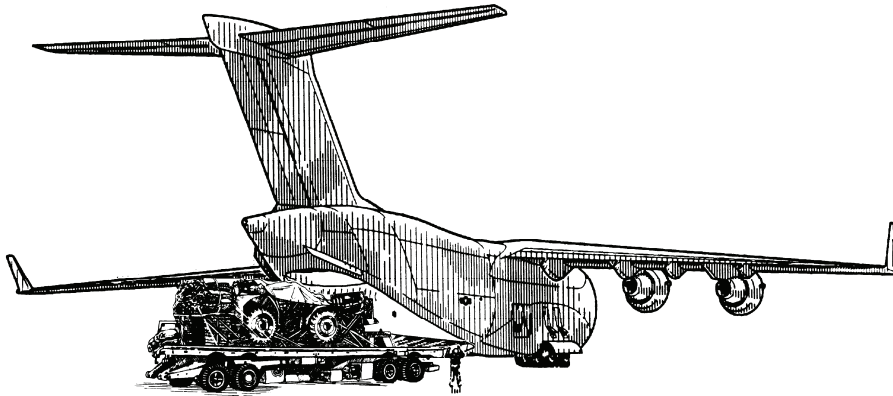


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TO 13C7-6-21

Airdrop of Supplies and Equipment: Rigging Tractors and Tractor-Dozers

September 2007



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No. 4-20.121
Technical Order
No. 13C7-6-21

Headquarters
Department of the Army
Department of the Air Force
Washington, DC, 6 September 2007

AIRDROP OF SUPPLIES AND EQUIPMENT: RIGGING TRACTORS AND TRACTOR-DOZERS

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Preface

SCOPE

This manual tells and shows how to prepare and rig the D-5B (Type I) tractor-dozer, the John Deere 450G LT full-tracked commercial bulldozer, the Deployable Universal Combat Earthmover (DEUCE), the T-200 Bobcat Compact Track Loader, the 420D backhoe loader, the 410 backhoe loader, the Small Emplacement Excavator (SEE), the 277 multi-terrain loader (MTL), and the All-Purpose Remote Transporter II (ARTS II) which are rigged for low-velocity (LV) airdrop from a C-130 and C-17 aircraft.

This manual combines FM4-20.121 and FM 10-539 into one manual, as well as, adding the T-200 Bobcat Compact Track Loader, the 420D backhoe loader, the MTL, and the ARTS.

APPLICABILITY

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

USER INFORMATION

The proponent of this publication is the United States Army Training and Doctrine Command (TRADOC). You are encouraged to report any errors or omissions and to suggest ways to make this a better manual. Army personnel, send your comments on DA Form 2028 directly to: Director

Aerial Delivery and Field Services Department
USA Quartermaster Center and School
710 Adams Avenue
Fort Lee, Virginia 23801-1502

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Unless this publication states otherwise, masculine nouns and pronouns do not refer exclusively to men.

Chapter 1

Introduction

DESCRIPTION OF ITEMS

1-1. The description and unrigged data for the items covered in this manual are described below.

- **D-5B Tractor-Dozer.** D-5B, type I (nonsectionalized). The type I tractor-dozer weighs 31,350 pounds with 3/4 tank of fuel. The weight of the tractor-dozer is reducible to 30,105 pounds with the roll-over protection structure (ROPS) removed. The tractor-dozer is 225 inches in length. Its width is 104 inches with the blade angled, and its height is 121 inches (reducible to 82 inches).
- **John Deere 450G Lt Full-Track Commercial Bulldozer.** The John Deere 450G Lt bulldozer weighs 18,080 pounds. The dozer is 180 inches in length. Its width is 97 inches and its height is 108 inches (reducible to 77 inches with ROPS removed and the seat back lowered).
- **Deployable Universal Combat Earthmover (DEUCE):** The Deployable Universal Combat Earthmover weighs 35,000 pounds. The earthmover is 112 inches high (reducible to 90 inches in the kneeling position with the cab removed).
- **T-200 Bobcat Compact Track Loader.** The T-200 Bobcat compact track loader weighs 8,300 pounds. The track loader is 81 inches high, 77 inches wide and 105 inches long. The roller attachment weighs 1,880 pounds. The angled broom attachment weighs 880 pounds. The bucket loader attachment weighs 540 pounds. The hydraulic breaker attachment weighs 760 pounds.
- **420D Backhoe Loader:** The 420D backhoe loader is 140 inches in high (reducible to 99-inches), 91 inches in wide, 276 inches in long, and weighs 15,763 pounds. An accompanying load, which consists of a roll-over protection system (ROPS) and a hydraulic breaker (hammer), is also rigged with the load. The ROPS weighs 420 pounds and the hydraulic breaker weighs 1420 pounds.
- **277 Multi-Terrain Loader:** The 277 Multi-Terrain Loader is 82 inches high, 78 inches wide, 115 inches long, and weighs 9,052 pounds. An accompanying load which consists of a front-end bucket loader attachment, a drill attachment, and an equipment storage box with a minimum weight of 1,500 pounds and a maximum weight of 3,000 pounds is also rigged with the load. The drill attachment weighs 920 pounds and the front-end bucket loader attachment weighs 940 pounds.
- **All-Purpose Remote Transporter:** The All-Purpose Remote Transporter is 78 inches high, 64 inches wide, 146 inches long, and weighs 9,880 pounds

SPECIAL INSTRUCTIONS

1-2. Special considerations for this manual are given below.

- The loads covered in this manual may include hazardous materials as defined in AFMAN 24-204(I)/TM 38-250/NAVSUP PUB 505/MCO P 4030.19I/DLAI4145.3. If included, the hazardous materials must be packaged, marked, and labeled as required by AFMAN 24-204(I)/TM 38-250/ NAVSUP PUB 505/MCO P 4030.19I/DLAI4145.3. A copy of this manual must be available to the joint airdrop inspectors during the before- and after-loading inspection.

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Chapter 2

Rigging the Type I, D-5B Tractor-Dozer for Low-Velocity Airdrop

DESCRIPTION OF LOAD

2-1. The type I (nonsectional), D-5B tractor-dozer is rigged on a 24-foot, type V platform with eight G-11C cargo parachutes. This dozer may be delivered by low-velocity airdrop from C-130 and C-17 aircraft.

PREPARING PLATFORM

2-2. Prepare a 24-foot, type V platform using two tandem links and 68 tiedown clevises as shown in Figure 2-1.

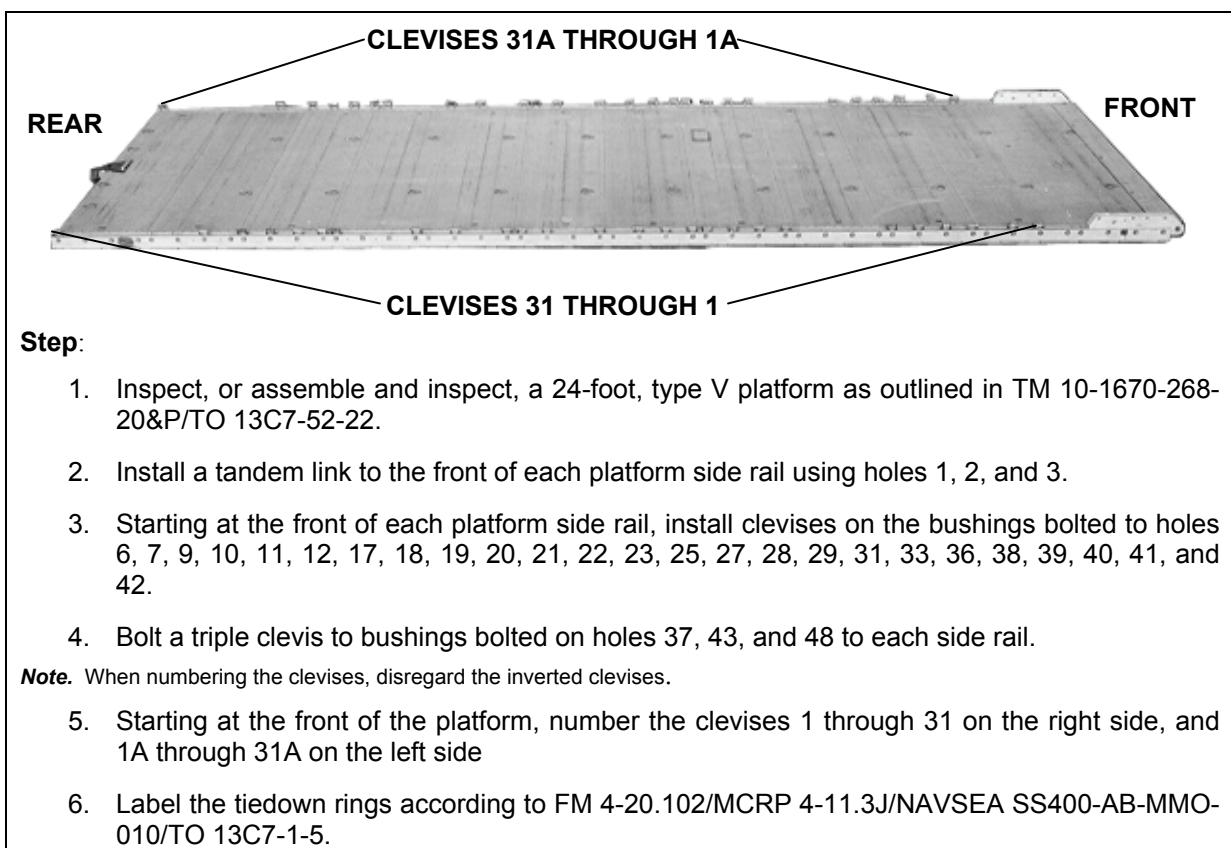
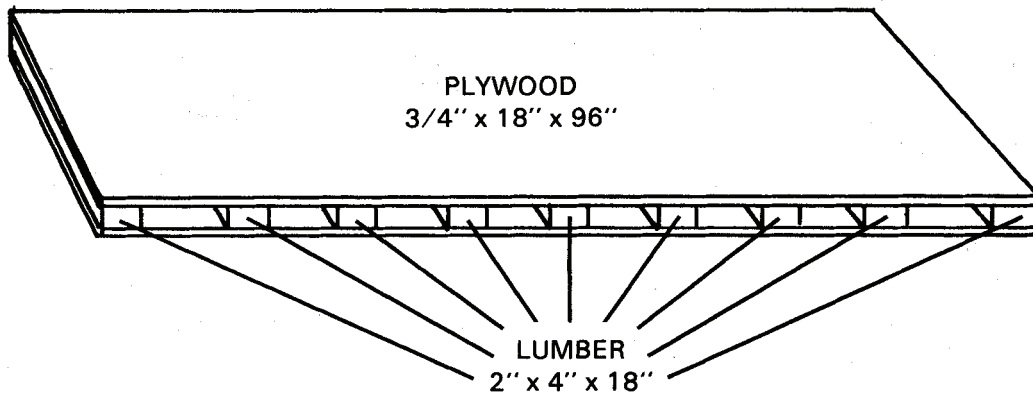


Figure 2-1. Platform Prepared

BUILDING AND POSITIONING HONEYCOMB STACKS

2-3. Build the load spreader for the honeycomb stacks as shown in Figure 2-2. Build the honeycomb stacks as shown in Figures 2-3 through 2-8. Position the stacks as shown in Figures 2-9 through 2-13.

- Notes.** 1. All measurements are given in inches.
2. This drawing is not drawn to scale.



Step:

1. Use two 3/4- by 18- by 96-inch pieces of plywood and nine 2- by 4- by 18-inch pieces of lumber.
2. Nail one piece of lumber to each end of one piece of plywood. Space the other seven pieces evenly, and nail them in place.
3. Nail the other piece of plywood to the lumber.

Note. Use eightpenny nails.

Figure 2-2. Load Spreader Prepared

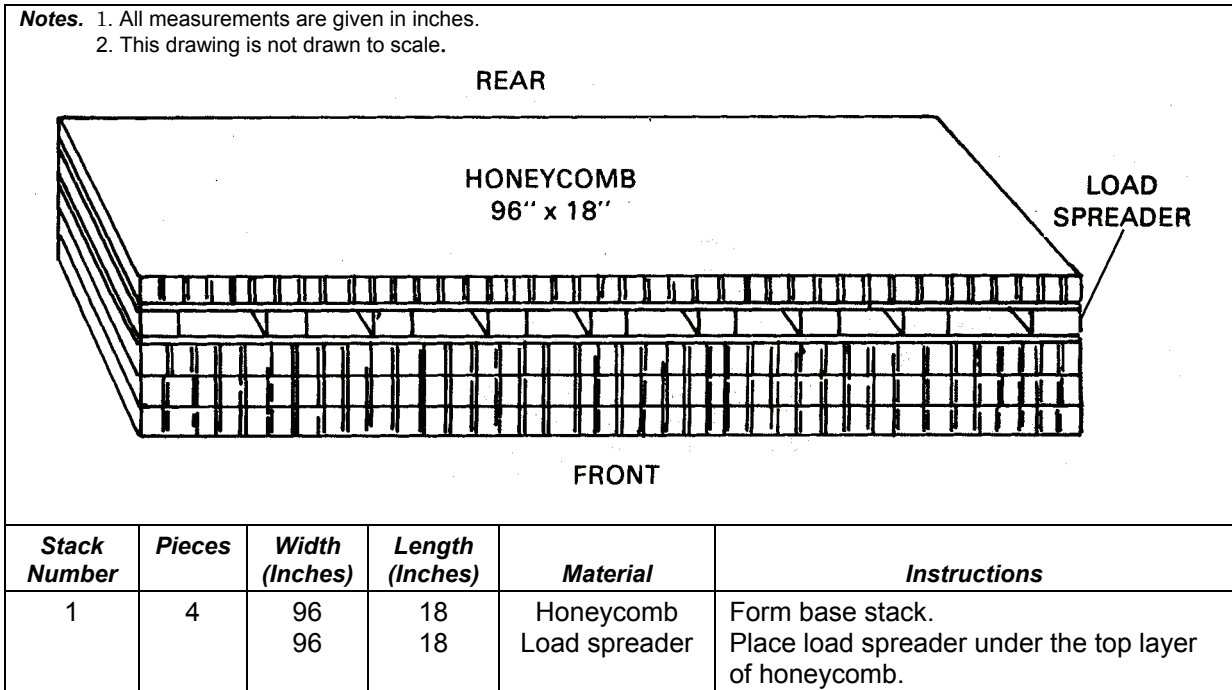


Figure 2-3. Honeycomb Stack Number 1 Prepared

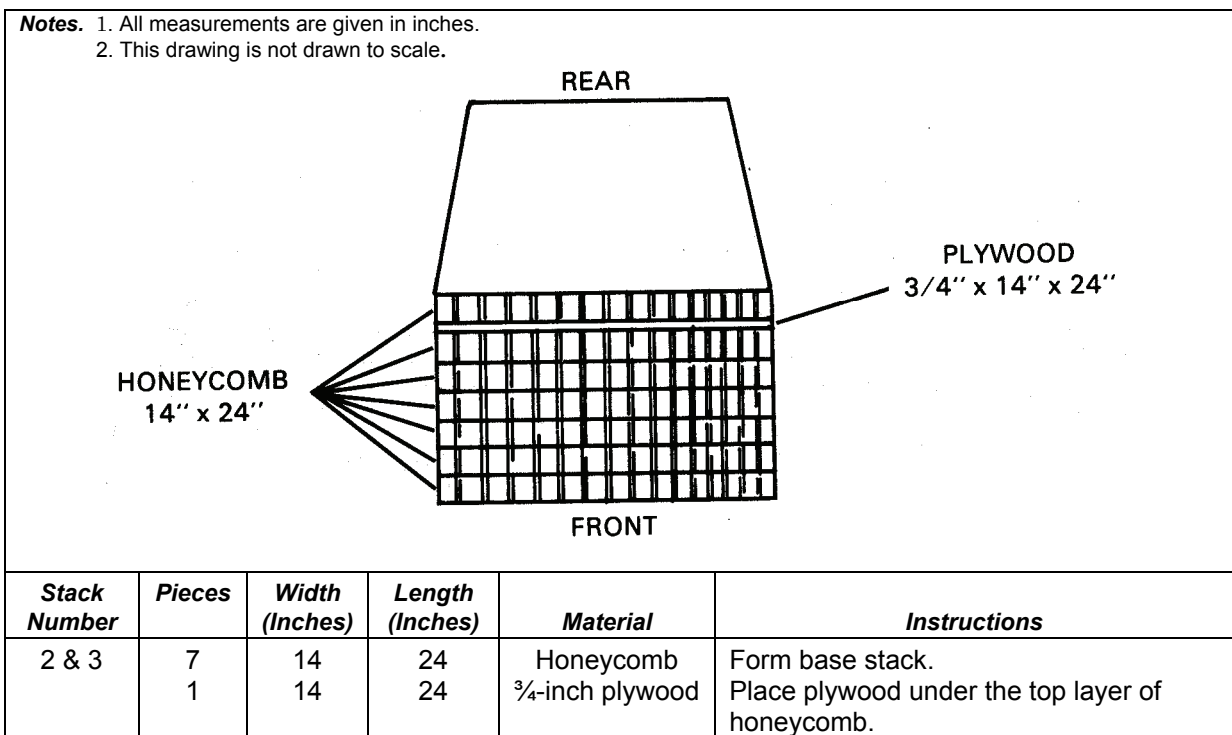


Figure 2-4. Honeycomb Stacks 2 and 3 Prepared