right hand shall be directed forward.

**FIGURE 3F. Hand signals for directing vehicle movement and winching on cargo aircraft (sheet 6 of 10).**

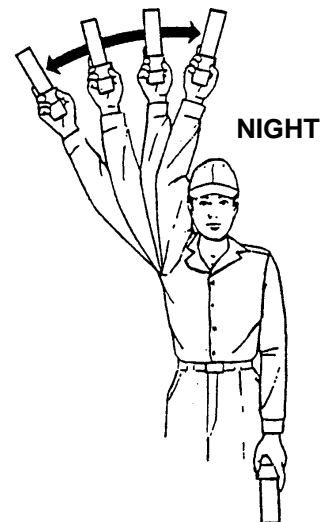
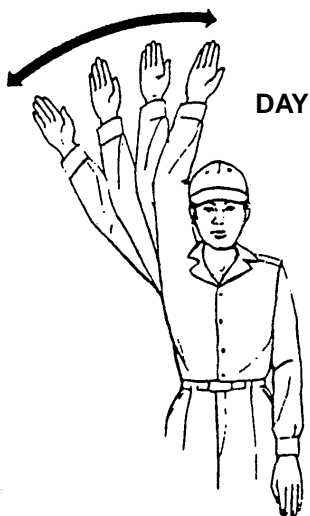
**MIL-PRF-5288H**

**Signal 13  
Mount**



Light in right hand moves up and down. Light in left hand held waist high pointed upward. When conventional flashlights are used, light in right hand shall be directed forward.

**Signal 14  
Attention**

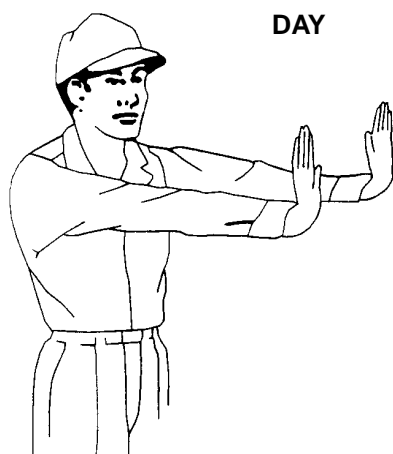


Blinking light in right hand. Light in left hand pointed downward, steady. When conventional flashlights are used, light in right hand shall be directed forward.

**FIGURE 3G. Hand signals for directing vehicle movement and winching on cargo aircraft (sheet 7 of 10).**

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**Signal 15  
Ready**

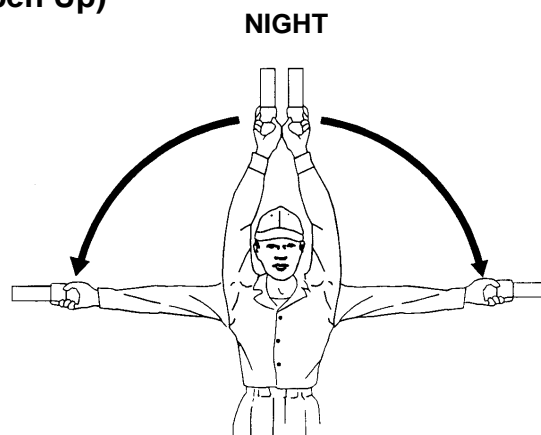
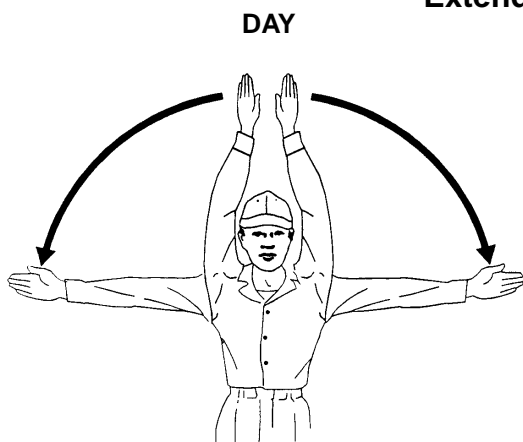


Both arms extended forward, palms facing out



Arms extended forward. Light in each hand pointed forward.

**Signal 16  
Extended (Open Up)**

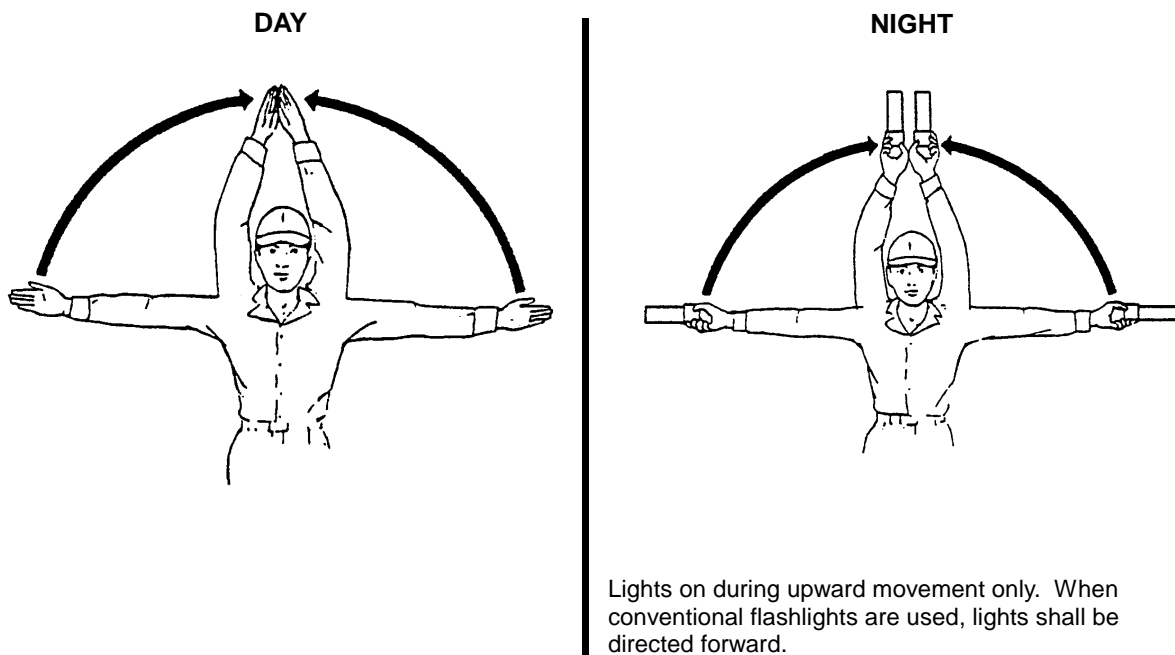


Lights on during downward movement only. When conventional flashlights are used, lights shall be directed forward.

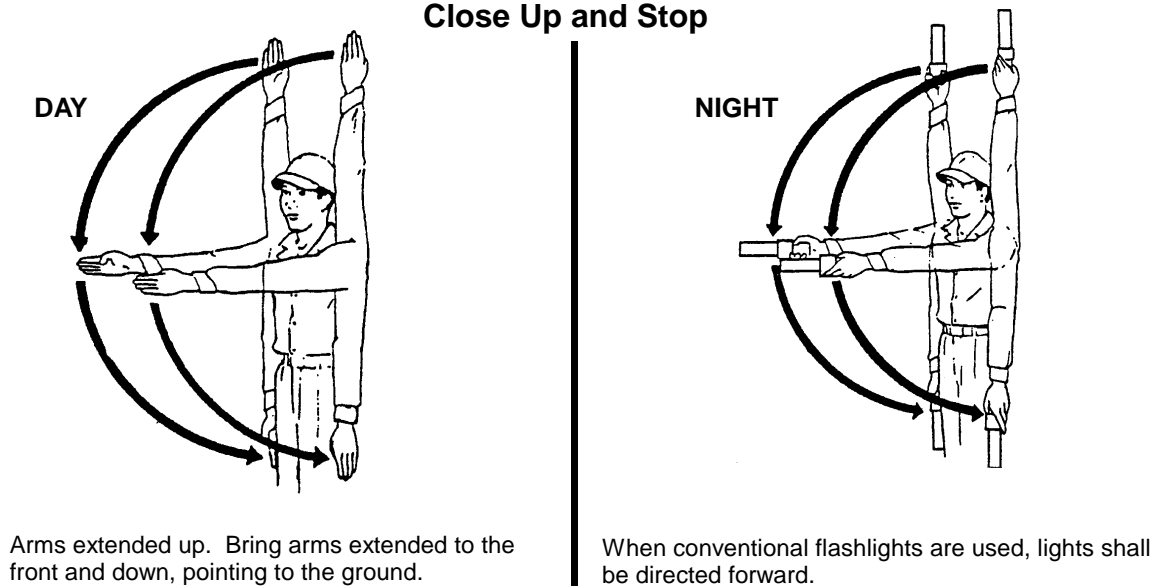
**FIGURE 3H. Hand signals for directing vehicle movement and winching on cargo aircraft (sheet 8 of 10).**

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**Signal 17  
Close Up**



**Signal 18  
Close Up and Stop**

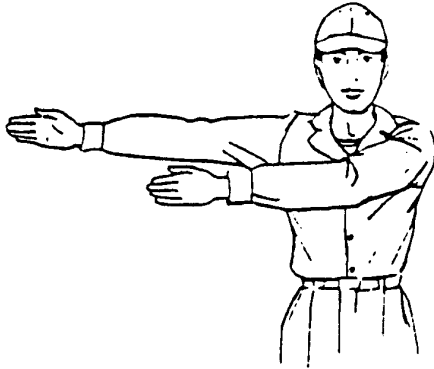


**FIGURE 3I. Hand signals for directing vehicle movement and winching on cargo aircraft (sheet 9 of 10).**

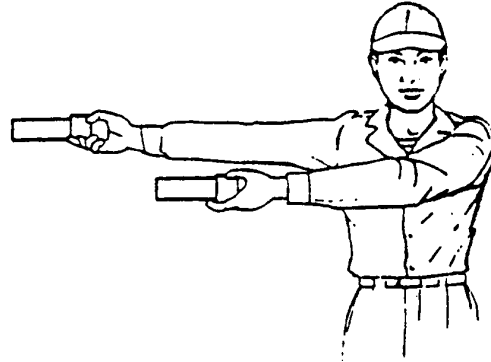
**MIL-PRF-5288H**

**Signal 19  
By the Flank**

**DAY**



**NIGHT**



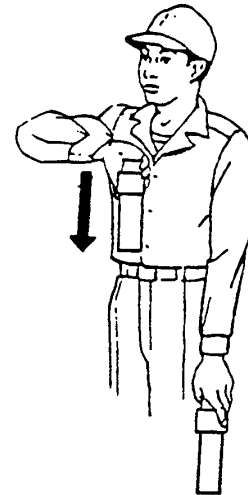
Arms extended to the right. When conventional flashlights are used, light shall be directed forward.

**DAY**



**Signal 20  
Up and Down**

**NIGHT**



Light in right hand used to indicate direction (up or down).  
Light in left hand steady pointed downward.

**FIGURE 3J. Hand signals for directing vehicle movement and winching on cargo aircraft (sheet 10 of 10).**

**MIL-PRF-5288H****CARGO PREPARATION**

- |  |   |
|--|---|
| 1. Vehicle brakes and engines                            | – CHECKED FOR PROPER OPERATION.             |
| 2. Vehicle fuel tanks                                    | – DRAINED SUFFICIENTLY TO PREVENT OVERFLOW. |
| 3. Vehicle fuel tank, oil, and battery caps              | – TIGHTENED.                                |
| 4. Missile dollies, helicopter skids, and like equipment | – CHECKED FOR SECURITY OF ATTACHMENT.       |
| 5. Missiles, helicopters, and like cargo                 | – PROPERLY CRADLED ON CARRIERS.             |
| 6. Contact area pressure of cargo limits                 | – DETERMINED FOR SHORING REQUIREMENTS.      |
| 7. Cargo unit dimensions and weights                     | – DETERMINED.                               |

NOTE: If cargo unit dimensions appear critical, check dimensions against cargo size limit chart.

- |   |                                  |
|---|----------------------------------|
| 8. Center of gravity location                         | – DETERMINED FOR ALL CARO UNITS. |
| 9. Dimensions, weight, and center of gravity location | – MARKED ON CARGO UNITS.         |

**LOAD PLANNING**

- |  |   |
|--|---|
| 1. Cargo sketches                        | – POSITIONED ON AIRCRAFT PROFILE, GIVING CONSIDERATION TO LOCATION OF JETTISONABLE CARGO. |
| 2. Center of gravity station location    | – DETERMINED FOR EACH CARGO UNIT.   |
| 3. Total load center of gravity location | – CALCULATED AND CHECKED AGAINST FORWARD AND AFT LIMITS.                                  |
| 4. Compartment loads                     | – CALCULATED AND CHECKED AGAINST COMPARTMENT LOAD LIMITATIONS.                            |
| 5. Zone loads                            | – CALCULATED AND CHECKED AGAINST ZONE LOAD LIMITATIONS.                                   |
| 6. Restraint criteria                    | – CALCULATED AND TIE DOWN PATTERN PLANNED TO RESTRAIN ALL POSSIBLE CARGO MOVEMENT.        |

FIGURE 4. Example of loadmaster checklist.

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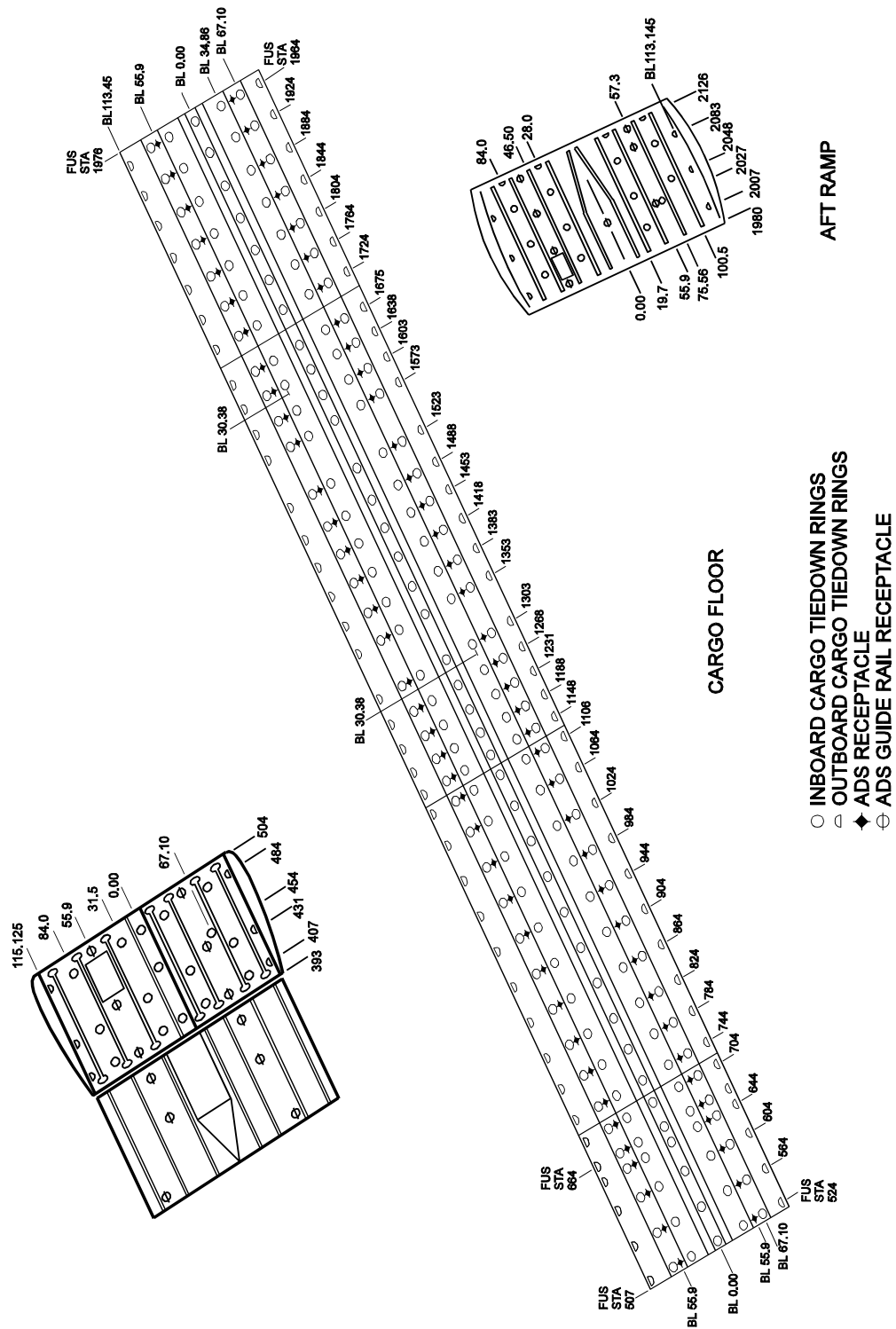


FIGURE 5. Example of tiedown floor plan.



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| <b>VEHICLE<br/>NUMBER</b> | <b>TIEDOWN<br/>FITTING</b> | <b>TIEDOWN DEVICE</b> |             | <b>ATTACH TO VEHICLE AT:</b>  |
|---------------------------|----------------------------|-----------------------|-------------|---|
|                           |                            | <b>QUANTITY</b>       | <b>SIZE</b> |   |
| <b>1</b>                  | 22E/22F                    | 1                     | 10,000      | ONE TURN AROUND TAIL WHEEL,<br>FORK AND SPINDLE ASSEMBLY            |
|                           | 12G                        | 1                     | 10,000      | RIGHT LANDING GEAR SHOCK<br>SHOE                                    |
|                           | 5G                         | 1                     | 10,000      | RIGHT LANDING GEAR SHOCK<br>SHOE                                    |
|                           | 12A                        | 1                     | 10,000      | LEFT LANDING GEAR SHOCK SHOE  |
|                           | 6A                         | 1                     | 10,000      | LEFT LANDING GEAR SHOCK SHOE  |
| <b>2</b>                  | 11A/15A                    | 1                     | 5,000       | ONE TURN AROUND 2 BY 12 ABOVE<br>WEDGE NEAR TOP OF RACK             |
|                           | 11C/15C                    | 1                     | 5,000       | ONE TURN AROUND 2 BY 12 ABOVE<br>WEDGE NEAR TOP OF RACK             |
|                           | 21A/25A                    | 1                     | 5,000       | ONE TURN AROUND 2 BY 12 ABOVE<br>WEDGE NEAR TOP OF RACK             |
|                           | 21C/25C                    | 1                     | 5,000       | ONE TURN AROUND 2 BY 12 ABOVE<br>WEDGE NEAR TOP OF RACK             |
|                           | 13A/13C                    | 1                     | 5,000       | OVER WING RACKS   |
|                           | 23A/23C                    | 1                     | 5,000       | OVER WING RACKS   |
| <b>3</b>                  | 18F/18G                    | 1                     | 5,000       | OVER STABILIZER RACK  |
|                           | 23F/23G                    | 1                     | 5,000       | OVER STABILIZER RACK  |
|                           | 19F/19G                    | 1                     | 5,000       | ONE TURN AROUND CONTROL BAR<br>OF HORIZONTAL STABILIZER<br>ASSEMBLY |

FIGURE 6. Example of tiedown index.

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| <b>CARGO</b>                         | <b>U-6 AIRCRAFT</b> |             |                   | <b>MB-1 REFRIGERATOR VAN</b> |                 | <b>WG-1 CHASSIS</b> | <b>14-A GENERATOR</b> | <b>M82K-1 TRAILER DOLLY SET</b> |
|--------------------------------------|---------------------|-------------|-------------------|------------------------------|-----------------|---------------------|-----------------------|---------------------------------|
|                                      | <b>FUSELAGE</b>     | <b>WING</b> | <b>STABILIZER</b> | <b>LOADED</b>                | <b>UNLOADED</b> |                     |                       |                                 |
| LENGTH INCHES                        |                     |             |                   |                              |                 |                     |                       |                                 |
| WIDTH INCHES                         |                     |             |                   |                              |                 |                     |                       |                                 |
| HEIGHT INCHES                        |                     |             |                   |                              |                 |                     |                       |                                 |
| TOTAL WT LB                          |                     |             |                   |                              |                 |                     |                       |                                 |
| VEHICLE FACES                        |                     |             |                   |                              |                 |                     |                       |                                 |
| REFERENCE POINT DESCRIPTION LOCATION |                     |             |                   |                              |                 |                     |                       |                                 |
| AXLE WT FRONT                        |                     |             |                   |                              |                 |                     |                       |                                 |
| AXLE WT REAR                         |                     |             |                   |                              |                 |                     |                       |                                 |
| LOCATION FRONT AXLE STATION          |                     |             |                   |                              |                 |                     |                       |                                 |
| CG LOCATION                          |                     |             |                   |                              |                 |                     |                       |                                 |
| TIE DOWNS REQUIRED                   |                     |             |                   |                              |                 |                     |                       |                                 |
| SHORING REQUIRED                     |                     |             |                   |                              |                 |                     |                       |                                 |
| LOADING METHOD                       |                     |             |                   |                              |                 |                     |                       |                                 |

FIGURE 7. Example of loading table data.

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| UNIT<br>NOMENCLATURE                           | LOADING<br>METHOD   | DIMENSIONS<br>WT AND CG  | MODIFICATIONS<br>AND/OR SUGGESTED<br>LOADING<br>PROCEDURES  |
|--|---|--|---|
| 010 O11A/E<br>FIRE TRUCK<br>TO 36A12-6-12-1    | Winch load back-wards,<br>operate engine for<br>steering and brakes | 376 by 102 by 125<br>32,350 lb (empty)                             | Remove turret, drain<br>agent, fuel tank max 3/4<br>full, tire air pressure<br>50% of normal hard<br>surface req. |
| Deicer Unit<br>AF/S32M (MB-3)<br>TO 13E-17-6-1 | Winch load cab first  | 364 by 100 by 138<br>22,550 lb CG<br>42" fwd tandem<br>axle center | Retract platform<br>(basket) to lowest point,<br>App angle of 40°   |
|  |   |  |   |
|  |   |  |   |

NOTE: This equipment requires only minor modification and limited procedures for loading. Chapter 3, Aircraft Configuration and Chapter 4, General Procedures for loading, securing and off-loading must be complied with, as applicable, in addition to the procedures specified above.

FIGURE 8. Example of miscellaneous equipment loading data table.

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| <b>EXTRACTION<br/>PARACHUTE<br/>(RING SLOT)</b> | <b>ALLOWABLE LOAD<br/>RANGE (LBS)</b> | <b>150 KCAS<br/>No. OF LOCKS PER PLATFORM</b> |      |      |      |      |      | <b>TYPE<br/>EXTRACTION<br/>LINE REQUIRED</b> |
|---|---------------------------------------|---|------|------|------|------|------|--|
|   |                                       | 1   | 2    | 3    | 4    | 5    | 6    |  |
| REEFED<br>15 FOOT                               | 2,520 TO 6,600                        | 1.55  |      |      |      |      |      | 1 LOOP 2 PLY<br>TYPE X NYLON                 |
| UNREEFED<br>15 FOOT                             | 5,100 TO 1,000                        | 1.95  | 1.15 |      |      |      |      | 1 LOOP 6 PLY<br>TYPE X NYLON                 |
| 22 FOOT   | 10,000 TO 18,750                      |   | 1.90 | 1.50 |      |      |      | 3 LOOP 6 PLY<br>TYPE X OR TYPE<br>XXVI NYLON |
| 28 FOOT   | 17,350 TO 35,000                      |   |      | 2.40 | 1.95 | 1.65 | 1.45 | 3 LOOP 6 PLY<br>TYPE X OR TYPE<br>XXVI NYLON |

FIGURE 9 Example of extracting parachute vs allowable load range and lock setting table.

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| <b>NOMENCLATURE<br/>(COMMON NAME)</b>                   | <b>TYPE</b> | <b>BREAKING<br/>STRENGTH (LB)</b> | <b>SIZE<br/>(WIDTH)</b> | <b>NOTES</b>  |
|---|-------------|-----------------------------------|-------------------------|---|
| Webbing, Textile,<br>Woven, Nylon (Type<br>VIII Nylon)  | VIII        | 3,600                             | 1-23/32 in.             | Parachute retaining web.<br>Troop static line 2<br>black threads in center. |
| Webbing, Textile,<br>Woven, Nylon (Type<br>X Nylon)     | X           | 8,700                             | 1-23/32 in.             |   |
| Webbing, Textile,<br>Woven, Cotton Warp                 | VIII        | 2,900                             | 1-3/4 in.               | 2 black threads in center.<br>Nylon filling yarns used.                     |
| Webbing, Textile<br>Woven, Cotton Warp<br>(Rigging Web) | X           | 5,000                             | 1-3/4 in.               | Nylon filling yarns used.   |
| Webbing, Textile<br>Woven, Cotton Warp<br>(Rigging Web) | XV          | 4,500                             | 1-3/4 in.               | 2 red threads along edge.<br>Nylon filling yarns used.                      |
| Webbing, Nylon,<br>Tubular                              |             | 3,000                             | 1 in.                   | Natural and OD.   |
| Webbing, Nylon,<br>Tubular                              |             | 1,000                             | ½ in.                   | Natural and OD.   |
| Tape, Cotton,<br>Reinforcing<br>(1/4 inch tape)         | I           | 80                                | 1/4 in.                 | Natural and OD Plain.   |
| Cord, Shock,<br>75 pound                                |             | 75                                |                         | Natural.  |
| Thread, Cotton  | IV B        | 32                                | Ticket No<br>8/7        | Shoe thread, glazed finish.   |
| Cord, Nylon   | II          | 375                               | Weight 105<br>yd per lb | 1 black thread in sleeve natural color.                                     |
| Cord, Nylon<br>(550 cord)                               | III         | 550                               | Weight 75<br>yd per lb  | Natural.  |
| Cord, Nylon<br>(coreless)                               | IV          | 1,000                             | Weight 40<br>yd per lb  | Natural and OD (used as pigtail on<br>extraction parachute).                |

FIGURE 10. Example of rigging material data.

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APPENDIX A**

**CARGO LOADING AND UNLOADING MANUAL  
DOCUMENT TYPE DEFINITION (DTD) SUBSET**

**A.1. SCOPE.**

A.1.1 Scope. The markup tags described herein are based on rules outlined in MIL-PRF-28001 and the Information Processing - Text and Office Systems - Standard Generalized Markup Language (SGML) document, International Organization for Standardization (ISO) 8879, as incorporated in Federal Information Processing Standards (FIPS) 152. The Document Type Definition (DTD) subset within this appendix provides the structure and content of documents prepared in accordance with this specification. Digital copies of the DTD (see A.4.1) and Tag Description Table (see A.4.2) are available (see A.5.). This Appendix is a mandatory part of this specification. The information contained herein is intended for compliance.

**A.2. APPLICABLE DOCUMENTS.**

A.2.1 Government documents.

A.2.1.1 Specifications, standards, and handbooks. The following specifications, standards, and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation (see 6.2).

**SPECIFICATIONS**

Military

|               |  |
|---------------|--|
| MIL-PRF-28001 | Markup Requirements and Generic Style Specification for Electronic Printed Output and Exchange of Text |
|---------------|--|

**STANDARDS**

Federal Information Processing Standards

|          |   |
|----------|---|
| FIPS 152 | Standard Generalized Markup Language (SGML) |
|----------|---|

(Unless otherwise indicated, copies of federal and military specifications, standards and handbooks are available from the Standardization Documents Order Desk, Building 4D, 700 Robins Avenue, Philadelphia, PA 19111-5094.)

(Copies of FIPS are available to Department of Defense activities from the Standardization Documents Order Desk, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094. Others must request copies of FIPS from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161-2171.)

**A.3. DOCUMENT TYPE DEFINITION SUBSET.**

A.3.1 SGML document type definition subset. Data to be delivered digitally in accordance with this specification shall be SGML tagged using the DTD found in MIL-STD-38784 as modified by the

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DTD subset in this Appendix. The procedure for accomplishing this is found in MIL-PRF-28001 and FIPS 152 (ISO 8879).

**A.3.2 Template document type for Cargo Loading and Unloading Manual.** The DTD subset for the Cargo Loading and Unloading Manual is as follows:

```
<!-- ***** START OF FILE ***** -->

<!-- The following set of declarations may be referred to by using a public
entity as follows:

<!ENTITY % m5288ia PUBLIC "-//USA-DOD//DTD MIL-PRF-5288I CLUL//EN" >
%m5288ia;
-->

<!-- NOTE: In order to parse the following DTD subset alone, append the
following statement to the beginning of the file:

    <!DOCTYPE docclul [
and the associated ">" to the end of the file. -->

<!-- ENTITY DECLARATIONS -->

<!ENTITY % stepcon "(warning*, caution?, note?, (clitem, action?, amplify?),
note?)" >

<!ENTITY % m5096cl PUBLIC "-//USA-DOD//DTD MIL-PRF-5096F CL//EN">
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pprep, emptypres, pproc)" >

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<!ENTITY chap2des "Chapter2 - Description of Aircraft Features. This chapter
presents a general description of the cargo compartment, including profile and
cross sections, cargo loading ramp (where applicable), entrances and exits,
cargo floor, roller conveyors and guides, restraint rails (where applicable),
tiedown fittings, seat and litter provisions, cargo loading aids, and storage
provisions for all cargo loading aids and tiedown devices." >
```

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<!ENTITY chap3des "Chapter 3 - Aircraft Configuration. This chapter presents aircraft preparation instructions with respect to aircraft cargo loading, airdrop provisions and personnel equipment." >

<!ENTITY chap4des "Chapter 4 - General Procedures. This chapter contains instructions relative to load preplanning, loading, postloading and off-loading procedures to include checklist." >

<!ENTITY chap5des "Chapter 5 - Emergency Procedures. This chapter describes all ground preparations required for cargo emergency procedures." >

<!ENTITY chap6des "Chapter 6 - Specific Procedures. This chapter contains all necessary instructions relative to preloading, loading, postloading, preflight and offloading procedures for cargo which, due to the physical characteristics, cannot be handled in accordance with the general procedures of Chapter 4 and therefore require special handling." >

<!ENTITY chap7des "Chapter 7 - Airdrop Procedures. This chapter presents instructions relative to the procedures required for airdrop of personnel and cargo." >

<!ENTITY purpose "The purpose of this manual is to provide cargo handling personnel with sufficient information and data to load, secure, and offload all types of cargo efficiently and safely and to explain the restrictions governing these operations. The manual includes procedures pertaining to ground functions and air drop procedures." >

<!-- ELEMENT and ATTRIBUTE LIST DECLARATIONS -->

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| <!ATTLIST eqinstcheck  | (para, note?)?, (step1, step1+)?, acftrig,       |
|                        | rigextparch, pltfrmllks, subpara1*) >            |
|                        | %sectatt; >                                      |
| <!ELEMENT extractchart | - o (%tabl;) >                                   |
| <!ATTLIST extractchart | %tabatts; >                                      |
| <!ELEMENT extwin       | - o (%nparcon;, subpara2*) >                     |
| <!ATTLIST extwin       | %sublatt; >                                      |
| <!ELEMENT flrplnfig    | - o (%parazero;, subpara1*) >                    |
| <!ATTLIST flrplnfig    | %para0att; >                                     |
| <!ELEMENT flrstruc     | - o (%nparcon;, subpara2*) >                     |
| <!ATTLIST flrstruc     | %sublatt; >                                      |
| <!ELEMENT fpcrst       | - o (%nparcon1;, subpara3*) >                    |
| <!ATTLIST fpcrst       | %sub2att; >                                      |
| <!ELEMENT fricefct     | - o (%titles;, warning*, caution?, note?,        |
|                        | (para, note?)?, (step1, step1+)?, friction,      |
|                        | cofric, rolfric, avgcofric, winincl, winhoriz,   |
|                        | subpara1*) >                                     |

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|                             |  |
|-----------------------------|--|
| <!ATTLIST fricefct          | %sectatt; >  |
| <!ELEMENT friction          | - o (%nparcon;, subpara2*) >   |
| <!ATTLIST friction          | %sublatt; >  |
| <!ELEMENT funcheck          | - o (%nparcon;, subpara2*) >   |
| <!ATTLIST funcheck          | %sublatt; >  |
| <!ELEMENT genades           | - o (%titles;, warning*, caution?, note?,<br>(para, note?)?, (step1, step1+)?, adespara,<br>trpcarry, litcarry, ardracap, safdes, subpara1*)<br>>  |
| <!ATTLIST genades           | %sectatt; >  |
| <!ELEMENT gencont           | - o (%parazero;, subpara1*) >  |
| <!ATTLIST gencont           | %para0att; >   |
| <!ELEMENT genldinstr        | - o (%nparcon;, subpara2*) >   |
| <!ATTLIST genldinstr        | %sublatt; >  |
| <!ELEMENT genproc           | - - (para0, (ldpln, ldmethrst, winching,<br>onoffldproc, chrtgrph, section*)) +(figure  <br>table   foldout) >   |
| <!ATTLIST genproc           | %chapatt; >  |
| <!ELEMENT genwincl          | - o (%parazero;, subpara1*) >  |
| <!ATTLIST genwincl          | %para0att; >   |
| <!ELEMENT genwinprepcl      | - o (%parazero;, subpara1*) >  |
| <!ATTLIST genwinprepcl      | %para0att; >   |
| <!ELEMENT genwtbal          | - o (%parazero;, subpara1*) >  |
| <!ATTLIST genwtbal          | %para0att; >   |
| <!ELEMENT geocons           | - o (%titles;, warning*, caution?, note?,<br>(para, note?)?, (step1, step1+)?, carszlim,<br>carwtldenv, ldarealim, vehprjlim, vehcritdim,<br>rmphltlim, parklim, ldohlim, carcompvw,<br>subpara1*) > |
| <!ATTLIST geocons           | %sectatt; >  |
| <!ELEMENT grndprepemergjett | - o (%nparcon;, subpara2*) >   |
| <!ATTLIST grndprepemergjett | %sublatt; >  |
| <!ELEMENT guidrl            | - o (%nparcon;, stowage?) >  |
| <!ATTLIST guidrl            | %sub3att; >  |
| <!ELEMENT handequip         | - o (%nparcon;, subpara2*) >   |
| <!ATTLIST handequip         | %sublatt; >  |
| <!ELEMENT hazcargdirect     | - o (%nparcon;, subpara2*) >   |
| <!ATTLIST hazcargdirect     | %sublatt; >  |
| <!ELEMENT infjetproc        | - o (%titles;, warning*, caution?, note?,<br>(para, note?)?, (step1, step1+)?,<br>grndprepemergjett?, adscargoplat?, nucweapcarg?,<br>hazcargdirect?, subpara1*) >                                   |

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|                         |   |
|-------------------------|---|
| <!ATTLIST infjetproc    | %sectatt; >                                   |
| <!ELEMENT insopbelts    | - o (%nparcon;, subpara2*) >                  |
| <!ATTLIST insopbelts    | %sublatt; >                                   |
| <!ELEMENT inspectparach | - o (%titles;, warning*, caution?, note?,     |
|                         | (para, note?)?, (step1, step1+)?, acftrig,    |
|                         | rigextparch, pltfrmks, subpara1*) >           |
| <!ATTLIST inspectparach | %sectatt; >                                   |
| <!ELEMENT instal        | - o (%nparcon1;, subpara3*) >                 |
| <!ATTLIST instal        | %sub2att; >                                   |
| <!ELEMENT instrpld      | - o (%nparcon;, subpara2*) >                  |
| <!ATTLIST instrpld      | %sublatt; >                                   |
| <!ELEMENT instrpoffld   | - o (%nparcon;, subpara2*) >                  |
| <!ATTLIST instrpoffld   | %sublatt; >                                   |
| <!ELEMENT interch       | - o (%nparcon1;, subpara3*) >                 |
| <!ATTLIST interch       | %sub2att; >                                   |
| <!ELEMENT intropara     | - o (%parazero;, subpara1*) >                 |
| <!ATTLIST intropara     | %para0att; >                                  |
| <!ELEMENT ldarealim     | - o (%nparcon;, subpara2*) >                  |
| <!ATTLIST ldarealim     | %sublatt; >                                   |
| <!ELEMENT ldasdev       | - o (%titles;, warning*, caution?, note?,     |
|                         | (para, note?)?, (step1, step1+)?, acftprep,   |
|                         | funcheck, stepinstall) >                      |
| <!ATTLIST ldasdev       | %sectatt; >                                   |
| <!ELEMENT lddata        | - o (%nparcon1;, subpara3*) >                 |
| <!ATTLIST lddata        | %sub2att; >                                   |
| <!ELEMENT ldeqasm       | - o (%nparcon;, subpara2*) >                  |
| <!ATTLIST ldeqasm       | %sublatt; >                                   |
| <!ELEMENT ldmeth        | - o (#PCDATA) >                               |
| <!ATTLIST ldmeth        | %secur; >                                     |
| <!ELEMENT ldmethod      | - o (%titles;, warning*, caution?, note?,     |
|                         | (para, note?)?, (step1, step1+)?, flrstruc,   |
|                         | handequip, missaccomp, cargszwt, portramp,    |
|                         | miscequipuse, subpara1*) >                    |
| <!ATTLIST ldmethod      | %sectatt; >                                   |
| <!ELEMENT ldmethrst     | - - (%titles;, para0?, gencont, ldmethod,     |
|                         | vehld, palcarld, pastrpld, rstcrit, para0*) > |
| <!ATTLIST ldmethrst     | %chapatt; >                                   |
| <!ELEMENT ldohlim       | - o (%nparcon;, subpara2*) >                  |
| <!ATTLIST ldohlim       | %sublatt; >                                   |
| <!ELEMENT ldplchazcar   | - o (%parazero;, subpara1*) >                 |
| <!ATTLIST ldplchazcar   | %para0att; >                                  |
| <!ELEMENT ldpln         | - - (%c11;) >                                 |

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|------------------------|--|
| <!ATTLIST ldpln        | %secur; >  |
| <!ELEMENT ldplncl      | - o (%parazero;, subpara1*) >  |
| <!ATTLIST ldplncl      | %para0att; >   |
| <!ELEMENT ldproc       | - o (%titles;, warning*, caution?, note?,<br>(para, note?)?, (step1, step1+)?, acftrig,<br>rigextparch, pltfrmks, subpara1*) > |
| <!ATTLIST ldproc       | %sectatt; >  |
| <!ELEMENT litcarry     | - o (%nparcon;, subpara2*) >   |
| <!ATTLIST litcarry     | %sublatt; >  |
| <!ELEMENT litter       | - o (%titles;, warning*, caution?, note?,<br>(para, note?)?, (step1, step1+)?, acftprep,<br>funcheck, stepinstall) >           |
| <!ATTLIST litter       | %sectatt; >  |
| <!ELEMENT loaddatatab  | - o (%parazero;, subpara1*) >  |
| <!ATTLIST loaddatatab  | %para0att; >   |
| <!ELEMENT loading      | - o (%parazero;, subpara1*) >  |
| <!ATTLIST loading      | %para0att; >   |
| <!ELEMENT locate       | - o (%nparcon1;, subpara3*) >  |
| <!ATTLIST locate       | %sub2att; >  |
| <!ELEMENT loctie       | - o (%nparcon1;, subpara3*) >  |
| <!ATTLIST loctie       | %sub2att; >  |
| <!ELEMENT manuvstren   | - o (%nparcon1;, subpara3*) >  |
| <!ATTLIST manuvstren   | %sub2att; >  |
| <!ELEMENT maxflrld     | - o (%nparcon;, subpara2*) >   |
| <!ATTLIST maxflrld     | %sublatt; >  |
| <!ELEMENT maxldrest    | - o (%nparcon;, subpara2*) >   |
| <!ATTLIST maxldrest    | %sublatt; >  |
| <!ELEMENT maxlds       | - o (%nparcon;, subpara2*) >   |
| <!ATTLIST maxlds       | %sublatt; >  |
| <!ELEMENT maxwt        | - o (%parazero;, subpara1*) >  |
| <!ATTLIST maxwt        | %para0att; >   |
| <!ELEMENT minresfc     | - o (%nparcon1;, subpara3*) >  |
| <!ATTLIST minresfc     | %sub2att; >  |
| <!ELEMENT miscequiptab | - o (%parazero;, (nomen, ldmeth, dimwtcg,<br>modis)+) >  |
| <!ATTLIST miscequiptab | %para0att; >   |
| <!ELEMENT miscequipuse | - o (%nparcon;, subpara2*) >   |
| <!ATTLIST miscequipuse | %sublatt; >  |
| <!ELEMENT missaccomp   | - o (%nparcon;, subpara2*) >   |
| <!ATTLIST missaccomp   | %sublatt; >  |

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|                         |   |
|-------------------------|---|
| <!ELEMENT modeldes      | - o (#PCDATA) >                               |
| <!ATTLIST modeldes      | %secur; >                                     |
| <!ELEMENT modis         | - o (#PCDATA) >                               |
| <!ATTLIST modis         | %secur; >                                     |
| <!ELEMENT morecargaid   | - o (%nparcon;, stowage?) >                   |
| <!ATTLIST morecargaid   | %sublatt; >                                   |
| <!ELEMENT navyrigmat    | - - (nomen, rigtype, rigstren, rigsize,       |
| <!ATTLIST navyrigmat    | rignotes)+ >                                  |
|                         | %chapatt; >                                   |
| <!ELEMENT navysig       | - o (%nparcon;, subpara2*) >                  |
| <!ATTLIST navysig       | %sublatt; >                                   |
| <!ELEMENT nucweapcarg   | - o (%nparcon;, subpara2*) >                  |
| <!ATTLIST nucweapcarg   | %sublatt; >                                   |
| <!ELEMENT offldaid      | - o (%nparcon;, subpara2*) >                  |
| <!ATTLIST offldaid      | %sublatt; >                                   |
| <!ELEMENT offldproc     | - o (%titles;, warning*, caution?, note?,     |
| <!ATTLIST offldproc     | (para, note?)?, (step1, step1+)?, acftrig,    |
|                         | rigextparch, pltfrmks, subpara1*) >           |
|                         | %para0att; >                                  |
| <!ELEMENT offloadproced | - o (%parazero;, subpara1*) >                 |
| <!ATTLIST offloadproced | %para0att; >                                  |
| <!ELEMENT onoffldproc   | - - (%titles;, para0, ldplncl, genwinprepcl,  |
| <!ATTLIST onoffldproc   | genwincl, palcarldcl, vehinspcl, vehldcl,     |
|                         | caroffldcl, persldcl, persoffldcl) >          |
|                         | %sectatt; >                                   |
| <!ELEMENT operation     | - o (%nparcon1;, subpara3*) >                 |
| <!ATTLIST operation     | %sub2att; >                                   |
| <!ELEMENT oxysys        | - o (%titles;, warning*, caution?, note?,     |
| <!ATTLIST oxysys        | (para, note?)?, (step1, step1+)?, acftprep,   |
|                         | funcheck, stepinstall) >                      |
|                         | %sectatt; >                                   |
| <!ELEMENT palcarld      | - o (%cl4;) >                                 |
| <!ATTLIST palcarld      | %secur; >                                     |
| <!ELEMENT palcarldcl    | - o (%parazero;, subpara1*) >                 |
| <!ATTLIST palcarldcl    | %para0att; >                                  |
| <!ELEMENT parklim       | - o (%nparcon;, subpara2*) >                  |
| <!ATTLIST parklim       | %sublatt; >                                   |
| <!ELEMENT pastrpld      | - o (%titles;, warning*, caution?, note?,     |
| <!ATTLIST pastrpld      | (para, note?)?, (step1, step1+)?, insopbelts, |
|                         | instrpld, instrpoffld) >                      |
|                         | %sectatt; >                                   |
| <!ELEMENT pconst        | - o (%nparcon;, subpara2*) >                  |
| <!ATTLIST pconst        | %sublatt; >                                   |



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|--|---|
| <!ELEMENT persldcl<br><!ATTLIST persldcl           | - o (%parazero;, subpara1*) ><br>%para0att; >   |
| <!ELEMENT persoffldcl<br><!ATTLIST persoffldcl     | - o (%parazero;, subpara1*) ><br>%para0att; >   |
| <!ELEMENT personnelmiss<br><!ATTLIST personnelmiss | - o (%parazero;, subpara1*) ><br>%para0att; >   |
| <!ELEMENT perstroopprov<br><!ATTLIST perstroopprov | - o (%nparcon;, subpara2*) ><br>%sublatt; >   |
| <!ELEMENT phcwin<br><!ATTLIST phcwin               | - o (%nparcon;, instal, checkout, operation?) ><br>%sub3att; >  |
| <!ELEMENT platcheck<br><br><!ATTLIST platcheck     | - o (%titles;, warning*, caution?, note?,<br>(para, note?)?, (step1, step1+)?, acftrig,<br>rigextparch, pltfrmllks, subpara1*) ><br>%sectatt; > |
| <!ELEMENT pldlim<br><!ATTLIST pldlim               | - o (%nparcon;, subpara2*) ><br>%sublatt; >   |
| <!ELEMENT pltfrmllks<br><!ATTLIST pltfrmllks       | - o (%nparcon;, subpara2*) ><br>%sublatt; >   |
| <!ELEMENT portramp<br><!ATTLIST portramp           | - o (%nparcon;, subpara2*) ><br>%sublatt; >   |
| <!ELEMENT postloading<br><!ATTLIST postloading     | - o (%parazero;, subpara1*) ><br>%para0att; >   |
| <!ELEMENT pprep<br><!ATTLIST pprep                 | - o (%nparcon;, subpara2*) ><br>%sublatt; >   |
| <!ELEMENT pproc<br><!ATTLIST pproc                 | - o (%nparcon;, subpara2*) ><br>%sublatt; >   |
| <!ELEMENT preflight<br><!ATTLIST preflight         | - o (%parazero;, subpara1*) ><br>%para0att; >   |
| <!ELEMENT prefltproc<br><br><!ATTLIST prefltproc   | - o (%titles;, warning*, caution?, note?,<br>(para, note?)?, (step1, step1+)?, acftrig,<br>rigextparch, pltfrmllks, subpara1*) ><br>%sectatt; > |
| <!ELEMENT preldproc<br><br><!ATTLIST preldproc     | - o (%titles;, warning*, caution?, note?,<br>(para, note?)?, (step1, step1+)?, acftrig,<br>rigextparch, pltfrmllks, subpara1*) ><br>%sectatt; > |
| <!ELEMENT preloading<br><!ATTLIST preloading       | - o (%parazero;, subpara1*) ><br>%para0att; >   |
| <!ELEMENT prep<br><!ATTLIST prep                   | - o (%cl2;) ><br>%sublatt; >  |

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|                       |  |
|-----------------------|--|
| <!ELEMENT prepostproc | - o (%titles;, warning*, caution?, note?,<br>(para, note?)?, (step1, step1+)?,<br>grndprepemergjett?, adscargoplat?, nucweapcarg?,<br>hazcargdirect?, subpara1*) > |
| <!ATTLIST prepostproc | %sectatt; >  |
| <!ELEMENT prybars     | - o (%nparcon;, stowage?) >  |
| <!ATTLIST prybars     | %sub3att; >  |
| <!ELEMENT pulleys     | - o (%nparcon;, stowage?) >  |
| <!ATTLIST pulleys     | %sub3att; >  |
| <!ELEMENT ramps       | - o (%titles;, warning*, caution?, note?,<br>(para, note?)?, (step1, step1+)?, acftprep,<br>funcheck, stepinstall) >   |
| <!ATTLIST ramps       | %sectatt; >  |
| <!ELEMENT rampstand   | - o (%nparcon;, stowage?) >  |
| <!ATTLIST rampstand   | %sub3att; >  |
| <!ELEMENT rampstren   | - o (%nparcon1;, subpara3*) >  |
| <!ATTLIST rampstren   | %sub2att; >  |
| <!ELEMENT releasemech | - o (%titles;, warning*, caution?, note?,<br>(para, note?)?, (step1, step1+)?, acftrig,<br>rigextparch, pltfrmllks, subpara1*) >                                   |
| <!ATTLIST releasemech | %sectatt; >  |
| <!ELEMENT relrst      | - o (%nparcon;, subpara2*) >   |
| <!ATTLIST relrst      | %sublatt; >  |
| <!ELEMENT restconv    | - o (%titles;, warning*, caution?, note?,<br>(para, note?)?, (step1, step1+)?, acftprep,<br>funcheck, stepinstall) >   |
| <!ATTLIST restconv    | %sectatt; >  |
| <!ELEMENT restraining | - o (%parazero;, subpara1*) >  |
| <!ATTLIST restraining | %para0att; >   |
| <!ELEMENT rigextparch | - o (%nparcon;, subpara2*) >   |
| <!ATTLIST rigextparch | %sublatt; >  |
| <!ELEMENT rignotes    | - o (#PCDATA) >  |
| <!ATTLIST rignotes    | %secur; >  |
| <!ELEMENT rigseats    | - o (%titles;, warning*, caution?, note?,<br>(para, note?)?, (step1, step1+)?, acftprep,<br>funcheck, stepinstall) >   |
| <!ATTLIST rigseats    | %sectatt; >  |
| <!ELEMENT rigsize     | - o (#PCDATA) >  |
| <!ATTLIST rigsize     | %secur; >  |
| <!ELEMENT rigstren    | - o (#PCDATA) >  |
| <!ATTLIST rigstren    | %secur; >  |
| <!ELEMENT rigtype     | - o (#PCDATA) >  |
| <!ATTLIST rigtype     | %secur; >  |

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|                           |   |
|---------------------------|---|
| <!ELEMENT rmphtlim        | - o (%nparcon;, subpara2*) >                  |
| <!ATTLIST rmphtlim        | %sublatt; >                                   |
| <!ELEMENT rolcnvys        | - o (%nparcon;, lddata+, locate, interch,     |
| <!ATTLIST rolcnvys        | subpara2*) >                                  |
|                           | %sublatt; >                                   |
| <!ELEMENT rolfric         | - o (%nparcon;, subpara2*) >                  |
| <!ATTLIST rolfric         | %sublatt; >                                   |
| <!ELEMENT rolldfac        | - o (%nparcon;, subpara2*) >                  |
| <!ATTLIST rolldfac        | %sublatt; >                                   |
| <!ELEMENT rolprkslp       | - o (%nparcon;, subpara2*) >                  |
| <!ATTLIST rolprkslp       | %sublatt; >                                   |
| <!ELEMENT rstcrit         | - o (%titles;, warning*, caution?, note?,     |
|                           | (para, note?)?, (step1, step1+)?, apprst,     |
|                           | apptiedev) >                                  |
| <!ATTLIST rstcrit         | %sectatt; >                                   |
| <!ELEMENT safdes          | - o (%nparcon;, subpara2*) >                  |
| <!ATTLIST safdes          | %sublatt; >                                   |
| <!ELEMENT safecaut        | - o (%nparcon;, subpara2*) >                  |
| <!ATTLIST safecaut        | %sublatt; >                                   |
| <!ELEMENT sblocks         | - o (%nparcon;, stowage?) >                   |
| <!ATTLIST sblocks         | %sub3att; >                                   |
| <!ELEMENT series          | - o (#PCDATA) >                               |
| <!ATTLIST series          | %secur; >                                     |
| <!ELEMENT shoring         | - o (%nparcon;, subpara2*) >                  |
| <!ATTLIST shoring         | %sublatt; >                                   |
| <!ELEMENT shormat         | - o (%nparcon;, subpara2*) >                  |
| <!ATTLIST shormat         | %sublatt; >                                   |
| <!ELEMENT shorreq         | - o (%titles;, warning*, caution?, note?,     |
|                           | (para, note?)?, (step1, step1+)?, shormat,    |
|                           | shorwtdis, rolprkslp, calcld, subpara1*) >    |
| <!ATTLIST shorreq         | %sectatt; >                                   |
| <!ELEMENT shorwtdis       | - o (%nparcon;, subpara2*) >                  |
| <!ATTLIST shorwtdis       | %sublatt; >                                   |
| <!ELEMENT specialhandling | - o (%parazero;, subpara1*) >                 |
| <!ATTLIST specialhandling | %para0att; >                                  |
| <!ELEMENT specproc        | - - (intropara, (preloading, loading,         |
|                           | restraining, postloading, preflight,          |
|                           | specialhandling, offloadproced)+, (flrplnfig, |
|                           | loadatatab)+, miscequiptab*) +(figure   table |
|                           | foldout) >                                    |
| <!ATTLIST specproc        | %chapatt; >                                   |

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| <!ELEMENT spliceplt   | - o (%nparcon; , stowage?) >                     |
| <!ATTLIST spliceplt   | %sub3att; >                                      |
| <!ELEMENT stanchkit   | - o (%titles; , warning* , caution? , note? ,    |
|                       | (para , note?)? , (step1 , step1+)? , acftprep , |
|                       | funcheck , stepinstall) >                        |
| <!ATTLIST stanchkit   | %sectatt; >                                      |
| <!ELEMENT stepinstall | - o (%nparcon; , subpara2*) >                    |
| <!ATTLIST stepinstall | %sublatt; >                                      |
| <!ELEMENT stow        | - o (%nparcon; , subpara2*) >                    |
| <!ATTLIST stow        | %sublatt; >                                      |
| <!ELEMENT stowage     | - o (%nparcon1; , subpara3*) >                   |
| <!ATTLIST stowage     | %sub2att; >                                      |
| <!ELEMENT strcons     | - o (%titles; , warning* , caution? , note? ,    |
|                       | (para , note?)? , (step1 , step1+)? , carwtlim , |
|                       | carldlim , carrmplim , carcg , concflrld ,       |
|                       | conflrldrub , maxflrld , maxldrest , maxlds ,    |
|                       | subpara1*) >                                     |
| <!ATTLIST strcons     | %sectatt; >                                      |
| <!ELEMENT supjks      | - o (%titles; , warning* , caution? , note? ,    |
|                       | (para , note?)? , (step1 , step1+)? , acftprep , |
|                       | funcheck , stepinstall) >                        |
| <!ATTLIST supjks      | %sectatt; >                                      |
| <!ELEMENT swclseats   | - o (%titles; , warning* , caution? , note? ,    |
|                       | (para , note?)? , (step1 , step1+)? , acftprep , |
|                       | funcheck , stepinstall) >                        |
| <!ATTLIST swclseats   | %sectatt; >                                      |
| <!ELEMENT syscompon   | - o (%titles; , warning* , caution? , note? ,    |
|                       | (para , note?)? , (step1 , step1+)? , acftrig ,  |
|                       | rigextparch , pltfrmlks , subpara1*) >           |
| <!ATTLIST syscompon   | %sectatt; >                                      |
| <!ELEMENT tailsup     | - o (%nparcon; , stowage?) >                     |
| <!ATTLIST tailsup     | %sub3att; >                                      |
| <!ELEMENT tieangrat   | - o (%nparcon1; , subpara3*) >                   |
| <!ATTLIST tieangrat   | %sub2att; >                                      |
| <!ELEMENT tieangs     | - o (%nparcon1; , subpara3*) >                   |
| <!ATTLIST tieangs     | %sub2att; >                                      |
| <!ELEMENT tiedev      | - o (%nparcon; , stowage?) >                     |
| <!ATTLIST tiedev      | %sub3att; >                                      |
| <!ELEMENT tiefits     | - o (%titles; , warning* , caution? , note? ,    |
|                       | (para , note?)? , (step1 , step1+)? , acftprep , |
|                       | funcheck , stepinstall) >                        |
| <!ATTLIST tiefits     | %sectatt; >                                      |
| <!ELEMENT tierngs     | - o (%nparcon1; , subpara3*) >                   |
| <!ATTLIST tierngs     | %sub2att; >                                      |

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| <!ELEMENT tierules   | - o (%nparcon1;, subpara3) >                |
| <!ATTLIST tierules   | %sub2att; >                                 |
| <!ELEMENT tlsup      | - o (%titles;, warning*, caution?, note?,   |
|                      | (para, note?)?, (step1, step1+)?, acftprep, |
| <!ATTLIST tlsup      | funcheck, stepinstall) >                    |
|                      | %sectatt; >                                 |
| <!ELEMENT treadstren | - o (%nparcon1;, subpara3*) >               |
| <!ATTLIST treadstren | %sub2att; >                                 |
| <!ELEMENT trpcarry   | - o (%nparcon;, subpara2*) >                |
| <!ATTLIST trpcarry   | %sublatt; >                                 |
| <!ELEMENT trpseats   | - o (%titles;, warning*, caution?, note?,   |
|                      | (para, note?)?, (step1, step1+)?, acftprep, |
| <!ATTLIST trpseats   | funcheck, stepinstall) >                    |
|                      | %sectatt; >                                 |
| <!ELEMENT turbsecur  | - o (%nparcon;, subpara2*) >                |
| <!ATTLIST turbsecur  | %sublatt; >                                 |
| <!ELEMENT vehcritdim | - o (%nparcon;, subpara2*) >                |
| <!ATTLIST vehcritdim | %sublatt; >                                 |
| <!ELEMENT vehinspcl  | - o (%parazero;, subpara1*) >               |
| <!ATTLIST vehinspcl  | %para0att; >                                |
| <!ELEMENT vehld      | - o (%cl5;) >                               |
| <!ATTLIST vehld      | %secur; >                                   |
| <!ELEMENT vehldcl    | - o (%parazero;, subpara1*) >               |
| <!ATTLIST vehldcl    | %para0att; >                                |
| <!ELEMENT vehprjlim  | - o (%nparcon;, subpara2*) >                |
| <!ATTLIST vehprjlim  | %sublatt; >                                 |
| <!ELEMENT vehwin     | - o (%nparcon;, subpara2*) >                |
| <!ATTLIST vehwin     | %sublatt; >                                 |
| <!ELEMENT wincabl    | - o (%nparcon;, subpara2*) >                |
| <!ATTLIST wincabl    | %sublatt; >                                 |
| <!ELEMENT winches    | - o (%nparcon;, stowage?) >                 |
| <!ATTLIST winches    | %sub3att; >                                 |
| <!ELEMENT winching   | - - (%cl3;) >                               |
| <!ATTLIST winching   | %secur; >                                   |
| <!ELEMENT winhoriz   | - o (%nparcon;, subpara2*) >                |
| <!ATTLIST winhoriz   | %sublatt; >                                 |
| <!ELEMENT winincl    | - o (%nparcon;, subpara2*) >                |
| <!ATTLIST winincl    | %sublatt; >                                 |
| <!ELEMENT winld      | - o (%nparcon;, winpalcar, ardrplat) >      |
| <!ATTLIST winld      | %sub3att; >                                 |

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```

<!ELEMENT winpalcar          - o (%nparcon1;, subpara3*) >
<!ATTLIST winpalcar          %sub2att; >

<!ELEMENT winproc            - o (%titles;, warning*, caution?, note?,
                                (para, note?)?, (step1, step1+)?, prep, wincabl,
                                carwinop, phcwin, winld, extwin, vehwin) >
<!ATTLIST winproc            %sectatt; >

<!ELEMENT wtbalff            - o (%parazero;, subpara1*) >
<!ATTLIST wtbalff            %para0att; >

<!ELEMENT wtbalop            - o (%parazero;, subpara1*) >
<!ATTLIST wtbalop            %para0att; >

<!ELEMENT wtcglocat          - o (%nparcon;, subpara2*) >
<!ATTLIST wtcglocat          %sublatt; >

<!-- ***** END OF FILE ***** -->

```

### A.4. DETAILED DESCRIPTION.

**A.4.1 Document type definition.** The DTD found in MIL-STD-38784 as modified by the DTD subset within this appendix provides the structure and content of documents prepared in accordance with this specification. The DTDs are available in a digital format. See A.5., for information on obtaining the files.

**A.4.2 Tag description table.** The Tag Description Table provides detailed descriptions of the tags above. It provides the element tagging structure, full element name, tag minimization requirements, element structure, referencing elements, source paragraph, and attribute descriptions unique to the element. See A.5., for information on obtaining this table.

### A.5. OBTAINING FILES.

a conflict between the text of this document and any downloaded files, the text of this document takes precedence. These files are for convenience and informational purposes only.

**A.5.1.1 File Transfer Protocol (FTP).** The procedures for obtaining files via FTP are as follows.

- a. Connect to "WPCDSO1.wpafb.af.mil" using the FTP software available at your site. For example, if your FTP software is invoked using the "ftp" command, type "ftp WPCDSO1.wpafb.af.mil". Do not attempt to log-in to this site using a "telnet" connection. If this connection fails, connect using "129.52.152.8".
- b. Log-in (login, name, remote user name, etc.) as "ftp" and press "enter".
- c. For password, type electronic mail (e-mail) name followed by "@" (at) and press "enter".
- d. Type "cd sgml" (or the command your system requires to change to "sgml" directory) and press "enter". At this point, a short new users message will normally appear. If the new users message does not appear, it should be downloaded and read. Download file by typing "get.message" (or the command your system requires to download a file) and press "enter".
- e. Type "get.filelist.txt" (or the command your system requires to download a file) and press "enter". This file contains a list of all files available. This file is updated as new items are added, therefore it should be downloaded and read before downloading any other file.

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**APPENDIX A**

- f. If the needed file ends with “.zip”, see g. below, otherwise type “asc” (or the command your system requires for an ASCII transfer) and press “enter”. Type “get XXXXXX.XXX” (where XXXXXX.XXX is the name of the file to be downloaded) and press “enter” to download needed file. Repeat for each file to be downloaded.
- g. If the needed file ends with “.zip”, type “bin” (or the command your system requires for a binary transfer) and press “enter”. Type “get XXXXXX.XXX” (where XXXXXX.XXX is the name of the file to be downloaded) and press “enter” to download needed file. Repeat for each file to be downloaded. Zipped files were compressed using PKZIP Version 2.04
- h. File “nc.txt” contains information on the naming conventions used on all files in this directory. Type “get nc.txt” to download this file.

A.5.1.2 World Wide Web (WWW). Obtain files via the Air Force Product Data Systems Modernization (PDSM) Program Office (AFPPPO) home page at <http://www.pdsm.wpafb.af.mil/>. Select TMSS from the graphical menu and follow the directions presented.

**MIL-PRF-5288H  
APPENDIX B**

**NUCLEAR CARGO LOADING AND UNLOADING MANUAL  
DOCUMENT TYPE DEFINITION (DTD) SUBSET**

**B.1. SCOPE.**

B1.1 Scope. The markup tags described herein are based on rules outlined in MIL-PRF-28001 and the Information Processing - Text and Office Systems - Standard Generalized Markup Language (SGML) document, International Organization for Standardization (ISO) 8879, as incorporated in Federal Information Processing Standards (FIPS) 152. The Document Type Definition (DTD) subset within this appendix provides the structure and content of documents prepared in accordance with this specification. Digital copies of the DTD (see B.4.1) and Tag Description Table (see B.4.2) are available (see A.5.). This Appendix is a mandatory part of this specification. The information contained herein is intended for compliance.

**B.2. APPLICABLE DOCUMENTS.**

B.2.1 Government documents.

B.2.1.1 Specifications, standards, and handbooks. The following specifications, standards and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation (see 6.2).

**SPECIFICATIONS**

**Military**

|               |  |
|---------------|--|
| MIL-PRF-28001 | Markup Requirements and Generic Style Specification for Electronic Printed Output and Exchange of Text |
|---------------|--|

**STANDARDS**

**Federal Information Processing Standards**

|          |   |
|----------|---|
| FIPS 152 | Standard Generalized Markup Language (SGML) |
|----------|---|

(Unless otherwise indicated, copies of federal and military specifications, standards and handbooks are available from the Standardization Documents Order Desk, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094.)

(Copies of FIPS are available to Department of Defense activities from the Standardization Documents Order Desk, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094. Others must request copies of FIPS from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161-2171.)

**B.3. DOCUMENT TYPE DEFINITION SUBSET.**



## MIL-PRF-5288H APPENDIX B

**B.3.1 SGML document type definition subset.** Data to be delivered digitally in accordance with this specification shall be tagged using the DTD found in MIL-STD-38784 as modified by the DTD subset in this section. The procedure for accomplishing this is found in MIL-PRF-28001.

**B.3.2 Template document type for Nuclear Cargo Loading and Unloading Manual.** The DTD subset for the Nuclear Cargo Loading and Unloading Manual is as follows:

```
<!-- ***** START OF FILE ***** -->

<!-- The following set of declarations may be referred to by using a public
entity as follows:

<!ENTITY % m5288ib PUBLIC "-//USA-DOD//DTD MIL-PRF-5288I NCLUL//EN" >
%m5288ib;
-->

<!-- NOTE: In order to parse the following DTD subset alone, append the
following statement to the beginning of the file:

        <!DOCTYPE docnclul [

and the associated ">" to the end of the file. -->

<!-- ENTITY DECLARATIONS -->

<!ENTITY % bodyele "((foreword | preface | intro), ldoffldngenproc, bombs,
warheads, missilesnuk, emerprocnuk, emerlogmvmt)" >

<!ENTITY % m5288ia PUBLIC "-//USA-DOD//DTD MIL-PRF-5288I CLUL//EN">

<!ENTITY nukecert "The support equipment and procedures contained herein have
been evaluated and are acceptable for this prescribed routine use with nuclear
weapons." >

%m5288ia;

<!-- ELEMENT and ATTRIBUTE LIST DECLARATIONS -->

<!ELEMENT acincfolup          - o (%parazero;) >
<!ATTLIST acincfolup          %para0att; >

<!ELEMENT bombdesc           - o (%parazero;) >
<!ATTLIST bombdesc           %para0att; >

<!ELEMENT bombheaddesig      - o (%parazero;) >
<!ATTLIST bombheaddesig      %para0att; >

<!ELEMENT bombs              - - (intropara, bombdesc+, (preloading,
loading, restraining, postloading, preflight,
specialhandling, offloadproced)+, (flrplnfig,
loadatatab)+, miscequiptab*)    +(figure | table
| foldout) >
<!ATTLIST bombs              %chapatt; >
```

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|                           |   |
|---------------------------|---|
| <!ELEMENT comm            | - o (%parazero;) >                            |
| <!ATTLIST comm            | %para0att; >                                  |
| <!ELEMENT docnclul        | - - (front, body, rear?) +(pgbrk   brk        |
| <!ATTLIST docnclul        | subjinfo   line   modreq   location)>         |
|                           | service %service; #REQUIRED                   |
|                           | %docatt;                                      |
|                           | %secur; >                                     |
| <!ELEMENT emerdestruct    | - o (%parazero;) >                            |
| <!ATTLIST emerdestruct    | %para0att; >                                  |
| <!ELEMENT emerlogmvmt     | - - (%chap;) +(figure   table   foldout) >    |
| <!ATTLIST emerlogmvmt     | %chapatt; >                                   |
| <!ELEMENT emerprocnuk     | - - (para0?, comm, firefite, genaccid,        |
|                           | emerdestruct, unschlnd, acincfolup, emeprc?,  |
|                           | prepostproc?, infjetproc?, para0*) +(figure   |
|                           | table   foldout) >                            |
| <!ATTLIST emerprocnuk     | %chapatt; >                                   |
| <!ELEMENT firefite        | - o (%parazero;) >                            |
| <!ATTLIST firefite        | %para0att; >                                  |
| <!ELEMENT genaccid        | - o (%parazero;) >                            |
| <!ATTLIST genaccid        | %para0att; >                                  |
| <!ELEMENT general         | - o (%parazero;) >                            |
| <!ATTLIST general         | %para0att; >                                  |
| <!ELEMENT genprec         | - o (%parazero;) >                            |
| <!ATTLIST genprec         | %para0att; >                                  |
| <!ELEMENT ldofffldgenproc | - - (general, genprec, rstcrit, shorreq,      |
|                           | cargaid, winproc, ldmethod, palcarld,         |
|                           | nukrstcrit) +(figure   table   foldout) >     |
| <!ATTLIST ldofffldgenproc | %chapatt; >                                   |
| <!ELEMENT misnukdesc      | - o (%parazero;) >                            |
| <!ATTLIST misnukdesc      | %para0att; >                                  |
| <!ELEMENT missilesnuk     | - - ((intropara, misnukdesc+, preloading,     |
|                           | loading, restraining, postloading, preflight, |
|                           | specialhandling, offloadproced, flrplnfig+,   |
|                           | loadatatab)+, miscequiptab) +(figure   table  |
|                           | foldout) >                                    |
| <!ATTLIST missilesnuk     | %chapatt; >                                   |
| <!ELEMENT nukrstcrit      | - o (%titles;, warning*, caution?, note?,     |
|                           | (para, note?)?, (step1, step1+)?, apprst,     |
|                           | apptiedev) >                                  |
| <!ATTLIST nukrstcrit      | %sectatt; >                                   |
| <!ELEMENT nuksafe         | - o (%parazero;) >                            |
| <!ATTLIST nuksafe         | %para0att; >                                  |

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```

<!ELEMENT twopers          - o (%parazero;) >
<!ATTLIST twopers          %para0att; >

<!ELEMENT unschlnd         - o (%parazero;) >
<!ATTLIST unschlnd         %para0att; >

<!ELEMENT warheaddesc      - o (%parazero;) >
<!ATTLIST warheaddesc      %para0att; >

<!ELEMENT warheads         - - ((intropara, warheaddesc+, preloading,
                                loading, restraining, postloading, preflight,
                                specialhandling, offloadproced, flrplnfig+,
                                loadatatab)+, miscequiptab) +(figure | table
                                | foldout) >
<!ATTLIST warheads         %chapatt; >

<!-- ***** END OF FILE ***** -->

```

### B.4. DETAILED DESCRIPTION.

**B.4.1 Document type definition.** The DTD found in MIL-STD-38784 as modified by the DTD subset within this appendix provides the structure and content of documents prepared in accordance with this specification. The DTDs are available in a digital format. See A.5., for information on obtaining the files.

**B.4.2 Tag description table.** The Tag Description Table provides detailed descriptions of the tags above. It provides the element tagging structure, full element name, tag minimization requirements, element structure, referencing elements, source paragraph, and attribute descriptions unique to the element. See A.5., for information on obtaining this table.

**MIL-PRF-5288H  
APPENDIX C**

**CARGO LOADING AND UNLOADING CHECKLISTS  
DOCUMENT TYPE DEFINITION (DTD) SUBSET**

**C.1. SCOPE.**

C.1.1 Scope. The markup tags described herein are based on rules outlined in MIL-PRF-28001 and the Information Processing - Text and Office Systems - Standard Generalized Markup Language (SGML) document, International Organization for Standardization (ISO) 8879, as incorporated in Federal Information Processing Standards (FIPS) 152. The Document Type Definition (DTD) subset within this appendix provides the structure and content of documents prepared in accordance with this specification. Digital copies of the DTD (see C.4.1), and Tag Description Table (see C.4.2) are available (see A.5.). This Appendix is a mandatory part of this specification. The information contained herein is intended for compliance.

**C.2. APPLICABLE DOCUMENTS.**

C.2.1 Government documents.

C.2.1.1 Specifications, standards, and handbooks. The following specifications, standards and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation (see 6.2).

**SPECIFICATIONS**

**Military**

|               |  |
|---------------|--|
| MIL-PRF-28001 | Markup Requirements and Generic Style Specification for Electronic Printed Output and Exchange of Text |
|---------------|--|

**STANDARDS**

**Federal Information Processing Standards**

|          |   |
|----------|---|
| FIPS 152 | Standard Generalized Markup Language (SGML) |
|----------|---|

(Unless otherwise indicated, copies of federal and military specifications, standards and handbooks are available from the Standardization Documents Order Desk, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094.)

(Copies of FIPS are available to Department of Defense activities from the Standardization Documents Order Desk, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094. Others must request copies of FIPS from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161-2171.)

**C.3. DOCUMENT TYPE DEFINITION SUBSET.**

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**C.3.1 SGML document type definition subset.** Data to be delivered digitally in accordance with this specification shall be tagged using the DTD found in MIL-STD-38784 as modified by the DTD subset in this section. The procedure for accomplishing this is found in MIL-PRF-28001.

**C.3.2 Template document type for Cargo Loading and Unloading Checklists.** The DTD subset for the Cargo Loading and Unloading Checklists is as follows:

```
<!-- ***** START OF FILE ***** -->

<!-- The following set of declarations may be referred to by using a public
entity as follows:

<!ENTITY % m5288ic PUBLIC "-//USA-DOD//DTD MIL-PRF-5288I CARCL//EN" >
%m5288ic;
-->

<!-- NOTE: In order to parse the following DTD subset alone, append the
following statement to the beginning of the file:

        <!DOCTYPE doccargocl [

and the associated ">" to the end of the file. -->

<!-- ENTITY DECLARATIONS -->

<!ENTITY % bodyele "(ldpln, prep, winching, palcarld, vehinsp, vehld,
cargoffld, persload, persoffld, chapter*)" >

<!ENTITY % frnt "(idinfo, lep, (foreword | preface | intro), contents)" >

<!ENTITY % m5288ia PUBLIC "-//USA-DOD//DTD MIL-PRF-5288I CLUL//EN">

<!ENTITY % titles "title" >

<!ENTITY % chap "(%titles;, task+) " >

<!ENTITY % cl1 "(%titles;, task+) " >

<!ENTITY % cl2 "(%titles;, task+) " >

<!ENTITY % cl3 "(%titles;, task+) " >

<!ENTITY % cl4 "(%titles;, task+) " >

<!ENTITY % cl5 "(%titles;, task+) " >

%m5288ia;

<!-- ELEMENT and ATTRIBUTE LIST DECLARATIONS -->

<!ELEMENT cargoffld          - o (%chap;) >
<!ATTLIST cargoffld          %chapatt; >
```

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```

<!ELEMENT doccargocl      - - (front, body) +(brk | pgbrk | subjinfo |
                             line | modreq | location) >

<!ATTLIST doccargocl      service %service; #REQUIRED
                             %docatt;
                             %secur; >

<!ELEMENT persload        - o (%chap;) >
<!ATTLIST persload        %chapatt; >

<!ELEMENT persoffld       - o (%chap;) >
<!ATTLIST persoffld       %chapatt; >

<!ELEMENT vehinsp         - o (%chap;) >
<!ATTLIST vehinsp         %chapatt; >

<!-- ***** END OF FILE ***** -->

```

### C.4. DETAILED DESCRIPTION.

C.4.1 Document type definition. The DTD found in MIL-STD-38784 as modified by the DTD subset within this appendix provides the structure and content of documents prepared in accordance with this specification. The DTDs are available in a digital format. See A.5., for information on obtaining the files.

C.4.2 Tag description table. The Tag Description Table provides detailed descriptions of the tags above. It provides the element tagging structure, full element name, tag minimization requirements, element structure, referencing elements, source paragraph, and attribute descriptions unique to the element. See A.5., for information on obtaining this table.

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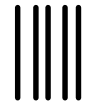
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