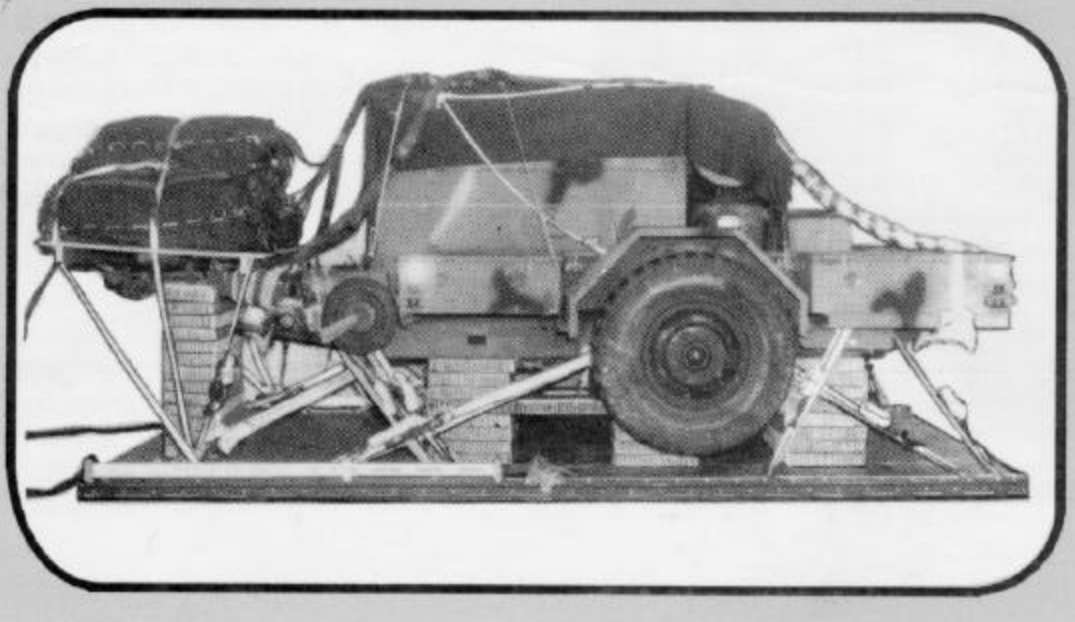
ARMY FM 10-569
AIR FORCE TO 13C7-15-61

AIRDROP OF SUPPLIES AND EQUIPMENT:

RIGGING TRAILER-MOUNTED AIR COMPRESSORS



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DEPARTMENT OF THE ARMY AND THE AIR FORCE

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 "OP" 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 TO FOLKS THAT HAVE 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

TAGS 7/18

SEP 11 '95 08:30AM CSSRD FT MONROE VA

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
DEPARTMENTS OF THE ARMY
AND THE AIR FORCE
Washington, DC, 20 March 1991

AIRDROP OF SUPPLIES AND EQUIPMENT:

RIGGING TRAILER-MOUNTED AIR COMPRESSORS

This change adds the procedures for rigging the Ingersol-Rand model, 250-CFM, trailer-mounted air compressor on a type V platform for low-velocity and LAPE airdrop. Also, with this change, the distribution restriction statement is changed to read as follows: "DISTRIBUTION RESTRICTION. Approved for public release; distribution is unlimited." Please mark this change, as appropriate, on the cover and title (table of contents) page of the basic manual. With use of this statement, a destruction notice is not required. Please delete it where it appears.

FM 10-569/TO 13C7-15-61, 27 December 1988, 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 through iv	i through vi
	3-1 through 3-73
Glossary-1	Glossary-1
References-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 Air Force:

CARL E. VUONO
General, United States Army
Chief of Staff

Official:

PATRICA P. HICKERSON
Colonel, United States Army
The Adjutant General

DISTRIBUTION:

Active Army, USAR, and ARNG: To be distributed in accordance with DA Form 12-11-E, requirements for FM 10-569, Airdrop of Supplies and Equipment: Rigging Trailer-Mounted Air Compressors (Qty rqr block no. 0942).

C1, FM 10-569/TO 13C7-15-61
*FM 10-569/TO 13C7-15-61

FIELD MANUAL
NO 10-569
TECHNICAL ORDER
NO 13C7-15-61

DEPARTMENTS OF THE ARMY
AND THE AIR FORCE
Washington, DC, 27 December 1988

AIRDROP OF SUPPLIES AND EQUIPMENT:

RIGGING TRAILER-MOUNTED AIR COMPRESSORS

TABLE OF CONTENTS

*This publication supersedes FM 10-569/TO 13C7-15-61, 31 December 1981.

PREFACE

SCOPE

This manual tells and shows how to prepare and rig the Davey, model 210- and 250-CFM, and the Ingersol-Rand model, 250-CFM, trailer-mounted air compressors for low-velocity airdrop from C-130 and C-141 aircraft. It also tells and shows how to prepare and rig the Davey model, 250-CFM, and Ingersol-Rand model, 250-CFM, air compressors for LAPE airdrop from C-130 aircraft.

USER INFORMATION

The proponent of this publication is HQ TRADOC. You are encouraged to report any errors or omissions and to suggest ways for making this a better manual. Army personnel, send your comments on DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to:

Commander
U.S. Army Quartermaster Center and School
ATTN: ATSM-DTP
Fort Lee, Virginia 23801-5036

Air Force personnel, send your reports on AFTO Form 22 (Technical Order Publication Improvement Report) through:

Headquarters
Military Airlift Command
(MAC/DOXT)
Scott AFB, Illinois 62225-5001

to:

Commander
U.S. Army Quartermaster Center and School
ATTN: ATSM-DTP
Fort Lee, Virginia 23801-5036

Also send information copies of AFTO Form 22 to:

San Antonio ALC/MMILRA
Kelly AFB, Texas 78241-5000

INTRODUCTION

DESCRIPTION OF ITEMS

The Davey model, 210-CFM, trailer-mounted air compressor weighs 8,250 pounds with the fuel tank 1/2 full. The unrigged trailer is 210 inches long, 84 inches high, and 96 inches wide.

The Davey model, 250-CFM, trailer-mounted air compressor weighs 7,235 pounds with the fuel tank 1/2 full. The unrigged trailer is 201 inches long, 79 inches high, and 96 inches wide.

The Ingersol-Rand model, 250-CFM, trailer-mounted air compressor weighs 7,345 pounds with the fuel tank 1/2 full. The unrigged trailer is 204 inches long, 77 inches high, and 96 inches wide.

SPECIAL CONSIDERATIONS

These loads may contain dangerous materials, explosives, or gasoline as defined in AFR 71-4/TM 38-250. The materials must be packaged, marked, and labeled according to AFR 71-4/TM 38-250.

A copy of this manual must be available to the joint airdrop inspectors during the before- and after-loading inspections.

Notes:

1. The type IV connector link joining the rear suspension slings must be seated properly during the rigging process.

2. All mounting bolts holding the compressor unit to the trailer must be the correct size and properly installed.

CHAPTER 3

RIGGING THE INGERSOL-RAND MODEL, 250-CFM, TRAILER-MOUNTED AIR COMPRESSOR ON A TYPE V PLATFORM

Section I

LOW-VELOCITY AIRDROP

3-1. Description of Load

The Ingersol-Rand model, 250-CFM, trailer-mounted air compressor (Figure 3-1) is rigged on a 16-foot, type V platform for low-velocity airdrop. The air compressor is rigged with three G-11A, two G-11B, or two G-11C cargo parachutes and other air items. It weighs 7,345 pounds with the fuel tank 1/2 full.

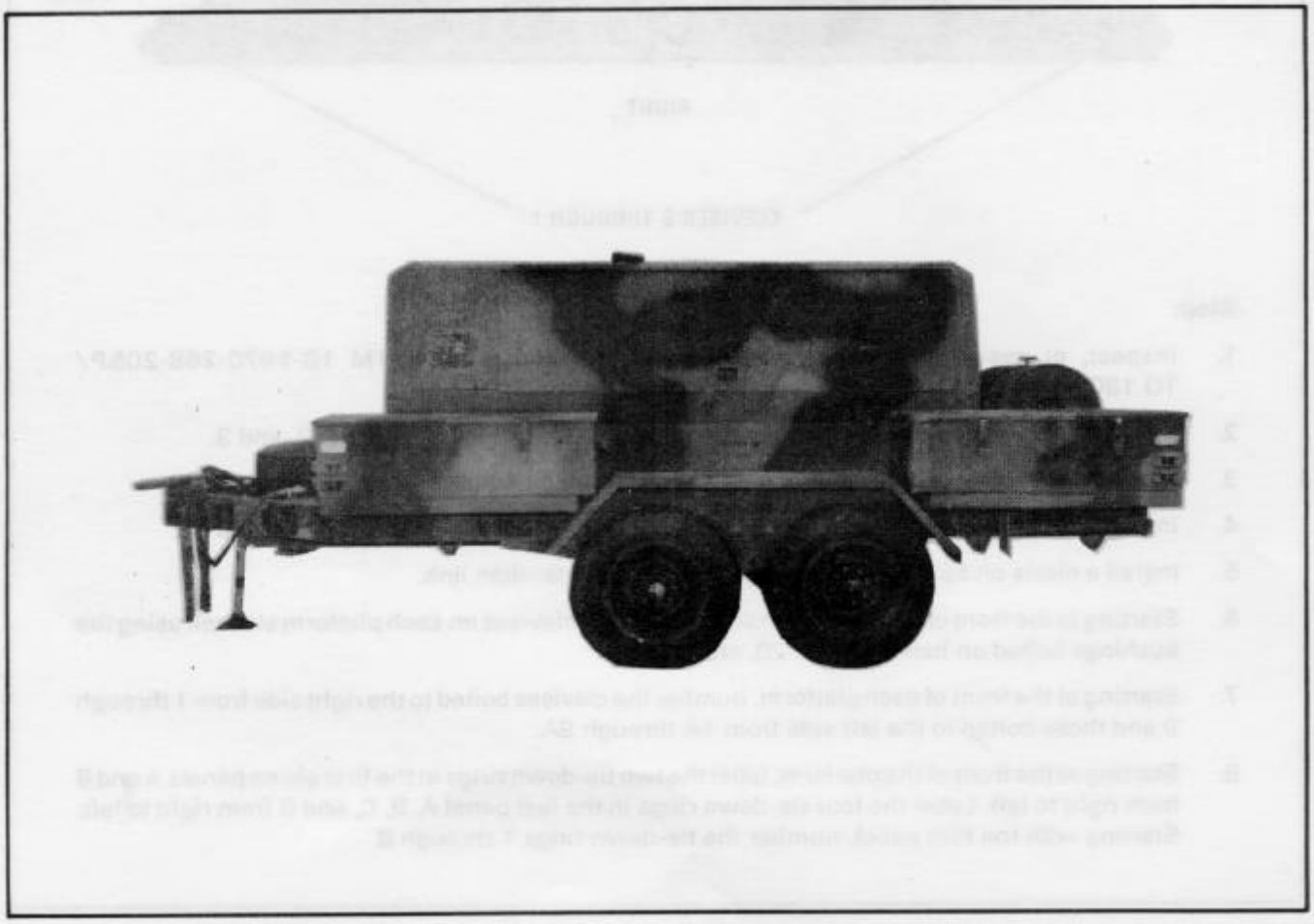


Figure 3-1. Ingersol-Rand model, 250-CFM, trailer-mounted air compressor

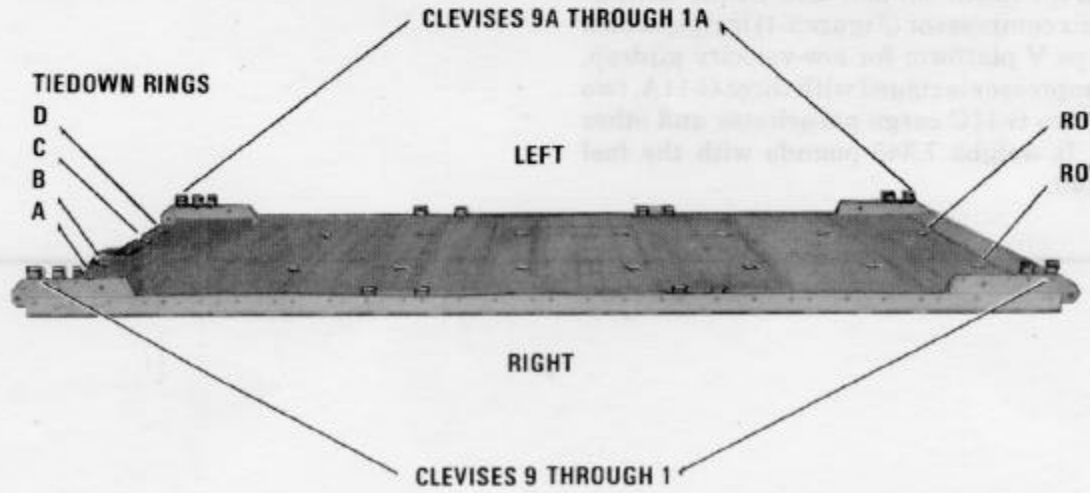
3-2. Preparing Platform

Prepare a 16-foot, type V platform using four tandem links and 18 tie-down clevises as shown in Figure 3-2.

Notes:

1. The nose bumper may or may not be installed.

2. Measurements given in this section are from the front edge of the platform, NOT from the front edge of the nose bumper.



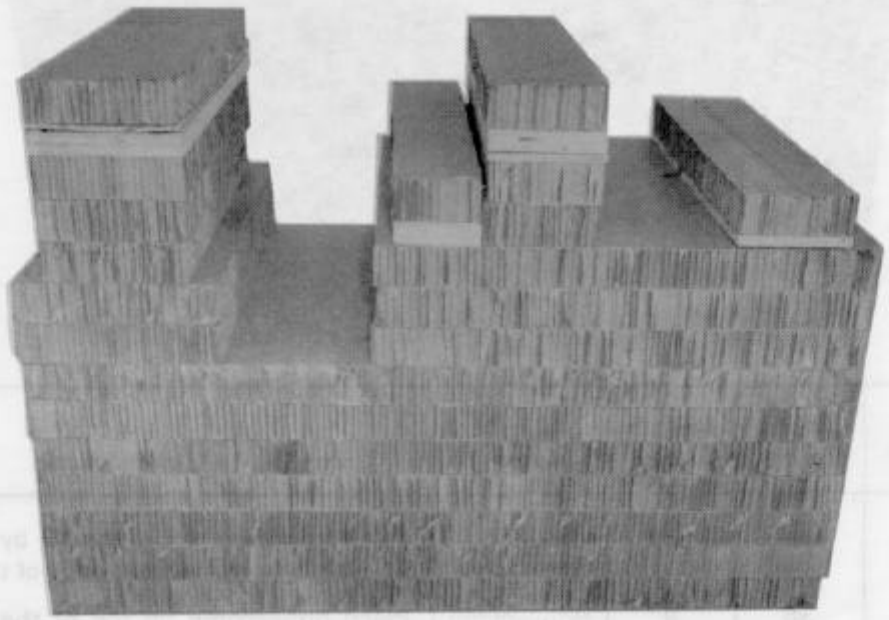
Step:

1. Inspect, or assemble and inspect, the platform according to TM 10-1670-268-20&P/TO 13C7-52-22.
2. Install a tandem link on the front of each platform side rail using holes 1, 2, and 3.
3. Install a clevis on bushings 1 and 2 on each front tandem link.
4. Install a tandem link on the rear of each platform side rail using holes 30, 31, and 32.
5. Install a clevis on bushings 2, 3, and 4 on each rear tandem link.
6. Starting at the front of each platform side rail, install clevises on each platform side rail using the bushings bolted on holes 11, 12, 20, and 22.
7. Starting at the front of each platform, number the clevises bolted to the right side from 1 through 9 and those bolted to the left side from 1A through 9A.
8. Starting at the front of the platform, label the two tie-down rings in the first seven panels A and B from right to left. Label the four tie-down rings in the last panel A, B, C, and D from right to left. Starting with the first panel, number the tie-down rings 1 through 8.

Figure 3-2. Platform prepared

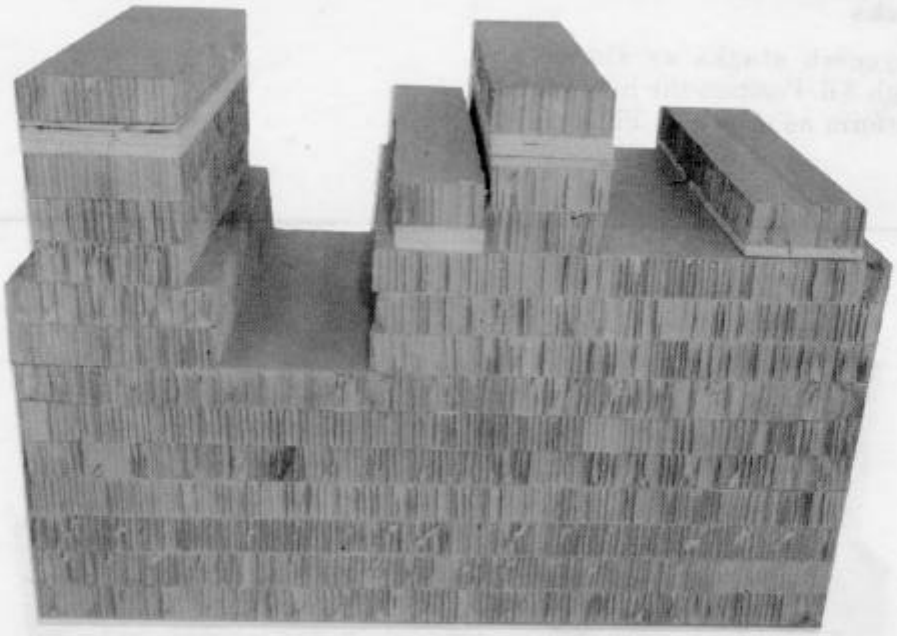
3-3. Building and Positioning Honeycomb Stacks

Build the honeycomb stacks as shown in Figures 3-3 through 3-6. Position the honeycomb stacks on the platform as shown in Figures 3-7, 3-8, and 3-9.



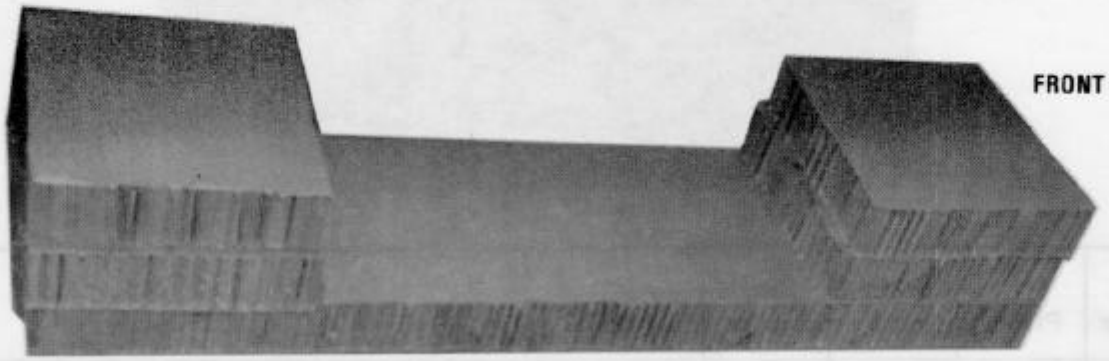
Stack Number	Pieces	Width (Inches)	Length (Inches)	Material	Instructions
1	7	36	60	Honeycomb	Form base.
	3	36	36	Honeycomb	Place honeycomb on top of the base flush with the front edge of the stack.
	1	36	8	3/4-inch plywood	Place plywood on top of the 36- by 36-inch honeycomb 2 inches from the front edge of the stack.
	1	36	8	Honeycomb	Place honeycomb on top of the 36- by 8-inch plywood.
	2	36	8	Honeycomb	Place honeycomb on top of the 36- by 36-inch honeycomb 21 inches from the front edge of the stack.
	1	36	8	1/2-inch plywood	Place plywood on top of the 36- by 8-inch honeycomb 21 inches from the front edge of the stack.

Figure 3-3. Stack 1 prepared



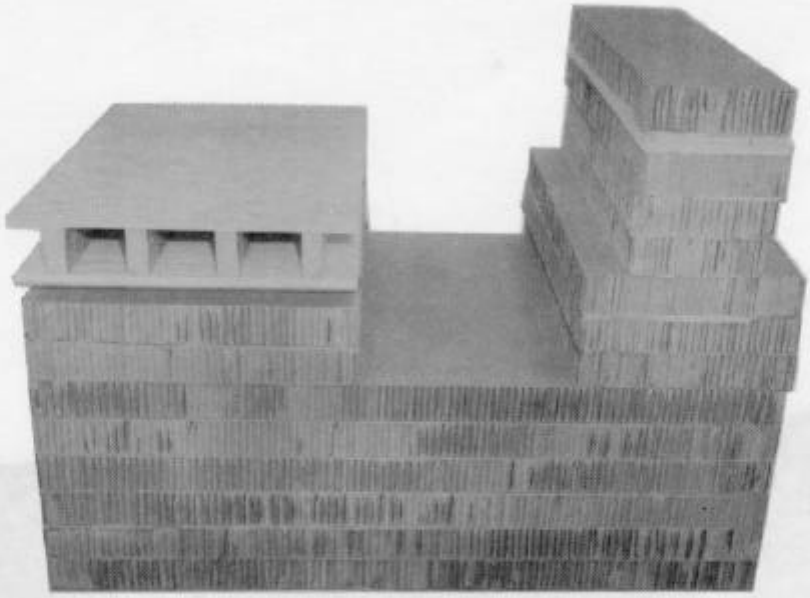
Stack Number	Pieces	Width (Inches)	Length (Inches)	Material	Instructions
	2	36	8	3/4-inch plywood	Place plywood on top of the 36- by 8-inch plywood 21 inches from the front edge of the stack.
	1	36	8	Honeycomb	Place honeycomb on top of the 36- by 8-inch plywood 21 inches from the front edge of the stack.
	2	36	6	3/4-inch plywood	Place plywood on top of the 36- by 36-inch honeycomb flush against the 36- by 8-inch honeycomb.
	1	36	6	1/4-inch plywood	Place plywood on top of the 3/4- by 36- by 6-inch plywood.
	1	36	6	Honeycomb	Place honeycomb on top of the 1/4- by 36- by 6-inch plywood.
	2	36	14	Honeycomb	Place honeycomb on top of the base flush with the rear edge of the stack.
	3	36	10	Honeycomb	Place honeycomb on top of the 36- by 14-inch honeycomb 2 inches from the rear edge.
	2	36	10	3/4-inch plywood	Place plywood on top of the 36- by 10-inch honeycomb.
	1	36	10	1/4-inch plywood	Place plywood on top of the 3/4- by 36- by 10-inch plywood.
	1	36	10	Honeycomb	Place honeycomb on top of the 1/4- by 36- by 10-inch plywood.

Figure 3-3. Stack 1 prepared (continued)



Stack Number	Pieces	Width (Inches)	Length (Inches)	Material	Instructions
2	1	12	48	Honeycomb	Form base.
	4	12	12	Honeycomb	Place two pieces of honeycomb on each end of the base flush with each edge.
3	1	12	48	Honeycomb	Form base.
	4	12	12	Honeycomb	Place two pieces of honeycomb on each end of the base flush with each edge.

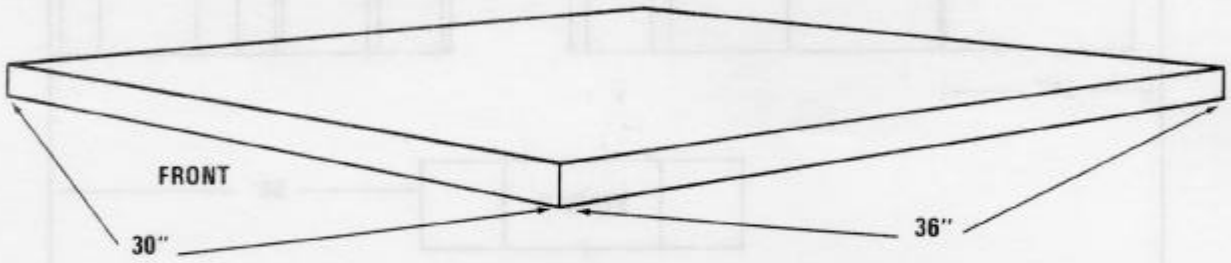
Figure 3-4. Stacks 2 and 3 prepared



Stack Number	Pieces	Width (Inches)	Length (Inches)	Material	Instructions
4	6	36	58	Honeycomb	Form base.
	3	36	16	Honeycomb	Place honeycomb on top of the base flush with the front edge of the stack.
	3	36	10	Honeycomb	Center honeycomb on top of the 36- by 16-inch honeycomb.
	2	36	10	3/4-inch plywood	Place plywood on top of the 36- by 10-inch honeycomb.
	1	36	10	Honeycomb	Place honeycomb on top of the 3/4- by 36- by 10-inch plywood.
	2	36	24	Honeycomb	Place honeycomb on top of the base flush with the rear edge of the stack.
	2	4	24	2-inch lumber	Place lumber on top of the 36- by 24-inch honeycomb running lengthwise 3 inches from each side.
Strong-back	1	36	24	3/4-inch plywood	Place plywood to form base of the strongback.
	4	36	4	2-inch lumber	Evenly space lumber side to side on top of the 3/4- by 36- by 24-inch plywood.
	1	36	24	3/4-inch plywood	Place plywood on top of the 2- by 4- by 36-inch lumber. Use sixpenny nails to nail the strongback together.

Figure 3-5. Stack 4 prepared

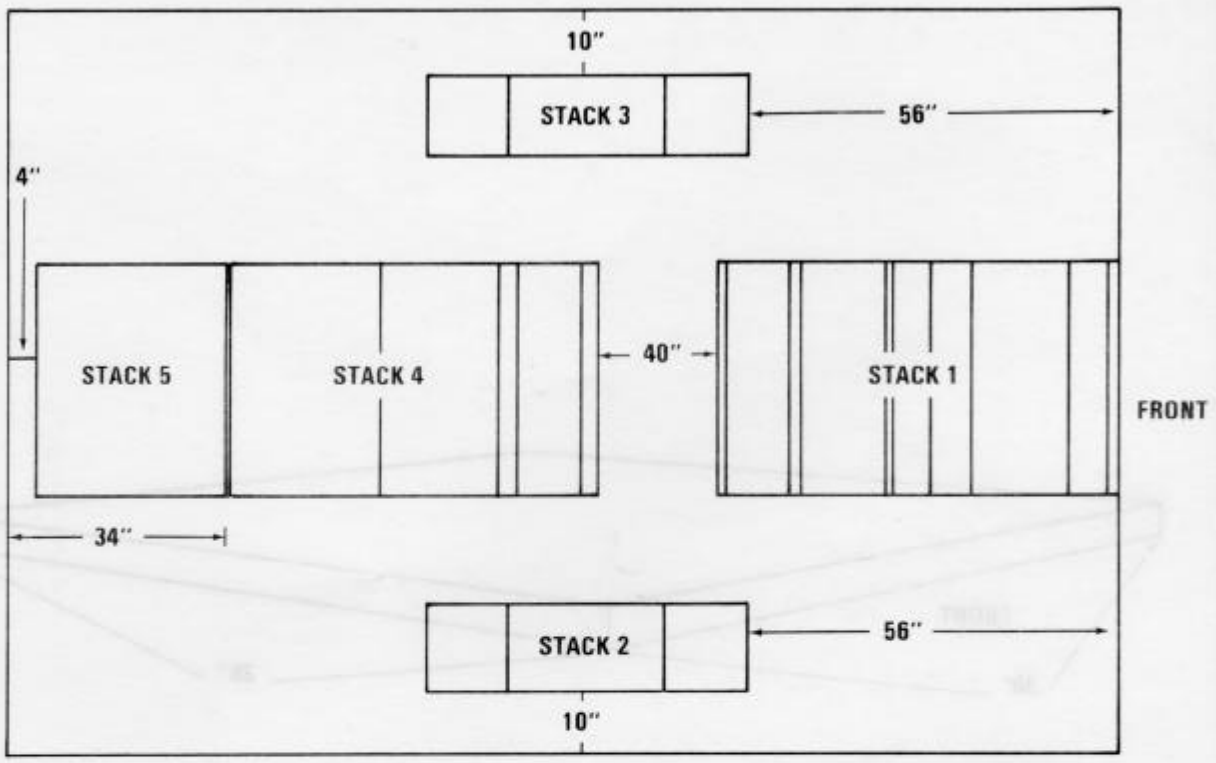
Note: This drawing is not drawn to scale.



Stack Number	Pieces	Width (Inches)	Length (Inches)	Material	Instructions
5	1	30	36	Honeycomb	Form base.

Figure 3-6. Stack 5 prepared

Note: This drawing is not drawn to scale.



Stack Number	Position of Stack on Platform
	Place stack:
1	Centered flush with the front edge of the platform.
2	56 inches from the front edge of the platform and 10 inches from the right rail.
3	56 inches from the front edge of the platform and 10 inches from the left rail.
4	Centered 40 inches from stack 1 and 34 inches from the rear edge of the platform.
5	Centered 4 inches from the rear edge of the platform.

Figure 3-7. Honeycomb stacks positioned on platform

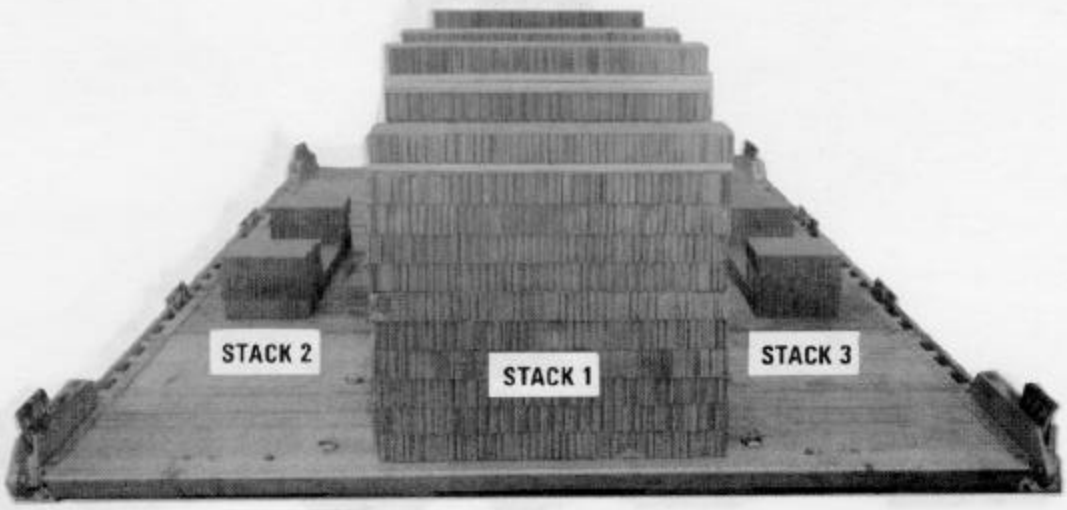


Figure 3-8. Front view of honeycomb stacks positioned on platform

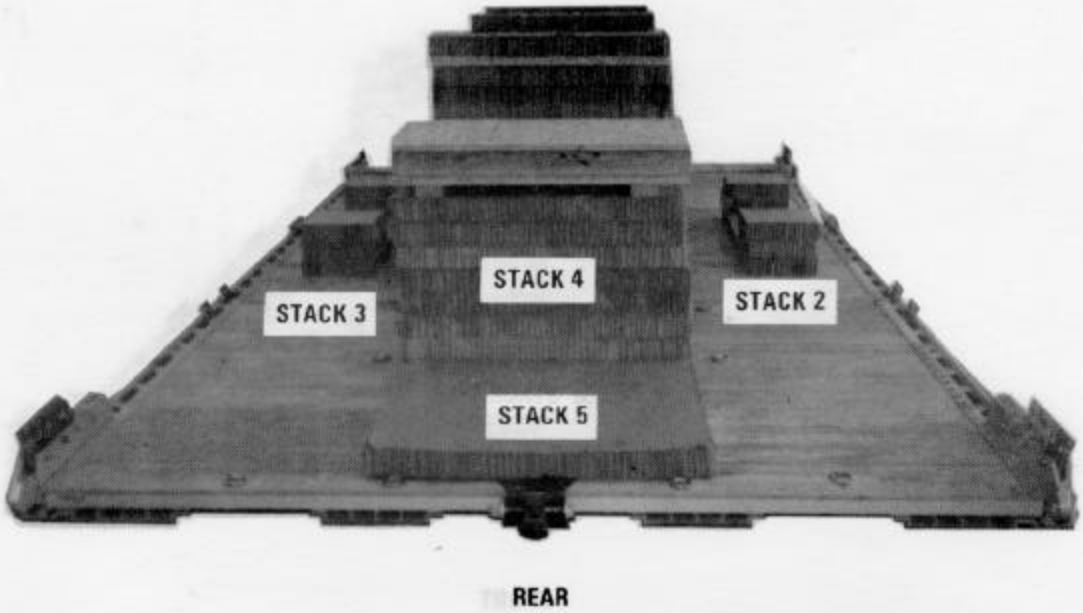
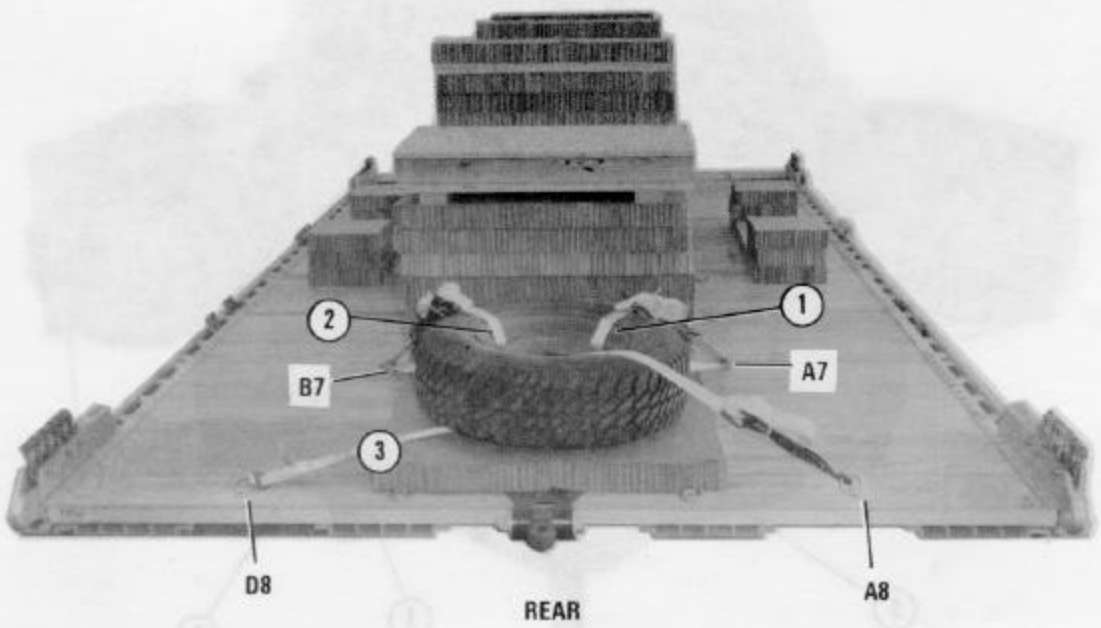


Figure 3-9. Rear view of honeycomb stacks positioned on platform

3-4. Lashing Tire

Remove the spare tire from the drawbar. Lash it to stack 5 using three 15-foot tie-down assemblies as shown in Figure 3-10.

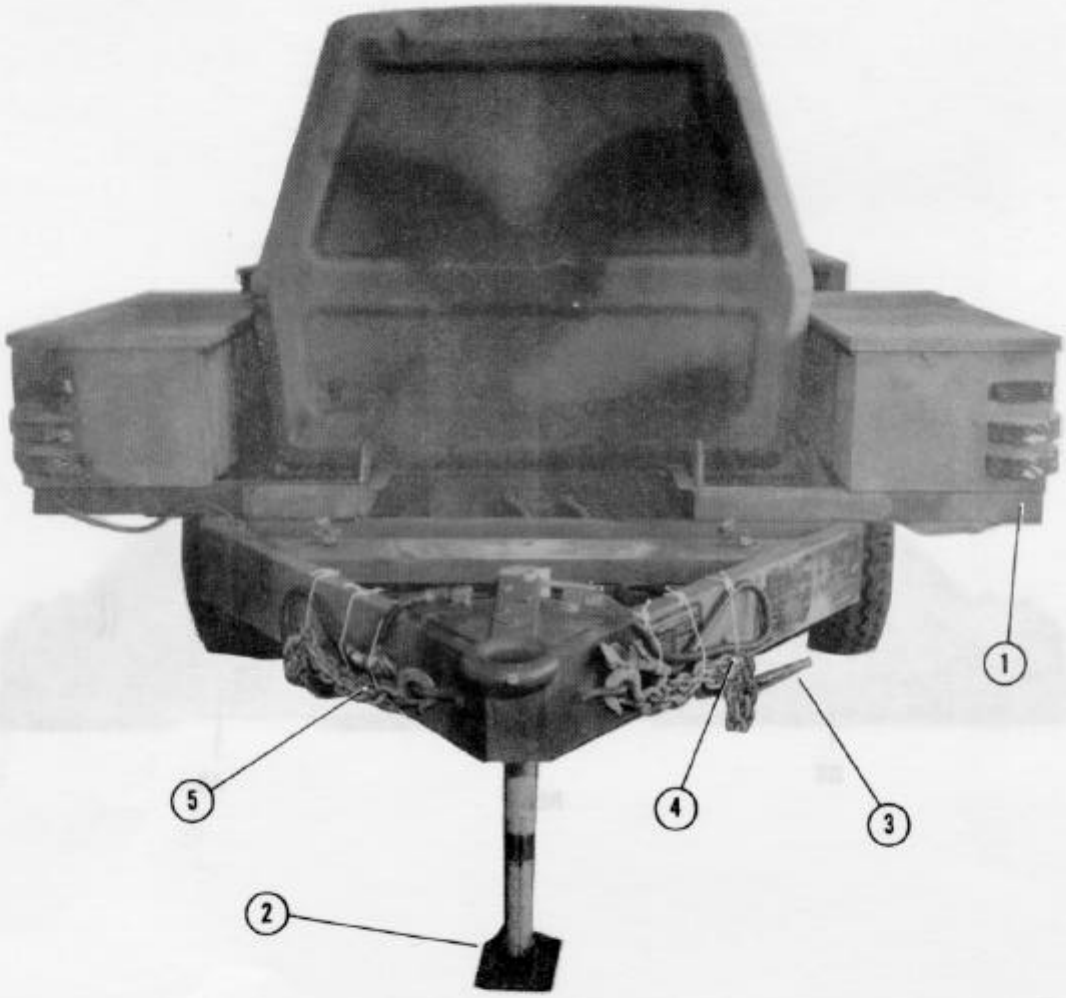


Lashing Number	Tie-down Ring Number	Instructions
1	A7	Pass lashing: Through tie-down and around tire.
2	B7	Through tie-down and around tire.
3	D8 and A8	Through tie-down D8, through its own D-ring, and under and over the tire to tie-down A8.

Figure 3-10. Tire lashed to platform

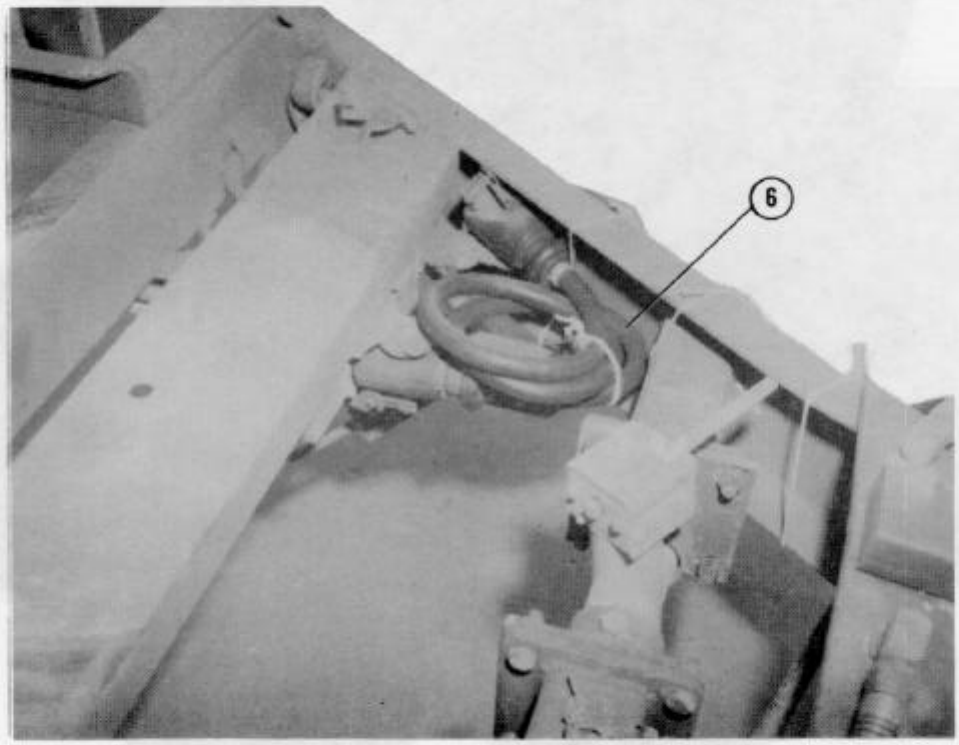
3-5. Preparing Trailer

Prepare the trailer as shown in Figures 3-11 through 3-21.



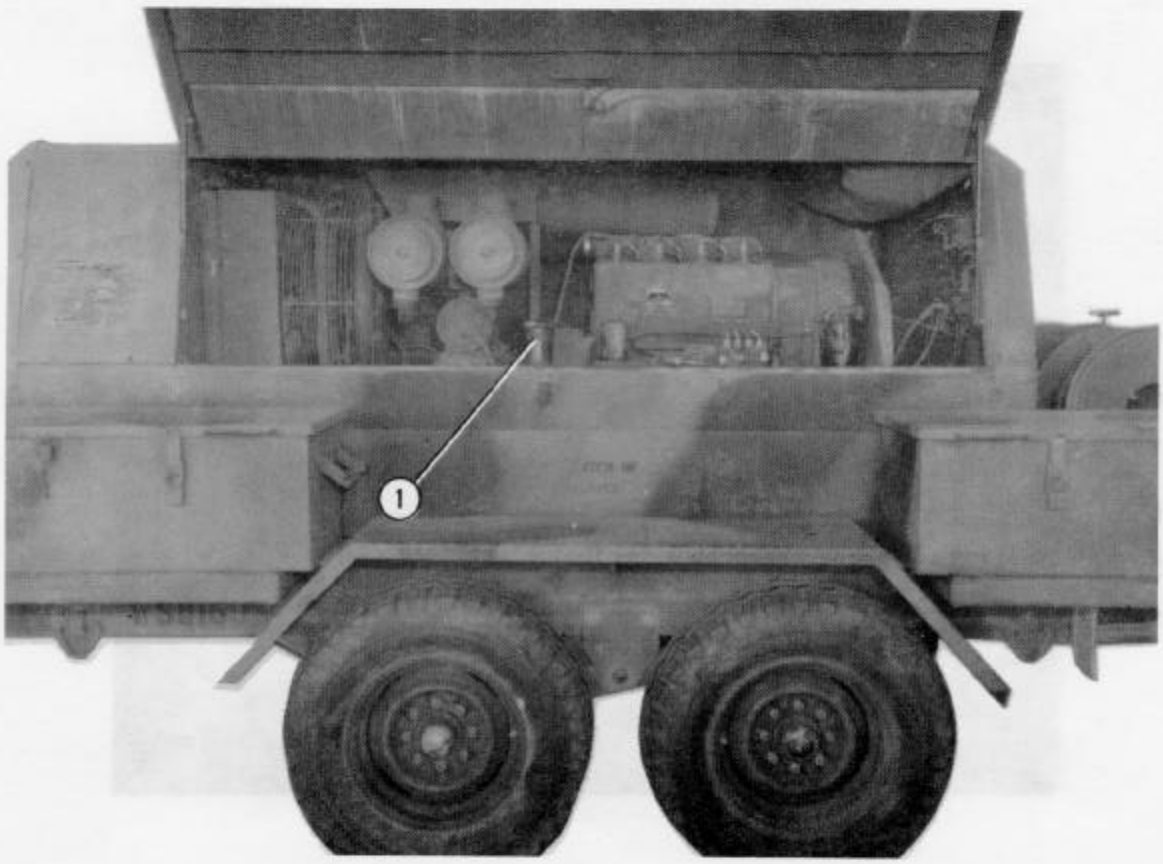
1. Tape all the lights and reflectors on the trailer.
2. Lower the front jack stand, and lock it in place.
3. Place the hand brakes in the release position.
4. Secure the air line hoses to the drawbar with type III nylon cord.
5. Secure the towing chains to the drawbar with type III nylon cord.

Figure 3-11. Front of trailer prepared



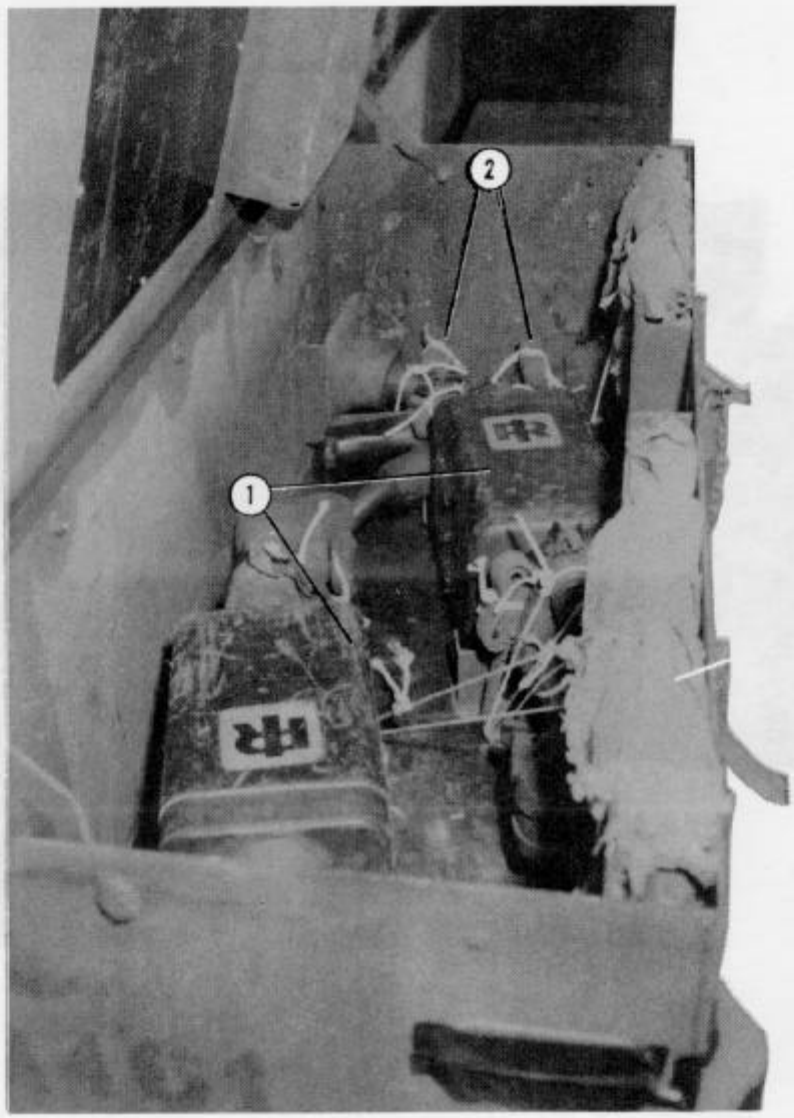
(6) Secure the intervehicular cable to the drawbar with type III nylon cord.

Figure 3-11. Front of trailer prepared (continued)



(1) Tape the fuel tank nozzle in place on the left engine compartment.

Figure 3-12. Left engine compartment prepared

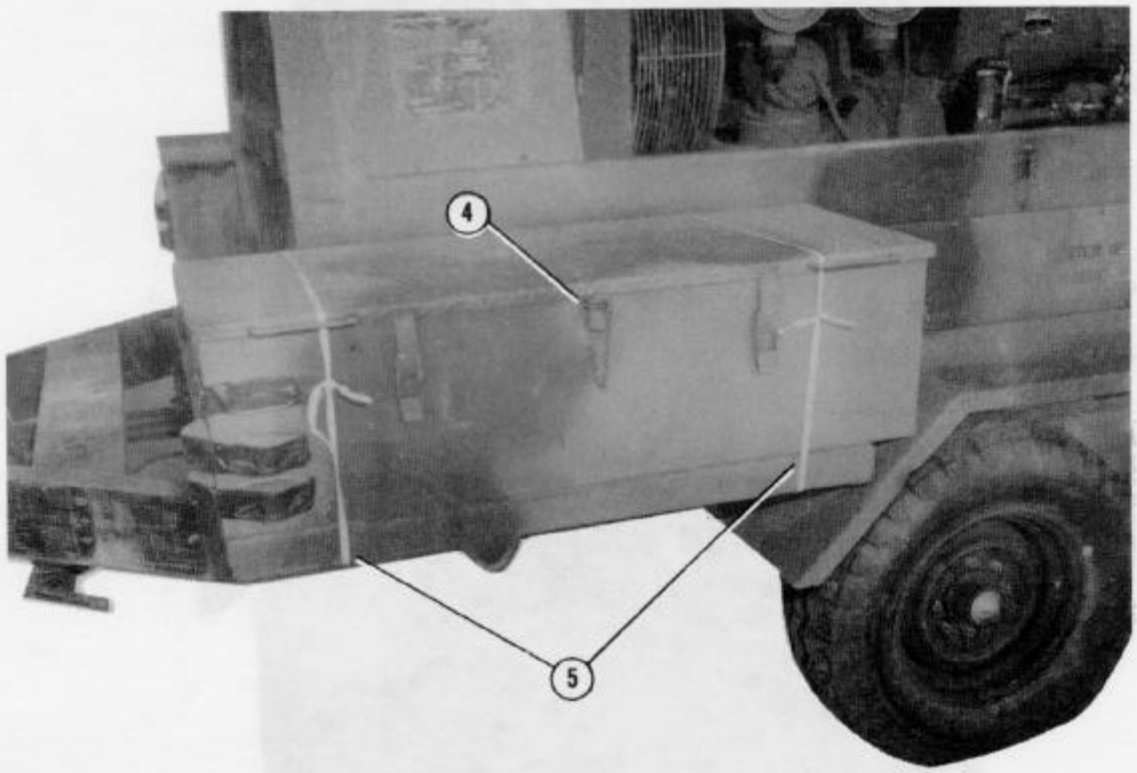


(1) Safety the two 80-pound breakers in place with type III nylon cord in storage box 1 (left front).

(2) Safety the two tamping feet with type III nylon cord.

(3) Tie the six chisels together with type III nylon cord. Wrap the chisels with cellulose wadding, and place them in the rack in storage box 1.

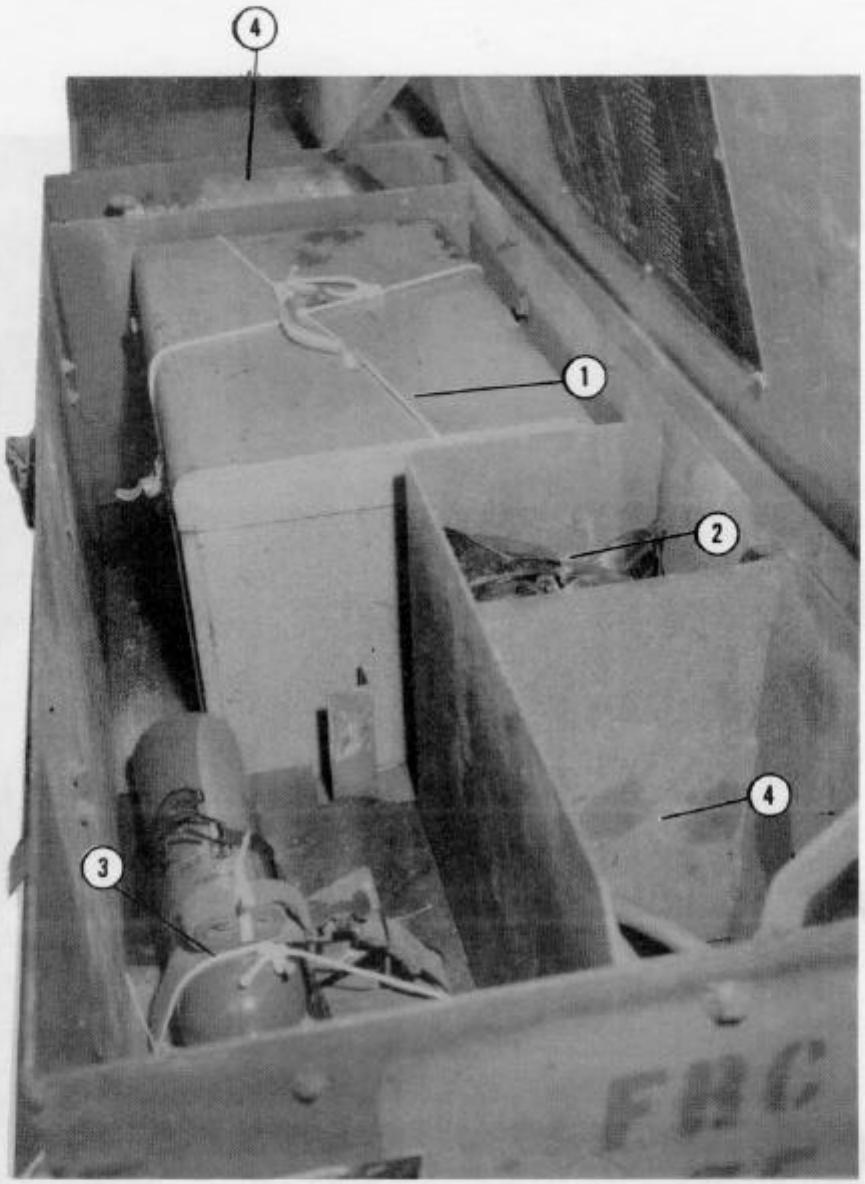
Figure 3-13. Storage box 1 prepared and secured



(4) Close and lock the storage box lid. If a lock is not available, tie the lock rings with type III nylon cord.

(5) Tie a length of 1/2-inch tubular nylon webbing around each end of the box.

Figure 3-13. Storage box 1 prepared and secured (continued)



(1) Secure the toolbox in place by passing type III nylon cord around the toolbox, through the hole in the bottom of storage box 2 (left rear), and up to the lid of the toolbox.

(2) Place the goggles and protective gear in the storage box compartment.

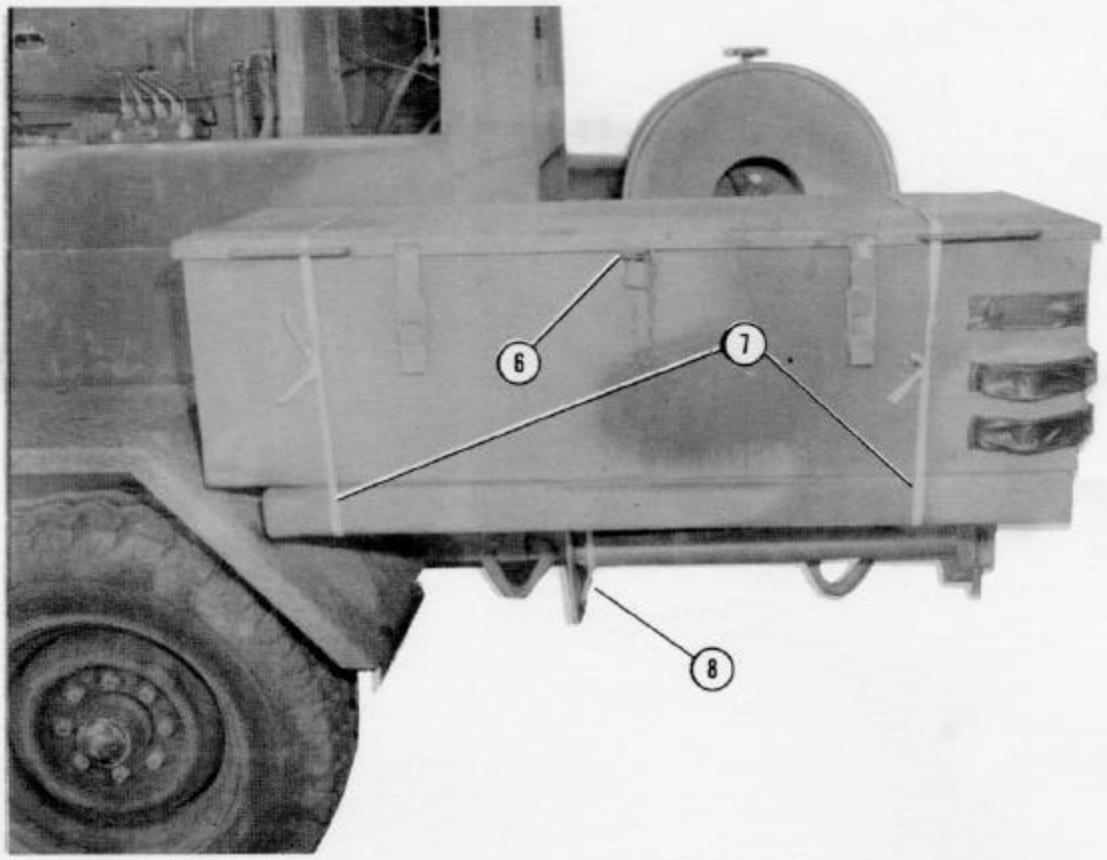
(3) Safety the fire extinguisher in place with type III nylon cord.

(4) Place miscellaneous parts in the storage box compartment.

Figure 3-14. Storage box 2 and jack stand prepared and secured

(5) Pad the goggles, protective gear, and the miscellaneous parts with cellulose wadding.

Figure 3-14. Storage box 2 and jack stand prepared and secured (continued)

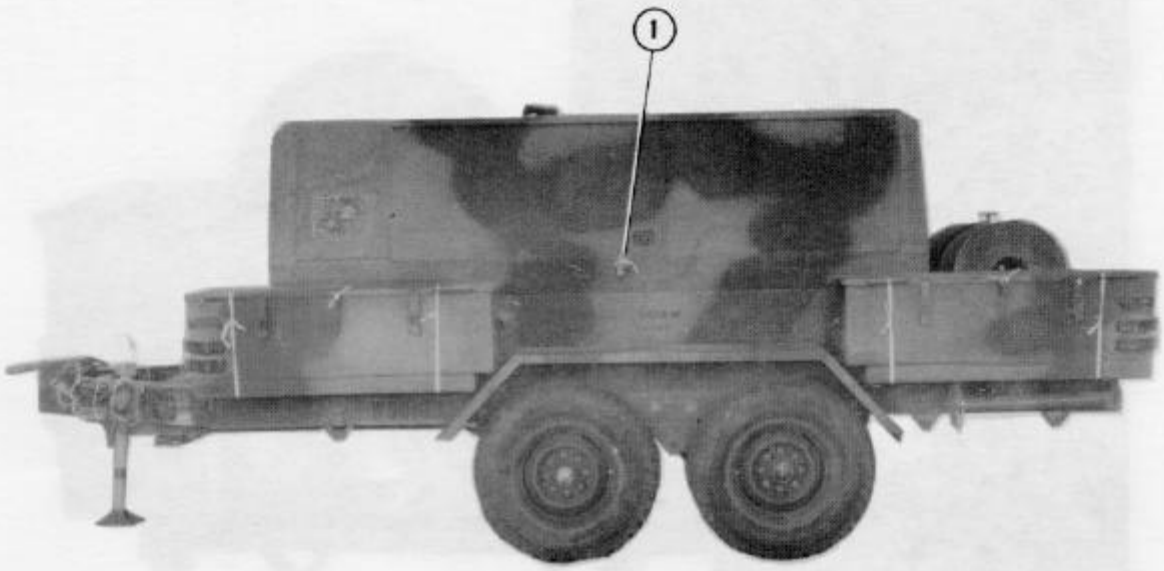


(6) Close and lock the storage box lid. If a lock is not available, tie the lock rings with type III nylon cord.

(7) Tie a length of 1/2-inch tubular nylon webbing around each end of the box.

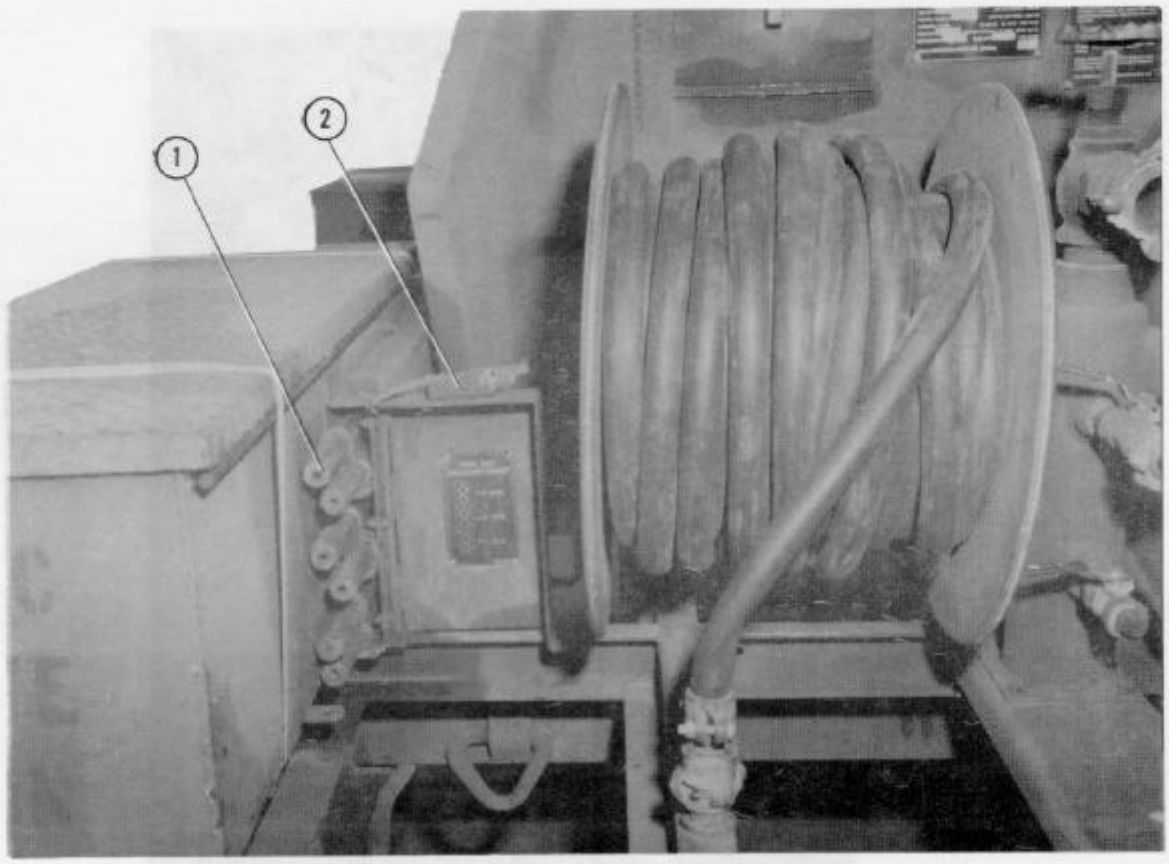
(8) Adjust the jack stand to the shortest position. Raise and tie it in place with 1/2-inch tubular nylon webbing.

Figure 3-14. Storage box 2 and jack stand prepared and secured (continued)



(1) Close the left engine compartment cover, and safety it with type III nylon cord.

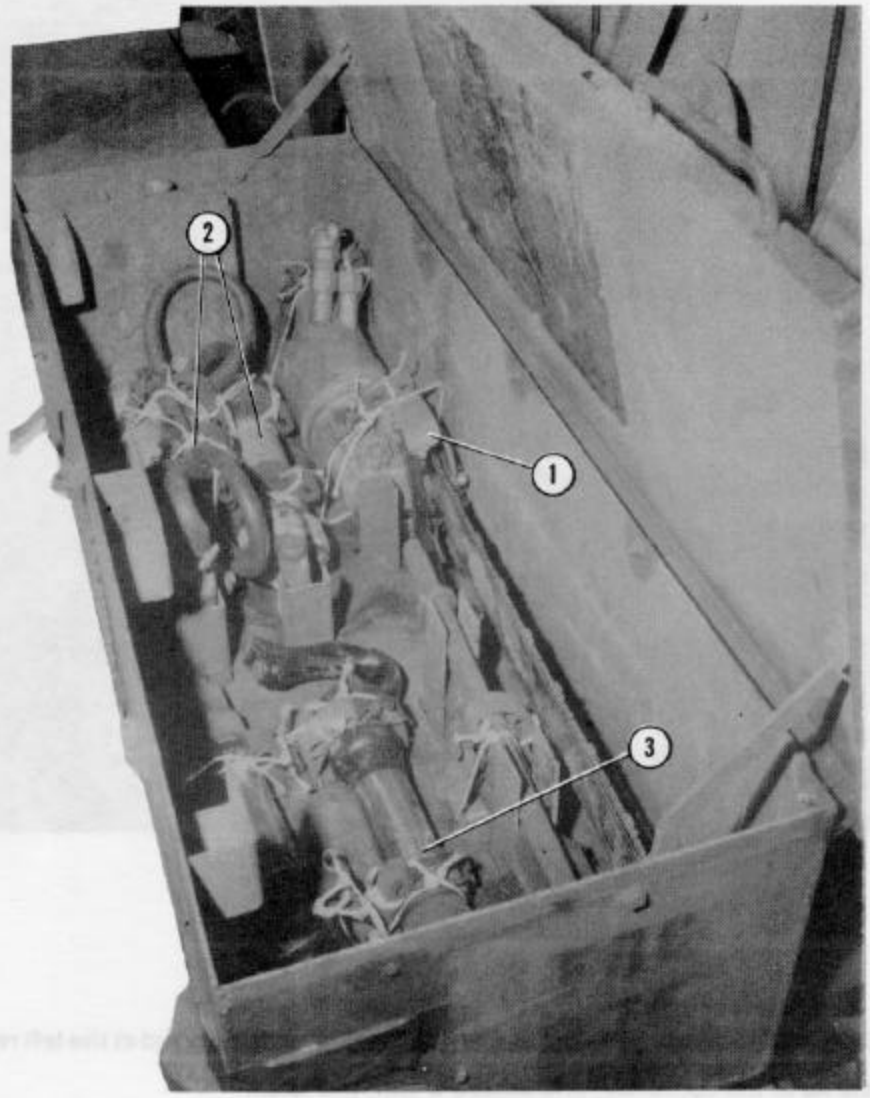
Figure 3-15. Left engine compartment secured



(1) Place the 4-foot, 6-foot, and 8-foot drill rods in the container located at the left rear of the trailer.

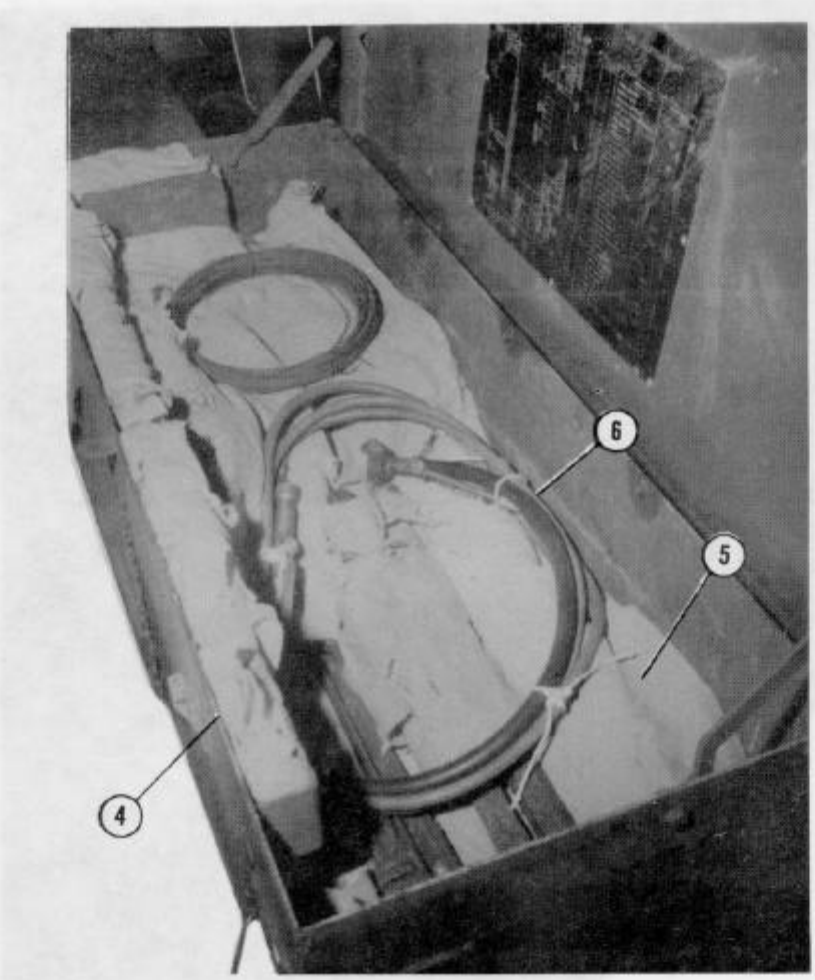
(2) Close the lid of the container, and secure it with the latch.

Figure 3-16. Drill rods placed in container and secured



(1) Tie the chain saw in place with type III nylon cord in storage box 3 (right front).
(2) Tie the two jackhammers in place with type III nylon cord.
(3) Tie the hammer-nailer in place with type III nylon cord.

Figure 3-17. Storage box 3 prepared and secured



(4) Wrap the chisels in cellulose wadding, and store them in the rack.

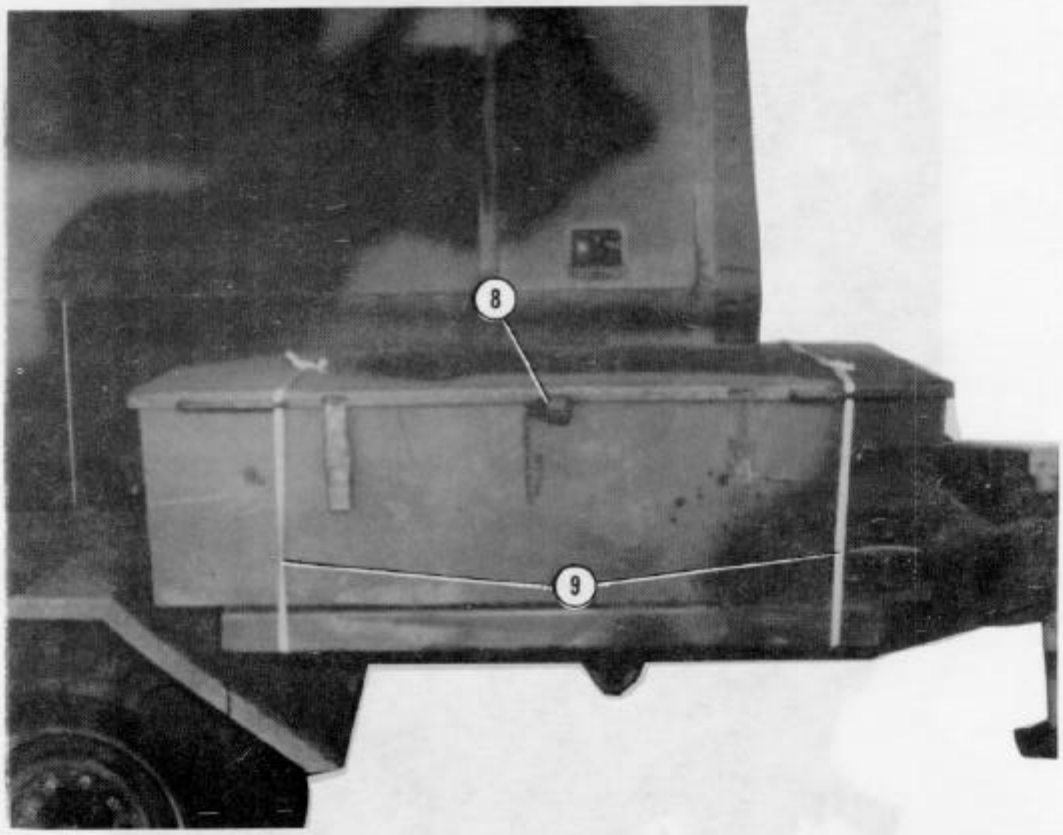
(5) Place a layer of cellulose wadding on top of the chain saw, jackhammers, and hammer-nailer.

(6) Place the miscellaneous hoses and cables on top of the cellulose wadding, and tie them with type III nylon cord.

Figure 3-17. Storage box 3 prepared and secured (continued)

(7) Place a 16- by 45-inch piece of honeycomb on top of the hoses and cables.

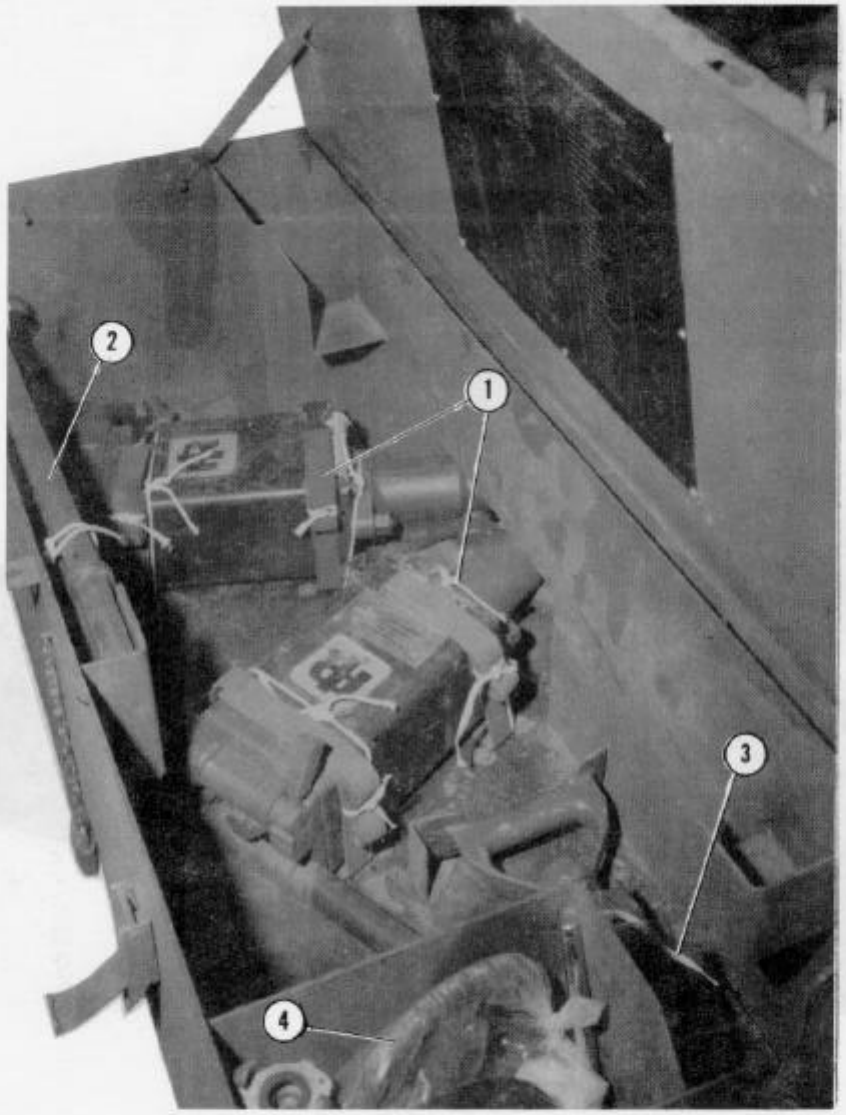
Figure 3-17. Storage box 3 prepared and secured (continued)



(8) Close and lock the storage box lid. If a lock is not available, tie the lock rings with type III nylon cord.

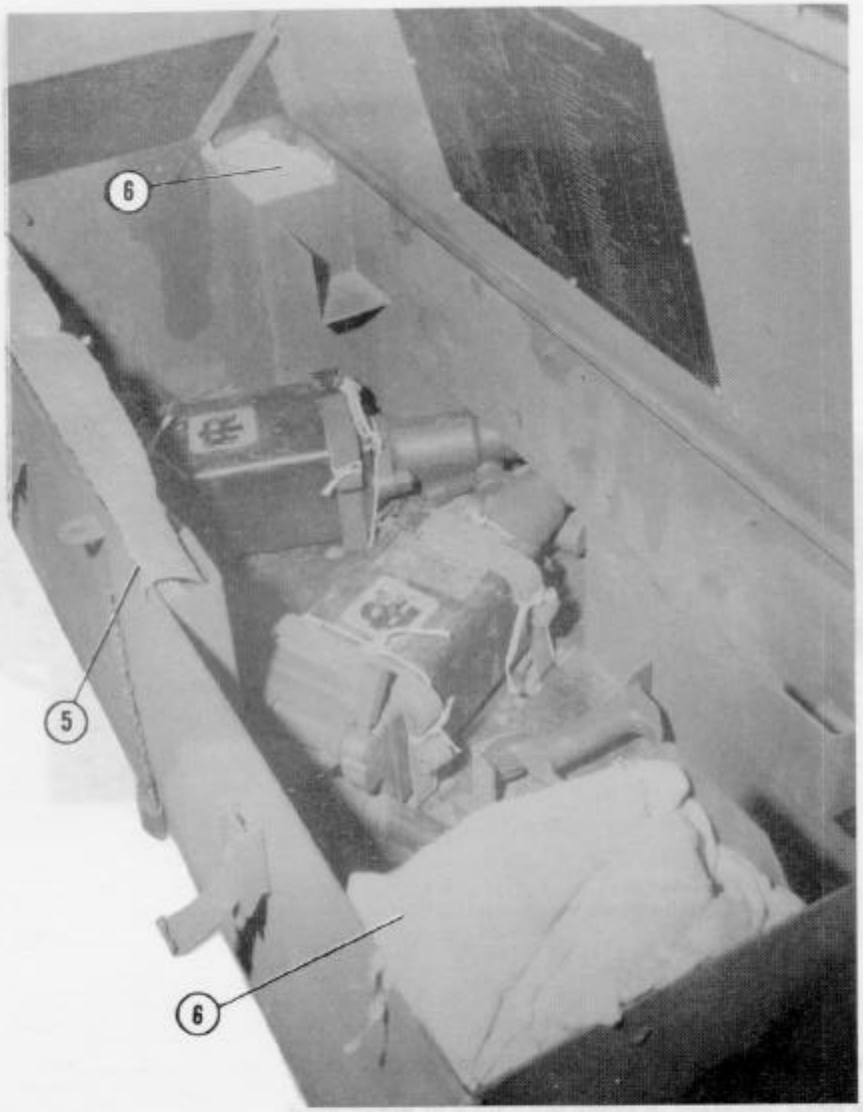
(9) Tie a length of 1/2-inch tubular nylon webbing around each end of the box.

Figure 3-17. Storage box 3 prepared and secured (continued)



(1) Tie the two drill sinkers in place with type III nylon cord in storage box 4 (right rear).
(2) Tie the 2-foot drill rods in place with type III nylon cord.
(3) Tie the wood borer in place with type III nylon cord.
(4) Tie the accessories in place with type III nylon cord.

Figure 3-18. Storage box 4 and jack stand prepared and secured



(5) Cut to fit and place a piece of honeycomb on top of the drill rods.

(6) Fill the two accessory boxes with cellulose wadding.

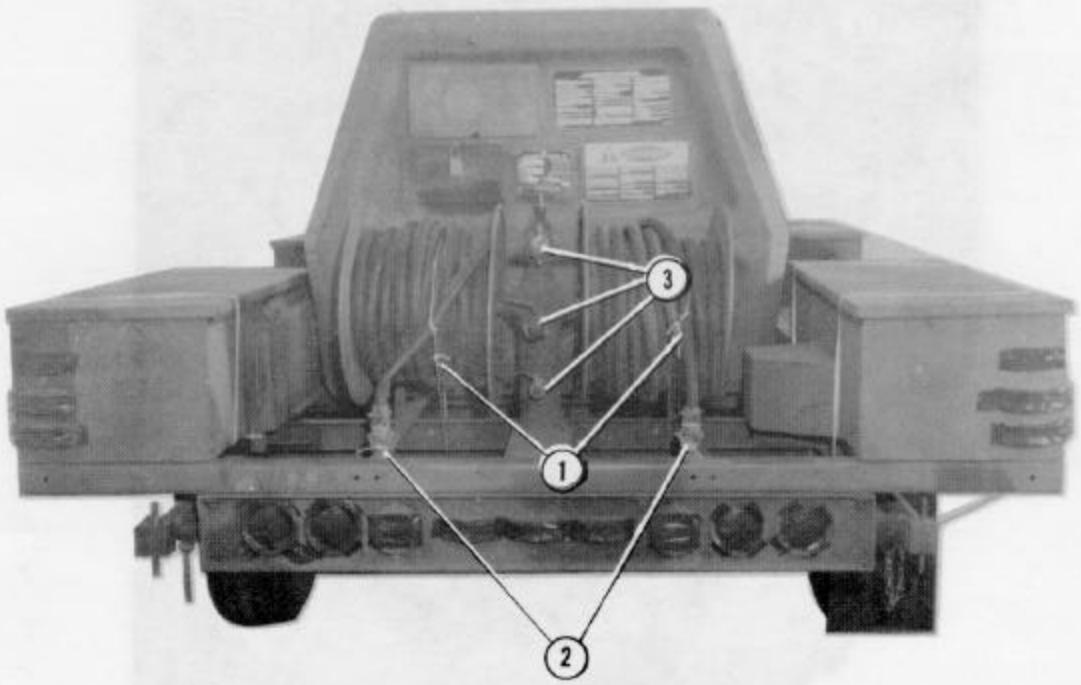
(7) Place a 16- by 45-inch piece of honeycomb (not shown) on top of the items.

(8) Close and lock the storage box lid. If a lock is not available, tie the lock rings with type III nylon cord (not shown).

(9) Tie a length of 1/2-inch tubular nylon webbing around each end of the box (not shown).

(10) Adjust the jack stand to the shortest position. Raise and tie it in place with 1/2-inch tubular nylon webbing (not shown).

Figure 3-18. Storage box 4 and jack stand prepared and secured (continued)

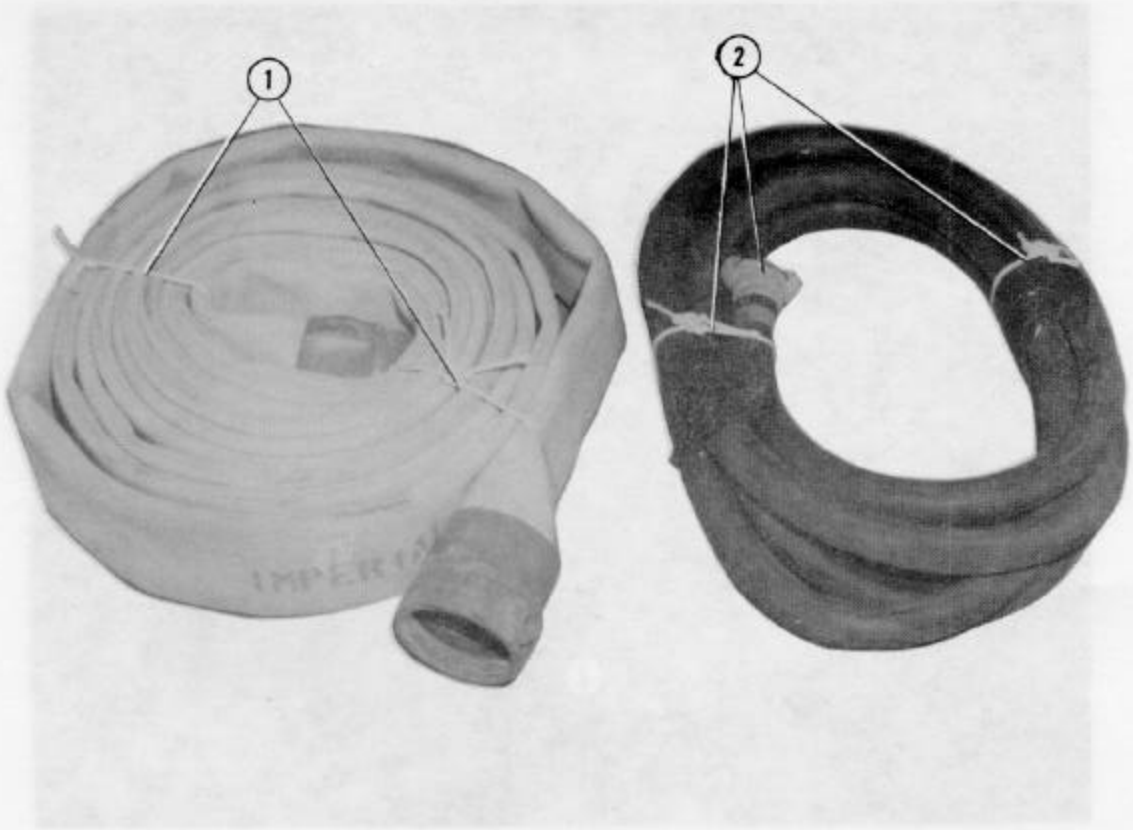


(1) Tie the air hoses in place with type III nylon cord.

(2) Tie the air hose adapters in place with type III nylon cord.

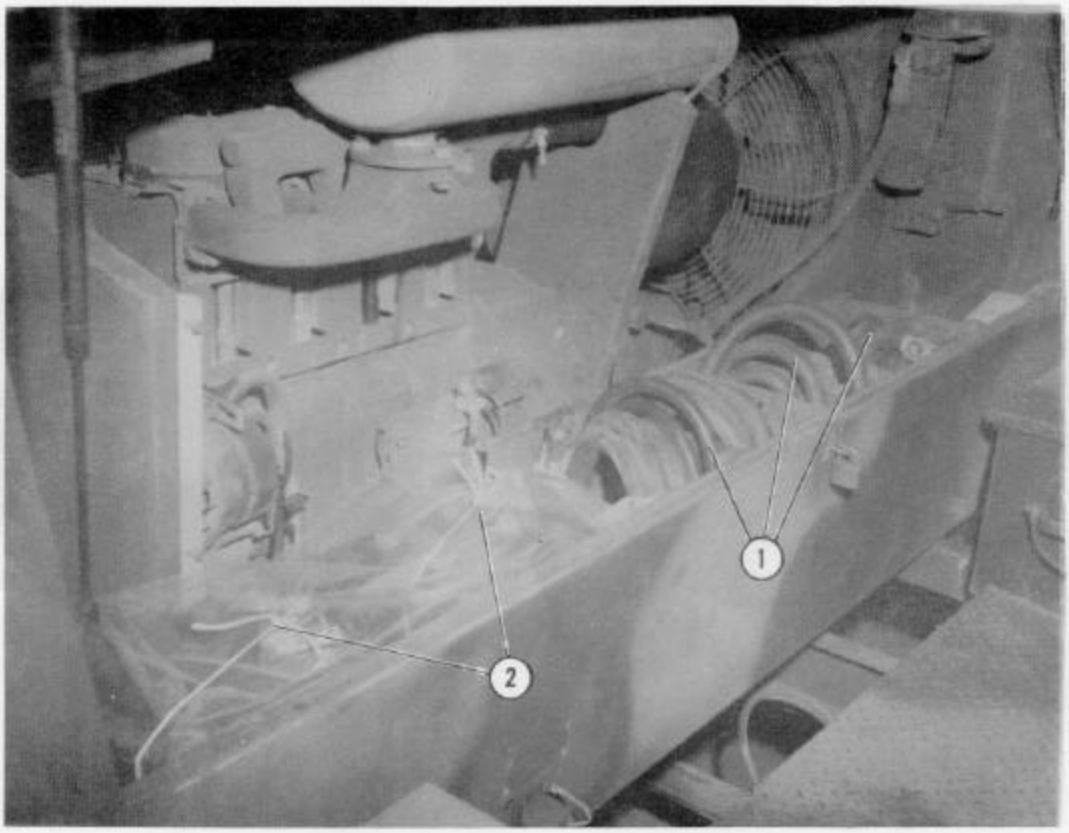
(3) Tape the nozzle openings.

Figure 3-19. Rear of trailer prepared



(1) Roll the canvas water hose, and tie it with type III nylon cord.
(2) Roll the air hoses, tape the connector ends, and tie the hoses with type III nylon cord.

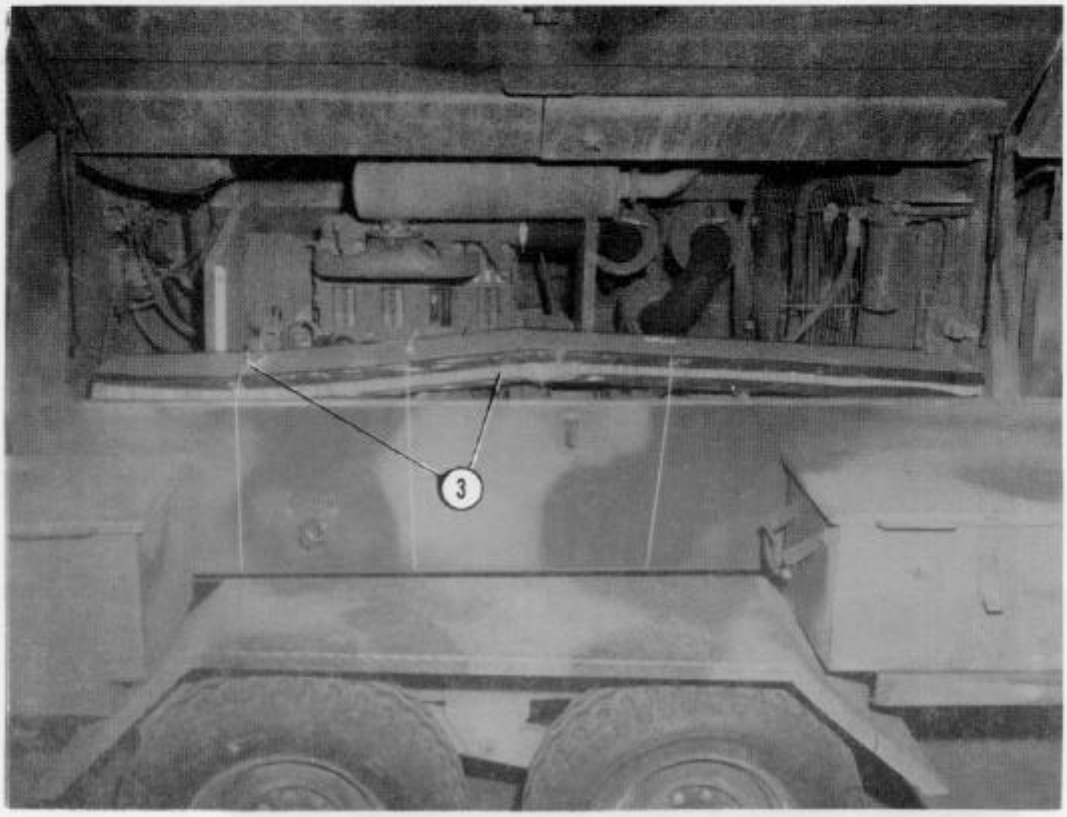
Figure 3-20. Hoses rolled and tied



(1) Place the air hoses and the canvas water hoses in the slots provided in the right engine compartment.

(2) Cover the batteries with plastic, and safety them in place with type III nylon cord.

Figure 3-21. Right engine compartment prepared and secured



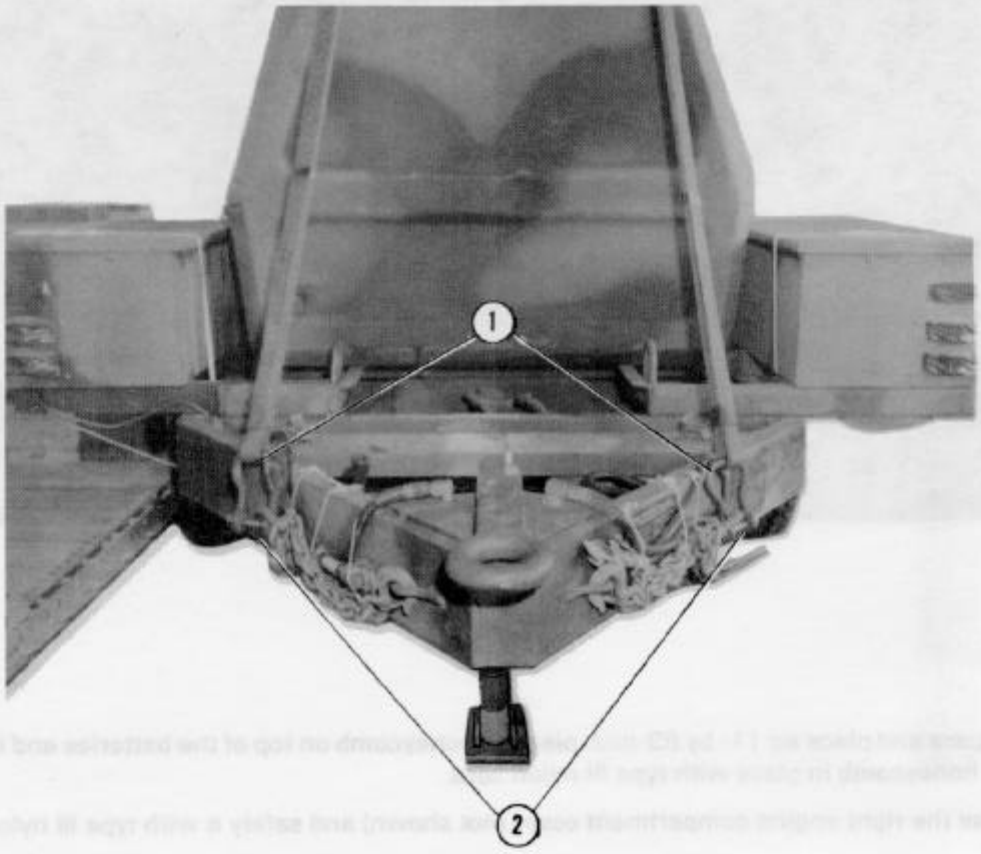
(3) Prepare and place an 11- by 83-inch piece of honeycomb on top of the batteries and hoses. Tie the honeycomb in place with type III nylon cord.

(4) Close the right engine compartment cover (not shown) and safety it with type III nylon cord.

Figure 3-21. Right engine compartment prepared and secured (continued)

3-6. Installing Lifting Slings and Preparing Jack Stand

Install the lifting slings using four 16-foot (4-loop), type XXVI nylon webbing slings as shown in Figure 3-22. Prepare the jack stand as shown in Figure 3-23.



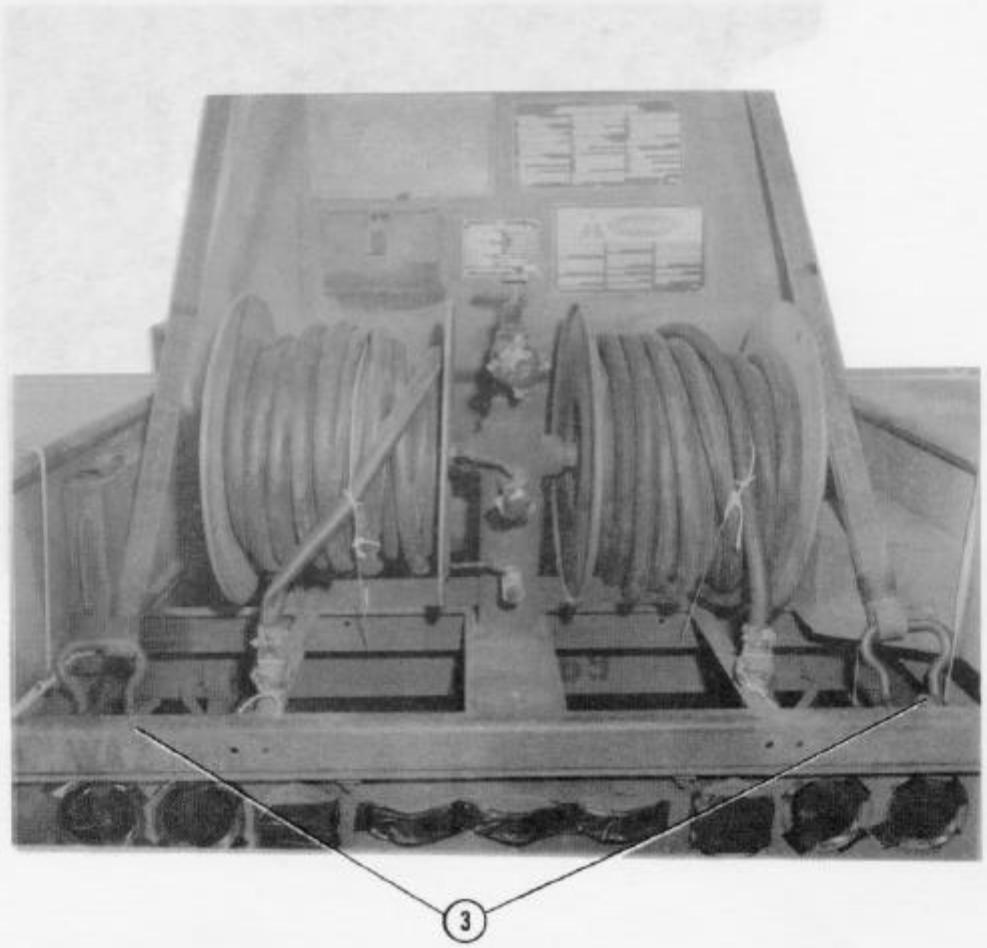
(1) Place the bell portion of a medium suspension clevis in the end loop of each 16-foot (4-loop), type XXVI nylon webbing sling.

(2) Bolt the clevises on the front lifting slings to the outside front tie-down provisions on the drawbar.

Figure 3-22. Lifting slings installed

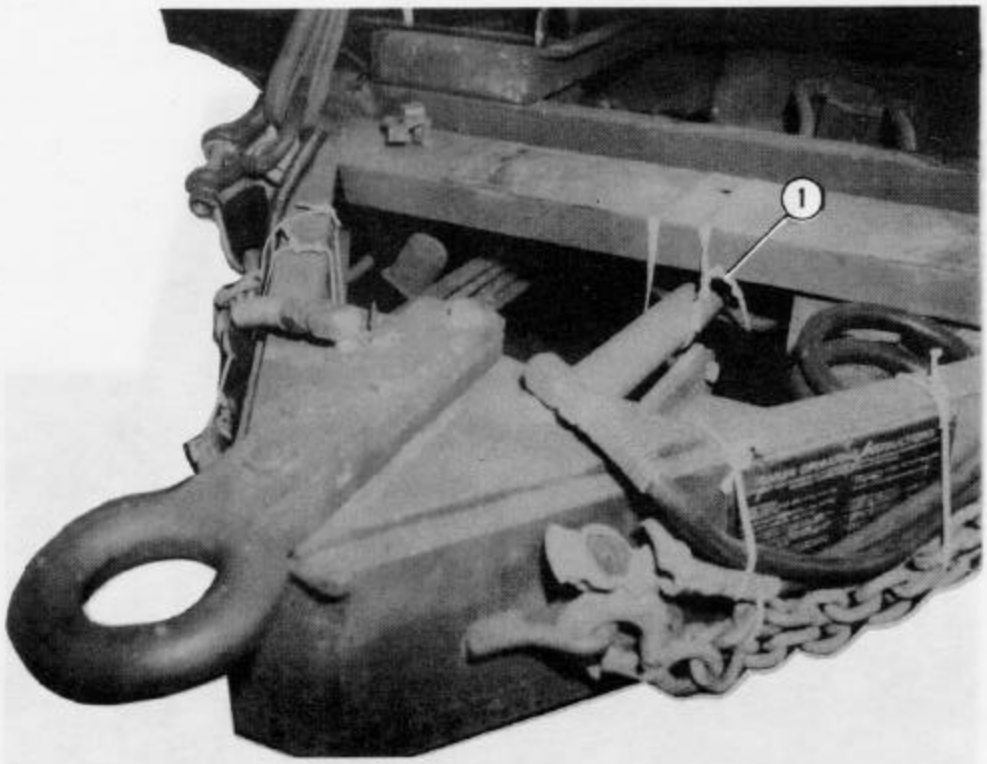
CAUTION

When lifting from these points, ensure the slings clear the hose reels as any pressure on these reels from the slings will result in damage.



(3) Bolt the clevises on the rear lifting slings to the rear inner frame sections.

Figure 3-22. Lifting slings installed (continued)



(1) Raise the front jack stand, and tie it in place with1/2-inch tubular nylon webbing.

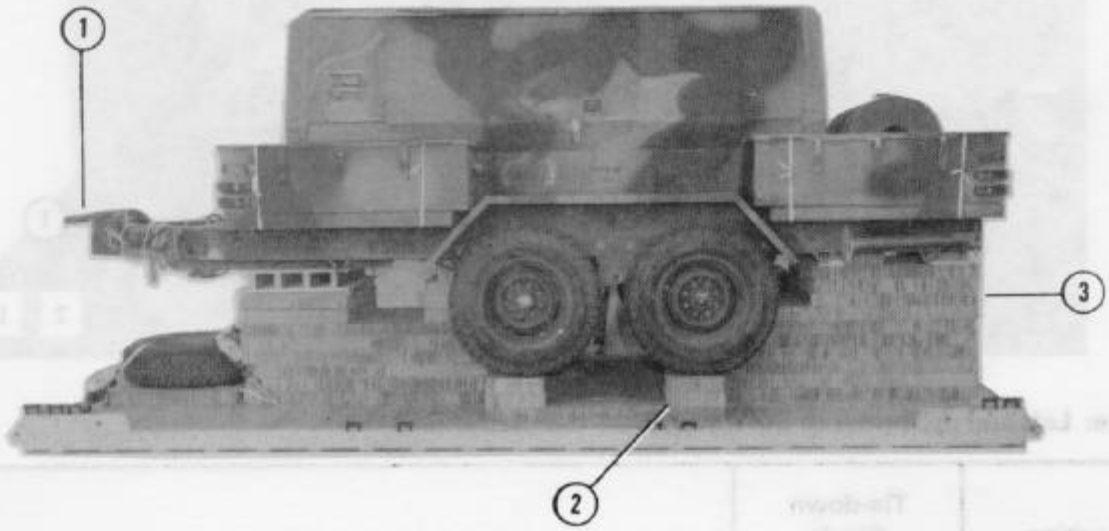
Figure 3-23. Front jack stand prepared

3-7. Positioning Trailer

Position the trailer on the honeycomb stacks as shown in Figure 3-24.

CAUTION

Make sure the brake pressure relief valve does not touch the strongback on stack 4.



(1) Place the trailer on the platform with the front of the trailer overhanging the rear of the platform 10 inches.

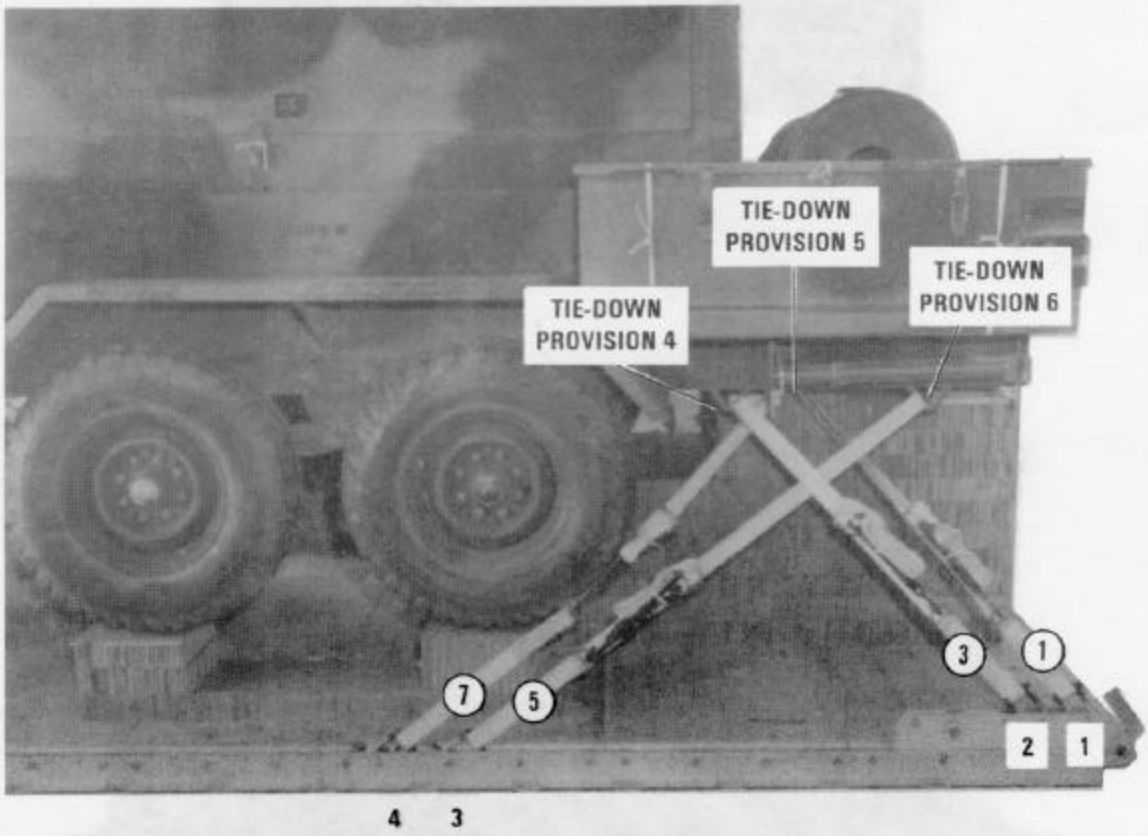
(2) Center the tires of the trailer over stacks 2 and 3.

(3) Center the rear edge of the trailer flush with the front edge of stack 1.

Figure 3-24. Trailer positioned

3-8. Lashing Trailer

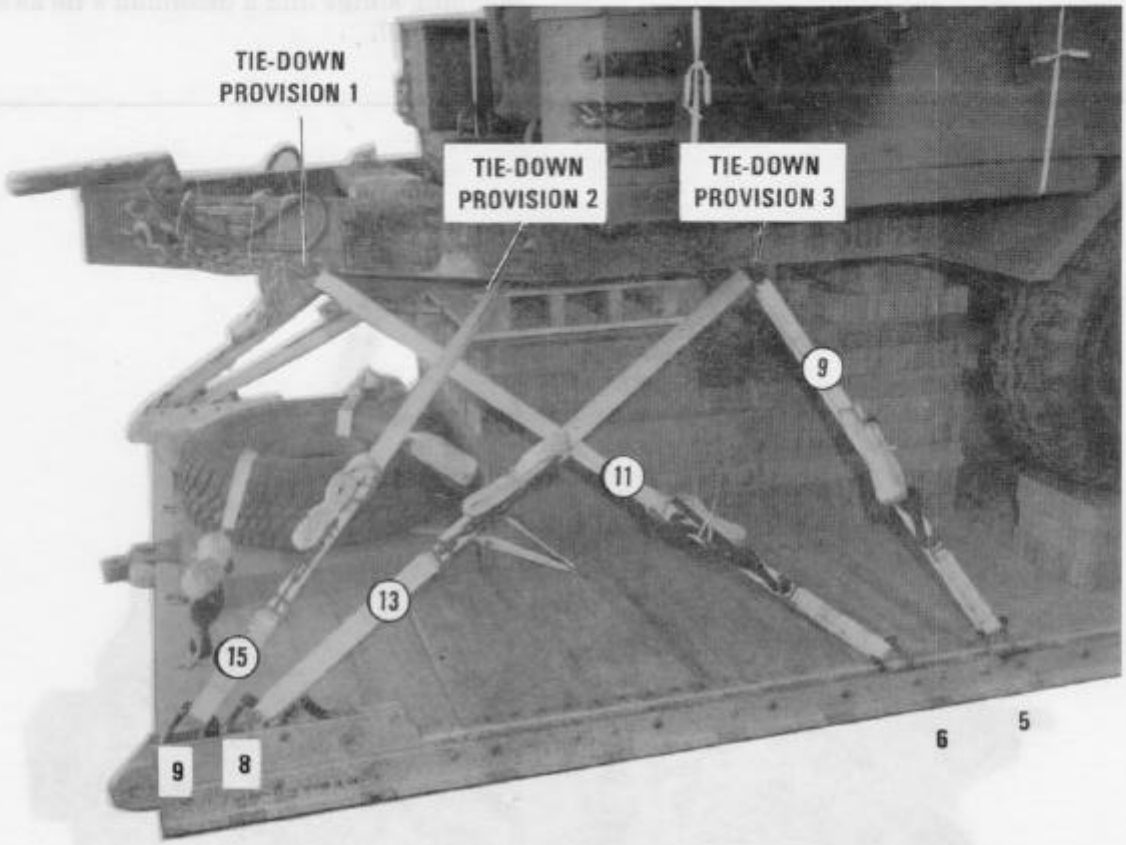
Lash the trailer to the platform using sixteen 15-foot tie-down assemblies according to FM 10-500-2/TO 13C7-1-5 and as shown in Figures 3-25 and 3-26.



Note: Left and right refer to the trailer, NOT the platform.

Lashing Number	Tie-down Clevis Number	Instructions
		Pass lashing:
1	1	Through tie-down provision 5, left side.
2	1A	Through tie-down provision 5, right side.
3	2	Through tie-down provision 4, left side.
4	2A	Through tie-down provision 4, right side.
5	3	Through tie-down provision 6, left side.
6	3A	Through tie-down provision 6, right side.
7	4	Through tie-down provision 5, left side.
8	4A	Through tie-down provision 5, right side.

Figure 3-25. Lashings 1 through 8 installed



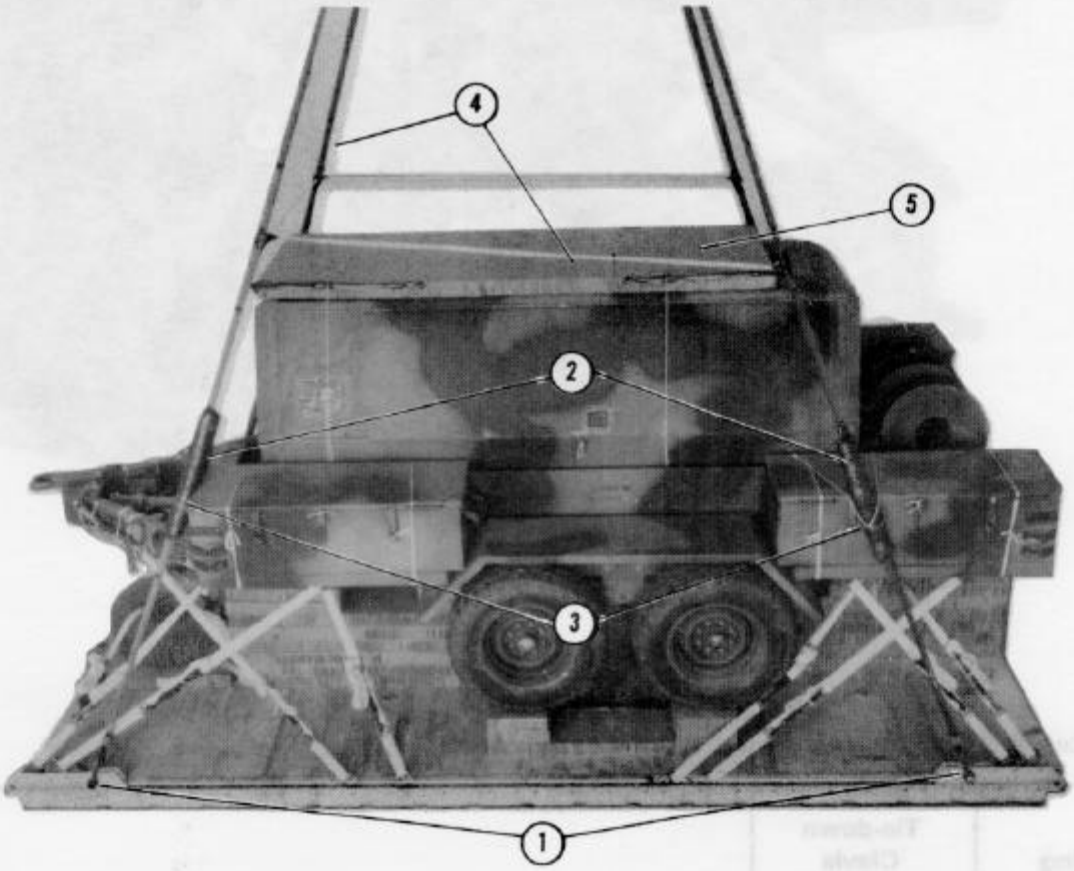
Note: Left and right refer to the trailer, NOT the platform.

Lashing Number	Tie-down Clevis Number	Instructions
		Pass lashing:
9	5	Through tie-down provision 3, left side.
10	5A	Through tie-down provision 3, right side.
11	6	Through tie-down provision 1, left side.
12	6A	Through tie-down provision 1, right side.
13	8	Through tie-down provision 3, left side.
14	8A	Through tie-down provision 3, right side.
15	9	Through tie-down provision 2, left side.
16	9A	Through tie-down provision 2, right side.

Figure 3-26. Lashings 9 through 16 installed

3-9. Installing Suspension Slings and Deadman's Tie

Install four 20-foot (2-loop), type XXVI nylon webbing slings and a deadman's tie as shown in Figure 3-27.



(1) Attach a 20-foot (2-loop), type XXVI nylon webbing sling to each tandem link using a large suspension clevis.

(2) Raise the suspension slings. Wrap a 9- by 18-inch piece of felt around each suspension sling 48 inches from each clevis. Tape the felt in place with pressure-sensitive tape.

(3) Safety the suspension slings to the front and rear cross members with type III nylon cord.

(4) Install the deadman's tie according to FM 10-500-2/TO 13C7-1-5.

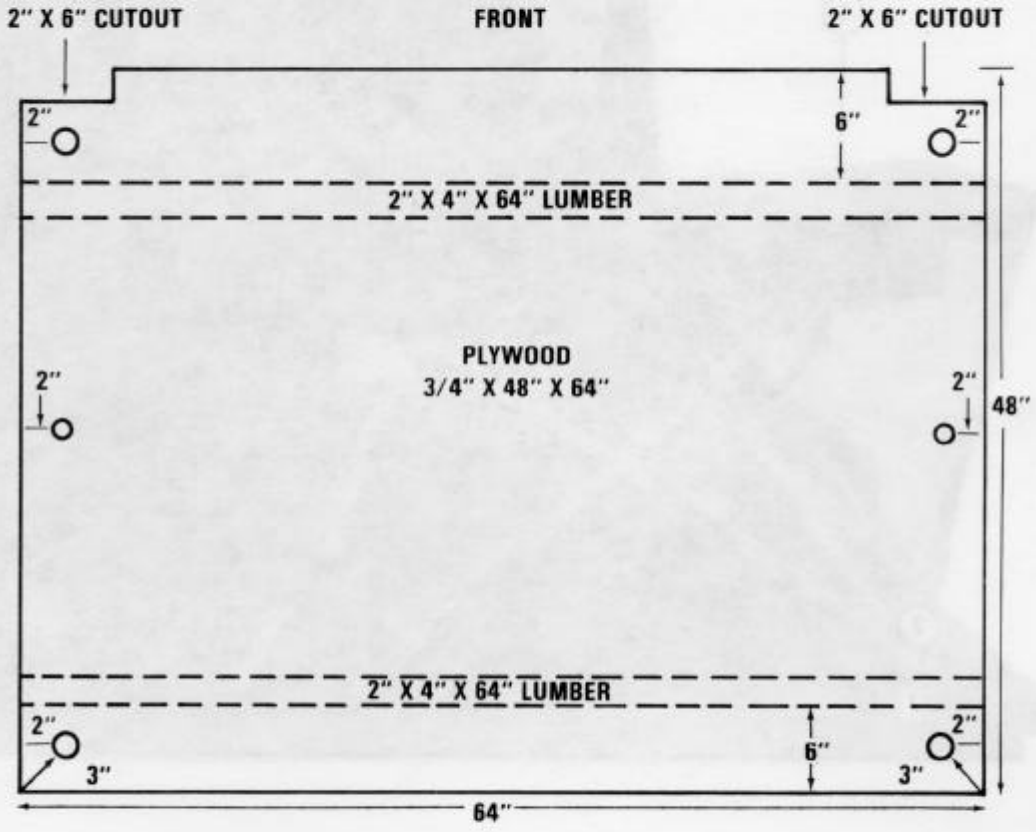
(5) Place a 36- by 96-inch piece of honeycomb on top of the compressor. Secure the honeycomb at convenient points with type III nylon cord.

Figure 3-27. Suspension slings and deadman's tie installed

3-10. Building and Installing Parachute Stowage Platform

Build the parachute stowage platform as shown in Figure 3-28. Install the parachute stowage platform as shown in Figure 3-29.

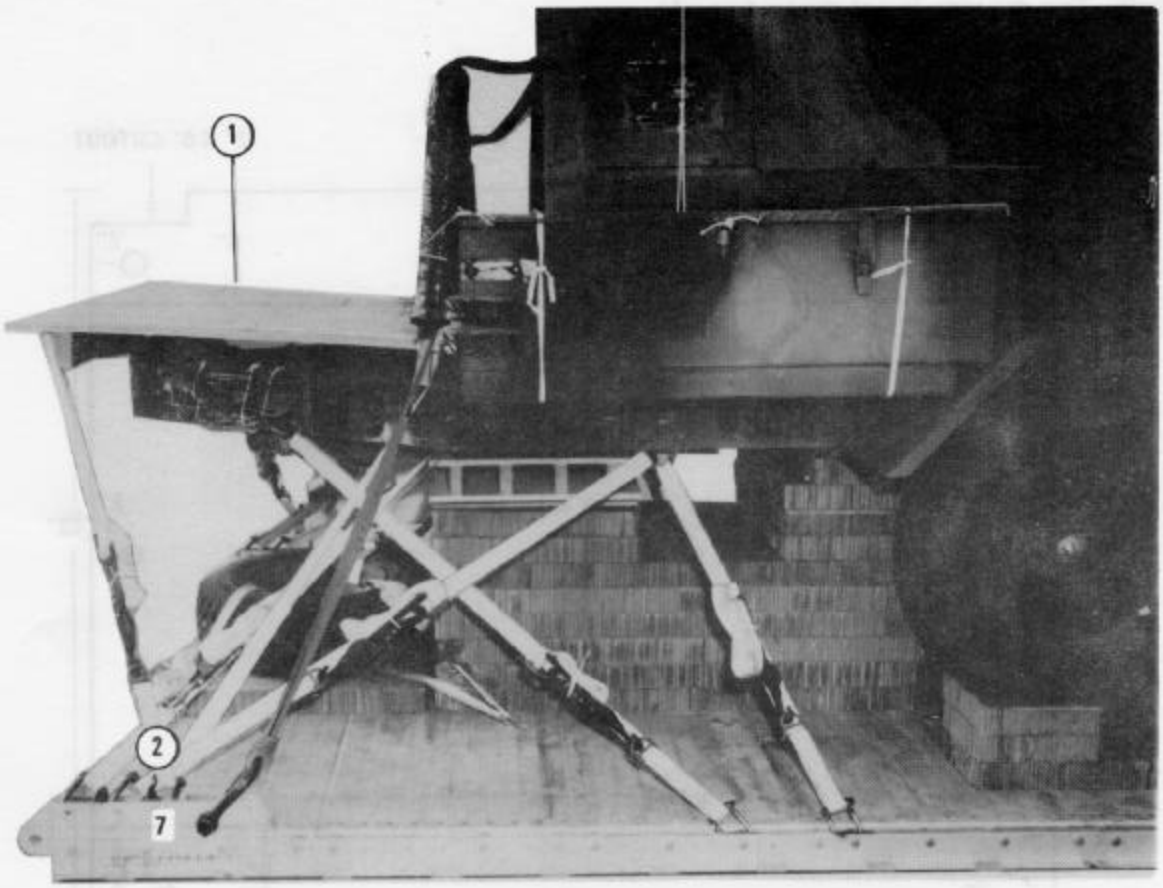
Note: This drawing is not drawn to scale.



Step:

1. Cut a 3/4- by 48- by 64-inch piece of plywood.
2. Make a 2- by 6-inch cutout on each front corner of the platform.
3. Drill a 2-inch hole 3 inches diagonally from each corner of the platform.
4. Drill a 1-inch hole 2 inches from the side and at the center of each 48-inch side of the platform.
5. Nail a 2- by 4- by 64-inch piece of lumber 6 inches from each 64-inch side using sixpenny or eightpenny nails.

Figure 3-28. Parachute stowage platform built



(1) Place the stowage platform on the drawbar frame with the 2- by 6-inch cutouts facing the load.

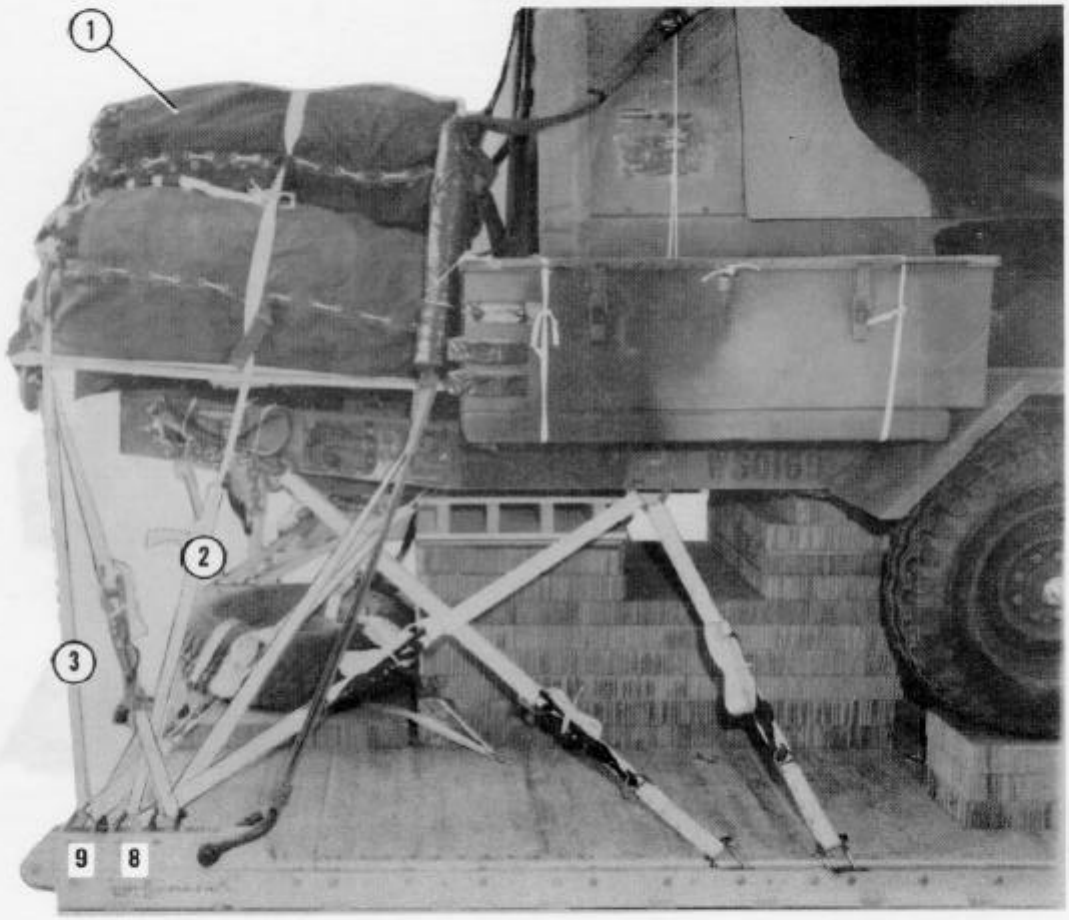
(2) Run the free end of a 15-foot lashing through clevis 7, through the front corner hole on the right side of the stowage platform, over the platform, and through the rear corner hole. Secure the lashing with a D-ring and a load binder.

(3) Repeat step 2 above on the left side (not shown) using clevis 7A.

Figure 3-29. Parachute stowage platform installed

3-11. Stowing and Securing Cargo Parachutes

Prepare, stow, and secure three G-11A, two G-11B, or two G-11C cargo parachutes according to FM 10-500-2/TO 13C7-1-5 and as shown in Figure 3-30.



(1) Place the parachutes on the parachute stowage platform according to FM 10-500-2/TO 13C7-1-5.

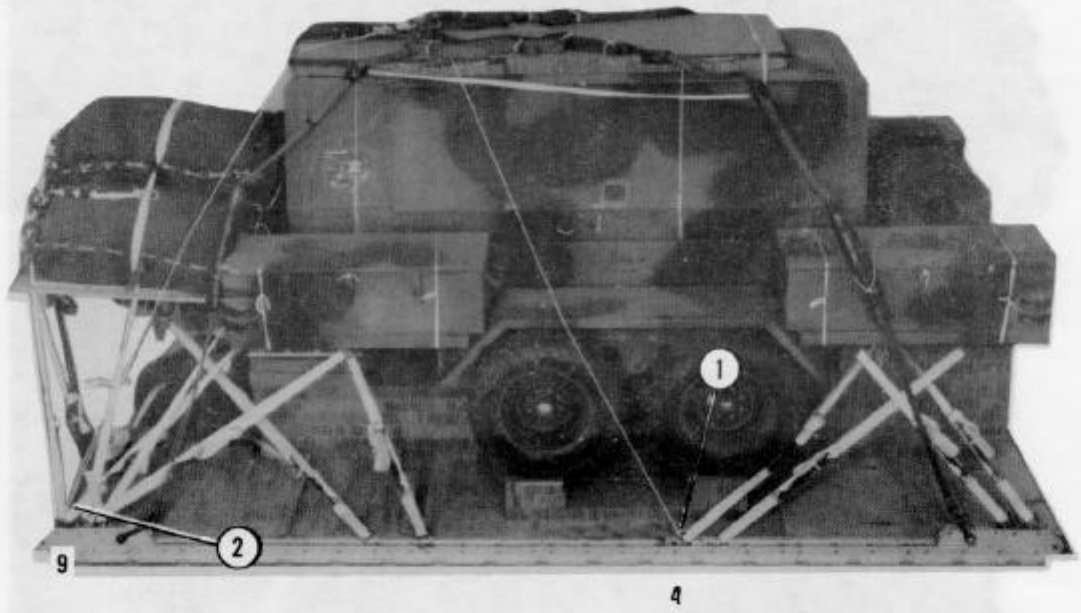
(2) Pass the first parachute restraint strap through the center holes of the stowage platform. Fasten the strap to clevises 8 and 8A.

(3) Pass the second parachute restraint strap through the rear holes of the stowage platform. Fasten the strap to clevises 9 and 9A.

Figure 3-30. Parachutes stowed and secured

3-12. Installing Parachute Release

Prepare, install, and safety an M-1 cargo parachute release according to FM 10-500-2/TO 13C7-1-5 and as shown in Figure 3-31.



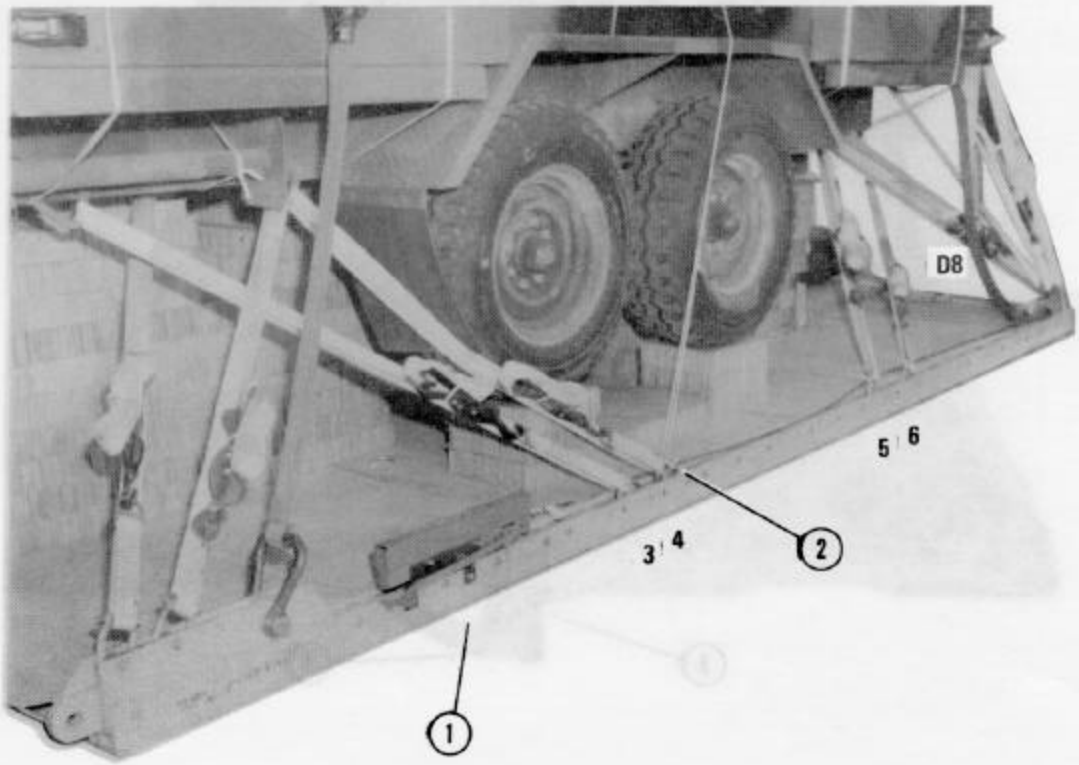
(1) Safety the front of the release to clevises 4 and 4A with type III nylon cord according to FM 10-500-2/TO 13C7-1-5.

(2) Safety the rear of the release to clevises 9 and 9A with type III nylon cord according to FM 10-500-2/TO 13C7-1-5.

Figure 3-31. Release system installed

3-13. Preparing and Installing Extraction System

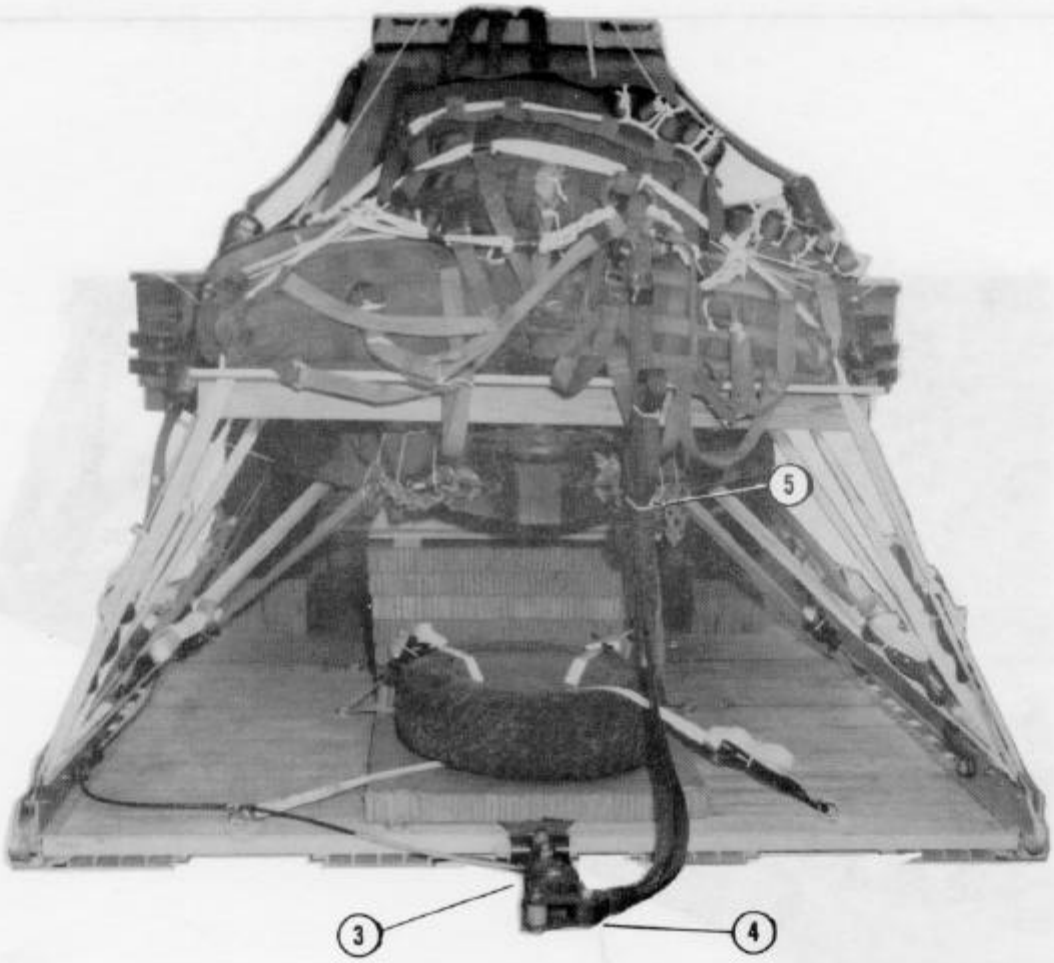
Prepare and install the EFTC extraction system according to FM 10-500-2/TO 13C7-1-5 and as shown in Figure 3-32.



(1) Attach the type V EFTA mounting brackets to the front mounting holes in the left platform rail. Install the actuator to the EFTA mounting brackets according to FM 10-500-2/TO 13C7-1-5.

(2) Attach a 16-foot cable to the actuator. Safety it to clevises 3, 4, 5, and 6 and tie-down ring D8.

Figure 3-32. Extraction system installed



(1) Use a 5-inch latch assembly adapter, and attach the latch assembly to the extraction bracket according to FM 10-500-2/TO 13C7-1-5 with the locking nut hole facing toward the left side of the platform.

(2) Connect one end of a 9-foot (2-loop), type XXVI nylon webbing sling (deployment line) to the right spacer of the link assembly. Connect the free end to the center large suspension clevis.

(3) Fold the excess deployment line, and secure the folds in place with tape or type I, 1/4-inch cotton webbing.

Figure 3-32. Extraction system installed (continued)

3-14. Installing Provisions for Emergency Restraints

Install the provisions for the emergency restraints on the load as described below.

a. C-130 Aircraft. Attach a medium suspension clevis to each front tandem link.

b. C-141 Aircraft. Attach a large suspension clevis to each front tandem link.

3-15. Placing Extraction Parachutes

Place the extraction parachutes as described below.

a. C-130 Aircraft. Place a 22-foot cargo extraction parachute and a 60-foot (3-loop), type XXVI nylon webbing extraction line on the load for installation in the aircraft.

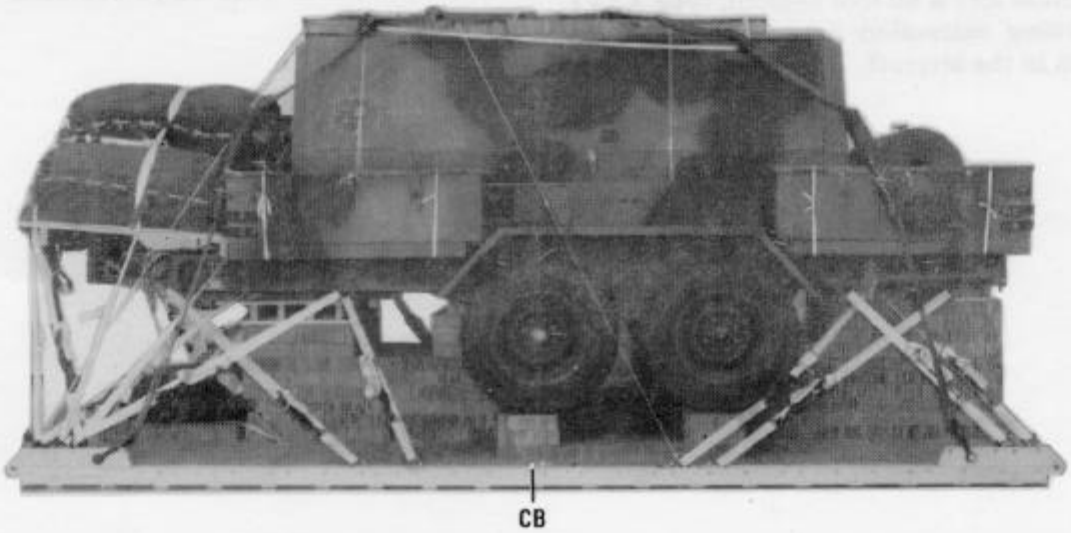
b. C-141 Aircraft. Place a 22-foot cargo extraction parachute and a 140-foot (3-loop), type XXVI nylon webbing extraction line on the load for installation in the aircraft.

3-16. Marking Rigged Load

Mark the rigged load according to FM 10-500-2/TO 13C7-1-5 and as shown in Figure 3-33. Complete DD Form 1387-2, and securely attach it to the load. Indicate on DD Form 1387-2 that the load has been prepared according to AFR 71-4/TM 38-250. If the load varies, the weight, height, CB, and parachute requirements must be recomputed.

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	10,100 pounds
Maximum load allowed	10,500 pounds
Height	96 inches
Width	108 inches
Length	214 1/2 inches
Overhang: Front	4 1/2 inches
Rear	18 inches
CB (from front edge of platform)	94 1/2 inches
Extraction System	EFTC

Figure 3-33. Ingersol-Rand model, 250-CFM, trailer-mounted air compressor rigged on a type V platform for low-velocity airdrop

3-17. Equipment Required

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

Table 3-1. Equipment required for rigging the Ingersol-Rand model, 250-CFM, trailer-mounted air compressor on a type V platform for low-velocity airdrop

National Stock Number	Item	Quantity
8040-00-273-8713	Adhesive, paste, 1-gal	As required
	Clevis, suspension:	
4030-00-678-8562	3/4-in (medium)	6
4030-00-090-5354	1-in (large)	8
8305-00-242-3593	Cloth, cotton duck, 60-in	As required
4020-00-240-2146	Cord, nylon, type III, 550-lb	As required
1670-00-434-5785	Coupling, airdrop, extraction force transfer w 16-ft cable	1
	Cover:	
1670-00-360-0328	Clevis, large	3
1670-00-360-0329	Link (type IV)	12
8135-00-664-6958	Cushioning material, packaging, cellulose wadding	As required
8305-00-958-3685	Felt, 1/2-in thick	As required
1670-01-183-2678	Leaf, extraction line	2
	Line, extraction:	
1670-00-856-0266	60-ft (3-loop), type X nylon webbing (Use w 22-ft parachute.) or	1
1670-01-062-6313	60-ft (3-loop), type XXVI nylon webbing	1
1670-01-107-7651	140-ft (3-loop), type XXVI nylon webbing	1
1670-00-783-5988	Link assembly, type IV	12
5510-00-220-6146	Lumber, 2- by 4-in:	
	24-in	2
	36-in	4
	64-in	2
5315-00-010-4657	Nail, steel wire, common, 6d	As required
1670-00-753-3928	Pad, energy-dissipating, honeycomb,	
	3- by 36- by 96-in:	17 sheets
	11- by 83-in	(1)
	12- by 12-in	(8)
	12- by 48-in	(2)
	16- by 45-in	(2)
	30- by 36-in	(1)
	36- by 6-in	(1)
	36- by 8-in	(4)
	36- by 10-in	(8)
	36- by 14-in	(2)
	36- by 16-in	(3)
	36- by 24-in	(2)
	36- by 36-in	(3)

Table 3-1. Equipment required for rigging the Ingersol-Rand model, 250-CFM, trailer-mounted air compressor on a type V platform for low-velocity airdrop (continued)

National Stock Number	Item	Quantity
	36- by 58-in	(6)
	36- by 60-in	(7)
	36- by 96-in	(1)
	Parachute:	
	Cargo:	
1670-00-269-1107	G-11A or	3
1670-01-016-7841	G-11B or	2
1670-01-016-7841	G-11C	2
	Cargo extraction:	
1670-00-687-5458	22-ft or	1
1670-01-063-3716	22-ft	1
9330-00-286-1231	Plastic, sheet roll (40- by 50-ft)	As required
	Platform, AD, type V, 16-ft:	1
	Bracket:	
1670-01-162-2375	Inside EFTA	(1)
1670-01-162-2374	Outside EFTA	(1)
1670-01-162-2372	Clevis assembly	(18)
1670-01-162-2376	Extraction bracket assembly	(1)
1670-01-162-2381	Tandem link	(4)
	Plywood:	
5530-00-129-7721	1/4-in:	
	36- by 6-in	1
	36- by 10-in	1
5530-00-129-7777	1/2- by 36- by 8-in	1
5530-00-128-4981	3/4-in:	
	36- by 6-in	2
	36- by 8-in	3
	36- by 10-in	4
	36- by 24-in	2
	48- by 64-in	1
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 lifting:	
1670-00-432-2507	16-ft (4-loop), type XXVI nylon webbing or	4
1670-00-003-7237	16-ft (4-loop), type XXVI nylon webbing or	4
1670-01-062-6308	16-ft (4-loop), type XXVI nylon webbing	4
	For riser extension:	
1670-00-823-5043	20-ft (3-loop), type X nylon webbing or	6
1670-01-062-6302	20-ft (2-loop), type XXVI nylon webbing	6
	For suspension:	
1670-01-062-6302	20-ft (2-loop), type XXVI nylon webbing	4
1670-00-998-0117	Static line, cargo parachute, breakaway type	2
	Strap:	
1670-00-738-5879	Connector, 120-in	1
1670-00-040-8219	Parachute release, multicut comes w 3 knives	2

Table 3-1. Equipment required for rigging the Ingersol-Rand model, 250-CFM, trailer-mounted air compressor on a type V platform for low-velocity airdrop (continued)

National Stock Number	Item	Quantity
7510-00-266-5016	Tape, adhesive, 2-in	As required
1670-00-937-0271	Tie-down assembly, 15-ft	20
	Webbing:	
8305-00-268-2411	Cotton, 1/4-inch, type I	As required
	Nylon:	
8305-00-082-5752	Tubular, 1/2-in	As required
8305-00-263-3591	Type VIII	As required

GLOSSARY

ACB	attitude control bar
AD	airdrop
AFB	Air Force base
AFR	Air Force regulation
AFTO	Air Force technical order
ALC	Airlift Logistics Center
ARNG	Army National Guard
attn	attention
C	change
CB	center of balance
CFM	cubic feet per minute
d	penny
DA	Department of the Army
DC	District of Columbia
DD	Department of Defense
diam	diameter
DS	direct support
EFTA	extraction force transfer actuator
EFTC	extraction force transfer coupling
FM	field manual
ft	feet/foot
gal	gallon
HQ	headquarters
in	inch
LAPE	low-altitude parachute-extraction
LAPES	low-altitude parachute-extraction system
lb	pound
MAC	Military Airlift Command
no	number
PEFTC	extraction force transfer coupling (platform)
qty	quantity
rqr	requirement
SL/CS	static line/connector strap
TM	technical manual
TO	technical order
TRADOC	United States Army Training and Doctrine Command
US	United States
USAR	United States Army Reserve
w	with
yd	yard

REFERENCES

AFR 71-4/TM 38-250	Packaging and Materials Handling: Preparing of Hazardous Materials for Military Air Shipments
FM 10-500-2/TO 13C7-1-5	Airdrop of Supplies and Equipment: Rigging Airdrop Platforms
TM 10-1670-208-20&P/ TO 13C3-4-12	Organizational Maintenance Manual Including Repair Parts and Special Tools List for Platforms, Type II Modular and LAPES/Airdrop Modular
TM 10-1670-215-23/ TO 13C5-1-102	Organizational and DS Maintenance Manual Including Repair Parts and Special Tools List for Parachute, Cargo Types. . . .
TM 10-1670-268-20&P/ TO 13C7-52-22	Organizational Maintenance Manual With Repair Parts and Special Tools List: Type V Airdrop Platform
AFTO Form 22	Technical Order Publication Improvement Report
DA Form 2028	Recommended Changes to Publications and Blank Forms
DD Form 1387-2	Special Handling Data/Certification