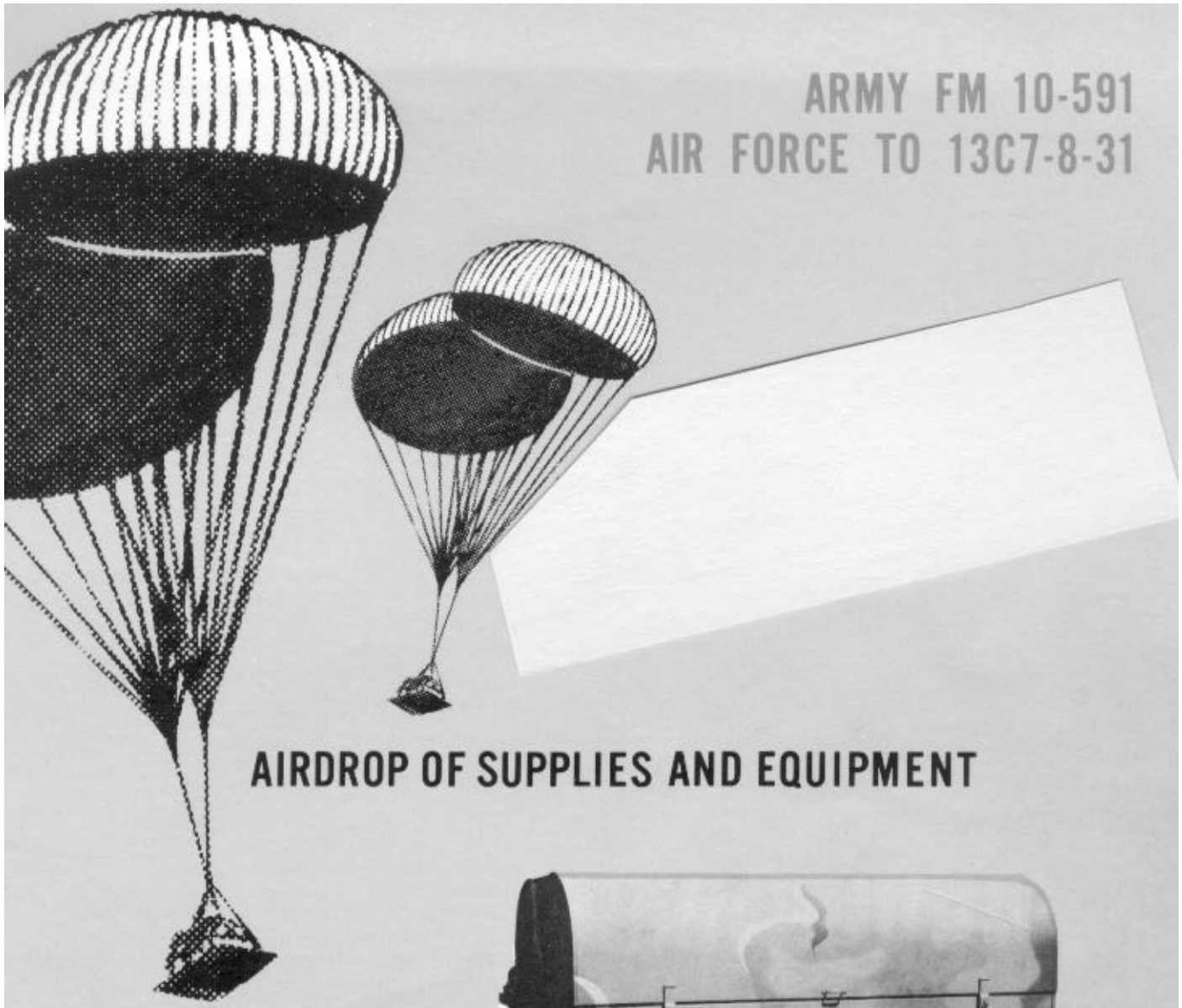
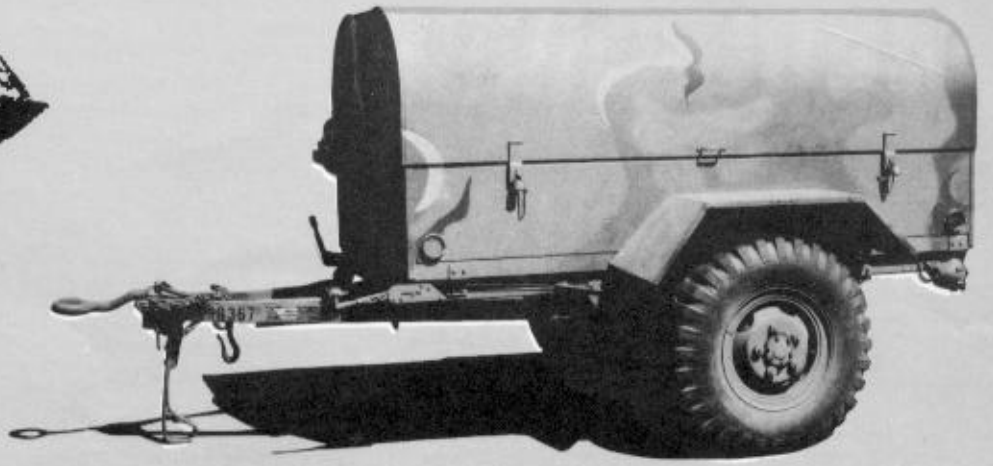
ARMY FM 10-591
AIR FORCE TO 13C7-8-31



AIRDROP OF SUPPLIES AND EQUIPMENT



RIGGING TRAILER MOUNTED ENGINEER ELECTRICAL TOOL OUTFITS

DEPARTMENTS OF THE ARMY AND THE AIR FORCE

DEPARTMENT OF THE ARMY
AERIAL DELIVERY AND FIELD SERVICES DEPARTMENT
U.S. ARMY QUARTERMASTER CENTER AND SCHOOL
1010 SHOP ROAD
FORT LEE, VIRGINIA 23801-1502

REPLY TO
ATTENTION OF

ATSM-ADFSD

7 October 1998

MEMORANDUM FOR Commander, US Army Training Support Center, ATTN: ATIC-TIST (Mr. Baston), Fort Eustis, VA 23604

SUBJECT: Distribution Restriction Notice on Airdrop Rigging Manuals

1. As proponent for development of all 10-500 series airdrop rigging field manuals and the 10-450 sling load manuals, it has been determined that the distribution restriction on these field manuals should be changed to read: Approved for public release, distribution unlimited.

2. It is requested that unrestricted release of these field manuals be made via the Army Training Digital Library.

3. The new distribution notice will be added to the cover pages as future changes/revisions are made to the manuals.

4. Enclosed you will find a numerical list and the number of changes of the manuals that have unlimited distribution.

5. The point of contact for this action is Mr. Roger Hale, DSN 687-4769.

Encl

THEODORE J. DLUGOS
Director, Aerial Delivery and
Field Services Department

Distribution restrictions for the following Airdrop field manuals should read "**Approved for public release; distribution is unlimited.**"

10-450-3
10-450-4
10-500-2, c2
10-500-3, c1
10-500-7, c1
10-500-45
10-500-53
10-500-66, c1
10-500-71
10-508, c1
10-510, c3
10-512, c4
10-513, c3
10-515, c1
10-516
10-517, c5
10-518
10-519, c3
10-520, c3
10-521, c2
10-522, c1
10-523, c2
10-524, c2
10-526, c3
10-527, c3
10-528, c6
10-529, c1
10-530
10-531, c2
10-532, c4
10-533
10-534, c2
10-535
10-537, c4
10-539, c3
10-540, c2
10-541, c1
10-542, c2
10-543, c2
10-546
10-547, c1
10-548, c1
10-549
10-550, c3
10-552, c2
10-554
10-555, c2
10-556
10-557
10-558, c1
10-562
10-564, c6
10-567, c1
10-569, c1
10-571
10-572
10-573, c1
10-574, c4
10-575, c2
10-576, c1
10-577
10-579, c2
10-584
10-586
10-588
10-591, c1

DEPARTMENT OF THE ARMY
HEADQUARTERS UNITED STATES ARMY TRAINING AND DOCTRINE COMMAND
FORT MONROE, VIRGINIA 23651-5000

REPLY TO ATTENTION OF

ATCD-SL (70-1f) 21 Oct 96

MEMORANDUM FOR DEPUTY CHIEF OF STAFF OPERATIONS AND PLANS, 400 ARMY PENTAGON, ATTN: DAMO-FDL, WASHINGTON DC 20310-0400

SUBJECT: Quartermaster (QM) Functional Area Assessment (FAA) Response

1. References:

a. Message, HQDA, DAMO-FDL, 231825Z Apr 96, subject: QM FAA Results.

b. Memorandum, HQ TRADOC, ATCG, 29 Jul 96, Army Airdrop Capabilities Assessment.

2. At the 29 Mar 96 QM FAA briefing to the Director of Army Staff, the decision was reached to revisit the Army's decision to "shelf" Low Altitude Parachute Extraction System (LAPES) (reference 1a).

a. Reference 1b, solicited CINCs input for their positions on LAPES and assessments of airdrop capabilities. The CINCs responses will be used to chart the direction and role for airdrop in the 21st century.

b. Based on the responses received (enclosure), there is no strong support for LAPES airdrop capability at this time. The consensus for the airdrop capabilities is to continue support for current Low Velocity Airdrop System (LVAD), develop a 500-foot LVAD and further explore Advanced Precision Aerial Delivery System (APADS).

3. Further, we will continue to maintain a range of airdrop capabilities to support all contingencies throughout the Army. The results of the Army Airdrop Capabilities Assessment also will be incorporated into the Operational Concept for Aerial Delivery Operations and Improved Cargo Aerial Delivery Capability Mission Needs Statement being developed by the Quartermaster Directorate of Combat Developments, U.S. Army Combined Arms Support Command (CASCOM).

4. The HQ TRADOC POC is MAJ Higgins, Airborne Airlift Action Office, ATCD-SL, E-mail: higginsn@emh10.monroe.army.mil, DSN 680-2469/3921, datafax DSN 680-2520.

ATCD-SL
SUBJECT: Quartermaster (QM) Functional Area Assessment (FAA) Response

FOR THE DEPUTY CHIEF OF STAFF FOR COMBAT DEVELOPMENTS:

Encl

JOHN A. MANDEVILLE
Colonel, GS
Director, Combat Service Support

CF:
USACASCOM (ATCL-CG/ATCL-QC/ATCL-MES)
USAQMC&S (ATSM-CG/ATSM-ABN/FS)
USANRDEC (SSCNC-UT/AMSSC-PM)

ORGANIZATION	LAPES	LVAD	500' LVAD	APADS	SPTS/ NOT SPEC
USSOCOM		X	X	X	
EUCOM					X
CENTCOM		X	X		
FORSCOM		X	X	X	
TRANSCOM					X
SOUTHCOM	X			X	
VIII ARMY					X
ACOM					X

USSOCOM: Memorandum specifically states that the command does not support LAPES airdrop capability, but supports LVAD as well as APADS.

EUCOM: Draft memorandum specifically states that the command support the need for a low level airdrop capability. However, memorandum summarizes that the specific capability is not important as to have a capability to meet the required mission/threat profile.

CENTCOM: Memorandum specifically states that the command does not support LAPES airdrop capability, but support both current LVAD and 500-foot LVAD airdrop capabilities.

FORSCOM: 1st Endorsement specifically states that the command does not support LAPES airdrop capability, however supports LVAD, 500-foot LVAD and APADS.

TRANSCOM: Memorandum does not specifically address any airdrop capability as it talks to the 21st century requiring the full spectrum of tactical delivery methods.

SOUTHCOM: Memorandum specifically supports LAPES and APADS airdrop capabilities for their command.

VIII ARMY: E-Mail note for VIII Army states that the command has no input to the assessment as their plans call for a limited employment of airdrop.

ACOM: Sent request for input on 30 Sep 96. Received verbal response on 16 Oct 96 stating command is indifferent on the specific capability received.

DEPARTMENT OF THE ARMY
HEADQUARTERS UNITED STATES ARMY TRAINING AND DOCTRINE COMMAND
FORT MONROE, VIRGINIA 23651-5000

REPLY TO
ATTENTION OF

6 SEP 1995

ATCD-SL (70-1f)

MEMORANDUM FOR

Major General Thomas W. Robison, Commander, U.S. Army Combined Arms Support Command and Fort Lee, Fort Lee, VA 23801-6000
Major General Robert K. Guest, Commander, U.S. Army Quartermaster Center and School, Fort Lee, VA 23801-5030

SUBJECT: Low Altitude Parachute Extraction System (LAPES) Disassembly

1. References:

a. Message, HQ TRADOC, ATCD-SL, 100930Z Jan 95, subject: LAPES.

b. OVVM Note, HQ USACASCOM, 30 March 95, subject: TRADOC Disassembly of LAPES.

2. The U.S. Army and other services recently have concurred that LAPES will be terminated, as this capability is no longer required as a viable wartime contingency airdrop option. However, Headquarters, Department of the Army (DA), Deputy Chief of Staff for Operations and Plans, has agreed that LAPES technology will be shelved, and all specialized equipment preserved for possible future use.

3. Take the necessary steps to terminate training and leader development concerning LAPES operations. Major General Guest's questions regarding the disassembly of LAPES (enclosed) with following guidance will be utilized:

a. "Does the U.S. Army Quartermaster Center and School (USAQMC&S) continue to publish LAPES procedures in their joint field manual(FMs)/technical order manuals?" "Do we publish the LAPES procedures that have been written but not been printed yet?" Publishing LAPES procedures in all joint publications, Army FMs, regulations, etc., will be discontinued and addressed in the next revision of the aforementioned documents. Concurrently, all LAPES procedures that have been written and not printed will not be published.

6 SEP 1995

ATCD-SL
SUBJECT: Low Altitude Parachute Extraction System (LAPES) Disassembly

b. "Do we keep LAPES in our programs of instruction (POIs)?" "Do we teach LAPES to other services and our allies?" The USAQMC&S will remove LAPES procedures from POI and cease teaching LAPES to other services and/or allies.

c. "What do we teach to folks that have LAPES equipment in their war reserves?" All instruction concerning LAPES procedures will be discontinued whether LAPES equipment is located in units or in war reserves.

d. "What is the DA/TRADOC guidance on disposition of unit, depot, and war reserves LAPES equipment?" All LAPES equipment in war reserves and depot should be preserved with the exception of a few items that can be utilized in other existing airdrop capabilities. Specifically, the Type V airdrop platforms and attitude control bars of the LAPES system are being utilized to augment current Low Velocity Airdrop Systems (LVADS) loads.

e. "What is the guidance to U.S. Army Test and Experimentation Command on force development test and experimentation certification of LAPES loads?" The certification of all LAPES loads at the Airborne Special Operations Test Directorate will be redirected toward testing and certification of LVADS loads.

4. HQ TRADOC POC is CPT Higgins or CPT Phillips, ATCD-SL, DSN 680-2469/3921, datafax DSN 680-2520.

FOR THE COMMANDER:

JOE N. BALLARD
Major General, GS
Chief of Staff

Encl

CF:
HQDA (DAMO-FDL)
CDR, NRDEC (SAFNC-UA)
CDR, FORSCOM (FCJ3-FC)
CDR, OPTEC (CSTE-CS, CSTE-OPM)
CDR, ATCOM (AMSAT-W-TD)
DIR, ABNSOTD (ATCT-AB)
HQ TRADOC (ATCD-L, ATCD-RM, ATDO-A, ATTG-IT)

Date and time 07/18/95 10:28:11

From: HIGGINSN--MON1
To: HIGGINSN--MON1

From: CPT NEIL HIGGINS, (AAACO), 680-2467
Subject: TRADOC "DISASSEMBLY" OF LAPES

****
* AIRBORNE AIRLIFT ACTION OFFICE *
* (AAACO) *
****

** Forwarding note from BRUNEAUN--CMSNAMES 07/18/95 10:27 ***
Received: from LEE-EMH2.ARMY.MIL by MONROE-EMH1.ARMY.MIL (IBM VM SMTP V2R2)
with TCP; Tue, 18 Jul 95 10:27:22 EDT
Received: from LEE1 by LEE-EMH2.ARMY.MIL (IBM VM SMTP V2R2) with BSMTP id 3547;
Tue, 18 Jul 95 10:29:34 EDT
Comments: Converted from PROFS to RFC822 format by PUMP V2.2X
Date: Tue, 18 Jul 95 10:29:26 EDT
From: NORMAN BRUNEAU <BRUNEAUN@LEE-EMH2.ARMY.MIL>
Subject: TRADOC "DISASSEMBLY" OF LAPES
To: "NEIL HIGGINS- AAACO " <HIGGINSN@MONROE-EMH1.ARMY.MIL>

*** Resending note of 03/30/95 09:23

-To: LARRY MC MILLIAN AAA <MCMILLIL@MONROE-EMH1.ARMY.MIL>
From: NORMAN BRUNEAU
Subject: TRADOC "DISASSEMBLY" OF LAPES

NEIL- HERE ARE THE QUESTIONS THAT MG GUEST WANTS DA/ TRADOC TO ANSWER RE LAPES.
AS I UNDERSTAND HIS GUIDANCE. I HAVE DISCUSSED THESE W/ OUR ABN DPT. IF THESE
QUESTIONS MAKE SENSE, GIVE ME AN "UP" BEFORE I FORMALLY SEND ANYTHING OUT.
MG GUEST WANTS SPECIFIC GUIDANCE FM TRADOC ON LAPES, RESPONSE NEEDS TO BE CLEAR
AND TO THE POINT. A LOT OF THIS WILL HINGE ON WHAT ACC PLANS TO DO W/ LAPES
NOW THAT THE AIR STAFF HAS GIVEN THEM THE GREEN LIGHT TO KILL IT. IF THEY
PLAN TO PLACE IT ON THE SHELF OR KEEP A LIMITED OR CONTINGENCY CAPABILITY, THAT
WILL DRIVE YOUR ANSWER TO US, AT THIS POINT I THINK ACC WILL DO WHATEVER THE
ARMY WANTS, AS THEIR PRIMARY CUSTOMER. I WILL NOT REHASH HOW THE ARMY DE-
CIDED THEY DIDNT NEED LAPES. QUESTIONS FOLLOW:

DOES THE GMCS CONTINUE TO PUBLISH LAPES PROCEDURES IN THEIRJOINT FM/TO MAN-
UALS?
DO WE PUBLISH THE LAPES PROCEDURES THAT HAVE BEEN WRITTEN BUT HAVE NOT BEEN
PRINTED YET?
DO WE REMOVE ALL LAPES PROCEDURES FROM ALREADY PUBLISHED MANUALS?
DO WE KEEP LAPES IN OUR POI?
DO WE TEACH LAPES TO OTHER SERVICES AND OUR ALLIES?
DO WE TEACH LAPES EQUIPMENT IN THEIR WAR RESERVES?
WHAT DO WE TEACH TO FOLKS THAT HAVE LAPES EQUIPMENT IN THEIR WAR RESERVES?
WHAT IS THE DA/TRADOC GUIDANCE ON DISPOSITION OF UNIT, DEPOT, AND WAR RE-
SERVE LAPES EQUIPMENT?
WHAT IS THE GUIDANCE TO TEXCOM ON THE FDTE CERTIFICATION OF LAPES LOADS?

I KNOW THESE ARE TOUGH QUESTIONS, BUT THEY HAVE TO BE ASKED. HQ STAFFS CAN-
NOT SIMPLY SAY "KILL IT" AND MOVE ON TO THE NEXT ISSUE. I DONT THINK WE ARE
DOING OUR JOB IF WE LEAVE IT UP TO THE SCHOOLHOUSE TO INTERPRET SKETCHY GUID-
ANCE. THAT PLACES US IN THE POSSIBLE POSITION OF BEING ACCUSED OF NOT FOLLOW-
ING ORDERS.

LETS TALK.....NORM

SEP 11 '95 08:30AM CSSRD FT MONROE VA P.4/7

Encl 1

DEPARTMENT OF THE ARMY
QUARTERMASTER CENTER AND SCHOOL
1201 22D STREET
FORT LEE, VIRGINIA 23801-1601

ATSM-ABN-FS 15 Dec 96

MEMORANDUM FOR RECORD

SUBJECT: Airdrop Equipment Update

Reference:

a. Phone conversation between CW4 Mahon, CASCOM and Dick Harper, Weapons System Management Office, Army Aviation Troop Command, Subject : sab

b. Phone conversation between CW4 Mahon, CASCOM and Don Stump, Logistics Management Specialist, Office, Deputy Chief of Staff for Logistics, Subject, sab

c. Phone conversation between CW4 Mahon, CASCOM and Chief Msgt Okraneck, Hqrs Air Combat Command, Subject sab

d. msg dtg R 181348Z Feb 94, subject: FCIF item: Type II platforms, PEFTC and SL/CS for Air Force unilateral training

1. Based on information received from the references a-c above, the following update is provided per request ref c, above.

a. The type II modular platform no longer exists within any contingency stocks. Therefore, maintaining Joint Inspection training program is no longer required for this equipment.

b. The Parachute Extraction Transfer Force Coupling (PEFTC) no longer exists within any contingency stocks. Therefore, maintaining Joint Inspection training program is no longer required for this equipment.

c. The metric platform interim rigging procedures are no longer valid as they apply to metric platforms. Those rigging procedures which have dual application with the type V platform are still valid for the type V platform.

d. The static line connector strap (SL/CS) currently has limited application. Only those loads that specifically require this system are authorized use of this system. The SL/CS is not an across the board substitute for the Extraction Force Transfer Coupling (EFTC). These authorized loads are specific in nature and will normally be found in the special operations arena of airdrop loads. This system is not authorized for use IAW ref d, above.

2. For additional questions/information contact the undersigned at DSN 687-4733, Fax 3084.

John R. Mahon
CW4, USA
Senior Airdrop Systems
Technician

CHANGE
No. 1

HEADQUARTERS
DEPARTMENT OF THE ARMY
DEPARTMENT OF THE AIR FORCE
Washington, DC, 19 August 1996

AIRDROP OF SUPPLIES AND EQUIPMENT: RIGGING TRAILER-MOUNTED ENGINEER ELECTRICAL TOOL OUTFITS

This change adds the procedures for rigging the trailer-mounted engineer electrical tool outfits for low-velocity airdrop on a type V platform.

FM 10-591/TO 13C7-8-31 is changed as follows:

1. New or changed material is identified by a vertical bar in the margin opposite the changed material.

2. Remove old pages and insert new pages as indicated below.

Remove pages	Insert pages
i	i and ii
1-1	1-1
2-13	3-1 through 3-21
	Glossary-1
	References-1

3. File this transmittal sheet in front of the publication for reference purposes.

By Order of the Secretaries of the Army and the Air Force:

DENNIS J. REIMER
General, United States Army
Chief of Staff

Official:

JOEL B. HUDSON
Administrative Assistant to the
Secretary of the Army
02239

DISTRIBUTION:

Active Army, Army National Guard, and U.S. Army Reserve: To be distributed in accordance with the initial distribution number 110947, requirements for FM 10-591.

FIELD MANUAL
NO 10-591
TECHNICAL ORDER
NO 13C7-8-31

HEADQUARTERS
DEPARTMENTS OF THE ARMY
AND THE AIR FORCE
Washington, DC, 17 June 1977

AIRDROP OF SUPPLIES AND EQUIPMENT:
RIGGING TRAILER-MOUNTED ENGINEER ELECTRICAL TOOL OUTFITS

TABLE OF CONTENTS

TYPE II PROCEDURES REMOVED

DISTRIBUTION UNLIMITED

* This publication supersedes FM 10-591/TO 13C7-8-31, 30 May 1974.

CHAPTER 1
INTRODUCTION

1-1. Scope

This manual tells and shows how to prepare and rig the trailer-mounted engineer electrical tool outfit for low-velocity airdrop from the C-130, C-141 and C-5 aircraft on the type II and type V platforms.

1-2. Special Considerations

a. The accompanying load may include a hazardous material such as ammunition or gasoline. When hazardous material is included as a part of the load, the material must be packaged, marked, and labeled to comply with AFJMAN 24-204.

CAUTION: Only ammunition listed in FM 10-500-53/TO 13C7-18-41 may be airdropped.

b. A copy of this manual should accompany the rigged load to the aircraft.

1-3. User Information

The proponent of this publication is HQ TRADOC. You are encouraged to report any errors or omissions and to suggest ways for improving this manual. Army personnel, send your comments on DA Form 2028 directly to:

AIRBORNE AND FIELD SERVICES DEPARTMENT
USA QUARTERMASTER CENTER AND SCHOOL
1010 SHOP ROAD
FORT LEE VA 23801-1502

Air Force personnel, send your reports on AFTO Form 22 through:

HEADQUARTERS
AIR MOBILITY COMMAND (AMC/DOTX)
402 SCOTT DRIVE UNIT 3A1
SCOTT AFB IL 62225-5302

Air Force personnel in Air Combat Command, send your reports on AFTO Form 22 through:

HQ ACC/DOTW
205 DODD BLVD SUITE 101
LANGLEY AFB VA 23665-2789

Air Force personnel in Special Operations Command, send your reports on AFTO Form 22 through:

HQ AFSOC/DOXT
100 BARTLEY ST SUITE 260
HURLBERT FIELD FL 32544-5273

to:

AIRBORNE AND FIELD SERVICES DEPARTMENT
USA QUARTERMASTER CENTER AND SCHOOL
1010 SHOP ROAD
FORT LEE VA 23801-1502

Also send information copies of AFTO Form 22 to:

SA-ALC/TILDP
485 QUENTIN ROSSVELT ROAD
KELLY AFB TX 78241-6421

CHAPTER 3

RIGGING TRAILER-MOUNTED ENGINEER ELECTRICAL TOOL OUTFIT ON A 12-FOOT, TYPE V AIRDROP PLATFORM FOR LOW-VELOCITY AIRDROP

3-1. Description of Load

The trailer-mounted engineer electrical tool outfit (NSN 5180-00-289-9569) is rigged on a 12-foot, type V platform with one G-11 cargo parachute and other items of airdrop equipment. The unrigged trailer-mounted tool outfit weighs 2,720 pounds, its length is 147 inches, its width is 75 inches, and its height is 71 inches. Other trailer-mounted engineer electrical tool outfits may also be rigged for airdrop by adapting these procedures.

3-2. Preparing Platform

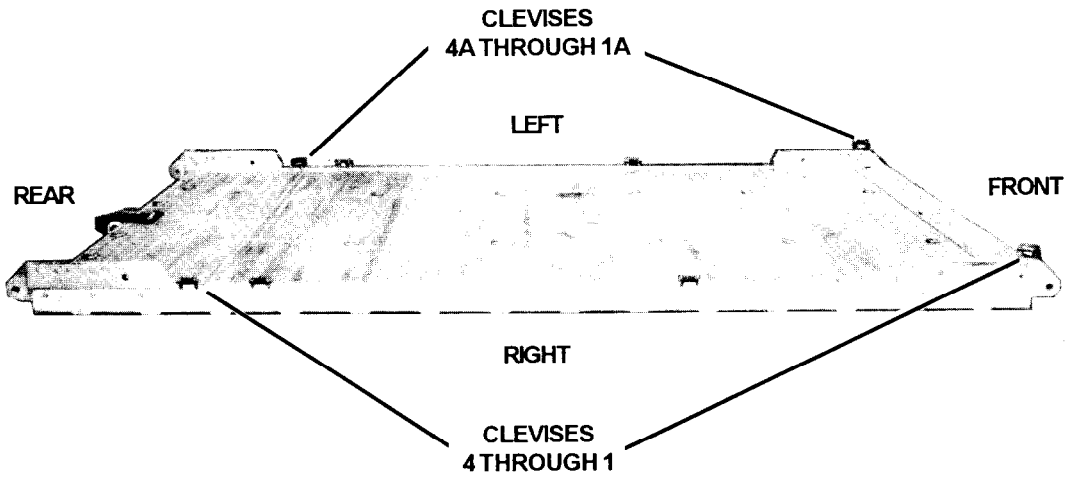
Prepare a 12-foot, type V platform as described below and shown in Figure 3-1.

a. Inspecting Platform. Inspect, or assemble and inspect, the 12-foot, type V airdrop platform according to TM 10-1670-268-20&P/TO 13C7-52-22.

b. Installing Tandem Links. Install a tandem link to the front and rear of each platform side rail as shown in Figure 3-1.

c. Installing and Numbering Clevises. Bolt and number eight clevis assemblies as shown in Figure 3-1.

NOTES: 1. **Nose bumper may or may not be installed.**
2. **Measurements from the front of the platform are taken from the front edge of the first panel or the crease of the nose bumper, NOT from the front edge of the nose bumper.**
3. **Measurements from the rear of the platform are taken from the rear edge of the last panel.**



Step:

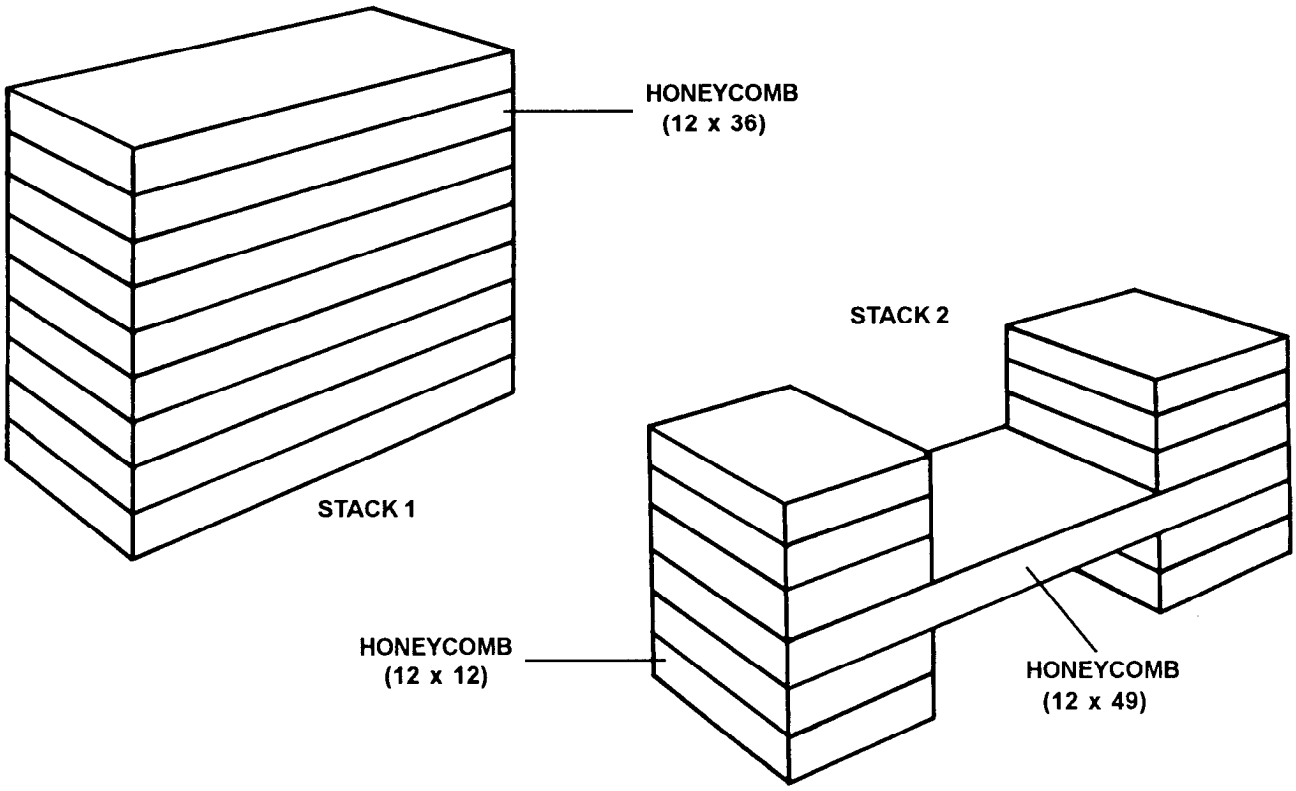
1. Install a tandem link to the front of each platform side rail using holes 1, 2, and 3.
2. Install a tandem link to the rear of each platform side rail using holes 22, 23, and 24.
3. Install a clevis on bushing 1 of each front tandem link.
4. Starting at the front of each platform side rail, install clevises on the bushings bolted on holes 9, 19, and 21.
5. Starting at the front of the platform, number the clevises 1 through 4 on the right side and 1A through 4A on the left side.
6. Label the tie-down rings according to FM 10-500-2/TO 13C7-1-5.

Figure 3-1. Platform prepared

3-3. Preparing and Positioning Honeycomb Stacks

Prepare three honeycomb stacks as shown in Figures 3-2, and 3-3. Position the stacks on the platform as shown in Figure 3-4.

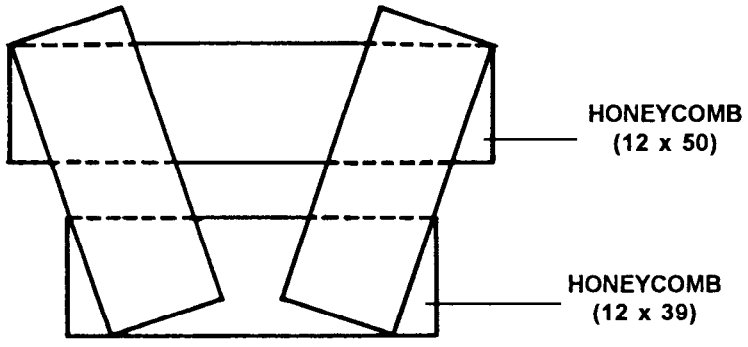
NOTES: 1. These drawings are not drawn to scale.
2. All measurements are given in inches.



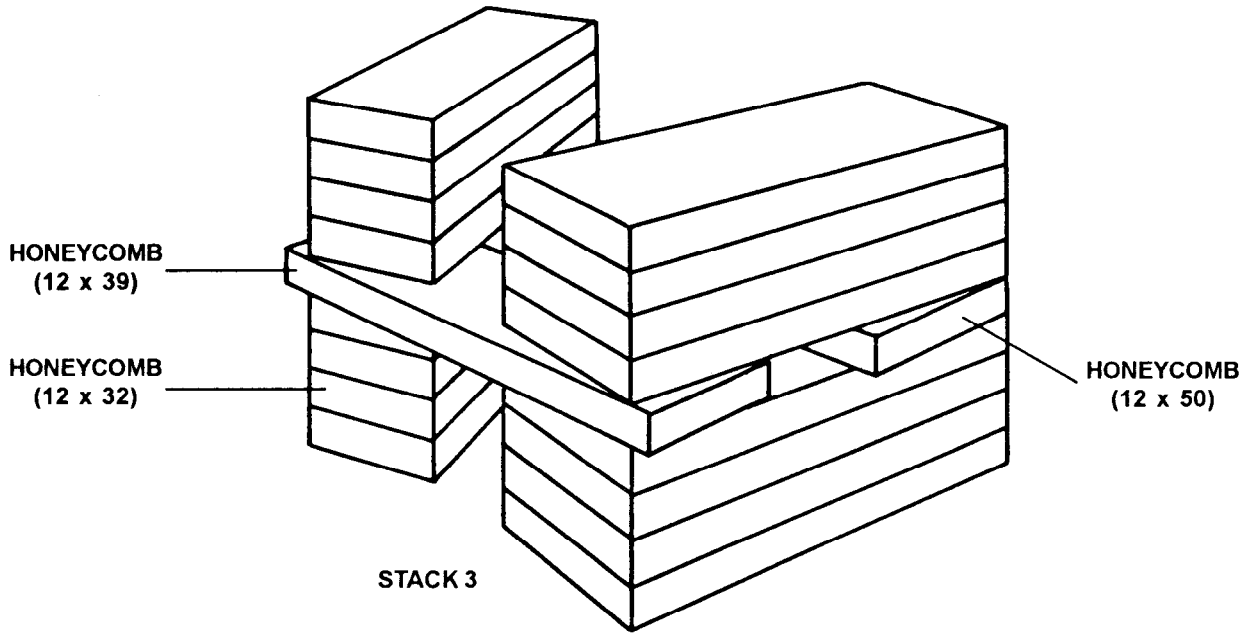
Stack Number	Pieces	Width (inches)	Length (inches)	Material	Instructions
1	9	12	36	Honeycomb	Stack honeycomb flush.
2	10 1	12 12	12 49	Honeycomb Honeycomb	Stack honeycomb flush. Bridge the two stacks between the second and third layers of honeycomb as shown.

Figure 3-2. Honeycomb stacks 1 and 2 prepared

NOTES: 1. These drawings are not drawn to scale.
2. All measurements are given in inches.



TOP VIEW

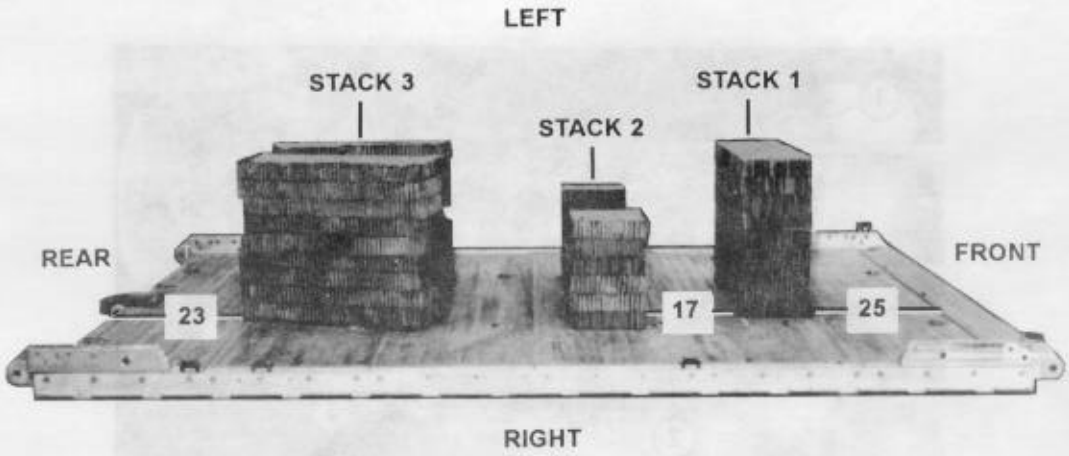


STACK 3

Stack Number	Pieces	Width (inches)	Length (inches)	Material	Instructions
3	16	12	32	Honeycomb	Make four stacks of four layers each. Place them at an angle as shown.
	1	12	39	Honeycomb	Bridge the two stacks between the fourth and fifth layers of honeycomb on stack 3.
	1	12	50	Honeycomb	

Figure 3-3. Honeycomb stack 3 prepared

NOTE: All measurements are given in inches.



Stack Number	Position of Stack on Platform
1	Center 25 inches from the front edge of the platform.
2	Center 17 inches from stack 1.
3	Center 23 inches from rear edge of platform with the narrow part of the V to the rear.

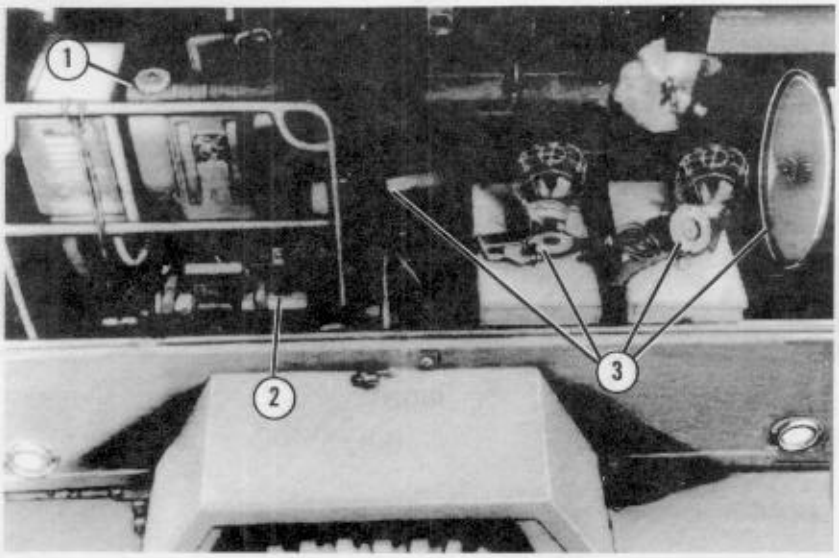
Figure 3-4. Honeycomb positioned

3-4. Preparing Tool Outfit and Trailer

Prepare the trailer and its contents as shown in Figures 3-5, 3-6 and 3-7.

CAUTION

Package, mark, and label gasoline according to AFJMAN 24-204.



NOTE: Be sure the generator is bolted down to the floor of the trailer. If the generator cannot be secured in this way, route a 15-foot lashing through each front tie-down ring and through its own D-ring. Route the lashings through each side of the generator frame. Secure the lashings with a D-ring and load binder. These lashings are shown in later figures.

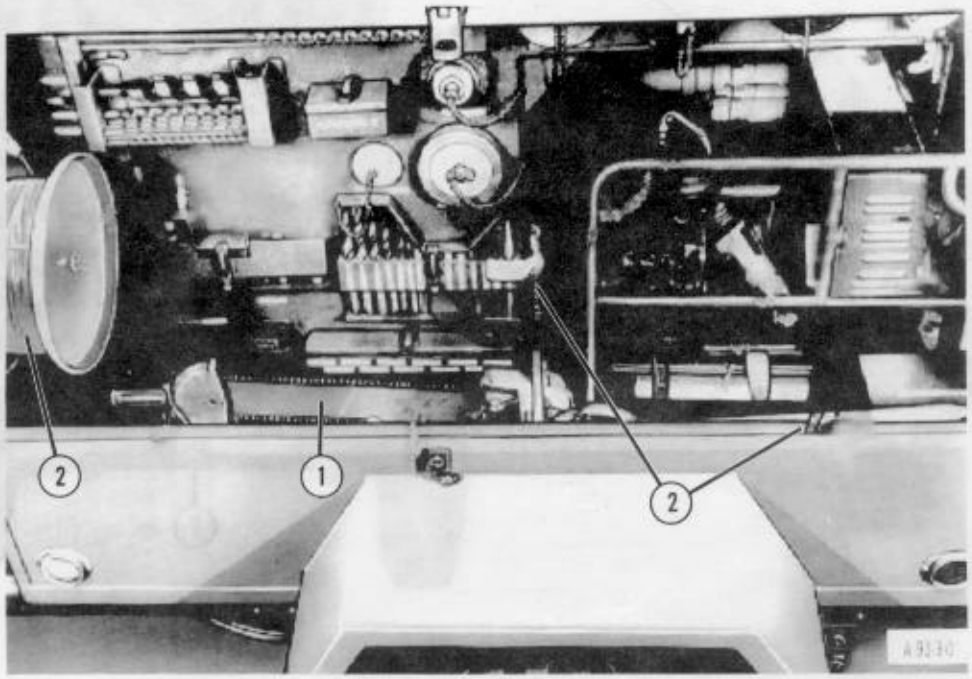
(1) Make certain the generator fuel tank is no more than three-fourths full.

(2) Position and tape two 2- by 4- by 15-inch pieces of lumber under the generator frame on the right and left sides.

(3) Tape the nozzle, extension cables, and floodlights.

(4) Tie the ground rods together with type III nylon cord, and place them in the storage area provided for long drill bits (not shown).

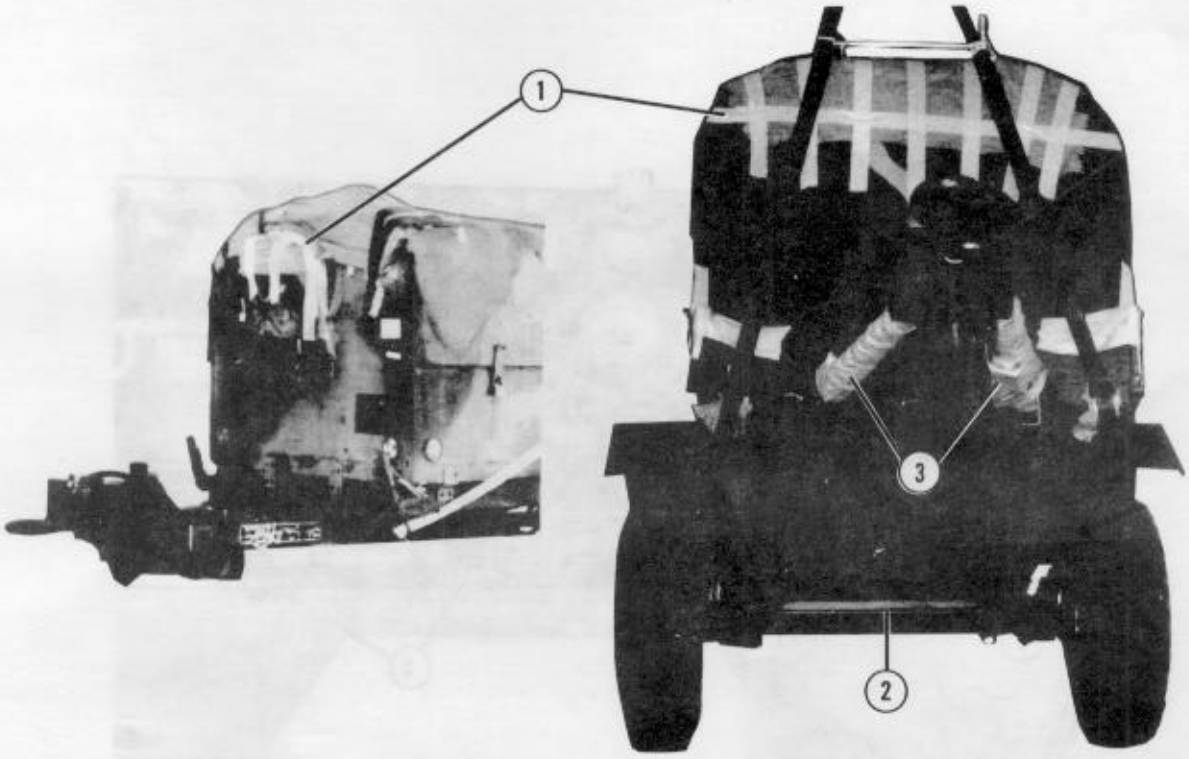
Figure 3-5. Right inside of trailer prepared



(1) Place the multipurpose saw on top of the circular saw. Secure it with a tie-down strap around the lower frame of the generator and through the handle of the circular saw.

(2) Tape the nozzle, extension cable, and survey stick.

Figure 3-6. Left inside of trailer prepared



(1) Pad the top edge of trailer first. Check gasoline can and make certain it is filled to a level 1 inch below the bottom of the filler neck threads when the can is in a level position. Stow the can in the bracket provided. Pad the top of the can. If there are no straps to secure the gasoline can, secure it with 1/2-inch tublar nylon.

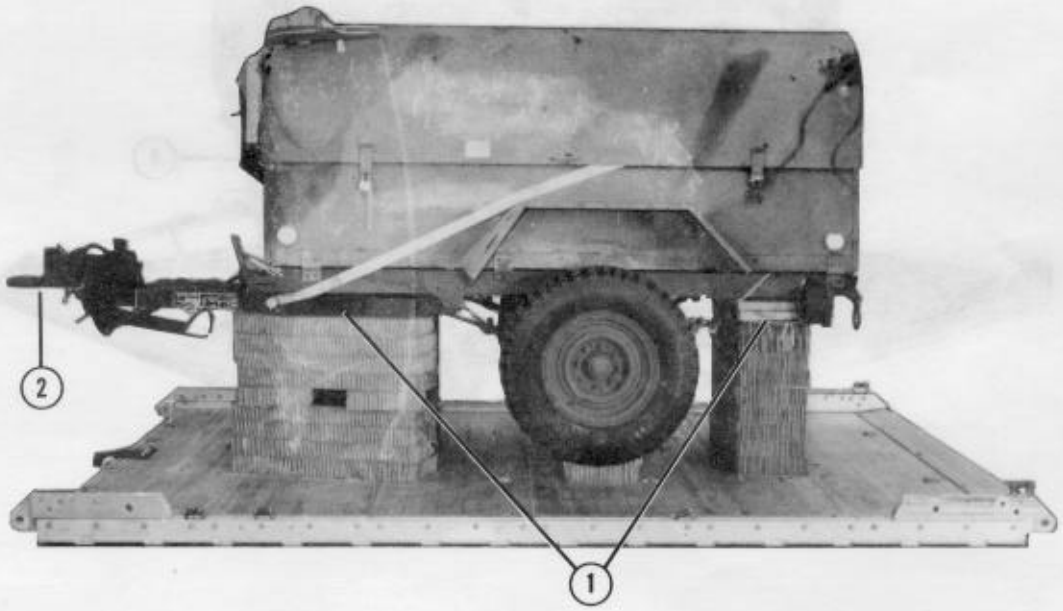
(2) Position two 2- by 12- by 47-inch pieces of lumber under the trailer frame to the rear of the spring shackles. Tie the pieces of lumber in place with one turn type III nylon cord.

(3) Secure the intervehicular cable and chains to the drawbar with type III nylon cord and tape. Close and lock the metal canopy and compartments. If there is no lock, securely tie the tool compartments with type III nylon cord.

Figure 3-7. Outside of trailer prepared

3-5. Positioning Trailer

Attach four 12-foot (2-loop) slings and four medium clevises to the tie-down rings to lift the trailer. Position the trailer on the honeycomb stacks as shown in Figure 3-8.



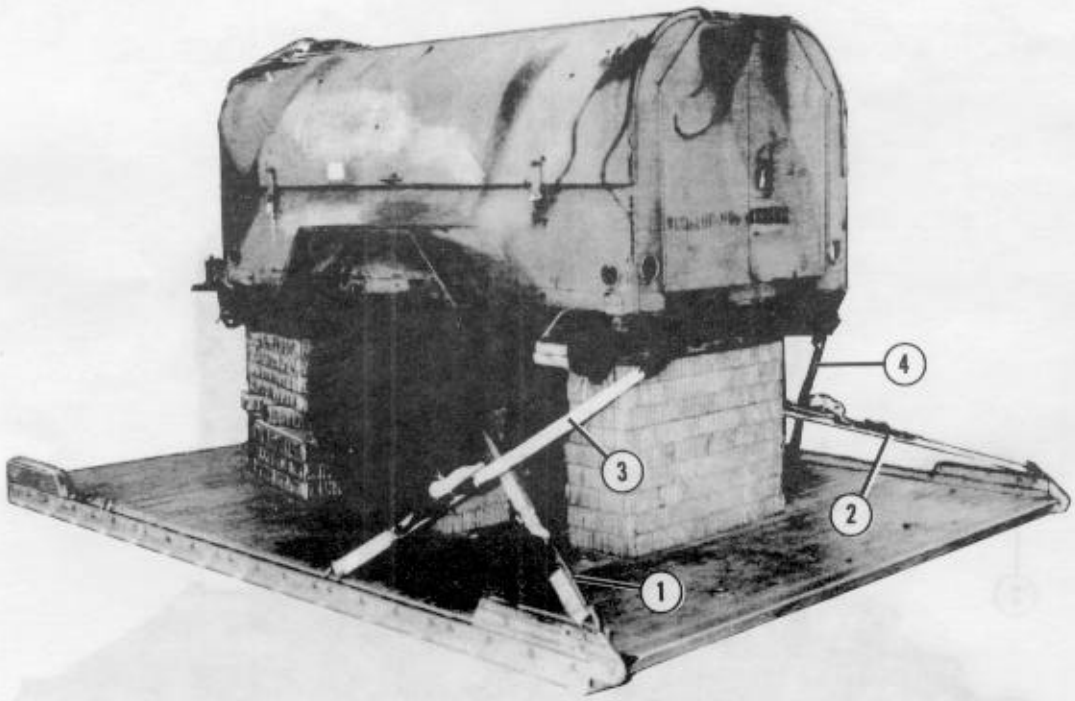
(1) Set the trailer on the honeycomb stacks so that the lumber pieces rest squarely on stack 1 and the drawbars rest squarely on stack 3.

(2) Let the lunette overhang the rear of the platform 20 inches.

Figure 3-8. Trailer positioned

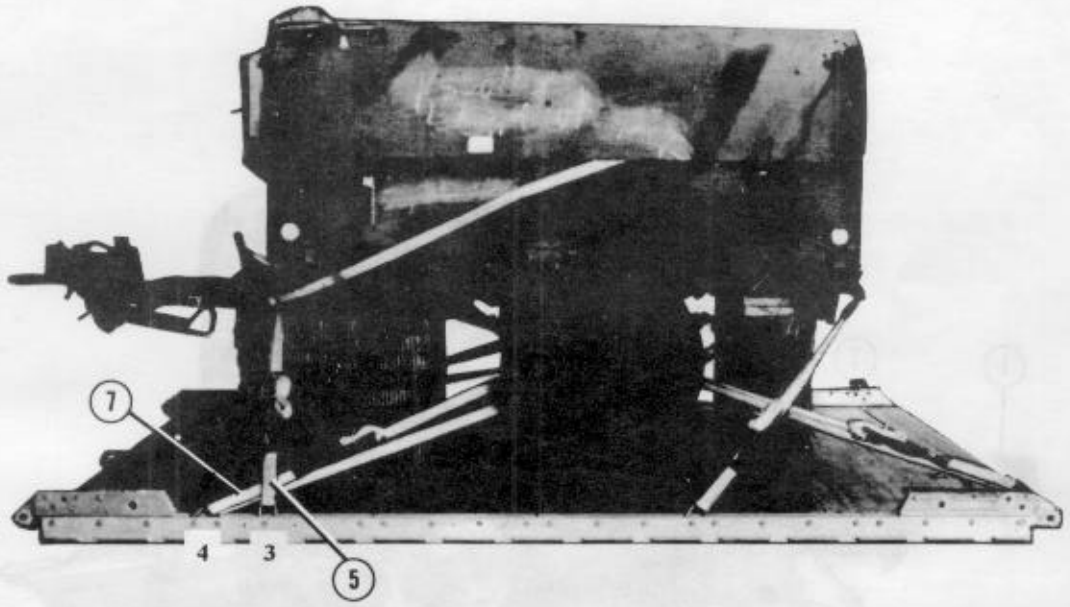
3-6. Lashing Trailer

Lash the trailer to the platform as shown in Figure 3-9.



Lashing Number	Tie-down Clevis Number	Instructions
		Pass lashing:
1	1	Around axle between shock absorber and spring.
2	1A	Around axle between shock absorber and spring.
3	2	Through left rear tiedown provision.
4	2A	Through right rear tiedown provision.

Figure 3-9. Lashings installed

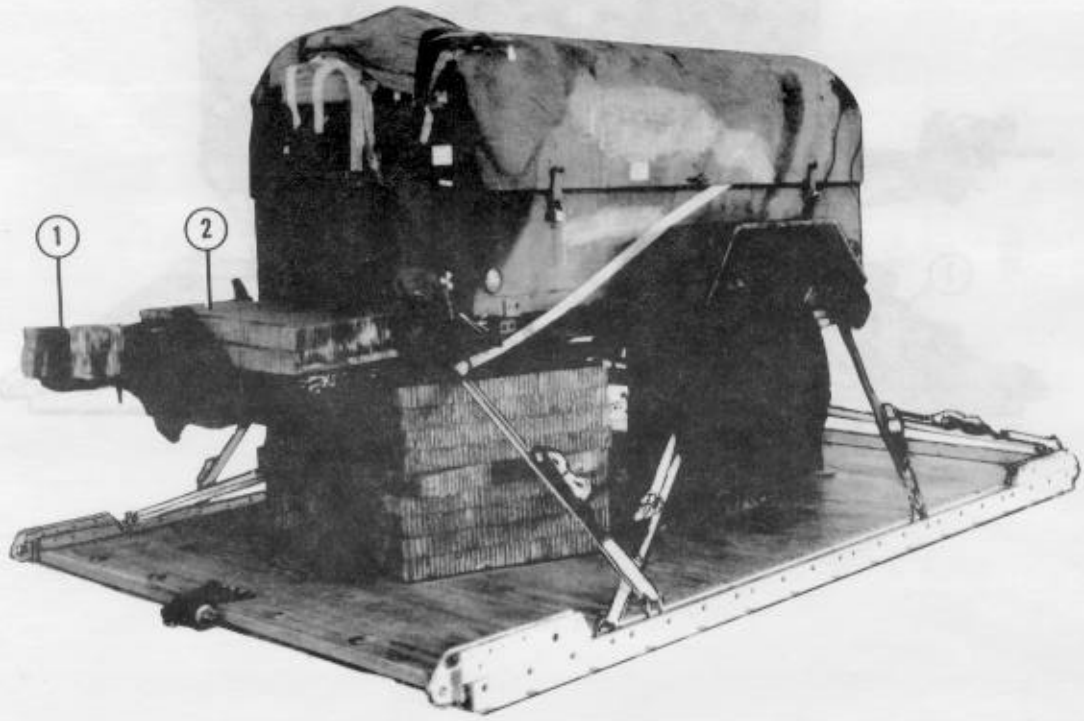


Lashing Number	Tie-down Clevis Number	Instructions
		Pass lashing:
5	3	Through left front tiedown provision.
6	3A	Through right front tiedown provision.
7	4	Around axle to right of shock absorber.
8	4A	Around axle to left of shock absorber.

Figure 3-9. Lashings installed (continued)

3-7. Constructing and Installing Parachute Stowage Platform

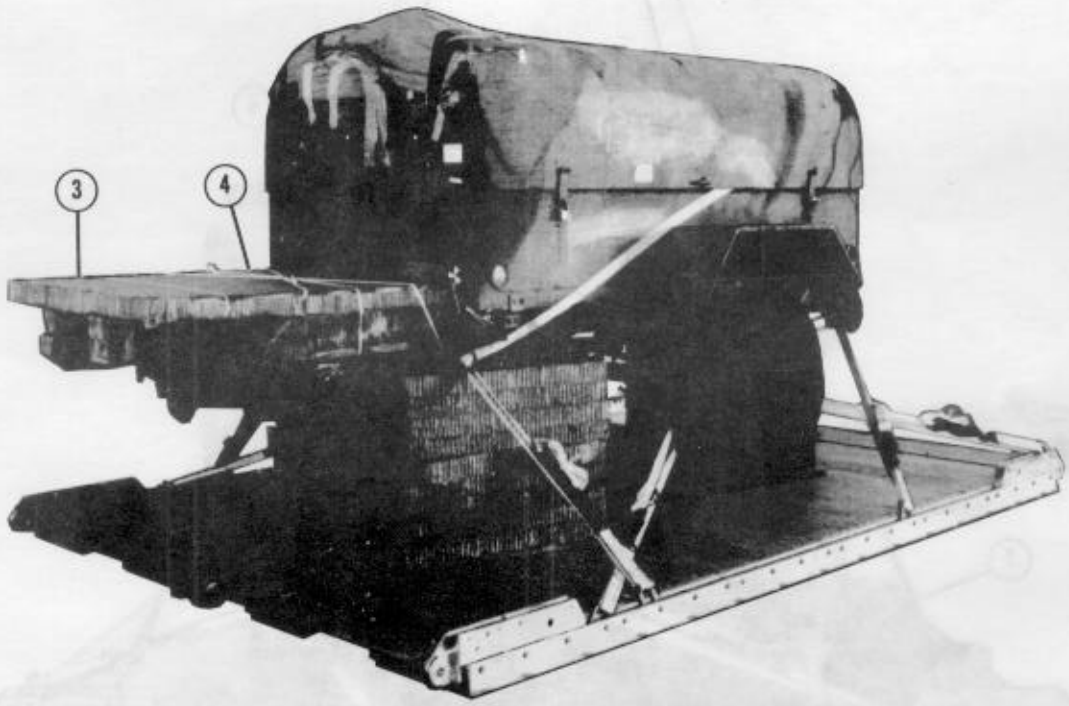
Construct and install the parachute stowage platform as shown in Figure 3-10.



(1) Tape two 12- by 6-inch pieces of honeycomb to the lunette.

(2) Position two 24- by 36-inch pieces of honeycomb on the trailer drawbar. Tape the bottom left and right edges of the honeycomb.

Figure 3-10. Parachute stowage platform constructed and installed



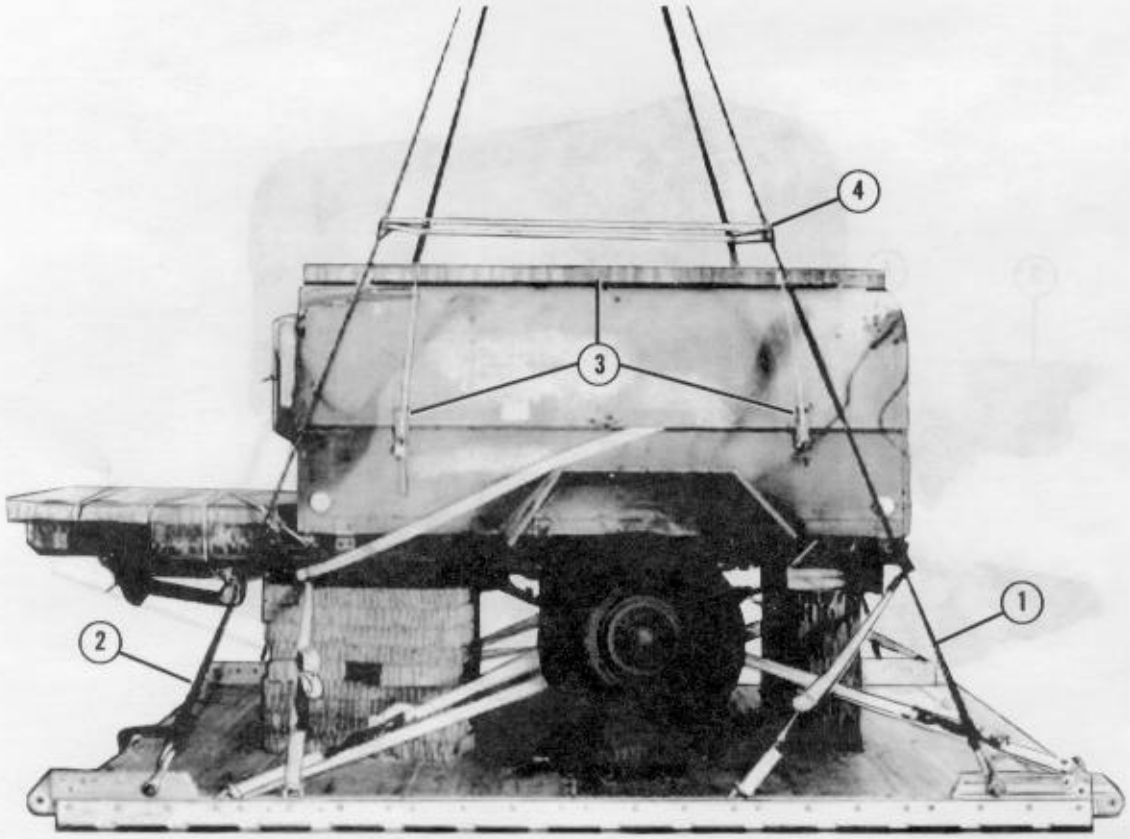
(3) Position and glue one 36- by 48-inch piece of honeycomb on top of the honeycomb placed in steps 1 and 2. Tape the right and left top edges of the honeycomb.

(4) Secure the honeycomb with type III nylon cord.

Figure 3-10. Parachute stowage platform constructed and installed (continued)

3-8. Installing and Safetying Suspension Slings

Install and safety the suspension slings as shown in Figure 3-11.



(1) Attach a 16-foot (2-loop), type XXVI nylon suspension sling to each front tandem link with a large clevis.

(2) Attach a 16-foot (2-loop), type XXVI nylon suspension sling to each rear tandem link with a large clevis.

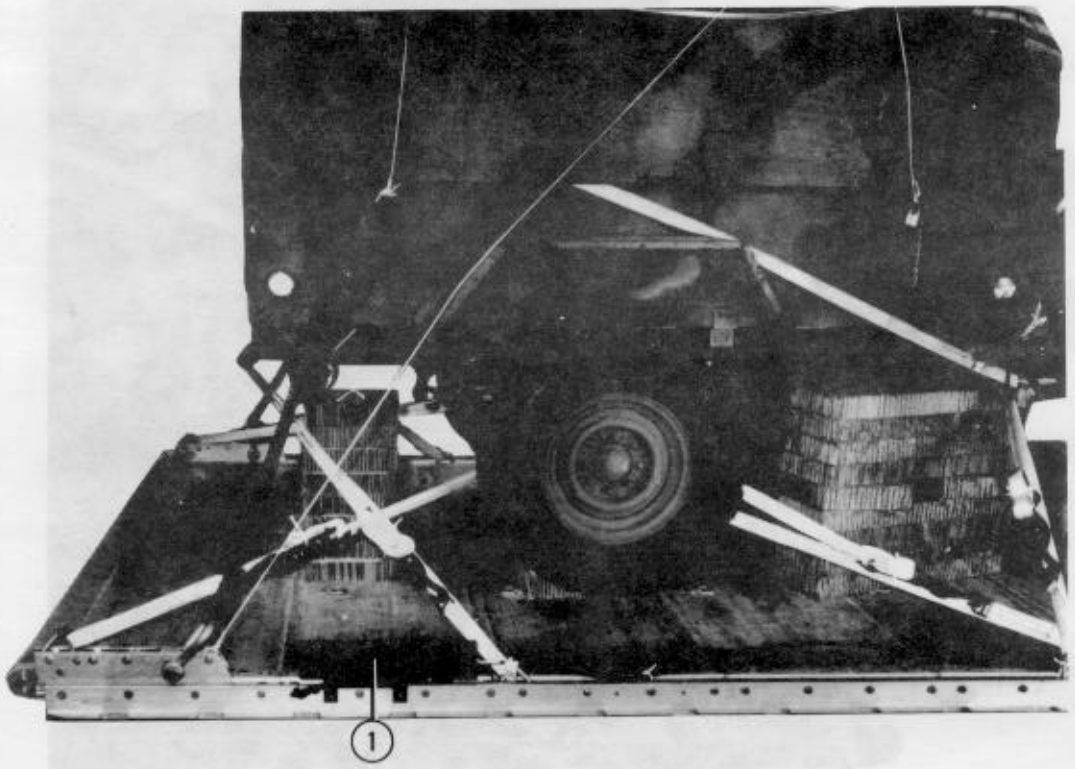
(3) Place a 36- by 96-inch piece of honeycomb on the top of the trailer. Tape the right and left top edges and secure with type III nylon cord. Pad and tape the cover latches.

(4) Raise the slings and install the deadman's tie 6 to 8 inches above the highest point on the load according to FM 10-500-2 /TO 13C7-1-5.

Figure 3-11. Suspension slings and deadman installed

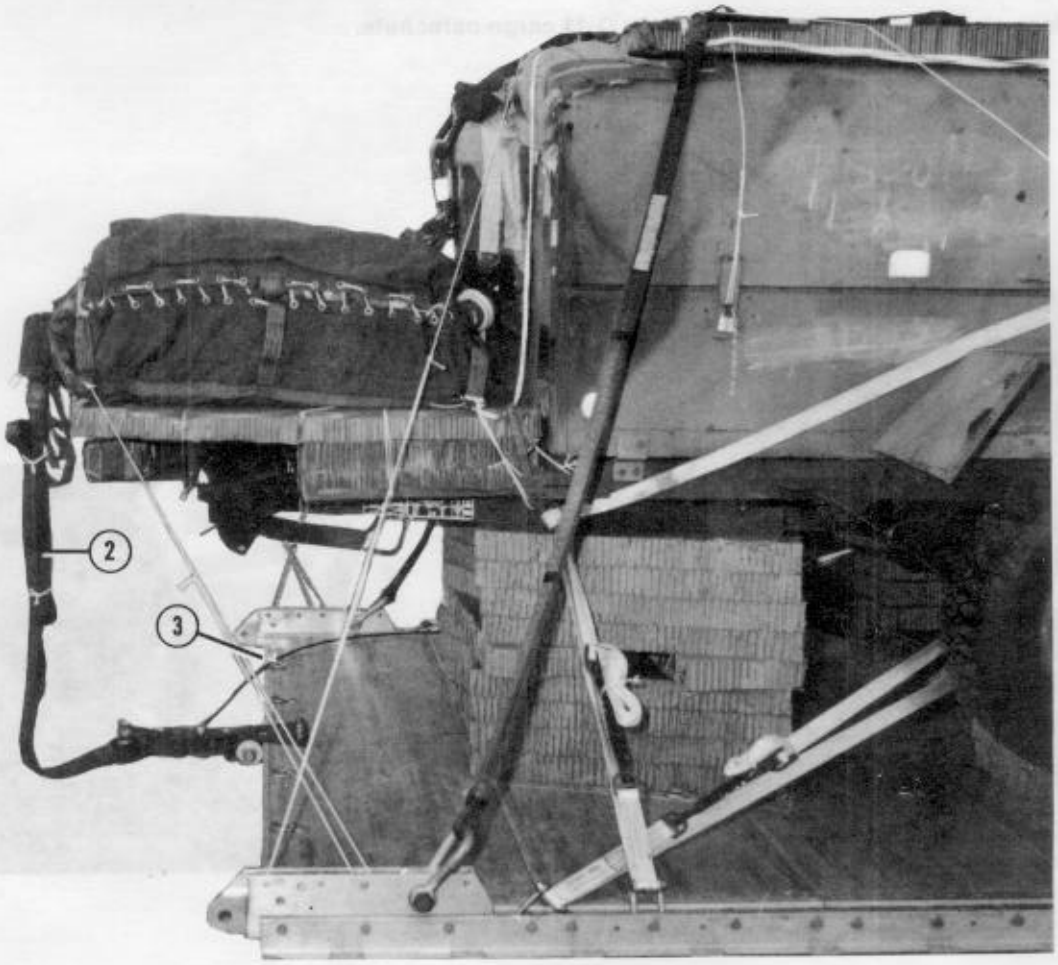
3-10. Installing Extraction System

Install the extraction system as shown in Figure 3-13.



(1) Install the components of the extraction force transfer coupling (EFTC) according to FM 10-500-2/TO 13C7-1-5. Use the forward mounting holes for the EFTC bracket.

Figure 3-13. Extraction system installed



(2) Attach a 9-foot (2 loop), type XXVI nylon sling to be used as a deployment line.

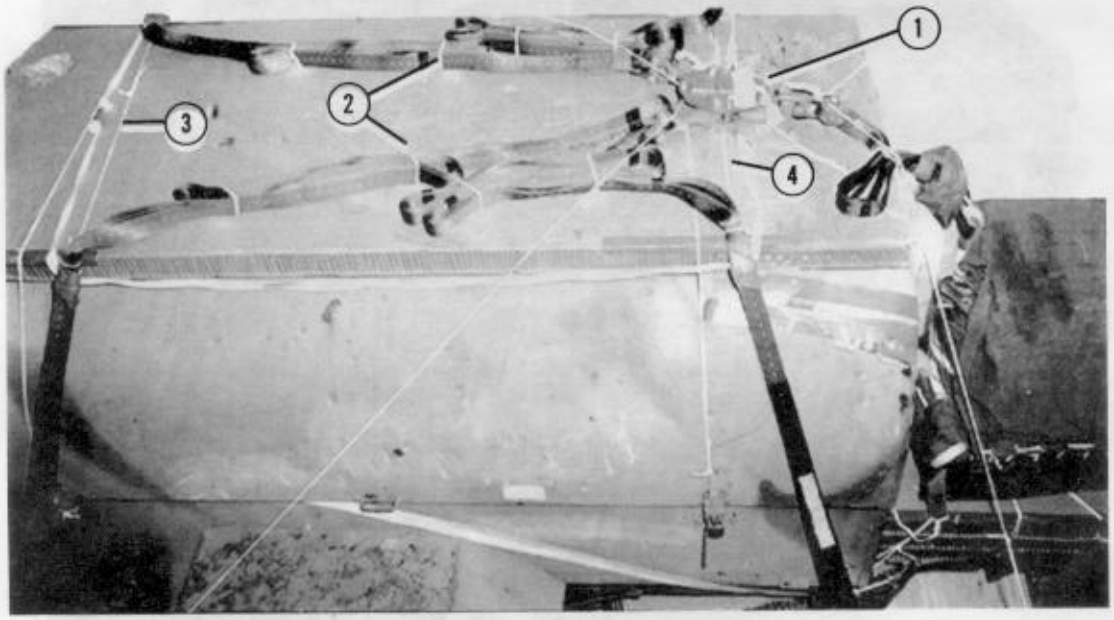
(3) Safety the EFTC cable to tie-down ring D6 using one turn of type I, 1/4-inch cotton webbing.

Figure 3-13. Extraction system installed (continued)

3-11. Installing Release System

Prepare, attach, and safety an M-1 cargo parachute release according to FM 10-500-2/TO 13C7-1-5 and as shown in Figure 3-14.

NOTE: Place clevis in the protector flap of the G-11 cargo parachute.



(1) Place the M-1 release on top of the honeycomb and safety it to convenient points on the load.
(2) Fold any slack in the suspension slings and tie folds with type I, 1/4-inch cotton webbing.
(3) Safety the front set of slings together just above the deadman's tie with type III nylon cord.
(4) Safety the rear set of slings together just above the deadman's tie with type III nylon cord.

Figure 3-14. Release system installed

3-12. Placing Extraction Parachute

Select the extraction parachute and extraction line needed using the extraction line requirements table in FM 10-500-2/TO 13C7-1-5. Place the extraction parachute and extraction line on the load for installation in the aircraft.

3-13. Installing Provisions for Emergency Restraint

Select and install the provisions for the emergency aft restraints according to the emergency aft restraint requirements table in FM 10-500-2/TO 13C7-1-5.

3-14. Marking the Rigged Load

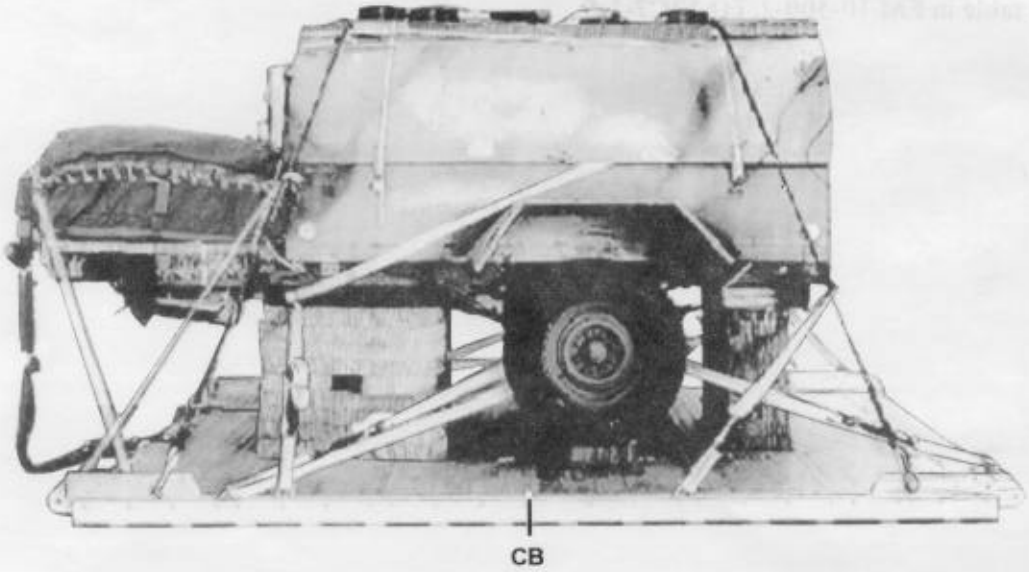
Mark the rigged load according to FM 10-500-2/TO 13C7-1-5 and as shown in Figure 3-15. Complete Shipper's Declaration for Dangerous Goods and securely attach it to the load. If the load varies from the one shown, the weight, height, CB, tip off curve, and parachute requirements must be recomputed.

3-15. Equipment Required

Use the equipment listed in Table 3-1 to rig this load.

CAUTION

Make the final rigger inspection required by FM 10-500-2/ TO 13C7-1-5 before the load leaves the rigging site.



RIGGED LOAD DATA

Weight: Load shown	4,520 pounds
Maximum allowed	5,000 pounds
Width	108 inches
Height	82 inches
Length	144 inches
Overhang: Front	0 inches
Rear	20 inches
CB (from front edge of platform)	72 inches

Figure 3-15. Trailer-mounted engineer electrical tool outfit rigged on a type V platform for low-velocity airdrop

Table 3-1. Equipment required for rigging trailer--mounted engineer electrical tool outfits for low-velocity airdrop

National Stock Number	Item	Quantity
8040-00-273-8713	Adhesive, paste, 1-gal	As required
4030-00-090-5354	Clevis, suspension, 1-in (large)	5
4020-00-240-2146	Cord, nylon, type III, 550-lb	As required
1670-00-434-5783	Coupling, airdrop, extraction force transfer w 12-ft cable	1
1670-00-360-0329	Cover, link assembly, type IV	1
1670-00-360-0328	Cover, clevis, large	1
8135-00-664-6958	Cushioning material, packing cellulose wadding	As required
1670-01-183-2678	Leaf, extraction (line bag)	2
	Line, extraction:	
1670-01-064-4452	60-ft (I-loop), type XXVI nylon webbing	1
1670-01-107-7652	160-ft (1-loop), type XXVI nylon webbing (for C-141)	1
1670-00-783-5988	Link assembly, type IV	2
5510-00-220-6146	Lumber, 2- by 4- by 15-in	4
5510-00-220-6250	Lumber, 2- by 12- by 47-in	2
1670-00-753-3928	Pad, energy-dissipating, honeycomb, 3- by 36- by 96-in	7 sheets
1670-01-016-7841	Parachute, cargo, 100-ft, G-11B	1
1670-01-063-3715	Parachute, cargo extraction, 15-ft	1
1670-01-162-2372	Clevis assembly, type V	8
	Platform, AD, type V, 12-ft:	1
	Bracket:	
1670-01-162-2375	Inside EFTA	1
1670-01-162-2374	Outside EFTA	1
1670-01-162-2376	Extraction bracket assembly	1
1670-01-247-2389	Link, tandem, type V platform	4
1670-01-097-8816	Release, cargo parachute, M-1	1
	Sling, cargo, airdrop:	
	For deployment line:	
1670-01-062-6304	9-ft (2-loop), type XXVI nylon webbing	1
	For suspension:	
1670-01-063-7761	16-ft (2-loop), type XXVI nylon webbing	4
1670-01-062-6301	3-ft (2-loop), type XXVI nylon webbing	1
8305-00-754-5124	Tape, adhesive, 2-in	As required
1670-00-937-0271	Tie-down assembly, 15-ft	10
	Webbing:	
8305-00-268-2411	Cotton, 1/4-in, type I	As required
8305-00-268-2453	Nylon, tubular, 1/2-in, 1,000 lb	As required

GLOSSARY

ACB Attitude control bar
AD airdrop
AFB Air Force base
AFJMAN armed forces joint manual
AFR Air Force regulation
AFTO Air Force technical order
attn attention
CB center of balance
d penny
DA Department of the Army
DC District of Columbia
DD Department of Defense
diam diameter
EFTA extraction force transfer actuator
EFTC extraction force transfer coupling
FM field manual
ft feet
gal gallon
HQ headquarters
in inch
lb pound
no number
NSN national stock number
Qty quantity
rqr requirement
sq square
TM technical manual
TO technical order
TRADOC United States Army Training and Doctrine Command
US United States
VA Virginia
w with
yd yard

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These documents must be available to the intended users of this publication.

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* AFJMAN 24-204 has superseded AFR71-4/TM 38-250 (15 January 1988). Change 1 pages reflect this change. The basic manual pages will still reference the superseded publication. You may wish to make pen and ink changes to update the old reference citations accordingly.

** Shipper's Declaration for Dangerous Goods has superseded DD Form 1387-2 (February 1982). The basic manual pages will still reference the superseded publication. You may wish to make pen and ink changes to update the old reference citations accordingly.

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