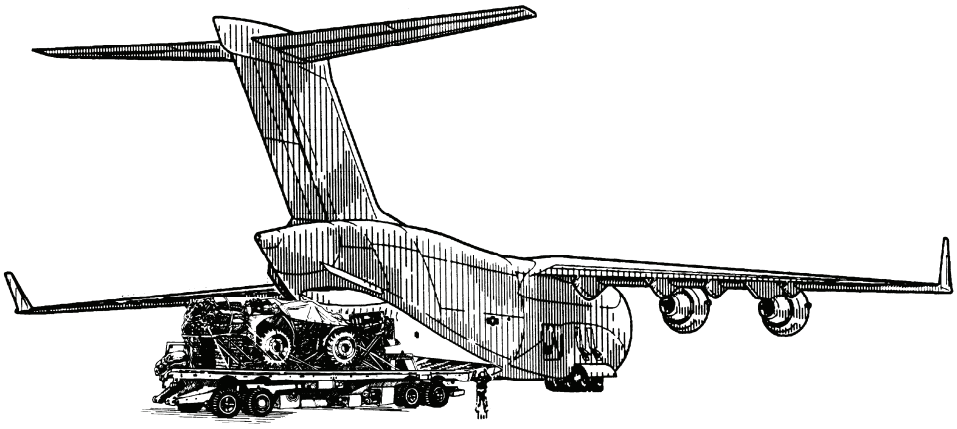
FM 4-20.102
MCRP 4-11.3J
NAVSEA SS400-AB-MMO-010
TO 13C7-1-5

AIRDROP OF SUPPLIES AND EQUIPMENT: RIGGING AIRDROP PLATFORMS



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HEADQUARTERS DEPARTMENT OF THE ARMY
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Headquarters
Department of the Army
United States Marine Corps
Department of the Navy
Department of the Air Force
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AIRDROP OF SUPPLIES AND EQUIPMENT: RIGGING AIRDROP PLATFORMS

Contents

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Preface

SCOPE

The purpose of this manual is to provide the latest approved procedures for rigging airdrop Platforms. This manual is written for use by the parachute rigger. It consists of 10 chapters.

The procedures contained in this manual are typical and serve as the standard from which all platform rigging is derived. Due to the uniqueness of some equipment and items, the procedures in a specific rigging manual may be different from those in this manual. When procedures are different, those in the specific manual will be followed. When an item of equipment is specified to be used for which its minimum or maximum capacity is exceeded, a notice of exception will be printed at the beginning of each paragraph in each rigging manual where the exception is authorized. When an item of airdrop equipment is replaced or a procedure is changed, it will be impossible to change all manuals in the field at one time. Therefore, this manual will be changed, when necessary.

Chapters 1 through 10 contain specific limitations and general information about the rigging of airdrop platform loads for low-velocity airdrop from US aircraft and also shows and tells how to prepare, attach, and safety tie some of the components and systems used in the specific rigging manuals of the FM 4-20.100/TO 13C7 series.

Note: New information concerning the Extraction Parachute Jettison System (EPJS) has been added along with some new procedures for the extraction force transfer coupling (EFTC). The C-141 and C-5 aircraft have been taken out and the C-17 aircraft information has been added. Also, a new user friendly format has been introduced combining general information and rigging information in each chapter.

USER INFORMATION

The proponent of this publication is United States Army Training and Doctrine Command (TRADOC). You are encouraged to report any errors or omissions and to suggest ways of making this a better manual.

This publication applies to Active Army, the Army National Guard (ARNG)/Army National Guard of the United States (ARNGUS), and the United States Army Reserve (USAR) unless otherwise stated.

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Chapter 1

Airdrop Information

RESPONSIBILITIES

1-1. Personnel responsible for loading rigged platform loads into aircraft and installing and operating airdrop systems are given below.

- **Air Forces Aircraft**. Air forces personnel are responsible for loading the rigged platform loads into the aircraft and for installing and operating the airdrop system.
- **US Air Force (USAF) Aircraft Foreign Joint Training**. USAF aircraft and crews conducting joint airdrop operations with foreign military governments are not authorized to airdrop equipment and configurations not included in this manual, unless authorized by specific MAJCOM.
- **Other Aircraft.** When an aircraft other than US Air Force aircraft is used, the service being airdropped may be responsible for loading their rigged platform loads into the aircraft and for installing and operating the airdrop systems.

SAFETY PRECAUTIONS

1-2. Safety precautions MUST be closely followed when airdrop platform loads are rigged. Failure to follow the precautions could result in serious injury to the rigger or damage to the drop item or aircraft. The following safety precautions shall be taken by the rigger:

- Make sure that when lifting heavy items, the lifting device has a rated lifting capacity that exceeds the weight of the item to be lifted.
- Be sure that items being lifted are secured to the lifting device.
- Avoid working under suspended equipment unless absolutely necessary.
- Cover all wet cell batteries in service with plastic or nonflammable material.
- Check fuel tanks to ensure that they do not exceed the fuel level of the specific rigging manuals. Check fuel cans to make sure they are performance-oriented packaging approved. When stowing fuel cans, use cellulose wadding or other suitable material to prevent metal-to-metal contact.
- Package, mark, and label hazardous materials according to AFMAN 24-204(I)/TM 38-250.

CAUTION

Only ammunition listed in FM 4-20.153/MCRP 4-11.3B/TO 13C7-18-41 may be airdropped. Hazardous material must be packaged, marked, and labeled as required by AFMAN(I) 24-204/TM 38-250.

TYPE AND METHOD OF AIRDROP

1-3. As used in this manual, airdrop is the air-to-ground delivery of platform loads from an aircraft in flight. Airdrop is designed to supplement the usual surface methods of delivering supplies and equipment to forces in the field.

- **Type of Airdrop**. Currently the only type of airdrop used to deliver platform loads is low-velocity airdrop. Low-velocity airdrop delivers platform loads from an aircraft at various altitudes. Cargo parachutes are used to slow the descent of the loads to ensure minimum landing shock. The type and number of cargo parachutes can vary as shown in Table 1-1. Due to differing deployment characteristics, parachutes of different types will not be mixed on the same load. Loads with different type parachutes and loads with quantities of the same type parachute may be airdropped from the same aircraft or element provided the following conditions are met:
  - Airdrop altitude for the aircraft or element will be determined by the type and number of parachutes on the load requiring the highest airdrop altitude.
  - Aircraft or elements with lower airdrop altitudes will drop before aircraft or elements with higher airdrop altitudes.
  - The transported force accepts strike report responsibility for loads other than the first platform to exit the aircraft or element lead for formation airdrops.

Table 1-1. Type and Number of Parachutes for Low-Velocity Airdrop

MINIMUM DROP ALTITUDE (FEET ABOVE GROUND LEVEL)	*PARACHUTES*
	G-11B
700	1
750	2 to 4
	G-11C
1,150	5
1,200	6 to 7
1,300	8
	G-12E
550	2 (Not for Army Platform Loads)

CAUTION

Drop altitudes reflect Minimum drop altitudes.

- **Method of Airdrop.** The extraction method is used for platform loads delivered by low-velocity airdrop on type V platform. This method uses a cargo extraction parachute to pull the platform load from the cargo compartment of the aircraft.

COMMONLY USED ITEMS

1-4. Items commonly used for rigging platform loads are described in this section. Each rigging manual in the FM 4-20.100/TO 13C7 series contains one or more tables of equipment required. These tables list the National Stock Number (NSN), item, and quantity of each item needed to prepare and rig the load covered in the manual. Standard airdrop hardware items are shown in Figure 1-1. Standard airdrop straps and canvas items are shown in Figure 1-2. Some textile, wood, and miscellaneous items are described below.

- **Textile Items**. The most common textile items and their uses are as follows:
  - Type III nylon cord is used to make safety ties and to hold items in place. It has a tensile strength of 550 pounds.
  - 1/2-inch tubular nylon webbing is used to secure items during airdrop and to tie the deadman's safety tie. It has a tensile strength of 1,000 pounds.
  - Type I, 1/4-inch cotton webbing is used to make many of the needed safety ties used when a platform load is rigged. It has a tensile strength of 80 pounds.
  - 5/8-inch or 9/16-inch tubular nylon webbing may be used for the deadman's safety tie and parachute clustering ties in place of 1/2-inch tubular nylon webbing. Five-eighths inch tubular nylon webbing has a tensile strength of 2,250 pounds and 9/16-inch tubular nylon webbing has a tensile strength of 1,500 pounds.