TM 4-48.07 (FM 10-579)
TO 13C7-50-1 **(FM 10-579, & FM 10-541)**

Airdrop of Supplies and Equipment: Rigging the Rapid Runway Repair Kit and Military Bridges

July 2013

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This special conversion does not integrate any changes in Army doctrine since 20 March 1998 and 13 July 1992 and does not alter the publication's original references; therefore, some sources cited in this TM may no longer be current. For the status of official Department of the Army (DA) publications, consult DA Pam 25-30, *Consolidated Index of Army Publications and Blank Forms,* at http://armypubs.army.mil/2530.html. DA Pam 25-30 is updated as new and revised publications, as well as changes to publications are published. For the content/availability of specific subject matter, contact the appropriate proponent.

HEADQUARTERS
DEPARTMENT OF THE ARMY,
DEPARTMENT OF THE AIR FORCE

Technical Manual
No. 4-48.07
Technical Order
No. 13C7-50-1

Headquarters
Department of the Army
Department of the Air Force
Washington, DC, 5 July 2013

AIRDROP OF SUPPLIES AND EQUIPMENT: RIGGING THE RAPID RUNWAY REPAIR KIT AND MILITARY BRIDGES

Contents

***This publication supersedes FM 10-579/TO 13C7-50-1, Dated 19 April 1985 and FM 10-541/TO 13C7-11-21, dated 5 March 1984.**

Preface

SCOPE

This manual tells and shows how to prepare and rig the rapid runway repair kit on a 20-foot, 24-foot and the Alpha kit on a 32-foot type V airdrop platform for low-velocity (LV) airdrop from a C-130 and C-17 aircraft. This manual also tells and shows how to prepare and rig the five and seven bay, single-story, medium girder (fixed) bridge on a 32-foot type V airdrop platform for low-velocity (LV) airdrop from a C-130 and C-17 aircraft. The seven-bay bridge includes additional components rigged on a 16-foot, type V platform. This manual is designed for all parachute riggers.

Note. This manual combines FM 10-579/TO 13C7-50-1 and FM 10-541/TO 13C7-11-21 into one manual Training Manual (TM) 4-48/.07/TO 13C7-50-1.

USER INFORMATION

This publication applies to the Active Army, the Army National Guard (ARNG)/Army National Guard of the United States (ARNGUS), and the United States Army Reserve (USAR), U.S. Air Force, Air National Guard (ANG), Air Force Reserve Command (AFRC).

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Chapter 1
Introduction

DESCRIPTION OF ITEMS

1-1. The description of items covered in this manual are listed below.

- **The Rapid Runway Repair Kit rigged on a 20-foot, Type V Platform**. The rapid runway repair kit consists of fiberglass sheets, plastic supports, metal fittings and tools to erect the structure. The kit is contained in locally fabricated wooden boxes. A total of two rapid runway repair kits will be on this load. The load weighs 14,080 pounds.
- **The Rapid Runway Repair Kit rigged on a 24-foot, Type V Platform**. The rapid runway repair kit consists of fiberglass sheets, plastic supports, metal fittings and tools to erect the structure. The kit is contained in locally fabricated wooden boxes. A total of four rapid runway repair kits will be on this load. The load weighs 24,360 pounds.
- **The Rapid Runway Repair Kit-ALPHA, rigged on a 32-foot, Type V Platform.** The folded fiberglass mat rapid runway repair kit-ALPHA consists of two mat sections, an equipment box and eight metal boxes filled with bolts and washers. The load is 401 inches long with a 17 inch rear overhang, 59 ½ inches high, 108 inches wide, and 13,260 pounds.
- **The Five-Bay, Single-Story, Medium Girder (Fixed) Bridge, rigged on a 32-foot, Type V Platform.** The five-bay bridge unrigged weighs 11,522 pounds. When the bridge is rigged for airdrop, it is 407 inches long, 108 inches wide and 97 inches high.
- **The Seven-Bay, Single-Story, Medium Girder (Fixed) Bridge, rigged on a 32-foot, Type V Platform.** The seven-bay bridge consists of the five-bay bridge which is rigged on a 32-foot platform and additional component parts which are rigged on a 16-foot, Type V platform. When the additional components are rigged for airdrop, it is 215 inches long, 108 inches wide and 67 ½ inches high. When rigged, the components weigh 6,310 pounds.

CAUTION

The load weights may vary from the loads shown. Be sure that each load is weighed, and the parachute requirements, CB, and tip-off curve computed.

SPECIAL CONSIDERATIONS

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

- The loads covered in this manual may include hazardous materials as defined in AFMAN(I) 24-204/TM 38-250. If included, the hazardous materials must be packaged, marked, and labeled as required by AFMAN(I) 24-204/TM 38-250.

CAUTION

Only ammunition listed in TM 4-48.16/MCRP 4-11.3B/TO 13C7-18-41 may be airdropped.

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

Chapter 2

Rigging the Rapid Runway Repair Kit on a Type V Platform for Low-Velocity Airdrop

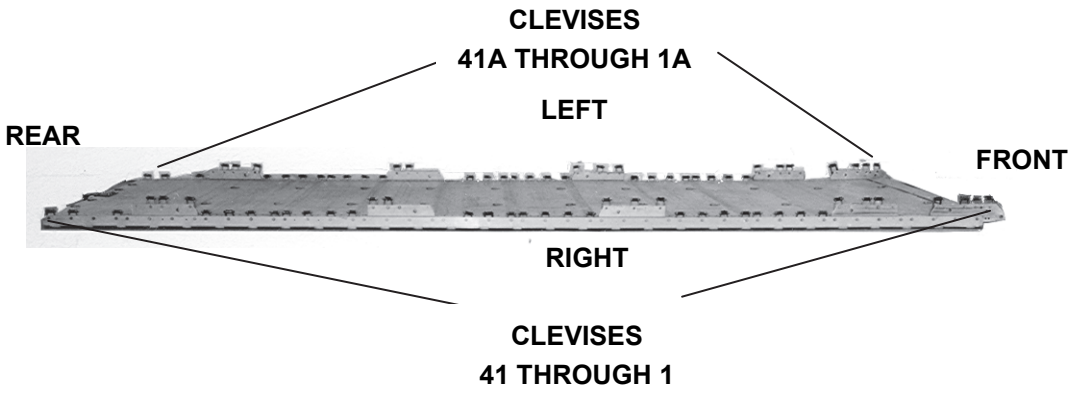
SECTION I-RIGGING THE RAPID RUNWAY REPAIR KIT ON A 24-FOOT PLATFORM

DESCRIPTION OF LOAD

2-1. The rapid runway repair kit consists of fiberglass sheets, plastic supports, metal fittings and tools to erect the structure. The kit is contained in locally fabricated wooden boxes. A total of four rapid runway repair kits will be on this load. The rapid runway repair kit must be in a box as described in Figure 2-4. The kit contains no materials requiring special handling and is not fragile. The rapid runway repair kit is rigged with five G-11 parachutes on a 24 foot type platform for low-velocity airdrop.

PREPARING PLATFORM

2-2. Prepare a 24-foot, type V platform according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 and as shown in Figure 2-1.



Step.

1. Inspect, or assemble and inspect, a 24-foot, type V platform as outlined in TM 10-1670-268-20&P/TO 13C7-52-22.
2. Install a suspension link in holes 6, 7, and 8 on each side of the platform.
3. Install a suspension link in holes 18, 19, and 20 on each side of the platform.
4. Install a suspension link in holes 29, 30, and 31 on each side of the platform.
5. Install a suspension link in holes 41, 42, and 43 on each side of the platform.
6. Install a tandem link on the front of each platform side rail using holes 1, 2, and 3.
7. Install clevises on bushings 1, 2, 3, and 4 of each front tandem link.
8. Install clevises on bushings 2, 3, and 4 of each first suspension link.
9. Install clevises on bushings 1, 3, and 4 of each second suspension link.
10. Install clevises on bushings 3 and 4 of each third suspension link.
11. Install clevises on bushings 1, 2, and 3 of each fourth suspension link.
12. Starting at the front of the right and left platform side rail, install clevises on the bushings bolted to holes 9, 10, 11, 12, 13, 14, 15, 16, 21, 22, 23, 24, 25, 26, 27, 33, 34, 35, 36, 37, 38, 39, 40, 45, 47 and 48.
13. Starting at the front of the platform, number the clevises 1 through 41 on the right side, and 1A through 41A on the left side.

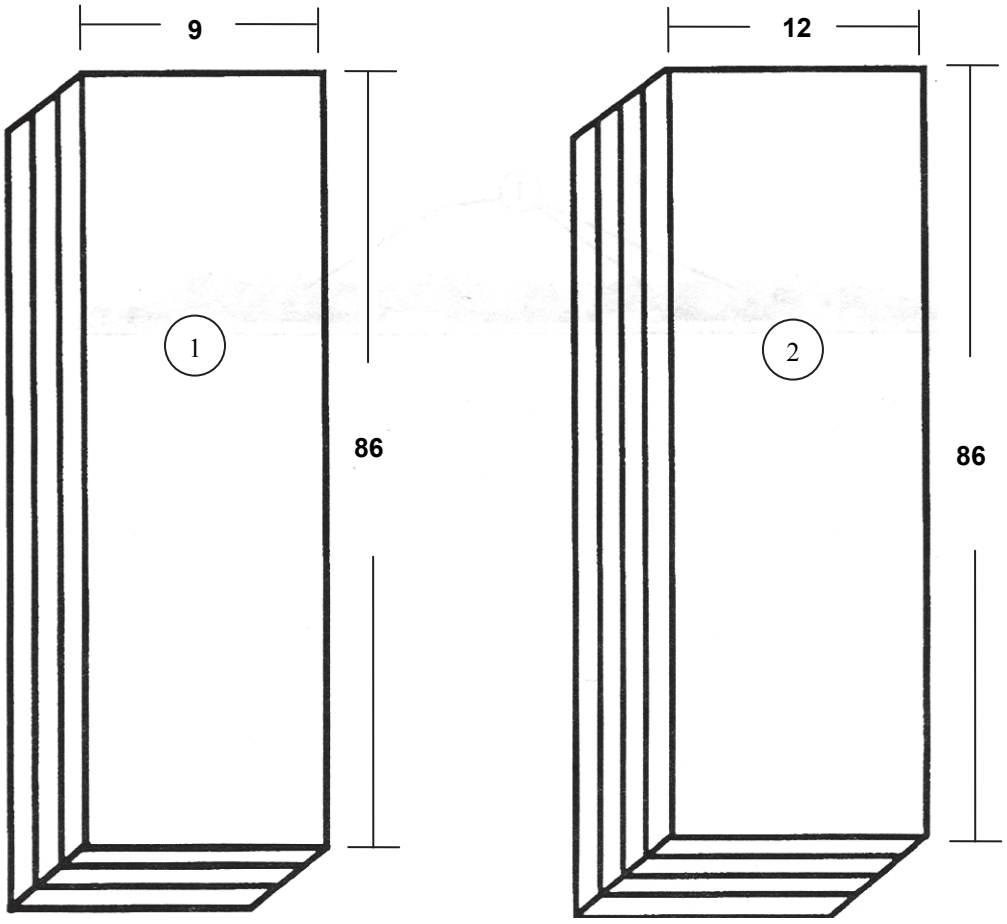
Figure 2-1. Platform Prepared

BUILDING AND POSITIONING HONEYCOMB STACKS

2-3. Build 10 honeycomb stacks as shown in Figure 2-2. Position the stacks on the platform as shown in Figure 2-3.

Notes.

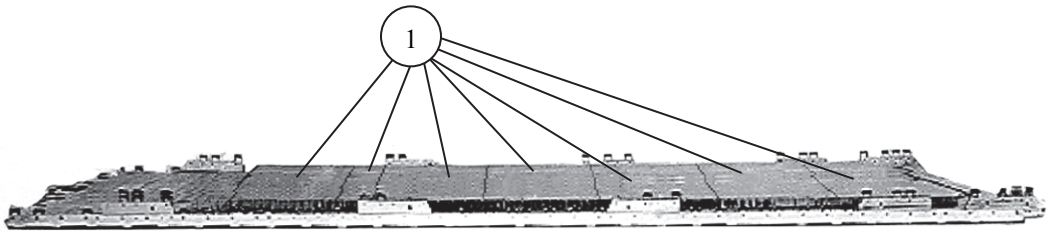
1. All dimensions are in inches.
2. These drawings are not drawn to scale.



(1) Use three 86- by 9-inch pieces of honeycomb to form stacks 1, 2, 4, 6, 8, and 10.

(2) Use four 86- by 12-inch pieces of honeycomb to form stacks 3, 5, 7, and 9.

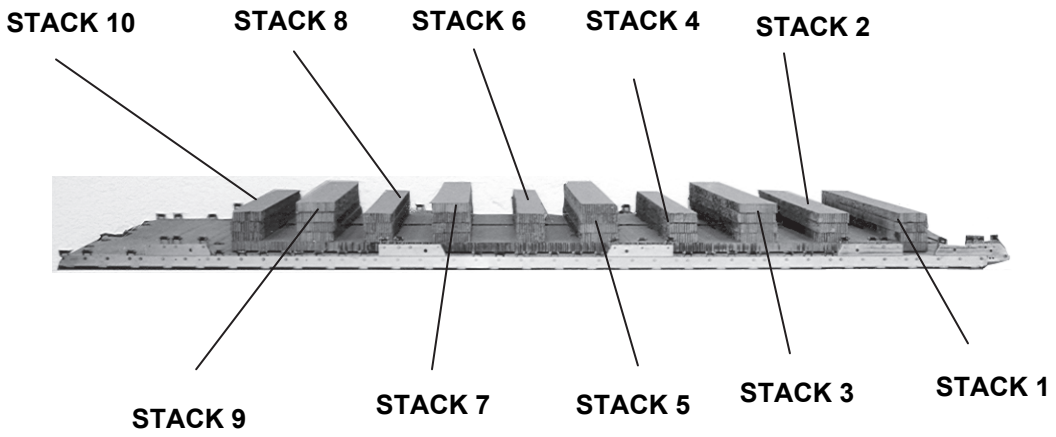
Figure 2-2. Honeycomb Stacks Built



1 Position six 48- by 96-inch pieces of honeycomb and one 6- by 96-inch piece of honeycomb 16 inches from the front edge of the platform. Center the pieces of honeycomb from right rail to left rail on the platform.

Figure 2-3. Honeycomb Stacks Positioned

Note. Boxes may vary in size and honeycomb stacks may have to be shifted.



Stack Number	***Position of Stack on the Platform***
1	Place 16 inches from the front edge of the platform.
2	Place 18 inches from the rear of stack 1.
3	Place 13 1/2 inches from the rear of stack 2.
4	Place 14 inches from the rear of stack 3.
5	Place 16 inches from the rear of stack 4.
6	Place 12 inches from the rear of stack 5.
7	Place 14 inches from the rear of stack 6.
8	Place 13 inches from the rear of stack 7.
9	Place 10 inches from the rear of stack 8.
10	Place 11 inches from the rear of stack 9.

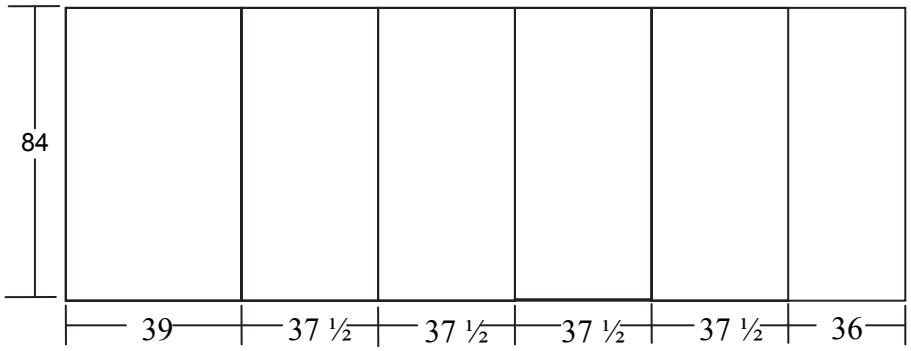
Figure 2-3. Honeycomb Stacks Positioned (Continued)

BUILDING RUNWAY REPAIR KIT CONTAINERS

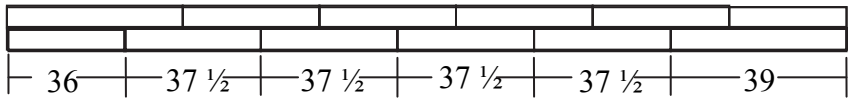
2-4. Build four runway repair kit containers using the following procedures.

Notes.
1. This drawing is not to scale.
2. All dimensions are in inches.

Base Top View All pieces are ¾-inch Plywood



Base Side View All pieces are staggered



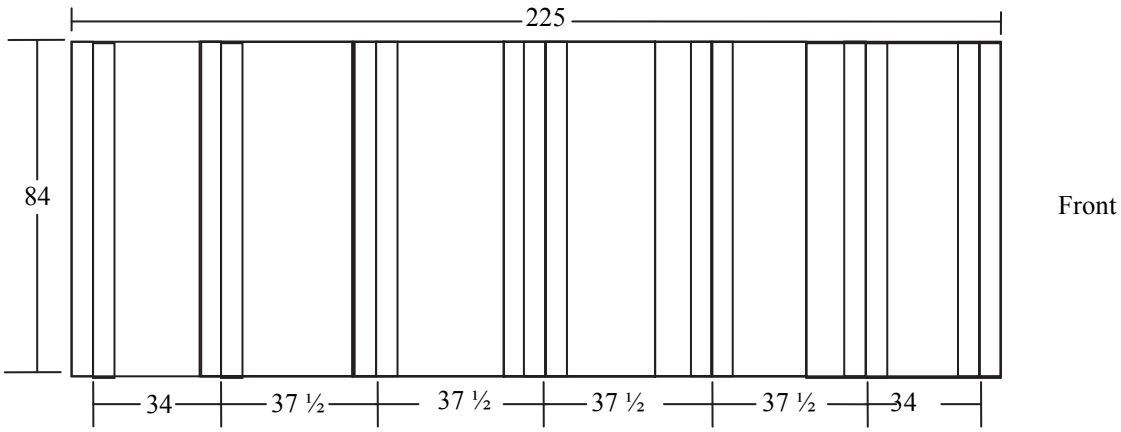
Base	*Pieces*	*Width (Inches)*	*Length (Inches)*	*Material*	*Instructions*
	2	84	39	¾-inch plywood	Position two 84- by 39- by ¾-inch plywood pieces, eight 84- by 37 ½- by ¾-inch plywood pieces, and two 84- by 36- by ¾-inch plywood pieces together to form two layers. Ensure that the plywood layers are staggered as shown above. Nail the pieces together using 8d nails.
	8	84	37 1/2	¾-inch plywood	
	2	84	36	¾-inch plywood b	

Figure 2-4. Runway Repair Kit Containers Built

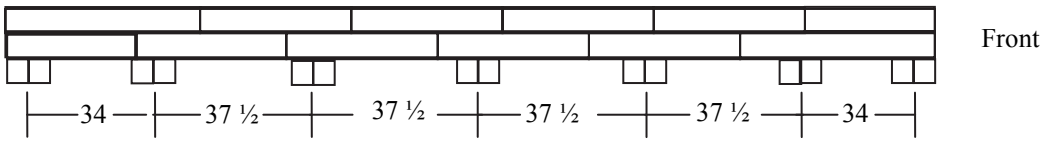
Figure 2-4. Runway Repair Kit Containers Built (Continued)

Notes.
1. This drawing is not to scale.
2. All dimensions are in inches.

Base Bottom View All pieces are 4- by 4-inch lumber



Base Side View Use 10d nails to secure the 4- by 4- by 84-inch lumber



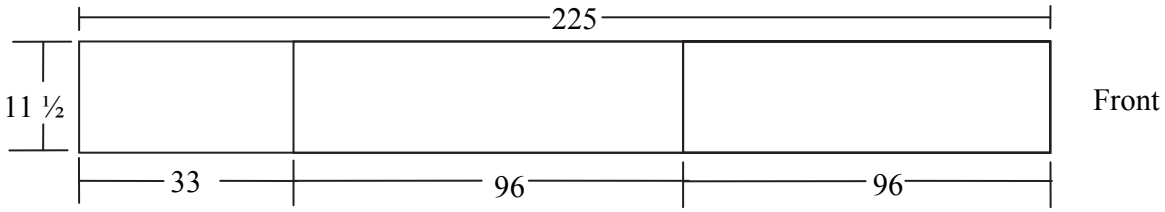
Base	*Pieces*	*Width (Inches)*	*Length (Inches)*	*Material*	*Instructions*
	14	3 1/2	84	4- by 4-inch lumber	Nail fourteen 4- by 4 by 84-inch pieces of lumber to the plywood base using 10d nails. Position and nail a piece to each front and rear edge. Space the remaining lumber pieces as shown above and nail in place.

Figure 2-4. Runway Repair Kit Containers Built (Continued)

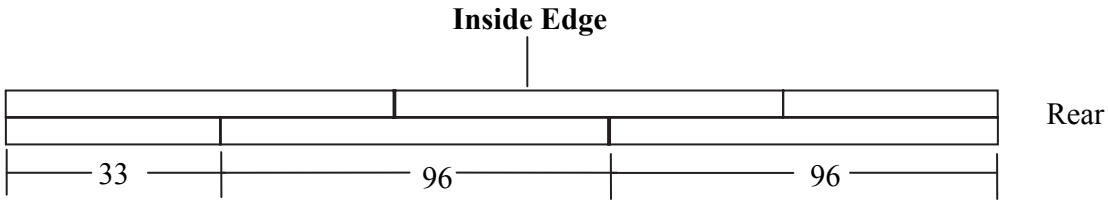
Figure 2-4. Runway Repair Kit Containers Built (Continued)

Notes.
1. This drawing is not to scale.
2. All dimensions are in inches.

Side View All pieces are ¾-inch plywood



Top View Use 10d nails to secure the sides to the base



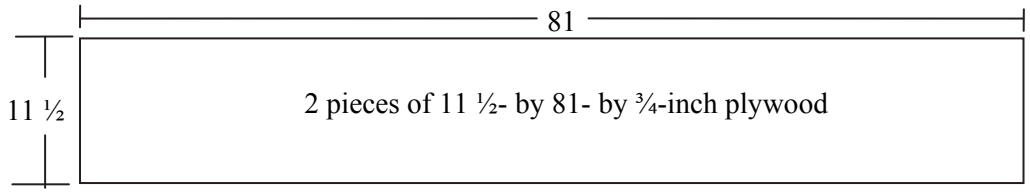
Base	*Pieces*	*Width (Inches)*	*Length (Inches)*	*Material*	*Instructions*
Side 1	2	11 1/2	33	3/4-inch plywood	Position two 11 ½ - by 33- by ¾-inch plywood pieces, and four 11 ½ - by 96- by ¾-inch plywood pieces together to form two layers. Ensure that the plywood layers are staggered as shown above. Nail the pieces together using 8d nails.
	4	11 1/2	96	3/4-inch plywood	
Side 2	2	11 1/2	33	3/4-inch plywood	Position two 11 ½ - by 33- by ¾-inch plywood pieces, and four 11 ½ - by 96- by ¾-inch plywood pieces together to form two layers. Ensure that the plywood layers are staggered as shown above. Nail the pieces together using 8d nails.
	4	11 1/2	96	3/4-inch plywood	

Figure 2-4. Runway Repair Kit Containers Built (Continued)

Figure 2-4. Runway Repair Kit Containers Built (Continued)

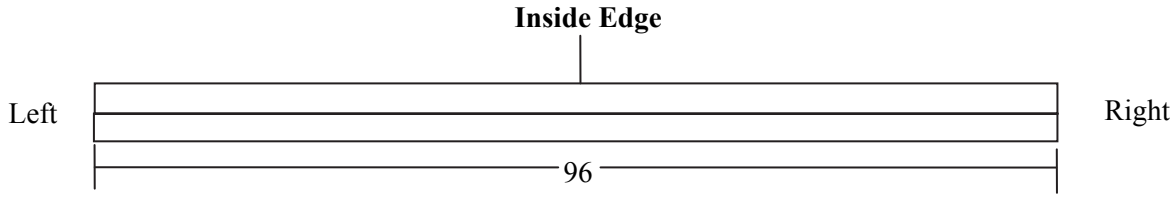
Notes.
1. This drawing is not to scale.
2. All dimensions are in inches.

Side View All pieces are ¾-inch plywood



Front and Rear View

Top View Use 10d nails to secure the front & rear to the base

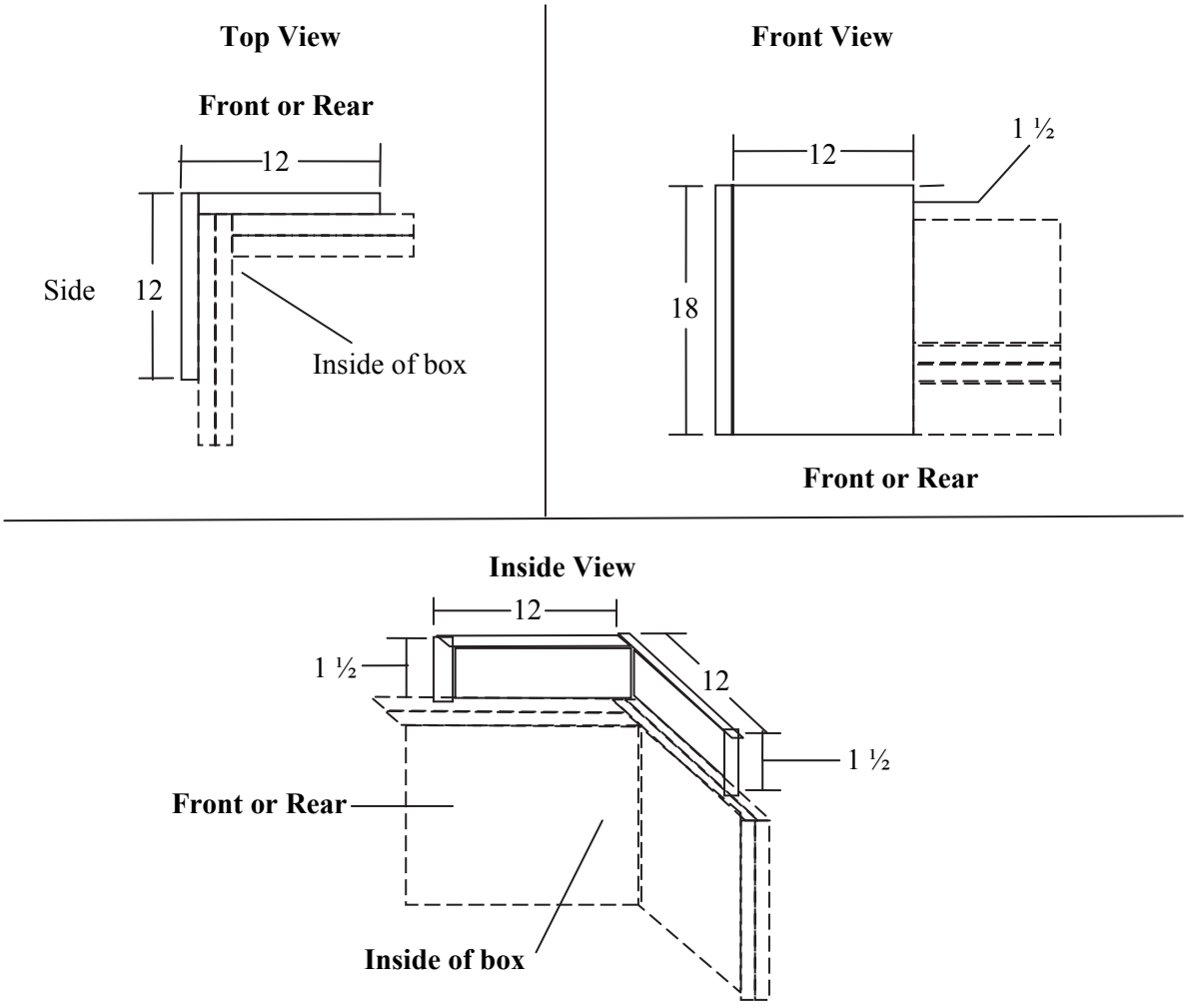


Sides	*Pieces*	*Width (Inches)*	*Length (Inches)*	*Material*	*Instructions*
Front	2	11 1/2	81	3/4-inch plywood	Cut and nail two 11 ½ - by 81- by ¾-inch plywood pieces together to form two layers. Use 8d nails to nail the pieces together.
Rear	2	11 1/2	81	3/4-inch plywood	Cut and nail two 11 ½ - by 81- by ¾-inch plywood pieces together to form two layers. Use 8d nails to nail the pieces together.

Figure 2-4. Runway Repair Kit Containers Built (Continued)

Figure 2-4. Runway Repair Kit Containers Built (Continued)

Notes.
1. This drawing is not to scale.
2. All dimensions are in inches.



Corners	*Pieces*	*Width (Inches)*	*Length (Inches)*	*Material*	*Instructions*
	8	12	18	3/4-inch plywood	Cut and nail two 12 - by 18- by ¾-inch plywood pieces to each corner for reinforcement. Use 8d nails to nail the pieces to the front, rear and sides. Follow the procedures above for assembly. Ensure that there is a 1 ½-inch overhang at the top of each plywood piece.

Figure 2-4. Runway Repair Kit Containers Built (Continued)

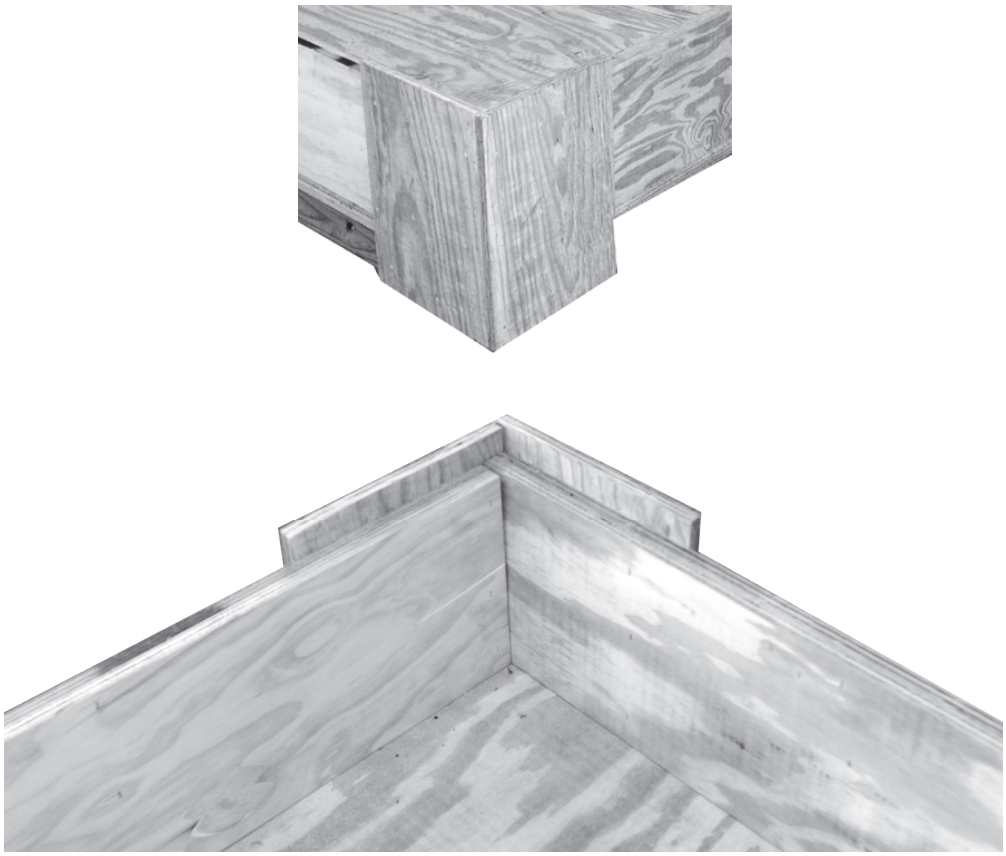
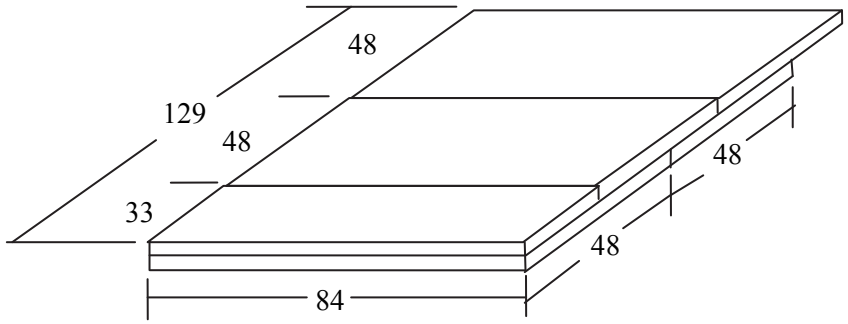


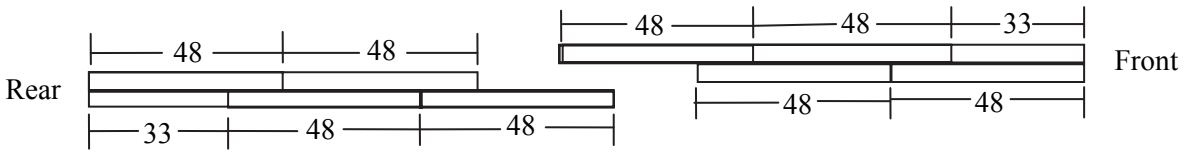
Figure 2-4. Runway Repair Kit Containers Built (Continued)

Notes.
1. This drawing is not to scale.
2. All dimensions are in inches.

Top View All pieces are ¾-inch plywood. Construct two lids for the top, the second lid is flipped and the overhang is overlapped. (See side view)



Side View Use 8d nails to secure the front & rear and the sides. Position the rear top first and then position the front and nail in place.



Top	*Pieces*	*Width (Inches)*	*Length (Inches)*	*Material*	*Instructions*
Front Top	1	84	33	3/4-inch plywood	Cut and nail one 84 - by 33- by ¾-inch plywood pieces and four 84 - by 48- by ¾-inch plywood pieces together to form two layers. Ensure that the plywood layers are staggered as shown above. Nail the pieces together using 8d nails.
	4	84	48	3/4-inch plywood	
Rear Top	1	84	33	3/4-inch plywood	Repeat the steps above for the construction of the rear top portion of the box. When positioned, the front and rear lids will overlap.
	4	84	48	3/4-inch plywood	

Figure 2-4. Runway Repair Kit Containers Built (Continued)

Figure 2-4. Runway Repair Kit Containers Built (Continued)

PLACING RUNWAY REPAIR KITS IN CONTAINERS

2-5. Place the following runway repair kit items in each of the containers.

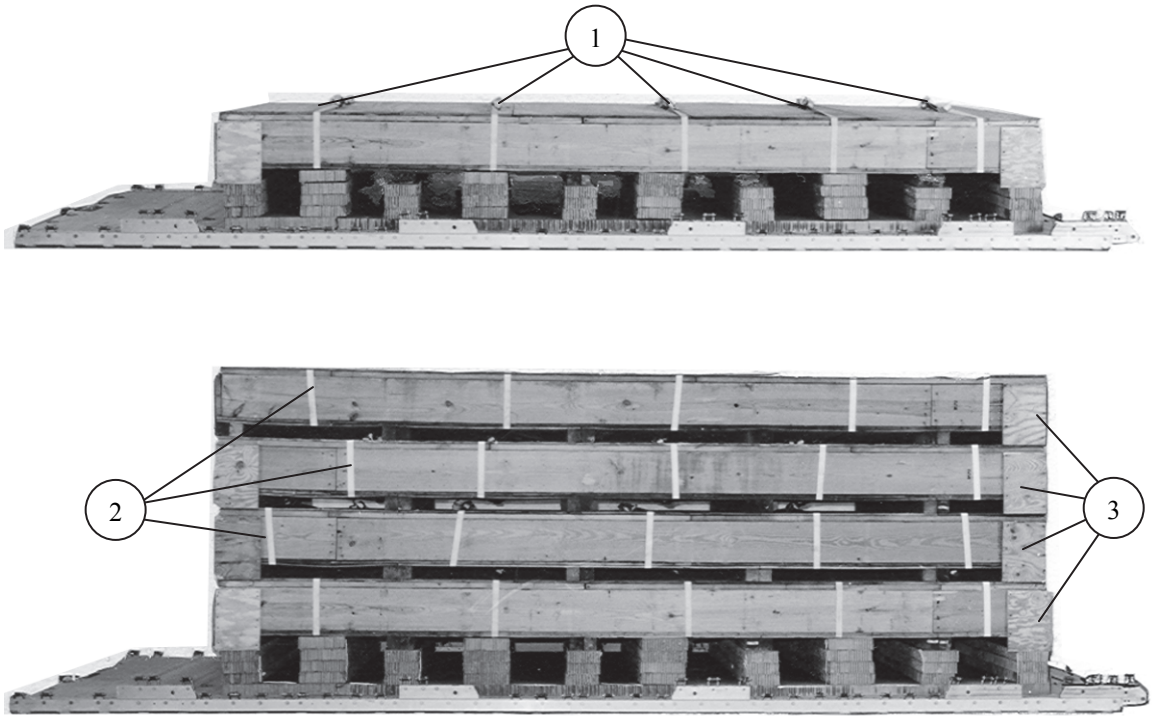
Table 2-1. Items Contained in the Rapid Runway Repair Kit

Item	*Quantity*
Bolt, Hex 1- by 5/8-inch	60 each
Bolt, Exp 6- by 9/16-inch	30 each
Box, Wooden 12- by 30- by 4-inch	1 each
Broom	3 each
Cord, Outdoor Electric, 50-foot	1 each
Disk, Metal, Flat 3 ½-inch	60 each
Disk, Metal, Beveled 3 1/2 -inch	30 each
Gloves, Leather	11 pair
Grid, Sand Confinement	8 each
Hammer, Claw	2 each
Hammer Rotary, TE-22	2 each
Matting, Poly-Fiberglass	5 each
Nut, Hex 9/16-inch	30 each
Plastic Sheeting	2 rolls
Pliers, Channel Lock	1 each
Rake	2 each
Rule, Red End Engineer, 6-foot	2 each
Rule, Tape Measure (KT12Y)	2 each
Screwdriver, F/T	2 each
Shovel	2 each
Socket Set, 7/16-inch through 1 ¼-inch	1 set
Strap, Nylon	1 each
Twine, Cotton, 3-ply	1 roll
Utility Knife	2 each
Washer, Bolt	29 each
Wrench, Adjustable 12-inch	2 each
Wrench, Pliers, 7-inch	1 each
Wrench, 2-Prong	1 each

Note. Packing and accounting for the items in the containers is the responsibility of the owning unit.

POSITIONING AND SECURING CONTAINERS

2-6. Position and secure the containers as shown in Figure 2-5.



1. Form five 30-foot lashings according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5. Pass the lashings around the container as shown above. Secure the ends of the lashings with load binders and D-rings. Lift the container onto the platform using an adequate lifting device.
2. Repeat step 1 for the other three containers.
3. Position the containers on the honeycomb stacks squarely with no overhang.

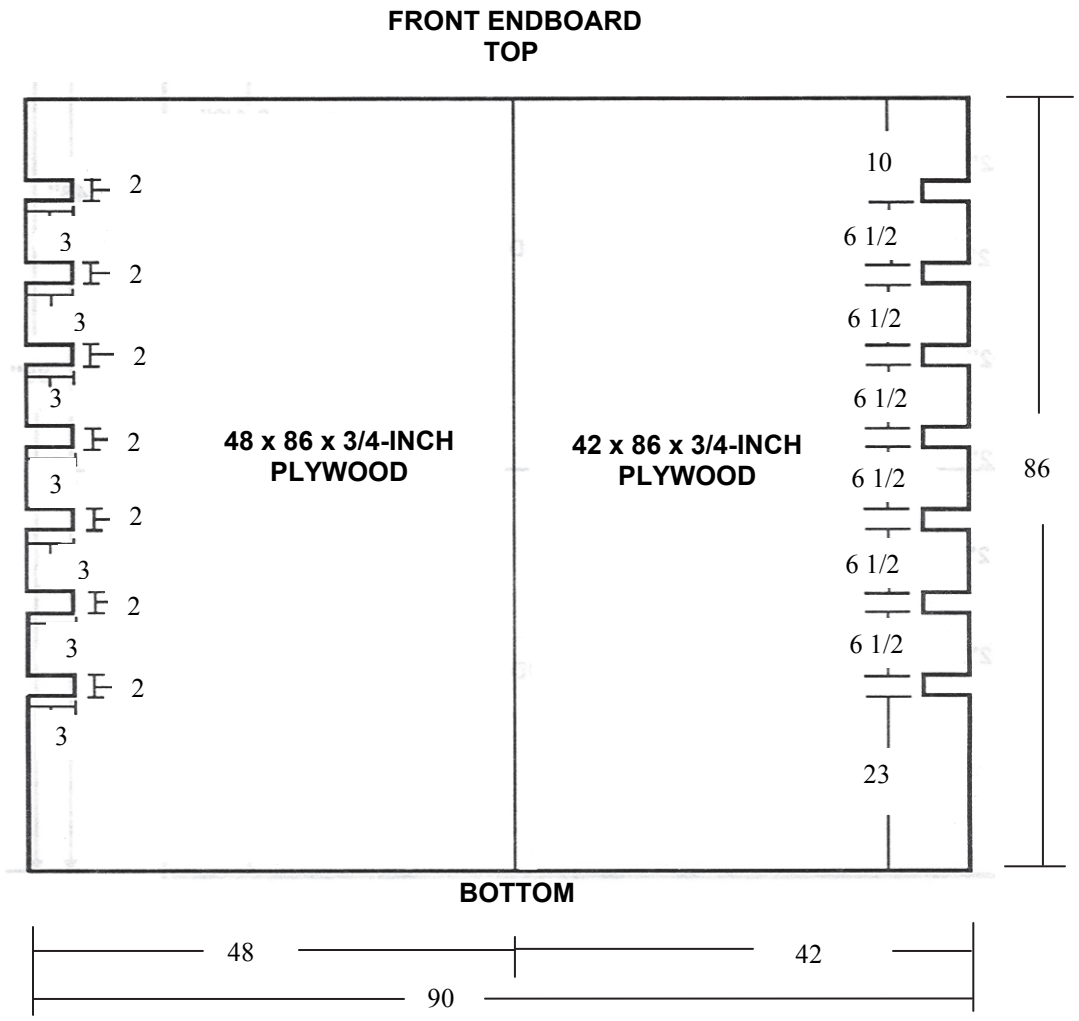
Note. Strapping, steel 5/8-inch may be used in place of the 30-foot lashings.

Figure 2-5. Containers Positioned and Secured

BUILDING, POSITIONING AND SECURING FRONT AND REAR ENDBOARDS

2-7. Build the front and rear endboards as shown in Figures 2-6 and 2-7. Position and secure the endboards as shown in Figure 2-8. Each endboard is a double thickness of ¾-inch plywood. Nail the outside layer to the inside layer of each endboard.

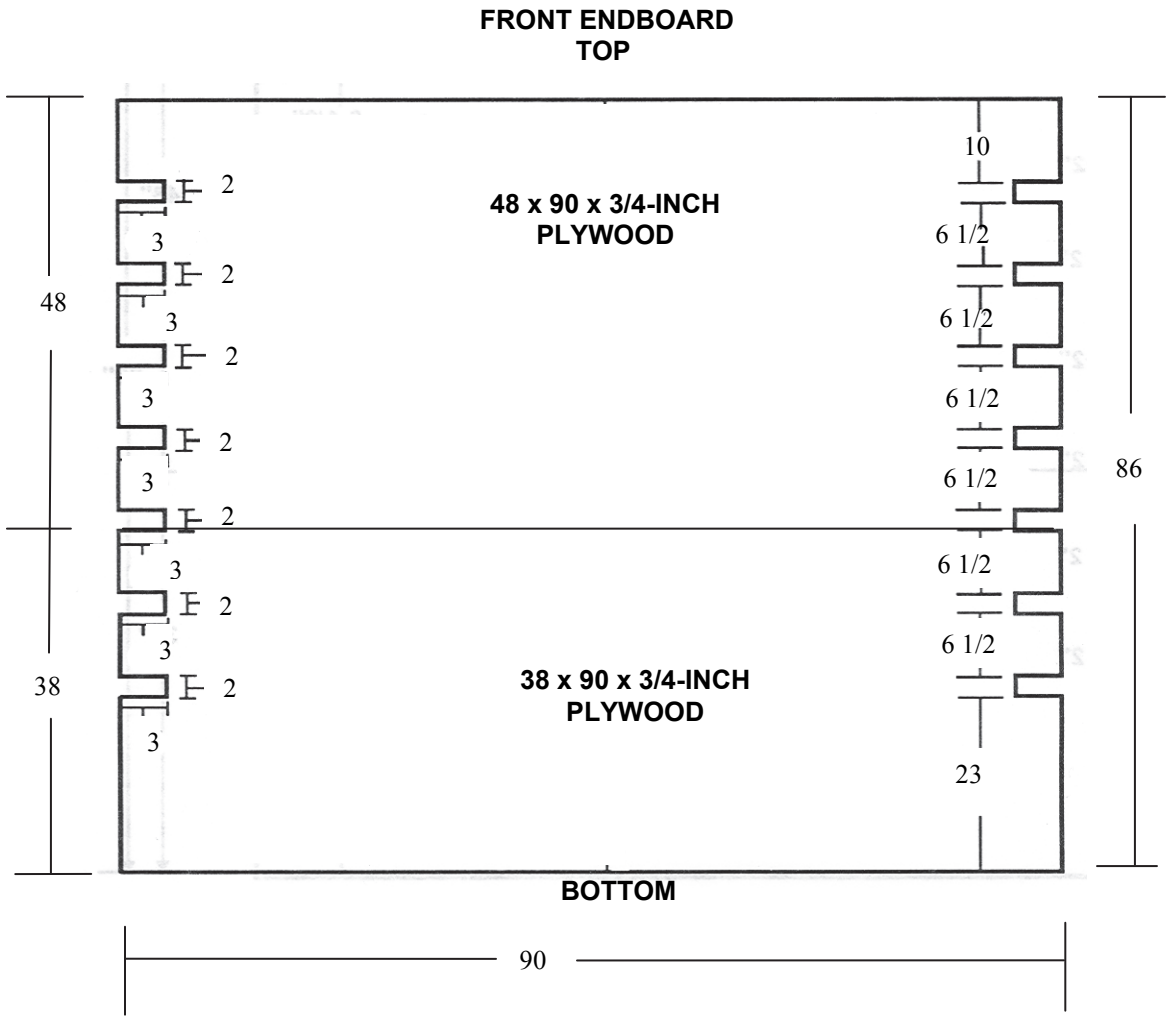
Notes.
1. This drawing is not to scale.
2. All dimensions are in inches.



Item Number	*Pieces*	*Width (Inches)*	*Length (Inches)*	*Material*
1	1	48	86	¾-inch plywood
2	1	42	86	¾-inch plywood

Figure 2-6. Materials Required to Build Front Endboard

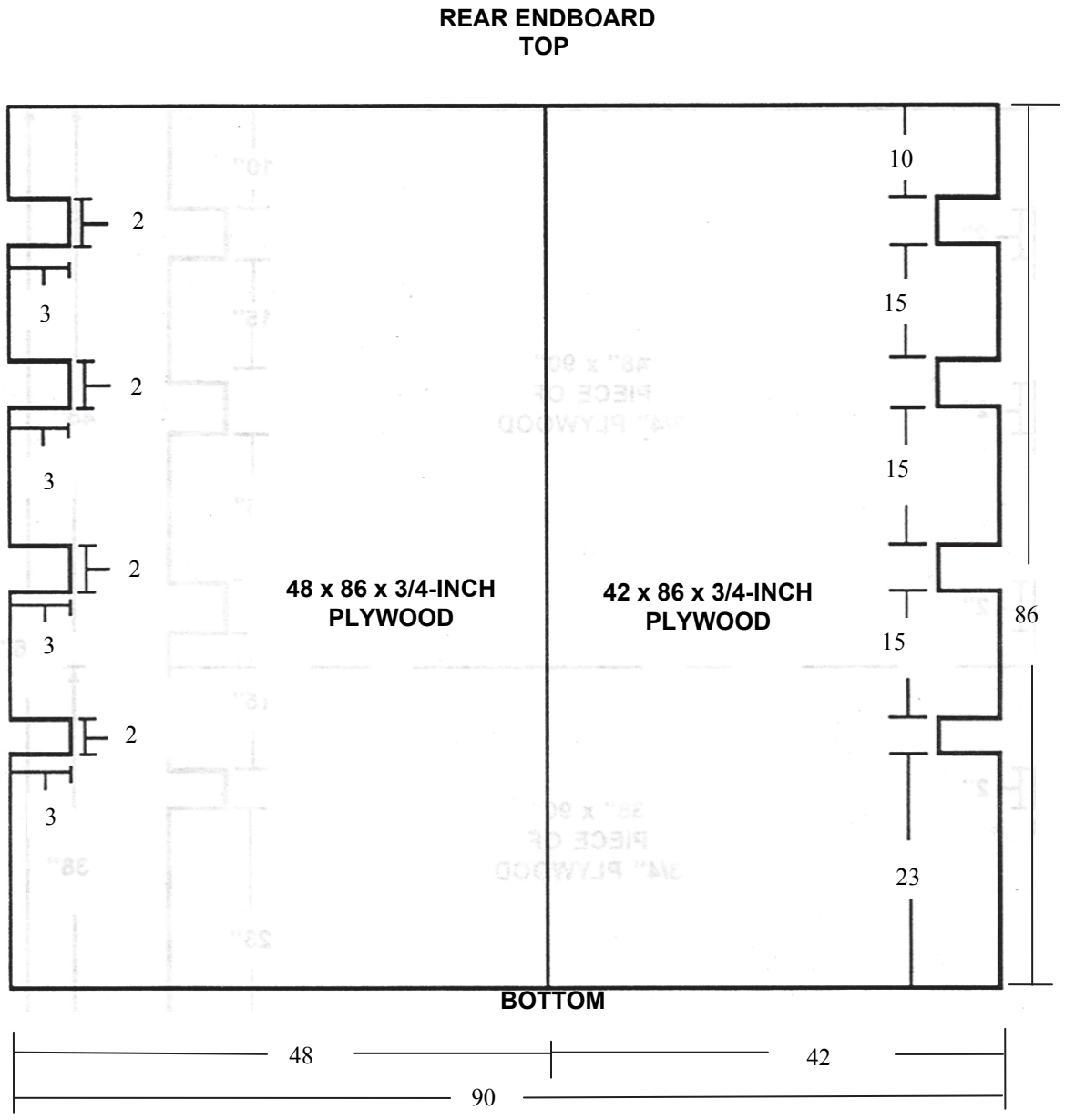
Notes.
1. This drawing is not to scale.
2. All dimensions are in inches.



Item Number	*Pieces*	*Width (Inches)*	*Length (Inches)*	*Material*
3	1	48	90	¾-inch plywood
4	1	38	90	¾-inch plywood

Figure 2-6. Materials Required to Build Front Endboard (Continued)

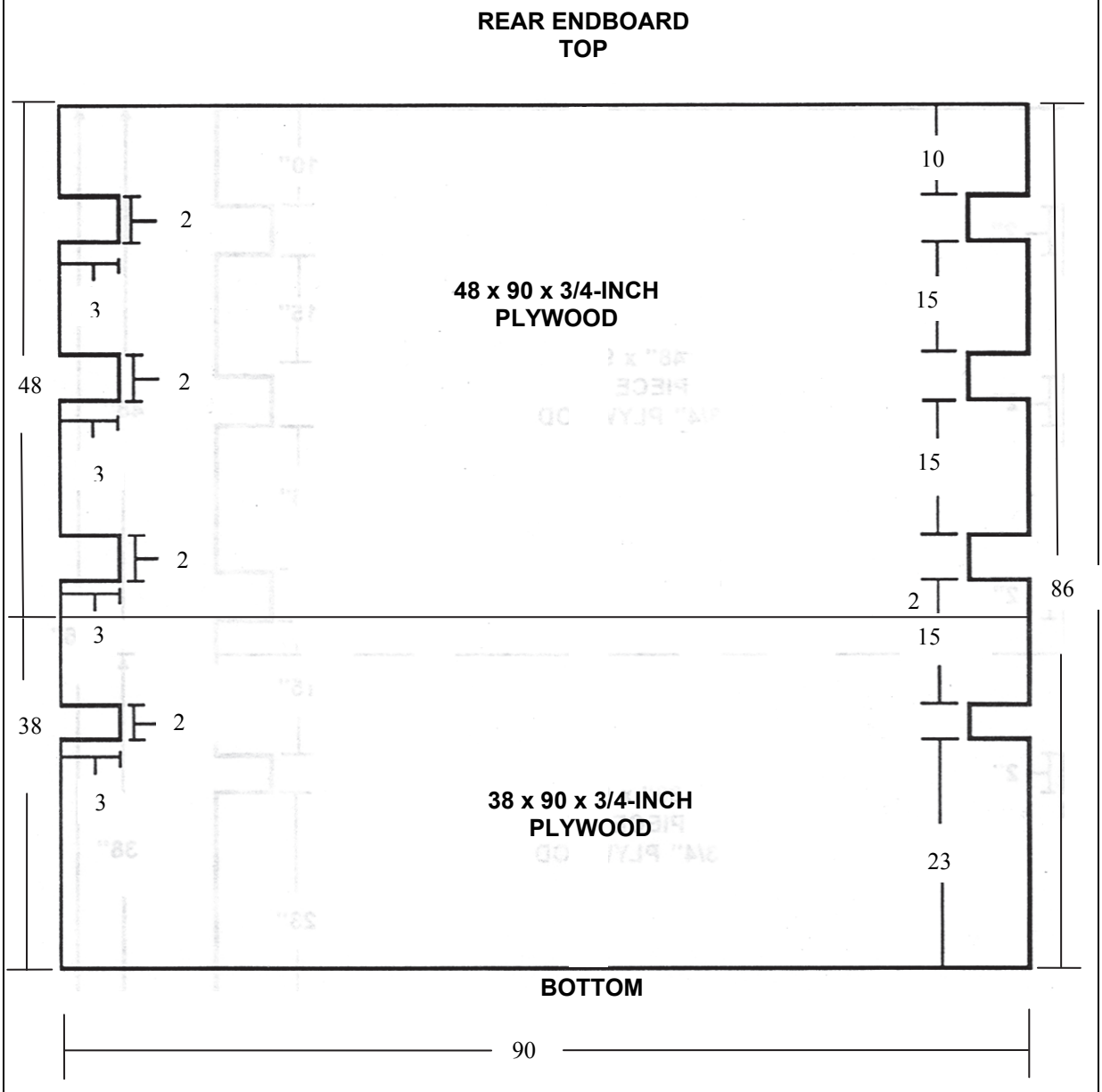
Notes.
1. This drawing is not to scale.
2. All dimensions are in inches.



Item Number	*Pieces*	*Width (Inches)*	*Length (Inches)*	*Material*
1	1	48	86	¾-inch plywood
2	1	42	86	¾-inch plywood

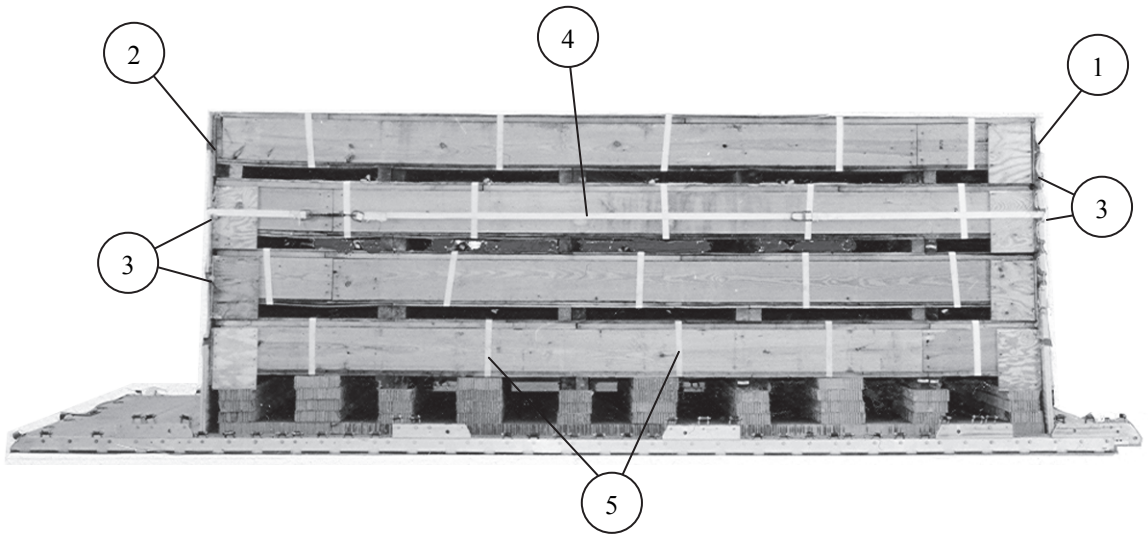
Figure 2-7. Materials Required to Build Rear Endboard

Notes.
1. This drawing is not to scale.
2. All dimensions are in inches.



Item Number	*Pieces*	*Width (Inches)*	*Length (Inches)*	*Material*
3	1	48	90	¾-inch plywood
4	1	38	90	¾-inch plywood

Figure 2-7. Materials Required to Build Rear Endboard (Continued)



1. Place the seven notch endboard on the front of the platform.
2. Place the four notch endboard on the rear of the platform against the load.
3. Pad the second and third notches from the top of each endboard.
4. Form a 75-foot lashing according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5. Run the lashing through the second set of cutouts to hold the endboards in place. Secure the lashing with a loadbinder and two D-rings.

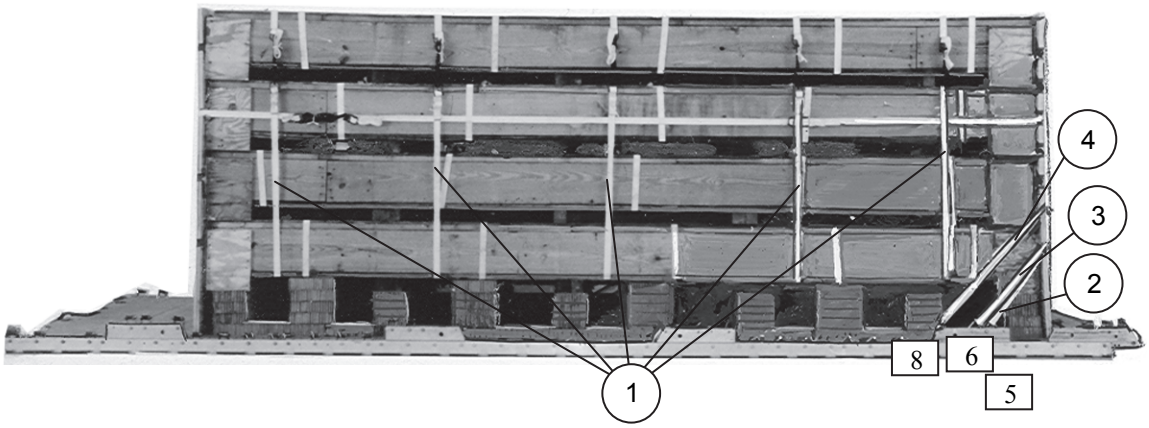
Note. A 75-foot length of type III nylon cord may be used in place of the 75-foot lashing.

Figure 2-8. Endboards Positioned and Secured

INSTALLING LASHING

2-8. Lash the load to the platform as shown in Figure 2-9. Form the 30-foot through 90-foot lashings according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.

Note. Cutouts are numbered 1 through 7, top to bottom on the front endboard.

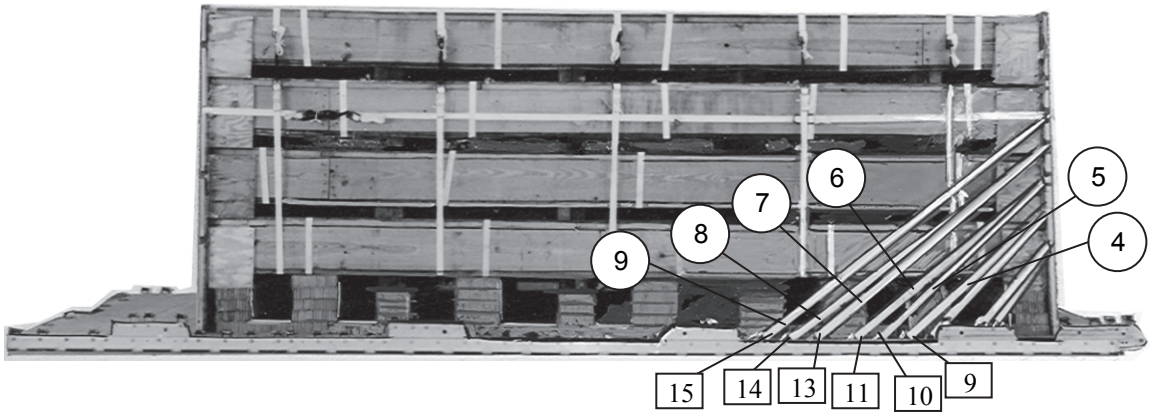


(1) Form five 30-foot lashings according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5. Pass each lashing over the top and around the containers. Secure each of the lashings on top of the containers with a loadbinder and two D-rings.

Lashing Number	*Tiedown Clevis Number*	*Instructions*
2	5 and 5A	Install the 30-foot lashing through cutout 7. Secure the lashing on the front endboard with two D-rings and a load binder.
2	6 and 6A	Install the 30-foot lashing through cutout 7. Secure the lashing on the front endboard with two D-rings and a load binder.
3	8 and 8A	Install the 30-foot lashing through cutout 6. Secure the lashing on the front endboard with two D-rings and a load binder.

Figure 2-9. Lashings Installed

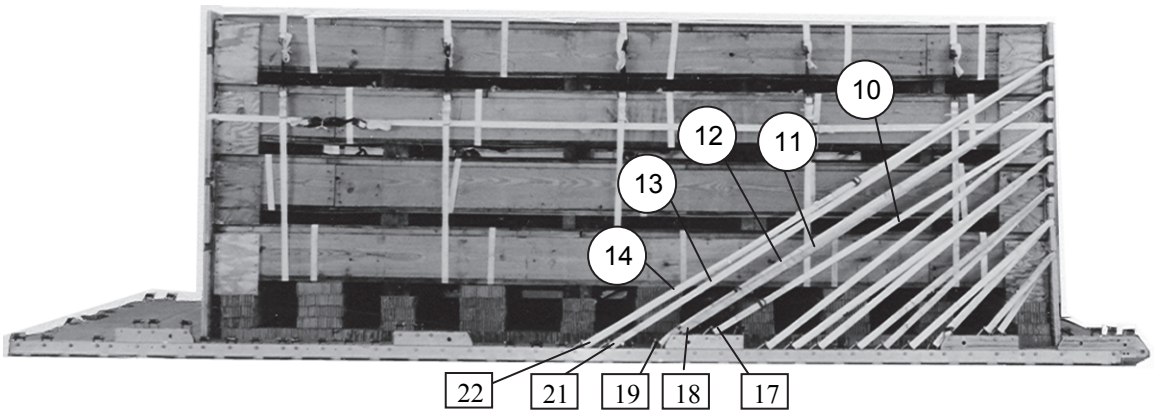
Note. Cutouts are numbered 1 through 7, top to bottom on the front endboard.



Lashing Number	*Tiedown Clevis Number*	*Instructions*
4	9 and 9A	Install the 45-foot lashing through cutout 6. Secure the lashing on the front endboard with two D-rings and a load binder.
5	10 and 10A	Install the 45-foot lashing through cutout 5. Secure the lashing on the front endboard with two D-rings and a load binder.
6	11 and11A	Install the 45-foot lashing through cutout 5. Secure the lashing on the front endboard with two D-rings and a load binder.
7	13 and 13A	Install the 45-foot lashing through cutout 4. Secure the lashing on the front endboard with two D-rings and a load binder.
8	14 and 14A	Install the 45-foot lashing through cutout 4. Secure the lashing on the front endboard with two D-rings and a load binder.
9	15 and15A	Install the 45-foot lashing through cutout 3. Secure the lashing on the front endboard with two D-rings and a load binder.

Figure 2-9. Lashings Installed (Continued)

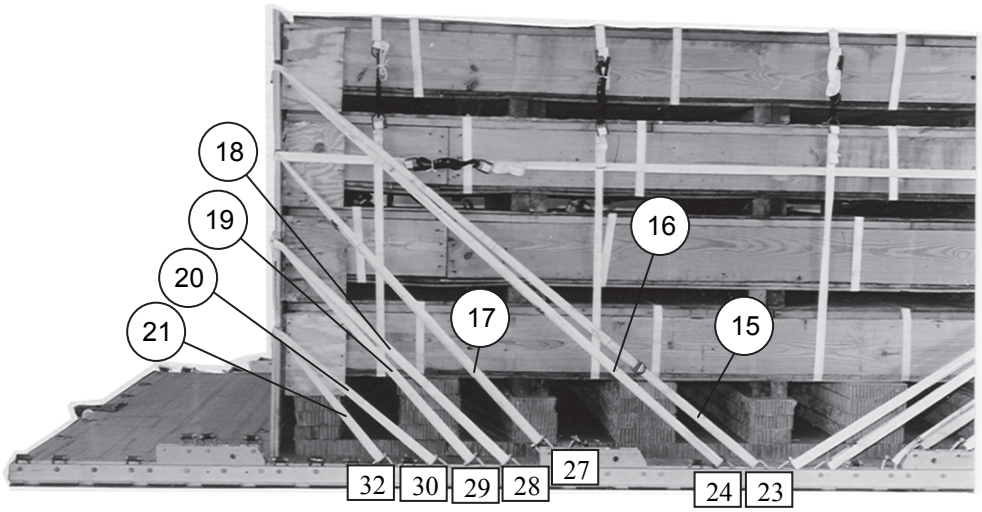
Note. Cutouts are numbered 1 through 7, top to bottom on the front endboard.



Lashing Number	*Tiedown Clevis Number*	*Instructions*
10	17 and 17A	Install the 45-foot lashing through cutout 3. Secure the lashing on the front endboard with two D-rings and a load binder.
11	18 and 18A	Install the 45-foot lashing through cutout 2. Secure the lashing on the front endboard with two D-rings and a load binder.
12	19 and19A	Install the 45-foot lashing through cutout 2. Secure the lashing on the front endboard with two D-rings and a load binder.
13	21 and 21A	Install the 45-foot lashing through cutout 1. Secure the lashing on the front endboard with two D-rings and a load binder.
14	22 and 22A	Install the 45-foot lashing through cutout 1. Secure the lashing on the front endboard with two D-rings and a load binder.

Figure 2-9. Lashings Installed (Continued)

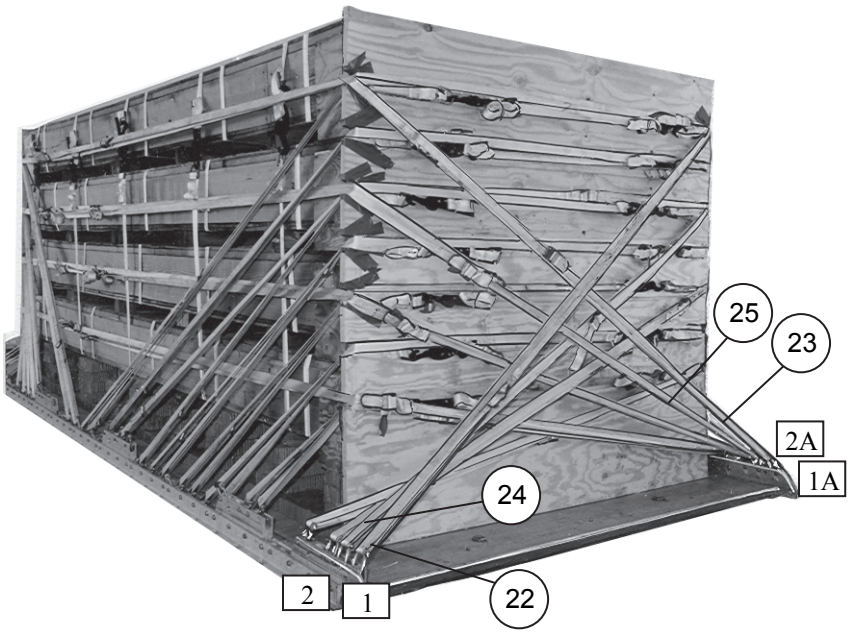
Note. Cutouts are numbered 1 through 4, top to bottom on the rear endboard.



Lashing Number	*Tiedown Clevis Number*	*Instructions*
15	23 and 23A	Install the 60-foot lashing through cutout 1 from the rear endboard. Secure the lashing to the rear of the endboard with two D-rings and a load binder.
16	24 and 24A	Install the 60-foot lashing through cutout 1 from the rear endboard. Secure the lashing to the rear of the endboard with two D-rings and a load binder.
17	27 and27A	Install the 45-foot lashing through cutout 2 from the rear endboard. Secure the lashing to the rear of the endboard with two D-rings and a load binder.
18	28 and 28A	Install the 45-foot lashing through cutout 3 from the rear endboard. Secure the lashing to the rear of the endboard with two D-rings and a load binder.
19	29 and 29A	Install the 45-foot lashing through cutout 3 from the rear endboard. Secure the lashing to the rear of the endboard with two D-rings and a load binder.
20	30 and 30A	Install the 30-foot lashing through cutout 4 from the rear endboard. Secure the lashing to the rear of the endboard with two D-rings and a load binder.
21	32 and 32A	Install the 30-foot lashing through cutout 4 from the rear endboard. Secure the lashing to the rear of the endboard with two D-rings and a load binder.

Figure 2-9. Lashings Installed (Continued)

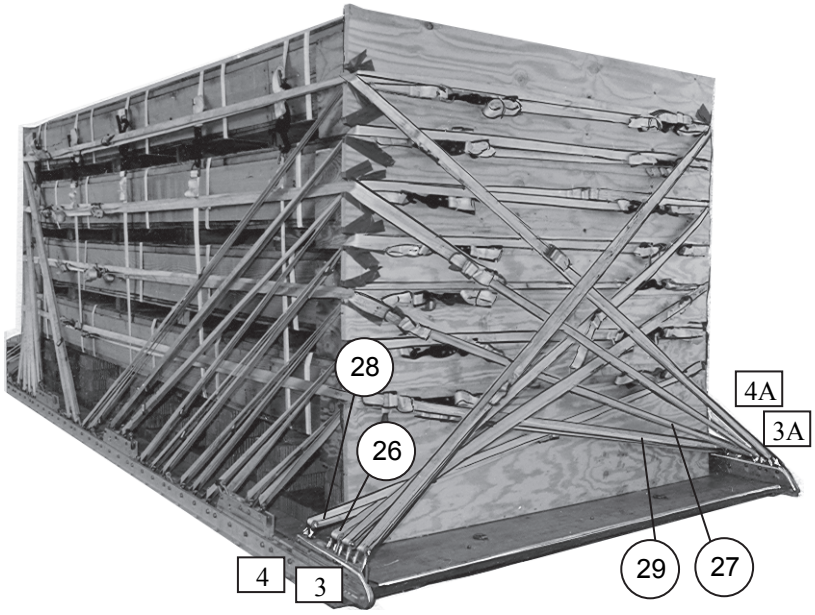
Note. Cutouts are numbered 1 through 7, top to bottom on the front endboard and 1 through 4, top to bottom on the rear endboard.



Lashing Number	*Tiedown Clevis Number*	*Instructions*
22	1 and 37	Install the 90-foot lashing from clevis 1, through cutout 1 from the front endboard, around the load through cutout 1 of the rear endboard to clevis 37. Secure the lashing to the rear of the endboard with two D-rings and a load binder.
23	1A and 37A	Install the 90-foot lashing from clevis 1A, through cutout 1 from the front endboard, around the load through cutout 1 of the rear endboard to clevis 37A. Secure the lashing to the rear of the endboard with two D-rings and a load binder.
24	2 and 36	Install the 90-foot lashing from clevis 2, through cutout 3 from the front endboard, around the load through cutout 2 of the rear endboard to clevis 36. Secure the lashing to the rear of the endboard with two D-rings and a load binder.
25	2A and 36A	Install the 90-foot lashing from clevis 2A, through cutout 3 from the front endboard, around the load through cutout 2 of the rear endboard to clevis 36A. Secure the lashing to the rear of the endboard with two D-rings and a load binder.

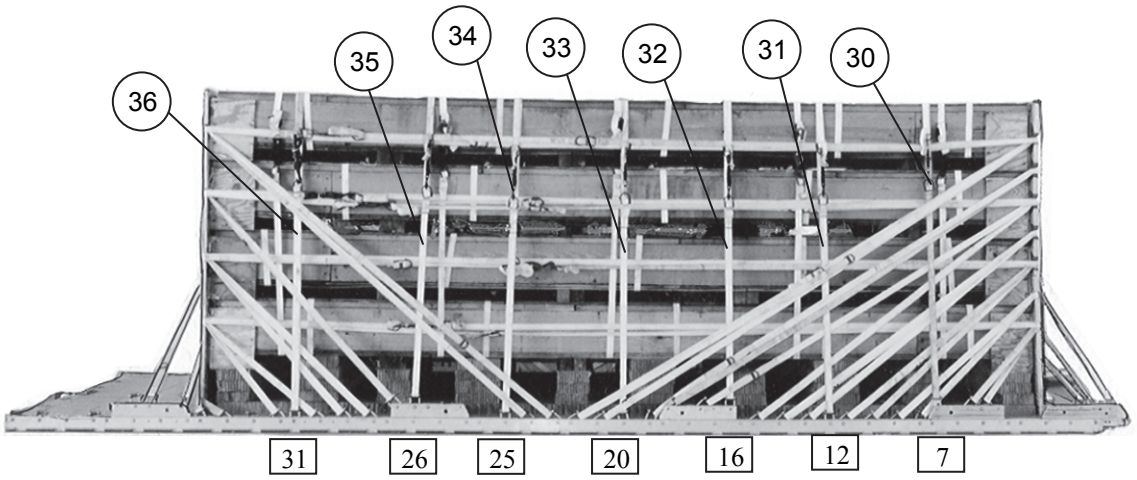
Figure 2-9. Lashings Installed (Continued)

Note. Cutouts are numbered 1 through 7, top to bottom on the front endboard and 1 through 4, top to bottom on the rear endboard.



Lashing Number	*Tiedown Clevis Number*	*Instructions*
26	3 and 35	Install the 90-foot lashing from clevis 3, through cutout 5 from the front endboard, around the load through cutout 3 of the rear endboard to clevis 35. Secure the lashing to the rear of the endboard with two D-rings and a load binder.
27	3A and 35A	Install the 90-foot lashing from clevis 3A, through cutout 5 from the front endboard, around the load through cutout 3 of the rear endboard to clevis 35A. Secure the lashing to the rear of the endboard with two D-rings and a load binder.
28	4 and 34	Install the 90-foot lashing from clevis 4, through cutout 6 from the front endboard, around the load through cutout 4 of the rear endboard to clevis 34. Secure the lashing to the rear of the endboard with two D-rings and a load binder.
29	4A and 34A	Install the 90-foot lashing from clevis 4A, through cutout 6 from the front endboard, around the load through cutout 4 of the rear endboard to clevis 34A. Secure the lashing to the rear of the endboard with two D-rings and a load binder.

Figure 2-9. Lashings Installed (Continued)

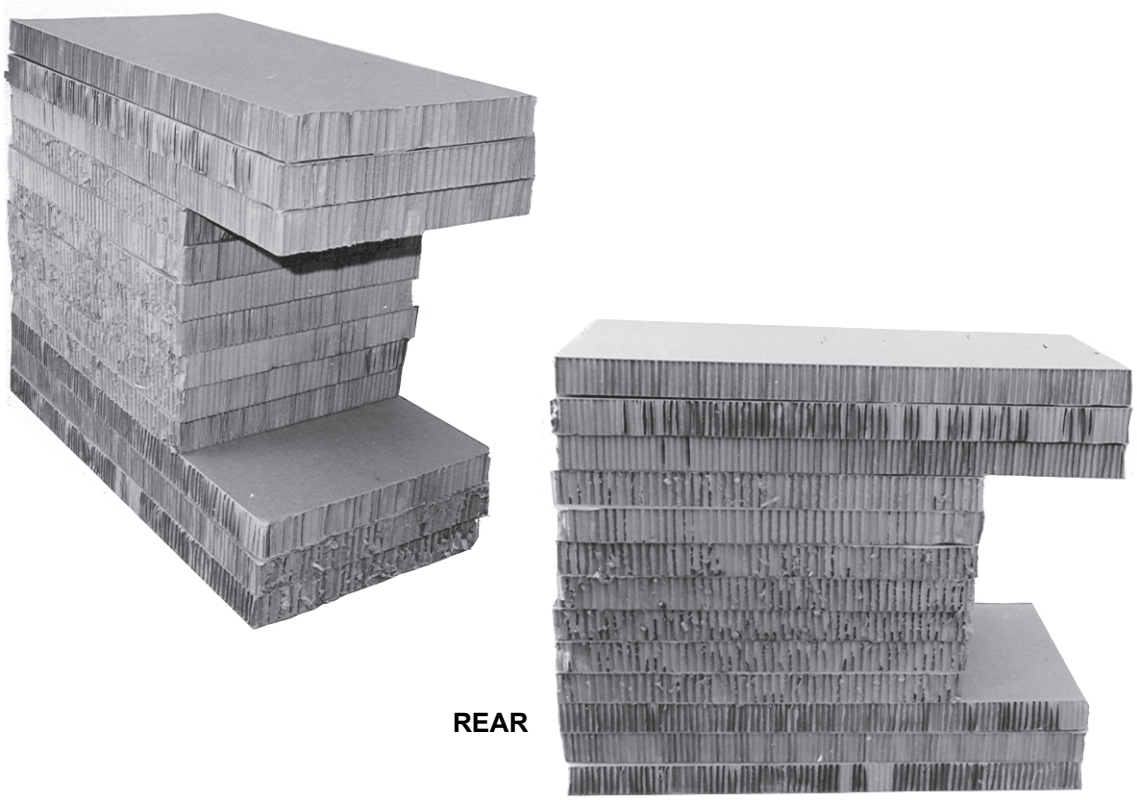


Lashing Number	*Tiedown Clevis Number*	*Instructions*
30	7 and 7A	Install a 45-foot lashing through clevis 7 and over the top of the load, to clevis 7A. Secure the lashing to the right side of the load with two D-rings and a load binder.
31	12 and 12A	Install a 45-foot lashing through clevis 12 and over the top of the load, to clevis 12A. Secure the lashing to the right side of the load with two D-rings and a load binder.
32	16 and 16A	Install a 45-foot lashing through clevis 16 and over the top of the load, to clevis 16A. Secure the lashing to the right side of the load with two D-rings and a load binder.
33	20 and 20A	Install a 45-foot lashing through clevis 20 and over the top of the load, to clevis 20A. Secure the lashing to the right side of the load with two D-rings and a load binder.
34	25 and 25A	Install a 45-foot lashing through clevis 25 and over the top of the load, to clevis 25A. Secure the lashing to the right side of the load with two D-rings and a load binder.
35	26 and 26A	Install a 45-foot lashing through clevis 26 and over the top of the load, to clevis 26A. Secure the lashing to the right side of the load with two D-rings and a load binder.
36	31 and 31A	Install a 45-foot lashing through clevis 31 and over the top of the load, to clevis 31A. Secure the lashing to the right side of the load with two D-rings and a load binder.

Figure 2-9. Lashings Installed (Continued)

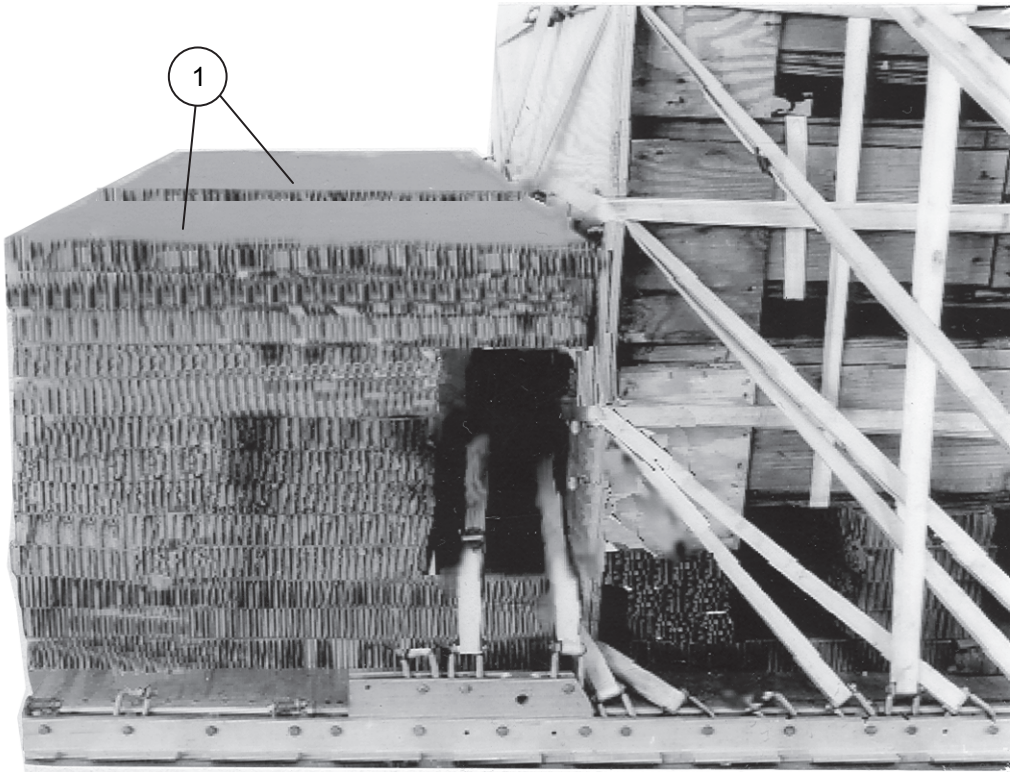
BUILDING, POSITIONING, AND SECURING PARACHUTE STOWAGE PLATFORM

2-9. Build and position two honeycomb supports for the parachute stowage platform as shown in Figure 2-10. Build the parachute stowage platform as shown in Figure 2-11. Secure the parachute stowage platform as shown in Figure 2-12 using six 15-foot tie-down assemblies.



Stack Number	*Pieces*	*Width (Inches)*	*Length (Inches)*	*Material*	*Instructions*
1 and 2	3	24	48	Honeycomb	Form as base.
	7	24	36	Honeycomb	Place flush on rear of base.
	3	24	48	Honeycomb	Place flush on rear of 36-inch pieces of honeycomb.

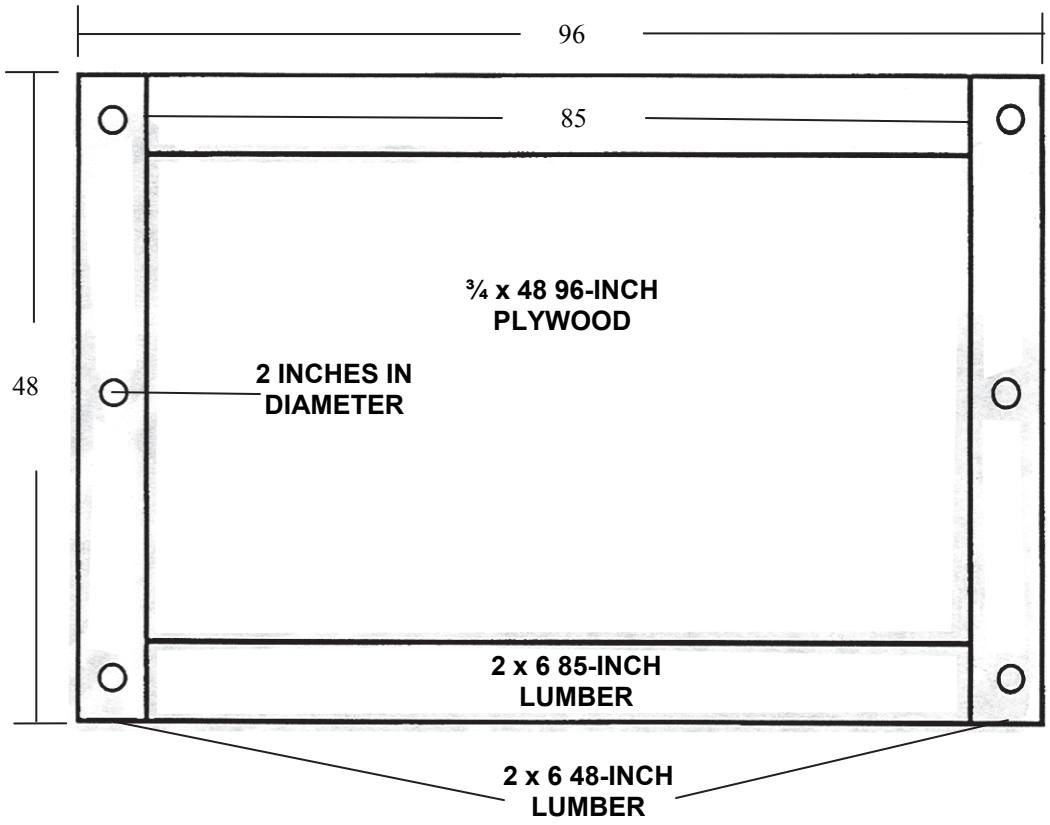
Figure 2-10. Honeycomb Supports Built and Positioned



(1) Position stacks 1 and 2 on the rear of the platform, flush against the rear and outside edges of the rear endboard.

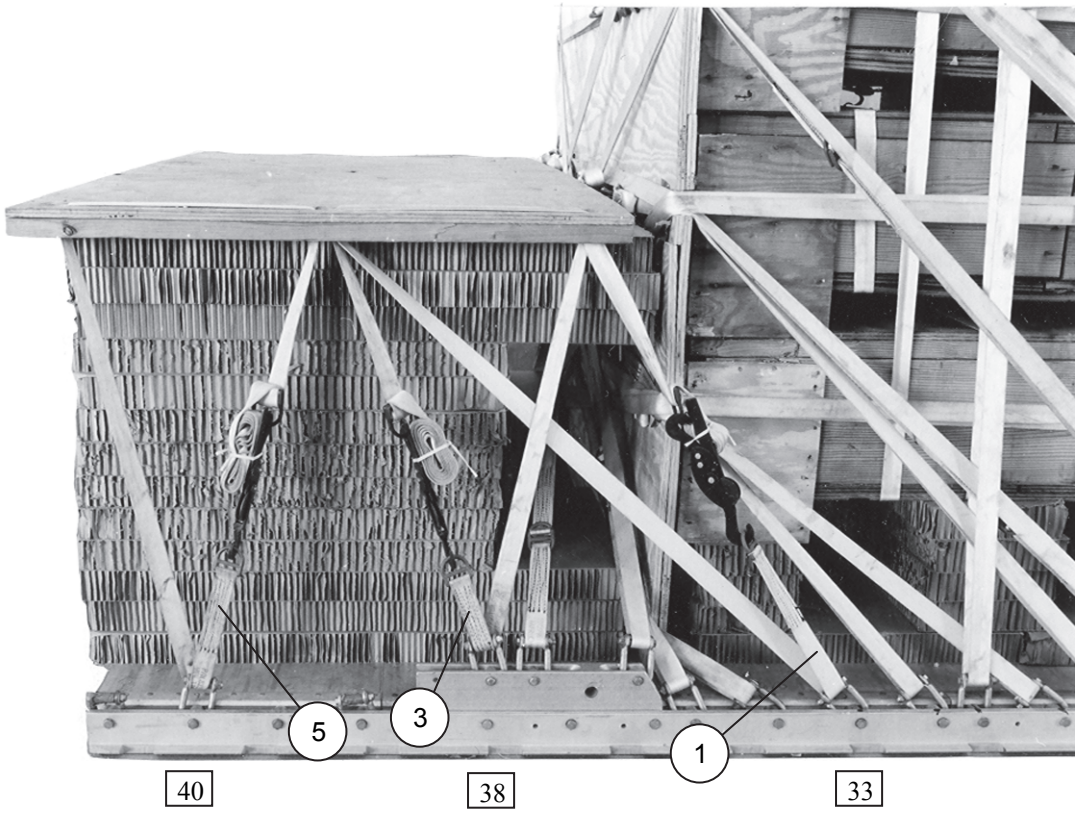
Figure 2-10. Honeycomb Supports Built and Positioned (Continued)

Notes.
1. This drawing is not to scale.
2. All dimensions are in inches.
3. All holes are 2 inches in diameter.



Item Number	*Pieces*	*Width (Inches)*	*Length (Inches)*	*Material*
1	1	96	48	¾-inch plywood
2	2	5 1/2	48	2- by 6-inch lumber
3	2	5 1/2	85	2- by 6-inch lumber

Figure 2-11. Parachute Stowage Platform Built



Lashing Number	*Tiedown Clevis Number*	*Instructions*
1	33	Pass the lashing through the center hole and then through the rear hole of the parachute stowage platform, right side.
2	33A	Pass the lashing through the center hole and then through the rear hole of the parachute stowage platform, left side.
3	38	Pass the lashing through the rear hole and then through the center hole of the parachute stowage platform, right side.
4	38A	Pass the lashing through the rear hole and then through the center hole of the parachute stowage platform, left side.
5	40	Pass the lashing through the front hole and then through the center hole of the parachute stowage platform, right side.
6	40A	Pass the lashing through the front hole and then through the center hole of the parachute stowage platform, left side.

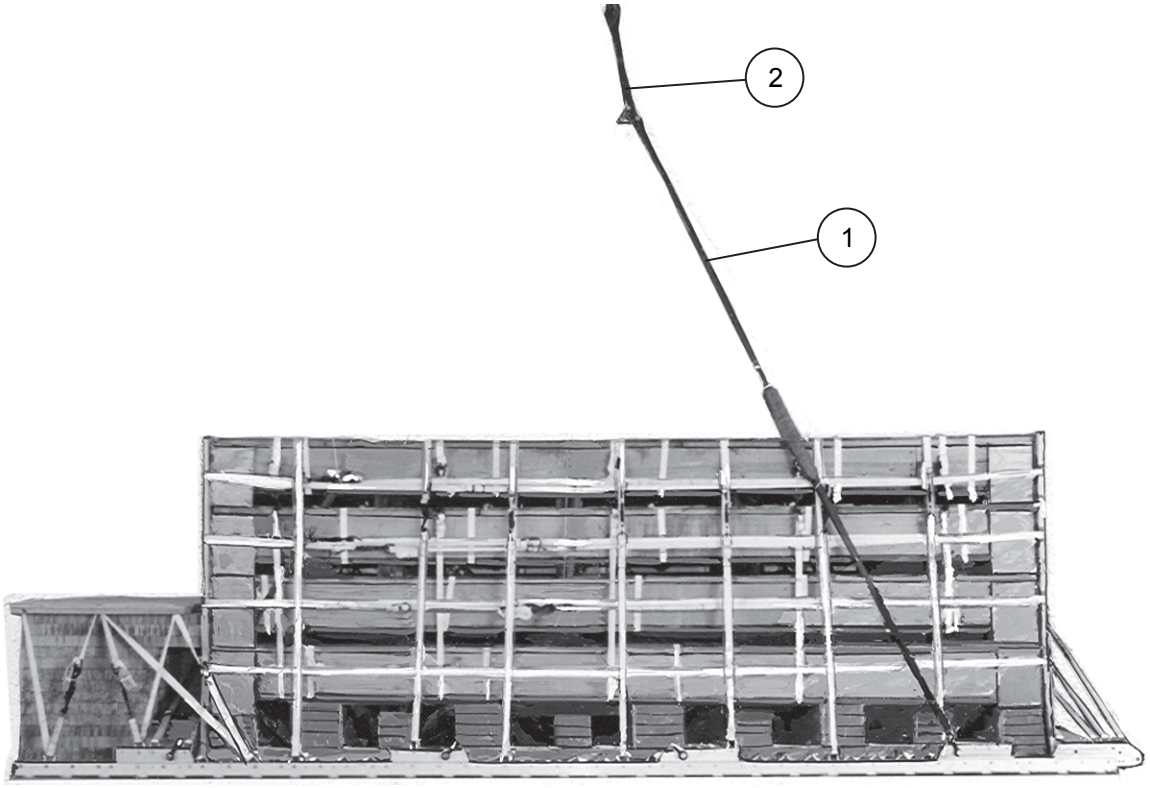
Figure 2-12. Parachute Stowage Secured

INSTALLING SUSPENSION SLINGS

2-10. Install the suspension slings according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 and as shown in Figure 2-13.

Notes.

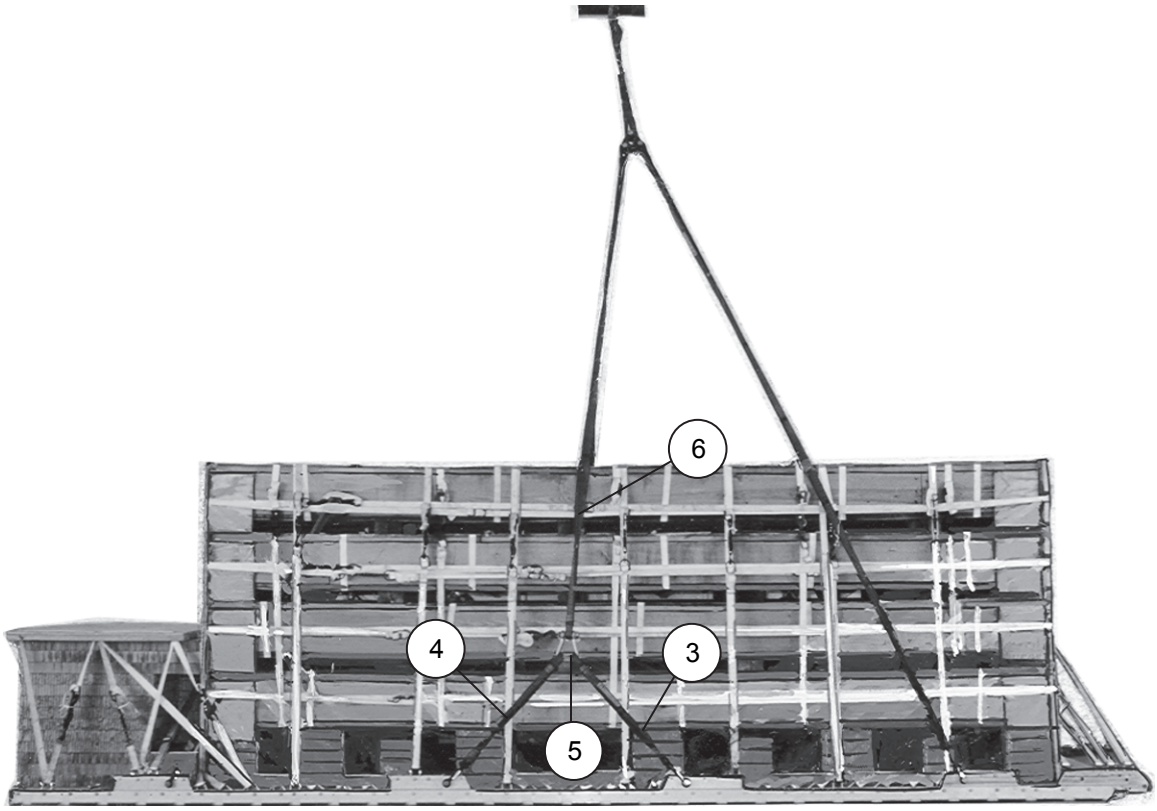
1. When attaching the free end of the sling, a four-point link may be used in place of the three-point link.
2. Lashings have been removed for clarity.



(1) Attach a 16-foot (4-loop), type XXVI nylon webbing sling to the bell portion of a large suspension clevis. Bolt the large suspension clevis to the first suspension link on the right side of the platform. Attach the free end of the sling to a three-point link.

(2) Attach a 3-foot (4-loop), type XXVI nylon webbing sling to the top spacer of the three-point link.

Figure 2-13. Suspension Slings Installed



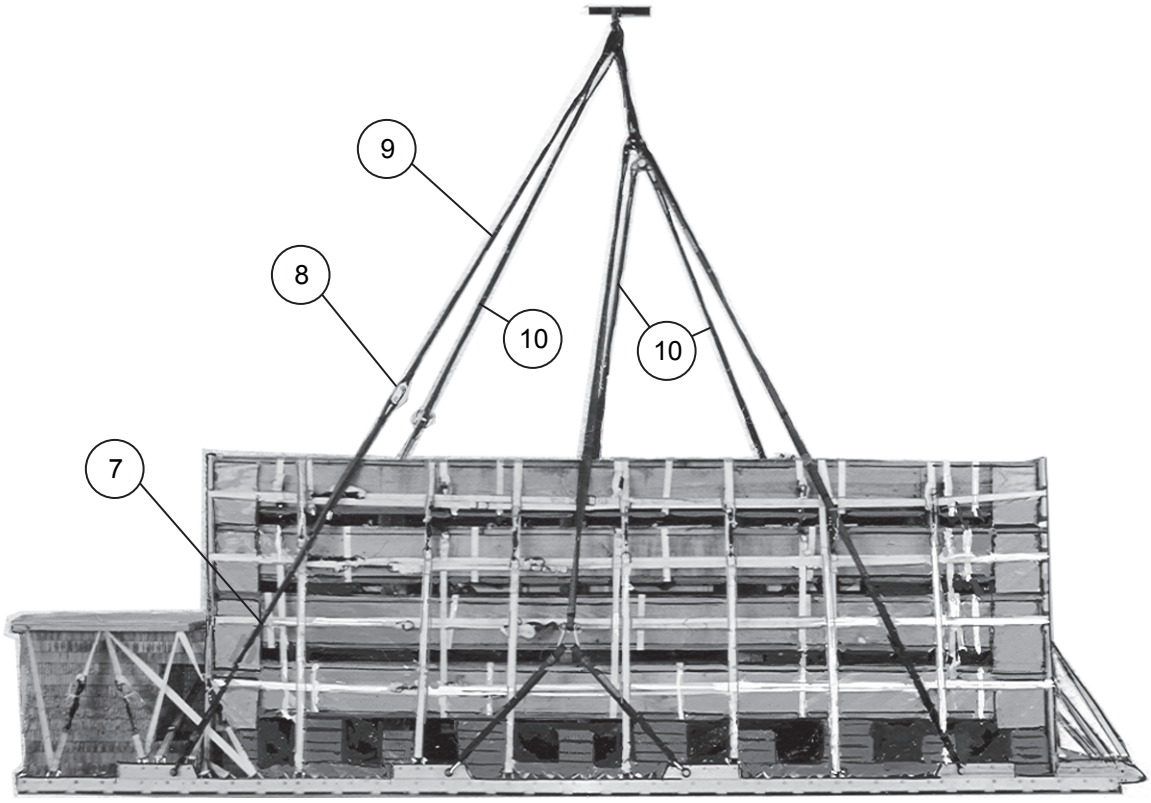
3 Attach a 3-foot (4-loop), type XXVI nylon webbing sling to the bell portion of a large suspension clevis. Bolt the large suspension clevis to the second suspension link on the right side of the platform.

4 Attach a 3-foot (4-loop), type XXVI nylon webbing sling to the bell portion of a large suspension clevis. Bolt the large suspension clevis to the third suspension link on the right side of the platform.

5 Attach the free ends of both 3-foot slings to the bell portion of a large suspension clevis on the right side of the platform.

6 Attach a 12-foot (4-loop), type XXVI nylon webbing sling to the bolt portion of the large suspension clevis used in step 5. Attach the free end of the sling to the three-point link.

Figure 2-13. Suspension Slings Installed (Continued)



7 Attach a 9-foot (4-loop), type XXVI nylon webbing sling to the bell portion of a large suspension clevis. Attach the large suspension clevis to the fourth suspension link on the right side of the platform.

8 Attach a 3 ¾-inch two-point link to the free end of the 9-foot sling.

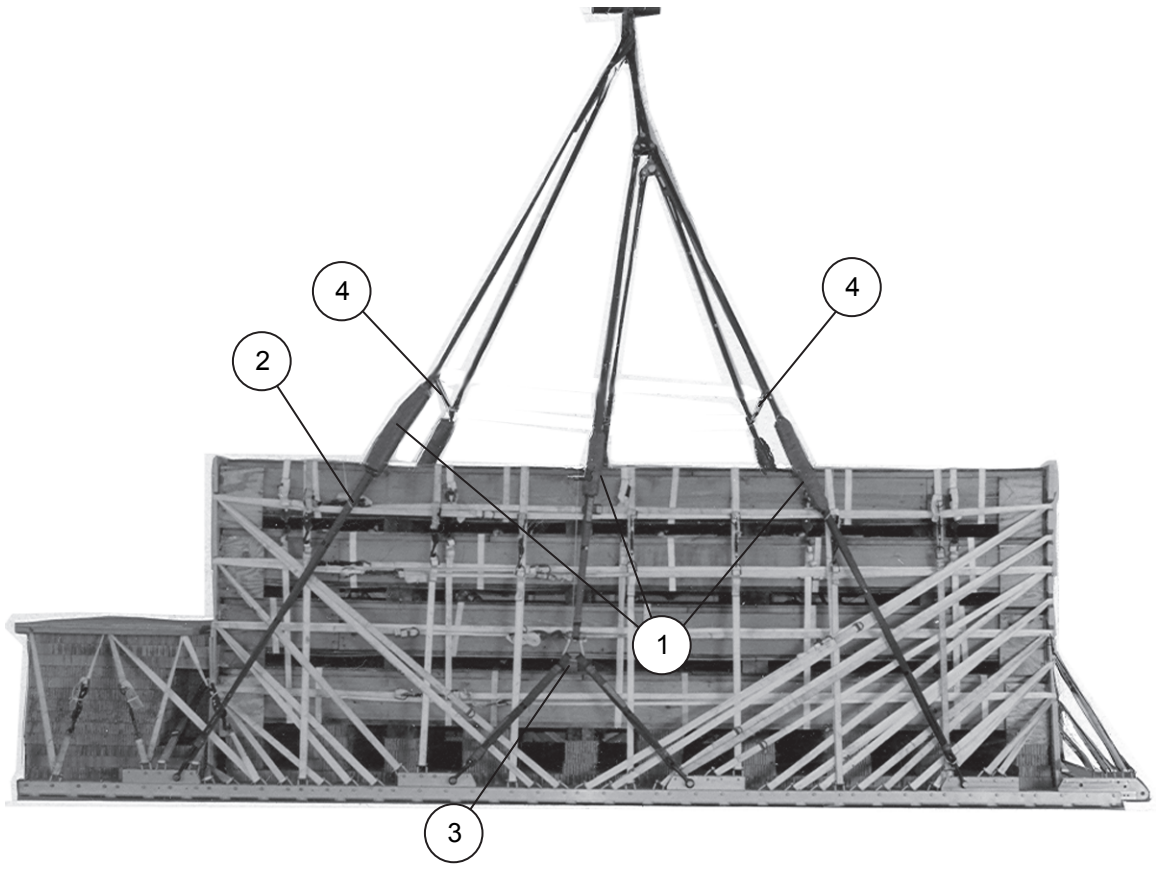
9 Attach an 11-foot (4-loop), type XXVI nylon webbing sling to the free end of the 3 ¾-inch two-point link.

10 Repeat steps 1 through 9 for the left side of the platform.

Figure 2-13. Suspension Slings Installed (Continued)

SAFETYING SUSPENSION SLINGS AND MODIFIED DEADMAN'S TIE

2-11. Safety the suspension slings according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 and as shown in Figure 2-14.

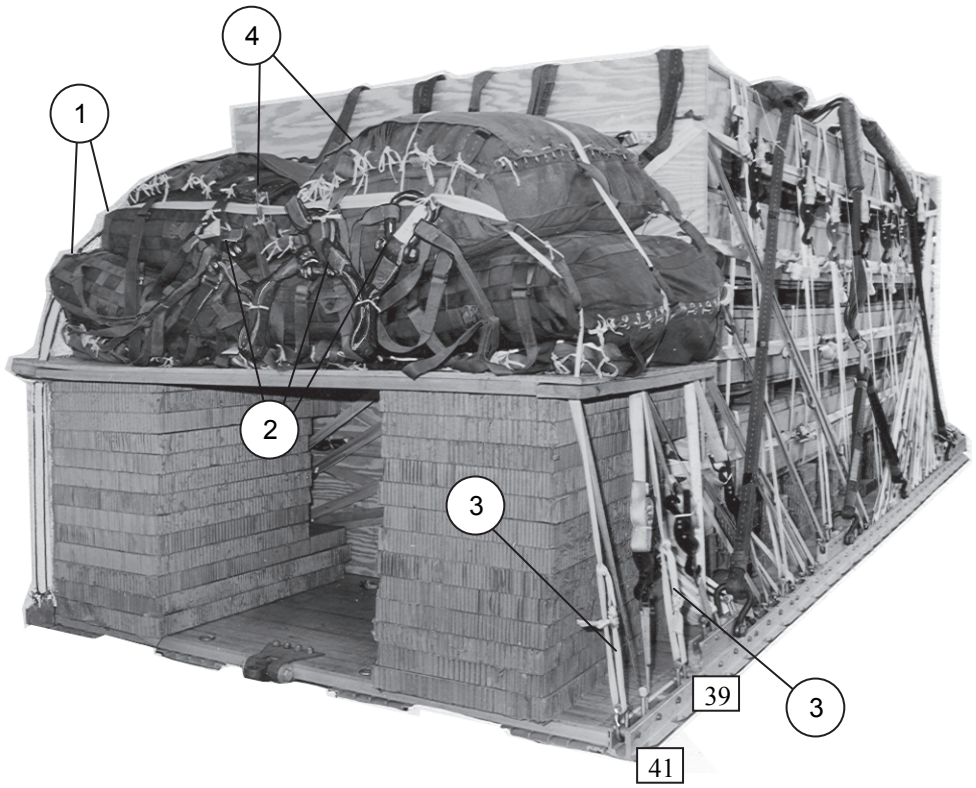


1. Wrap the slings with felt and pressure-sensitive tape where the slings make contact with the load.
2. Safety tie the slings across the load, from right to left using type III nylon cord.
3. Safety tie the center large clevises with type III nylon cord across the top of the load.
4. Install a modified deadman's tie to the suspension slings according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.

Figure 2-14. Suspension Slings Safetied

STOWING CARGO PARACHUTES

2-12. Stow five G-11 cargo parachutes on the parachute stowage platform according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 and as shown in Figure 2-15.

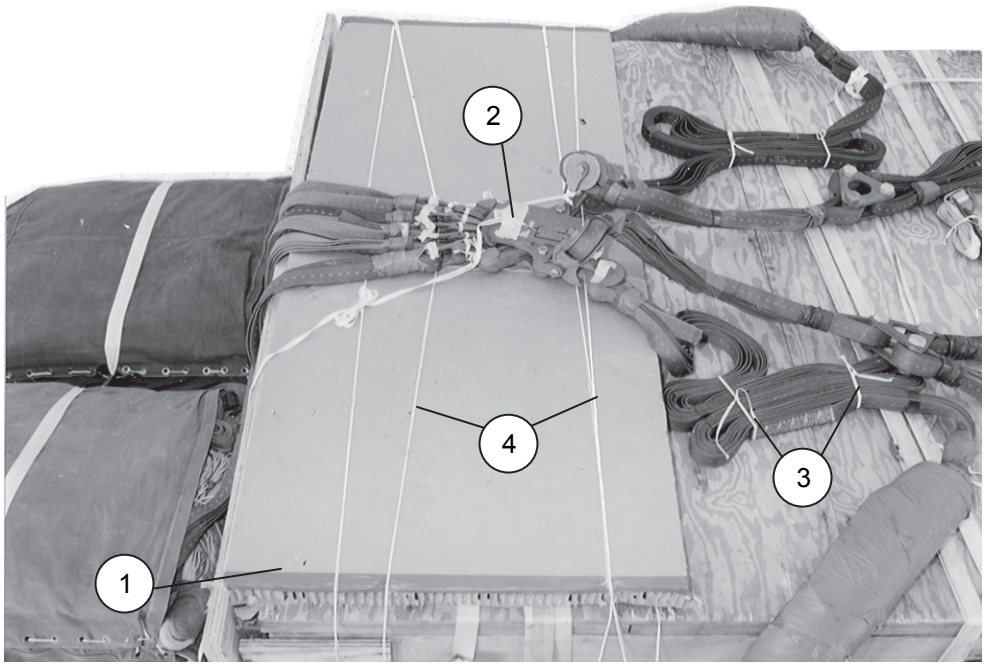


1. Stow five G-11 cargo parachutes according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.
2. Group the bridle assemblies as shown in TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.
3. Restrain the cargo parachutes to the platform using two lengths of type VIII nylon webbing according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5. Tie the ends of the webbing to platform clevises 39 and 39A and 41 and 41A.
4. Install two multicut parachute release straps according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.

Figure 2-15. Parachutes Stowed

INSTALLING RELEASE SYSTEM

2-13. Prepare and install the M-2 release system according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 and as shown in Figure 2-16.

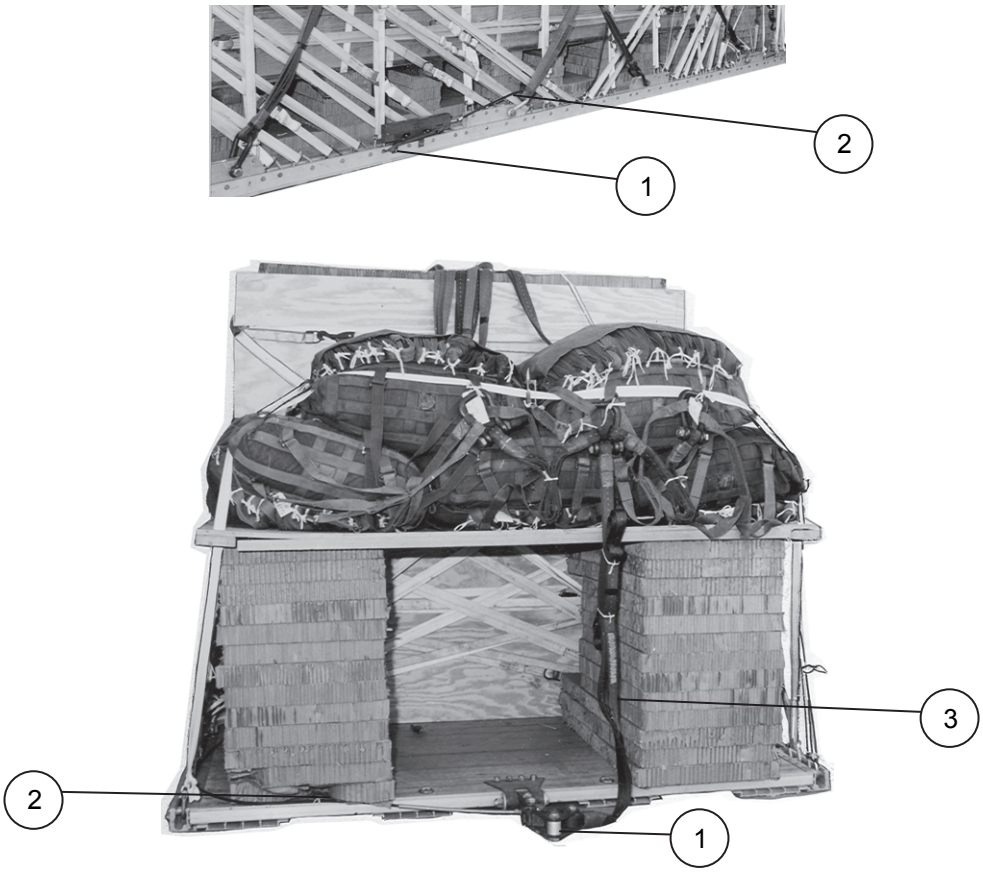


1. Place a 36- by 84-inch piece of honeycomb on top of the load. Tape the edges of the honeycomb with pressure-sensitive tape and secure with type III nylon cord to convenient points on the platform.
2. Prepare an M-2 cargo release assembly according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5. Place the M-2 release on the honeycomb and attach the release to the suspension slings and the cargo parachutes according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.
3. S-fold and tie any excess suspensions slings with one turn of type I, ¼-inch cotton webbing.
4. Secure the top and bottom of the M-2 cargo parachute according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.

Figure 2-16. Release System Installed

INSTALLING THE EXTRACTION SYSTEM

2-14. Install the extraction system according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 and as shown in Figure 2-17.



1. Install the components of the extraction force transfer coupling (EFTC) according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5. Use the front mounting holes for the EFTC brackets.

2. Install a 24-foot EFTC cable according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 and safety the cable to convenient places on the platform with one turn of type I, 1/4-inch cotton webbing.

3. Attach a 12-foot (2-loop), type XXVI nylon webbing sling according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 to be used as a deployment line. S-fold the excess and tie it in two places with type I, 1/4-inch cotton webbing.

Figure 2-17. Extraction System Installed

PLACING EXTRACTION PARACHUTE

2-15. Select the extraction parachute and extraction line needed using the extraction line requirements table in TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5. Place the extraction parachute and line on the load for installation in the aircraft.

INSTALLING PROVISIONS FOR EMERGENCY RESTRAINTS

2-16. Select and install the provisions for the emergency aft restraints according to the emergency aft restraint requirements table in TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.

MARKING RIGGED LOAD

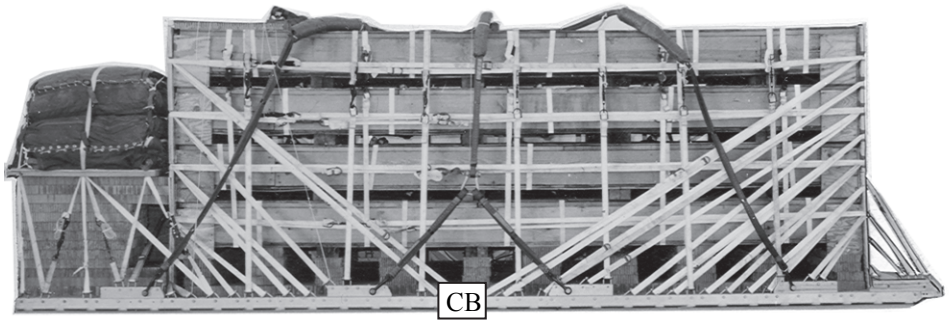
2-17. Mark the rigged load according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5, and as shown in Figure 2-18. Comply with the Shipper's requirements for Declaration of Dangerous/Hazardous Goods in accordance with AFMAN 24-204 (I)/TM 38-250/NAVSUP PUB 505/MCOP4030.191/DLAI 4145.3.. If the load varies from the one shown, the weight, height, CB, and parachute requirements must be recomputed.

EQUIPMENT REQUIRED

2-18. Use the equipment listed in Table 2-2 to rig this load.

CAUTION

Make the final rigger inspection required by AR 59-4 and TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 before the load leaves the rigging site.



RIGGED LOAD DATA

Weight: Load shown ..... 24,360 pounds

Maximum Load Allowed ..... 26,250 pounds

Height ..... 90 inches

Width ..... 108 inches

Overall Length ..... 288 inches

Overhang: Front ..... 0 inches

Rear ..... 0 inches

Center of Balance (from front edge of the platform) ..... 136 inches

Extraction System with 24-foot cable (adds 18 inches to length of platform) ..... EFTC

Figure 2-18. Rapid Runway Repair Kits Rigged on a 24-Foot, Type V Platform for Low-Velocity Airdrop

Table 2-2. Equipment Required for Rigging Rapid Runway Repair Kit Rigged on a 24-Foot, Type V Platform for Low-Velocity Airdrop

National Stock Number	*Item*	*Quantity*
8040-00-273-8713	Adhesive, paste, 1-gallon	As required
	Clevis, suspension:	
4030-00-678-8562	3/4-inch (medium) emergency restraint	8
4030-00-090-5354	1-inch (large)	11
4020-00-240-2146	Cord, nylon, type III	As required
1670-00-434-5782	Coupling, airdrop, extraction force transfer with 24-foot cable	1
1670-00-360-0328	Cover, clevis, large	5
8135-00-664-6958	Cushioning material, packaging, cellulose wadding	As required
8305-00-191-1101	Felt, 1/2-inch thick	As required
1670-01-183-2678	Leaf, extraction line (line bag) (add 2 for C-17)	2
	Line, extraction, type XXVI nylon webbing:	
1670-01-062-6313	60-foot (3-loop), type XXVI	1
1670-01-107-7615	140-foot (3-loop), type XXVI	1
1670-01-064-4452	60-foot (1-loop), type XXVI for C-17 drogue line	1
1670-01-493-6418	Link assembly, two-point:	4
	Lumber:	
5510-00-220-6146	2- by 4-inch:	As required
5510-00-220-6184	2- by 6-inch:	
	48	2
	84	2
5510-00-220-6148	4- by 4-inch:	
	81	48
1670-01-307-0155	Three-point	2
5315-00-010-4657	Nail, steel wire, common 6d	As required
5315-00-010-4661	Nail, steel wire, common 10d	As required
1670-00-753-3928	Pad, energy-dissipating, honeycomb	23 sheets
	Parachute:	
1670-01-016-7841	Cargo, G-11C	5
1670-00-040-8135	Cargo, extraction, 28-foot	1
1670-01-063-3715	Cargo, extraction, 15-foot for C-17	1
	Platform, airdrop, type V, 24-foot	
1670-01-353-8425	Bracket assembly, EFTC	1
1670-01-162-2372	Bracket assembly, extraction	1
1670-01-162-2376	Clevis assembly	82
1670-01-247-2389	Suspension link	8
1670-01-162-2381	Tandem link	2
5530-00-128-4981	Plywood, 3/4-inch	62 sheets
1670-01-097-8817	Release, cargo parachute, M-2	1

Table 2-2. Equipment Required for Rigging Rapid Runway Repair Kit Rigged on a 24-Foot, Type V Platform for Low-Velocity Airdrop (Continued)

National Stock Number	*Item*	*Quantity*
	Sling, cargo airdrop:	
1670-01-062-6306	3-foot (4-loop), type XXVI nylon webbing (Suspension)	8
1670-01-062-6305	9-foot (4-loop), type XXVI nylon webbing (Suspension)	2
1670-01-062-6310	11-foot (4-loop), type XXVI nylon webbing (Suspension)	2
1670-01-062-6303	12-foot (2-loop), type XXVI nylon webbing (Deployment)	1
1670-01-062-6308	16-foot (4-loop), type XXVI nylon webbing (Suspension)	2
1670-01-062-6302	20-foot (2-loop), type XXVI nylon webbing (For Risers)	20
5340-00-040-8219	Strap parachute release, multicut	2
7501-00-266-5016	Tape, adhesive, 2-inch	As required
7501-00-266-6710	Tape, masking	As required
1670-00-937-0271	Tiedown assembly, 15-foot	199
1670-01-483-8259	Towplate release mechanism (H-block) (C-17)	1
	Webbing:	
8305-00-268-2411	Cotton, 1/4-inch, type I	As required
	Nylon:	
8305-00-082-5752	Tubular, 1/2-inch	As required
8305-00-263-3591	Type VIII webbing	As required

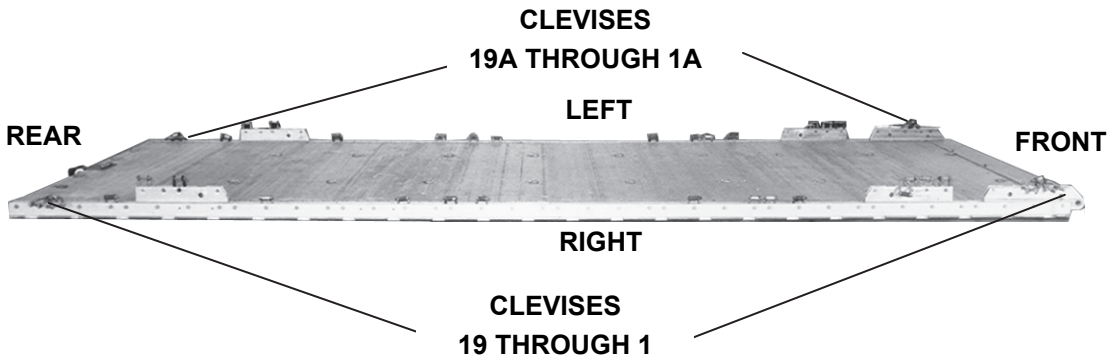
SECTION II-RIGGING THE RAPID RUNWAY REPAIR KIT ON A 20-FOOT PLATFORM

DESCRIPTION OF LOAD

2-19. The rapid runway repair kit consists of fiberglass sheets, plastic supports, metal fittings and tools to erect the structure. The kit is contained in locally fabricated wooden boxes. A total of two rapid runway repair kits will be on this load. The rapid runway repair kit must be in a box as described in Figure 2-4. The kit contains no materials requiring special handling and is not fragile. The rapid runway repair kit is rigged with three G-11 cargo parachutes on a 20 foot type platform for low-velocity airdrop.

PREPARING PLATFORM

2-20. Prepare a 20-foot, type V platform according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 and as shown in Figure 2-19.



Step:

1. Inspect, or assemble and inspect, a 20-foot, type V platform as outlined in TM 10-1670-268-20&P/TO 13C7-52-22.
2. Install a suspension link in holes 6, 7, and 8 on each side of the platform.
3. Install a suspension link in holes 33, 34, and 35 on each side of the platform.
4. Install a tandem link on the front of each platform side rail using holes 1, 2, and 3.
5. Install clevises on bushings 2 (triple), of each front tandem link.
6. Install clevises on bushings 1, 2 and 3 (triple) of each first suspension link.
7. Install clevises on bushings 2 and 4 of each second suspension link.
8. Starting at the front of the right and left platform side rail, install clevises on the bushings bolted to holes 11, 12, 13, 15, 23, 24, 26, 31, 37, and 38 (triple).
9. Starting at the front of the platform, number the clevises 1 through 19 on the right side, and 1A through 19A on the left side.
10. Label the tie-down rings according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.

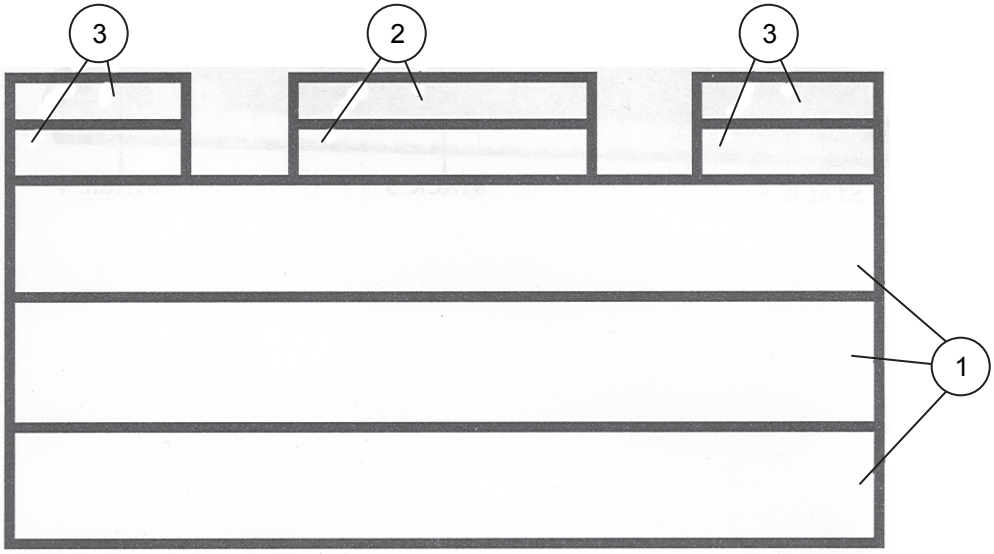
Figure 2-19. Platform Prepared

BUILDING AND POSITIONING HONEYCOMB STACKS

2-21. Build 10 honeycomb stacks according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 and as shown in Figure 2-20. Position the stacks on the platform as shown in Figure 2-21.

Notes.

1. All dimensions are in inches.
2. This drawing is not drawn to scale.



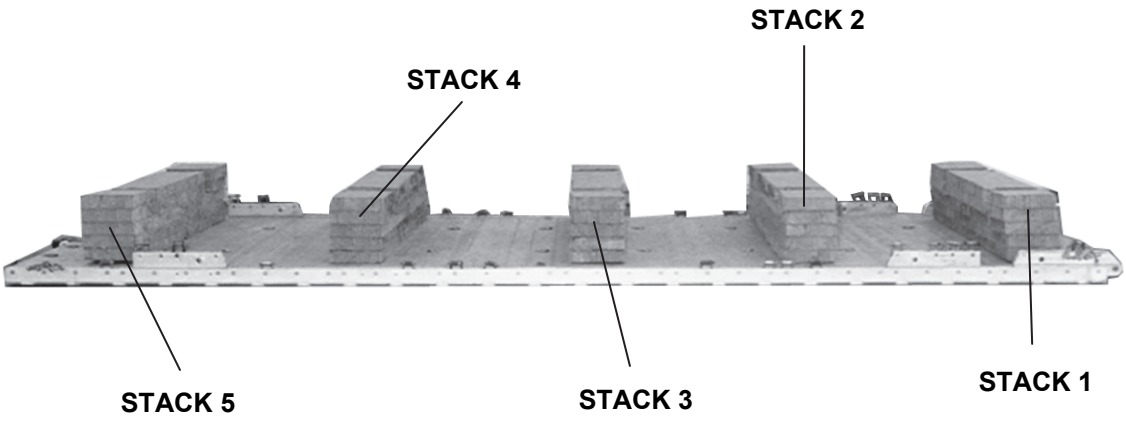
(1) Glue three 12- by 89-inch pieces of honeycomb together to form stacks 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10.

(2) Glue two 12- by 45-inch pieces of honeycomb centered to base of stacks 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10.

(3) Use four 12- by 15-inch pieces of honeycomb, glue two pieces flush with the outside edge of base stacks 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10.

Figure 2-20. Honeycomb Stacks Built

Note.
1. Boxes may vary in size and honeycomb stacks may have to be shifted.



Stack Number	*Position of Stacks on the Platform*
1	Position Stack 1, centered and 5 inches from the front edge of the platform.
2	Position Stack 2, centered and 42 1/2 inches from the rear of Stack 1.
3	Position Stack 3, centered and 41 inches from the rear of Stack 2.
4	Position Stack 4, centered and 41 inches from the rear of Stack 3.
5	Position Stack 5, centered and 44 inches from the rear of Stack 4.

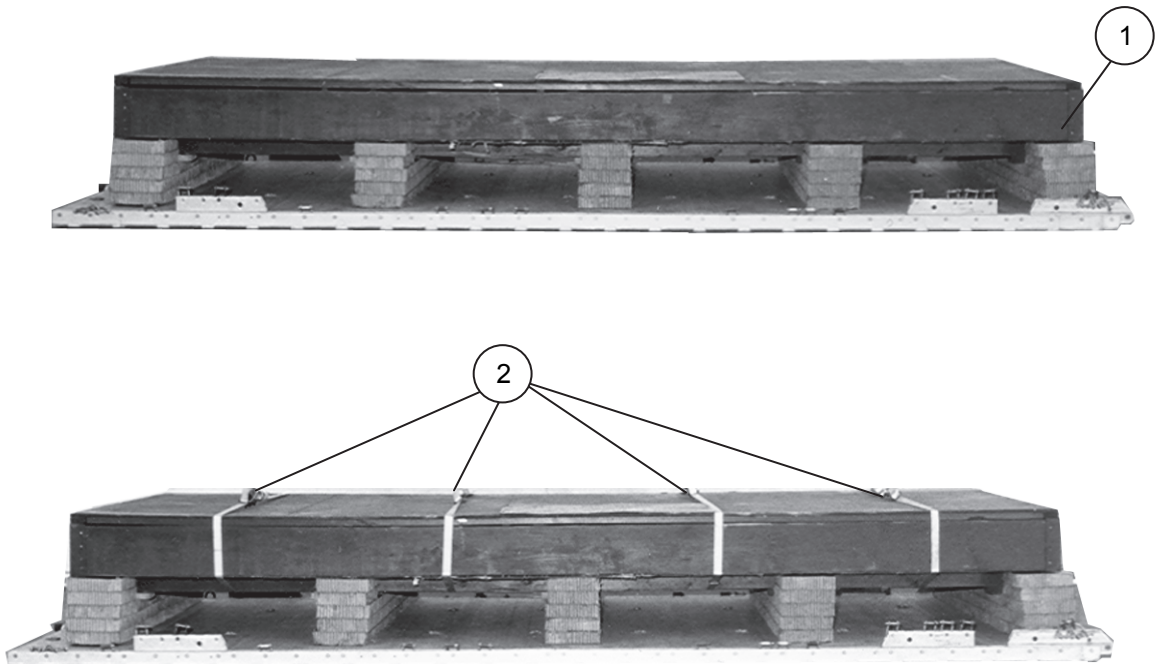
Figure 2-21. Honeycomb Stacks Positioned

BUILDING CONTAINERS AND PLACING ITEMS IN RUNWAY REPAIR KIT CONTAINERS

2-22. Build two runway repair kit containers using the procedures in Figure 2-4 and place items in kit as listed in Table 2-1..

POSITIONING AND SECURING CONTAINER, ADDITIONAL HONEYCOMB STACKS AND ADDITIONAL CONTAINER

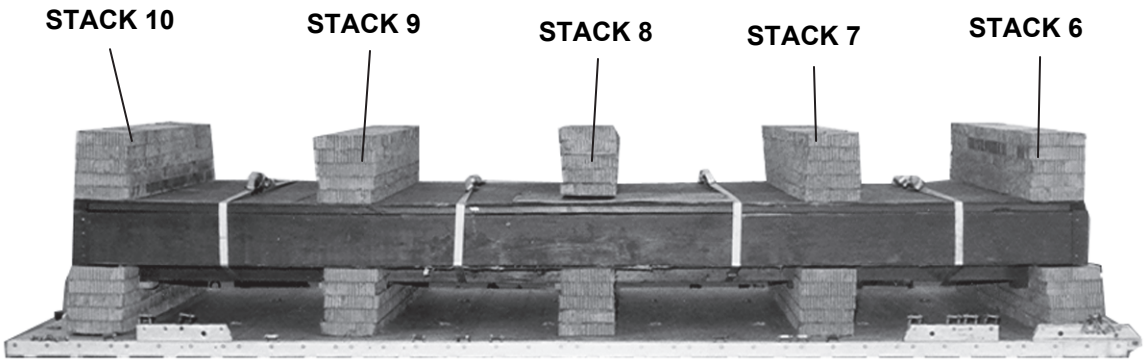
2-23. Position and secure the containers as shown in Figure 2-22.



1. Position the box centered on the five honeycomb stacks with the front edge of the box, 2 inches from the front edge of Stack 1. The rear stack should be adjusted to allow 2 inches of the stack to extend past the end of the box.

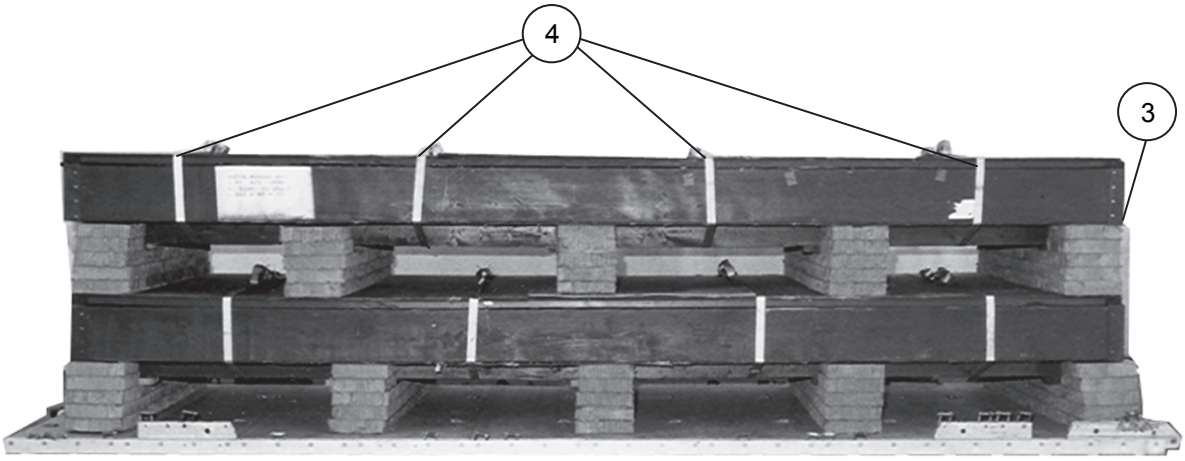
2. Secure the box closed with four 15-foot lashings. Run each lashing around the box, one at each point centered between the honeycomb stacks. Secure the load binders on top of the box.

Figure 2-22. Containers and Honeycomb Stacks Positioned and Secured



Stack Number	*Position of Stacks on the Platform*
6	Position Stack 6, even with the front edge of the box.
7	Position Stack 7, 40 ½ inches from the rear of Stack 6.
8	Position Stack 8, 41 inches from the rear of Stack 7.
9	Position Stack 9, 41 inches from the rear of Stack 8.
10	Position Stack 10, even with the rear edge of the box.

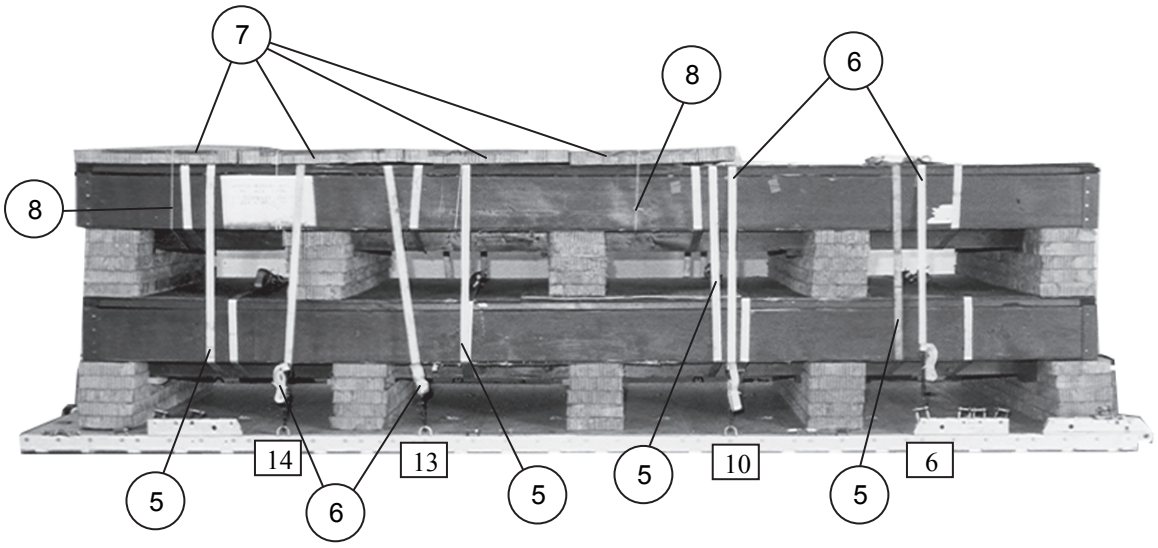
Figure 2-22. Containers and Honeycomb Stacks Positioned and Secured (Continued)



3 Position the second box centered on the honeycomb stacks with the front of the box even with the front of stack 6.

4 Secure the box closed with four 15-foot lashings. Run each lashing around the box, one at each point centered between the honeycomb stacks. Secure the load binders on top of the box.

Figure 2-22. Containers and Honeycomb Stacks Positioned and Secured (Continued)



5 Form four 30-foot lashings and wrap them around the boxes on the left side of the platform with two D-rings and a loadbinder.

6 Form four 30-foot lashings and secure the boxes to the platform by centering the lashings on the top box and securing the running ends starting from the front of the load to clevises 6 and 6A, 10 and 10A, 13 and 13A, 14 and 14A.

7 Cut four pieces of honeycomb 36 inches by 89 inches and position the honeycomb side by side with the first piece even with the rear edge of the box.

8 Secure in place with lengths of type III nylon cord.

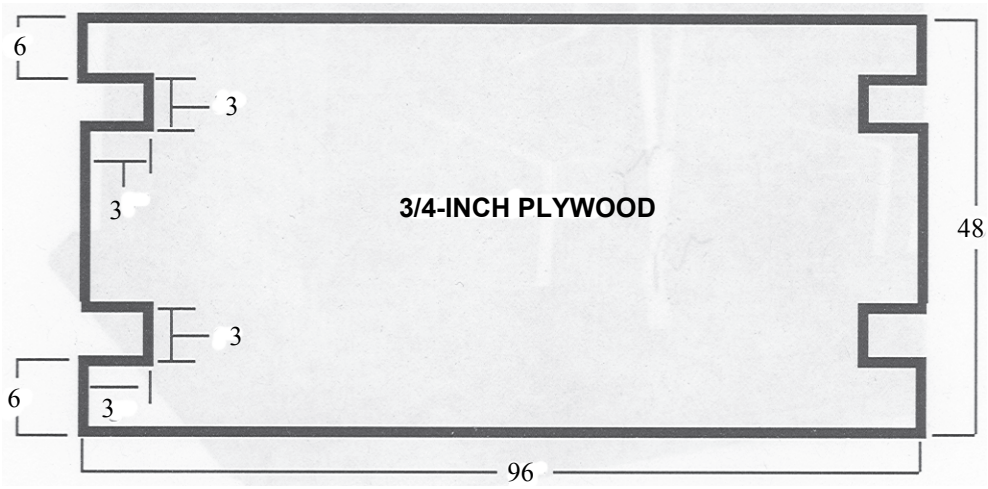
Figure 2-22. Containers and Honeycomb Stacks Positioned and Secured (Continued)

BUILDING, POSITIONING AND SECURING FRONT AND REAR ENDBOARDS

2-24. Build the front and rear endboards as shown in Figure 2-23. Position and secure the endboards as shown in Figure 2-24.

Notes.
1. This drawing is not to scale.
2. All dimensions are in inches.

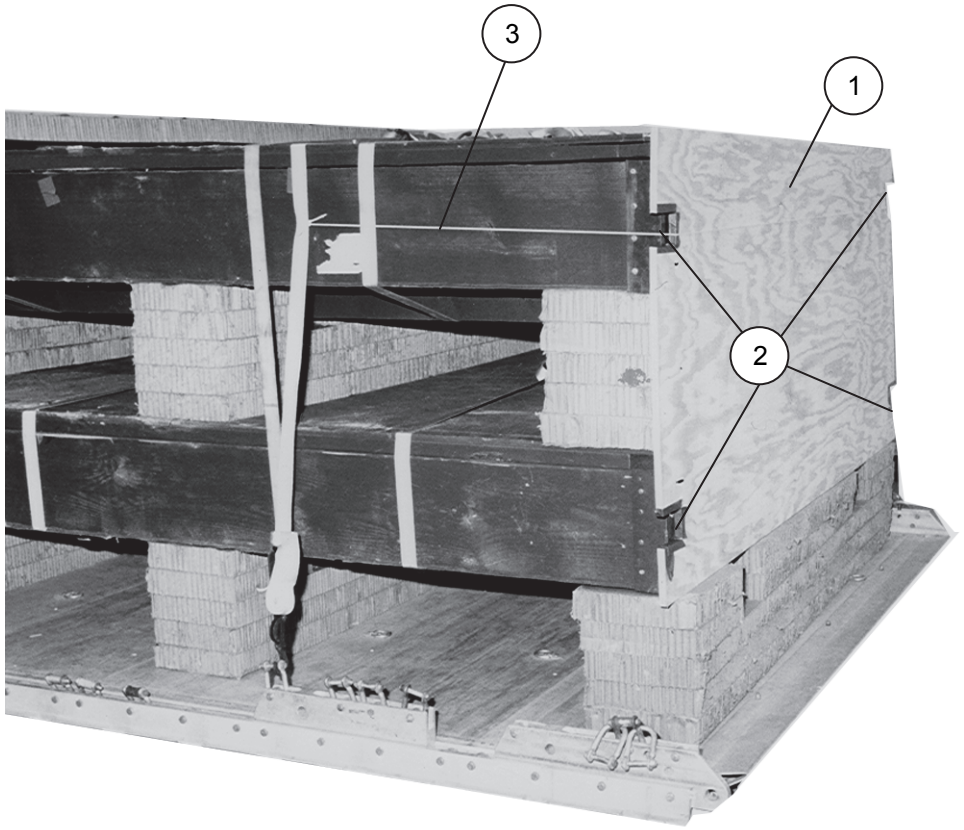
TOP



BOTTOM

Item Number	*Pieces*	*Width (Inches)*	*Length (Inches)*	*Material*
1	1	48	96	¾-inch plywood
2	1	48	96	¾-inch plywood

Figure 2-23. Materials Required to Build Endboards

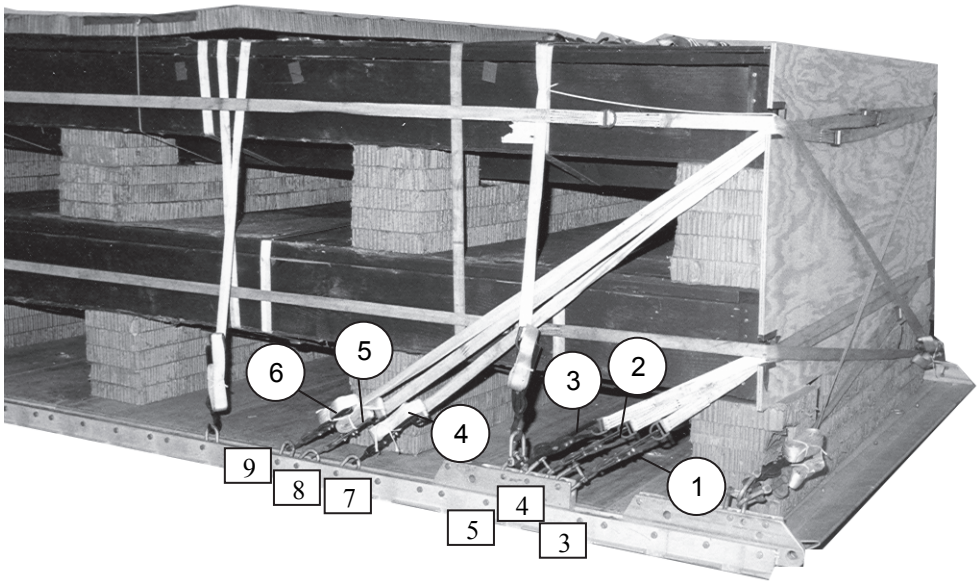


1. Position one endboard on each end of the load centered and flush with boxes.
2. Tape the notches of each endboard.
3. Secure the endboards with type III nylon cord.

Figure 2-24. Endboards Positioned and Secured

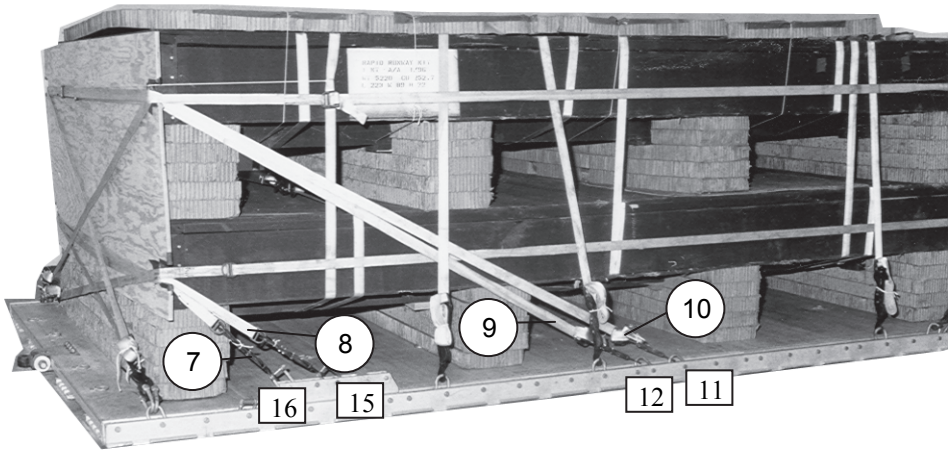
INSTALLING LASHINGS

2-25. Lash the load to the platform as shown in Figures 2-25 through 2-27. Form the 30-foot through 45-foot lashings according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.



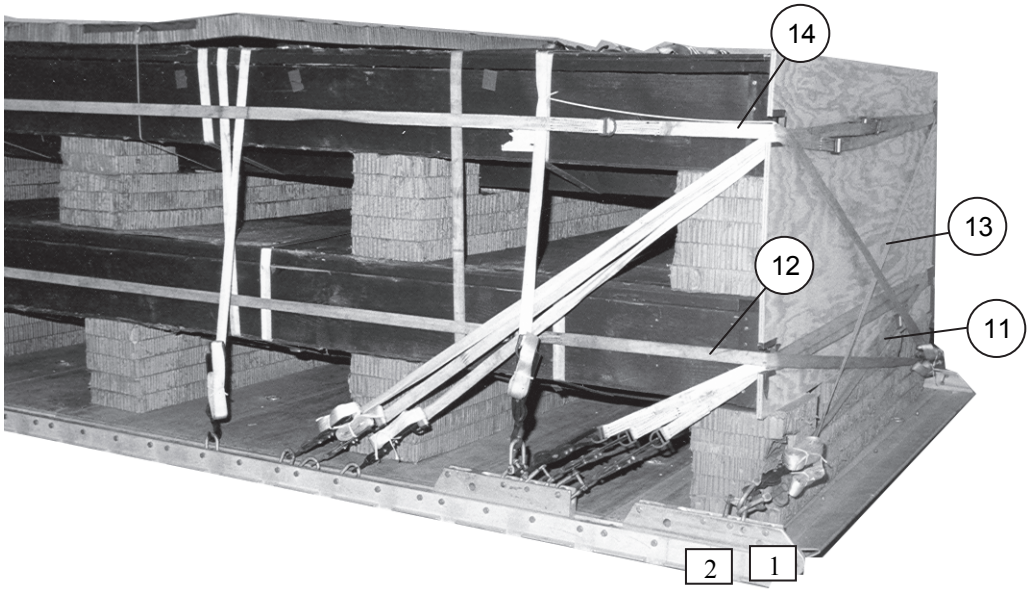
Lashing Number	*Tiedown Clevis Number*	*Instructions*
1	3 to 3A	Pass the 30-foot lashing through the bottom notch of the front endboard.
2	4 to 4A	Pass the 30-foot lashing through the bottom notch of the front endboard.
3	5 to 5A	Pass the 30-foot lashing through the bottom notch of the front endboard.
4	7 to 7A	Pass the 30-foot lashing through the top notch of the front endboard.
5	8 to 8A	Pass the 30-foot lashing through the top notch of the front endboard.
6	9 to 9A	Pass the 30-foot lashing through the top notch of the front endboard.

Figure 2-25. Lashings 1 through 6 Installed



Lashing Number	*Tiedown Clevis Number*	*Instructions*
7	16 to 16A	Pass the 30-foot lashing through the bottom notch of the rear endboard.
8	15 to 15A	Pass the 30-foot lashing through the bottom notch of the rear endboard.
9	12 to 12A	Pass the 30-foot lashing through the top notch of the rear endboard.
10	11 to 11A	Pass the 30-foot lashing through the top notch of the rear endboard.

Figure 2-26. Lashings 7 through 10 Installed

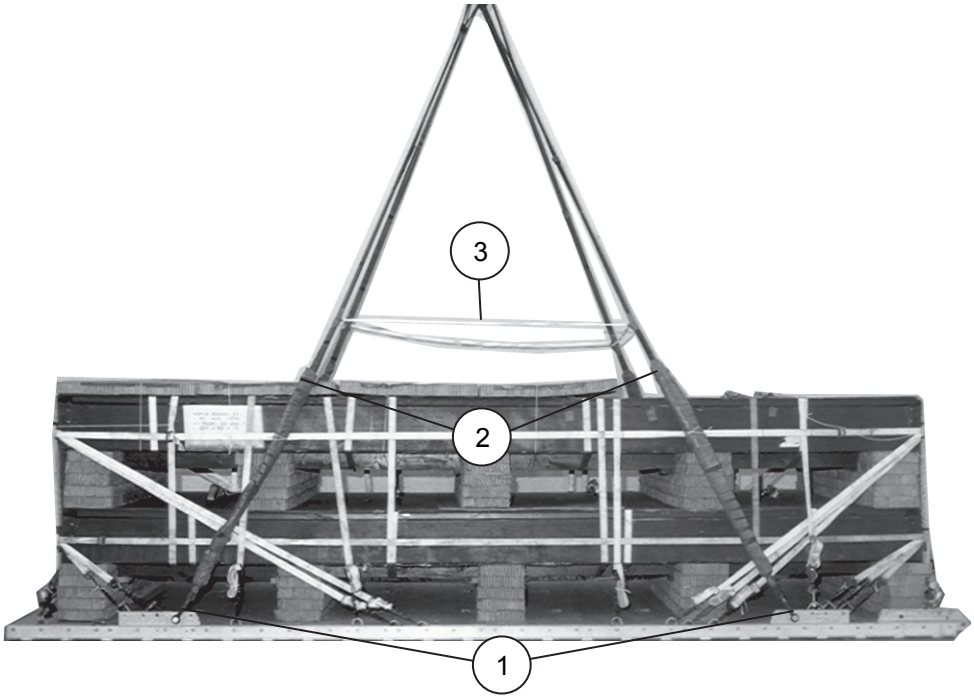


Lashing Number	*Tiedown Clevis Number*	*Instructions*
11	2 to 18	Pass the 45-foot lashing through the bottom notch left side front and rear.
12	2A to 18A	Pass the 45-foot lashing through the bottom notch right side front and rear.
13	1 to 19	Pass the 45-foot lashing through the top notch left side front and rear.
14	1A to 19A	Pass the 45-foot lashing through the top notch right side front and rear.

Figure 2-27. Lashings 11 through 14 Installed

INSTALLING SUSPENSION SLINGS AND DEADMAN'S TIE

2-26. Install the suspension slings according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 and as shown in Figure 2-28.

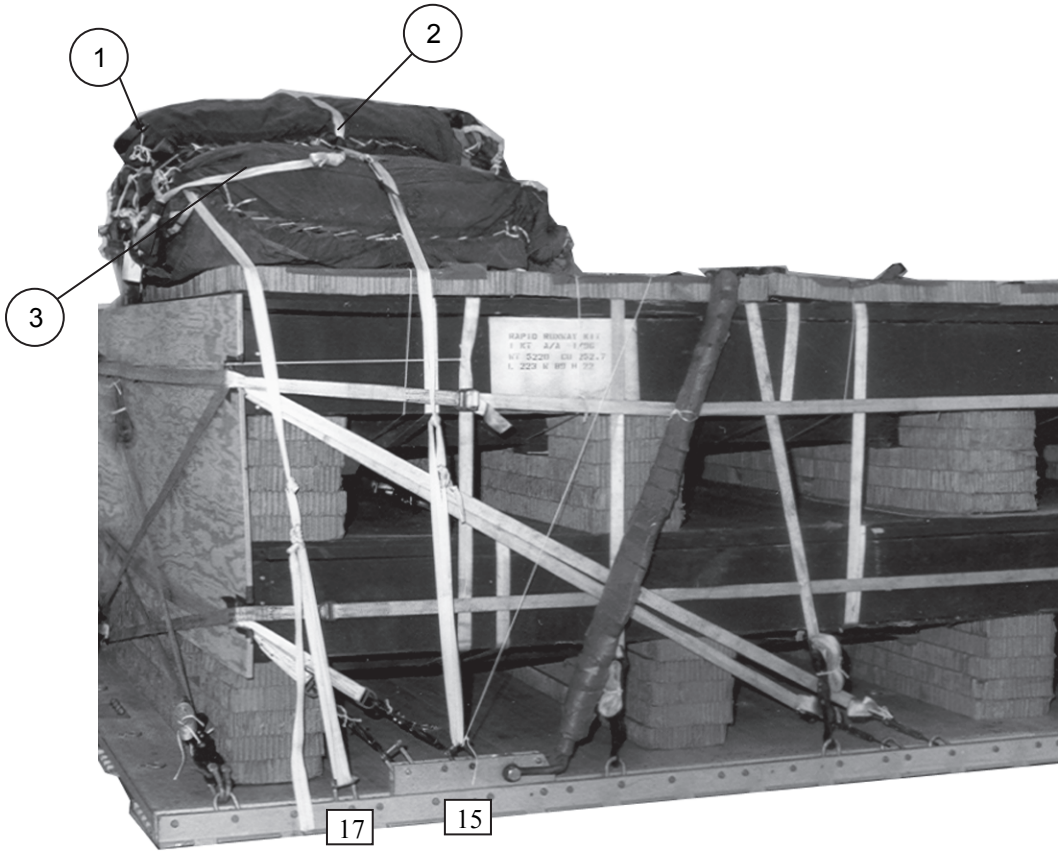


1. Place a large clevis in one end of the four 16-foot (4-loop), type XXVI nylon webbing slings. Attach the large clevises to each suspension link.
2. Pad the slings with felt and pressure sensitive tape from the large clevis to 6 inches above the top of the load.
3. Install a deadman's tie to the suspension slings according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.

Figure 2-28. Suspension Slings Installed

STOWING CARGO PARACHUTES

2-27. Prepare, stow and restrain three G-11B cargo parachutes on the honeycomb according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 and as shown in Figure 2-29.

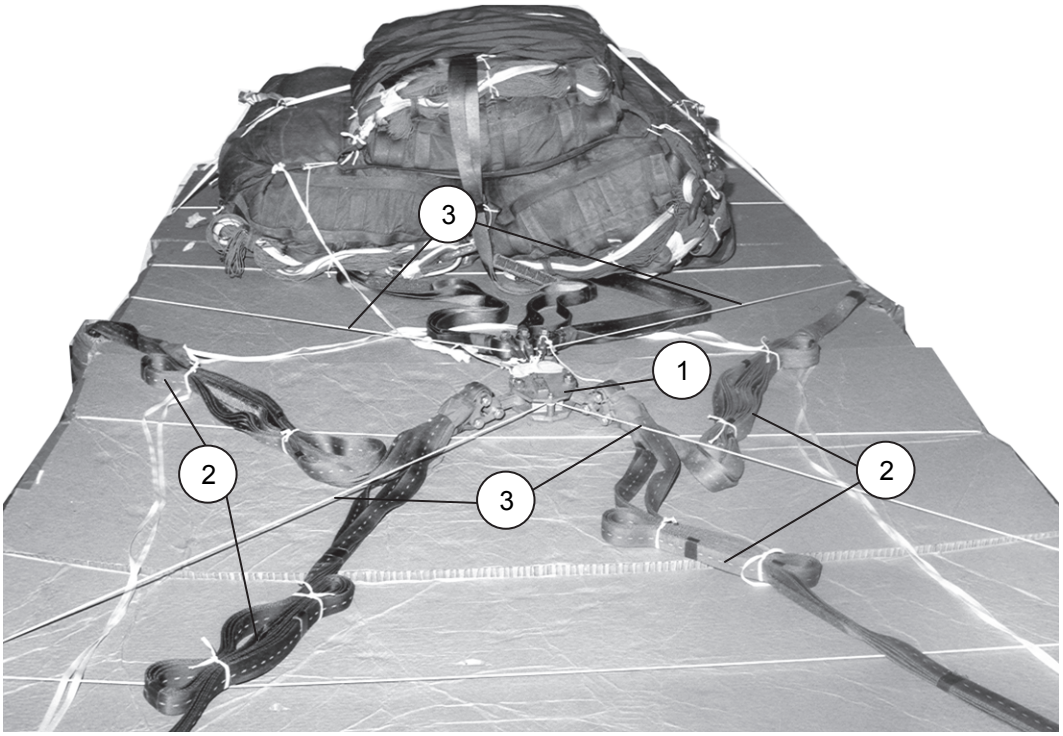


1. Stow three G-11 cargo parachutes according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.
2. Restrain the cargo parachutes to the platform using two lengths of type VIII nylon webbing according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5. Tie the ends of the webbing to platform clevises 15 and 15A and 17 and 17A.
3. Install multicut parachute release straps according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.

Figure 2-29. Parachutes Stowed

INSTALLING RELEASE SYSTEM

2-28. Prepare and install the M-1 release system according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 and as shown in Figure 2-30.



1. Prepare an M-1 cargo parachute release assembly according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5. Place the M-1 release on the honeycomb and attach the release to the suspension slings and the cargo parachutes risers.

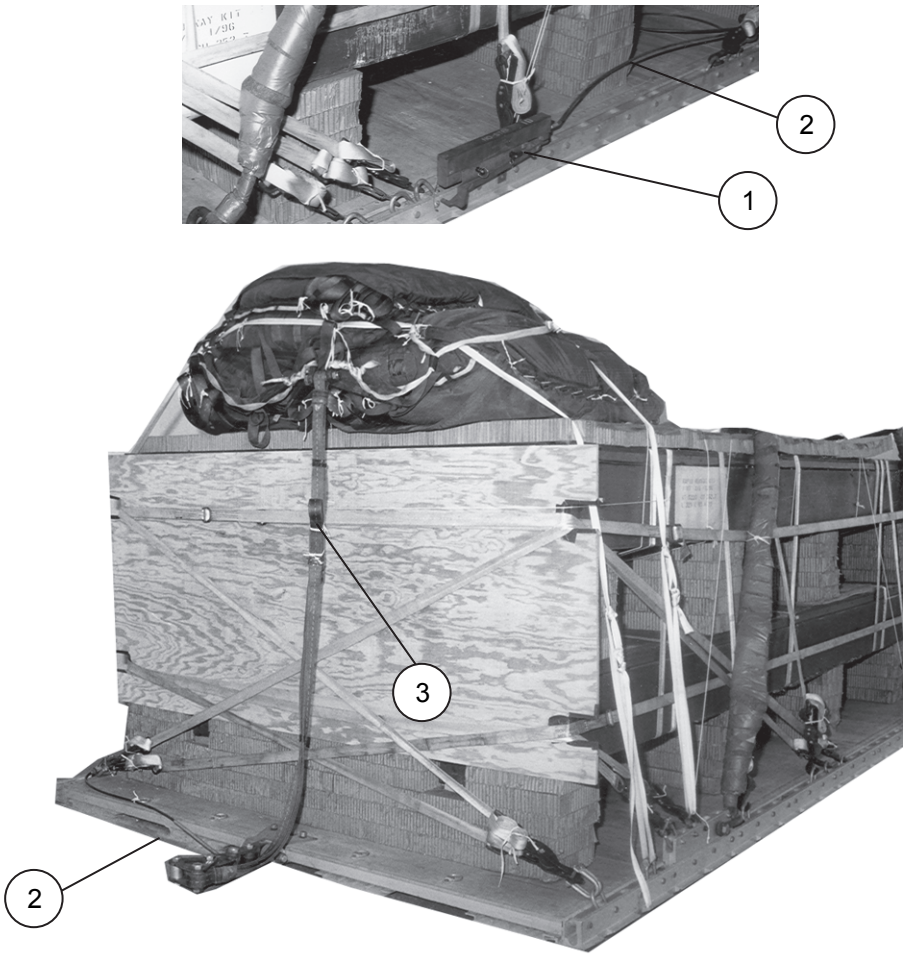
2. S-fold and tie any excess of the suspensions slings with one turn of type I, ¼-inch cotton webbing.

3. Secure the top and bottom of the M-1 cargo parachute release according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.

Figure 2-30. Release System Installed

INSTALLING THE EXTRACTION SYSTEM

2-29. Install the extraction system according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 and as shown in Figure 2-31.



1. Install the components of the extraction force transfer coupling (EFTC) according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5. Use the front mounting holes for the EFTC brackets.

2. Install a 20-foot EFTC cable according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 and safety the cable to convenient places on the platform with one turn of type I, 1/4-inch cotton webbing.

3. Attach a 9-foot (2-loop), type XXVI nylon webbing sling according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 to be used as a deployment line. S-fold the excess and tie it in two places with type I, 1/4-inch cotton webbing.

Figure 2-31. Extraction System Installed

PLACING EXTRACTION PARACHUTE

2-30. Select the extraction parachute and extraction line needed using the extraction line requirements table in TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5. Place the extraction parachute and line on the load for installation in the aircraft.

INSTALLING PROVISIONS FOR EMERGENCY RESTRAINTS

2-31. Select and install the provisions for the emergency aft restraints according to the emergency aft restraint requirements table in TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.

MARKING RIGGED LOAD

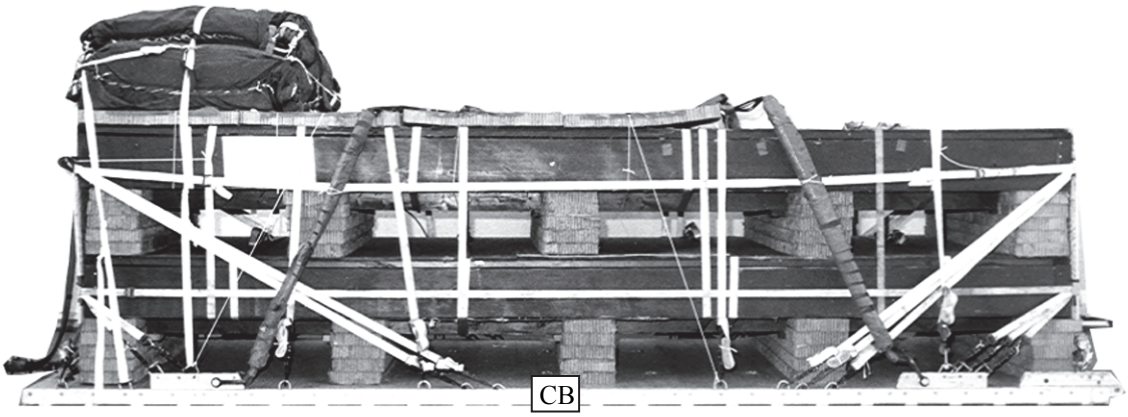
2-32. Mark the rigged load according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5, and as shown in Figure 2-32. Comply with the Shipper's requirements for Declaration of Dangerous/Hazardous Goods in accordance with AFMAN 24-204 (I)/TM 38-250/NAVSUP PUB 505/MCOP4030.191/DLAI 4145.3.. If the load varies from the one shown, the weight, height, CB, and parachute requirements must be recomputed.

EQUIPMENT REQUIRED

2-33. Use the equipment listed in Table 2-3 to rig this load.

CAUTION

Make the final rigger inspection required by AR 59-4 and TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 before the load leaves the rigging site.



RIGGED LOAD DATA

Weight: Load shown	14,080 pounds
Maximum Load Allowed	15,750 pounds
Height	67 inches
Width	108 inches
Overall Length	258 inches
Overhang: Front	0 inches
Rear	0 inches
Center of Balance (from front edge of the platform)	124 inches
Extraction System with 20-foot cable (adds 18 inches to length of platform)	EFTC

Figure 2-32. Rapid Runway Repair Kits Rigged on a 20-Foot, Type V Platform for Low-Velocity Airdrop

Table 2-3. Equipment Required for Rigging Rapid Runway Repair Kit Rigged on a 20-Foot, Type V Platform for Low-Velocity Airdrop

National Stock Number	*Item*	*Quantity*
8040-00-273-8713	Adhesive, paste, 1-gallon	As required
	Clevis, suspension:	
4030-00-678-8562	3/4-inch (medium) emergency restraint	8
4030-00-090-5354	1-inch (large)	8
4020-00-240-2146	Cord, nylon, type III	As required
1670-00-434-5787	Coupling, airdrop, extraction force transfer with 20-foot cable	1
1670-00-360-0328	Cover, clevis, large	8
8135-00-664-6958	Cushioning material, packaging, cellulose wadding	As required
8305-00-191-1101	Felt, 1/2-inch thick	As required
1670-01-183-2678	Leaf, extraction line (line bag) (add 2 for C-17)	2
	Line, extraction, type XXVI nylon webbing:	
1670-01-062-6313	60-foot (3-loop), type XXVI	1
1670-01-107-7615	140-foot (3-loop), type XXVI	1
1670-01-064-4452	60-foot (1-loop), type XXVI for C-17 drogue line	1
1670-01-493-6418	Link assembly, two-point:	2
	Lumber	As required
5315-00-010-4657	Nail, steel wire, common 6d	As required
5315-00-010-4661	Nail, steel wire, common 10d	As required
1670-00-753-3928	Pad, energy-dissipating, honeycomb	19 sheets
	Parachute:	
1670-01-016-7841	Cargo, G-11B	3
1670-01-063-3716	Cargo, extraction, 22-foot	1
1670-01-063-3715	Cargo, extraction, 15-foot for C-17	1
	Platform, airdrop, type V, 20-foot	
1670-01-353-8425	Bracket assembly, EFTC	1
1670-01-162-2372	Bracket assembly, extraction	1
1670-01-162-2376	Clevis assembly	44
1670-01-247-2389	Suspension link	4
1670-01-162-2381	Tandem link	2
5530-00-128-4981	Plywood, 3/4-inch	29 sheets
1670-01-097-8816	Release, cargo parachute, M-1	1

Table 2-3. Equipment Required for Rigging Rapid Runway Repair Kit Rigged on a 20-Foot, Type V Platform for Low-Velocity Airdrop (Continued)

National Stock Number	*Item*	*Quantity*
	Sling, cargo airdrop:	
1670-01-062-6305	9-foot (4-loop), type XXVI nylon webbing (Deployment)	1
1670-01-062-6308	16-foot (4-loop), type XXVI nylon webbing (Suspension)	4
1670-01-062-6302	20-foot (2-loop), type XXVI nylon webbing (For Risers)	6
5340-00-040-8219	Strap parachute release, multicut	2
7501-00-266-5016	Tape, adhesive, 2-inch	As required
7501-00-266-6710	Tape, masking	As required
1670-00-937-0271	Tiedown assembly, 15-foot	46
1670-01-483-8259	Towplate release mechanism (H-block) (C-17)	1
	Webbing:	
8305-00-268-2411	Cotton, 1/4-inch, type I	As required
	Nylon:	
8305-00-082-5752	Tubular, 1/2-inch	As required
8305-00-263-3591	Type VIII webbing	As required

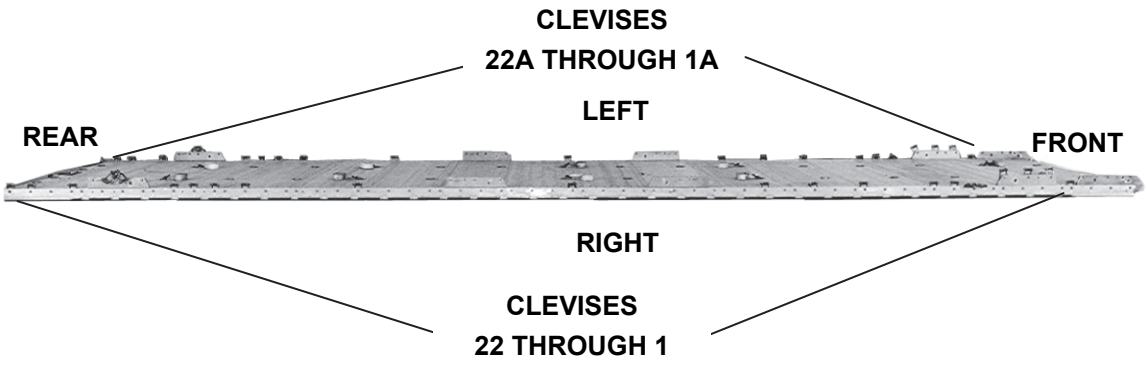
SECTION III-RIGGING THE RAPID RUNWAY REPAIR (RRR) KIT-ALPHA ON A 32-FOOT PLATFORM

DESCRIPTION OF LOAD

2-34. The folded fiberglass mat Rapid Runway Repair (RRR) Kit-ALPHA consists of two mat sections, an equipment box and ten metal boxes filled with bolts and washers. The folded fiberglass mat RRR kit is rigged with three G-11 cargo parachutes on a 32-foot, type V platform for low-velocity airdrop. It has a total rigged weight of 13,260 pounds, height of 59 ½ inches, width of 108 inches, and length of 401 inches and center of balance of 189 inches from the front edge of the platform.

PREPARING PLATFORM

2-35. Prepare a 32-foot, type V platform according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 and as shown in Figure 2-33.



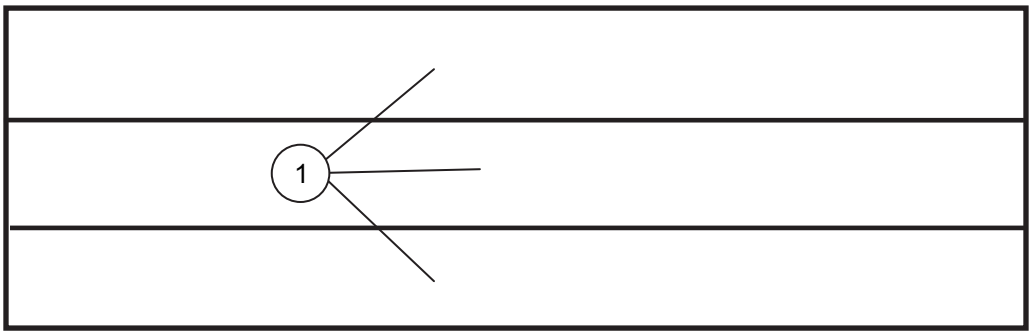
Step.

1. Inspect, or assemble and inspect, a 32-foot, type V platform as outlined in TM 10-1670-268-20&P/TO 13C7-52-22.
2. Install a suspension link in holes 6, 7, and 8 on each side of the platform.
3. Install a suspension link in holes 26, 27, and 28 on each side of the platform.
4. Install a suspension link in holes 37, 38, and 39 on each side of the platform.
5. Install a suspension link in holes 57, 58, and 59 on each side of the platform.
6. Install a tandem link on the front of each platform side rail using holes 1, 2, and 3.
7. Install clevises on bushings 1, 2, and 4 of each first suspension link.
8. Install a (triple) clevis on bushing 2 of each fourth suspension link.
9. Starting at the front of the right and left platform side rail, install clevises on the bushings bolted to holes 4, 10 (triple), 11, 12, 16, 19, 22, 33, 45, 51, 53, 54, 55, 61, 63, and 64.
10. Starting at the front of the platform, number the clevises 1 through 22 the right side, and 1A through 22A the left side.
11. Label the tiedown rings according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.
12. Preposition single tie-down lashings through the following tie-down rings through its own D-ring: A2, B2, A6, B6, B9, A12, A15, and B15.

Figure 2-33. Platform Prepared

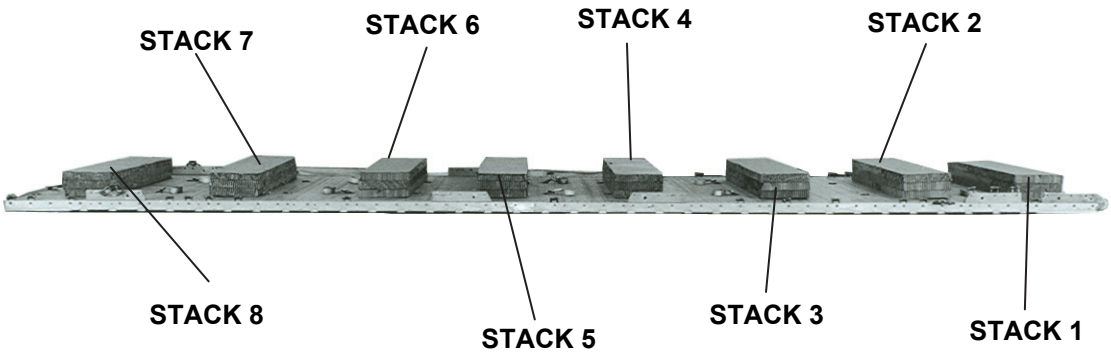
BUILDING AND POSITIONING HONEYCOMB STACKS

2-36. Build eight honeycomb stacks according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 and as shown in Figure 2-34. Position the stacks on the platform as shown in Figure 2-35.



(1) Glue three 18- by 75-inch pieces of honeycomb together to form stacks 1, 2, 3, 4, 5, 6, 7, and 8.

Figure 2-34. Honeycomb Stacks Built



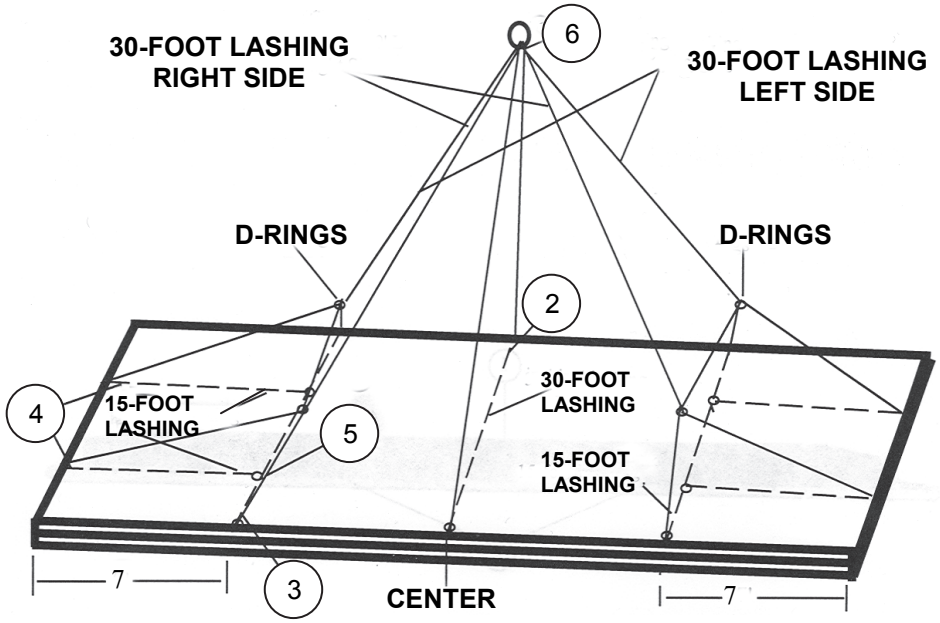
Stack Number	*Position of Stacks on the Platform*
1	Position Stack 1, centered and 6 inches from the front edge of the platform.
2	Position Stack 2, centered and 24 inches from the rear of Stack 1.
3	Position Stack 3, centered and 35 inches from the rear of Stack 2.
4	Position Stack 4, centered and 35 inches from the rear of Stack 3.
5	Position Stack 5, centered and 32 inches from the rear of Stack 4.
6	Position Stack 6, centered and 24 inches from the rear of Stack 5.
7	Position Stack 7, centered and 36 inches from the rear of Stack 6.
8	Position Stack 8, centered and 36 inches from the rear of Stack 7.

Figure 2-35. Honeycomb Stacks Positioned

LIFTING AND POSITIONING FOLDED FIBERGLASS MAT RAPID RUNWAY REPAIR (RRR) KIT

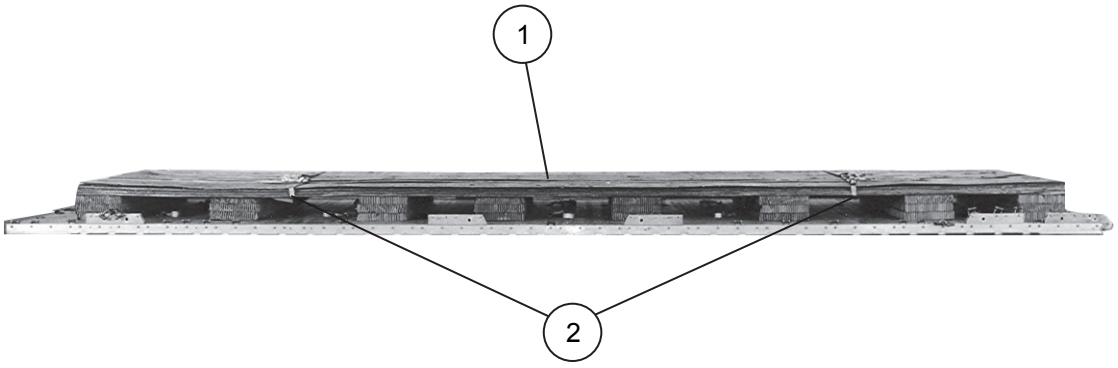
2-37. Lift one section of the folded fiberglass mat RRR kit by using a combination of tie-down lashings as shown in Figure 2-36. Position the mats on the honeycomb stacks as shown in Figures 2-37 through 2-39.

Notes.
1. This drawing is not to scale.
2. All dimensions are in feet.



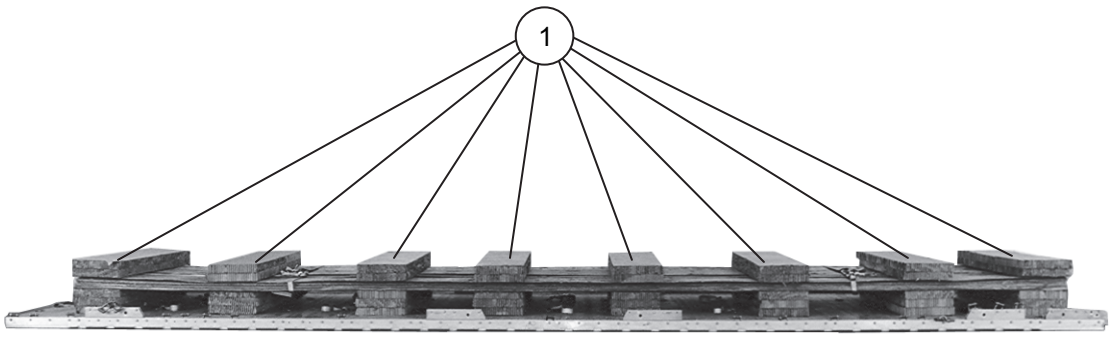
1. Using a forklift, place the section to be lifted on adequate dunnage. (not shown)
2. Form a 30-foot lashing and pass around the center of the matting.
3. Evenly space and position two 15-foot lashings on each end of the mat. Place the D-rings under the mat 7 feet from the ends.
4. Run a 15-foot lashing on each end of the mat through the D-rings of the lashings in step 3. Connect the running end of the lashing to its own D-ring forming a loop around the mat. Attach the running ends of the lashings in step 3 to the looped lashing with D-rings keeping the ends evenly spaced.
5. Form two 30-foot lashings and connect the running end of one of the 30-foot lashings on the left side at the point where the lashings in step 3 and 4 connect. Repeat the steps for the right side.
6. Place the centers of all the 30-foot lashings on a crane and lift the mat. Adjust the lashings as needed to balance evenly.

Figure 2-36. Lifting Lashings Positioned



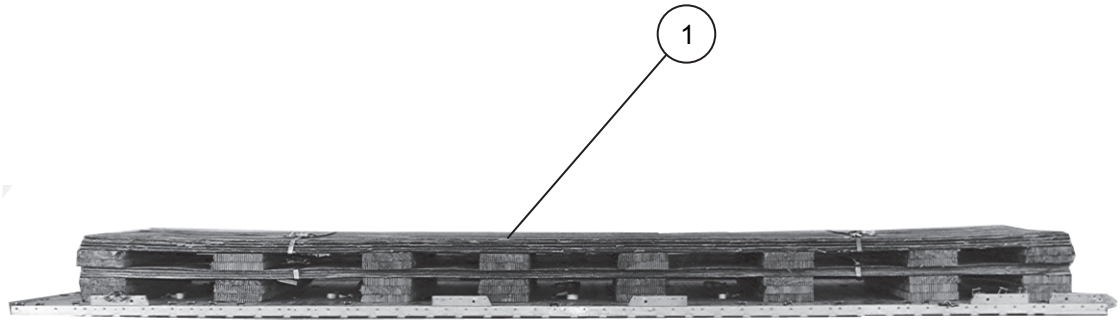
1. Position the matting section on the platform centered on the honeycomb.
2. The lifting lashings can be left on the matting to assist in recovery.

Figure 2-37. Matting Section Positioned on Honeycomb Stacks



1 Cut and glue eight stacks of honeycomb each with two layers measuring 18 by 75 inches. Place them on top of the matting section one directly over the stacks positioned on the platform.

Figure 2-38. Second Honeycomb Stacks Positioned on Matting



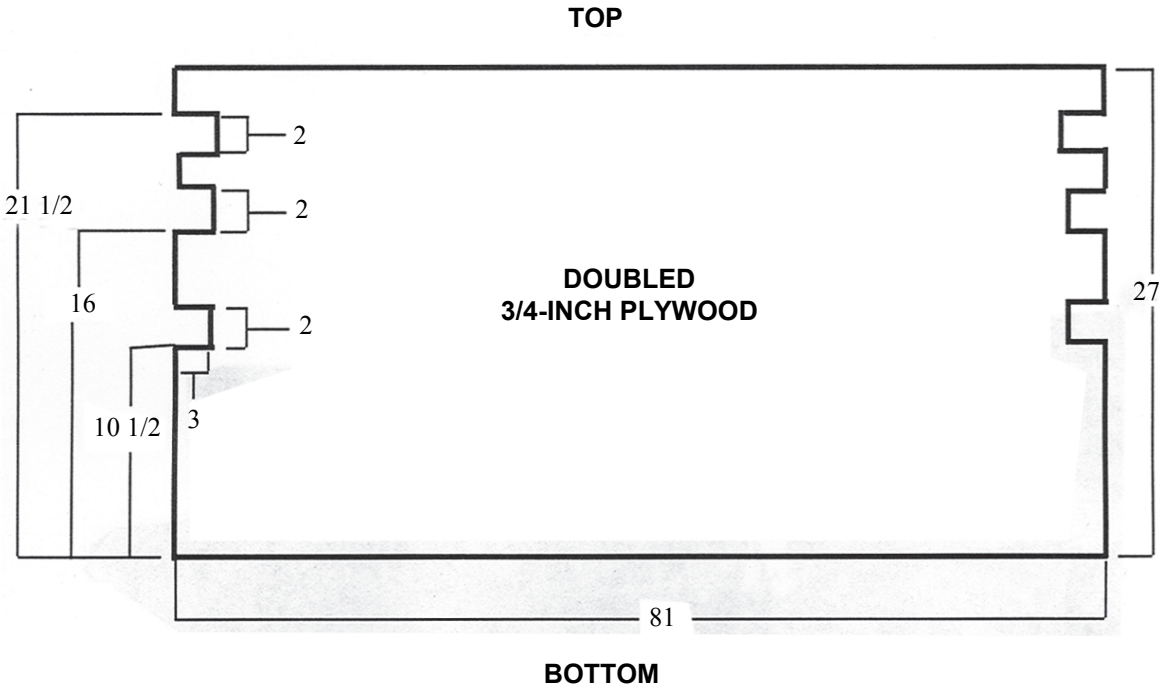
1 Lift and position another section of matting as outlined in Figures 2-36 and 2-37.

Figure 2-39. Second Matting Section Positioned

BUILDING, POSITIONING AND SECURING FRONT AND REAR ENDBOARDS

2-38. Build the front and rear endboards as shown in Figure 2-40. Place a piece of honeycomb 36 inches by 75 inches, flat behind, centered and flush with the endboards as shown in Figure 2-42. Each endboard consists of double thickness of ¾-inch plywood. Nail the outside layer to the inside layer of each endboard. Position and secure the endboards as shown in Figures 2-42, 2-43, 2-44, and 2-46.

Notes.
1. This drawing is not to scale.
2. All dimensions are in inches.

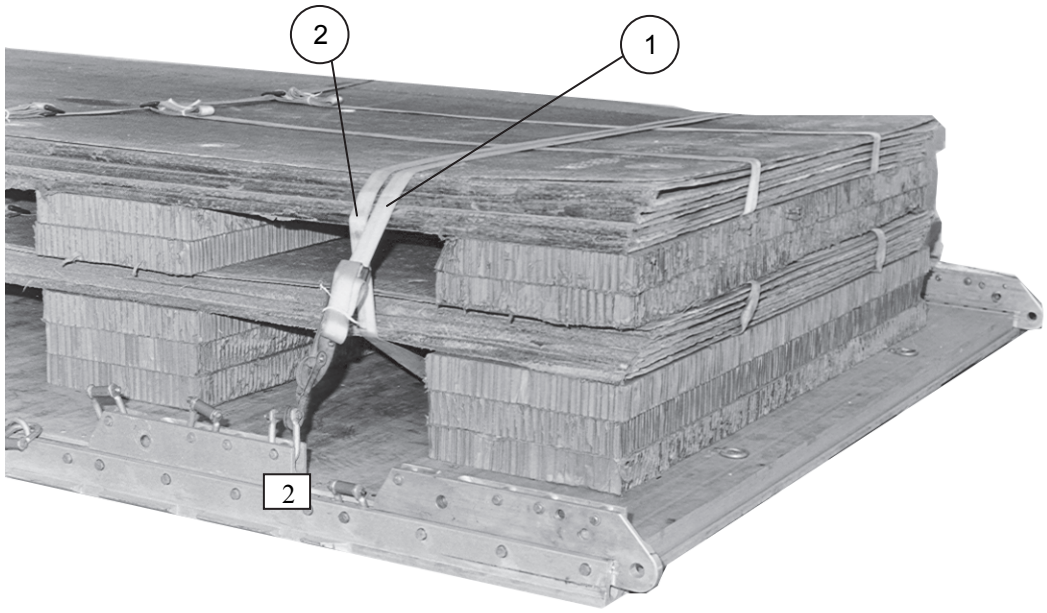


Item Number	*Pieces*	*Width (Inches)*	*Length (Inches)*	*Material*
1	2	27	81	¾-inch plywood
2	2	27	81	¾-inch plywood

Figure 2-40. Materials Required to Build Endboards

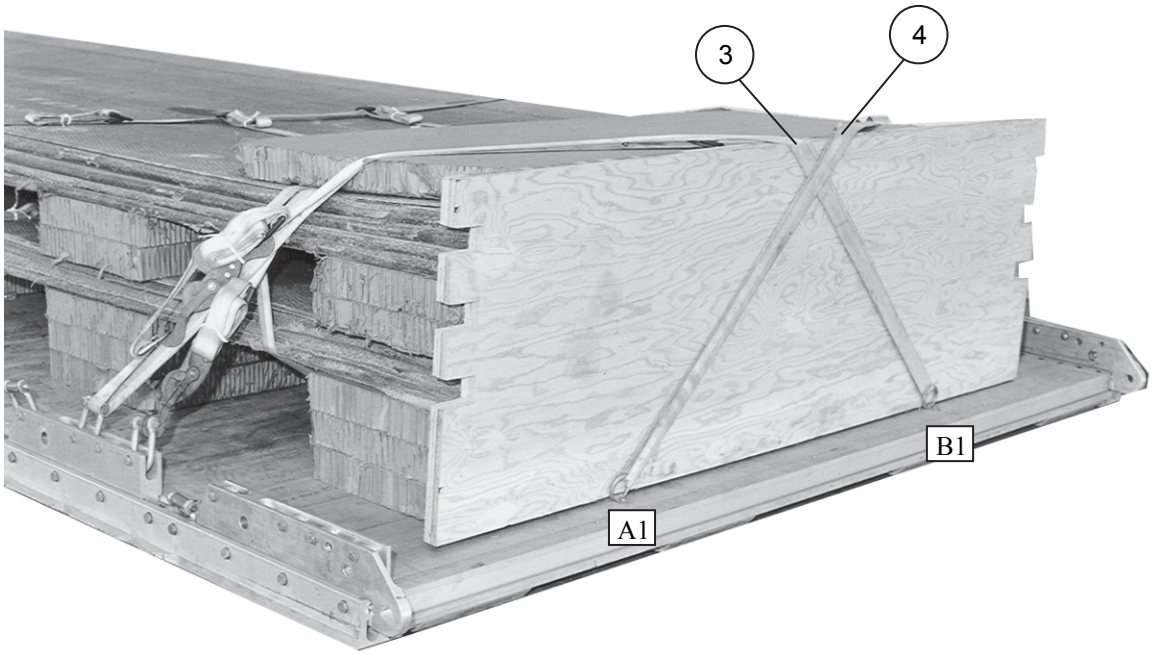
INSTALLING LASHINGS

2-39. Lash the load to the platform as shown in Figures 2-41 through 2-46. Form the 30-foot and 45-foot lashings according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.



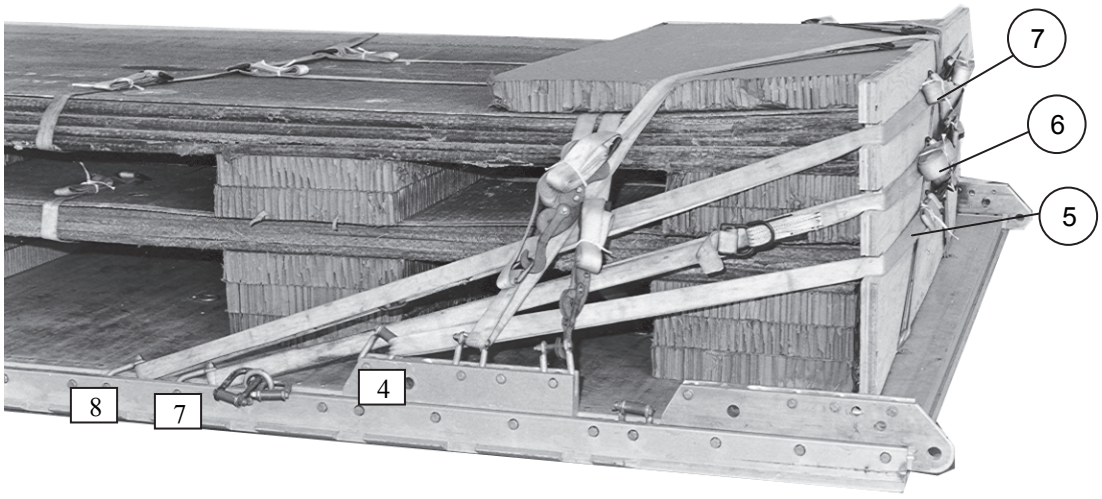
Lashing Number	*Tiedown Clevis/Ring Number*	*Instructions*
1	B2 to 2	Pass the pre-positioned lashing over the top of the matting from tiedown ring to clevis.
2	A2 to 2A	Pass the pre-positioned lashing over the top of the matting from tiedown ring to clevis.

Figure 2-41. Lashings 1 and 2 Installed



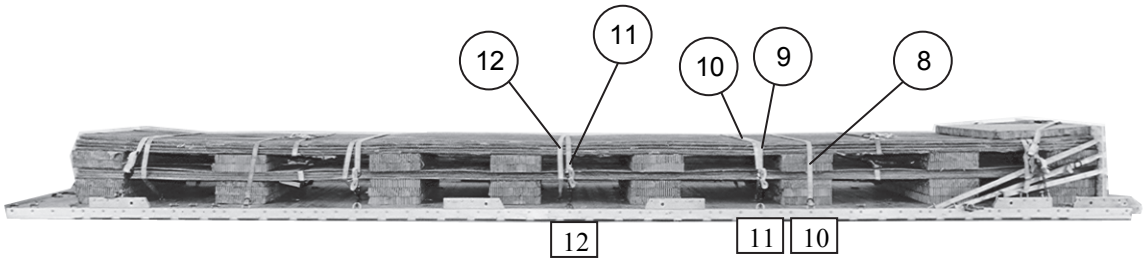
Lashing Number	*Tiedown Clevis/Ring Number*	*Instructions*
3	3 to B1	Pass the 30-foot lashing from clevis 3, over the top of the endboard through tiedown ring B1 and back to the clevis.
4	3A to A1	Pass the 30-foot lashing from clevis 3A, over the top of the endboard through tiedown ring A1 and back to the clevis.

Figure 2-42. Lashings 3 and 4 Installed



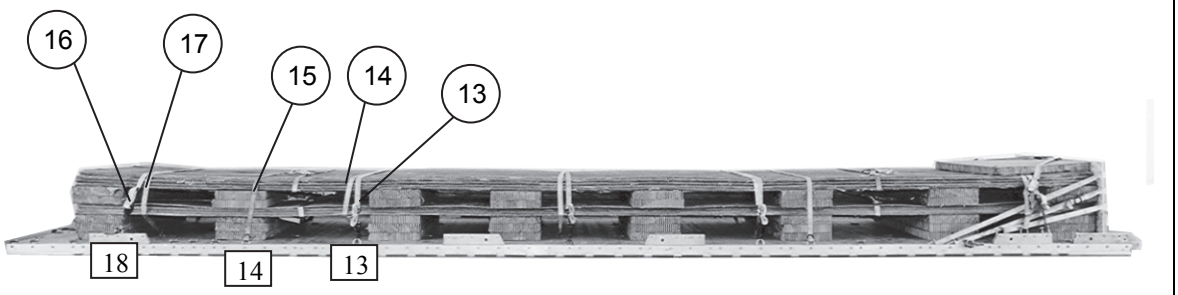
Lashing Number	*Tiedown Clevis Number*	*Instructions*
5	4 to 4A	Pass the 30-foot lashing from clevis 4, through the bottom notch of the endboard to clevis 4A.
6	7 to 7A	Pass the 45-foot lashing from clevis 7, through the middle notch of the endboard to clevis 7A.
7	8 to 8A	Pass the 45-foot lashing from clevis 8, through the top notch of the endboard to clevis 8A.

Figure 2-43. Lashings 5 through 7 Installed



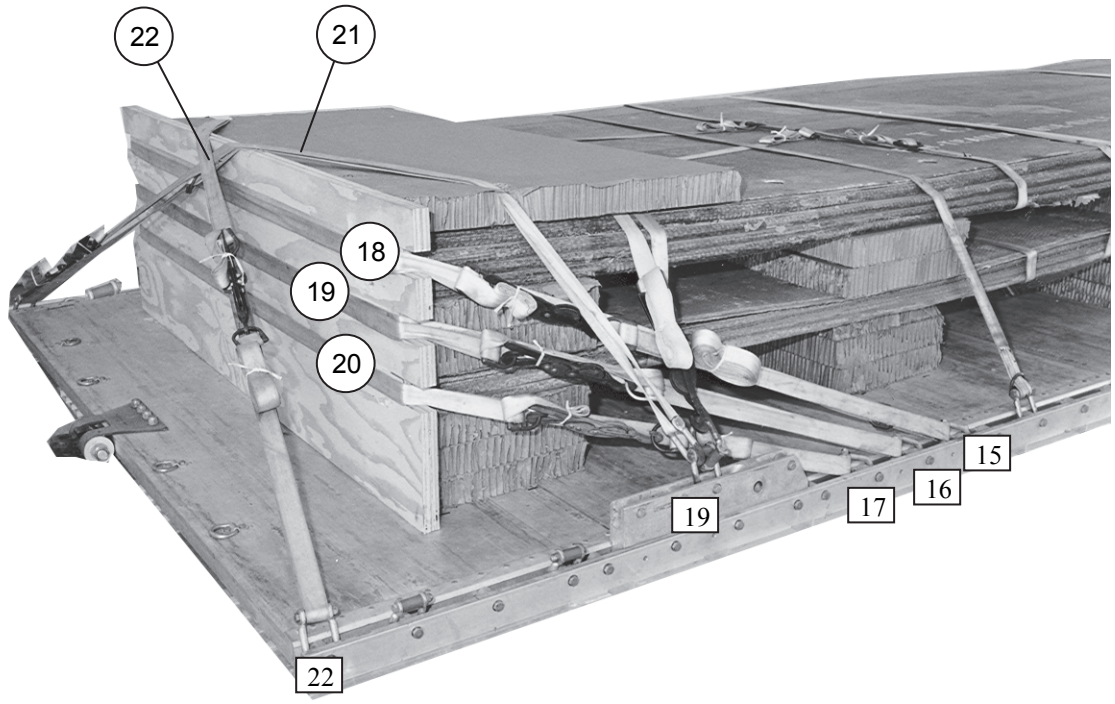
Lashing Number	*Tiedown Clevis/Ring Number*	*Instructions*
8	10 to 10A	Pass a 15-foot lashing through clevis 10 and its own D-ring over the matting to clevis 10A.
9	B6 to 11	Pass the pre-positioned lashing from tiedown ring B6 over the matting to clevis 11.
10	A6 to 11A	Pass the pre-positioned lashing from tiedown ring A6 over the matting to clevis 11A.
11	B9 to 12	Pass pre-positioned lashing from tiedown ring B9 over the matting to clevis 12.
12	A9 to 12A	Pass the pre-positioned lashing from tiedown ring A9 over the matting to clevis 12A.

Figure 2-44. Lashings 8 and 12 Installed



Lashing Number	*Tiedown Clevis/Ring Number*	*Instructions*
13	B12 to 13	Pass the pre-positioned lashing from tiedown ring B12 over the matting to clevis 13.
14	A12 to 13A	Pass the pre-positioned lashing from tiedown ring A12 over the matting to clevis 13A.
15	14 to 14A	Pass s 15-foot lashing through clevis 14 and its own D-ring over the matting to clevis 14A.
16	B15 to18	Pass the pre-positioned lashing from tiedown ring B15 over the matting to clevis 18.
17	A15 to 8A	Pass the pre-positioned lashing from tiedown ring A15 over the matting to clevis 18A.

Figure 2-45. Lashings 13 through 17 Installed

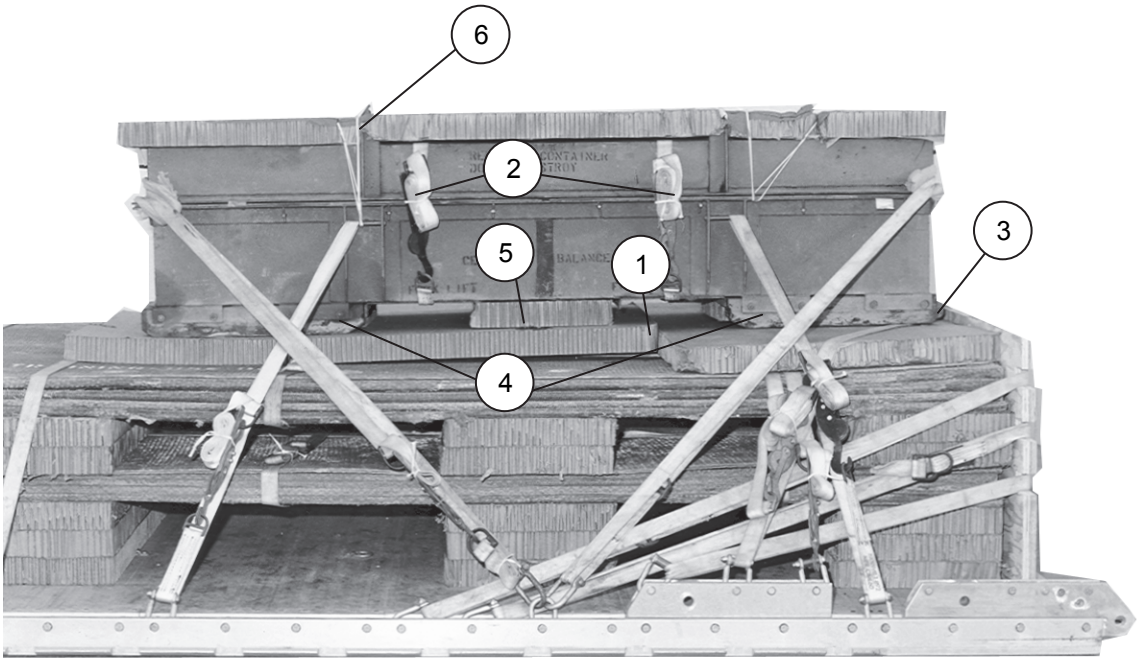


Lashing Number	*Tiedown Clevis Number*	*Instructions*
18	15 to 15A	Pass a 30-foot lashing through clevis 15, through the top notch of the endboard to clevis 15A.
19	16 to 16A	Pass a 30-foot lashing through clevis 16, through the middle notch of the endboard to clevis 16A.
20	17 to 17A	Pass a 30-foot lashing through clevis 15 and through the bottom notch of the endboard to clevis 17A.
21	19 to 22A	Pass the 30-foot lashing through clevis 19 and over the top of the endboard to clevis 22A (Do not tighten).
22	19A to 22	Pass the 30-foot lashing through clevis 19A and over the top of the endboard to clevis 22 (Do not tighten).

Figure 2-46. Lashings 18 through 22 Installed

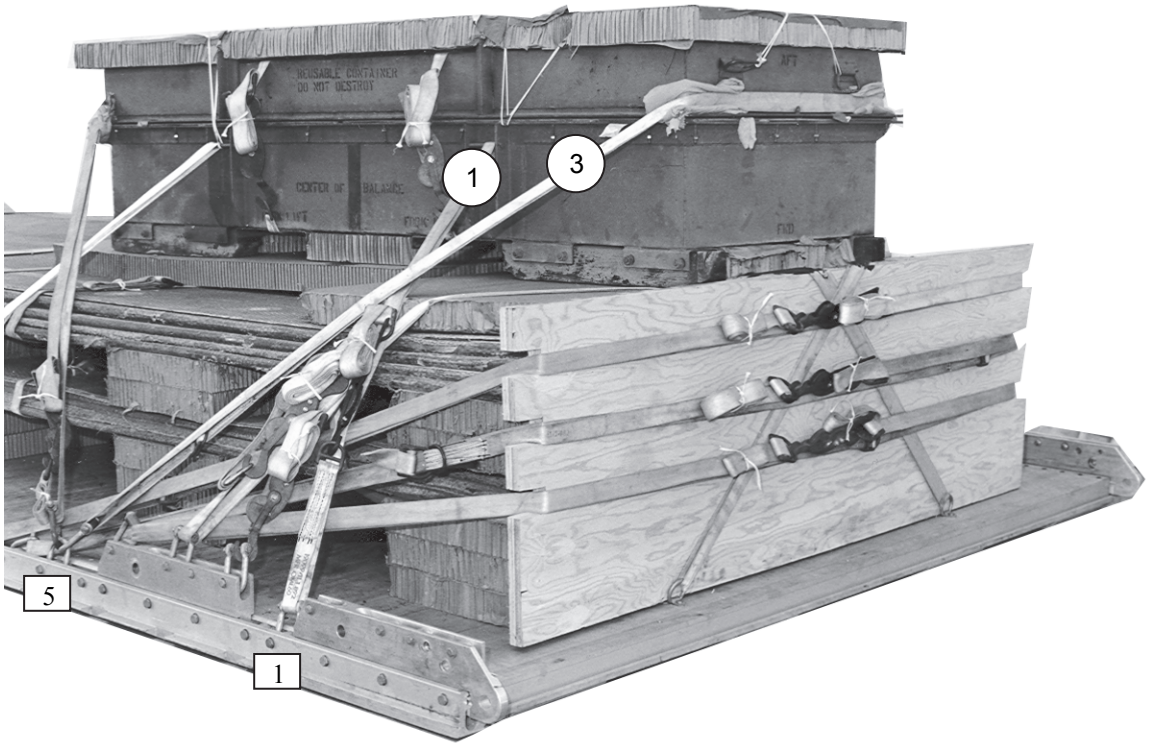
RIGGING ACCOMPANYING LOAD

2-40. Rig the accompanying load as shown in Figures 2-47 through 2-51.



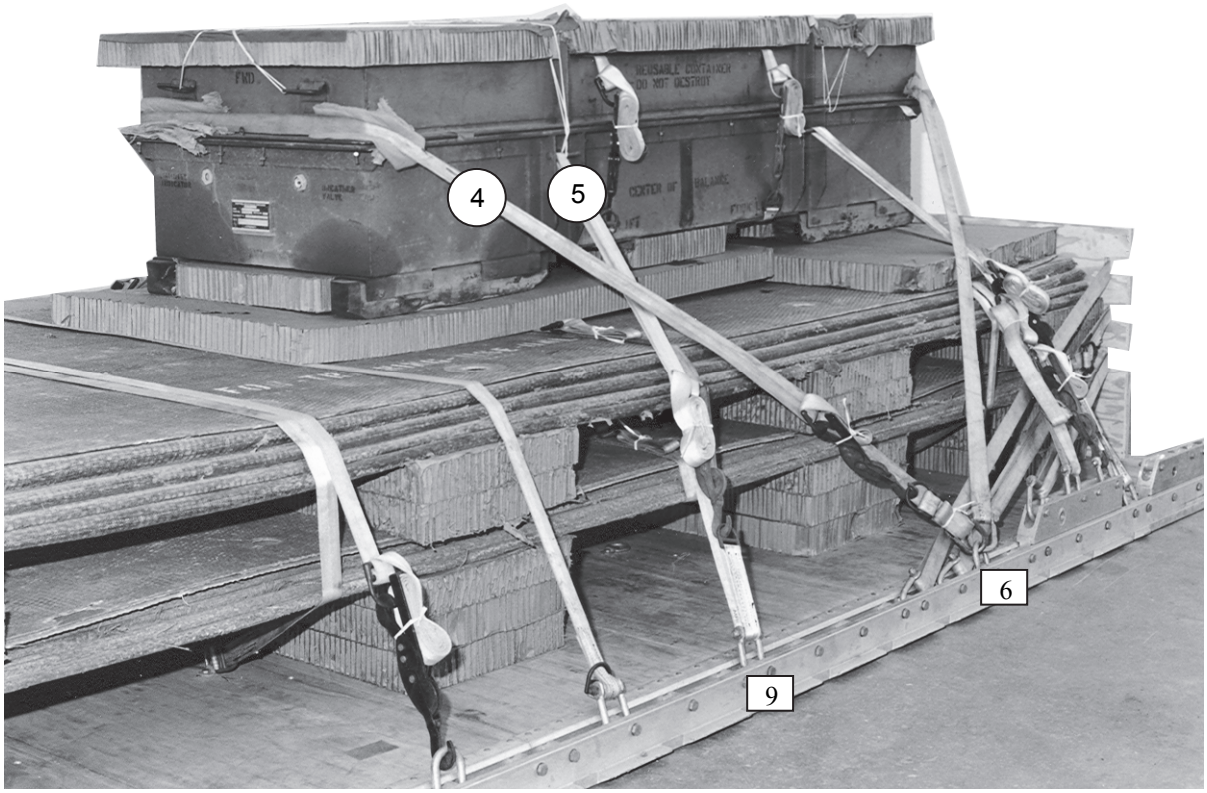
1. Cut and position a 36- by 68-inch piece of honeycomb on top of the matting long ways and flush with the honeycomb against the endboard.
2. Secure the equipment box closed with two 15-foot tiedown lashings.
3. Position the equipment box centered and long ways, 4 ½ inches from the endboard on top of the honeycomb.
4. Cut two 20- by 24-inch pieces of honeycomb. Place one piece under the front and one piece under the rear of the equipment box.
5. Cut one 16- by 27-inch piece of honeycomb. Place it under the center of the box and glue it to the honeycomb positioned on top of the matting.
6. Place a 36- by 96-inch piece of honeycomb on top of the box and secure in place with type III nylon cord. Tape the edges of the honeycomb where type III nylon cord comes in contact with it.

Figure 2-47. Equipment Box Positioned



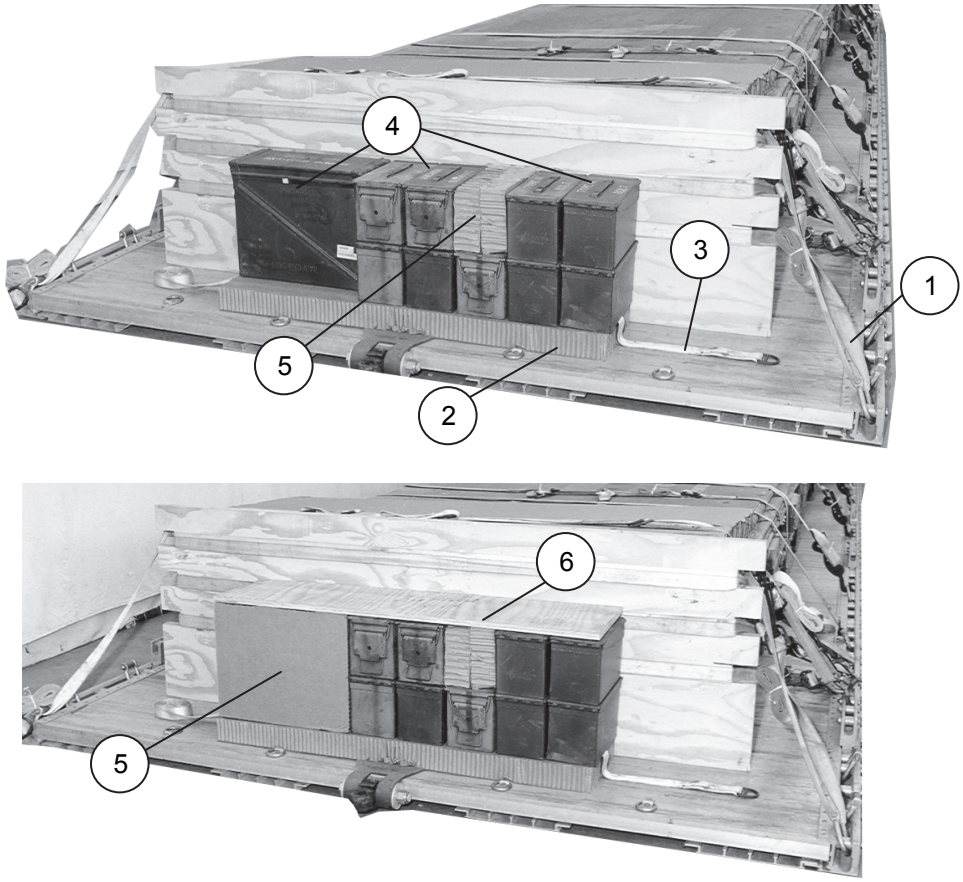
Lashing Number	*Tiedown Clevis Number*	*Instructions*
1	1	Pass the 15-foot lashing through the right front carrying handle.
2	1A	Pass the 15-foot lashing through the left front carrying handle.
3	5 to 5A	Pass a 30-foot lashing through clevis 5 and up and around the front end of the box (over lip of lid) to clevis 5A. Pad with cellulose wadding.

Figure 2-48. Equipment Box Secured



Lashing Number	*Tiedown Clevis Number*	*Instructions*
4	6 to 6A	Pass a 30-foot lashing through clevis 6 and up and around the rear end of the box (over lip of lid) to clevis 6A. Pad with cellulose wadding.
5	9	Pass a 15-foot lashing through the right rear carrying handle.
6	9A	Pass a 15-foot lashing through the left rear carrying handle.

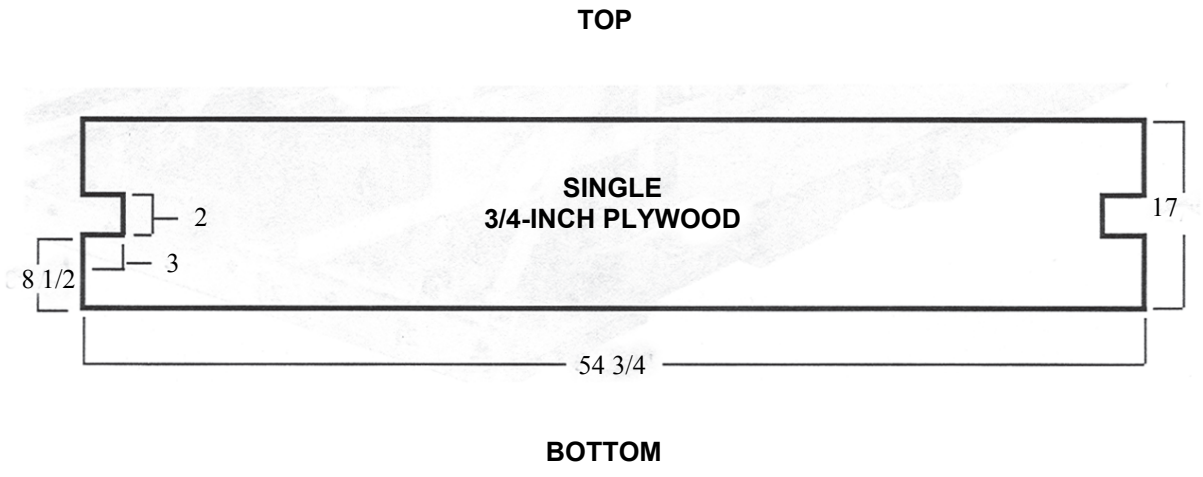
Figure 2-48. Equipment Box Secured (Continued)



1. Loosen lashings 21 and 22.
2. Place a 12- by 48-inch piece of honeycomb centered and flush with endboard.
3. Place a 15-foot tiedown lashing on top of the honeycomb.
4. Place parts boxes on the honeycomb.
5. Fill gaps with honeycomb as needed.
6. Place a 12- by 48-inch piece of ¾-inch plywood on top of the parts boxes.

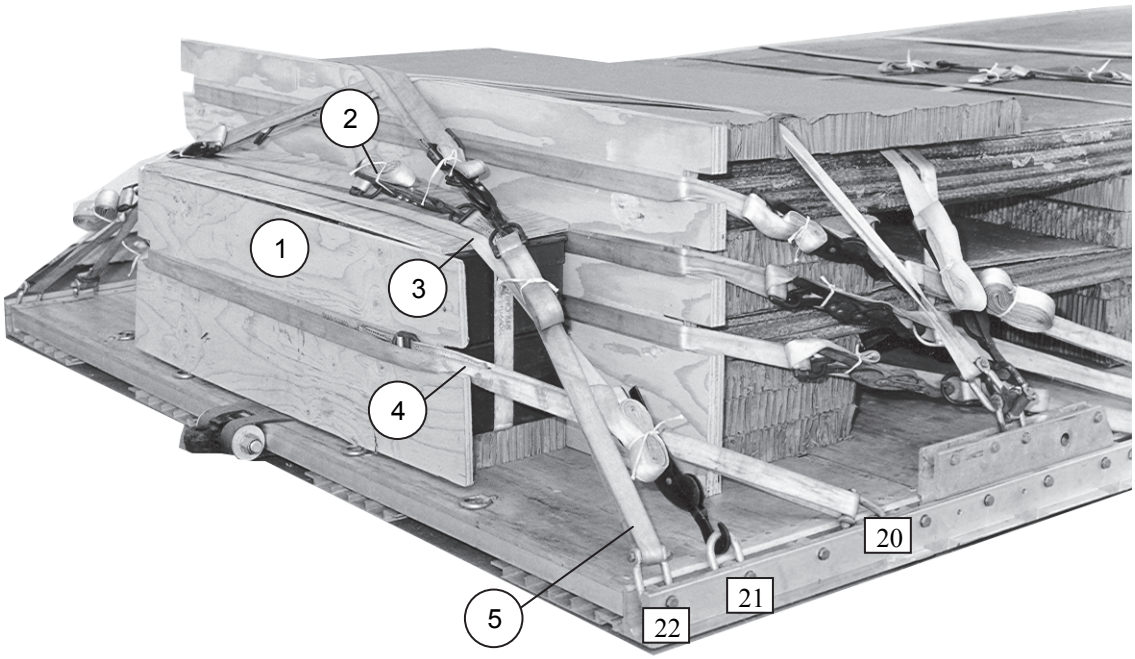
Figure 2-49. Parts Boxes Positioned

Notes.
1. This drawing is not to scale.
2. All dimensions are in inches.



Item Number	*Pieces*	*Width (Inches)*	*Length (Inches)*	*Material*
1	1	17	54 3/4	¾-inch plywood

Figure 2-50. Material Required to Build Parts Boxes Endboard

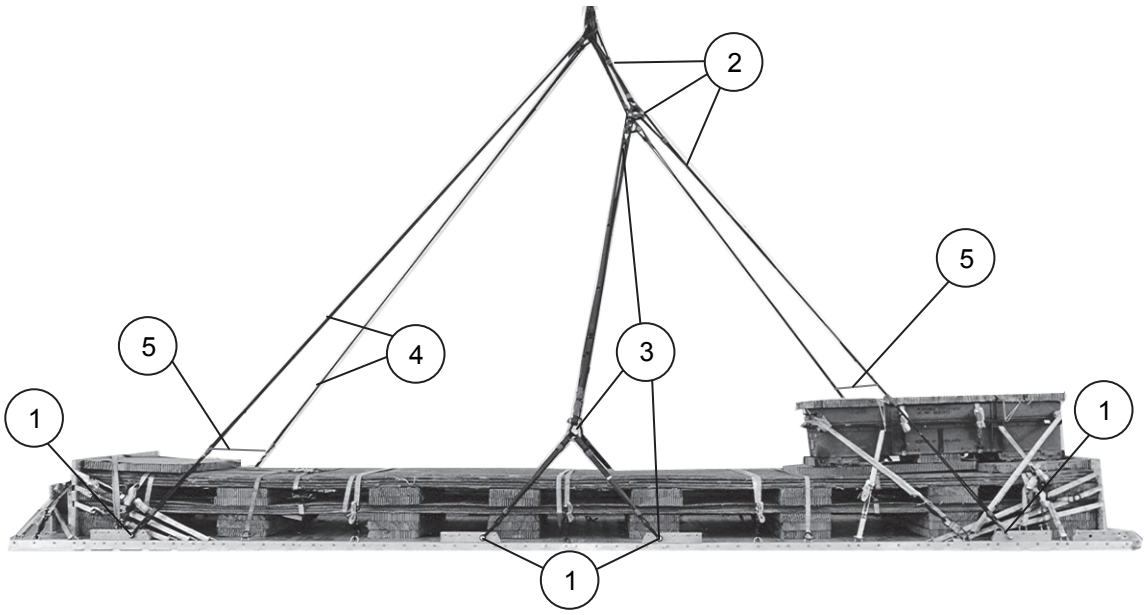


1. Place the parts boxes endboard centered and flush against the parts boxes.
2. Secure the prepositioned lashing placed in Figure 2-49, on top of the plywood.
3. Run a lashing through clevis 21A and its' own D-ring and over the top of the parts boxes and clevis 21.
4. Run a 30-foot lashing through the notch of the endboard and clevis 20 and 20A.
5. Secure lashings 21 and 22.

Figure 2-51. Parts Boxes Secured

INSTALLING AND SAFETYING SUSPENSION SLINGS

2-41. Install and safety the suspension slings according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 and as shown in Figure 2-52.

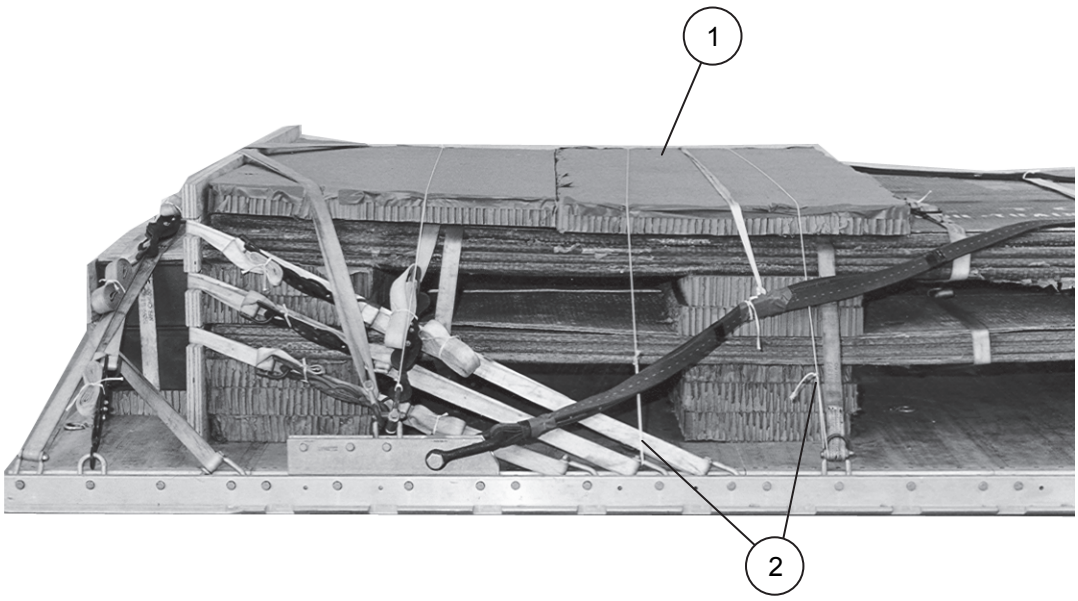


1. Attach a large clevis to the platform suspension links.
2. Attach a 16-foot (2-loop), type XXVI nylon webbing sling to each center suspension link and to each front suspension link. Attach a 3-foot (2-loop), type XXVI nylon sling to the three point link and each 16-foot (2-loop) slings.
3. Attach a 3-foot (2-loop), type XXVI nylon suspension sling to each center suspension link and join them with a large clevis. Attach and half a 20-foot (2-loop), type XXVI nylon suspension sling to the large clevis and three point link.
4. Attach a 20-foot (2-loop), type XXVI nylon suspension sling to each of the rear suspension links.
5. Raise the slings and safety the two front and rear suspension slings with a modified deadmans tie according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.

Figure 2-52. Suspension Slings Installed

STOWING CARGO PARACHUTES

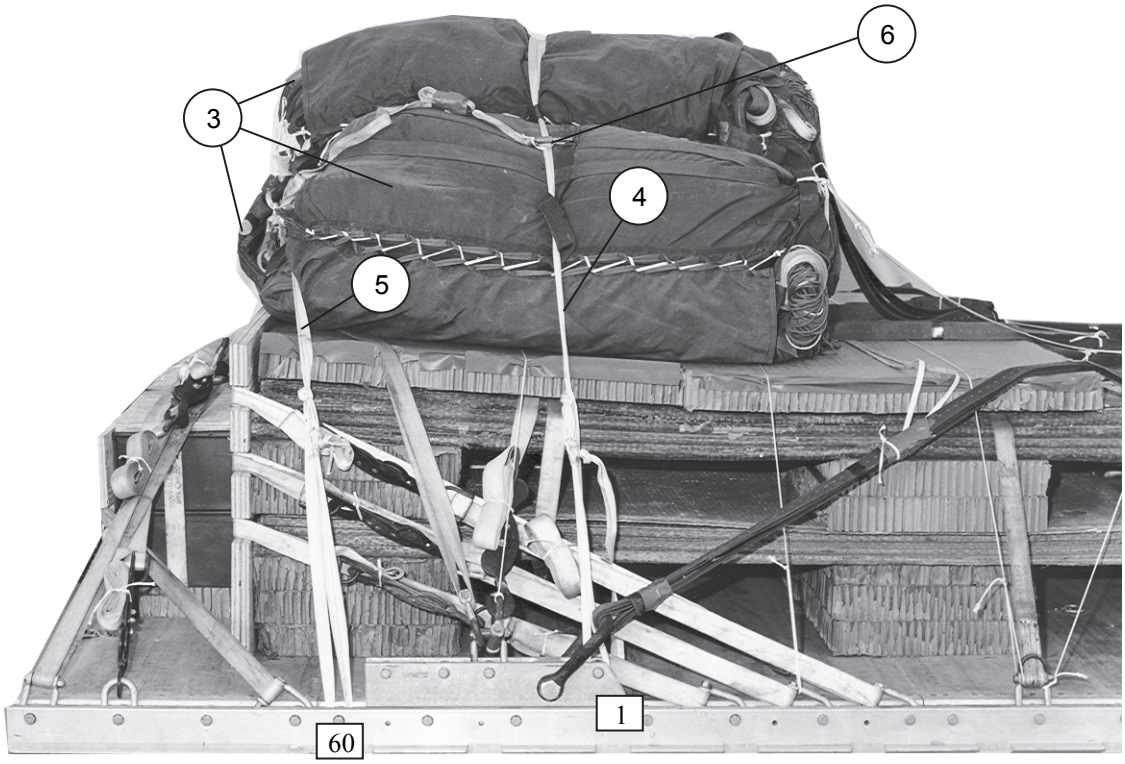
2-42. Prepare, stow and restrain three G-11B cargo parachutes on the honeycomb according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 and as shown in Figure 2-53.



(1) Place a 36- by 75-inch piece of honeycomb on top of the matting against the rear piece of previously placed honeycomb. Tape the edges of the honeycomb where type III nylon cord comes in contact with it.

(2) Secure in place with three lengths of type III nylon cord.

Figure 2-53. Cargo Parachutes Stowed



3 Stow three G-11B cargo parachutes according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.

4 Run one length of type VIII nylon webbing from bushing 1 on the right rear suspension link through the center carrying handles and bushing 1A on the left rear suspension link and secure.

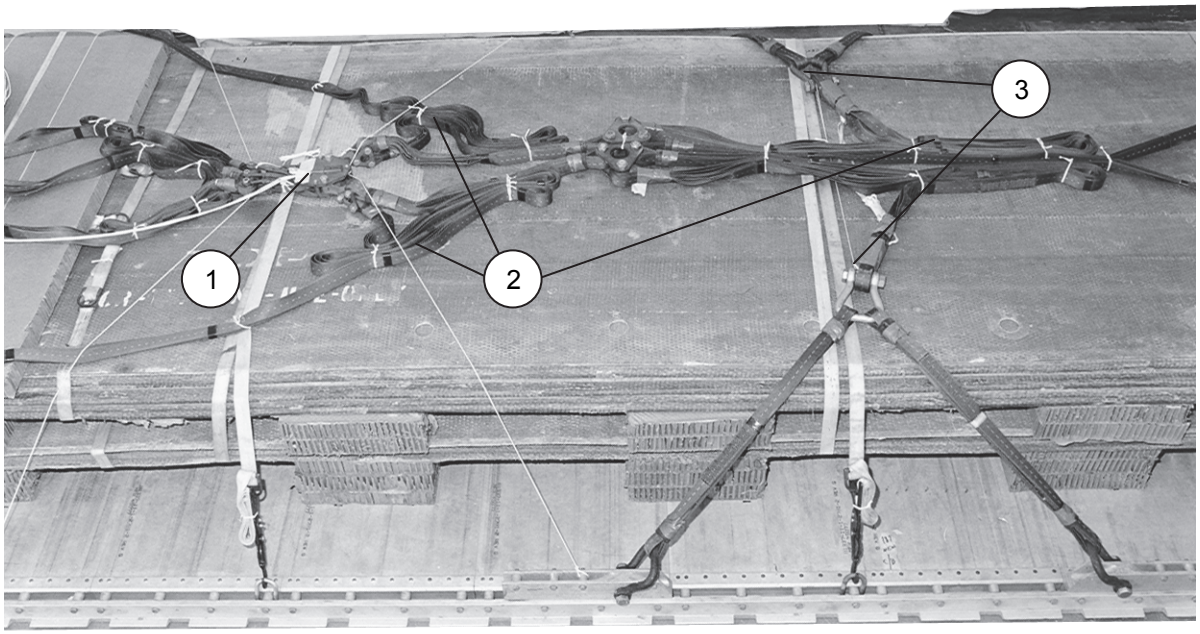
5 Run one length of type VIII nylon webbing from bushing 60 on the right side of the platform through the rear carrying handles and bushing 60A on the left side of the platform and secure.

6 Install the multicut parachute release knives according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.

Figure 2-53. Cargo Parachutes Stowed (Continued)

INSTALLING RELEASE SYSTEM

2-43. Prepare and install the M-1 release system according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 and as shown in Figure 2-54.

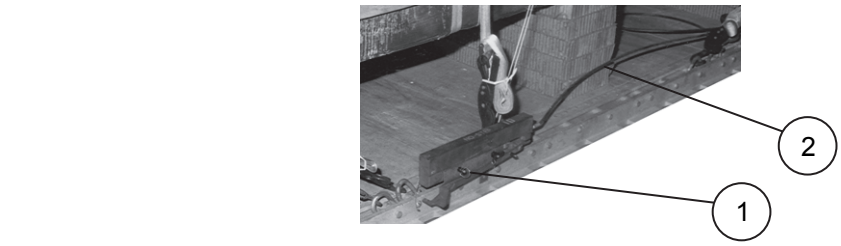


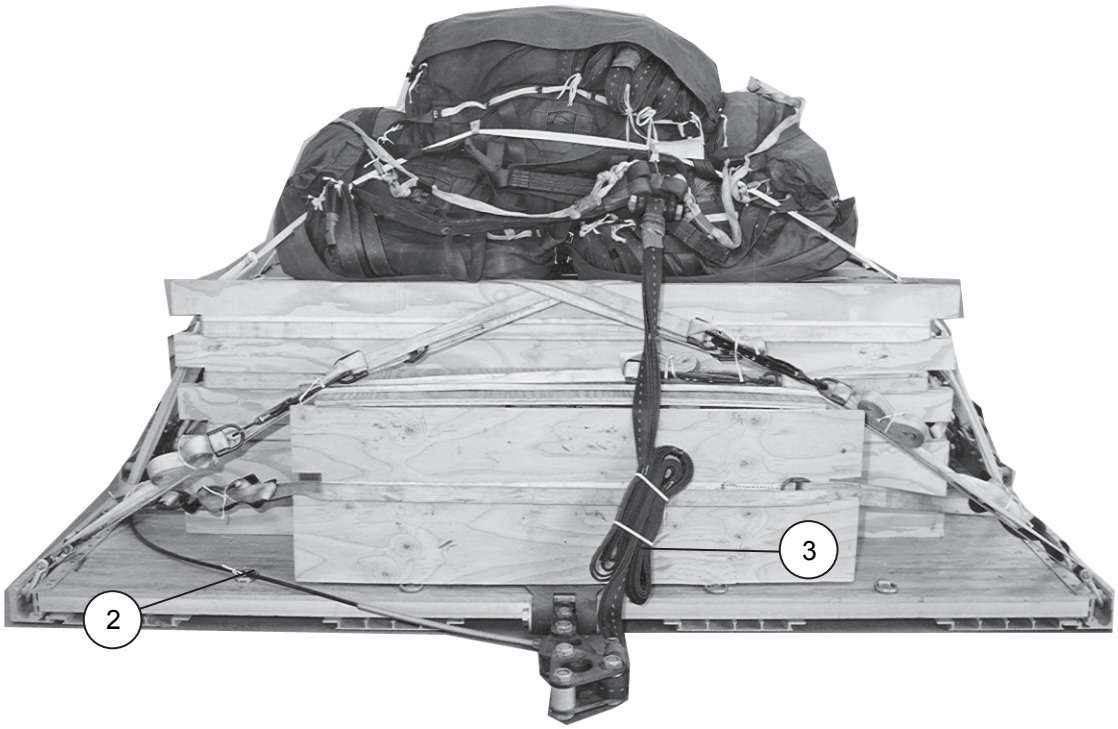
1. Prepare an M-1 cargo parachute release system according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5. Place the M-1 release on the matting and attach the release to the suspension slings and the cargo parachutes according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.
2. S-fold and tie any excess in the suspensions slings with one turn of type I, ¼-inch cotton webbing.
3. Safety tie the large clevises with type III nylon cord.

Figure 2-54. Release System Installed

INSTALLING THE EXTRACTION SYSTEM

2-44. Install the extraction system according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 and as shown in Figure 2-55.





1. Install the components of the extraction force transfer coupling (EFTC) according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5. Use the rear mounting holes for the EFTC brackets.

2. Install a 28-foot EFTC cable according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 and safety the cable to convenient places on the platform with one turn of type I, 1/4-inch cotton webbing.

3. Attach a 9-foot (2-loop), type XXVI nylon sling according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 to be used as a deployment line. S-fold the excess and tie it in two places with type I, 1/4-inch cotton webbing.

Figure 2-55. Extraction System Installed

PLACING EXTRACTION PARACHUTE

2-45. Select the extraction parachute and extraction line needed using the extraction line requirements table in TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5. Place the extraction parachute and line on the load for installation in the aircraft.

INSTALLING PROVISIONS FOR EMERGENCY RESTRAINTS

2-46. Select and install the provisions for the emergency aft restraints according to the emergency aft restraint requirements table in TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.

MARKING RIGGED LOAD

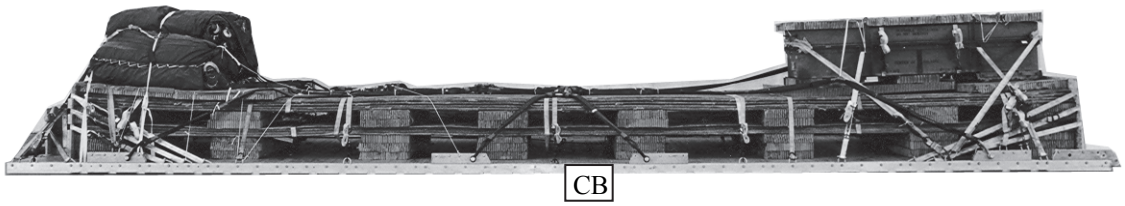
2-47. Mark the rigged load according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5, and as shown in Figure 2-56. Comply with the Shipper's requirements for Declaration of Dangerous/Hazardous Goods in accordance with AFMAN 24-204 (I)/TM 38-250/NAVSUP PUB 505/MCOP4030.191/DLAI 4145.3.. If the load varies from the one shown, the weight, height, CB, and parachute requirements must be recomputed.

EQUIPMENT REQUIRED

2-48. Use the equipment listed in Table 2-4 to rig this load.

CAUTION

Make the final rigger inspection required by AR 59-4 and TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 before the load leaves the rigging site.



RIGGED LOAD DATA

Weight: Load shown	13,260 pounds
Maximum Load Allowed	13,500 pounds
Height	59 1/2 inches
Width	108 inches
Overall Length	402 inches
Overhang: Front	0 inches
Rear	0 inches
Center of Balance (from front edge of the platform)	189 inches
Extraction System with 28-foot cable (adds 18 inches to length of platform)	EFTC

Figure 2-56. Rapid Runway Repair Kit-ALPHA Rigged on a 32-Foot, Type V Platform for Low-Velocity Airdrop

Table 2-4. Equipment Required for Rigging Rapid Runway Repair Kit-ALPHA Rigged on a 32-Foot, Type V Platform for Low-Velocity Airdrop

National Stock Number	*Item*	*Quantity*
8040-00-273-8713	Adhesive, paste, 1-gallon	As required
	Clevis, suspension:	
4030-00-678-8562	3/4-inch (medium) emergency restraint	8
4030-00-090-5354	1-inch (large)	15
4020-00-240-2146	Cord, nylon, type III	As required
1670-00-157-6527	Coupling, airdrop, extraction force transfer with 28-foot cable	1
1670-00-360-0328	Cover, clevis, large	8
8135-00-664-6958	Cushioning material, packaging, cellulose wadding	As required
8305-00-191-1101	Felt, 1/2-inch thick	As required
1670-01-183-2678	Leaf, extraction line (line bag) (add 2 for C-17)	2
	Line, extraction, type XXVI nylon webbing:	
1670-01-062-6313	60-foot (3-loop), type XXVI	1
1670-01-107-7615	140-foot (3-loop), type XXVI	1
1670-01-064-4452	60-foot (1-loop), type XXVI for C-17 drogue line	1
1670-01-493-6418	Link assembly, two-point:	3
1670-01-307-0155	Three-point	2
5315-00-010-4657	Nail, steel wire, common 6d	As required
5315-00-010-4661	Nail, steel wire, common 10d	As required
1670-00-753-3928	Pad, energy-dissipating, honeycomb	9 sheets
5530-00-128-4981	Plywood, ¾-inch	3 sheets
	Parachute:	
1670-01-016-7841	Cargo, G-11B	3
1670-01-162-3716	Cargo, extraction, 22-foot	1
1670-01-063-3715	Cargo, extraction, 15-foot for C-17	1
	Platform, airdrop, type V, 32-foot	1
1670-01-353-8425	Bracket assembly, EFTC	1
1670-01-162-2372	Bracket assembly, extraction	1
1670-01-162-2376	Clevis assembly	44
1670-01-247-2389	Suspension link	8
1670-01-162-2381	Tandem link	2
5530-00-128-4981	Plywood, 3/4-inch	3 sheets
1670-01-097-8816	Release, cargo parachute, M-1	1

Table 2-4. Equipment Required for Rigging Rapid Runway Repair Kit-ALPHA Rigged on a 32-Foot, Type V Platform for Low-Velocity Airdrop (Continued)

National Stock Number	*Item*	*Quantity*
	Sling, cargo airdrop:	
1670-01-062-6305	9-foot (4-loop), type XXVI nylon webbing (Deployment)	1
1670-01-062-6301	3-foot (2-loop), type XXVI nylon webbing (Suspension)	6
1670-01-063-7761	16-foot (2-loop), type XXVI nylon webbing (Suspension)	2
1670-01-062-6302	20-foot (2-loop), type XXVI nylon webbing (Suspension)	2
1670-01-062-6302	20-foot (2-loop), type XXVI nylon webbing (For Risers)	6
5340-00-040-8219	Strap parachute release, multicut	2
7501-00-266-5016	Tape, adhesive, 2-inch	As required
7501-00-266-6710	Tape, masking	As required
1670-00-937-0271	Tiedown assembly, 15-foot	48
1670-01-483-8259	Towplate release mechanism (H-block) (C-17)	1
	Webbing:	
8305-00-268-2411	Cotton, 1/4-inch, type I	As required
	Nylon:	
8305-00-082-5752	Tubular, 1/2-inch	As required
8305-00-263-3591	Type VIII webbing	As required

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Chapter 3

Rigging Military Bridges

SECTION I-RIGGING FIVE-BAY, SINGLE-STORY, MEDIUM GIRDER (FIXED) BRIDGE ON A 32-FOOT, TYPE V PLATFORM

DESCRIPTION OF LOAD

3-1. The five-bay, single-story, medium girder (fixed) bridge (Figure 3-1) is rigged on a 32-foot, type V platform with five G-11 parachutes. The unrigged bridge weighs 11,522 pounds. When the bridge is rigged for airdrop, it is 407 inches long, 108 inches wide and 97 inches high.

Notes.
1. The curbs and guide markers are not included in this material.

2. There must be at least eight bridge crew personnel to assist in the rigging of this load.

PREPARING PLATFORM

3-2. Prepare a 32-foot, type V platform according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 and as shown in Figure 3-2.

Note. This drawing is not to scale.

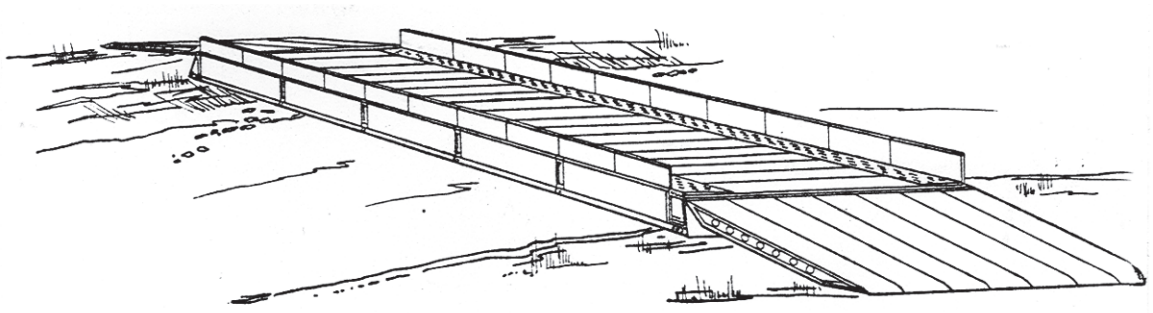
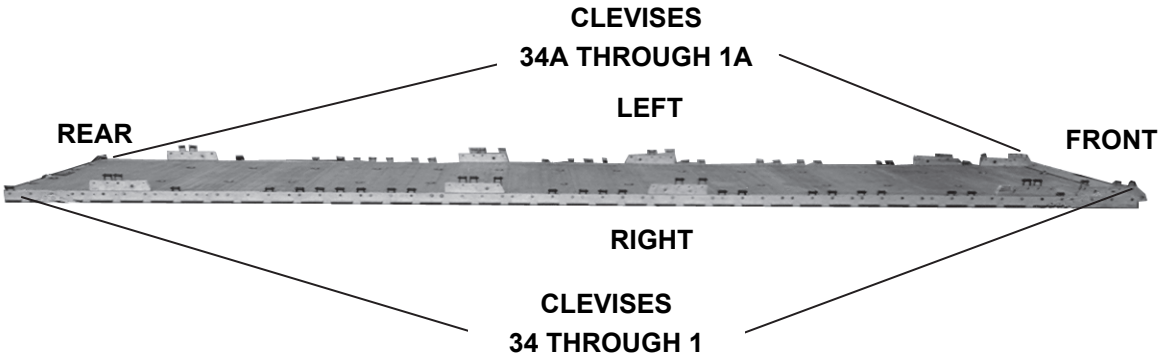


Figure 3-1. Five-Bay, Single-Story, Medium Girder (Fixed) Bridge Assembled



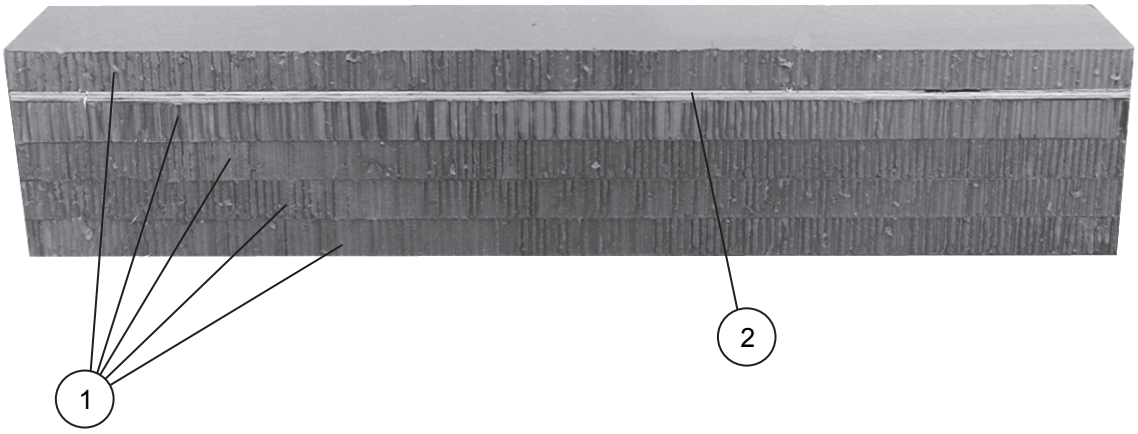
Step.

1. Inspect, or assemble and inspect, a 32-foot, type V platform as outlined in TM 10-1670-268-20&P/TO 13C7-52-22.
2. Install a suspension link in holes 6, 7, and 8 on each side of the platform.
3. Install a suspension link in holes 26, 27, and 28 on each side of the platform.
4. Install a suspension link in holes 37, 38, and 39 on each side of the platform.
5. Install a suspension link in holes 57, 58, and 59 on each side of the platform.
6. Install a tandem link on the front of each platform side rail using holes 1, 2, and 3.
7. Install clevises on bushings 1, 2, and 4 on each front tandem link.
8. Install clevises on bushings 2, and 3 of each first suspension link.
9. Install clevises on bushing 1 and 3 of each second suspension link.
10. Install clevises on bushing 1, 2 and 3 of each third suspension link.
11. Install clevises on bushing 2 and 3 of each fourth suspension link.
12. Starting at the front of the right and left platform side rail, install clevises on the bushings bolted to holes 5, 10, 11, 15, 16, 18, 19, 23, 24, 30, 31, 32, 34, 42, 43, 45, 46, 47, 48, 50, 55, and 64.
13. Starting at the front of the platform, number the clevises 1 through 34 on the right side, and 1A through 34A on the left side.

Figure 3-2. Platform Prepared

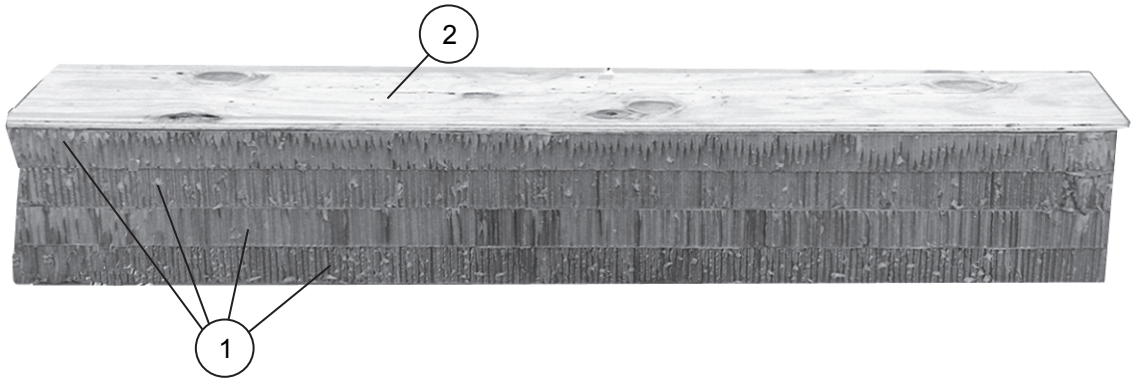
PREPARING AND POSITIONING HONEYCOMB STACKS

3-3. Prepare the honeycomb stacks as shown in Figures 3-3 through 3-5. Position the honeycomb stacks on the platform as shown in Figure 3-6.



1. Form each honeycomb stack using five 12- by 80-inch pieces of honeycomb.
2. Place one ¾- by 12- by 80-inch piece of plywood between layers 4 and 5 of each stack.

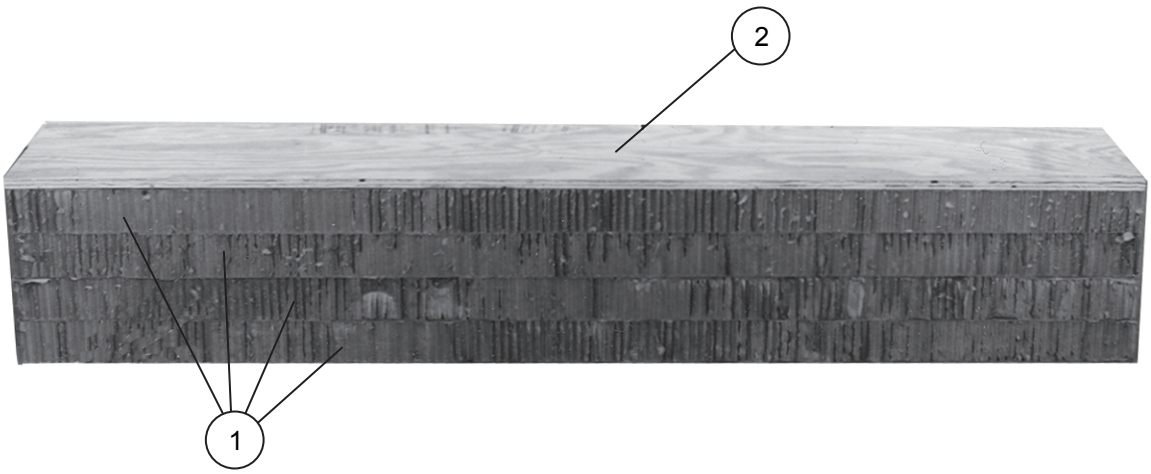
Figure 3-3. Honeycomb Stacks 1, 4, 5, 8, 9, 12, 13, and 16 Prepared



1 Form each honeycomb stack using four 12- by 80-inch pieces of honeycomb.

2 Place one ¾- by 12- by 80-inch piece of plywood on top of each stack.

Figure 3-4. Honeycomb Stacks 2, 3, 6, 7, 10 and 11 Prepared

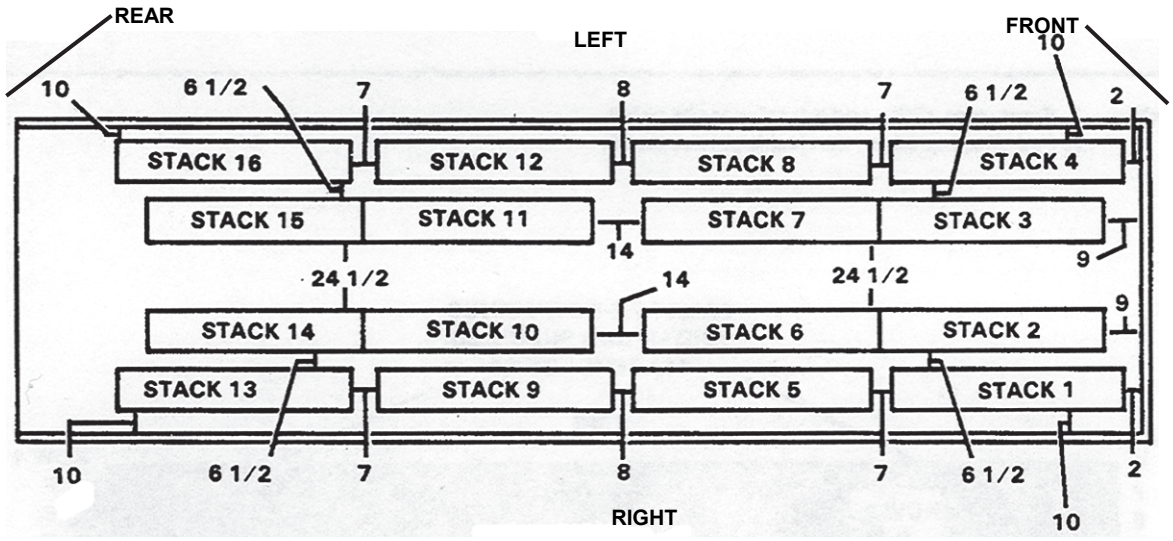


1 Form each honeycomb stack using four 12- by 73-inch pieces of honeycomb.

2 Place one ¾- by 12- by 73-inch piece of plywood on top of each stack.

Figure 3-5. Honeycomb Stacks 14 and 15 Prepared

Notes.
1. This drawing is not to scale.
2. All dimensions are in inches.



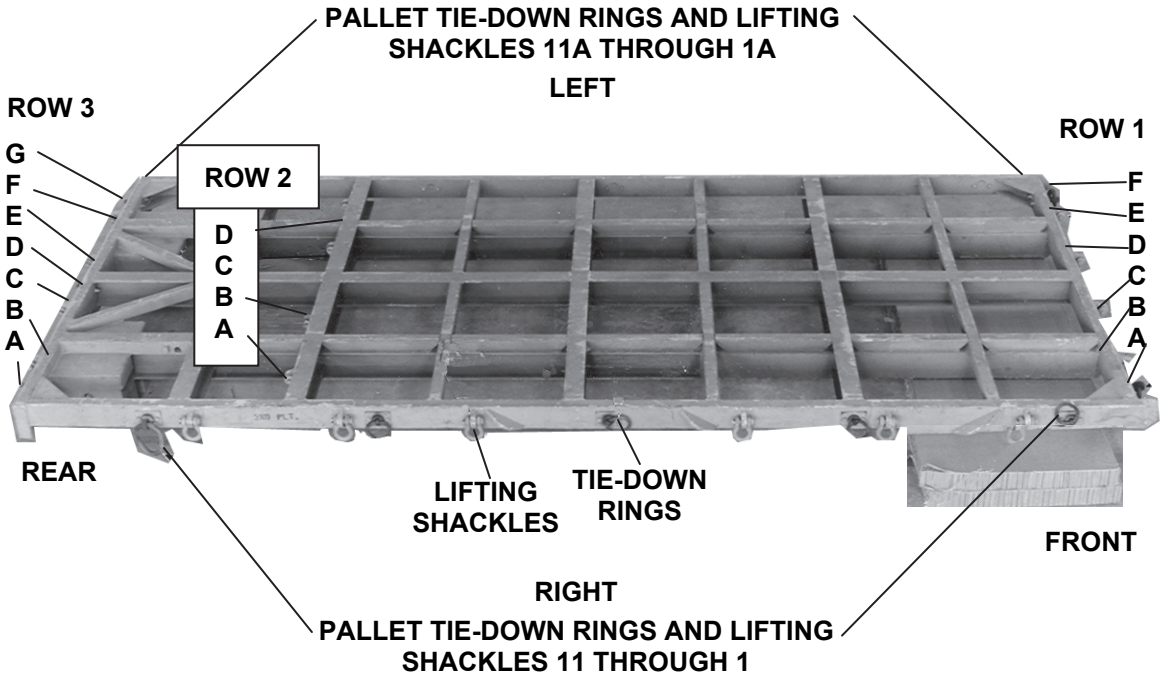
Stack Number	*Position of Stacks on the Platform* **Position stack:**
1	2 inches from the front edge of the platform and 10 inches from the right side rail.
2	9 inches from the front edge of the platform and 6 ½ inches from the left edge of stack 1.
3	9 inches from the front edge of the platform and 24 ½ inches from the left edge of stack 2
4	2 inches from the front edge of the platform and 10 inches from the left side rail.
5	7 inches from the rear edge of stack 1 and 10 inches from the right side rail.
6	Flush against stack 2 and 6 ½ inches from the left edge of stack 5.
7	Flush against stack 3 and 24 ½ inches from the left edge of stack 6.
8	7 inches from the rear edge of stack 4 and 10 inches from the left side rail.
9	8 inches from the rear edge of stack 5 and 10 inches from the right side rail.
10	14 inches from the rear edge of stack 6 and 6 ½ inches from the left edge of stack 9.
11	14 inches from the rear edge of stack 7 and 24 ½ inches from the left edge of stack 10.
12	8 inches from the rear edge of stack 8 and 10 inches from the left side rail.
13	7 inches from the rear edge of stack 9 and 10 inches from the right side rail.
14	Flush against stack 10 and 6 ½ inches from the left edge of stack 13.
15	Flush against stack 11 and 24 ½ inches from the left edge of stack 14.
16	7 inches from the rear edge of stack 12 and 10 inches from the left side rail.

Figure 3-6. Honeycomb Stacks Positioned on the Platform

PREPARING PALLET 1

3-4. Prepare pallet 1 as shown in Figures 3-7 through 3-23.

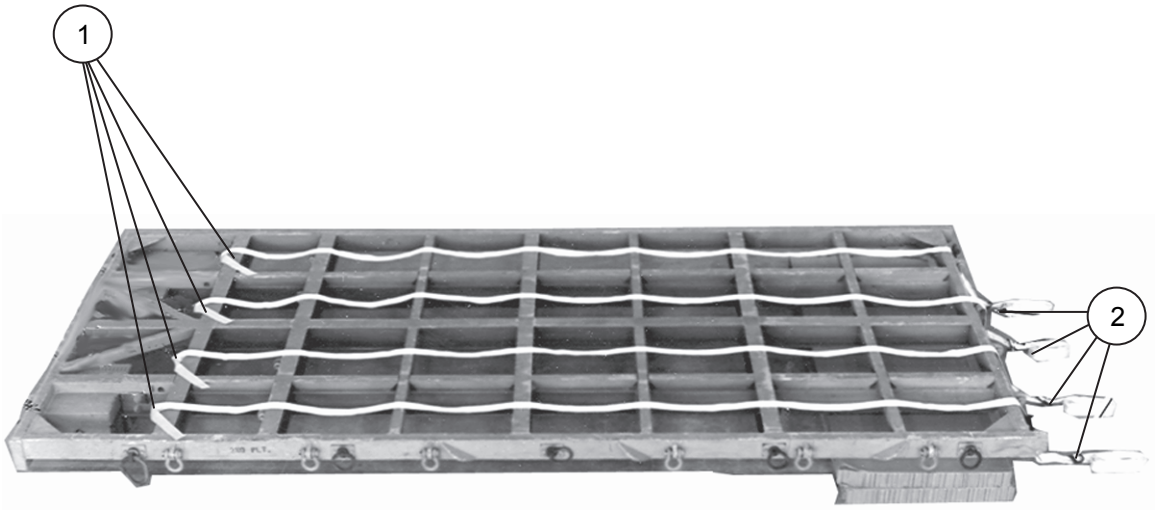
Notes.
1. Front, rear, right and left refer to the pallet.
2. Pad all sharp edges that the lashings may touch.



Step.

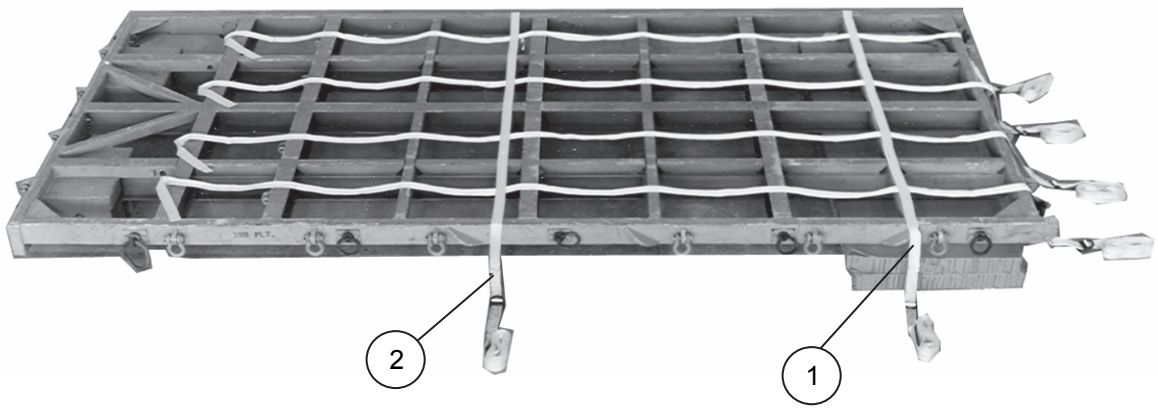
1. Starting at the front of the pallet, number the tie-down rings and lifting shackles bolted to the right side from 1 through 11 and those bolted to the left side 1A through 11A.
2. Starting at the front of the pallet, label row 1 of tie-down rings and lifting shackles from right to left A1 through F1. Label row 2 from right to left A2 through D2. Label row 3 from right to left A3 through G3.
3. Place two 96- by 36-inch pieces of honeycomb under the front of the pallet to keep the pallet level.

Figure 3-7. Pallet 1 Labeled



1. Form four 30-foot lashings according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5. Evenly space the lashings on top of the pallet from front to rear between the pallet rails.
2. Make sure each lashing D-rings are 20 inches from the front edge of the pallet.

Figure 3-8. Front-to-Rear Lashings Pre-Positioned

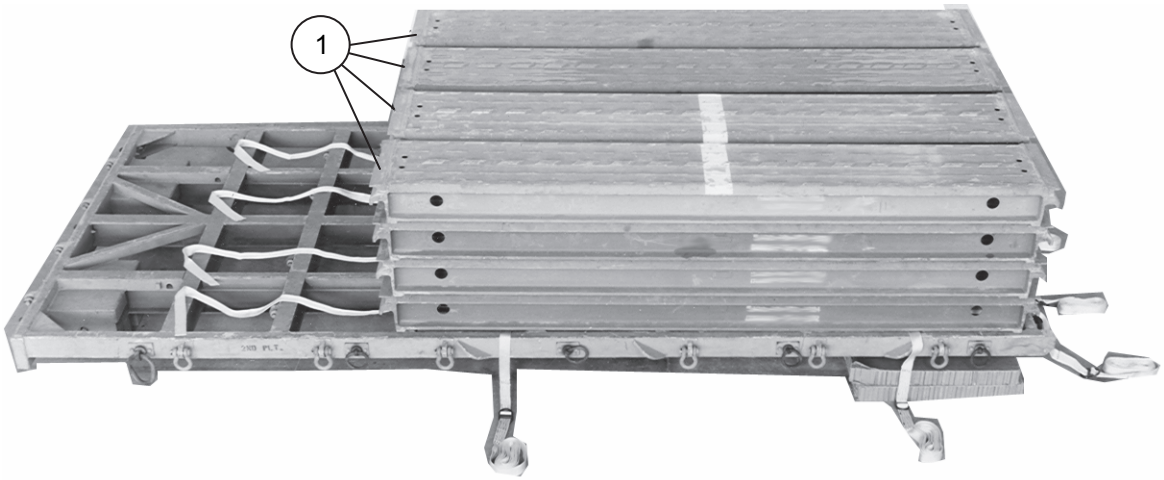


1. Form two 30-foot lashings according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5. Place one 30-foot lashing on top of the pallet 21 inches from the front edge of the pallet in the side-to-side direction. Make sure the D-rings are 15 inches from the right side of the pallet.

2. Place one 30-foot lashing on top of the pallet 90 inches from the front edge of the pallet in a side-to-side direction. Make sure the D-rings are 15 inches from the right side of the pallet.

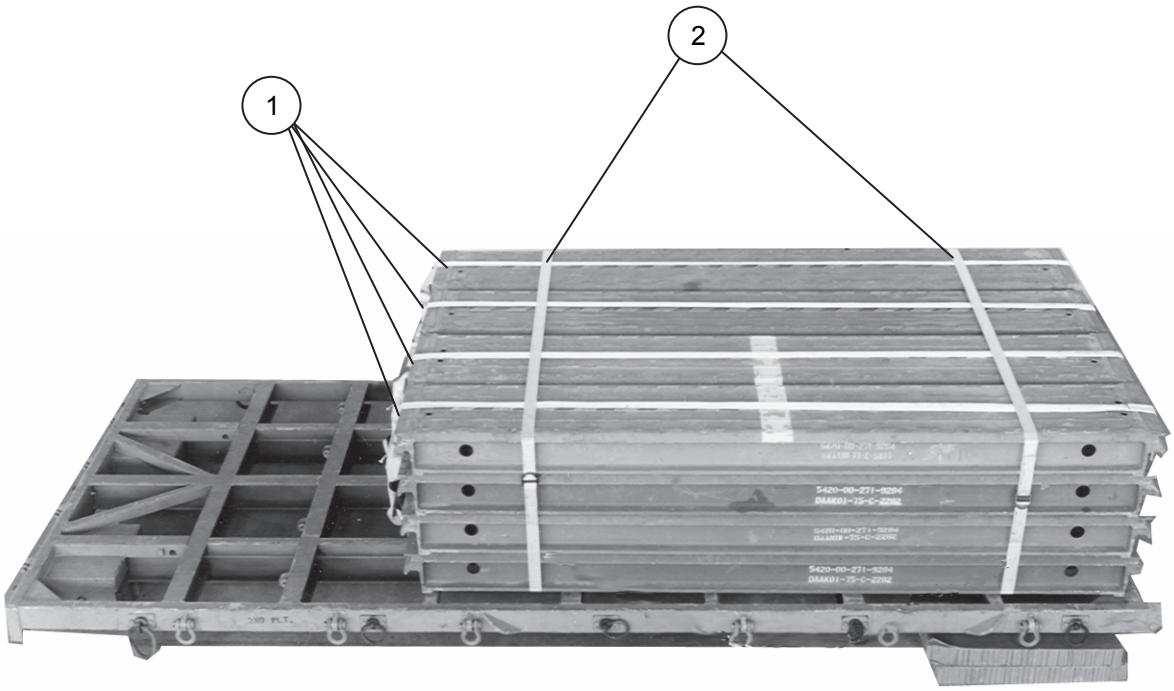
Figure 3-9. Side-to-Side Lashings Pre-Positioned

ONE DECK



1 Place four rows of four decks each on top of the pallet flush with the front edge of the pallet.

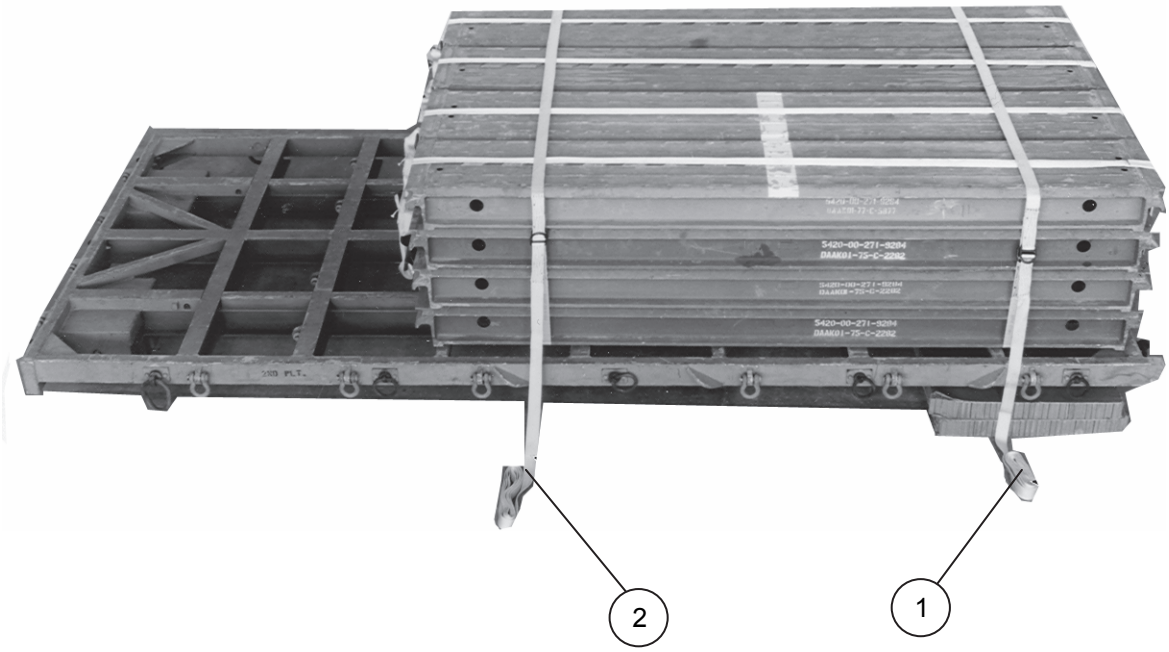
Figure 3-10. Sixteen Decks Positioned on Pallet



1. Run the four front-to-rear pre-positioned lashings over the top of the decks. Secure the lashings according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 on the rear of the decks.

2. Run the two side to side pre-positioned lashings over the top of the decks. Secure the lashings according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 on the left side of the decks.

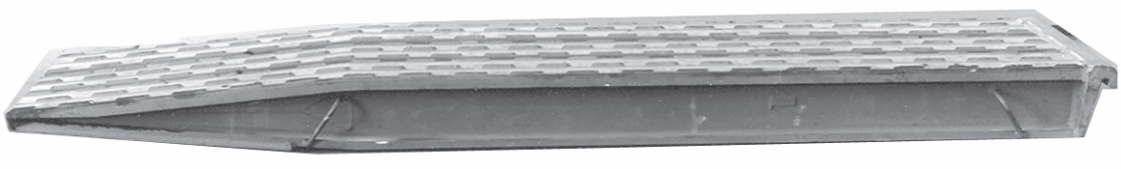
Figure 3-11. Sixteen Decks Secured



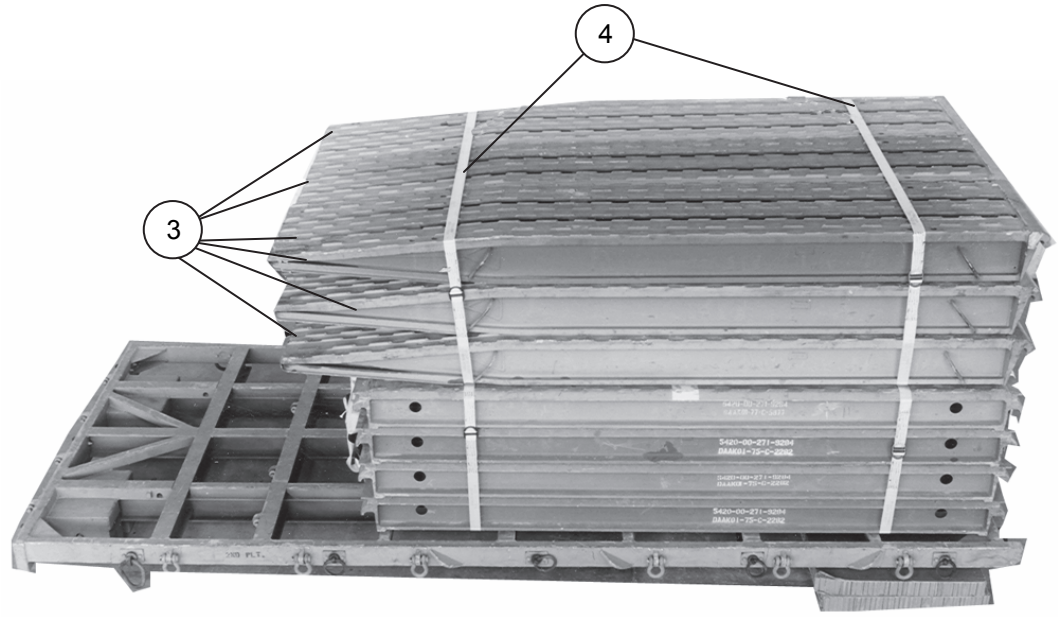
(1) Form two 30-foot lashings according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5. Place one 30-foot lashing on top of the secured decks 21 inches from the front edge of the pallet in a side-to-side direction. Make sure the D-rings are placed on the right side of the decks.

(2) Place one 30-foot lashing on top of the secured decks 90 inches from the front edge of the pallet in a side-to-side direction. Make sure the D-rings are placed on the right side of the decks.

Figure 3-12. Short Ramps Positioned and Secured



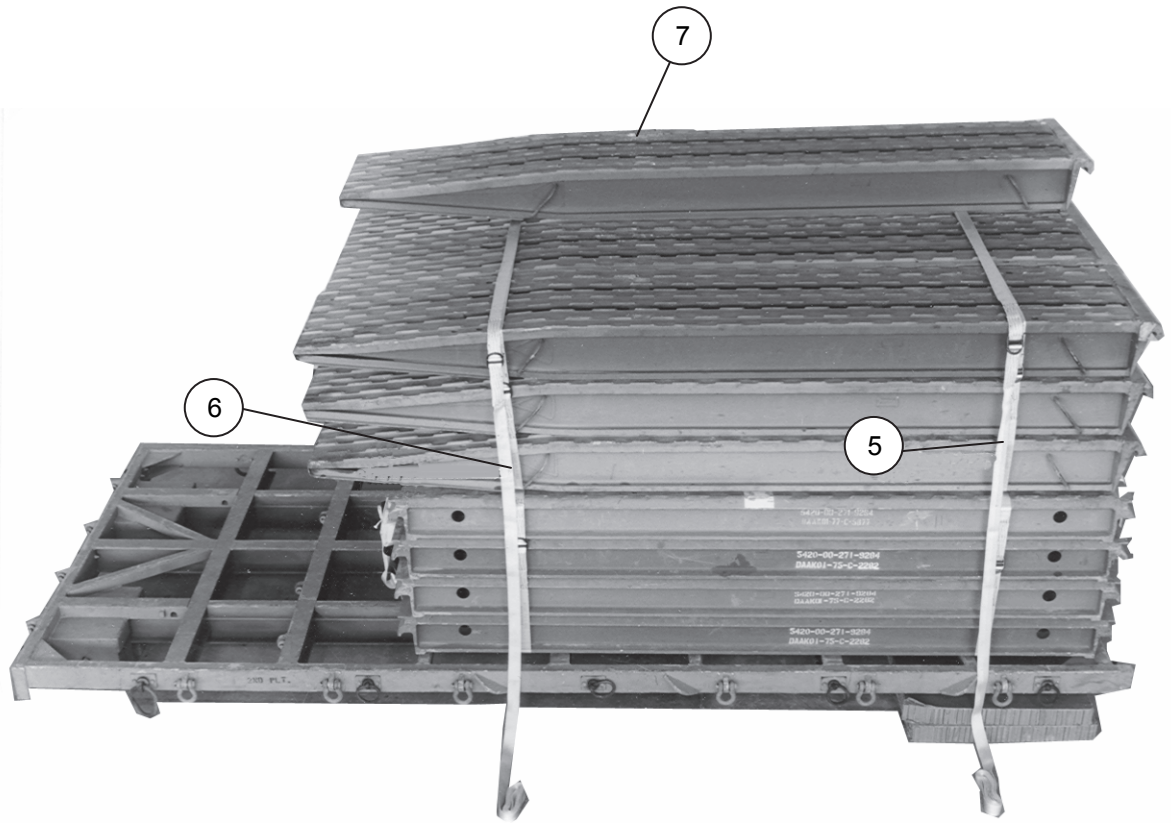
ONE SHORT RAMP



3 Position three rows of three short ramps on top of and flush with the front edge of the secured decks.

4 Run the two pre-positioned lashings over the top of the short ramps. Secure the lashings according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 on the left side of the ramps.

Figure 3-12. Short Ramps Positioned and Secured (Continued)

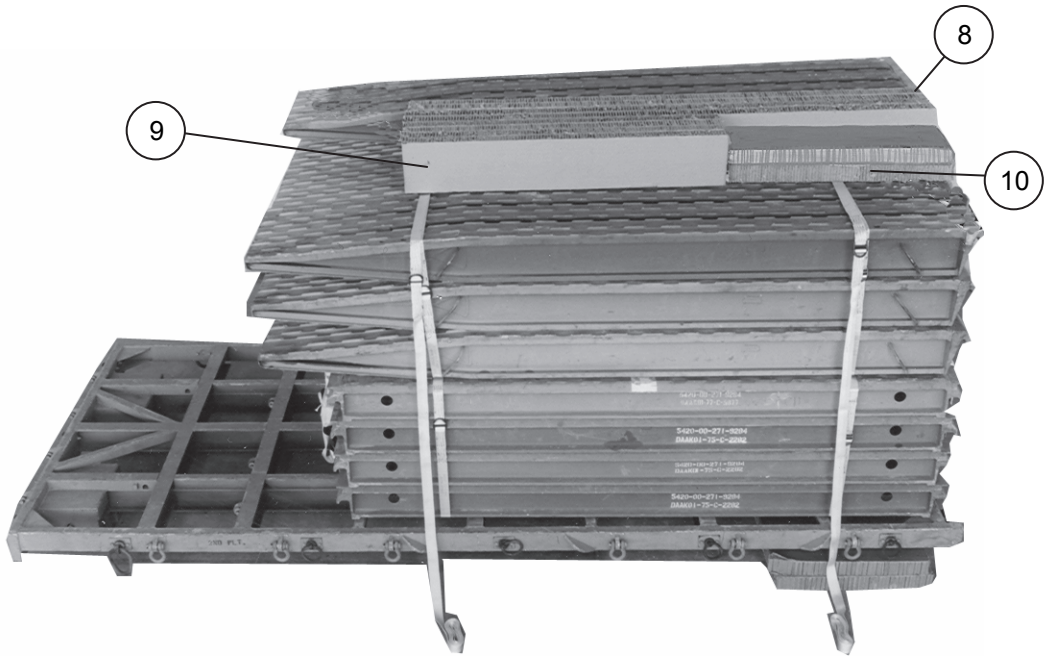


5 Form two 30-foot lashings according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5. Place one 30-foot lashing on top of the secured ramps 21 inches from the front edge of the pallet in a side-to-side direction. Make sure the D-rings are placed on the right side of the short ramps.

6 Place one 30-foot lashing on top of the secured ramps 90 inches from the front edge of the pallet in a side-to-side direction. Make sure the D-rings are placed on the right side of the short ramps.

7 Place one short ramp on top of the left side of the secured ramps flush with the front edge of the secured ramps.

Figure 3-12. Short Ramps Positioned and Secured (Continued)

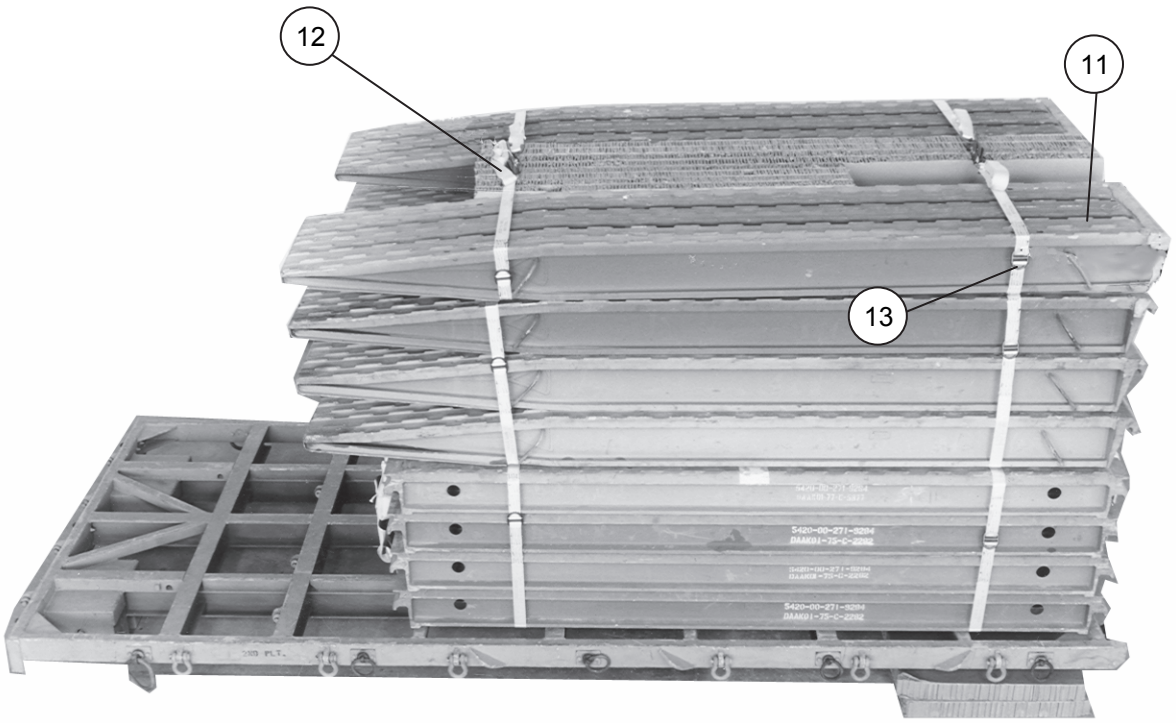


(8) Place four 9- by 96-inch pieces of honeycomb on edge. Place them next to the short ramp flush with the front edge of the load.

(9) Place four 9- by 56-inch pieces of honeycomb on edge. Place them flush with the rear edge of the 9- by 96-inch pieces of honeycomb.

(10) Place two 11- by 40-inch pieces of honeycomb next to the 9- by 96-inch pieces of honeycomb flush with the front edge of the load.

Figure 3-12. Short Ramps Positioned and Secured (Continued)



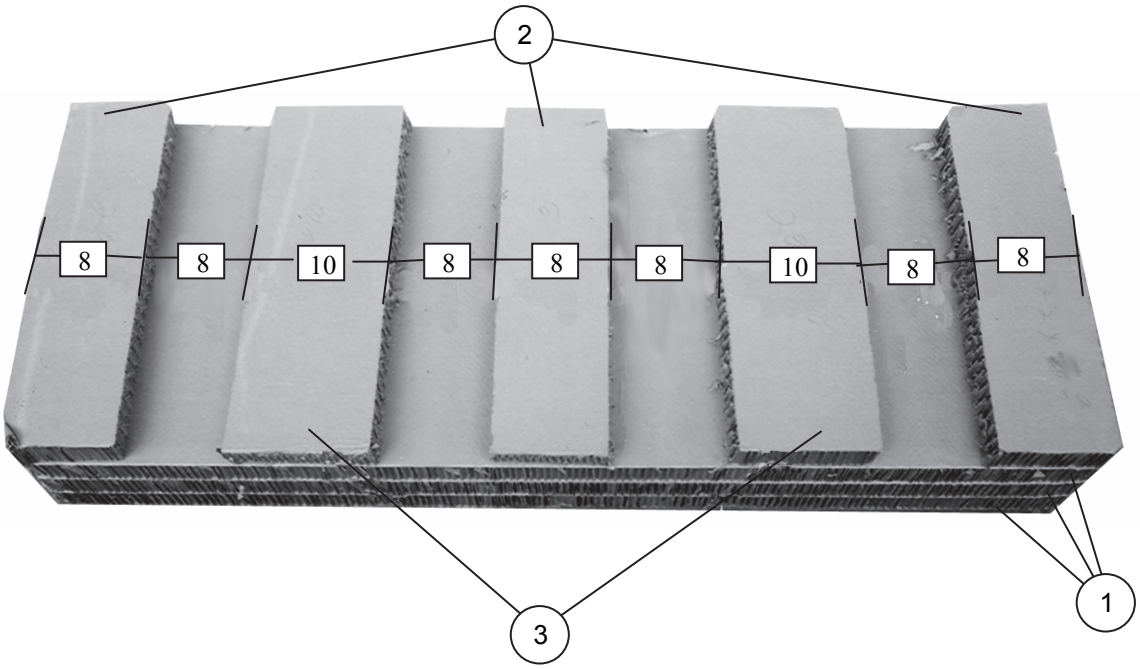
(11) Place a short ramp next to the 9- by 56-inch pieces of honeycomb flush with the front edge of the load.

(12) Run the rear pre-positioned lashing on top of the load. Secure the lashing according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.

(13) Run the front pre-positioned lashing on top of the load and hook the lashing together using two D-rings and a load binder. Do NOT secure the lashing at this time.

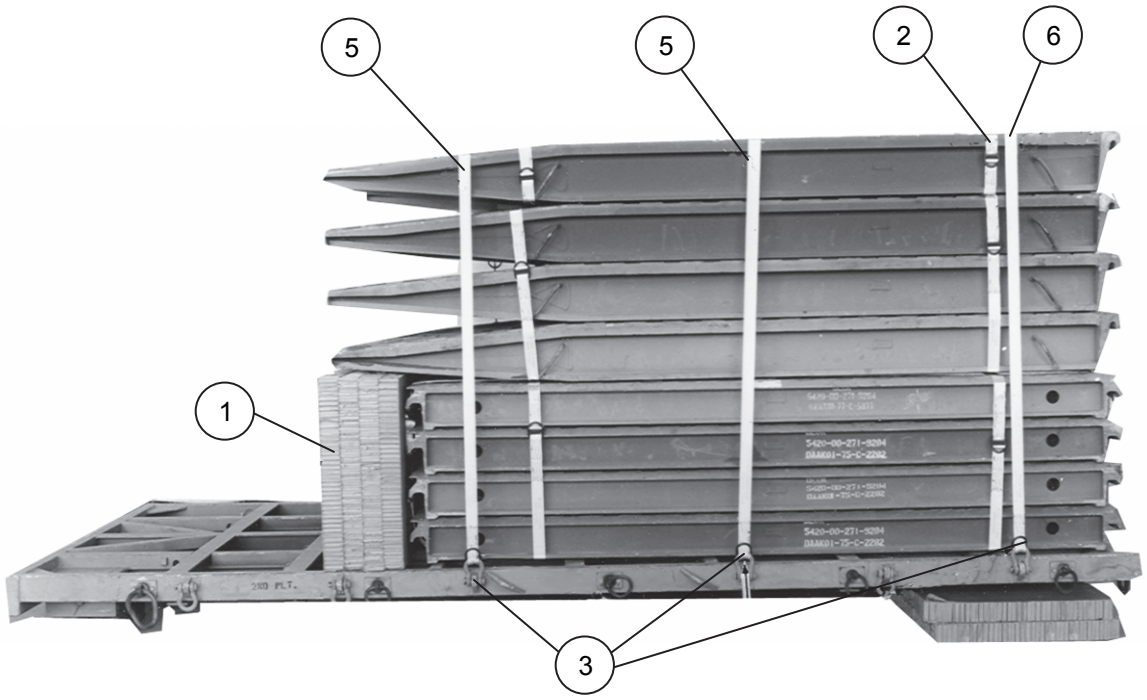
Figure 3-12. Short Ramps Positioned and Secured (Continued)

Note. All dimensions are in inches.



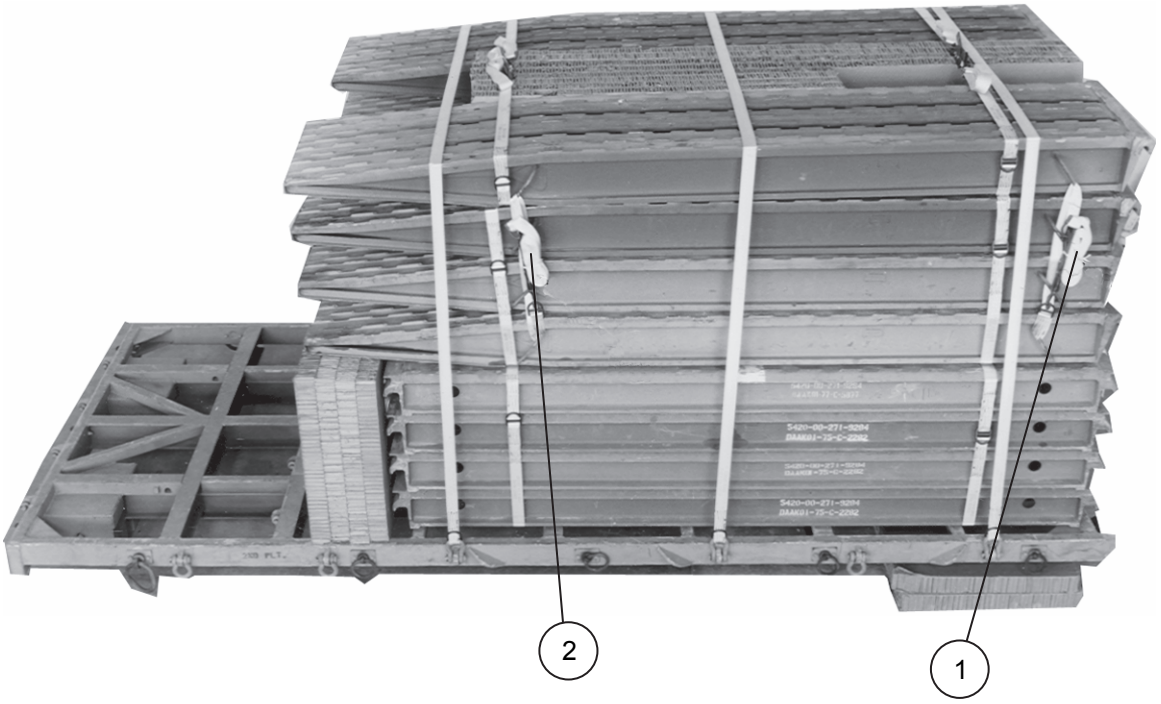
1. Glue three 76- by 28 1/2-inch pieces of honeycomb together.
2. Glue three 8- by 28 ½-inch pieces of honeycomb and place as shown.
3. Glue two 10- by 28 ½-inch pieces of honeycomb and place as shown.

Figure 3-13. Honeycomb Stack Prepared



1. Position the 76- by 28 ½-inch honeycomb stack with the cutouts flush against the decks.
2. Close but do NOT secure the front lashing positioned on the short ramps (Figure 3-12, step 13).
3. Pass a 15-foot lashing through pallet lifting shackles 2, 5, and 7 and back through their own D-rings.
4. Repeat step 3 for the left side of the pallet (not shown) using pallet lifting shackles 2A, 5A, and 7A.
5. Run the lashings, placed in pallet lifting shackles 5 and 5A and 7 and 7A, over the top of the load from right to left. Secure the lashings according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 on the left side.
6. Run the lashings, placed in pallet lifting shackles 2 and 2A, over the top of the load from right to left. Close but do NOT secure the lashings at this time.

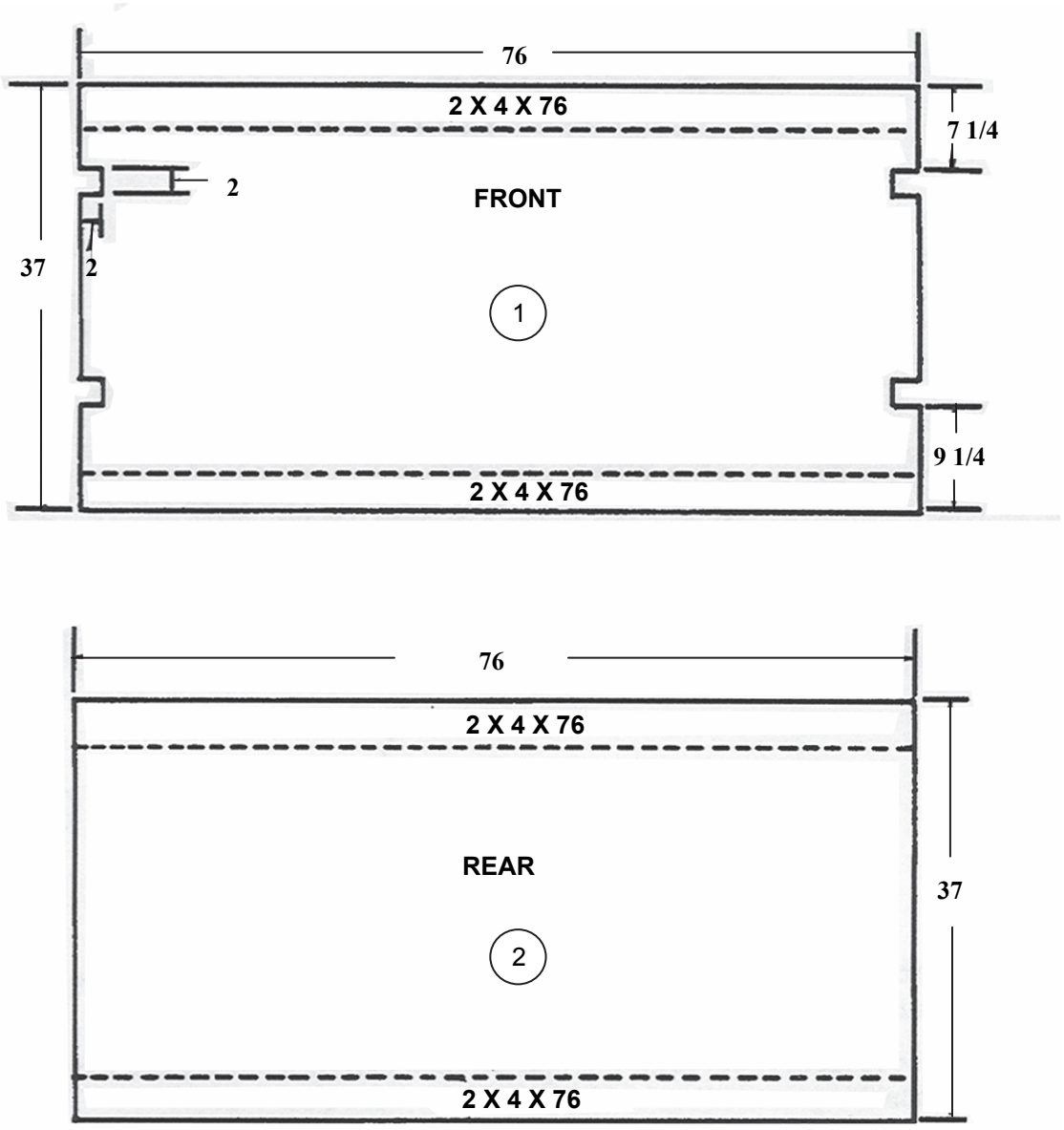
Figure 3-14. Honeycomb Stack Positioned and Lashings Secured



1. Pass a 15-foot lashing through the front outside carrying handles of the short ramps. Secure the lashing according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.
2. Pass a 15-foot lashing through the rear outside carrying handles of the short ramps. Secure the lashing according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.
3. Repeat steps 1 and 2 for the left side of the load. (not shown)

Figure 3-15. Short Ramps Secured

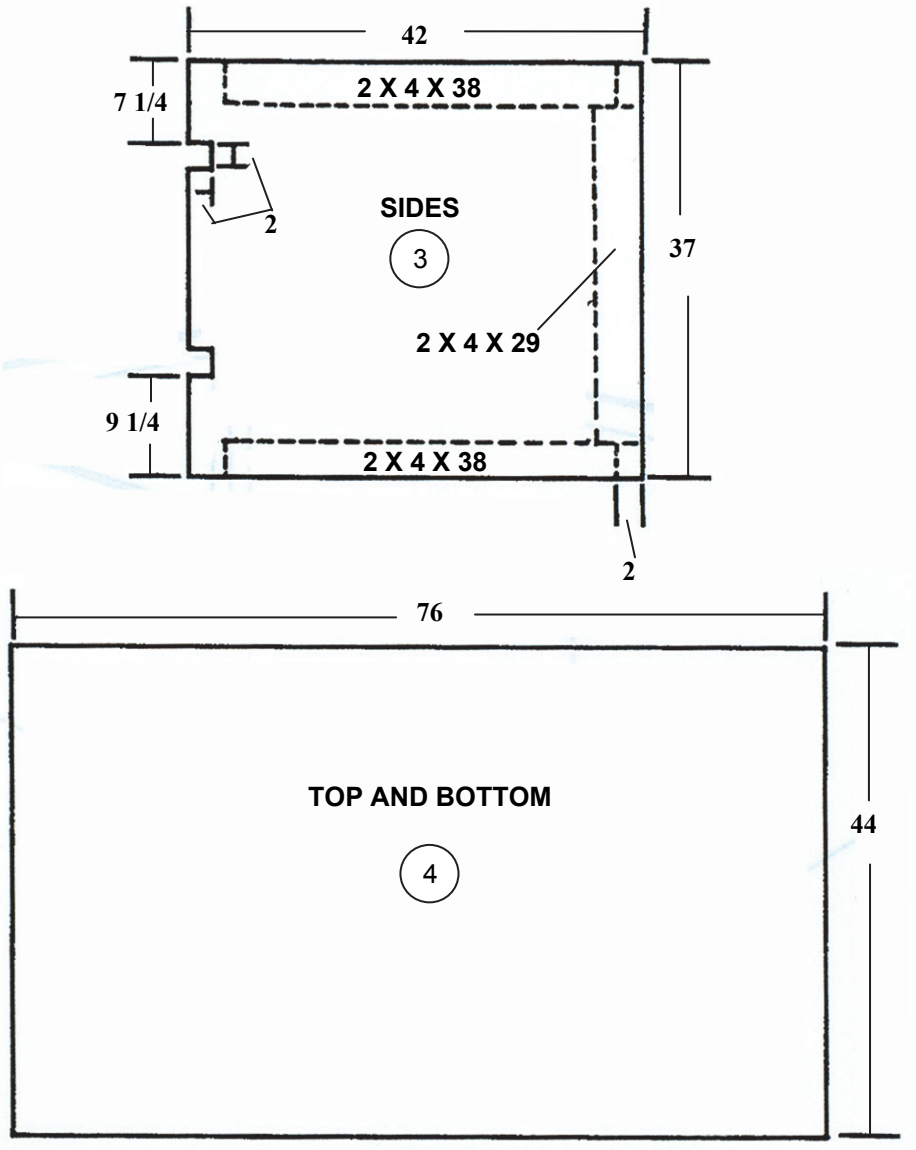
Notes.
1. This drawing is not to scale.
2. All dimensions are in inches.



Item Number	*Pieces*	*Width (Inches)*	*Length (Inches)*	*Material*
1	1	76	37	¾-inch plywood
	2	76	4	2- by 4-inch lumber
2	1	76	37	¾-inch plywood
	2	76	4	2- by 4-inch lumber

Figure 3-16. Materials Required to Build Parts Box

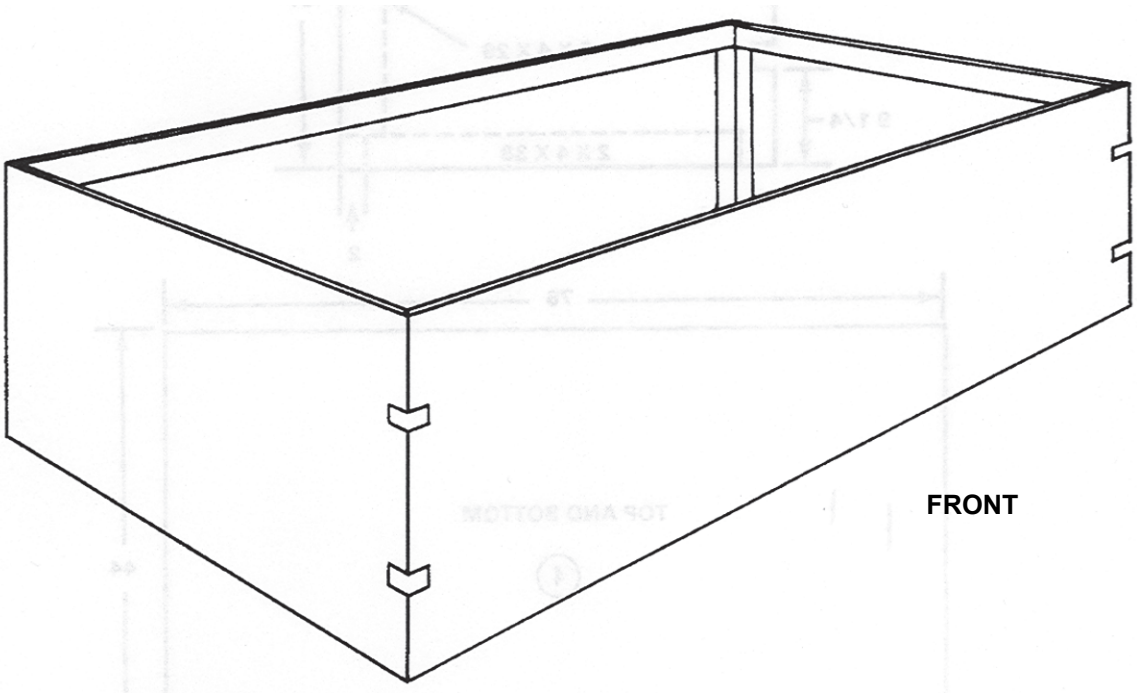
Notes.
1. This drawing is not to scale.
2. All dimensions are in inches.



Item Number	*Pieces*	*Width (Inches)*	*Length (Inches)*	*Material*
3	2 4 2	42 38 29	37 4 4	¾-inch plywood 2- by 4-inch lumber 2- by 4-inch lumber
4	2	76	44	¾-inch plywood

Figure 3-16. Materials Required to Build Parts Box (Continued)

Note. This drawing is not to scale.

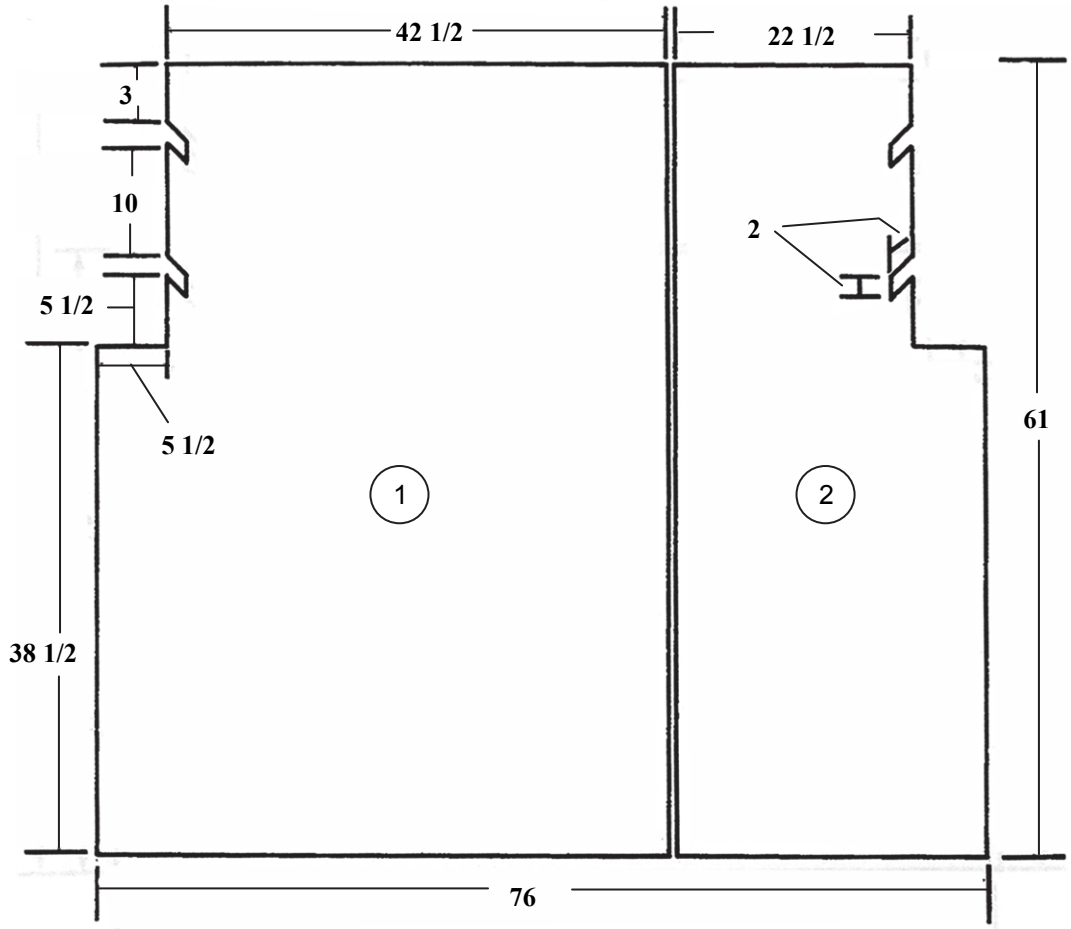


Step.

1. Build the parts box using the materials given in Figure 3-16.
2. Use eightpenny nails to secure the parts box.

Figure 3-17. Parts Box Built

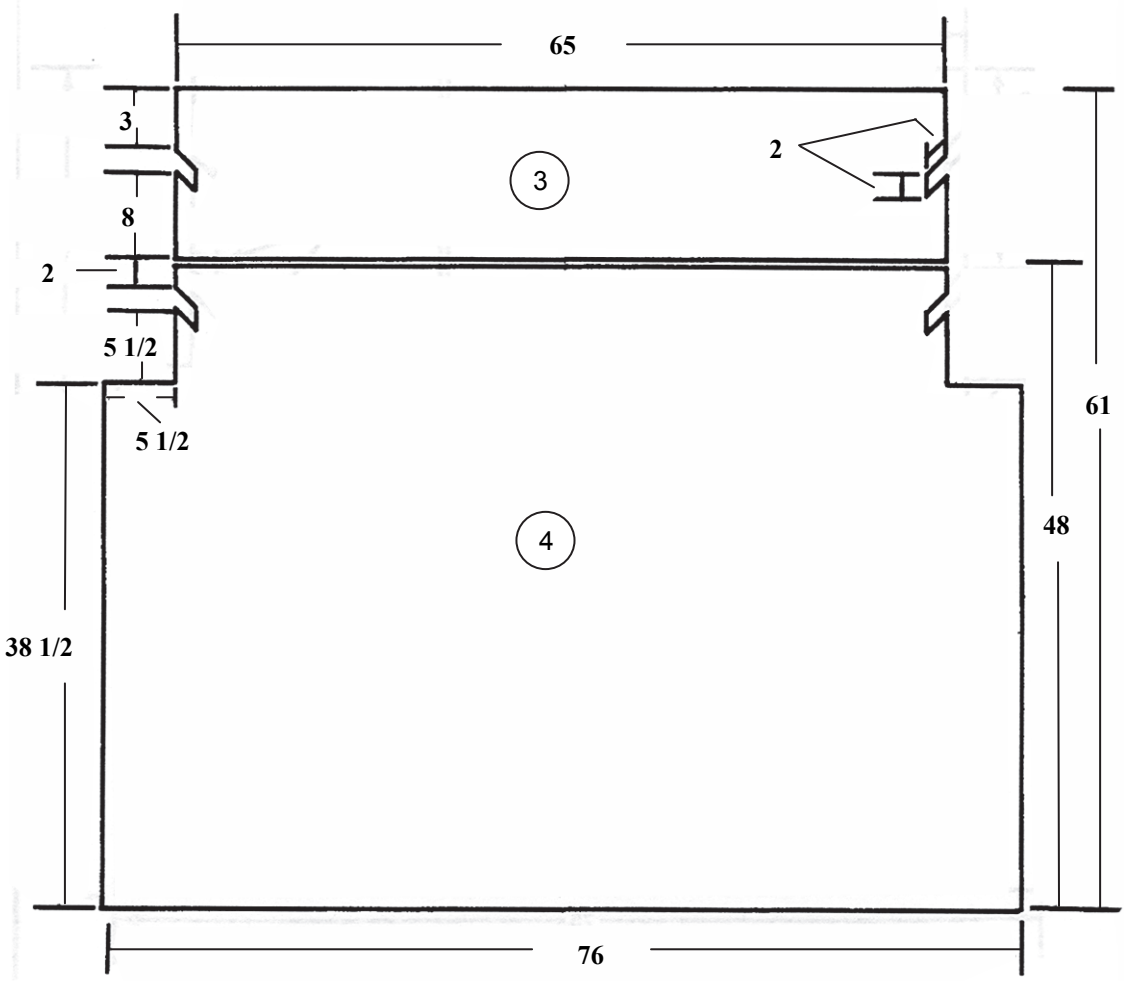
Notes.
1. This drawing is not to scale.
2. All dimensions are in inches.



Item Number	*Pieces*	*Width (Inches)*	*Length (Inches)*	*Material*
1	1	42 1/2	61	¾-inch plywood
2	1	22 1/2	61	¾-inch plywood

Figure 3-18. Materials Required to Build Restraint Board 1

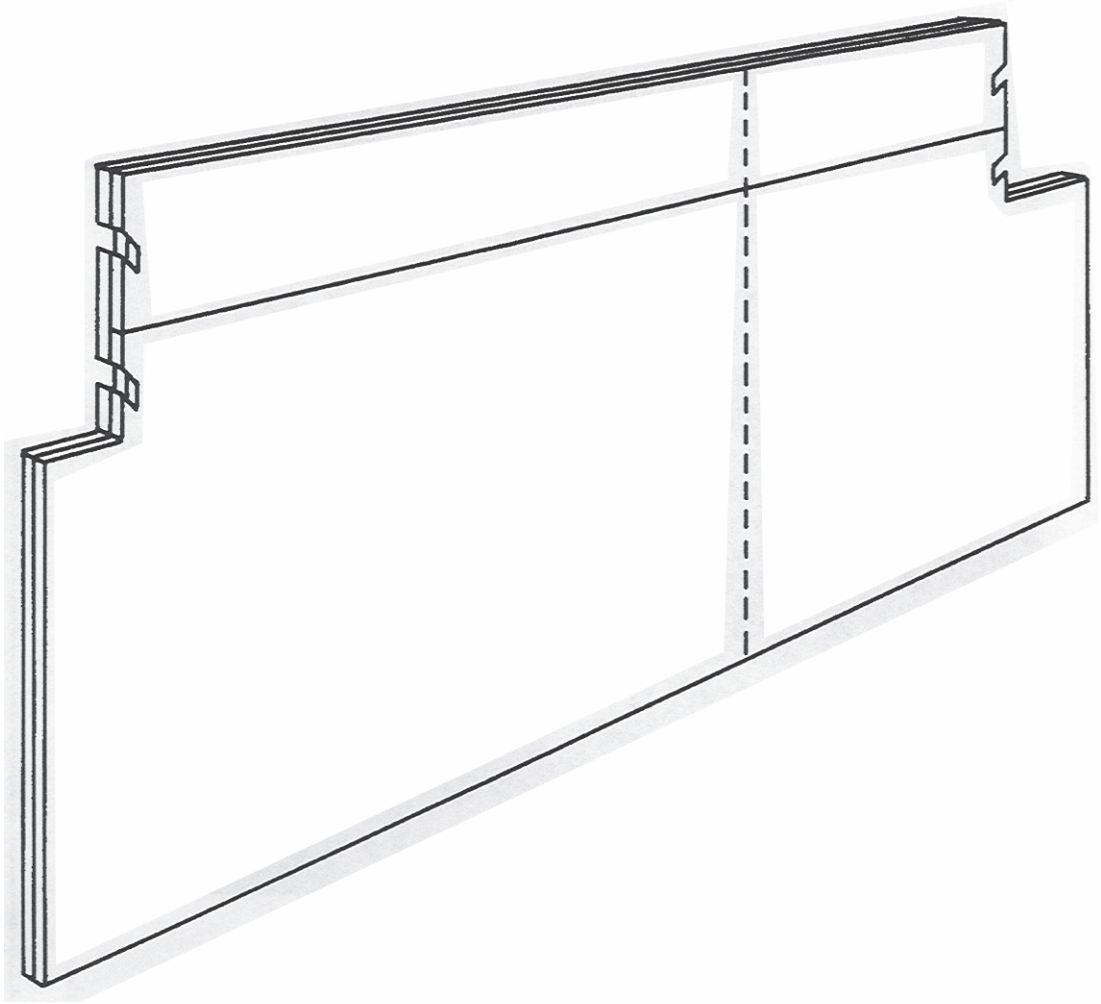
Notes.
1. This drawing is not to scale.
2. All dimensions are in inches.



Item Number	*Pieces*	*Width (Inches)*	*Length (Inches)*	*Material*
3	1	65	13	¾-inch plywood
4	1	76	48	¾-inch plywood

Figure 3-18. Materials Required to Build Restraint Board 1 (Continued)

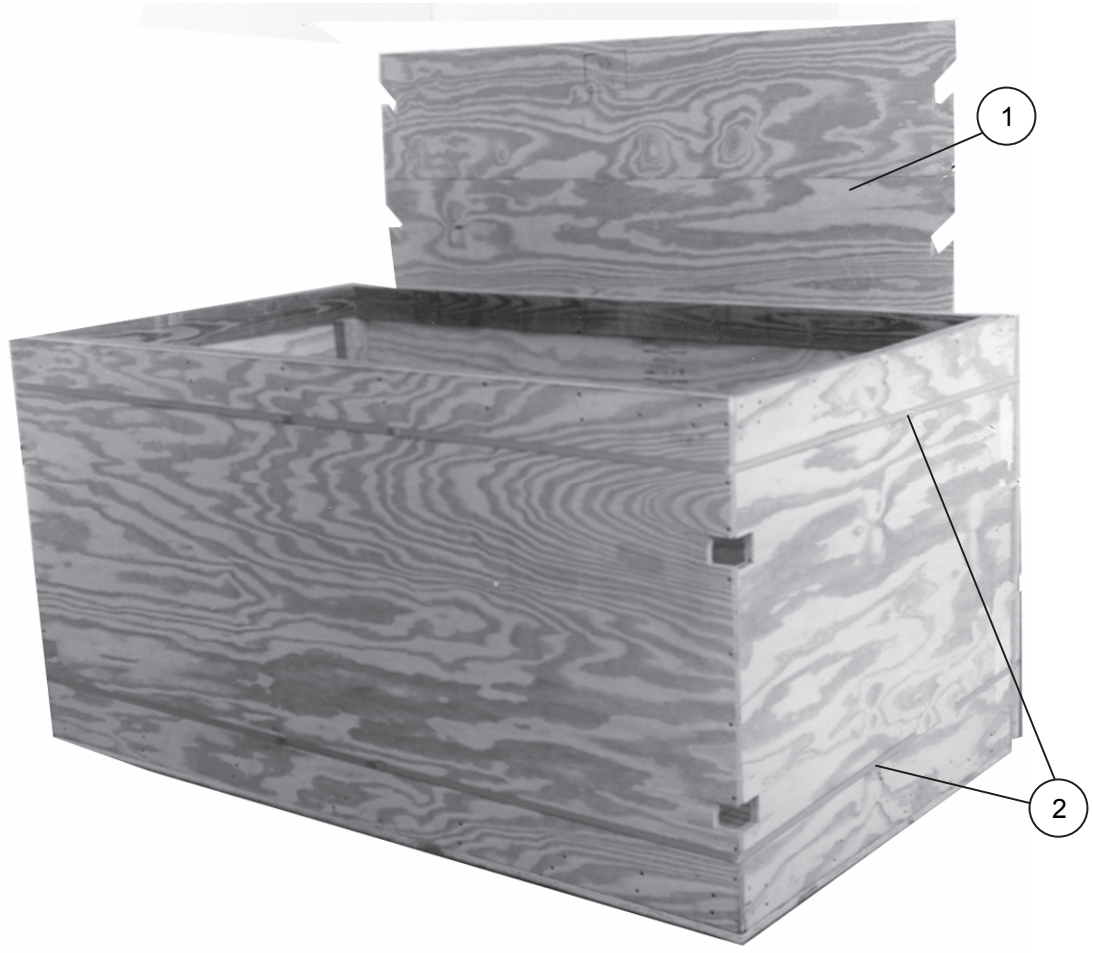
Note.. This drawing is not to scale.



Step.

1. Build the restraint board 1 using the materials given in Figure 3-18.
2. Use eightpenny nails to secure restraint board 1.

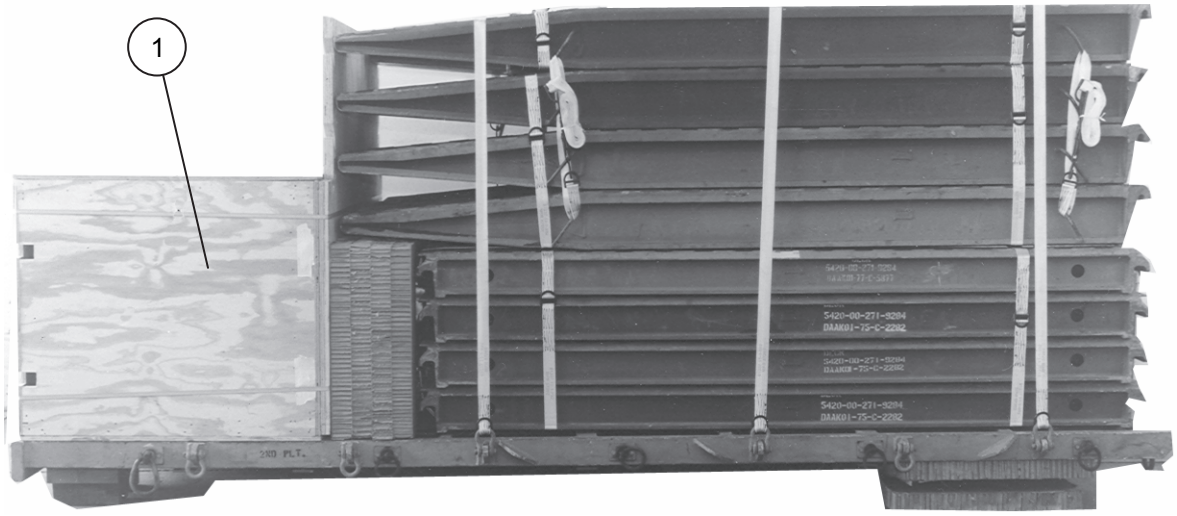
Figure 3-19. Restraint Board 1 Built



(1) Nail restraint board 1 to the rear of the parts box using eightpenny nails.

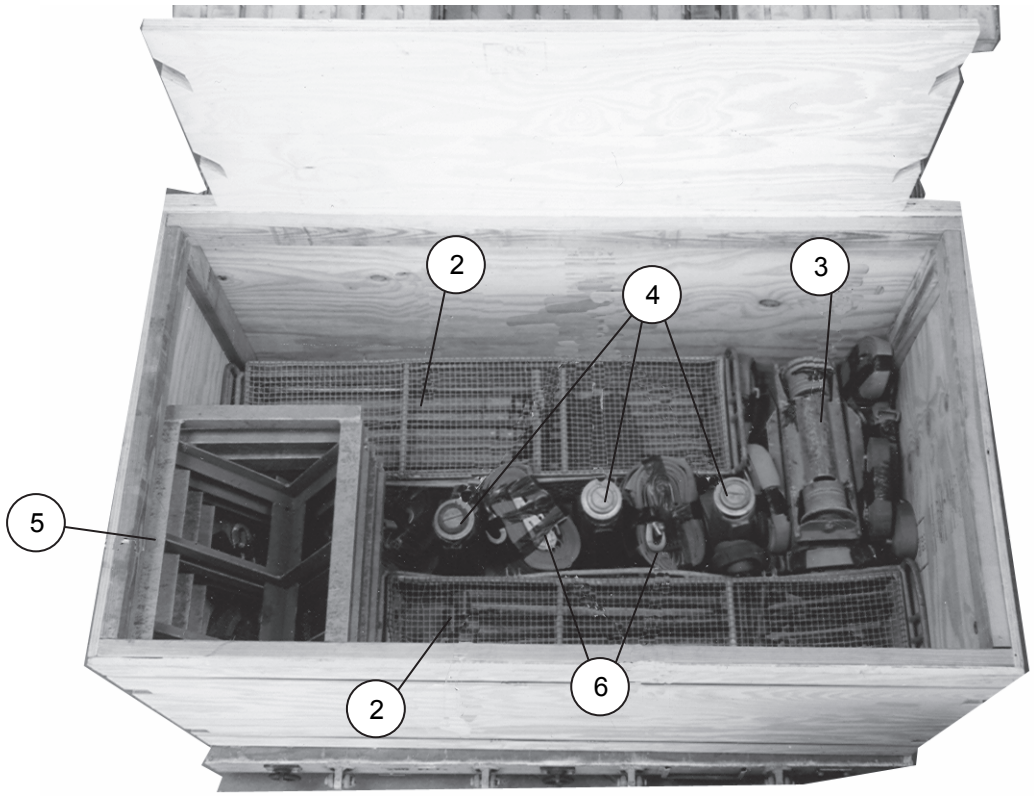
(2) Secure the parts box and restraint board 1 together using steel strapping material or two 30-foot lashings (formed according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5). These photographs show steel strapping being used.

Figure 3-20. Parts Box and Restraint Board 1 Secured Together



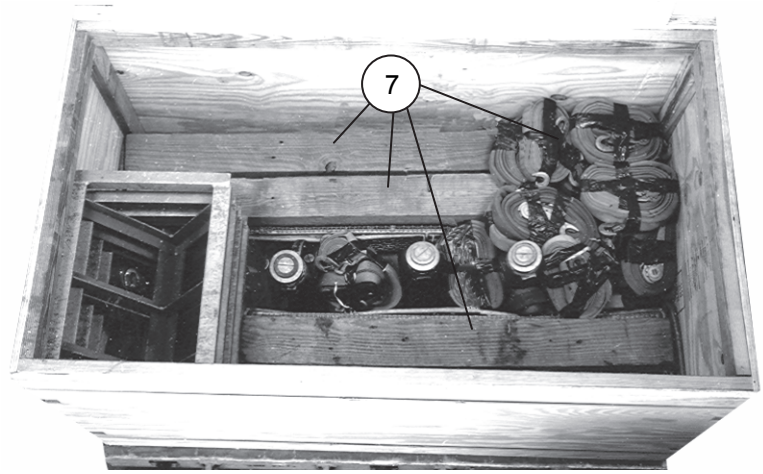
1 Position the parts box and restraint board 1 on the rear of pallet 1 with restraint board 1 flush against the load.

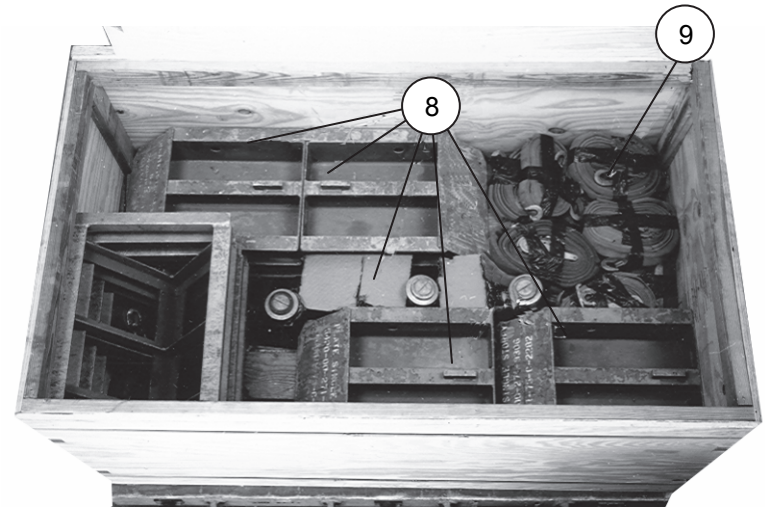
Figure 3-21. Parts Box and Restraint Board 1 Positioned on Pallet 1



1. Place a 71 ½- by 36-inch piece of honeycomb (not shown) in the bottom of the parts box.
2. Place the two baskets in the parts box. Make sure the basket with the pins is to the front and rear corner of the parts box.
3. Place a landing roller in the parts box (as shown). Wedge a 4- by 7 ½-inch piece of honeycomb at either end of the landing roller to prevent tilting (not shown).
4. Place three hydraulic jacks in the parts box.
5. Place four building pedestals in the parts box.
6. Fill open spaces with 10,000-pound straps.

Figure 3-22. Parts Placed in Parts Box



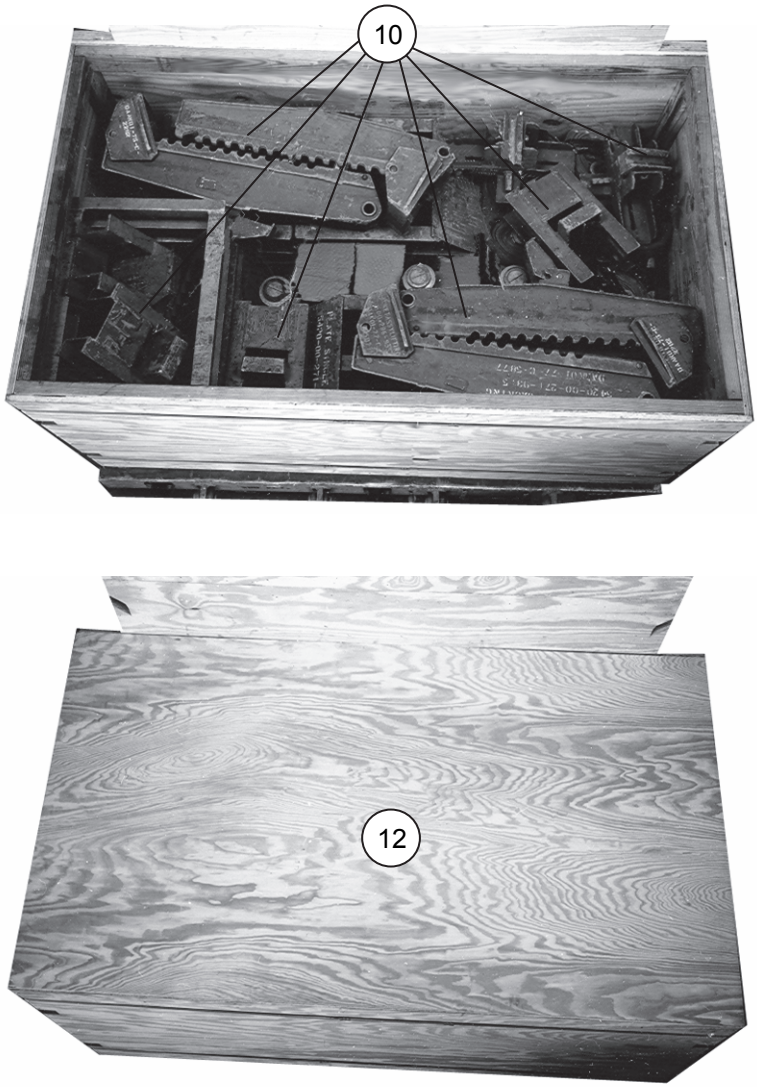


7 Place three pieces of dunnage and additional 10,000-pound straps in the parts box.

8 Place four single store base plates in the parts box with honeycomb fillers between the base plates.

9 Place additional 10,000-pound straps in the parts box.

Figure 3-22. Parts Placed in Parts Box (Continued)



(10) Place four jack posts, four jack supports, and two fixed supports in the parts box.

(11) Fill the remainder of the parts box with pieces of honeycomb (not shown).

(12) Place the top on the box, and secure it using eightpenny nails.

Figure 3-22. Parts Placed in Parts Box (Continued)

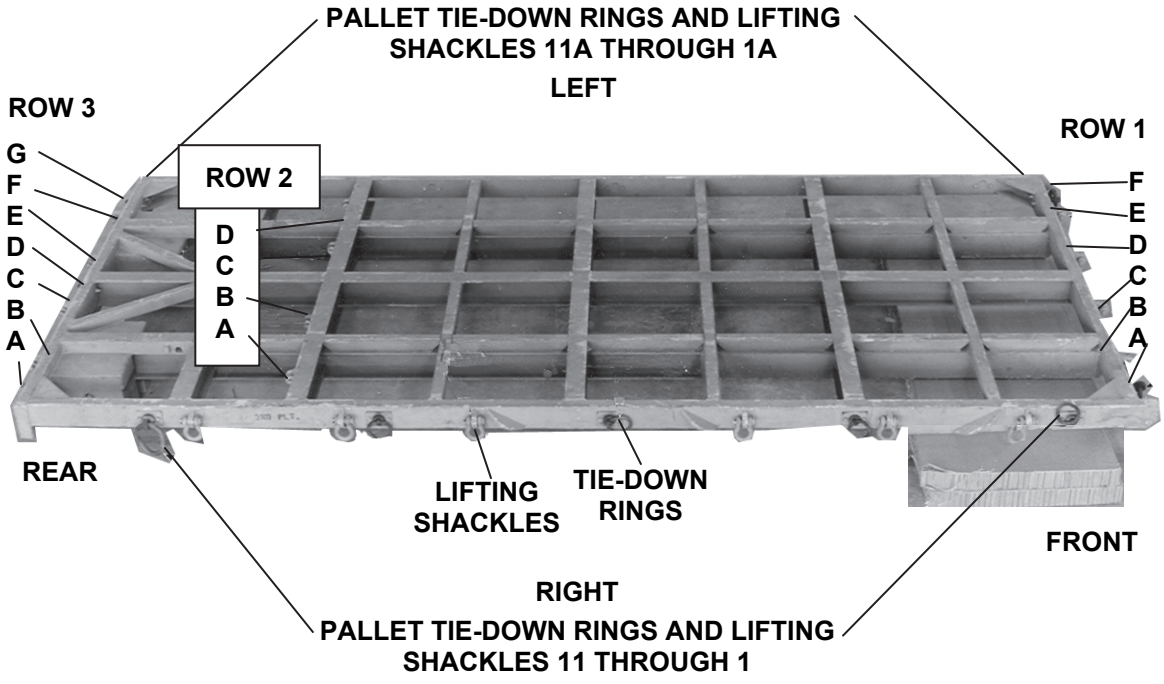
1 Form a 30-foot lashing according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5. Pass the lashing through tie-down ring D3. Bring the free ends over the top rear corners of the parts box. Secure the lashing to tie-down rings 8 and 8A with a load binder and D-ring on each side.

Figure 3-23. Parts Box Secured to Pallet 1

PREPARING PALLET 2

3-5. Prepare pallet 2 as shown in Figures 3-24 through 3-35.

Notes.
1. Front, rear, right and left refer to the pallet.
2. Pad all sharp edges that the lashings may touch.

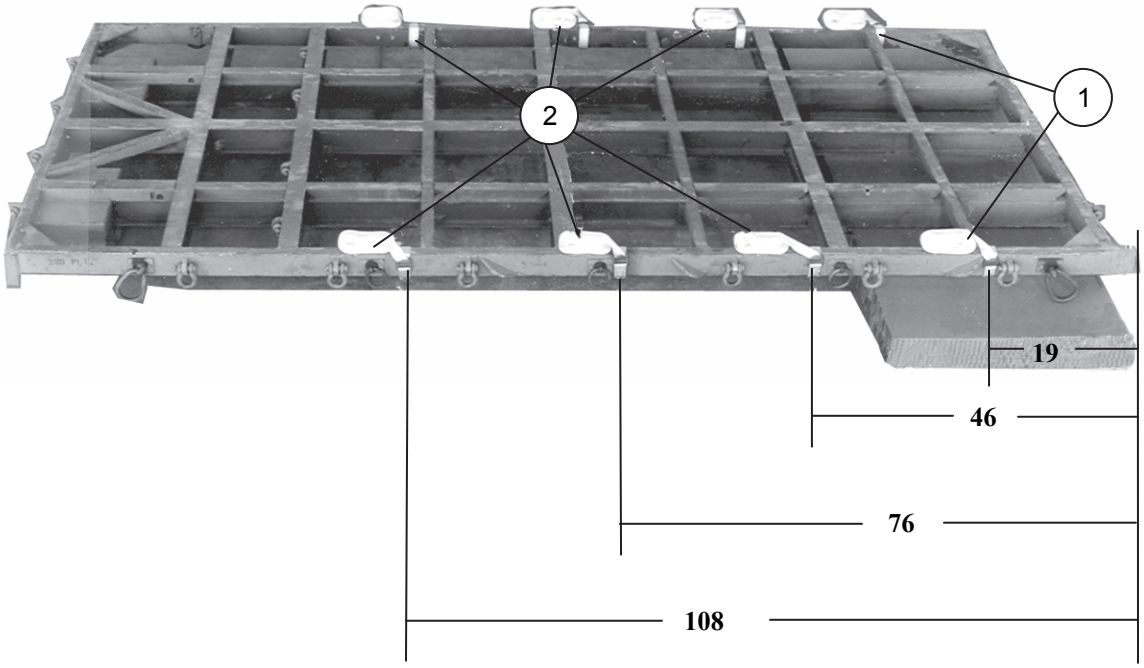


Step.

1. Starting at the front of the pallet, number the tie-down rings and lifting shackles bolted to the right side from 1 through 11 and those bolted to the left side 1A through 11A.
2. Starting at the front of the pallet, label row 1 of tie-down rings and lifting shackles from right to left A1 through F1. Label row 2 from right to left A2 through D2. Label row 3 from right to left A3 through G3.
3. Place two 96- by 36-inch pieces of honeycomb under the front of the pallet to keep the pallet level.

Figure 3-24. Pallet 2 Labeled

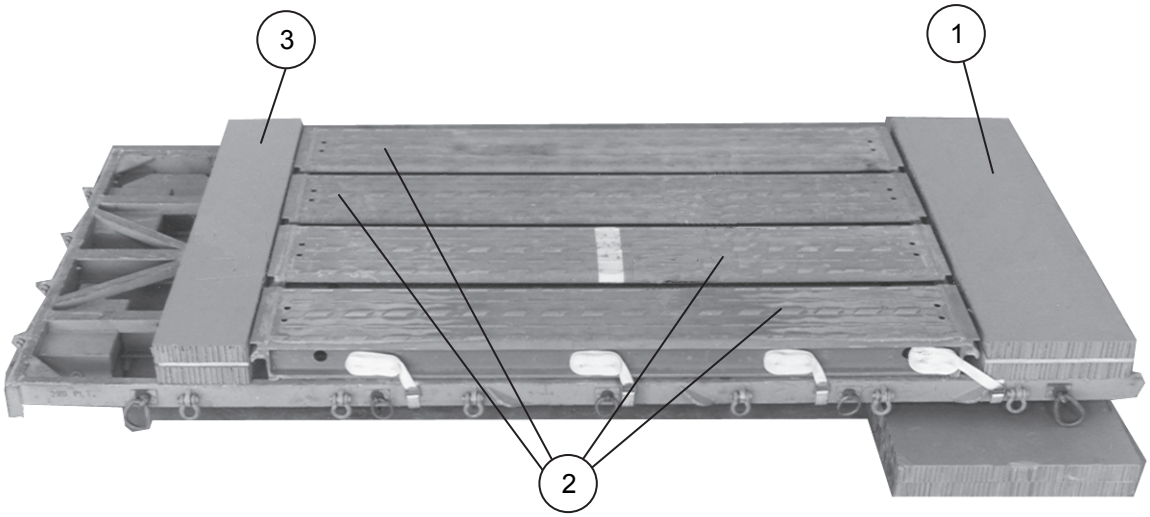
Note. All dimensions are in inches.



1. Pass a 15-foot lashing around the right front side rail and through its own D-ring 19 inches from the front edge of the pallet. Repeat this step from the left side rail.
2. Repeat step 1 at intervals of 46, 76, and 108 inches.

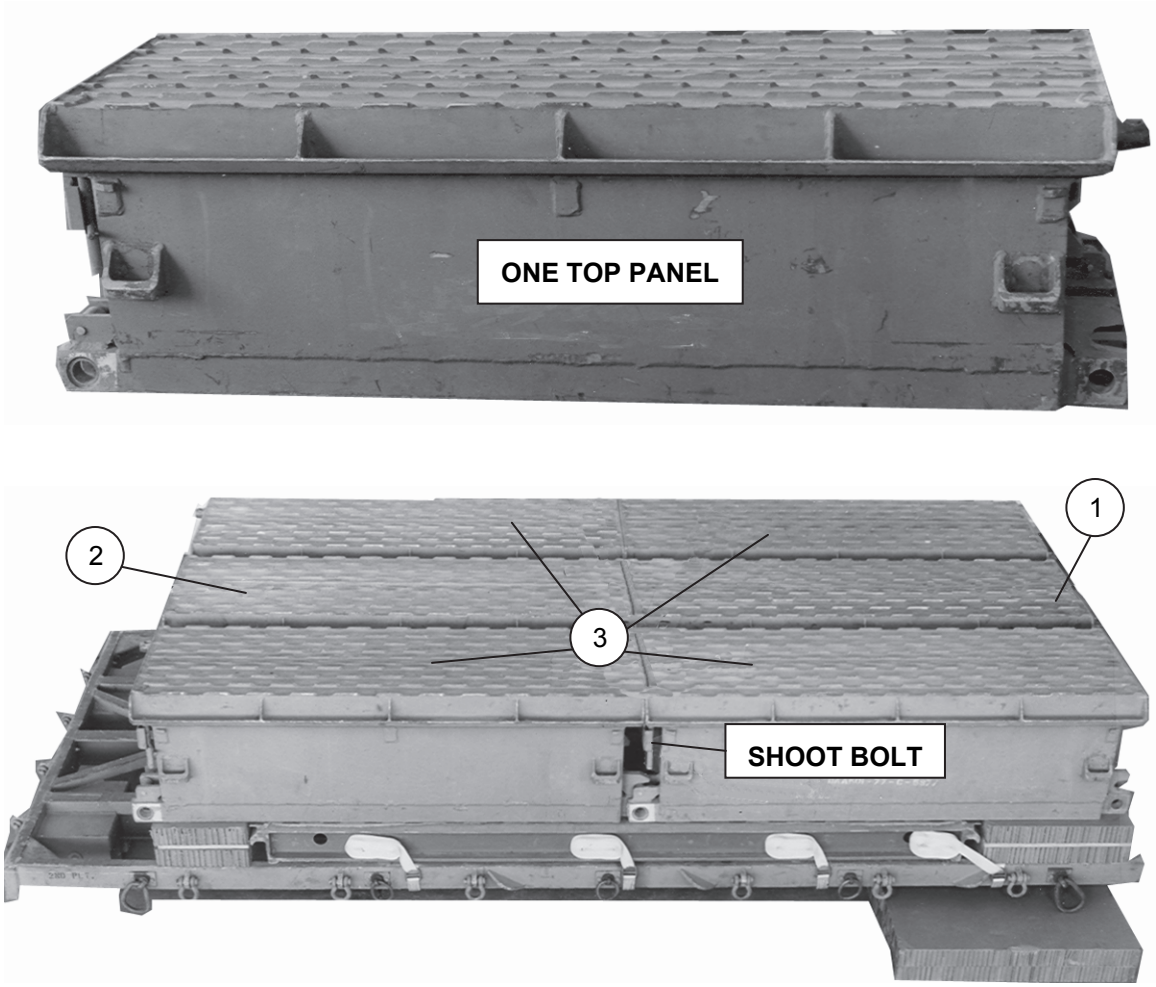
Note. Make sure the D-rings are facing to the outside of the side rails.

Figure 3-25. Eight Lashings Pre-Positioned



1. Place one ¾- by 76- by 22-inch piece of plywood between two 76- by 22-inch pieces of honeycomb to form a stack. Place the stack flush with the front edge to the pallet.
2. Place four decks side by side on top of the pallet against the 76- by 22-inch stack.
3. Place one ¾- by 76- by 13 ½-inch piece of plywood between two 76- by 13 ½-inch pieces of honeycomb to form a stack. Place the stack flush against the rear of the decks.

Figure 3-26. Honeycomb, Plywood and Decks Positioned



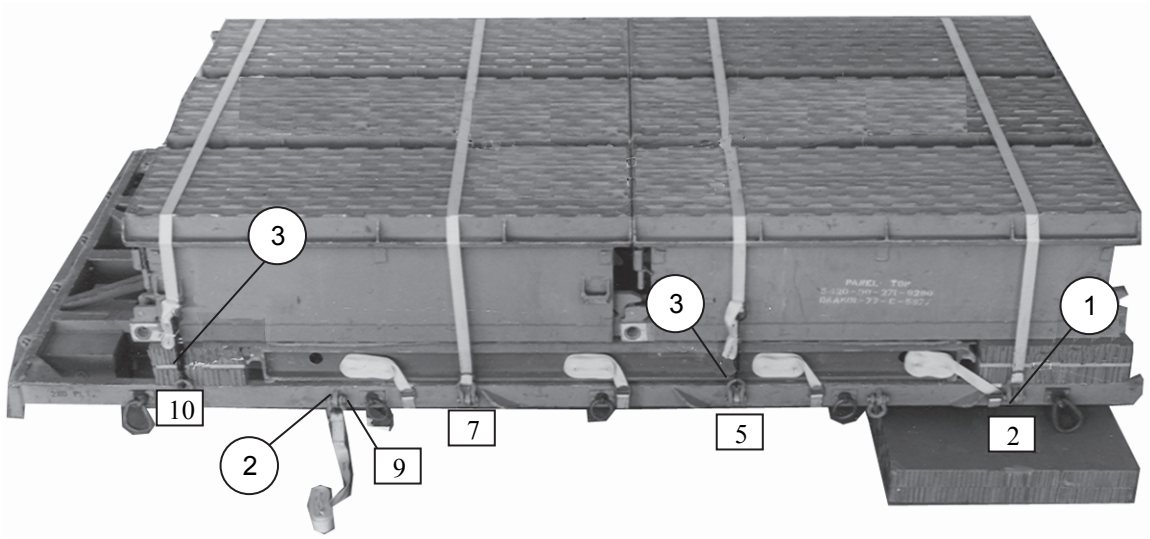
1 Center top panel with the end of the panel flush with the front edge of the pallet.

Note. Make sure the shoot bolt is in the unlocked position.

2 Center another top panel against the rear edge of the top panel positioned in step 1. Interlock the two panels with the shoot bolt.

3 Position two top panels to each side of the panels positioned in steps 1 and 2. Interlock all the top panels with the shoot bolts.

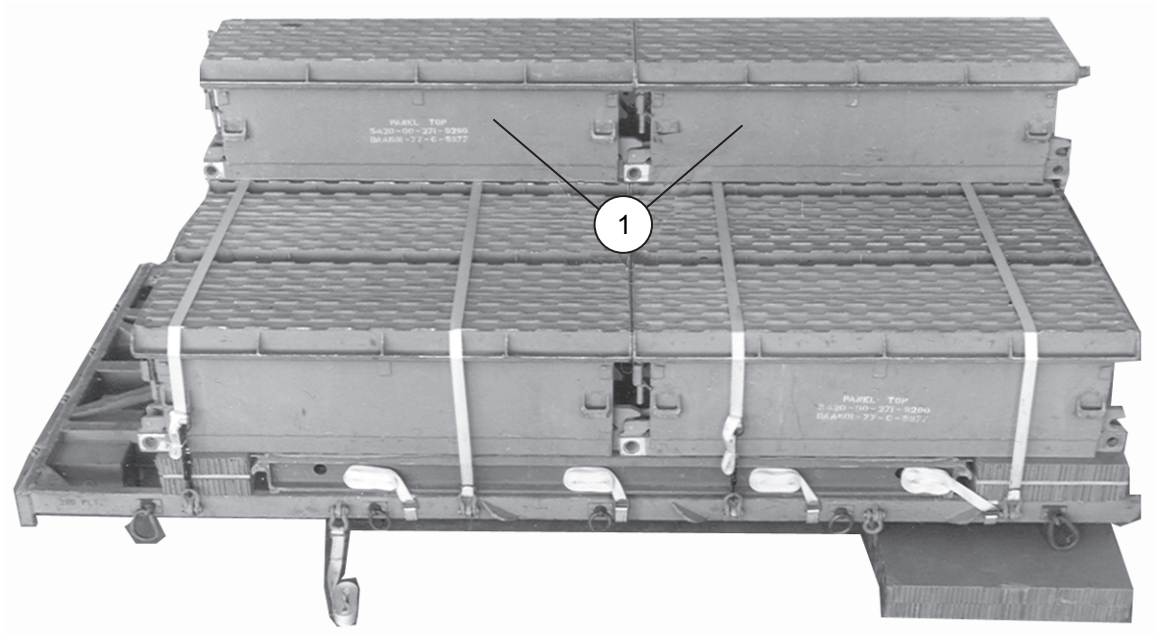
Figure 3-27. Top Panels Positioned



1. Pass a 15-foot lashing through lifting shackles 2, 5A, 7, 9, 10A and back through its own D-ring.
2. Run the lashings attached to lifting shackles 2, 5A, 7 and 10A over the top panels.

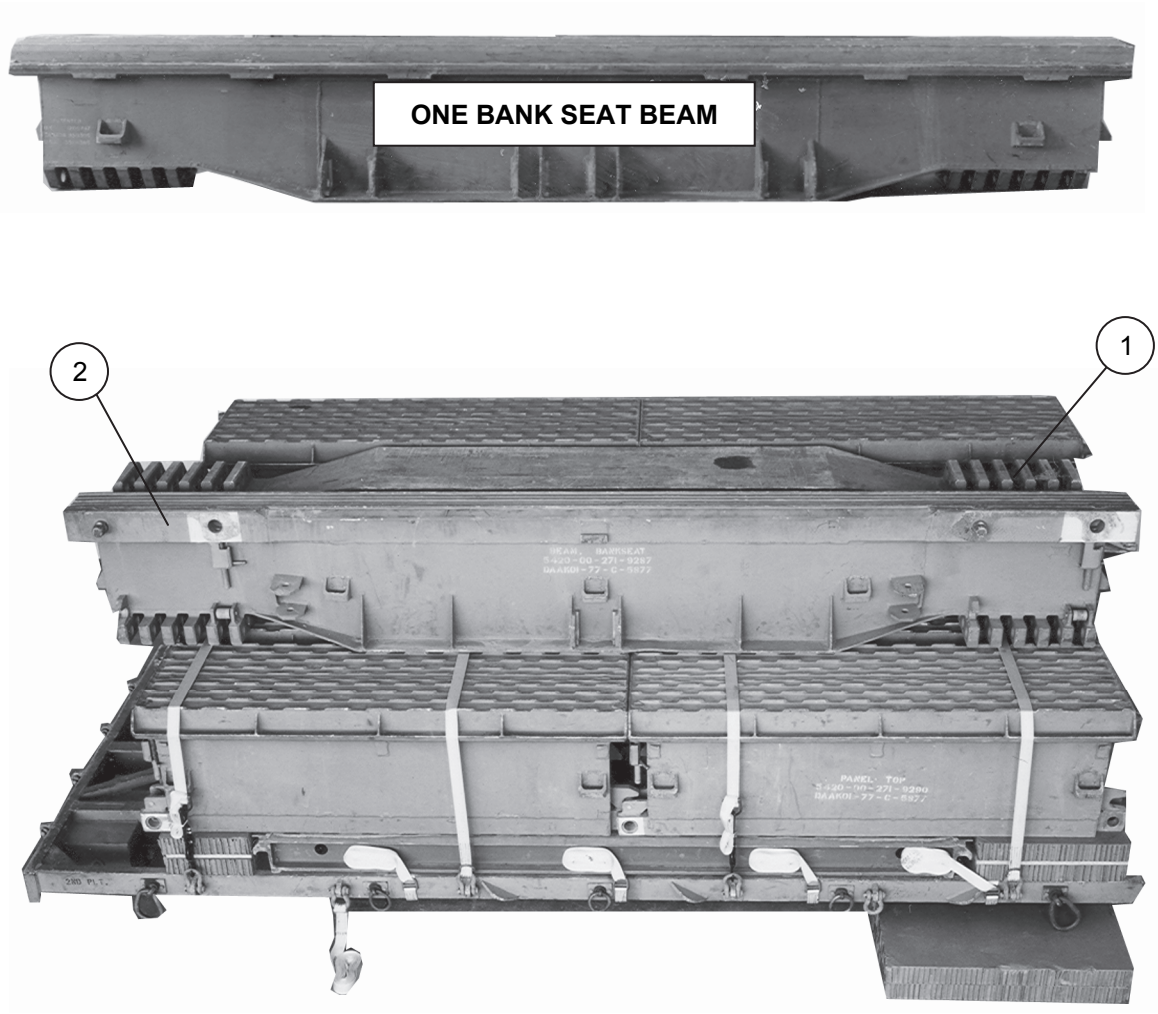
   Note. The lashing attached to lifting shackle 9 is NOT secured at this time.
3. Secure the lashings to tie-down rings 2A, 5, 7A and 10 according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.

Figure 3-28. Six Top Panels Secured



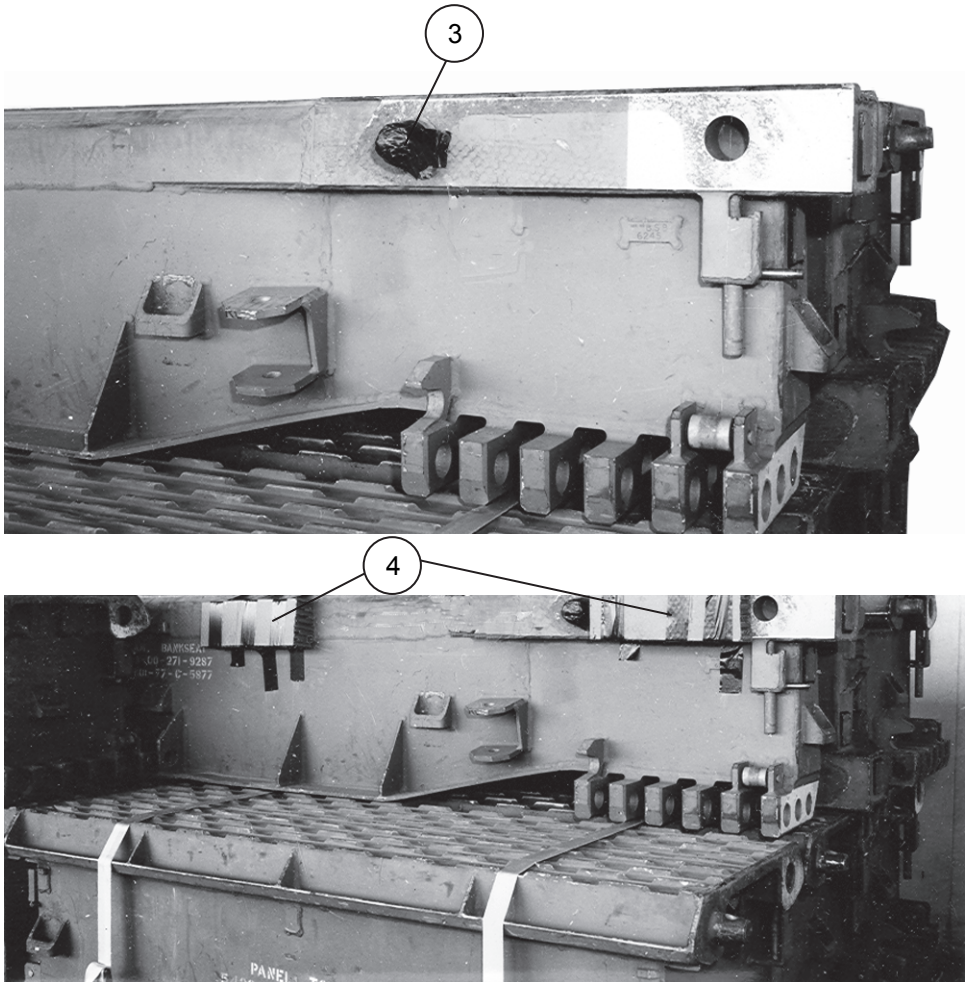
(1) Position two top panels even with the left side of the load. Interlock the top panels with the shoot bolt.

Figure 3-29. Two Top Panels Positioned



1. Position a bank seat beam facing down against two top panels. Make sure the front edge of the bank seat beam is flush with the front edge of the pallet.
2. Position another bank seat beam facing up against the first bank seat beam. Make sure the front edge of the bank seat beam is flush with the front edge of the pallet.

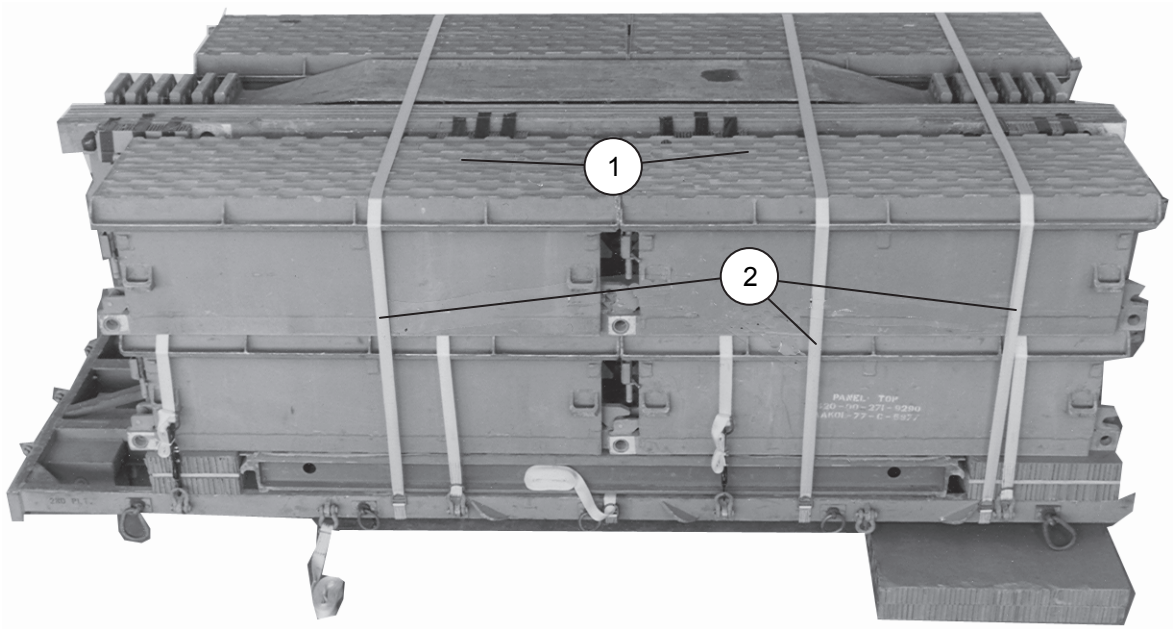
Figure 3-30. Bank Seat Beams Positioned and Prepared



3 Cover the bank seat beam tips with cellulose wadding. Tape the wadding in place.

4 Evenly space four 5- by 7-inch pieces of honeycomb across the right side of the bank seat beam. Tape the honeycomb in place.

Figure 3-30. Bank Seat Beams Positioned and Prepared (Continued)

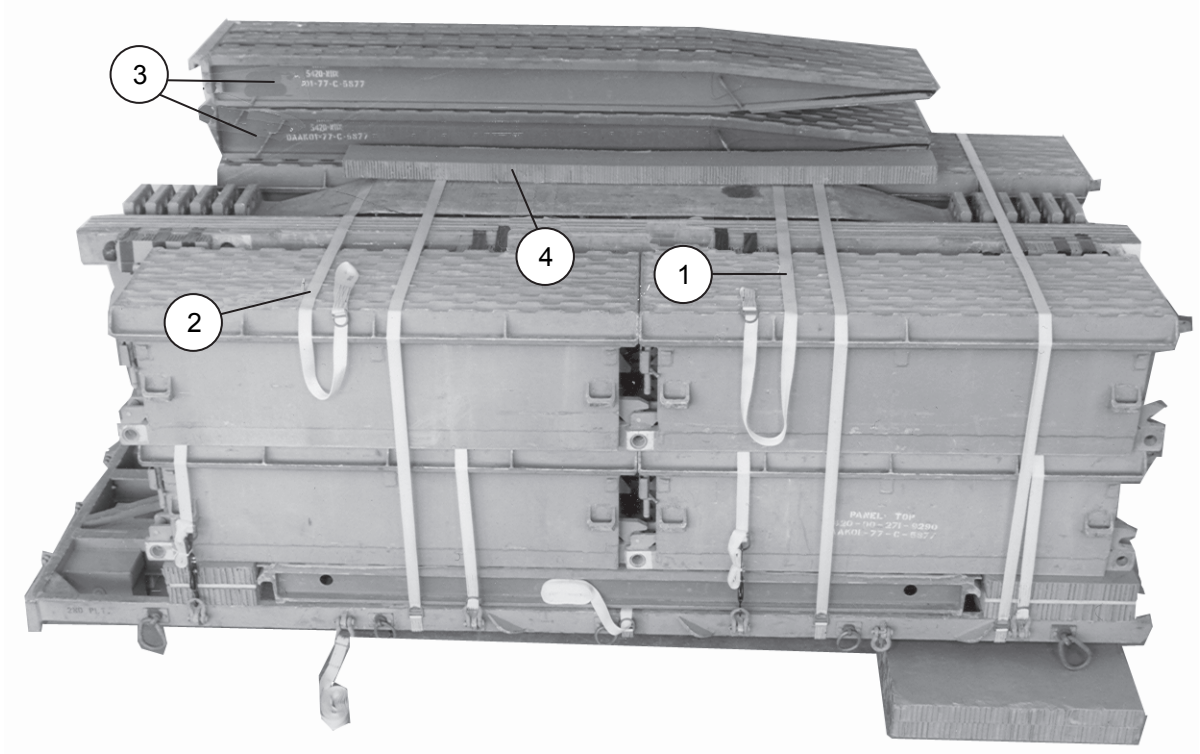


1 Position two top panels on the right side of the bank seat beams flush with the front edge of the pallet. Make sure the top panels are interlocked.

2 Secure the top panels and bank seat beams in place using the pre-positioned lashings at the 19-, 46-, and 108-inch intervals.

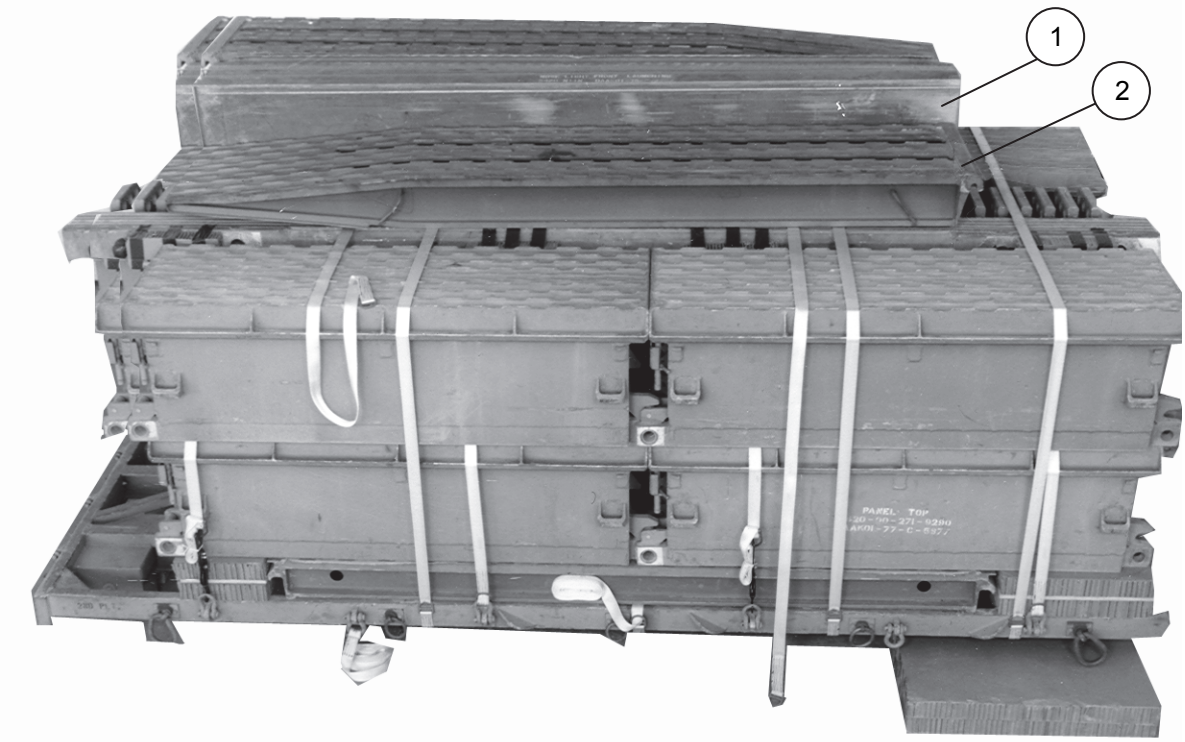
Note. Make sure the lashings are secured to the left side of the load.

Figure 3-31. Top Panels and Bank Seat Beams Secured



1. Place a 15-foot lashing over the top panels and bank seat beams in a side-to-side direction 51 ½ inches from the front edge of the pallet.
2. Place a 15-foot lashing over the top panels and bank seat beams in a side-to-side direction 117 inches from the front edge of the pallet.
3. Position two ramps on top of the left side of the load flush with the rear edge of the top panels.
4. Place a 7- by 96-inch piece of honeycomb against the bottom ramp. Align the honeycomb with the front edge of the bottom ramp.

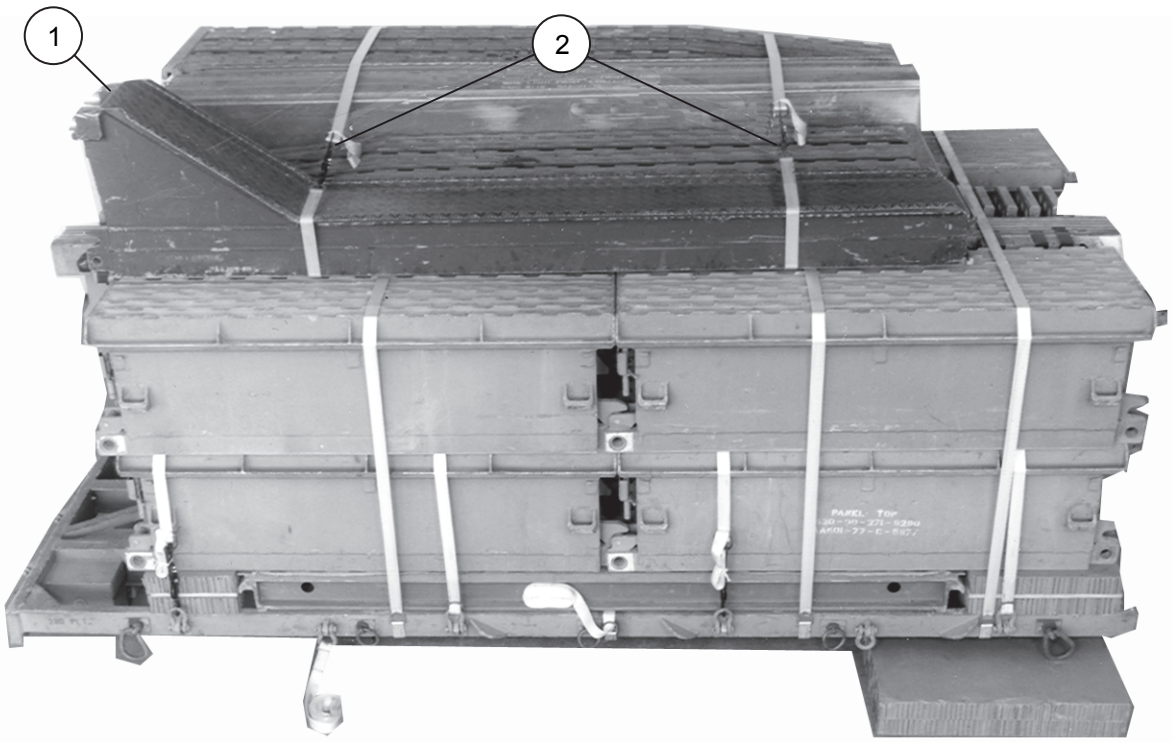
Figure 3-32. Two Ramps Positioned on Pallet



(1) Place the front light launching nose to the right of the ramp on the 7- by 96-inch piece of honeycomb. Turn the launching nose on its side with the larger end flush with the rear edge of the top panel.

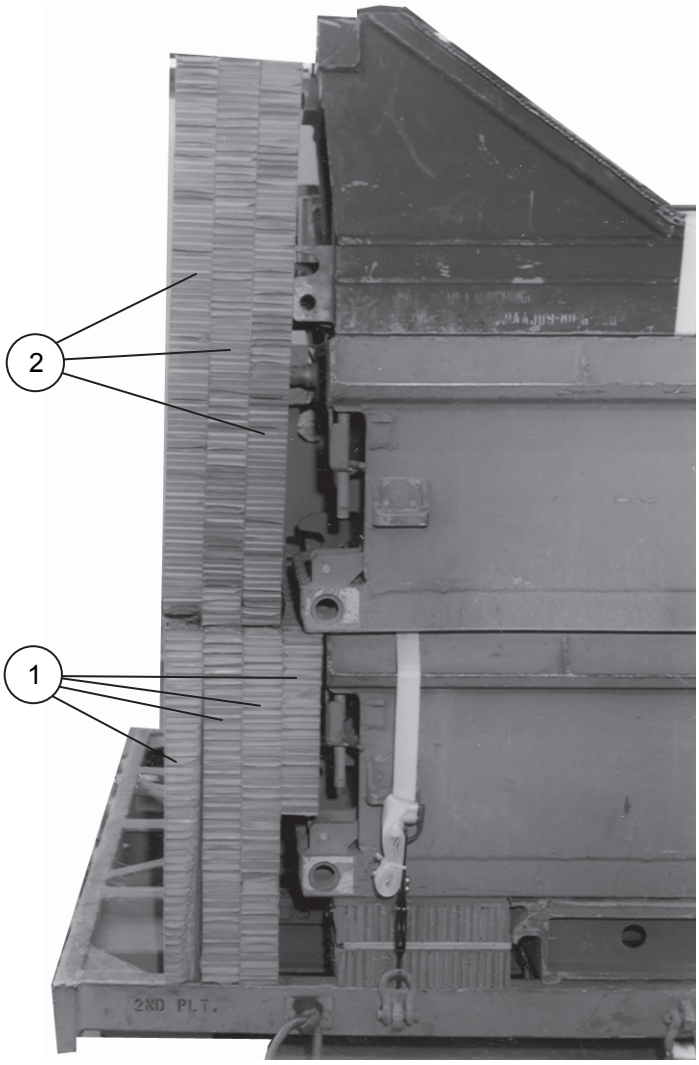
(2) Place a ramp to the right of the front light launching nose. Make sure the declining end of the ramp is flush with the rear edge of the top panel.

Figure 3-33. Front Light Launching Nose and Ramp Positioned



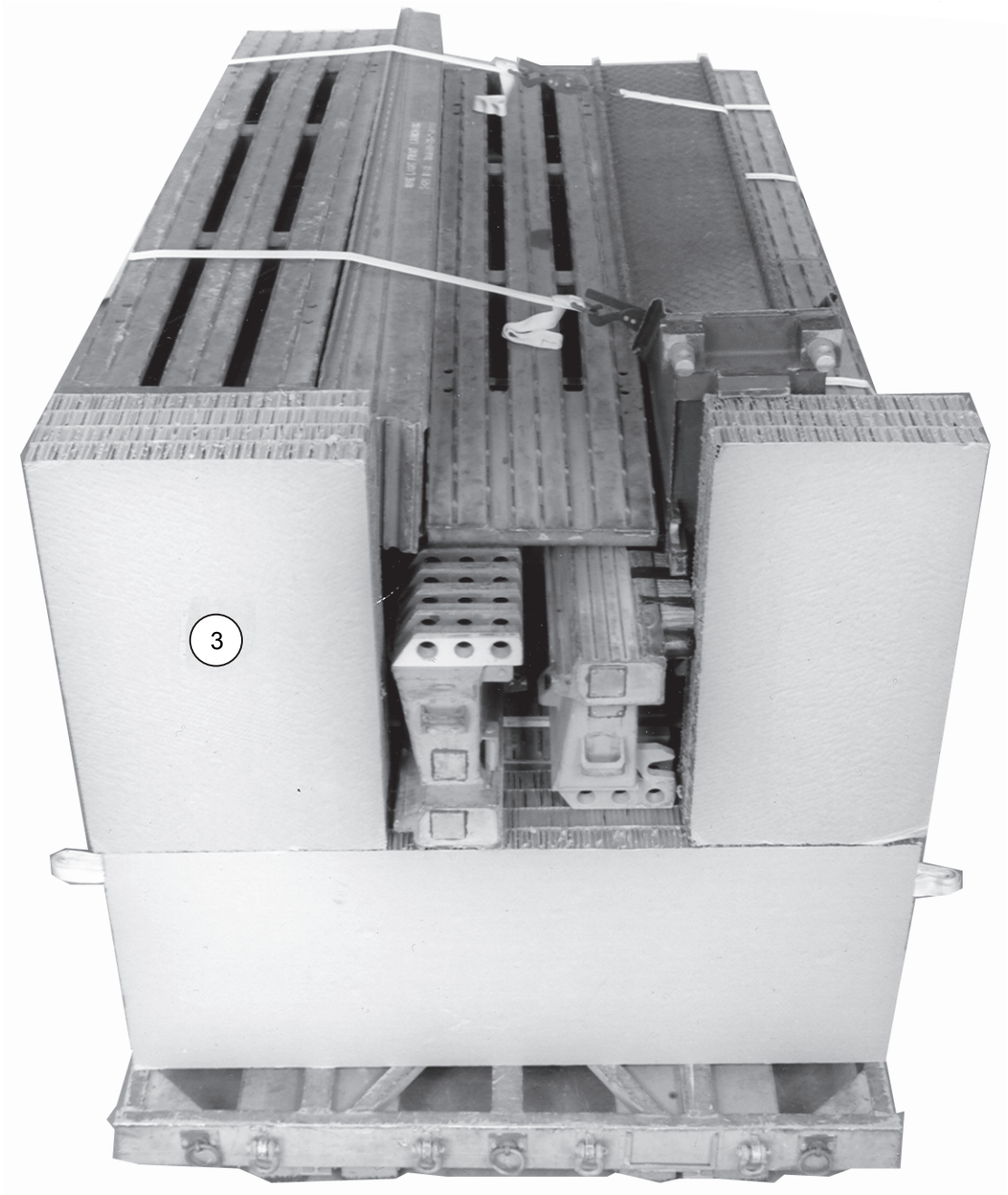
1. Position the rear light launching nose against the right side of the ramp. Make sure the taller end of the rear light launching nose is facing toward the rear of the pallet and flush with the rear edge of the top panel.
2. Pass the pre-positioned lashings (Figure 3-32, steps 1 and 2) around the launching noses and ramps. Hook the ends of the lashings using D-rings and load binders. Do NOT tighten the lashings at this time.

Figure 3-34. Rear Light Launching Nose Positioned and Pre-Positioned Lashings Secured



1. Place one 76- by 14-inch piece of honeycomb and three 76- by 28-inch pieces of honeycomb on top of the pallet and against the right rear of the load.
2. Place three 22- by 41-inch piece of honeycomb on top of the honeycomb positioned in step 1 and against the right rear of the load.

Figure 3-35. Honeycomb Positioned Against Load



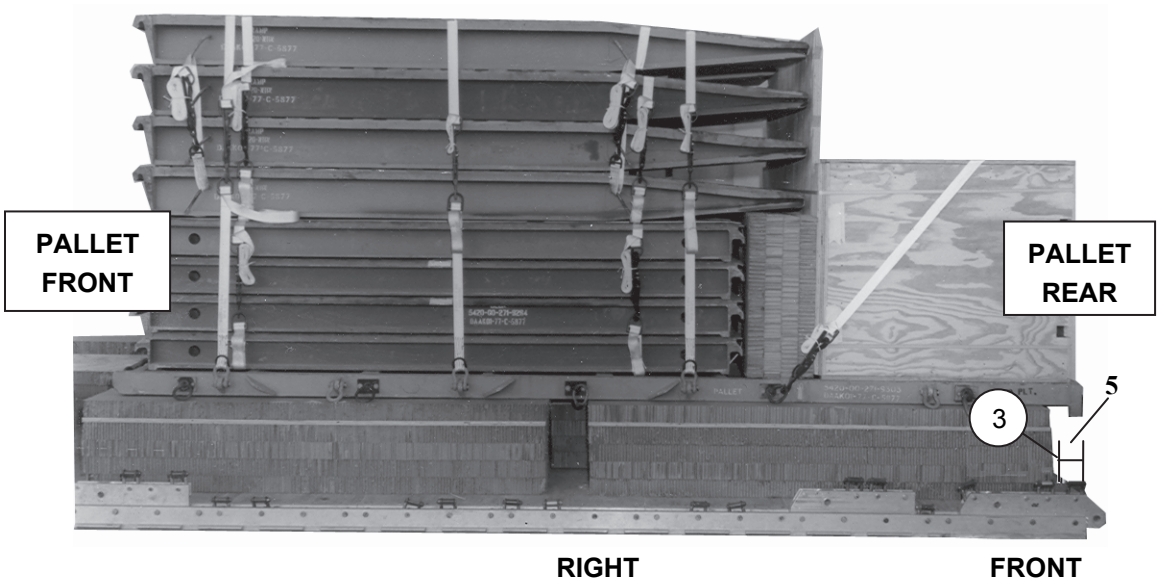
3 Place four 27- by 41-inch pieces of honeycomb on the top left of and flush with the honeycomb positioned in step 1.

Figure 3-35. Honeycomb Positioned Against Load (Continued)

POSITIONING PALLETS 1 AND 2 ON PLATFORM

3-6. Position pallets 1 and 2 on the platform using four 16-foot (2-loop), type XXVI nylon webbing slings and four medium suspension clevises as shown in Figure 3-36.

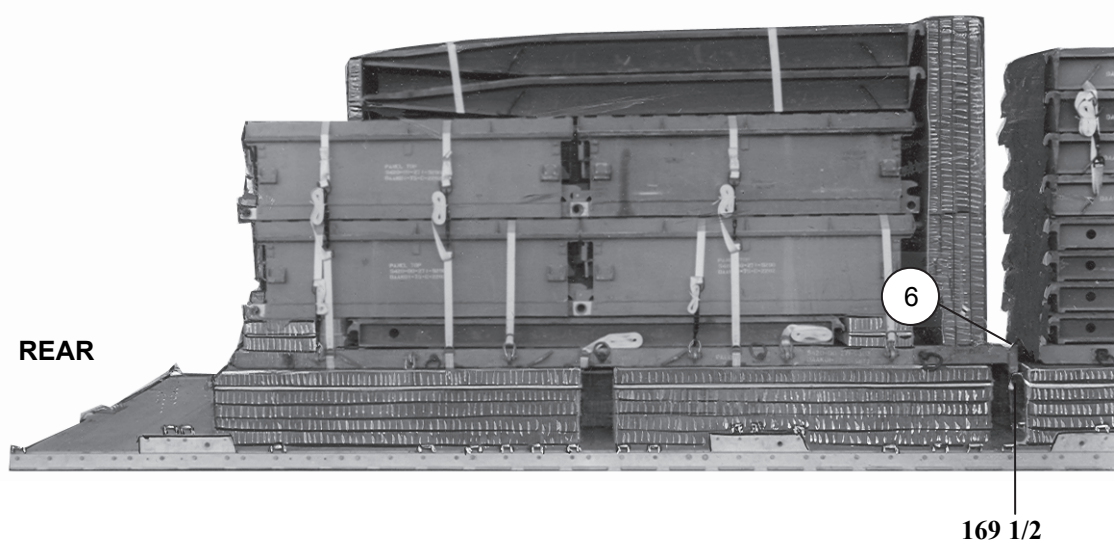
Note. All dimensions are in inches.



1. Pass the end of a 16-foot sling through a medium suspension clevis (not shown).
2. Attach a medium suspension clevis to lifting shackles 1, 1A, 11 and 11A on pallet 1 (not shown).
3. Position pallet 1 on the platform so that the rear of the pallet overhangs the front of the platform 5 inches.
4. Remove the lifting slings and medium suspension clevises from the pallet (not shown).

Figure 3-36. Pallets 1 and 2 Positioned on Platform

Note. All dimensions are in inches.



5 Repeat steps 1 and 2 for pallet 2 (not shown).

6 Position pallet 2 on the platform so that the rear edge of the pallet is 169 ½ inches from the front edge of the platform.

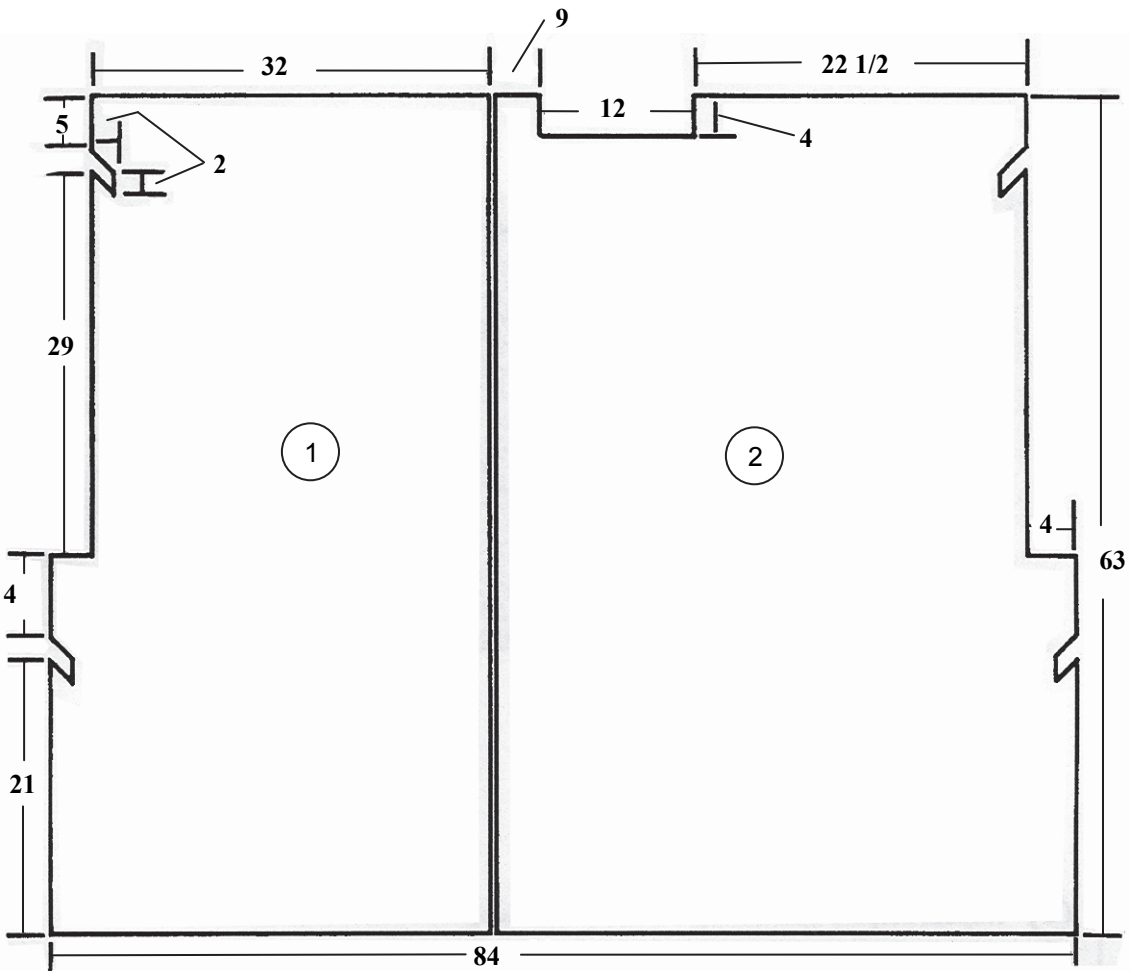
7 Remove the suspension slings and the medium suspension clevises from the pallet (not shown).

Figure 3-36. Pallets 1 and 2 Positioned on Platform (Continued)

BUILDING AND POSITIONING RESTRAINT BOARDS 2, 3, 4 AND 5

3-7. Build restraint boards 2, 3, 4 and 5 as shown in Figures 3-37 through 3-44. Position restraint boards 2, 3, 4 and 5 as shown in Figure 3-45.

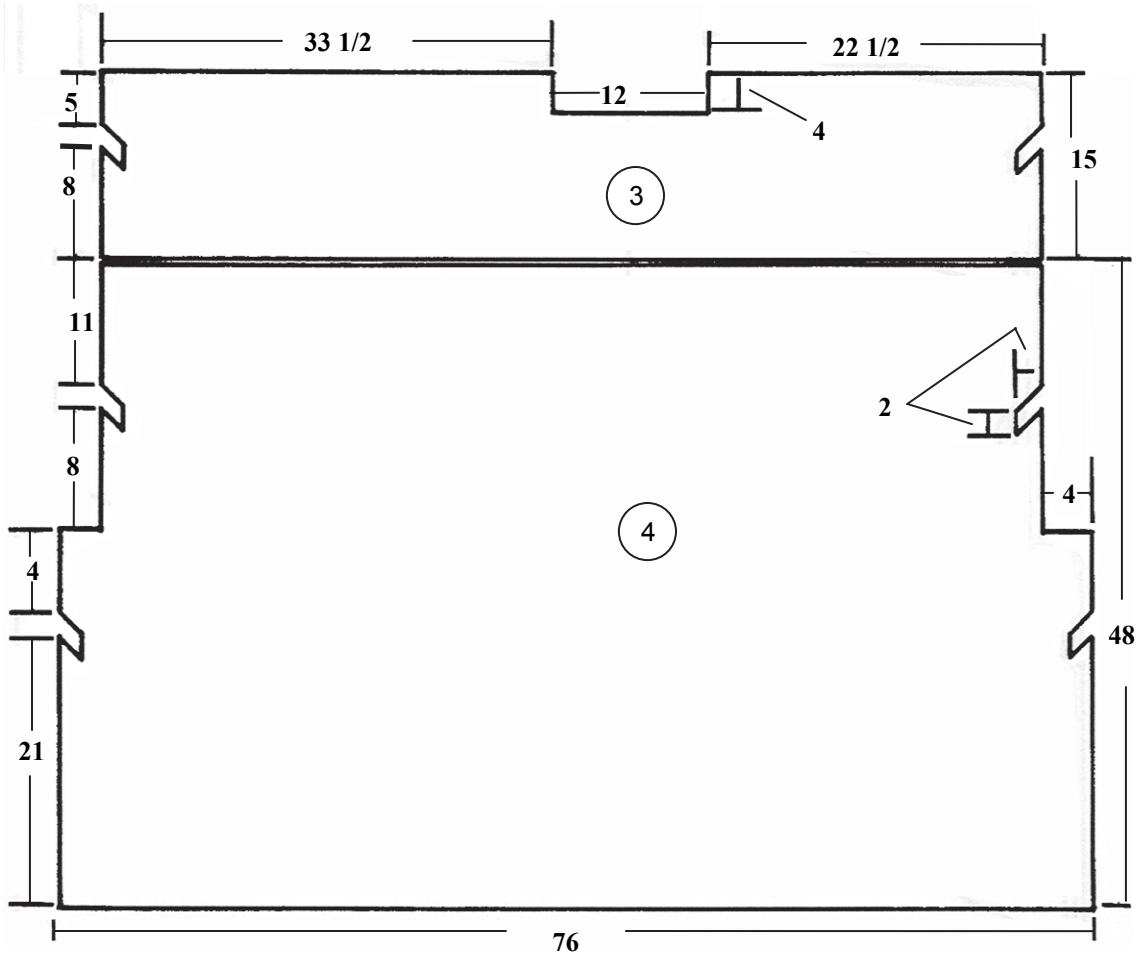
Notes.
1. This drawing is not to scale.
2. All dimensions are in inches.



Item Number	*Pieces*	*Width (Inches)*	*Length (Inches)*	*Material*
1	1	36	63	¾-inch plywood
2	1	48	63	¾-inch plywood

Figure 3-37. Materials Required to Build Restraint Board 2

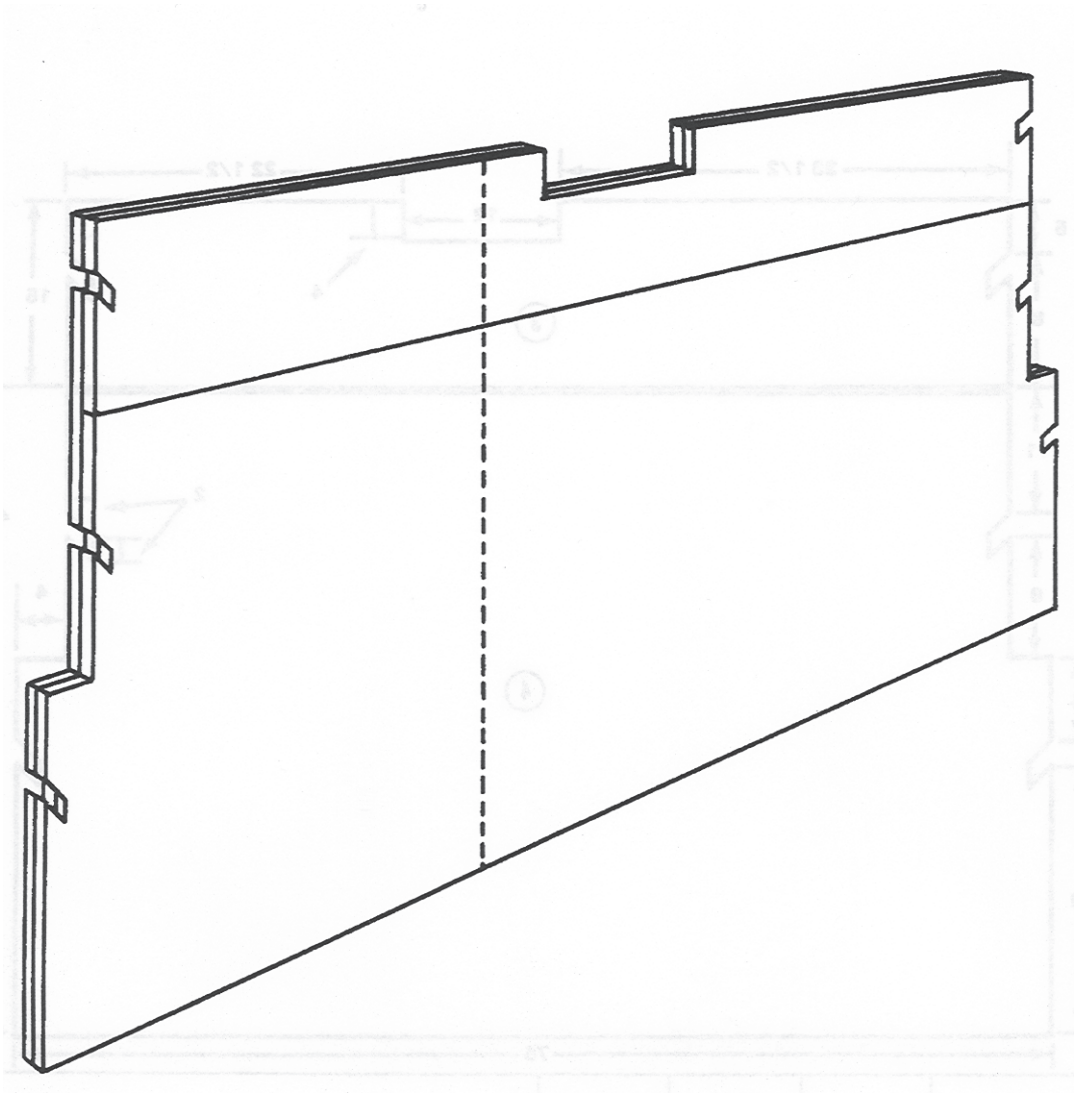
Notes.
1. This drawing is not to scale.
2. All dimensions are in inches.



Item Number	*Pieces*	*Width (Inches)*	*Length (Inches)*	*Material*
3	1	68	15	¾-inch plywood
4	1	76	48	¾-inch plywood

Figure 3-37. Materials Required to Build Restraint Board 2 (Continued)

Note. This drawing is not to scale.

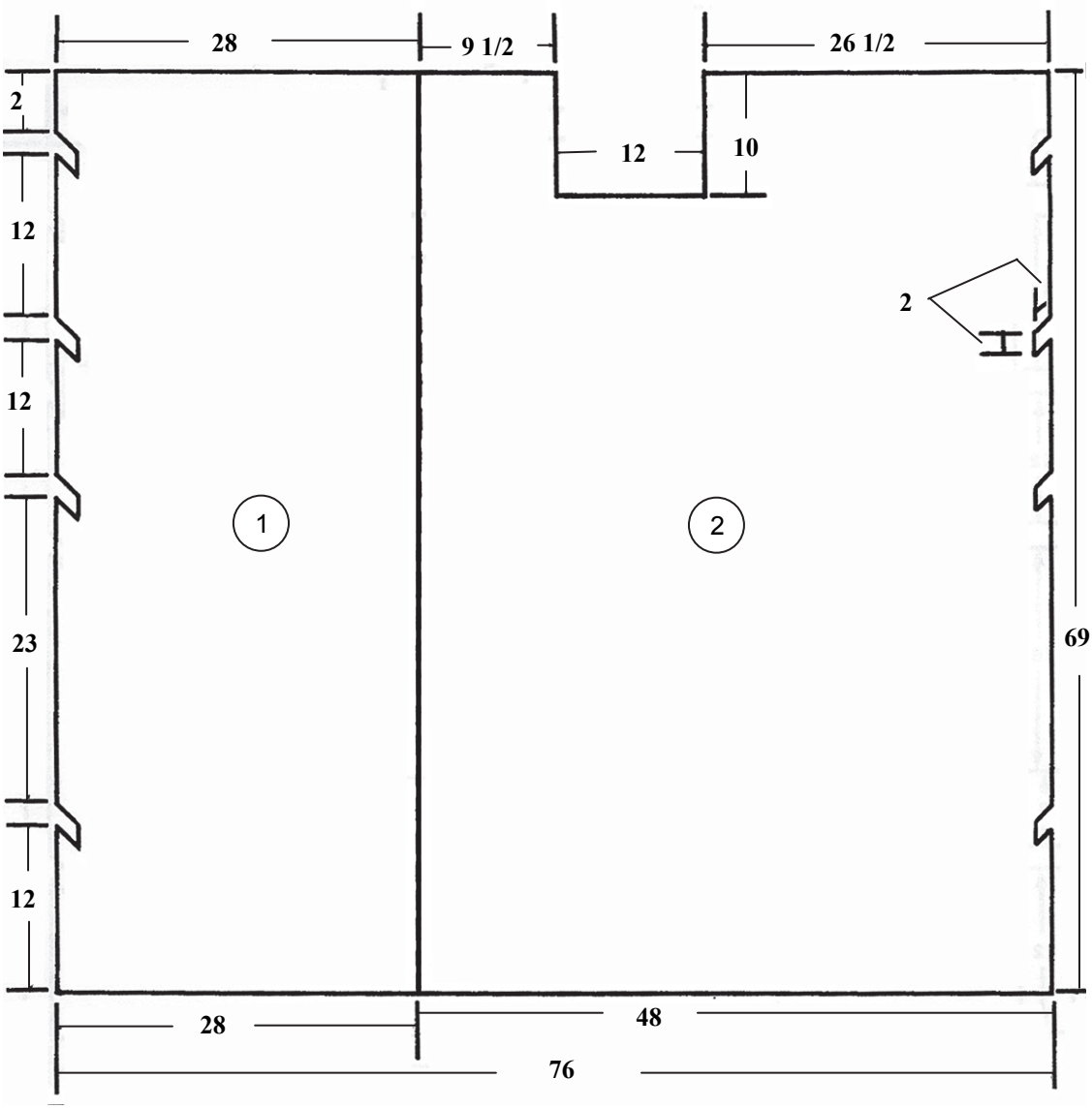


Step.

1. Build restraint board 2 using the materials given in Figure 3-37.
2. Use eightpenny nails to secure restraint board 2.

Figure 3-38. Restraint Board 2 Built

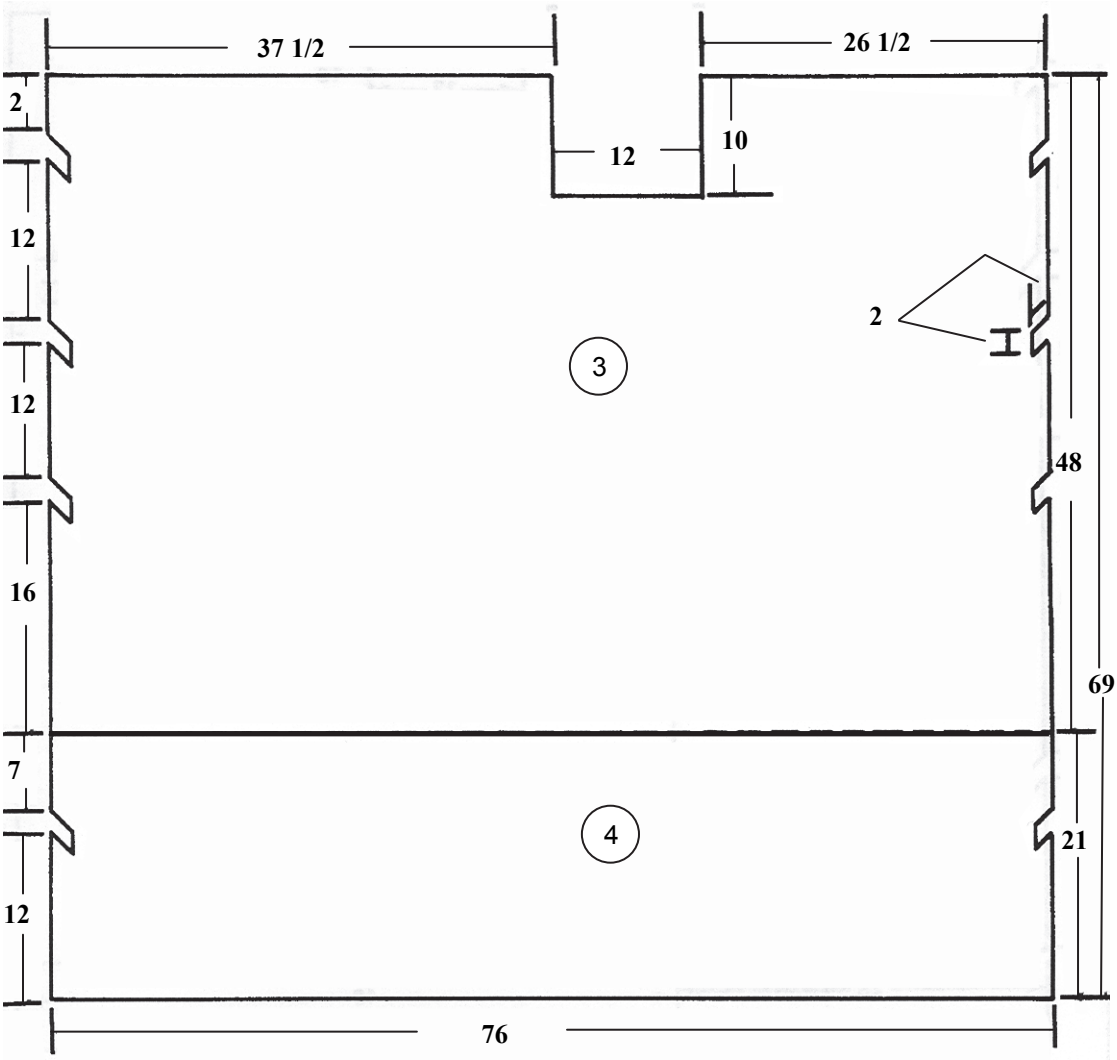
Notes.
1. This drawing is not to scale.
2. All dimensions are in inches.



Item Number	*Pieces*	*Width (Inches)*	*Length (Inches)*	*Material*
1	1	28	69	¾-inch plywood
2	1	48	69	¾-inch plywood

Figure 3-39. Materials Required to Build Restraint Board 3

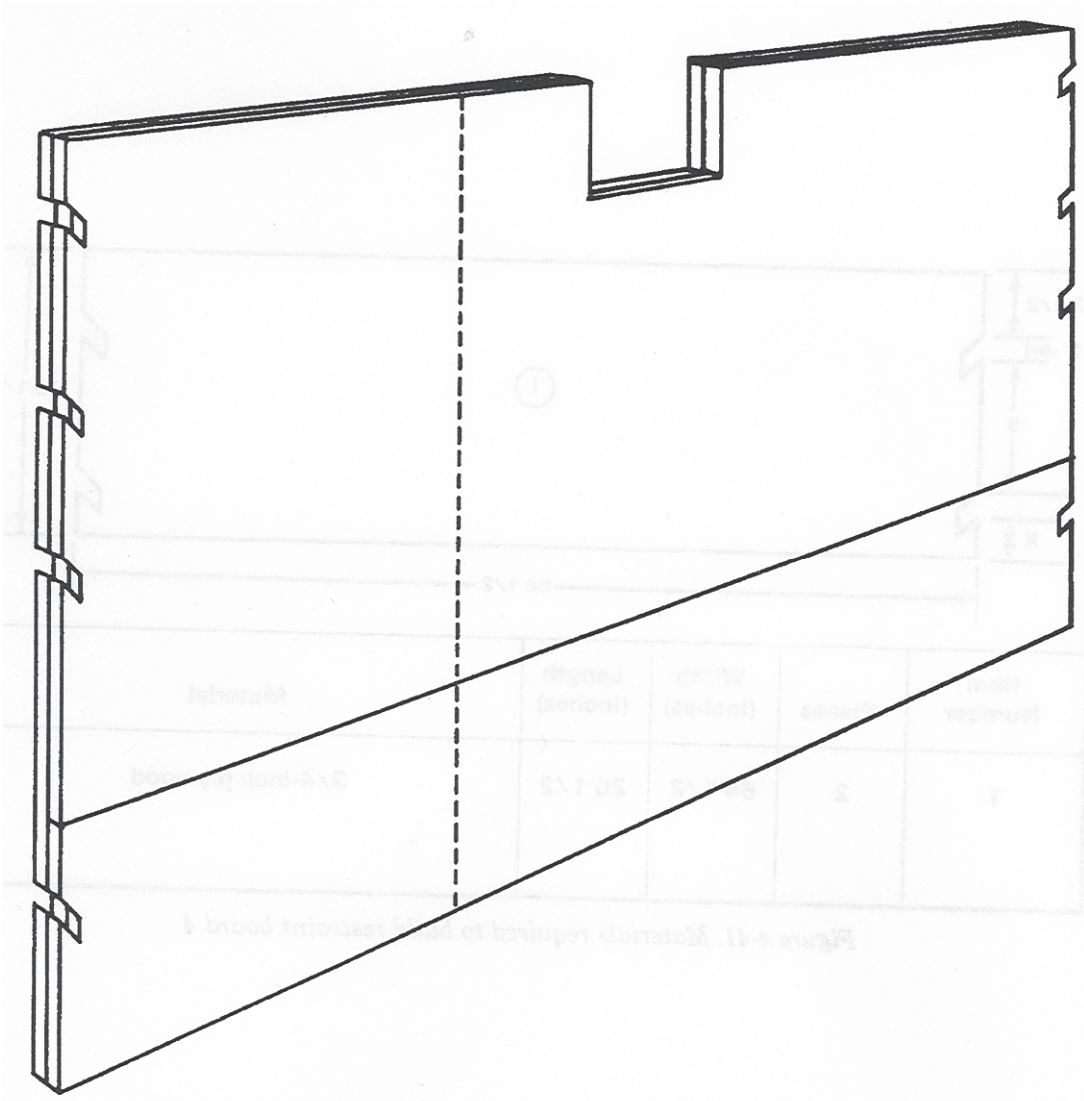
Notes.
1. This drawing is not to scale.
2. All dimensions are in inches.



Item Number	*Pieces*	*Width (Inches)*	*Length (Inches)*	*Material*
3	1	76	48	¾-inch plywood
4	1	76	21	¾-inch plywood

Figure 3-39. Materials Required to Build Restraint Board 3 (Continued)

Note. This drawing is not to scale.

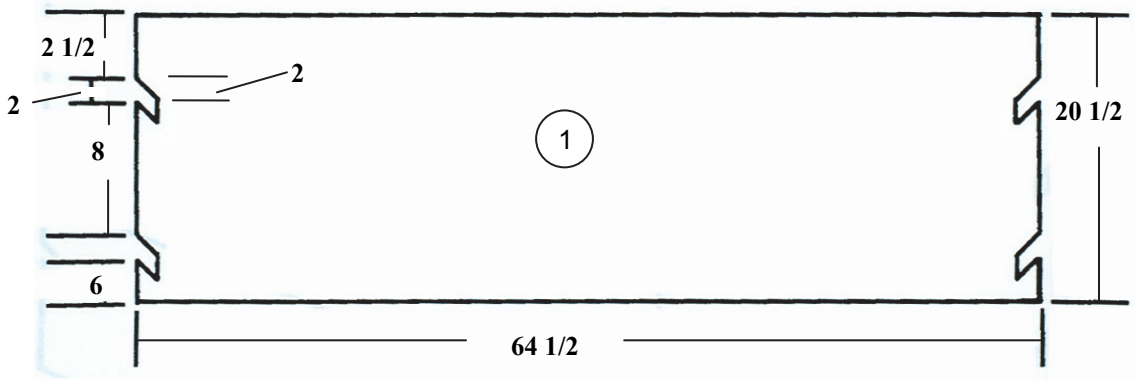


Step.

1. Build restraint board 3 using the materials given in Figure 3-39.
2. Use eightpenny nails to secure restraint board 3.

Figure 3-40. Restraint Board 3 Built

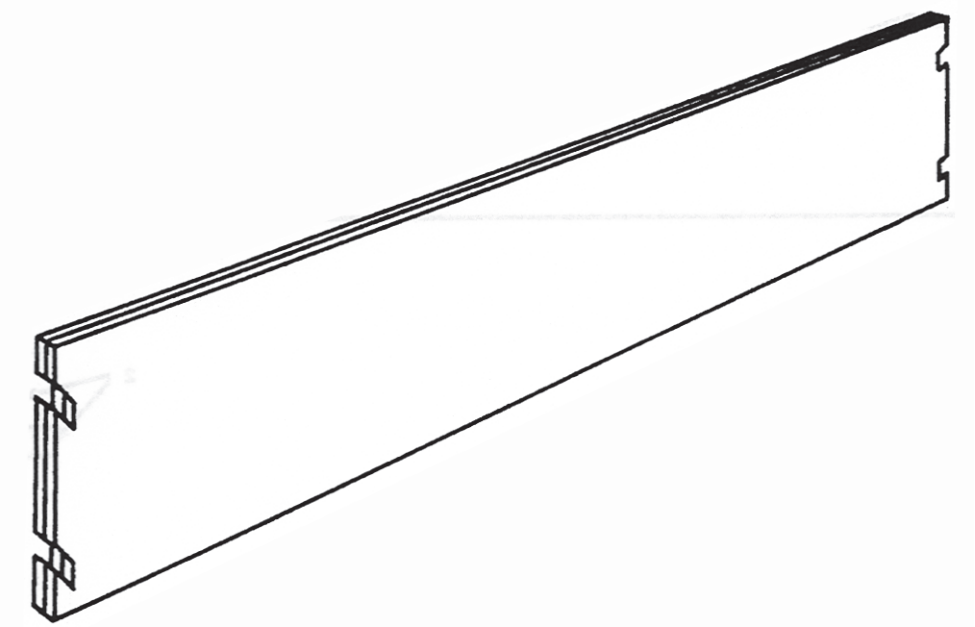
Notes.
1. This drawing is not to scale.
2. All dimensions are in inches.



Item Number	*Pieces*	*Width (Inches)*	*Length (Inches)*	*Material*
1	2	64 1/2	20 1/2	¾-inch plywood

Figure 3-41. Materials Required to Build Restraint Board 4

Note. This drawing is not to scale.

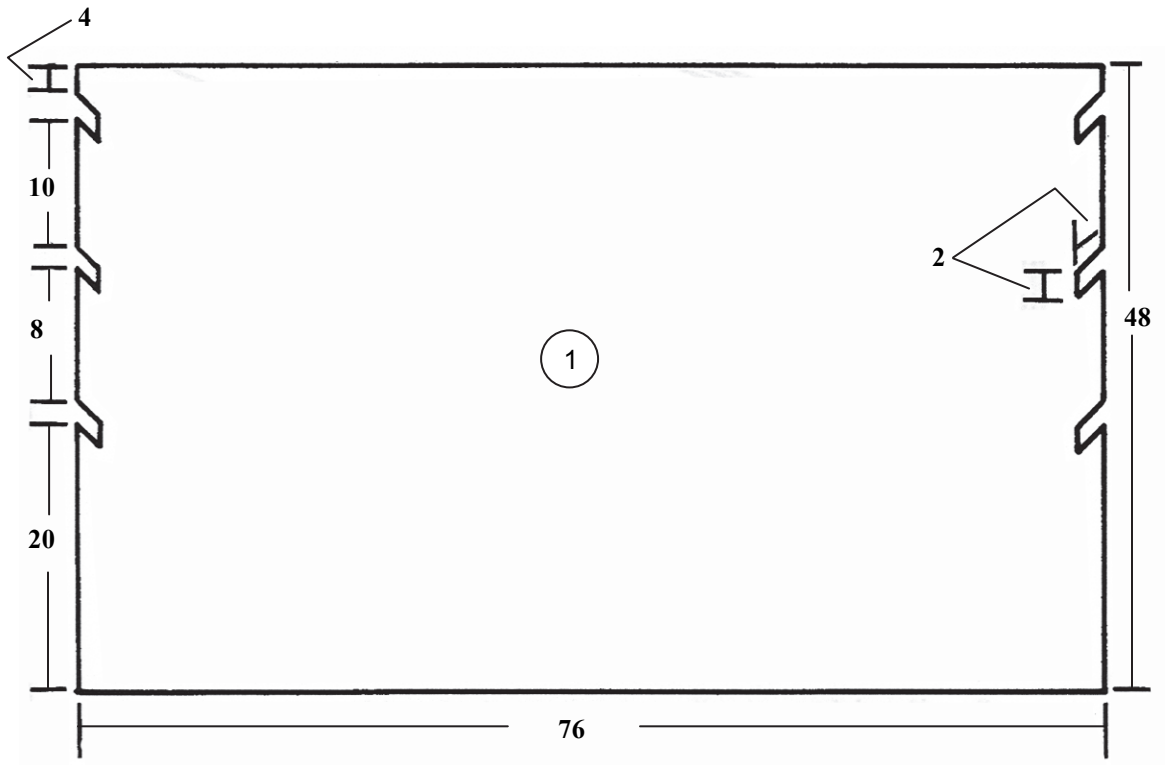


Step.

1. Build restraint board 4 using the materials given in Figure 3-41.
2. Use eightpenny nails to secure restraint board 4.

Figure 3-42. Restraint Board 4 Built

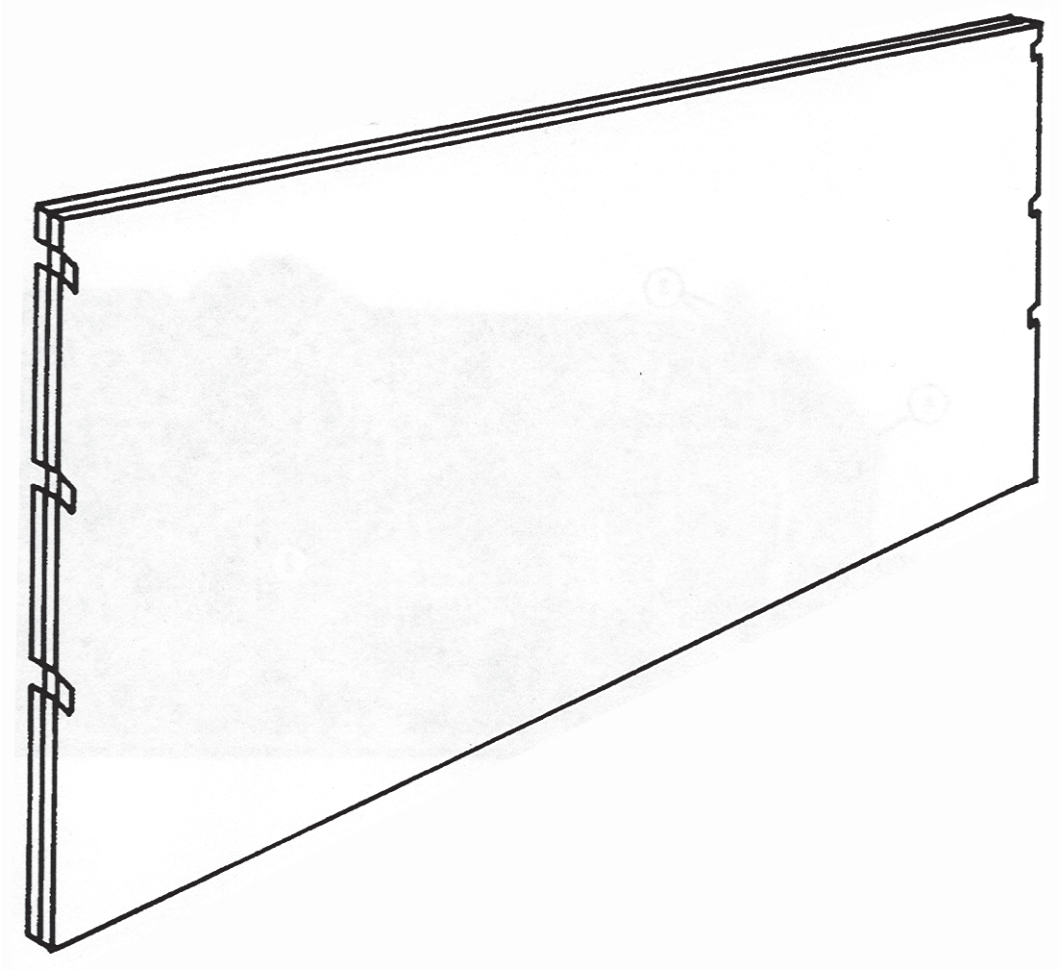
Notes.
1. This drawing is not to scale.
2. All dimensions are in inches.



Item Number	*Pieces*	*Width (Inches)*	*Length (Inches)*	*Material*
1	2	76	48	¾-inch plywood

Figure 3-43. Materials Required to Build Restraint Board 5

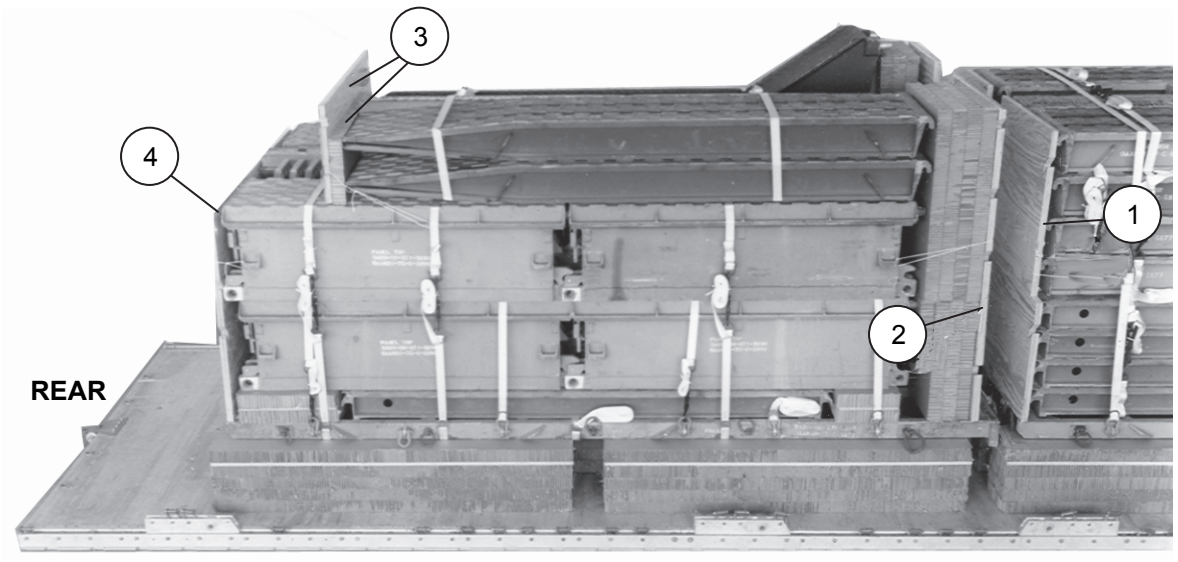
Note. This drawing is not to scale.



Step.

1. Build restraint board 5 using the materials given in Figure 3-43.
2. Use eightpenny nails to secure restraint board 5.

Figure 3-44. Restraint Board 5 Built

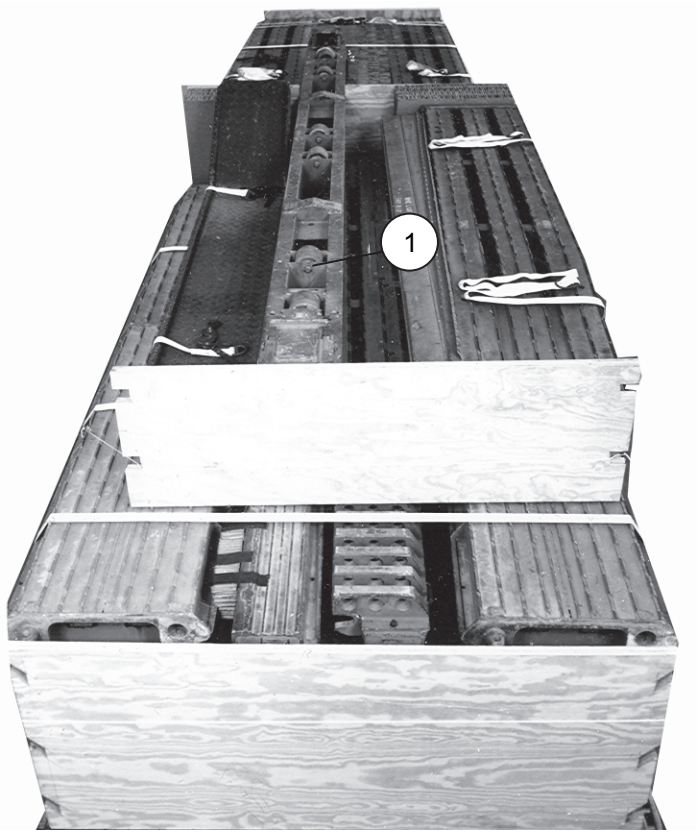


1. Position restraint board 2 against the front of pallet 1. Make sure the 22 ½-inch top edge of the restraint board is on the left side of the platform. Secure restraint board 2 in place with type III nylon cord.
2. Position restraint board 3 against the rear of pallet 2. Make sure the 26 ½-inch top edge of the restraint board is on the left side of the platform. Secure restraint board 3 in place with type III nylon cord.
3. Place a 53- by 15-inch piece of honeycomb against the declining end of the ramps on pallet 2. Position restraint board 4 against the piece of honeycomb. Secure restraint board 4 in place with type III nylon cord.
4. Position restraint board 5 against the front of pallet 2. Secure restraint board 5 in place with type III nylon cord.

Figure 3-45. Restraint Boards 2, 3, 4 and 5 Positioned and Secured

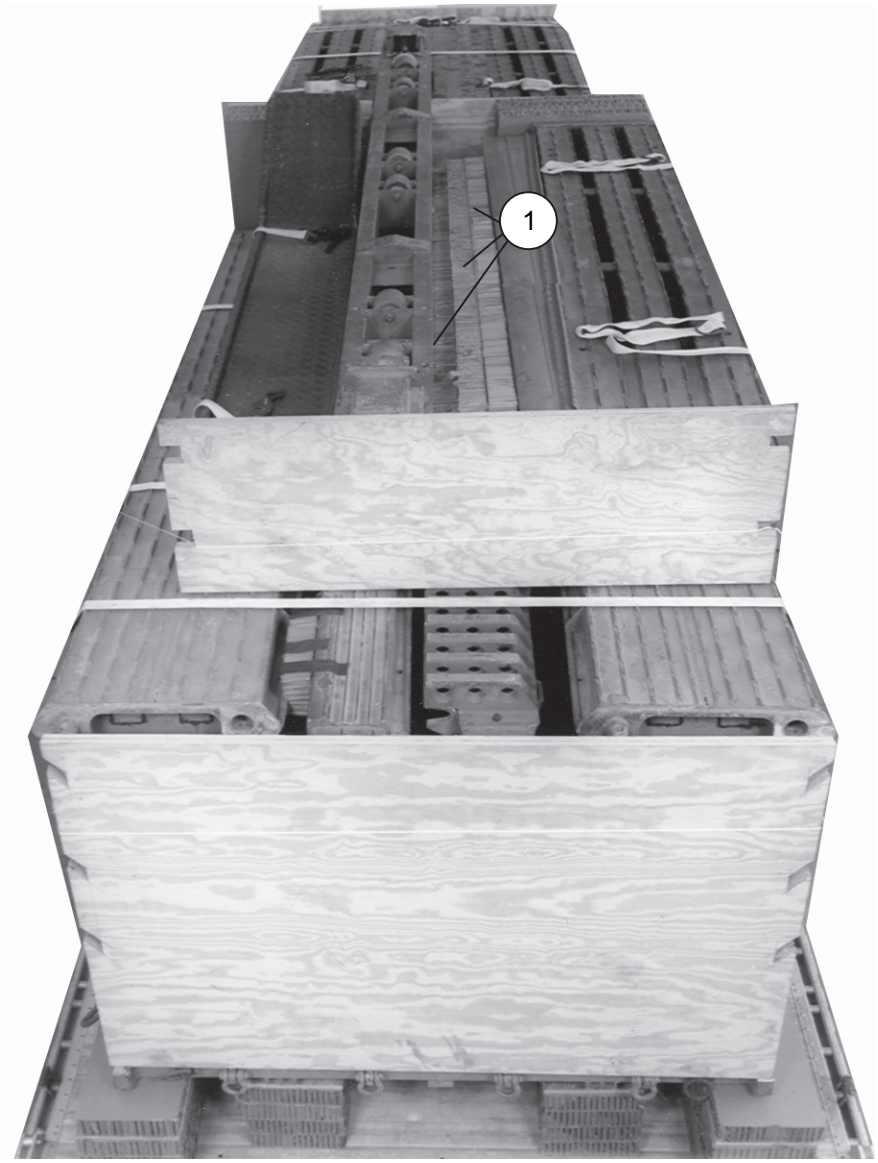
PREPARING PALLETS 1 AND 2 AFTER POSITIONING ON PLATFORM

3-8. Prepare pallets 1 and 2 after they have been positioned on the platform as shown in Figures 3-46, through 3-48.



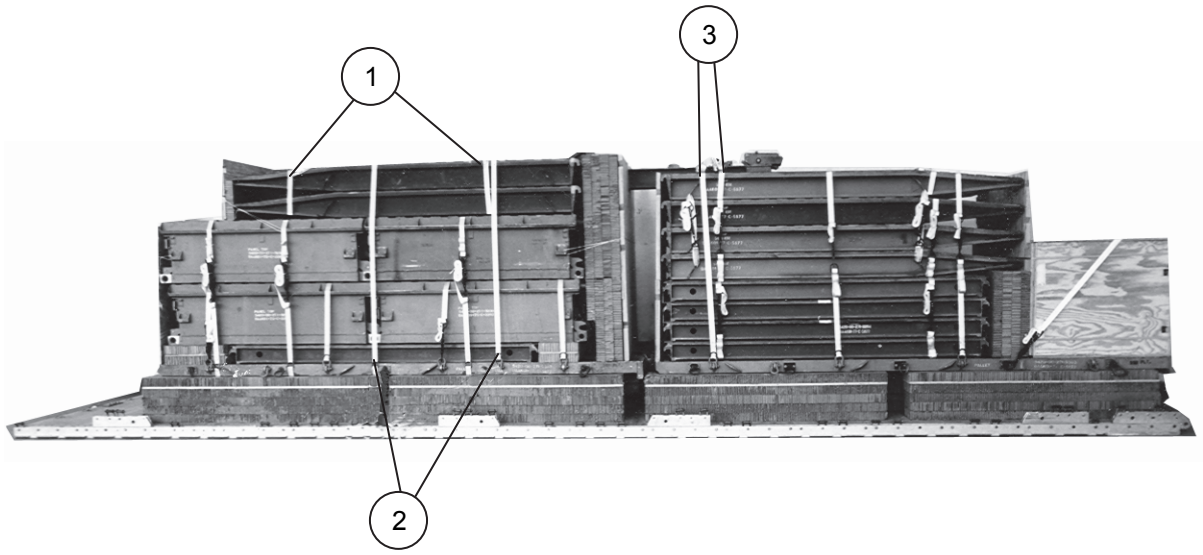
(1) Position the roller beam on the load with the roller portion of the beam facing up. Make sure the roller beam is flush against restraint board 4 and is through the cutout of restraint boards 2 and 3.

Figure 3-46. Roller Beam Positioned



(1) Wedge two 9- by 96-inch pieces of honeycomb and one 6- by 96-inch piece of honeycomb between the roller beam and the front light launching nose.

Figure 3-47. Honeycomb Wedged on Pallet 2



1. Pass the pre-positioned lashings (Figures 3-32, steps 1 and 2) on top of the top panels of pallet 2 around the ramps and roller beam. Secure the lashings on top of the load according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.

2. Pass the lashings attached to tie-down rings 9 and 9A and pre-positioned lashing, 76 inches from the front of pallet 2 around the load. Secure the lashings on top of the load according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.

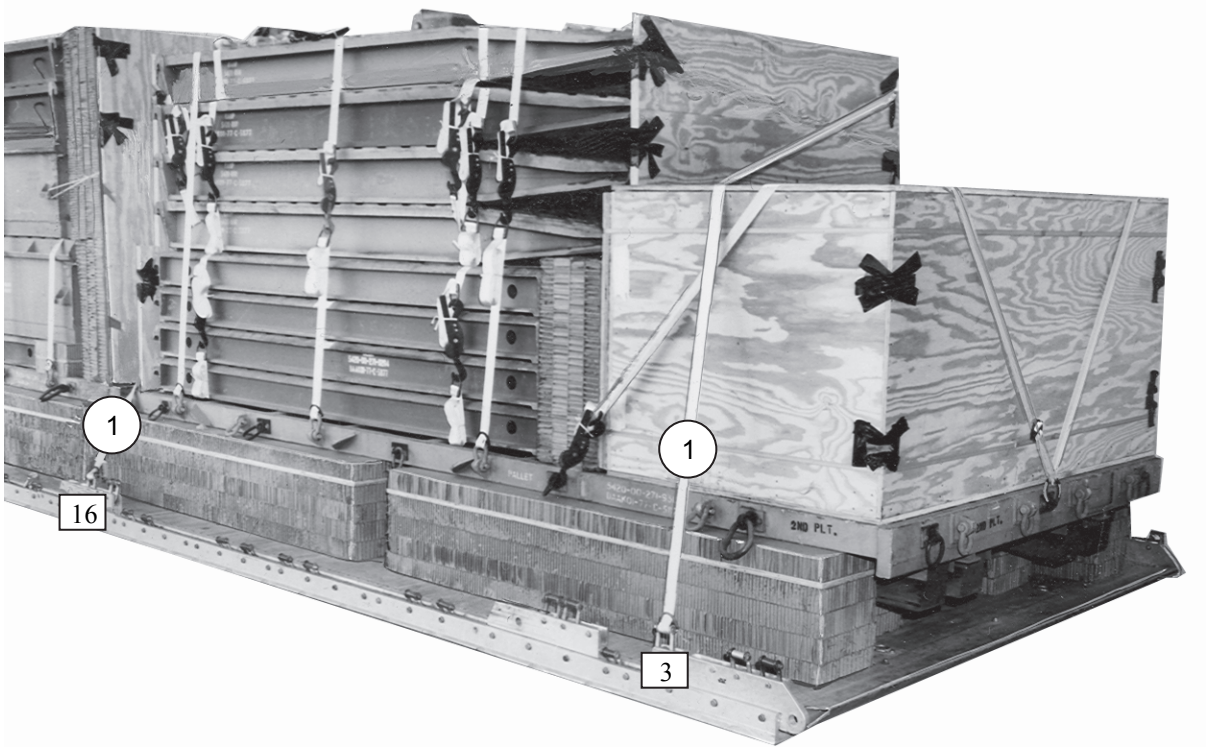
3. Secure the load, to include the roller beam on pallet 1, using the lashings attached to tie-down rings 2 and 2A and the pre-positioned lashing, 21 inches from the front of pallet 1. Secure the lashings on top of the load according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.

Figure 3-48. Pallets 1 and 2 Secured

LASHING PALLETS 1 AND 2

3-9. Lash pallets 1 and 2 to the platform with seventy-one 15-foot tiedown assemblies as shown in Figures 3-49 through 3-61. If the 15-foot lashings DO NOT reach, additional lashings may be added. Use the procedures in TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 to form the additional lengths. Secure the lashings according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.

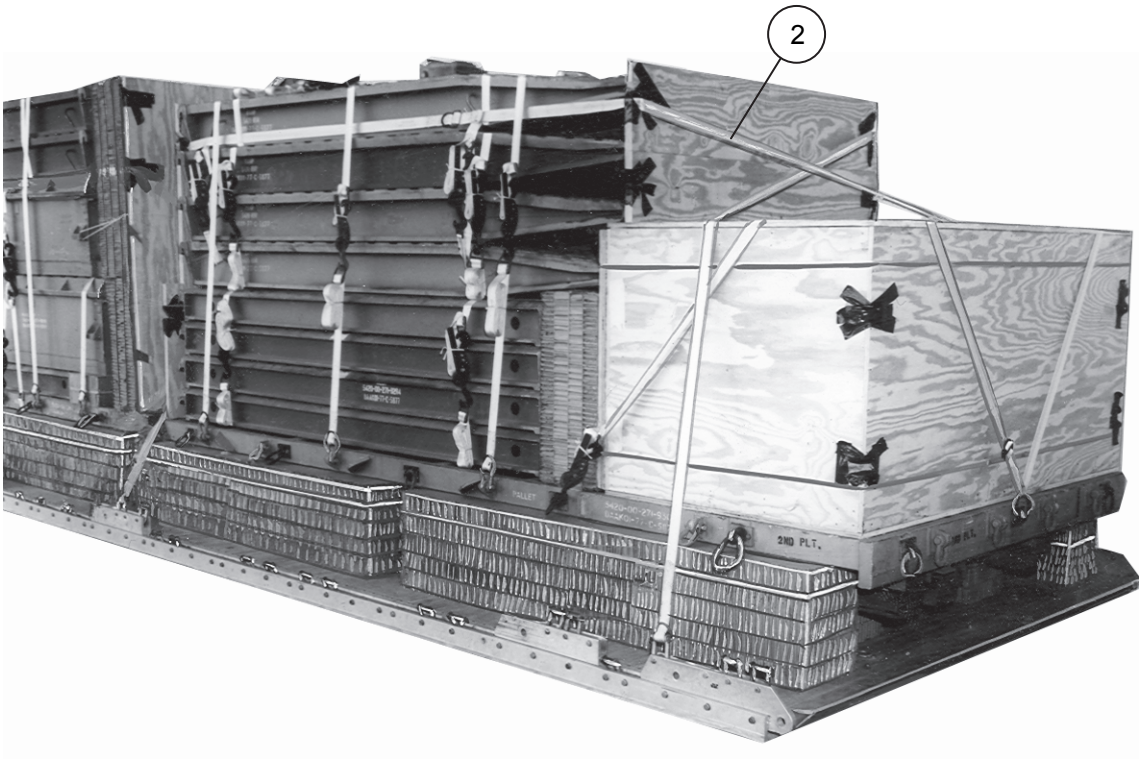
Notes.
1. Left and right refer to the pallet, NOT the platform.
2. Use three 15-foot lashings. Use the procedures in TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.



Lashing Number	*Tiedown Clevis Number*	*Instructions*
1	3	Pass the lashing through its own D-ring, over the top of the parts box, through the right top cutout of the restraint board 1 and around the right side of pallet 1.
	16	Pass a lashing through its own D-ring, through the right top cutout of the restraint board 2 and around the right side of pallet 1. Connect and secure these two lashings with a third 15-foot lashing.

Figure 3-49. Lashing 1 Installed

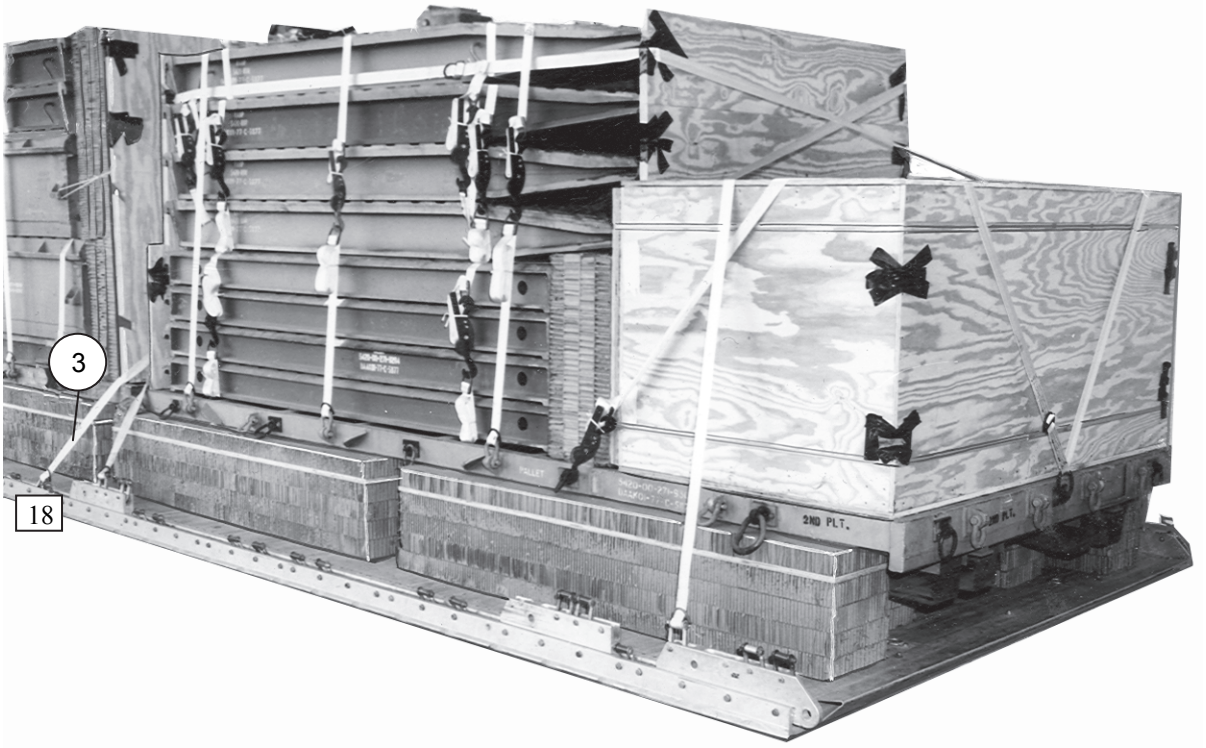
Notes.
1. Left and right refer to the pallet, NOT the platform.
2. Use three 15-foot lashings. Use the procedures in TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.



Lashing Number	*Tiedown Clevis Number*	*Instructions*
2	3A	Pass a 15-foot lashing through its own D-ring, over the top of the parts box, through the left top cutout of the restraint board 1 and around the left side of pallet 1.
	16A	Pass a 15-foot lashing through its own D-ring, through the left cutout of the restraint board 2 and around the left side of pallet 1. Connect and secure these two lashings with a third 15-foot lashing.

Figure 3-50. Lashing 2 Installed

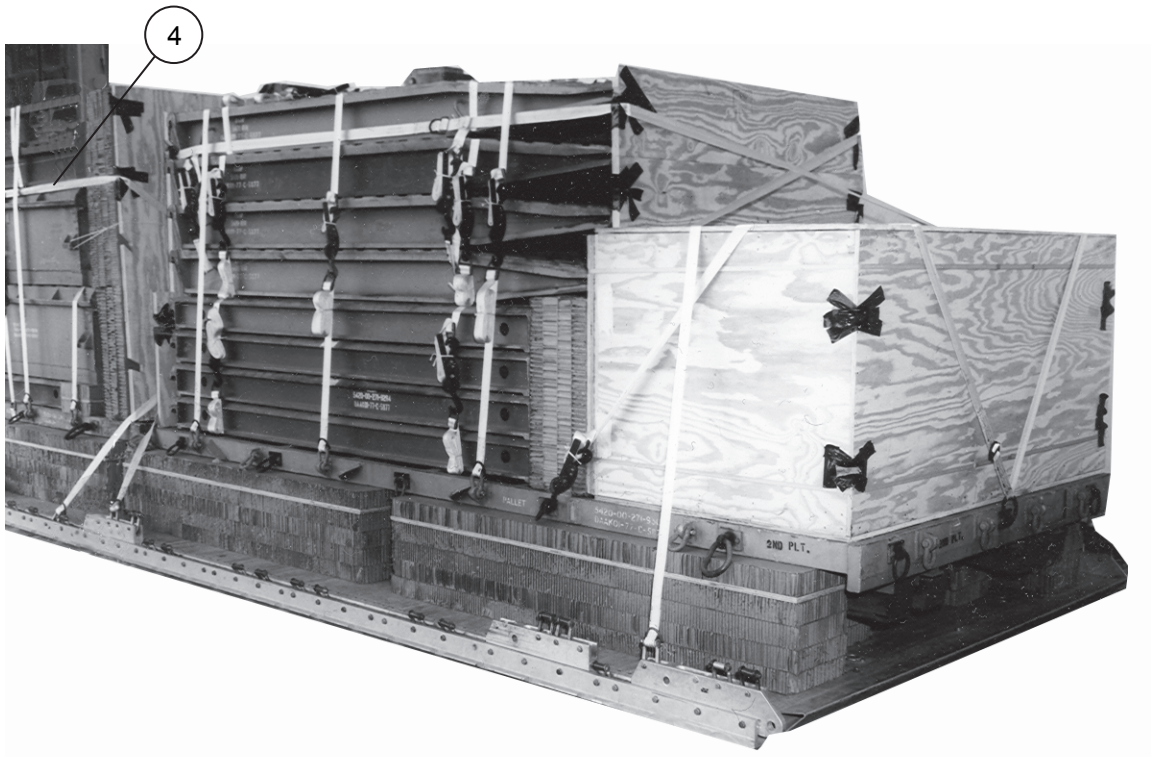
Notes.
1. Left and right refer to the pallet, NOT the platform.
2. Use three 15-foot lashings. Use the procedures in TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.



Lashing Number	*Tiedown Clevis Number*	*Instructions*
3	18	Pass a 15-foot lashing through its own D-ring, around the second cutout from the top on the right side of restraint board 3 and around the right side of pallet 2.
	32	Pass a 15-foot lashing through its own D-ring, through the top cutout on the right side of restraint board 5 and around the right side of pallet 2. Connect and secure these two lashings with a third 15-foot lashing.

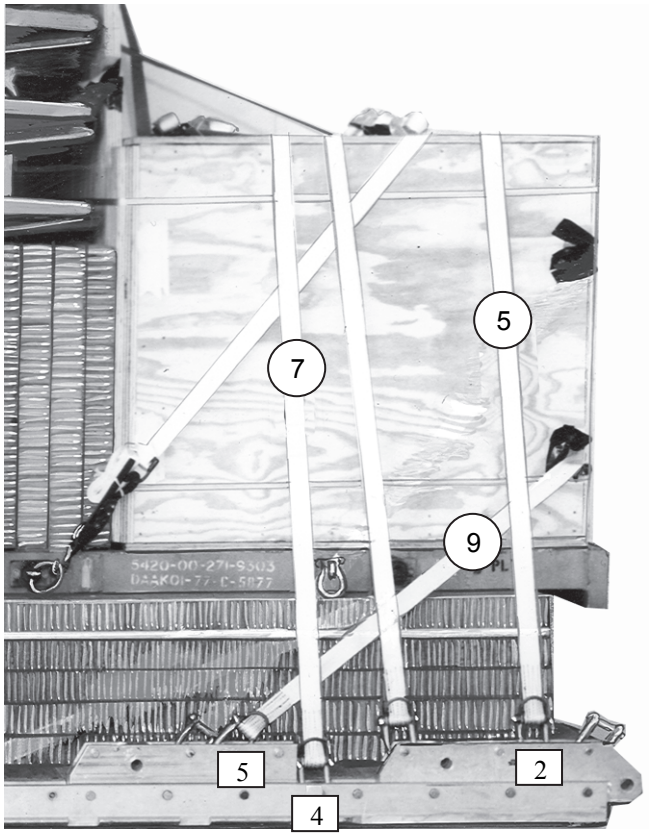
Figure 3-51. Lashing 3 Installed

Notes.
1. Left and right refer to the pallet, NOT the platform.
2. Use three 15-foot lashings. Use the procedures in TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.



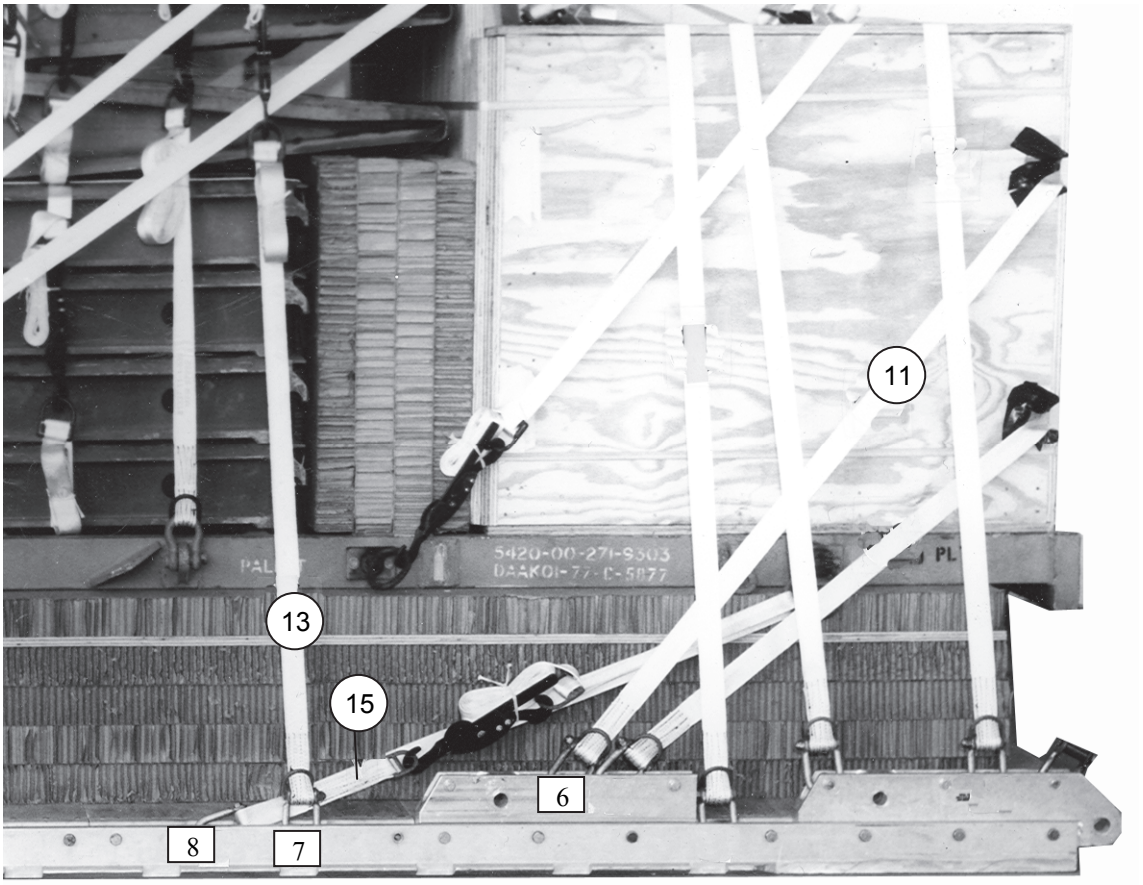
Lashing Number	*Tiedown Clevis Number*	*Instructions*
4	18A	Pass a 15-foot lashing through its own D-ring, around the second cutout from the top on the left side of restraint board 3 and around the left side of pallet 2.
	32A	Pass a 15-foot lashing through its own D-ring, through the top cutout on the left side of restraint board 5 and around the left side of pallet 2. Connect and secure these two lashings with a third 15-foot lashing.

Figure 3-52. Lashing 4 Installed



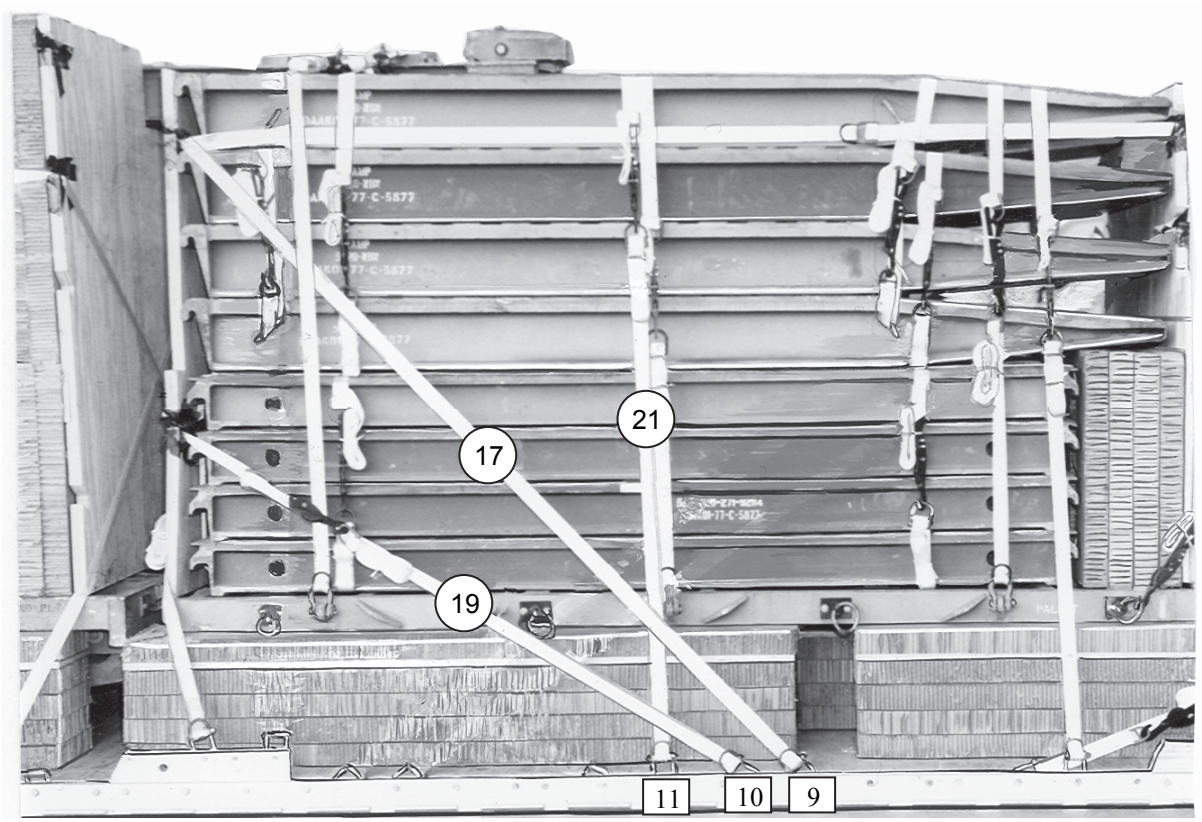
Lashing Number	*Tiedown Clevis Number*	*Instructions*
5	2	Pass a 15-foot lashing through its own D-ring and to the top of the parts box.
6	2A	Pass a 15-foot lashing through its own D-ring and to the top of the parts box. Secure it to lashing 5.
7	4	Pass a 15-foot lashing through its own D-ring and to the top of the parts box.
8	4A	Pass a 15-foot lashing through its own D-ring and to the top of the parts box. Secure it to lashing 7.
9	5	Pass a 15-foot lashing through its own D-ring and to the bottom cutout of the parts box.
10	5A	Pass a 15-foot lashing through its own D-ring and to the bottom cutout of the parts box. Secure it to lashing 9.

Figure 3-53. Lashings 5 Through 10 Installed



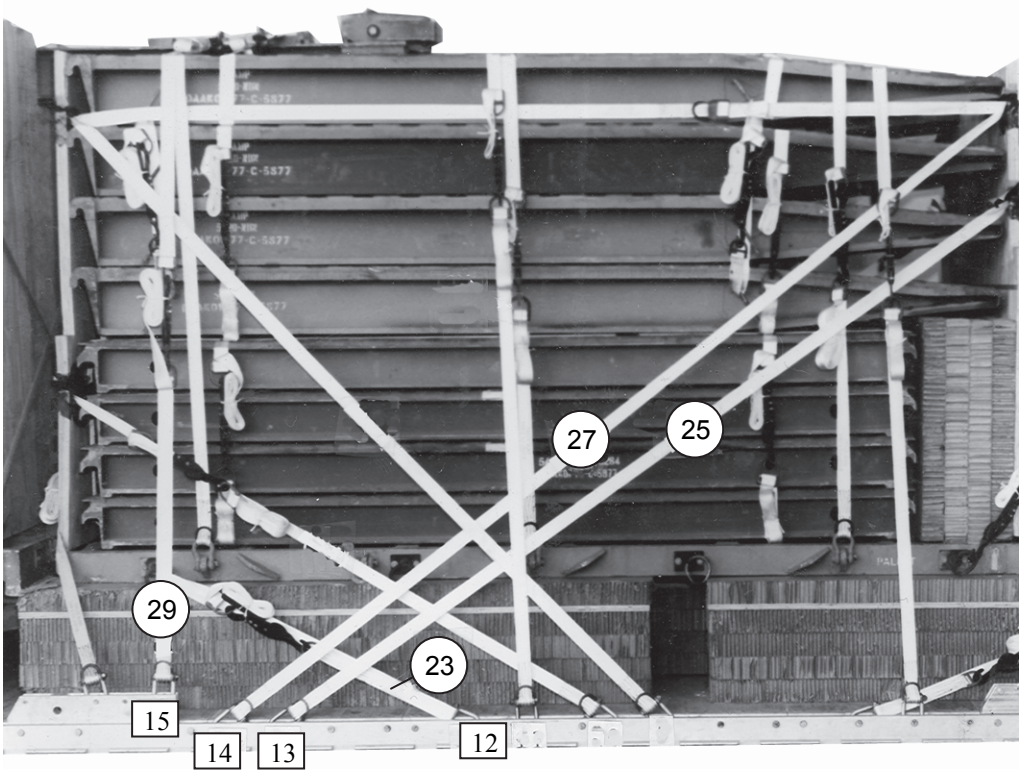
Lashing Number	*Tiedown Clevis Number*	*Instructions*
11	6	Pass a 15-foot lashing through its own D-ring and through the top cutout of the parts box.
12	6A	Pass a 15-foot lashing through its own D-ring and through the top cutout of the parts box. Secure it to lashing 11.
13	7	Pass a 15-foot lashing through its own D-ring and to the top of pallet 1.
14	7A	Pass a 15-foot lashing through its own D-ring and to the top of pallet 1. Secure it to lashing 13.
15	8	Pass a 15-foot lashing through lifting shackle 11A of pallet 1.
16	8A	Pass a 15-foot lashing through lifting shackle 11 of pallet 1.

Figure 3-54. Lashings 11 Through 16 Installed



Lashing Number	*Tiedown Clevis Number*	*Instructions*
17	9	Pass a 15-foot lashing through its own D-ring and through the top cutout of restraint board 2.
18	9A	Pass a 15-foot lashing through its own D-ring and through the top cutout of restraint board 2. Secure it to lashing 17.
19	10	Pass a 15-foot lashing through its own D-ring and to the bottom cutout of restraint board 2.
20	10A	Pass a 15-foot lashing through its own D-ring and to the bottom cutout of restraint board 2. Secure it to lashing 19.
21	11	Pass a 15-foot lashing through its own D-ring and over the top of pallet 1.
22	11A	Pass a 15-foot lashing through its own D-ring and over the top of pallet 1. Secure it to lashing 21.

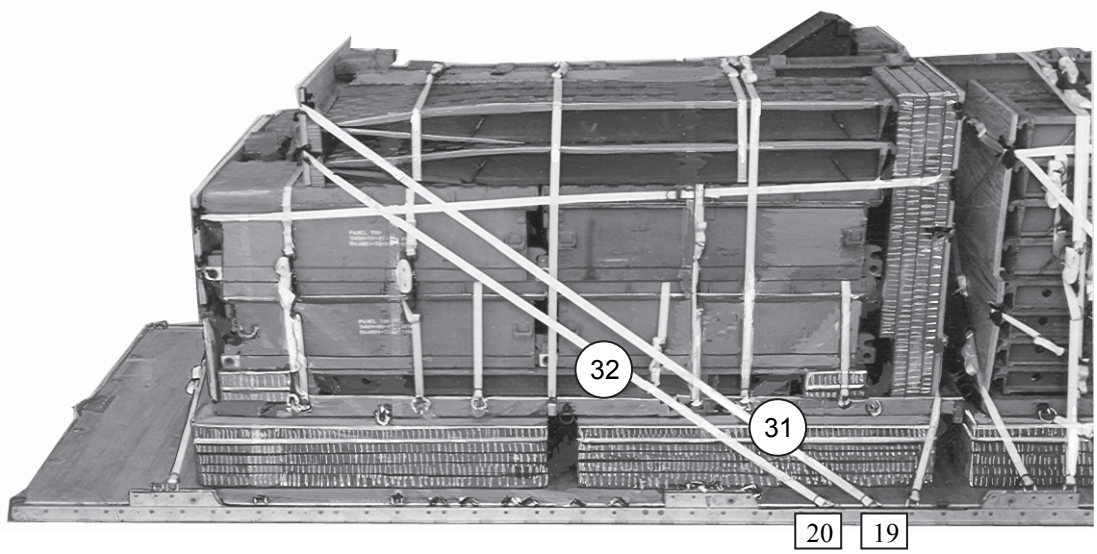
Figure 3-55. Lashings 17 Through 22 Installed



Lashing Number	*Tiedown Clevis Number*	*Instructions*
23	12	Pass a 15-foot lashing through the lifting shackle 1A of pallet 1.
24	12A	Pass a 15-foot lashing through the lifting shackle 1 of pallet 1.
25	13	Pass a 15-foot lashing through its own D-ring and through the bottom cutout of restraint board 1.
26	13A	Pass a 15-foot lashing through its own D-ring and through the bottom cutout of restraint board 1. Secure it to lashing 25.
27	14	Pass a 15-foot lashing through its own D-ring and through the top cutout of restraint board 1.
28	14A	Pass a 15-foot lashing through its own D-ring and through the top cutout of restraint board 1. Secure it to lashing 27.
29	15	Pass a 15-foot lashing through its own D-ring and over the top of pallet 1.
30	15A	Pass a 15-foot lashing through its own D-ring and over the top of pallet 1. Secure it to lashing 29.

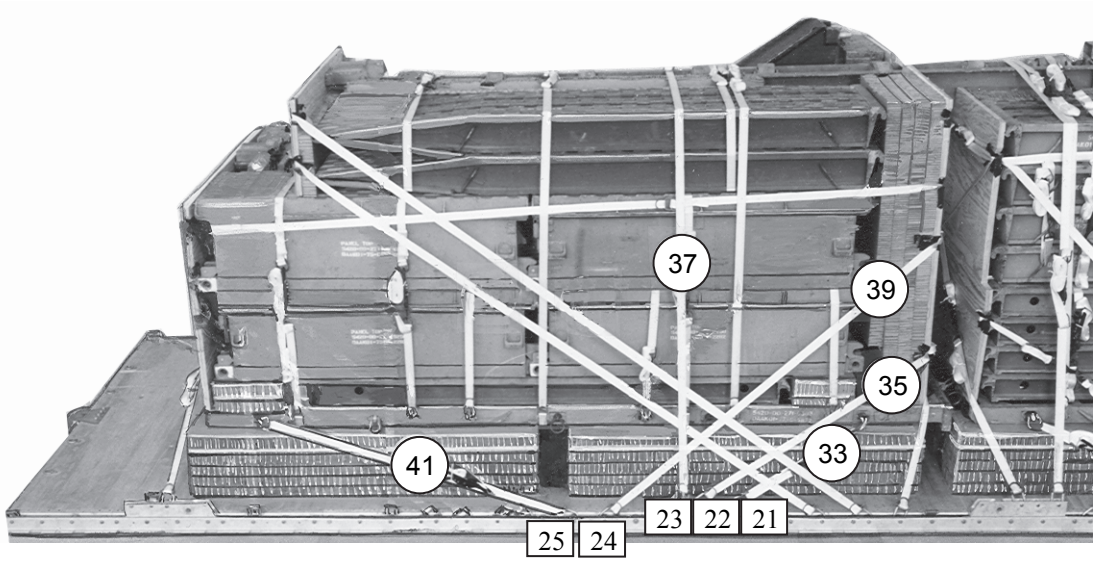
Figure 3-56. Lashings 23 Through 30 Installed

Note. Use three 15-foot lashings. Use the procedures in TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.



Lashing Number	*Tiedown Clevis Number*	*Instructions*
31	19	Pass a 15-foot lashing through its own D-ring and through the top cutout of restraint board 4.
	19A	Pass a 15-foot lashing through its own D-ring, through the top cutout of restraint board 4. Connect and secure these two lashings with a third 15-foot lashing.
32	20	Pass a 15-foot lashing through its own D-ring and through the bottom cutout of restraint board 4.
	20A	Pass a 15-foot lashing through its own D-ring, through the bottom cutout of restraint board 4. Connect and secure these two lashings with a third 15-foot lashing.

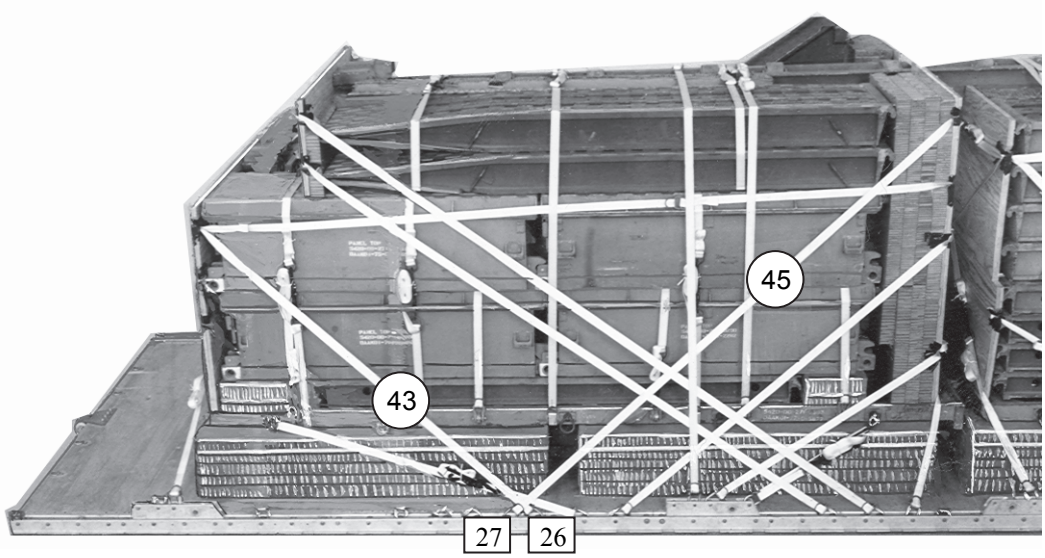
Figure 3-57. Lashings 31 and 32 Installed



Lashing Number	*Tiedown Clevis Number*	*Instructions*
33	21	Pass a 15-foot lashing to lifting shackle 11A of pallet 2.
34	21A	Pass a 15-foot lashing to lifting shackle 11 of pallet 2.
35	22	Pass a 15-foot lashing through its own D-ring and through the bottom cutout of restraint board 3.
36	22A	Pass a 15-foot lashing through its own D-ring and through the bottom cutout of restraint board 3. Secure it to lashing 35.
37	23	Pass a 15-foot lashing through its own D-ring and over the top of pallet 2.
38	23A	Pass a 15-foot lashing through its own D-ring and over the top of pallet 2. Secure it to lashing 37.
39	24	Pass a 15-foot lashing through its own D-ring and through the third cutout from the top of restraint board 3.
40	24A	Pass a 15-foot lashing through its own D-ring and through the third cutout from the top of restraint board 3. Secure it to lashing 39.
41	25	Pass a 15-foot lashing through lifting shackle 1A of pallet 2.
42	25A	Pass a 15-foot lashing through lifting shackle 1 of pallet 2.

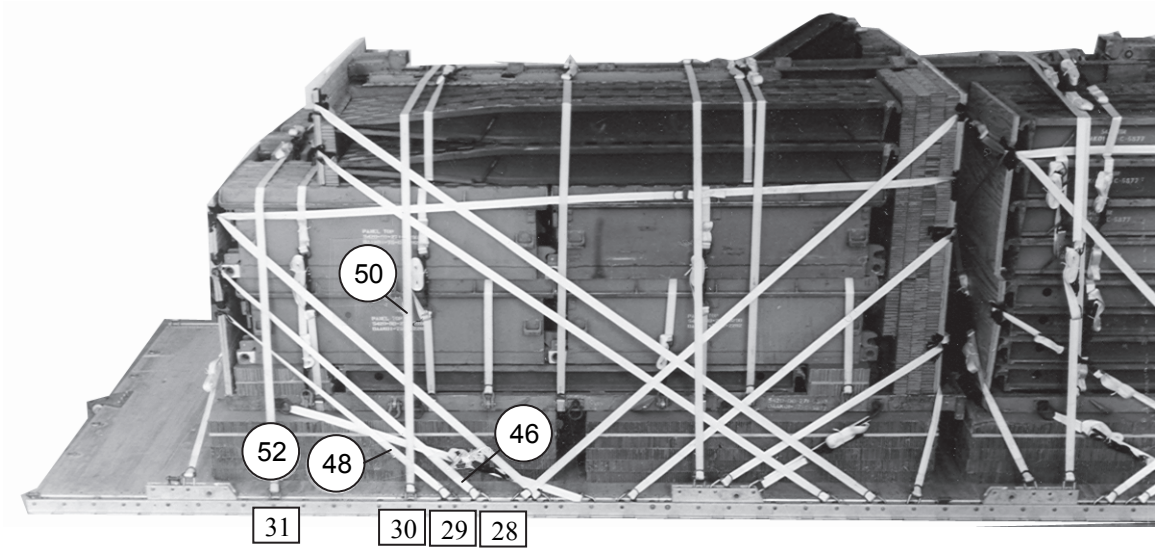
Figure 3-58. Lashings 33 Through 42 Installed

Note. Use three 15-foot lashings in lashing number 45.. Use the procedures in TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.



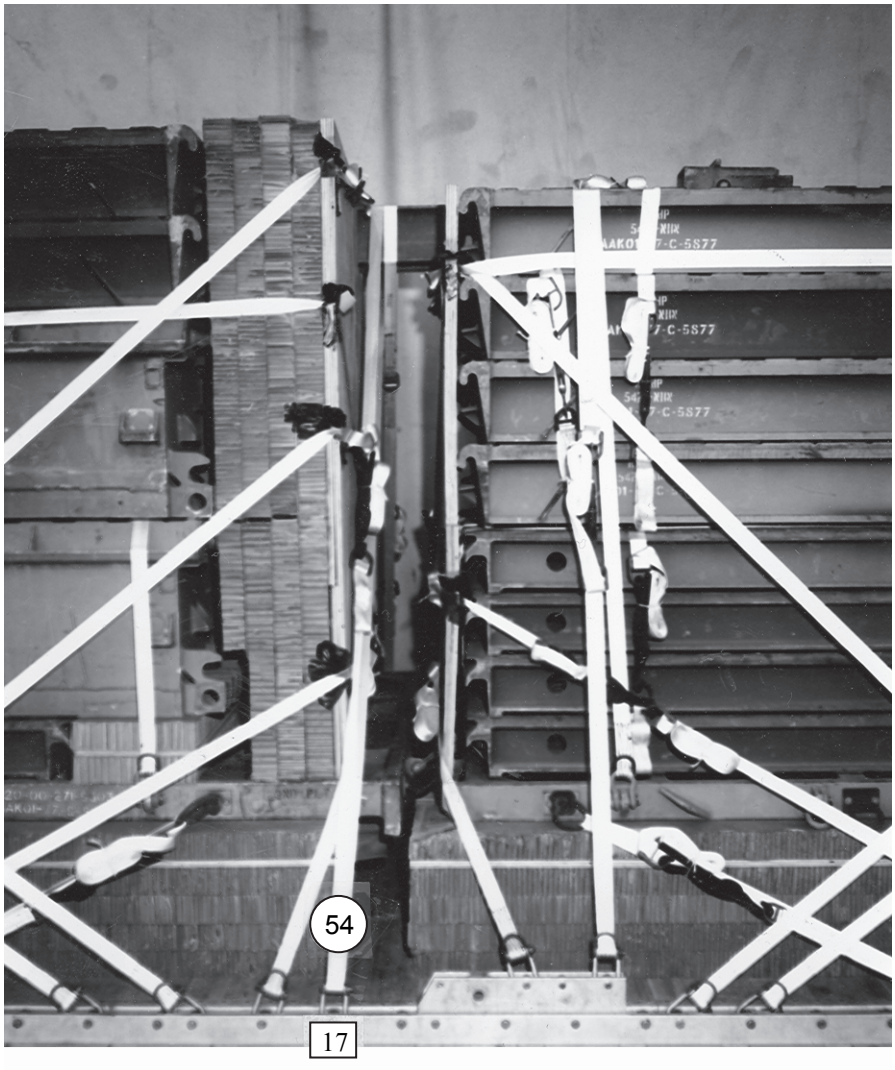
Lashing Number	*Tiedown Clevis Number*	*Instructions*
43	26	Pass a 15-foot lashing through its own D-ring and through the top cutout of restraint board 5.
44	26A	Pass a 15-foot lashing through its own D-ring, through the top cutout of restraint board 5. Secure it to lashing 43.
45	27	Pass a 15-foot lashing through its own D-ring and through the top cutout of restraint board 3.
	27A	Pass a 15-foot lashing through its own D-ring, through the top cutout of restraint board 3. Connect and secure these two lashings with a third 15-foot lashing.

Figure 3-59. Lashings 43 through 45 Installed



Lashing Number	*Tiedown Clevis Number*	*Instructions*
46	28	Pass a 15-foot lashing through its own D-ring and through the middle cutout of restraint board 5.
47	28A	Pass a 15-foot lashing through its own D-ring, through the middle cutout of restraint board 5. Secure it to lashing 46.
48	29	Pass a 15-foot lashing through its own D-ring and through the bottom cutout of restraint board 5.
49	29A	Pass a 15-foot lashing through its own D-ring, through the bottom cutout of restraint board 5. Secure it to lashing 48.
50	30	Pass a 15-foot lashing through its own D-ring and over the top of pallet 2.
51	30A	Pass a 15-foot lashing through its own D-ring and over the top of pallet 2. Secure it to lashing 50.
52	31	Pass a 15-foot lashing through its own D-ring and over the top of pallet 2.
53	31A	Pass a 15-foot lashing through its own D-ring and over the top of pallet 2. Secure it to lashing 52.

Figure 3-60. Lashings 46 through 53 Installed

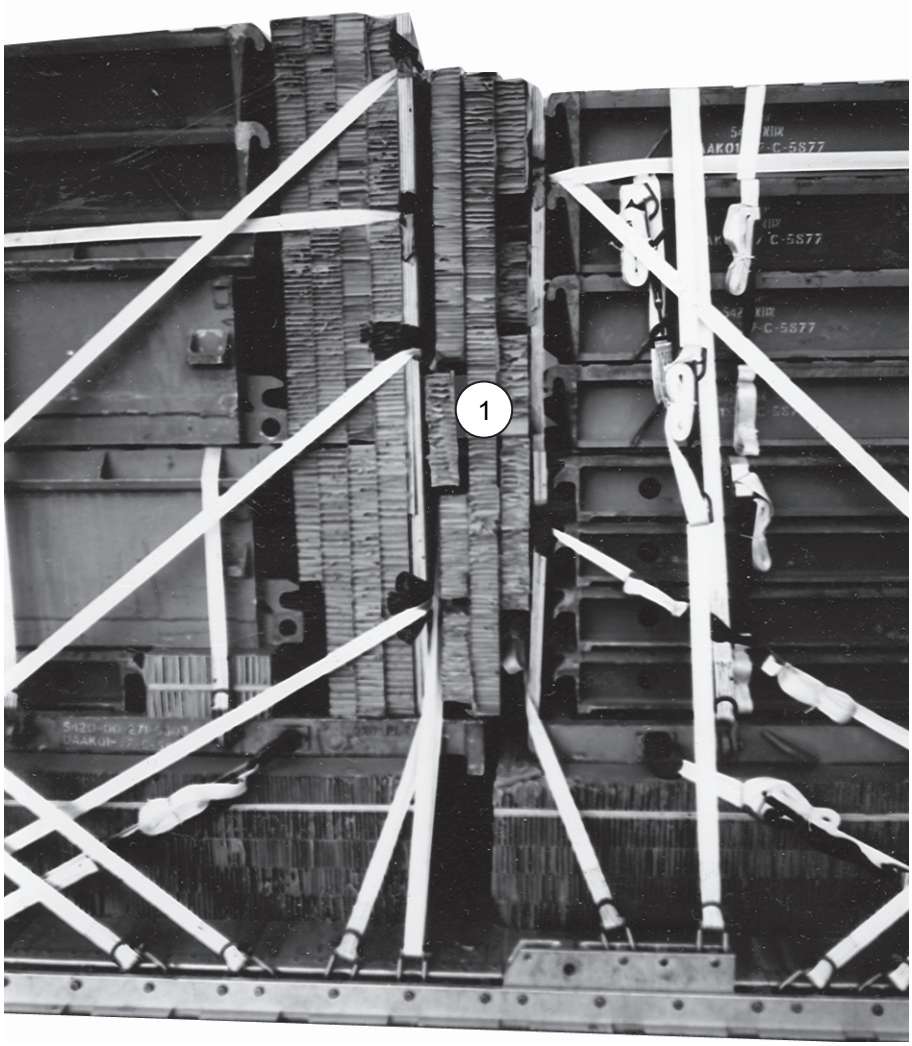


Lashing Number	*Tiedown Clevis Number*	*Instructions*
54	17	Pass a 30-foot lashing around the roller beam.
55	17A	Pass a 30-foot lashing around the roller beam.

Figure 3-61. Lashings 54 and 55 Installed

POSITIONING HONEYCOMB FILLER BETWEEN PALLETS 1 AND 2

3-10. Position honeycomb filler between pallets 1 and 2 as shown in Figure 3-62.

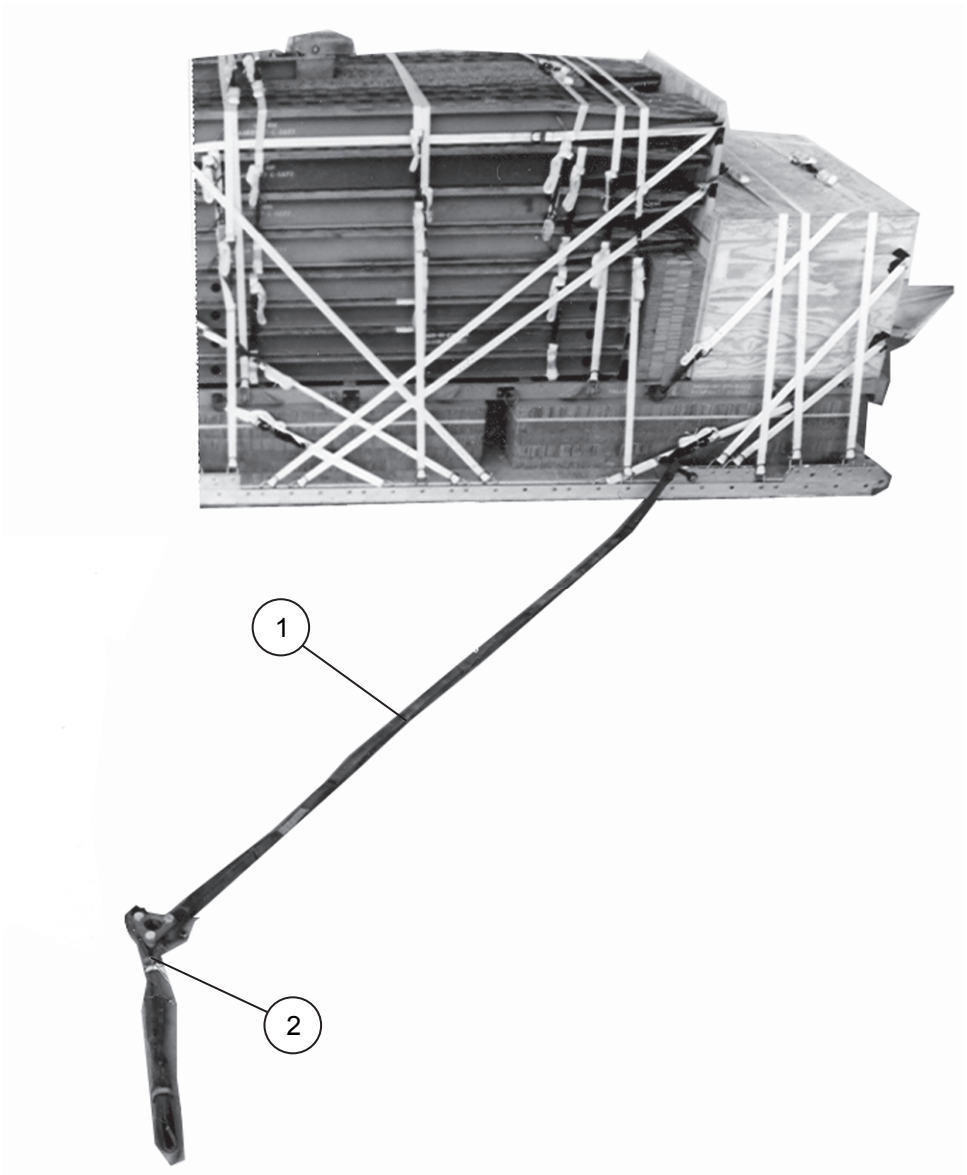


(1) Position various sizes of honeycomb as filler between pallets 1 and 2.

Figure 3-62. Honeycomb Filler Positioned Between Pallets 1 and 2

INSTALLING SUSPENSION SLINGS

3-11. Install the suspension slings as shown in Figure 3-63.

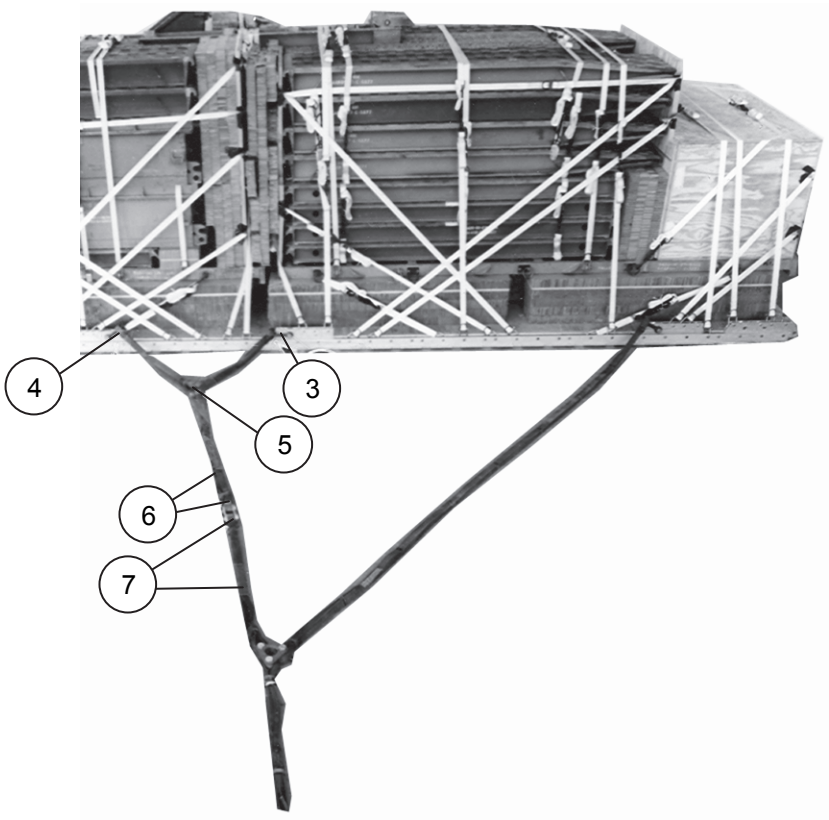


1. Attach a 16-foot (4-loop), type XXVI nylon webbing sling to the bell portion of a large suspension clevis. Bolt the large suspension clevis to the first suspension link on the right side of the platform. Attach the free end of the sling to a three-point link.

2. Attach a 3-foot (4-loop), type XXVI nylon webbing sling to the top spacer of the three-point link.

Figure 3-63. Suspension Slings Installed

Note. Tape the folded slings at three connections.



3 Attach a 3-foot (4-loop), type XXVI nylon webbing sling to the bell portion of a large suspension clevis. Bolt the large suspension clevis to the second suspension link on the right side of the platform.

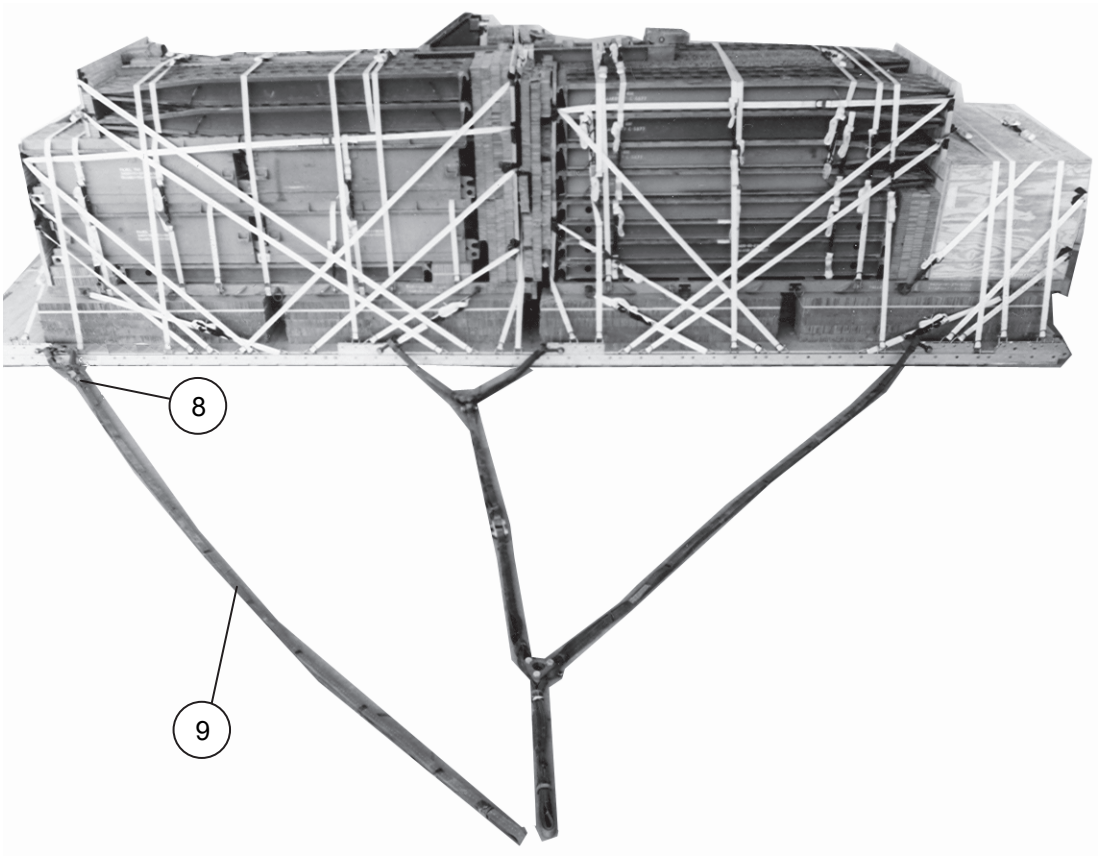
4 Attach a 3-foot (4-loop), type XXVI nylon webbing sling to the bell portion of a large suspension clevis. Bolt the large suspension clevis to the third suspension link on the right side of the platform.

5 Attach the free ends of both 3-foot slings to the bell portion of a large suspension clevis on the right side of the platform.

6 Pass an 11-foot (2-loop), type XXVI nylon webbing sling around the bolt portion of the large suspension clevis used in step 5 by folding the sling in half. Attach the free ends of the sling to a 3 ¾-inch two-point link.

7 Pass a 9-foot (2-loop), type XXVI nylon webbing sling through the three-point link used in steps 1 and 2 by folding the sling in half. Attach the free ends of the sling to the 3 ¾-inch two-point link used in step 6.

Figure 3-63. Suspension Slings Installed (Continued)



8 Route a 3-foot (4-loop), type XXVI nylon webbing sling through a 5 ½-inch two-point link. Attach the free ends of the sling to the bell portion of a large suspension clevis. Bolt the suspension clevis to the fourth suspension link on the right side of the platform.

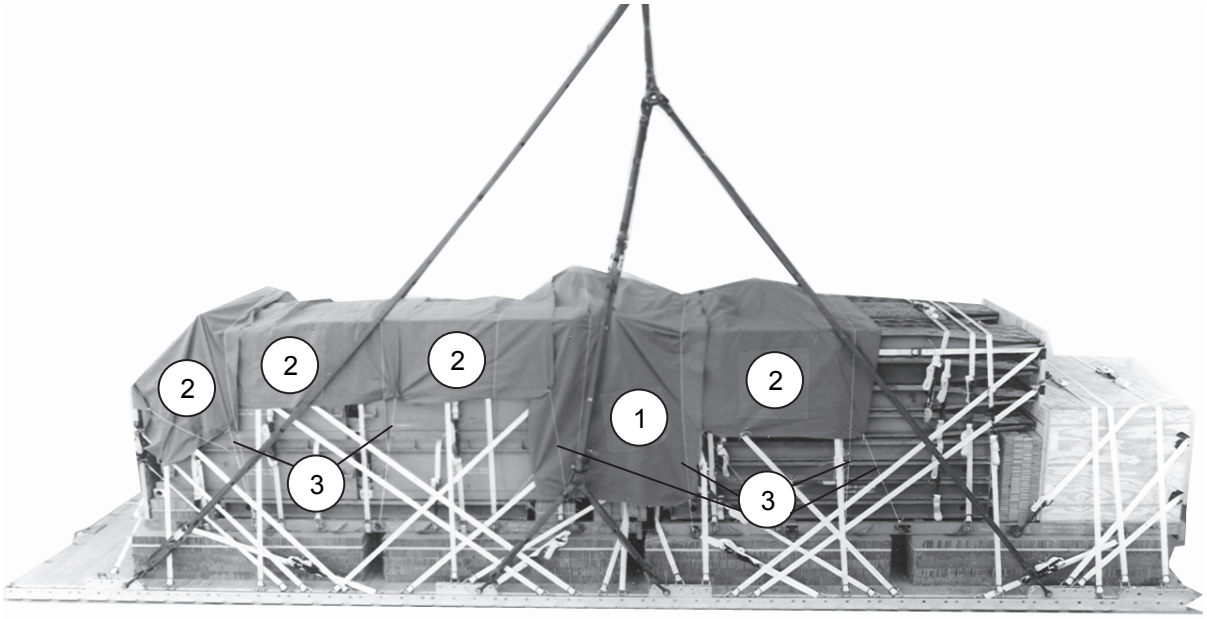
9 Attach a 20-foot (4-loop), type XXVI nylon webbing sling to the other end of the two-point link used in step 8.

10 Repeat steps 1 through 9 for the left side of the platform (not shown).

Figure 3-63. Suspension Slings Installed (Continued)

PREPARING AND POSITIONING LOAD COVERS

3-12. Prepare and position the load covers as shown in Figure 3-64.



(1) Prepare one 16 ½- by 5-foot load cover. Center the load cover over the load between pallets 1 and 2.

(2) Prepare four 10 ½- by 5-foot load covers. Place one load cover in front of the 16 ½- by 5-foot cover. Place the other three covers to the rear of the 16 ½- by 5-foot load cover.

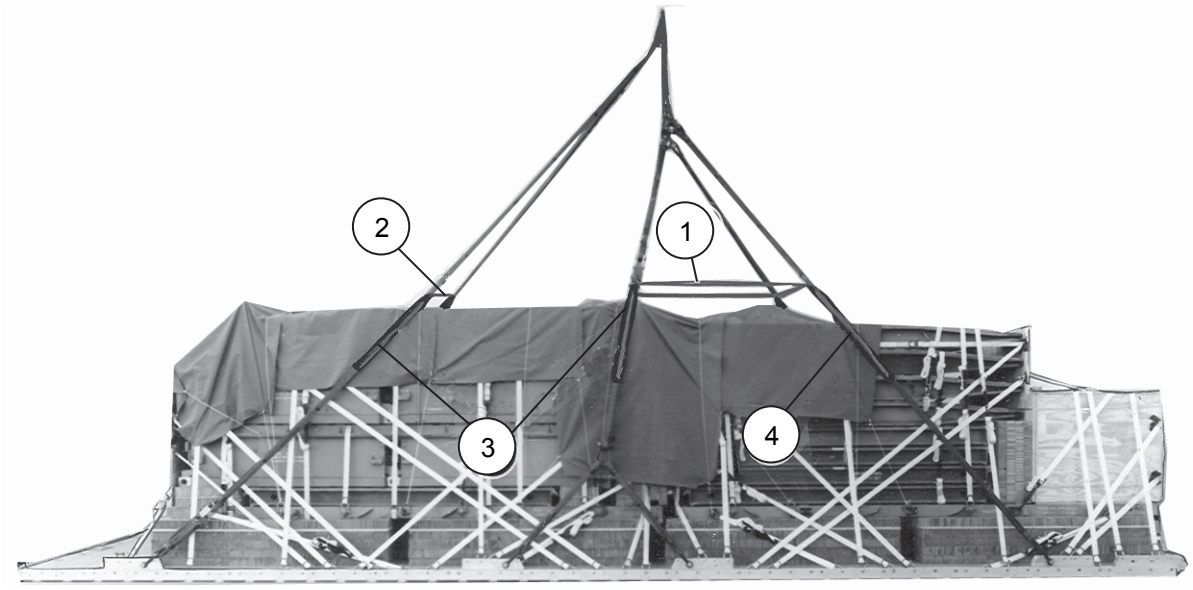
(3) Secure the load covers to the load at convenient points with lengths of type III nylon cord.

Figure 3-64. Load Covered

SAFETYING SUSPENSION SLINGS

3-13. Safety the suspension slings according to. TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 and as shown in Figure 3-65.

Note. Raise the suspension slings until they are tight.

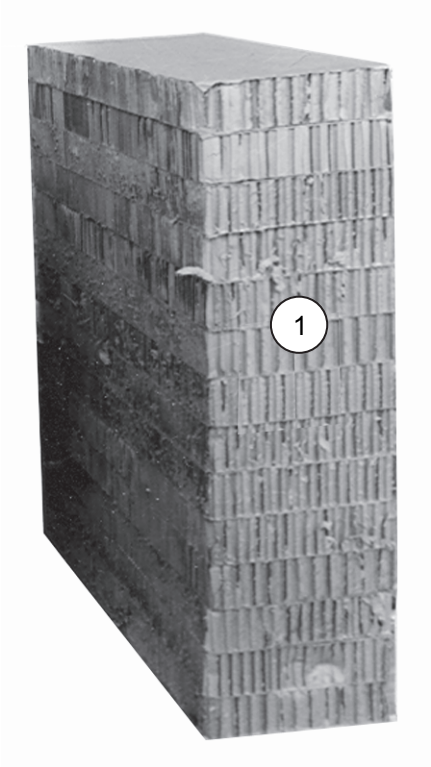


1. Install a deadman's tie to the front four suspension slings 6 to 8 inches above the load according to. TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.
2. Safety the two rear suspension slings with a modified deadmans tie according to. TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.
3. Wrap the suspension slings where the slings come in contact with the load using pieces of ½-inch felt.
4. Secure the felt to the suspension slings with lengths of type III nylon cord. Tape the felt in place.
5. Lower the suspension slings on the load (not shown).

Figure 3-65. Suspension Slings Safetied

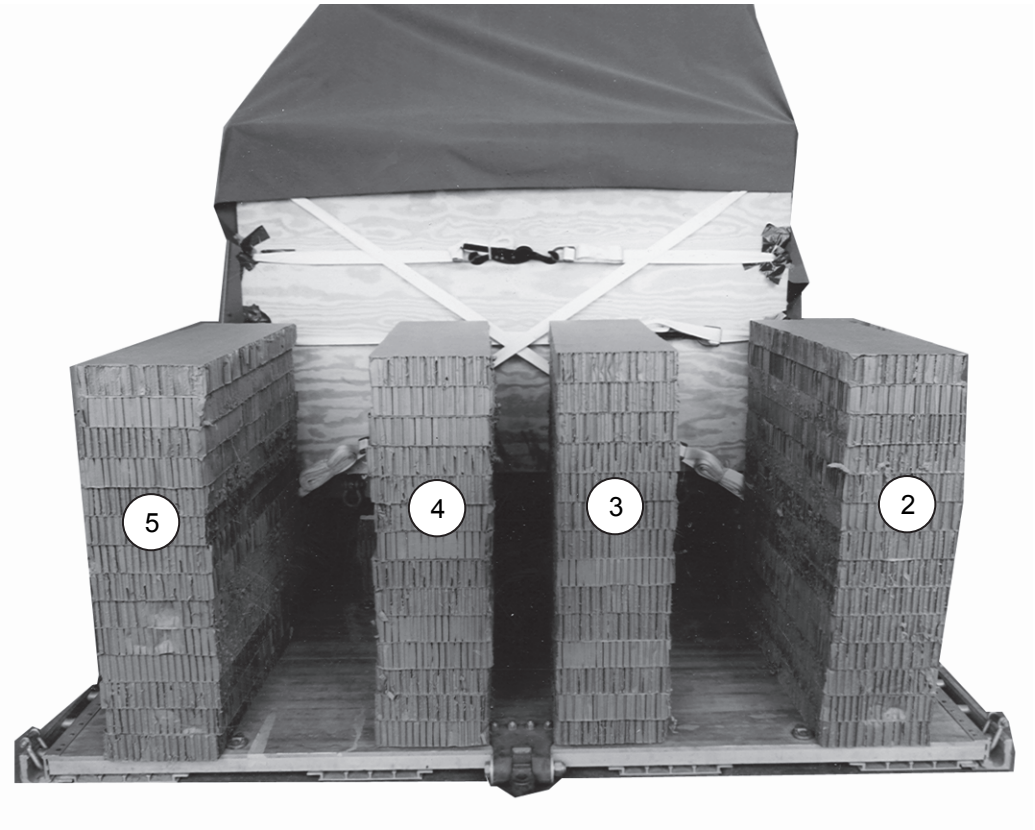
BUILDING, POSITIONING AND SECURING PARACHUTE STOWAGE PLATFORM

3-14. Build and position four honeycomb supports for the parachute stowage platform as shown in Figure 3-66. Build the parachute stowage platform as shown in Figures 3-67 and 3-68. Lash the parachute stowage platform as shown in Figure 3-69 using four 15-foot tie-down assemblies.



(1) Form four honeycomb supports using fifty-six 12- by 40-inch pieces of honeycomb, 14 pieces in each honeycomb support.

Figure 3-66. Honeycomb Supports Built and Positioned



(2) Position honeycomb support 1 flush with the rear edge of the platform and 9 ¼ inches from the right rail of the platform.

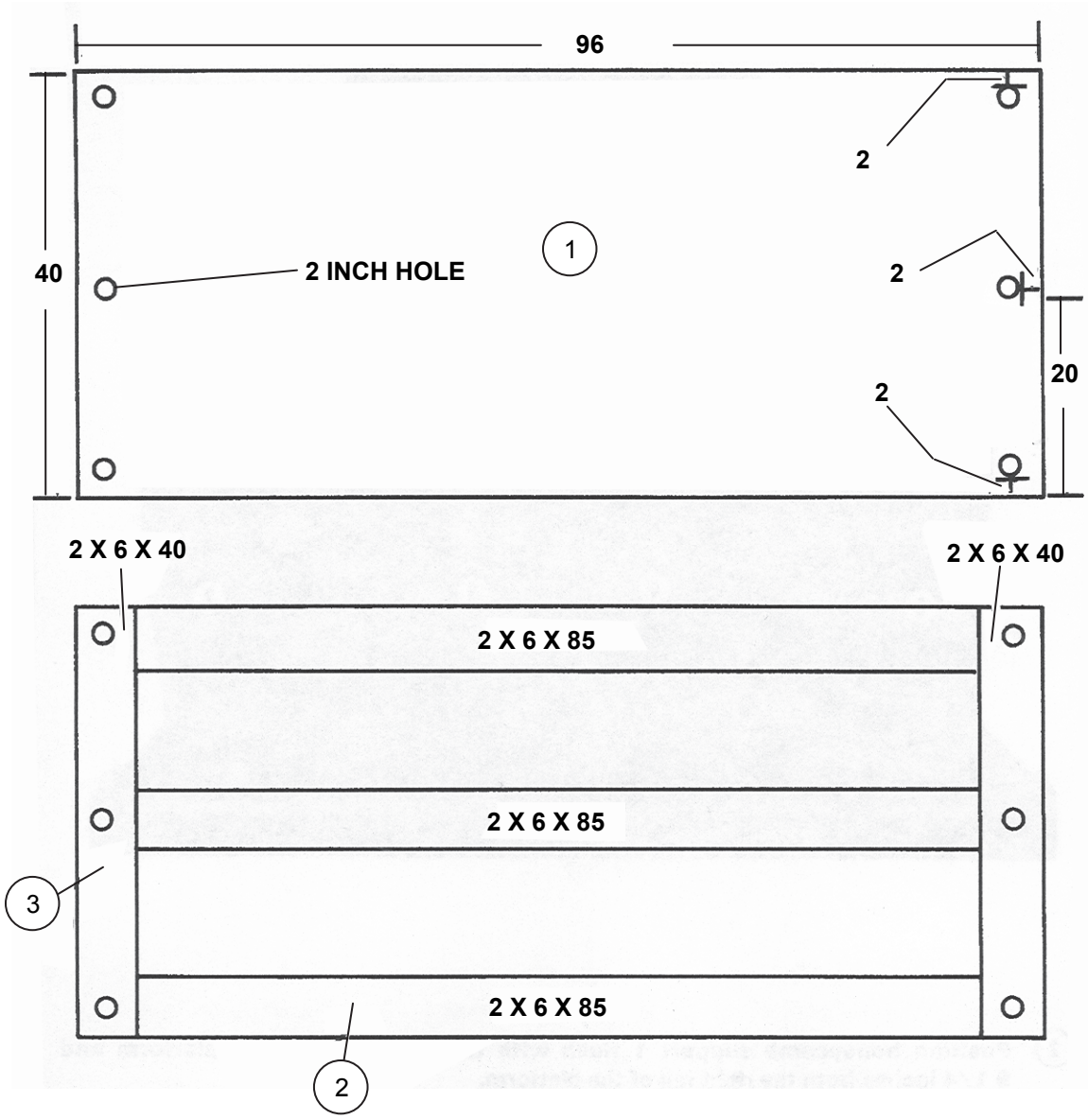
(3) Position honeycomb support 2 flush with the rear edge of the platform and 16 inches from the left edge of honeycomb support 1.

(4) Position honeycomb support 3 flush with the rear edge of the platform and 7 inches from the left edge of honeycomb support 2.

(5) Position honeycomb support 4 flush with the rear edge of the platform and 9 ¼ inches from the left rail of the platform.

Figure 3-66. Honeycomb Supports Built and Positioned (Continued)

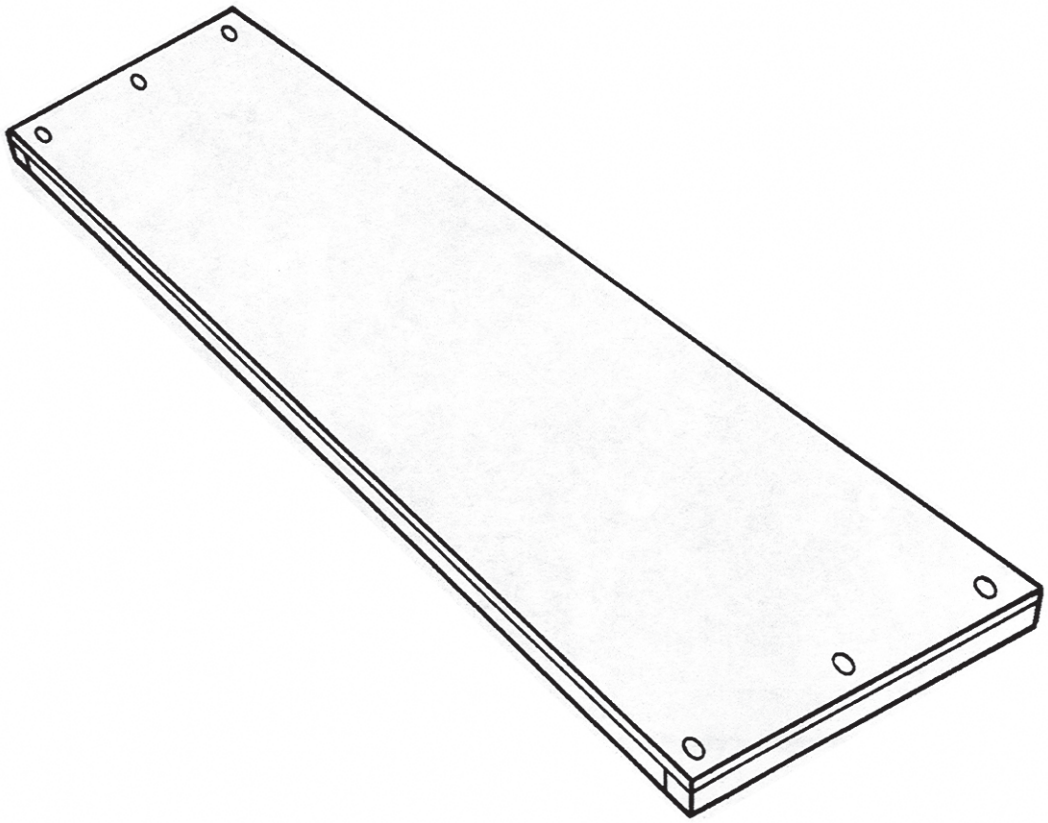
Notes.
1. This drawing is not to scale.
2. All dimensions are in inches.



Item Number	*Pieces*	*Width (Inches)*	*Length (Inches)*	*Material*
1	1	96	40	¾-inch plywood
2	3	85	6	2- by 6-inch lumber
3	2	6	40	2- by 6-inch lumber

Figure 3-67. Materials Required to Build Parachute Stowage Platform

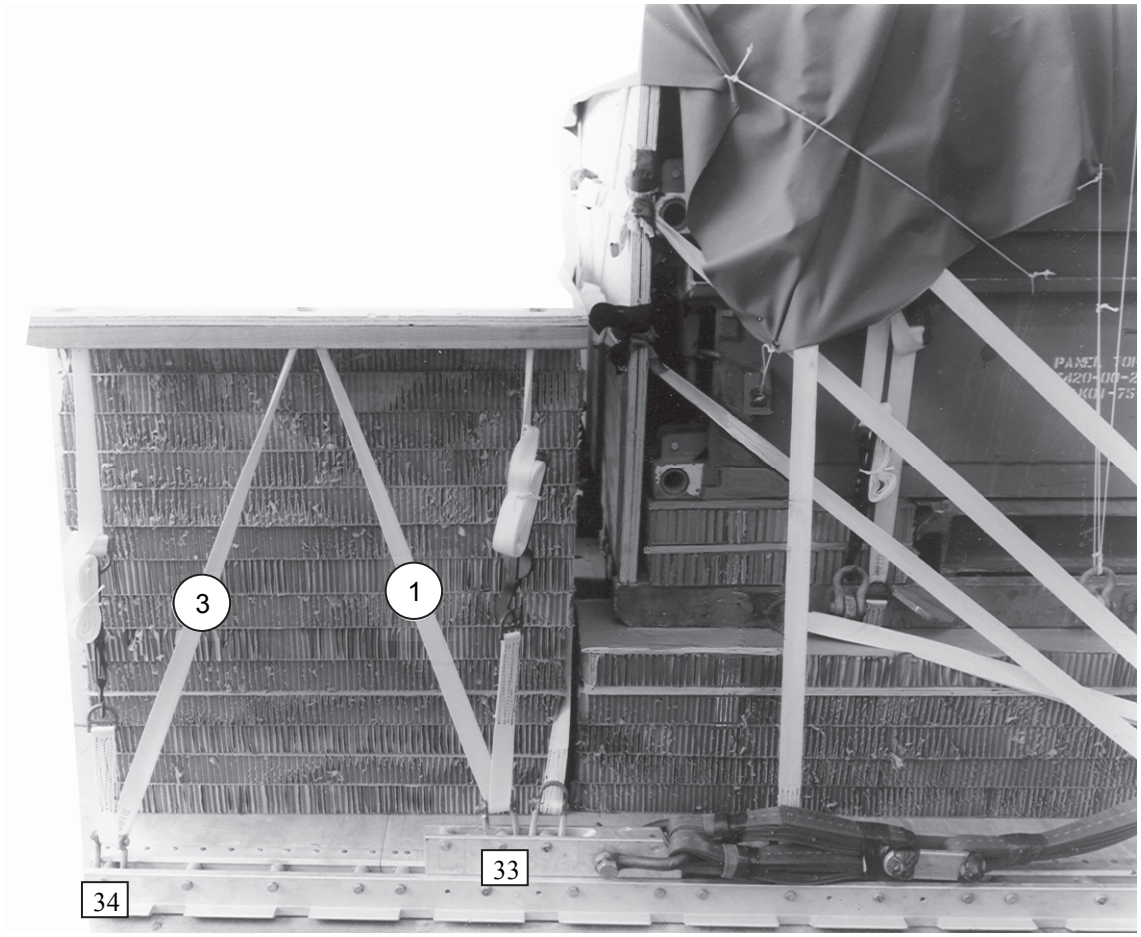
Note. This drawing is not to scale.



Step.

1. Build the parachute stowage platform using materials given in Figure 3-67.
2. Use eightpenny nails to secure the parachute stowage platform.

Figure 3-68. Parachute Stowage Platform Built



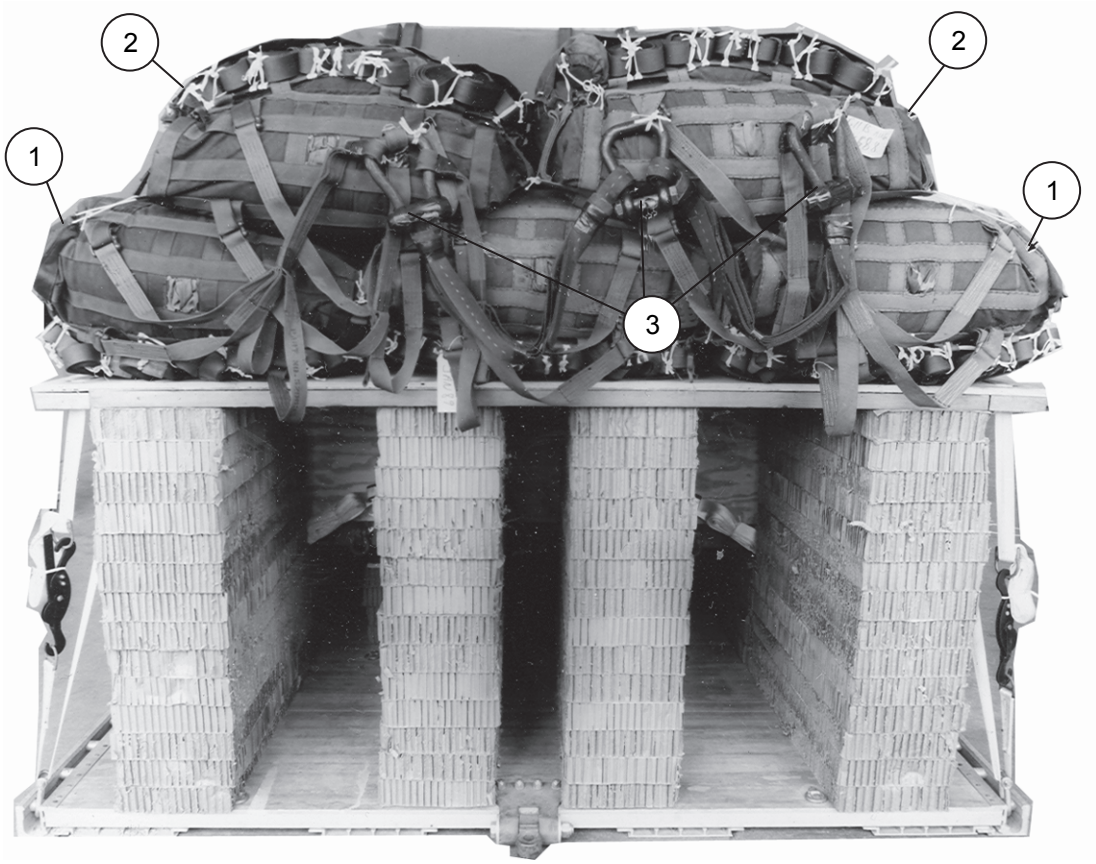
Note. Place the parachute stowage platform on the supports.

Lashing Number	*Tiedown Clevis Number*	*Instructions*
1	33	Pass the lashing through the center hole and then through the front hole of the parachute stowage platform, right side.
2	33A	Pass the lashing through the center hole and then through the front hole of the parachute stowage platform, left side.
3	34	Pass the lashing through the center hole and then through the rear hole of the parachute stowage platform, right side.
4	34A	Pass the lashing through the center hole and then through the rear hole of the parachute stowage platform, left side.

Figure 3-69. Parachute Stowage Platform Secured

STOWING CARGO PARACHUTES

3-15. Prepare, stow and restrain five G-11C cargo parachutes on the parachute stowage platform according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 and as shown in Figure 3-70.

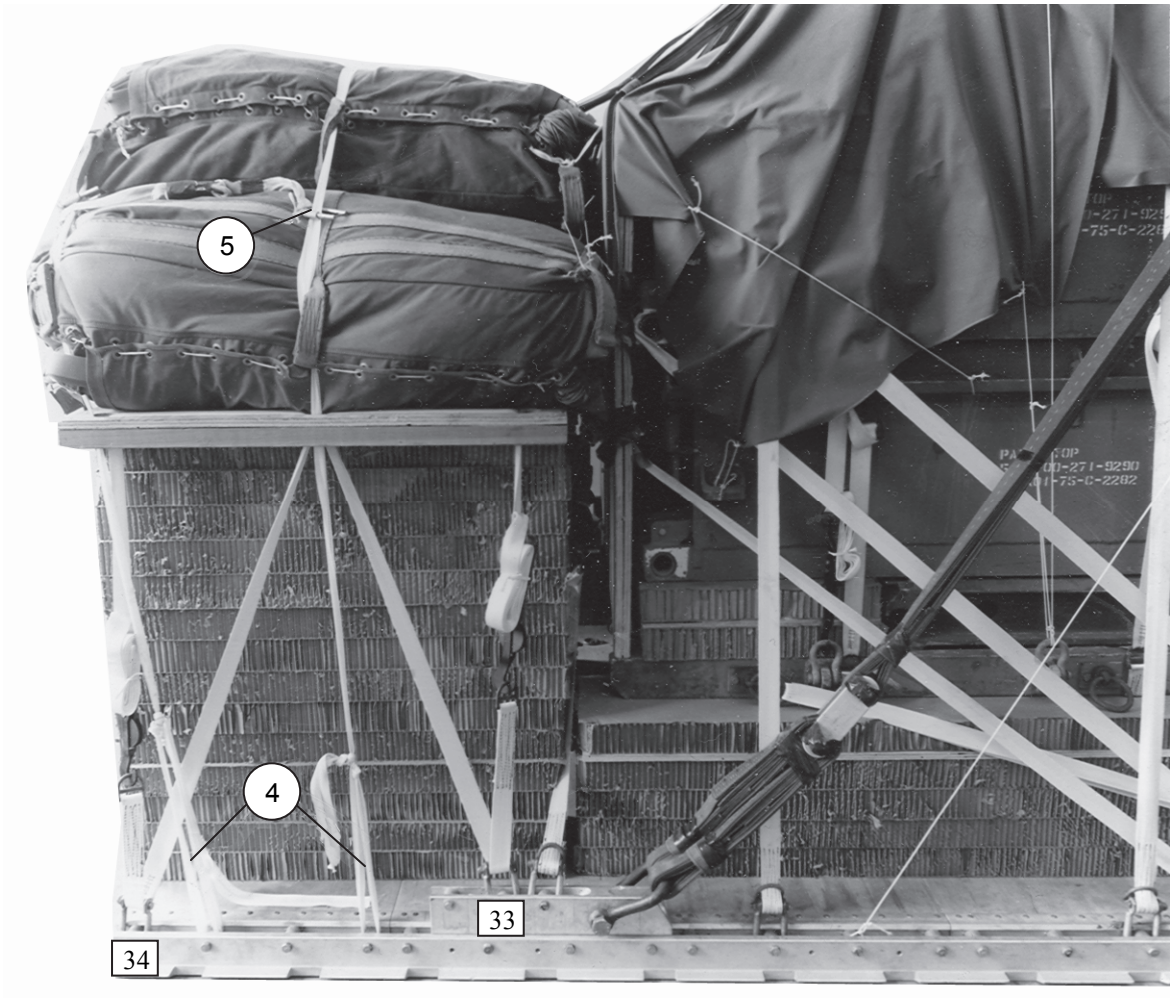


1. Set three G-11C cargo parachutes according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 with the riser extension compartments facing down on the parachute stowage platform.

2. Set two G-11C cargo parachutes according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 with the riser extension compartments facing up on top of the parachutes placed in step 1.

3. Group the bridle assemblies as shown in TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.

Figure 3-70. Cargo Parachutes Stowed



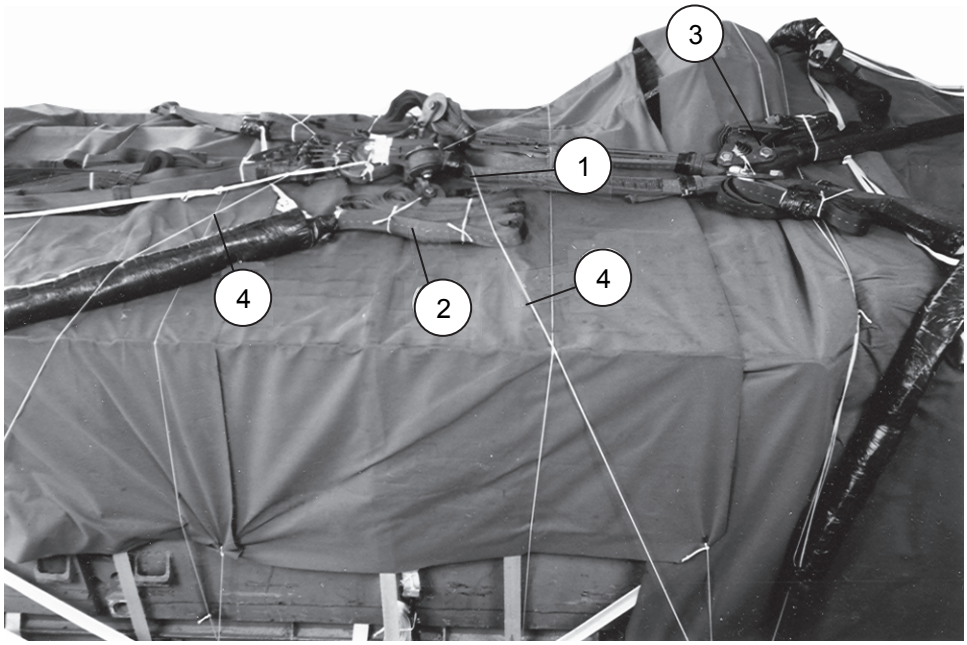
(4) Restrain the cargo parachutes to the platform using two lengths of type VIII nylon webbing according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5. Tie the ends of the webbing to the platform bushings between clevises 33 and 34.

(5) Install multicut parachute release straps according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.

Figure 3-70. Cargo Parachutes Stowed (Continued)

INSTALLING RELEASE SYSTEM

3-16. Prepare, and install the M-2 release system according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 and as shown in Figure 3-71.

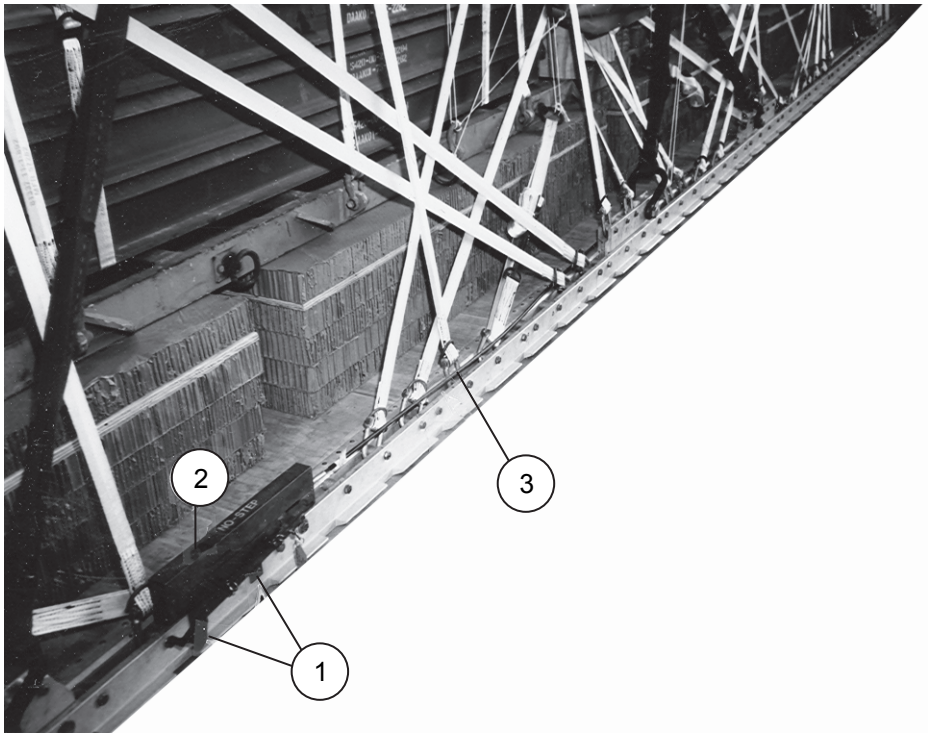


1. Prepare an M-2 cargo release assembly according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5. Attach the M-2 cargo release assembly to the suspension slings and the cargo parachutes according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.
2. S-fold the suspension slings. Secure the folds with lengths of type I, ¼-inch cotton webbing.
3. Safety the three-point links together with a length of type I, ¼-inch cotton webbing.
4. Secure the top and bottom of the M-2 cargo parachute release according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.

Figure 3-71. Release System Installed

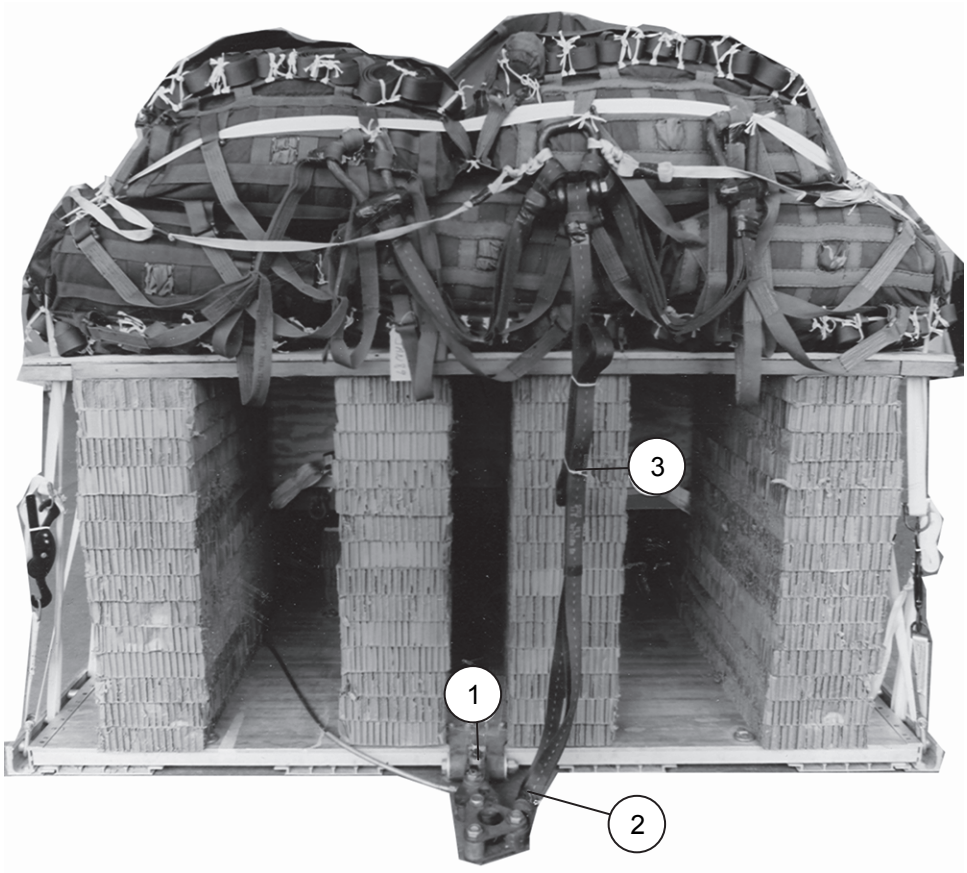
INSTALLING EXTRACTION SYSTEM

3-17. Install the EFTC extraction system as shown in Figures 3-72 and 3-73.



1. Attach the EFTA mounting brackets to the rear mounting holes on the left platform side rail.
2. Install the actuator to the EFTA mounting brackets with a 28-foot cable according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.
3. Safety the 28-foot cable to the lashings along the left platform side rail using lengths of type I, ¼-inch cotton webbing.

Figure 3-72. Actuator and Cable Installed



(1) Attach the latch assembly to the extraction bracket with the locking nut hole facing toward the left side of the platform according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.

(2) Connect one end of a 9-foot (2-loop), type XXVI nylon webbing sling as a deployment line to the right spacer of the link assembly. Connect the free end of the deployment line to the center large clevis on the 3-foot clustering slings.

(3) Fold excess deployment line. Secure the folds with type I, ¼-inch cotton webbing.

Figure 3-73. Extraction System Installed

PLACING EXTRACTION PARACHUTE

3-18. Select the extraction parachute and extraction line needed using the extraction line requirements table in TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5. Place the extraction parachute and line on the load for installation in the aircraft.

INSTALLING PROVISIONS FOR EMERGENCY RESTRAINTS

3-19. Select and install the provisions for the emergency aft restraints according to the emergency aft restraint requirements table in TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.

MARKING RIGGED LOAD

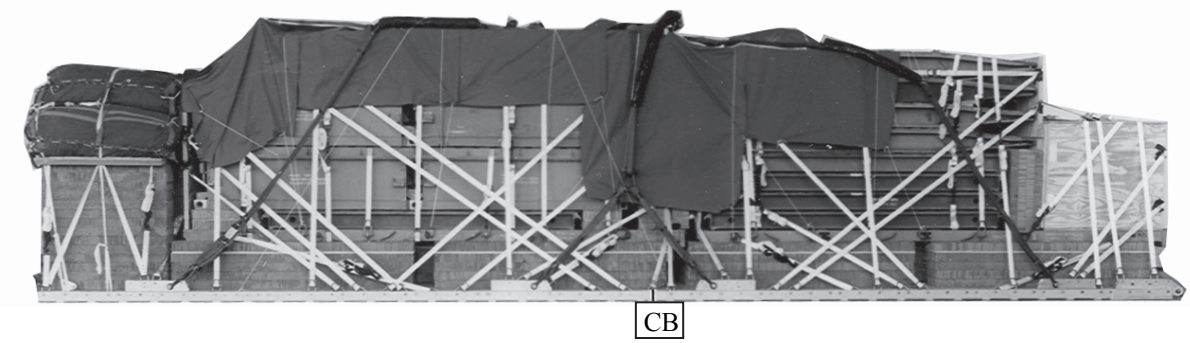
3-20. Mark the rigged load according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5, and as shown in Figure 3-74. Comply with the Shipper's requirements for Declaration of Dangerous/Hazardous Goods in accordance with AFMAN 24-204 (I)/TM 38-250/NAVSUP PUB 505/MCOP4030.191/DLAI 4145.3.. If the load varies from the one shown, the weight, height, CB, and parachute requirements must be recomputed.

EQUIPMENT REQUIRED

3-21. Use the equipment listed in Table 3-1 to rig this load.

CAUTION

Make the final rigger inspection required by AR 59-4 and TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 before the load leaves the rigging site.



RIGGED LOAD DATA

Weight: Load shown	22,480 pounds
Maximum Load Allowed	23,500 pounds
Height	97 inches
Width	108 inches
Overall Length	407 inches
Overhang: Front	0 inches
Rear	0 inches
Center of Balance (from front edge of the platform)	186 inches
Extraction System with 28-foot cable (adds 18 inches to length of platform)	EFTC

Figure 3-74. Five-Bay. Single-Story, Medium Girder (Fixed) Bridge Rigged on a 32-Foot, Type V Platform for Low-Velocity Airdrop

Table 3-1. Equipment Required for Rigging the Five-Bay, Single-Story, Medium Girder (Fixed) Bridge for Low-Velocity Airdrop on a Type V Platform

National Stock Number	*Item*	*Quantity*
8040-00-273-8713	Adhesive, paste, 1-gallon	As required
	Clevis, suspension:	
4030-00-678-8562	3/4-inch (medium) emergency restraint	4
4030-00-090-5354	1-inch (large)	10
4020-00-240-2146	Cord, nylon, type III	As required
1670-00-157-6527	Coupling, airdrop, extraction force transfer with 28-foot cable	1
1670-00-360-0328	Cover, clevis, large	5
8135-00-664-6958	Cushioning material, packaging, cellulose wadding	As required
8305-00-191-1101	Felt, 1/2-inch thick	As required
1670-01-183-2678	Leaf, extraction line (line bag) (add 2 for C-17)	2
	Line, extraction, type XXVI nylon webbing:	
1670-01-062-6313	60-foot (3-loop), type XXVI	1
1670-01-107-7615	140-foot (3-loop), type XXVI	1
1670-01-064-4452	60-foot (1-loop), type XXVI for C-17 drogue line	1
1670-01-493-6418	Link assembly, two-point:	8
1670-01-307-0155	Three-point	2
5315-00-010-4657	Nail, steel wire, common 6d	As required
5315-00-010-4661	Nail, steel wire, common 10d	As required
1670-00-753-3928	Pad, energy-dissipating, honeycomb	48 sheets
5530-00-128-4981	Plywood, ¾-inch	25 sheets
	Parachute:	
1670-01-016-7841	Cargo, G-11B	5
1670-00-040-8135	Cargo, extraction, 28-foot	1
1670-01-063-3715	Cargo, extraction, 15-foot for C-17	1
	Platform, airdrop, type V, 32-foot	1
1670-01-353-8425	Bracket assembly, EFTC	1
1670-01-162-2372	Bracket assembly, extraction	1
1670-01-162-2376	Clevis assembly	70
1670-01-247-2389	Suspension link	8
1670-01-162-2381	Tandem link	2
1670-01-097-8817	Release, cargo parachute, M-2	1

Table 3-1. Equipment Required for Rigging the Five-Bay, Single-Story, Medium Girder (Fixed) Bridge for Low-Velocity Airdrop on a Type V Platform (Continued)

National Stock Number	*Item*	*Quantity*
	Sling, cargo airdrop:	
1670-01-062-6304	9-foot (2-loop), type XXVI nylon webbing	3
1670-01-062-6301	3-foot (4-loop), type XXVI nylon webbing	10
1670-01-063-7760	11-foot (2-loop), type XXVI nylon webbing	2
1670-01-063-7761	16-foot (2-loop), type XXVI nylon webbing	2
1670-01-062-6302	20-foot (2-loop), type XXVI nylon webbing	2
1670-01-062-6302	20-foot (2-loop), type XXVI nylon webbing	22
5340-00-040-8219	Strap parachute release, multicut	2
7501-00-266-5016	Tape, adhesive, 2-inch	As required
7501-00-266-6710	Tape, masking	As required
1670-00-937-0271	Tiedown assembly, 15-foot	144
1670-01-483-8259	Towplate release mechanism (H-block) (C-17)	1
	Webbing:	
8305-00-268-2411	Cotton, 1/4-inch, type I	As required
	Nylon:	
8305-00-082-5752	Tubular, 1/2-inch	As required
8305-00-263-3591	Type VIII webbing	As required

SECTION II-RIGGING SEVEN-BAY, SINGLE-STORY, MEDIUM GIRDER (FIXED) BRIDGE ON A TYPE V PLATFORM

DESCRIPTION OF LOAD

3-22. The seven-bay, single-story, medium girder (fixed) bridge consists of the five-bay, single-story, medium girder (fixed) bridge with additional components parts that, when combined, make up the seven-bay bridge. Chapter 3, Section I gives the procedures for rigging the five-bay bridge. The additional component parts are rigged on a 16-foot, type V platform and use two G-11B cargo parachutes. When the load is rigged for airdrop, it is 215 inches long, 108 inches wide and 67 ½ inches high. When rigged, the components weigh 6,310 pounds.

Notes.

1. The additional components platform must be airdropped with the five-bay bridge. See Chapter 3, Section I for the procedures for the five-bay bridge.

2. All small components will be placed in the parts box on the five-bay bridge.

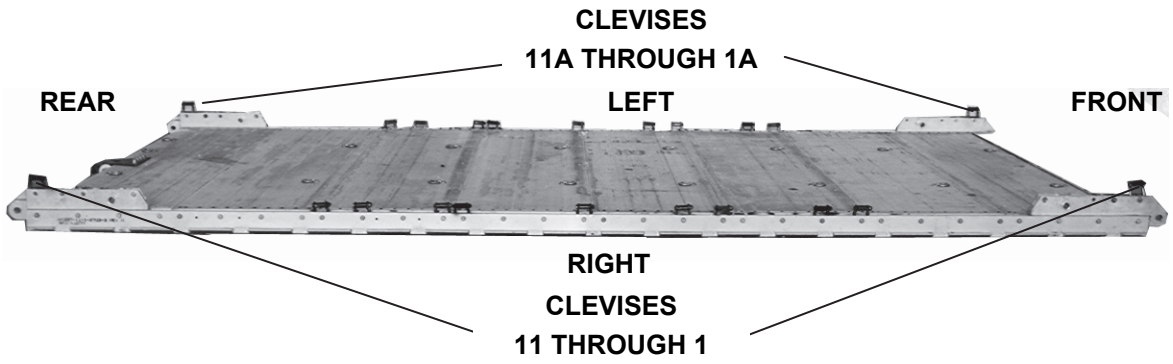
3. The curbs and guide markers are not included in this manual.

4. There must be at least eight bridge crew personnel to assist in the rigging of this load.

5. Measurements given in this section are from the front edge of the platform.

PREPARING PLATFORM

3-23. Prepare a 16-foot, type V platform using four tandem links and 22 clevis assemblies according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 and as shown in Figure 3-75.



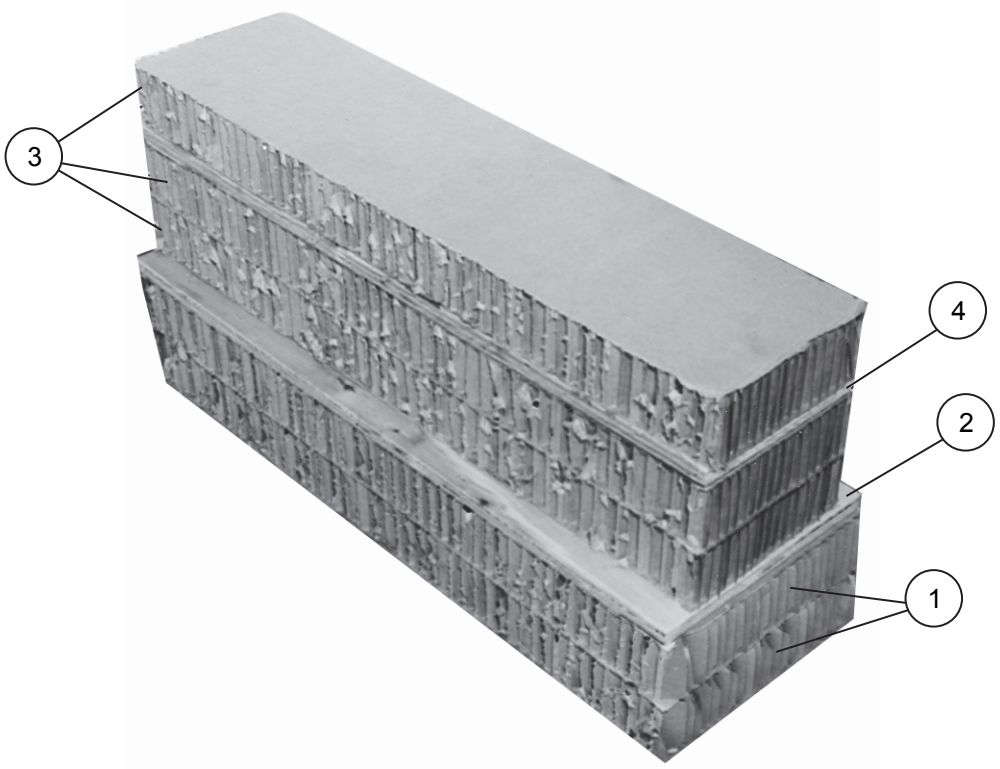
Step.

1. Inspect, or assemble and inspect, a 16-foot, type V platform as outlined in 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 tandem link on the rear of each platform side rail using holes 30, 31, and 32.
4. Install clevises on bushings 1 on each front tandem link.
5. Install a clevis on bushing 4 on each rear tandem link.
6. Starting at the front of the right and left platform side rail, install clevises on the bushings bolted to holes 9, 10, 13, 14, 17, 20, 21, 23, and 24.
7. Starting at the front of the platform, number the clevises 1 through 11 the right side, and 1A through 11A the left side. Label the tie-down rings according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.

Figure 3-75. Platform Prepared

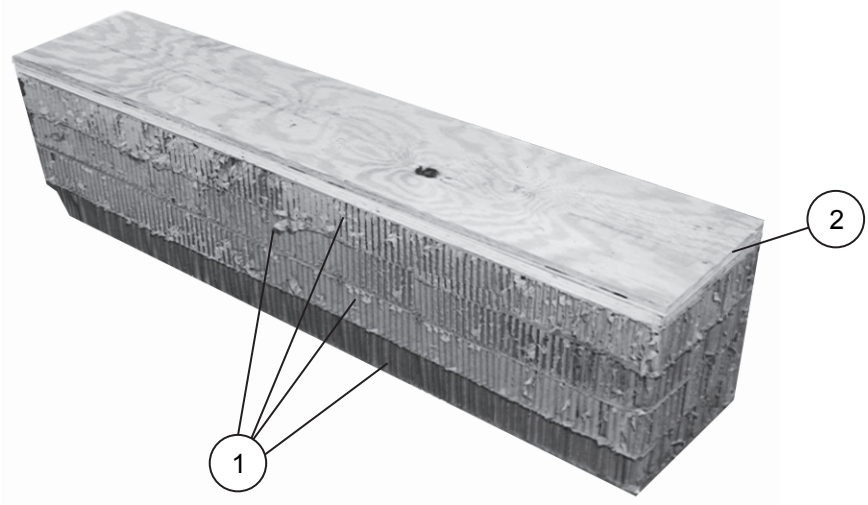
PREPARING AND POSITIONING HONEYCOMB STACKS

3-24. Prepare the honeycomb stacks as shown in Figures 3-76 and 3-77. Position the honeycomb stacks on the platform as shown in Figure 3-78.



1. Form each honeycomb stack using two 12- by 36-inch pieces of honeycomb as the base.
2. Place one ¾- by 12- by 36-inch piece of plywood on top off each honeycomb stack.
3. Center three 9- by 36-inch pieces of honeycomb on top off each stack.
4. Place a ¾- by 9- by 36-inch piece of plywood between honeycomb layers 4 and 5 of each stack.

Figure 3-76. Honeycomb Stacks 1, 4, 5 and 8 Prepared

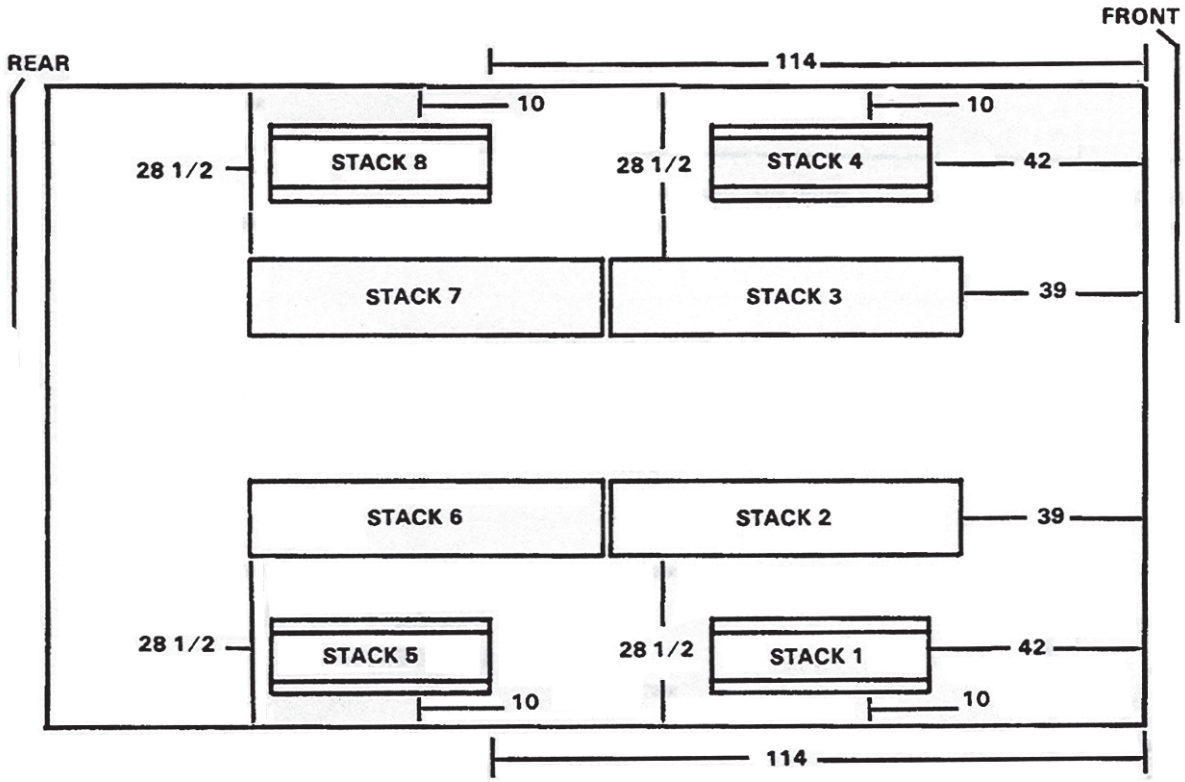


(1) Form each honeycomb stack using four 12- by 57-inch pieces of honeycomb.

(2) Place one ¾- by 12- by 57-inch piece of plywood on top of each stack.

Figure 3-77. Honeycomb Stacks 2, 3, 6 and 7 Prepared

Notes.
1. This drawing is not to scale.
2. All dimensions are in inches.



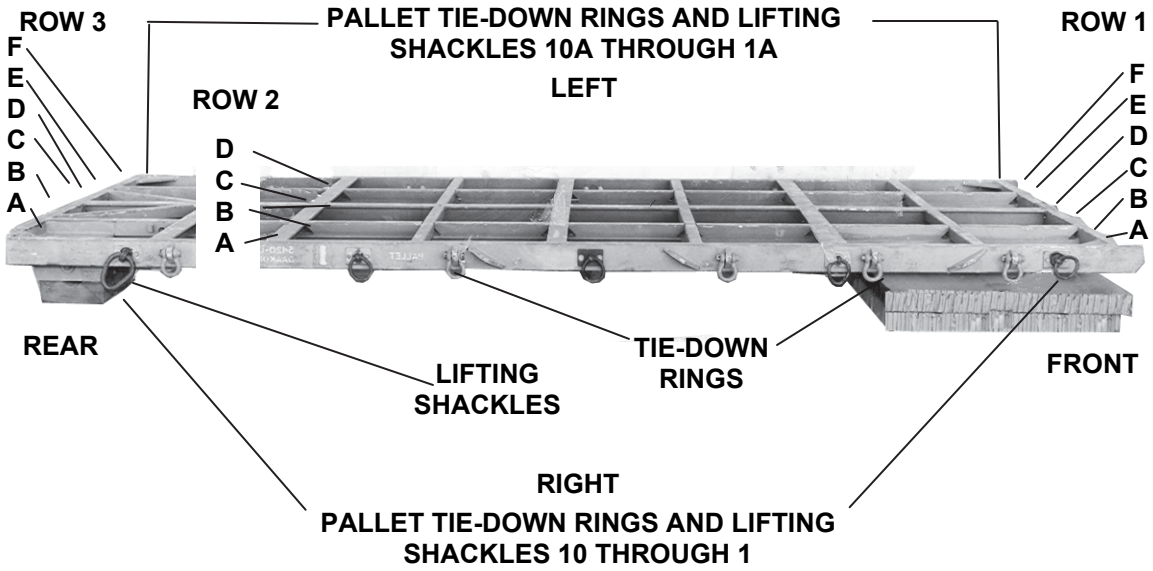
Stack Number	*Position of Stacks on the Platform* **Position stack:**
1	42 inches from the front edge of the platform and 10 inches from the right side rail.
2	39 inches from the front edge of the platform and 28 ½ inches from the right side rail.
3	39 inches from the front edge of the platform and 28 ½ inches from the left side rail.
4	42 inches from the front edge of the platform and 10 inches from the left side rail.
5	114 inches from the front edge of the platform and 10 inches from the right side rail.
6	Flush against the rear edge of stack 2 and 28 ½ inches from the right side rail.
7	Flush against the rear edge of stack 3 and 28 ½ inches from the left side rail.
8	114 inches from the front edge of the platform and 10 inches from the left side rail.

Figure 3-78. Honeycomb Stacks Positioned on the Platform

PREPARING PALLET

3-25. Prepare the pallet as shown in Figures 3-79 through 3-86.

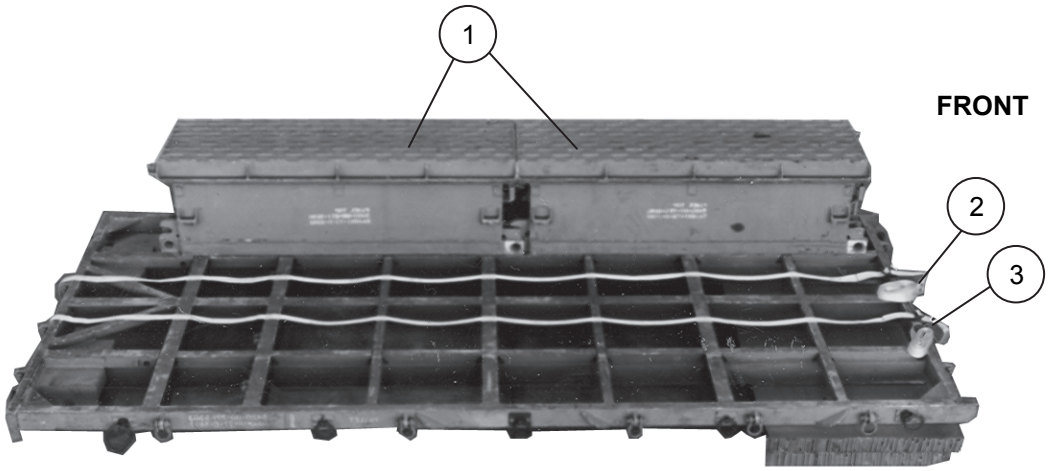
Note. All pallet tie-down rings and lifting shackles must be present.



Step.

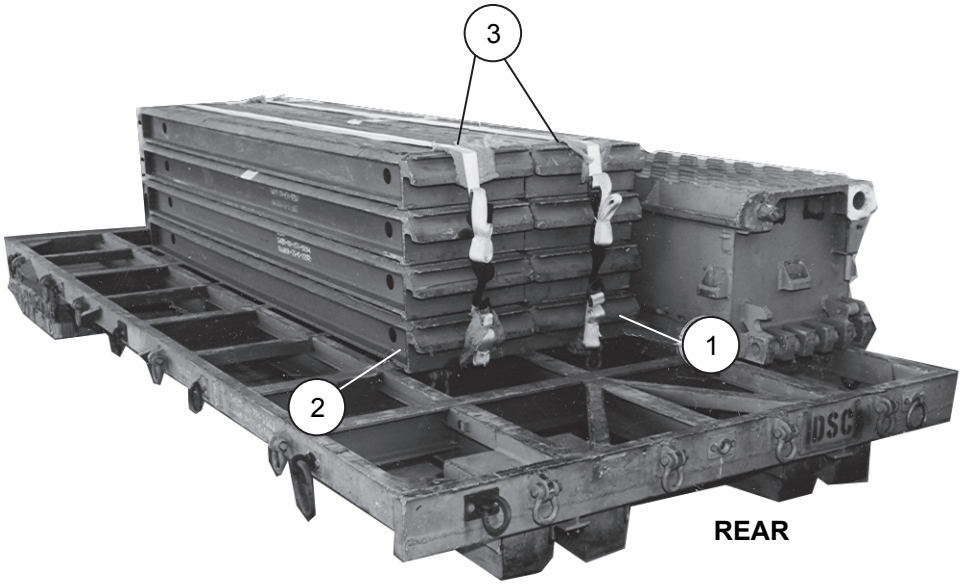
1. Starting at the front of the pallet, number the tie-down rings and lifting shackles bolted to the right side from 1 through 10 and those bolted to the left side 1A through 10A.
2. Starting at the front of the pallet, label row 1 of tie-down rings and lifting shackles from right to left A1 through F1. Label row 2 from right to left A2 through D2. Label row 3 from right to left A3 through F3.
3. Place two 96- by 36-inch pieces of honeycomb under the front of the pallet to keep the pallet level.

Figure 3-79. Pallet Labeled



1. Position two panels on the pallet 4 ½ inches from the front edge of the pallet and 2 ½ inches overhanging the left side of the pallet. Make sure the shoot bolt is in the locked position.
2. Form two 30-foot lashings according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5. Place one 30-foot lashing on top of the pallet 8 ¾ inches from the right edge of the top panels in a front-to-rear direction.
3. Place one 30-foot lashing on top of the pallet 26 ¼ inches from the right edge of the top panels in a front-to-rear direction.

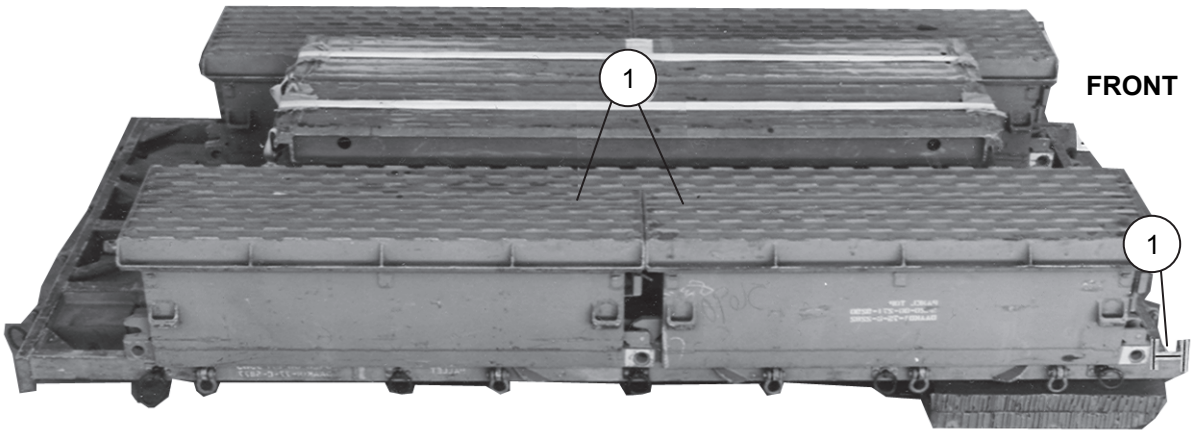
Figure 3-80. Two Top Panels Positioned on Left Side of Pallet



1. Center four decks on the pallet against the top panels.
2. Center four decks on the pallet against the first four decks.
3. Secure each stack of decks using the pre-positioned lashings. Secure the lashings according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 on the rear of the decks.

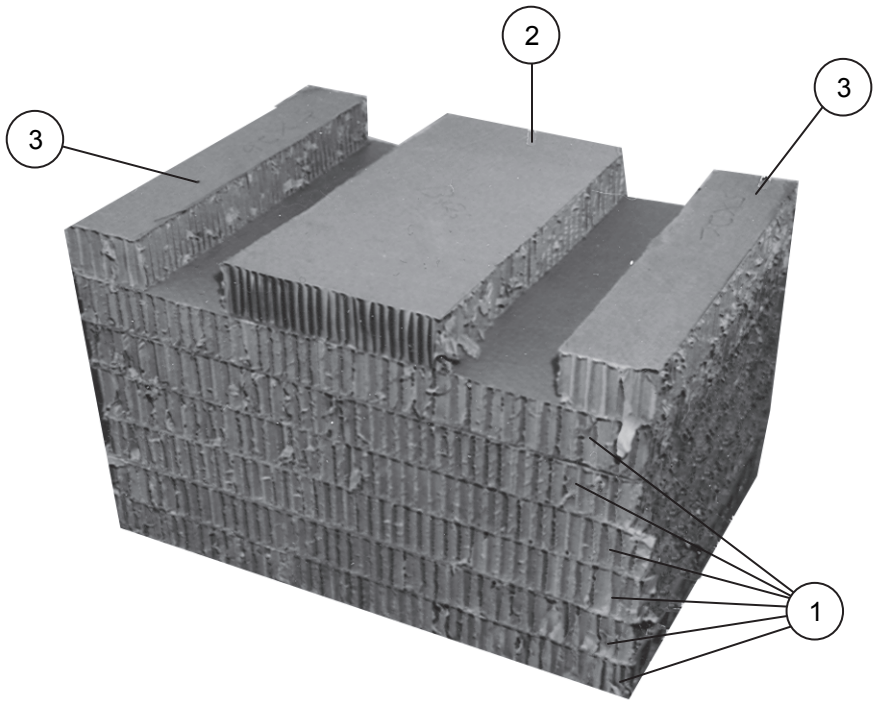
Note. Pad the lashings where they touch the ends of the decks.

Figure 3-81. Eight Decks Positioned and Secured



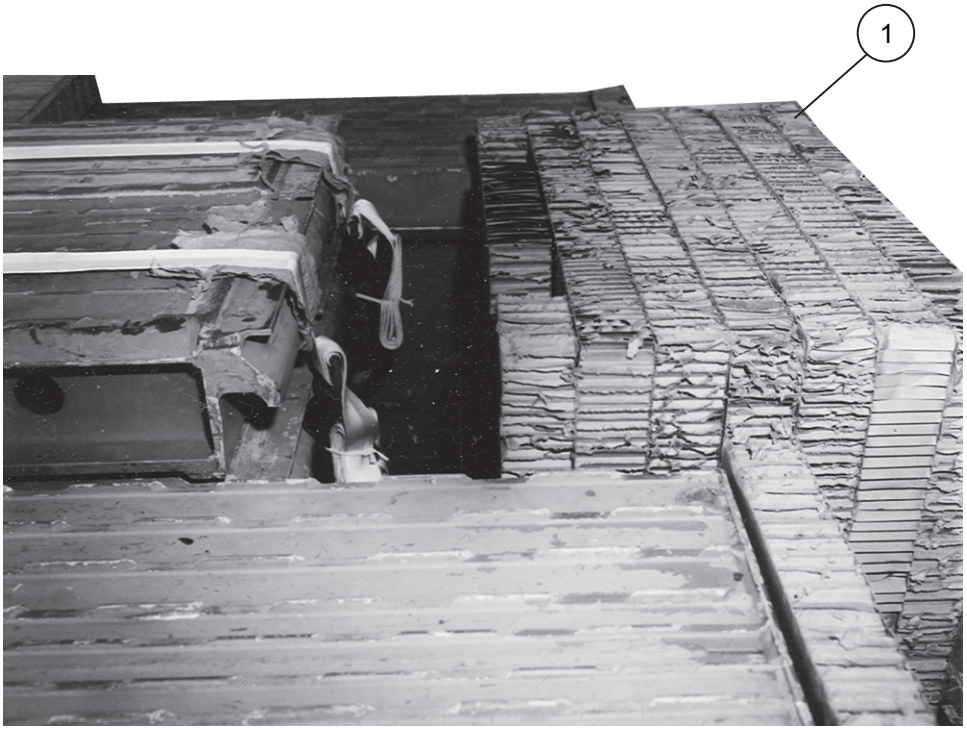
1 Position two top panels on the pallet 4 ½ inches from the front edge of the pallet and 2 ½ inches overhanging the right side of the pallet. Make sure the shoot bolt is in the locked position.

Figure 3-82. Two Top Panels on Right Side of Pallet



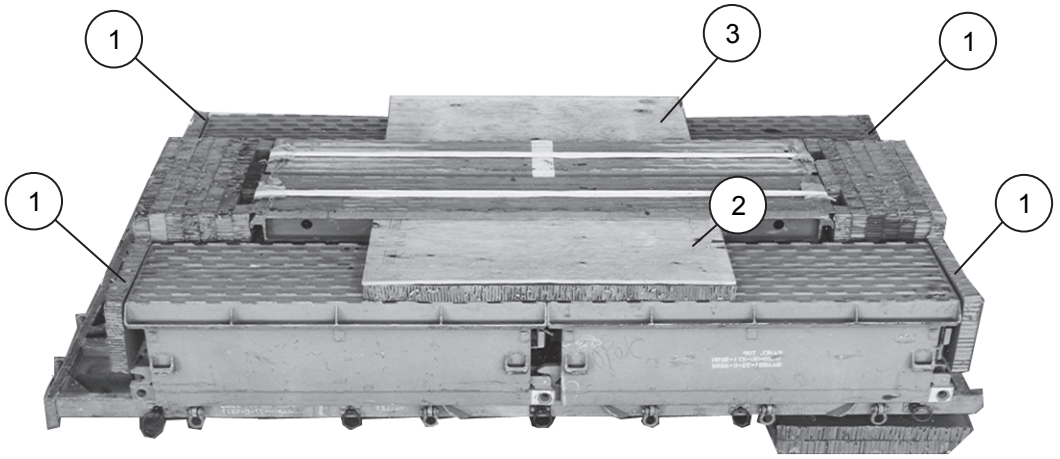
1. Form the base of the honeycomb support using six 35- by 26-inch pieces of honeycomb.
2. Center a 13- by 26-inch piece of honeycomb on the base.
3. Place a 5- by 26-inch piece of honeycomb on each side flush with the edges of the base.
4. Repeat steps 1 through 3 to build another honeycomb support.

Figure 3-83. Honeycomb Supports Built



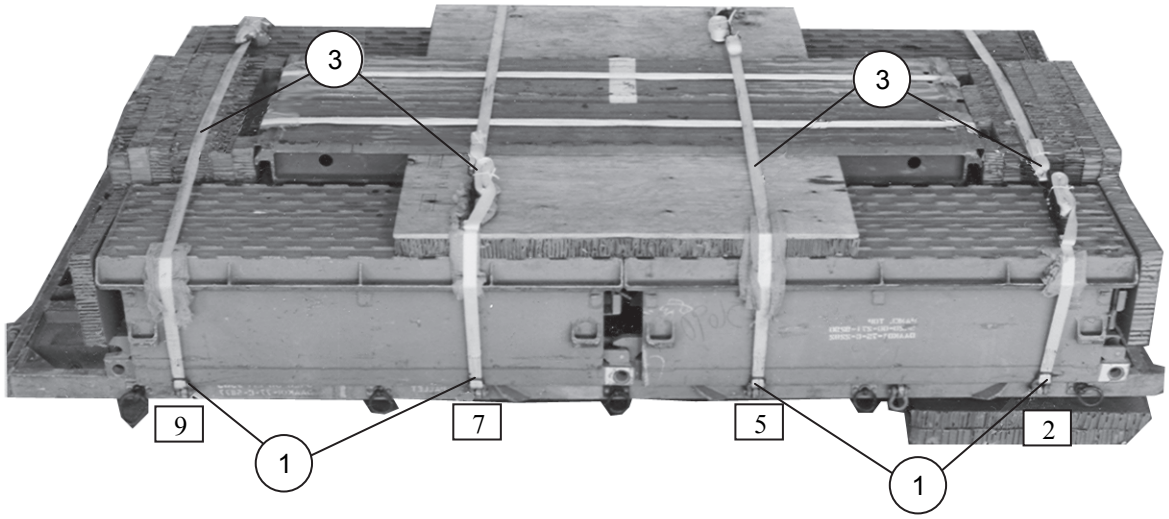
1. Place a honeycomb support on edge. Position the honeycomb support so that the small pieces of honeycomb are against the front end of the secured decks.
2. Place the other honeycomb support on edge. Position the honeycomb support so that the small pieces of the honeycomb are against the rear end of the secured decks (not shown).

Figure 3-84. Honeycomb Supports Positioned



1. Place a 24- by 14-inch piece of honeycomb on each end of the positioned top panels. Make sure the honeycomb pieces are flush with the top edge of the panels.
2. Center a 25- by 64-inch piece of honeycomb on top of the right two top panels. Place a ¾- by 25- by 64-inch piece of plywood on top of the honeycomb.
3. Center a 25- by 64-inch piece of honeycomb on top of the left two top panels. Place a ¾- by 25- by 64-inch piece of plywood on top of the honeycomb.

Figure 3-85. Honeycomb and Plywood Placed on Top Panels



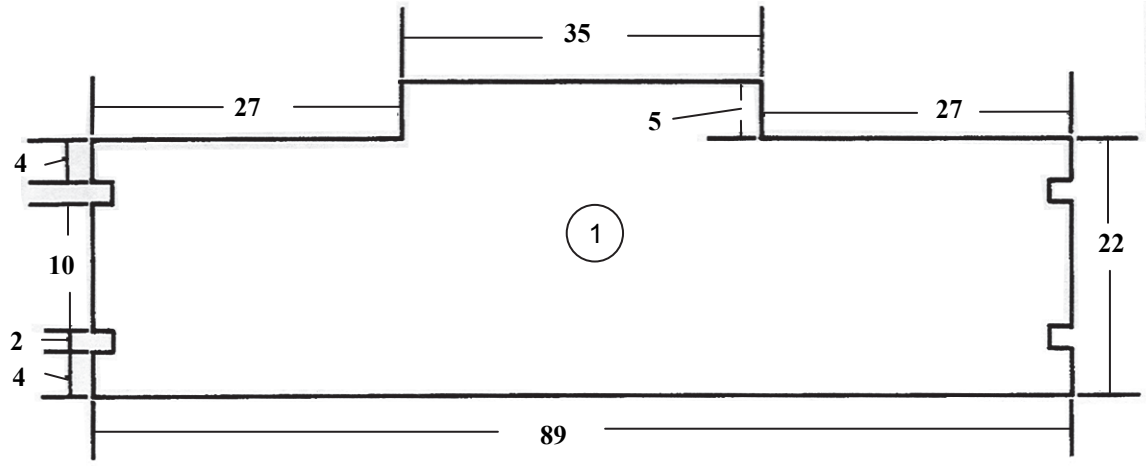
1. Pass a 15-foot lashing through pallet tie-down rings 2, 5, 7 and 9 and back through their own D-rings.
2. Repeat step 1 for the left side of the pallet (not shown) using pallet tie-down rings 2A, 5A, 7A and 9A.
3. Run the lashings over the top of the load. Secure the lashings according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5. Pad the lashings where they come in contact with the top panels and honeycomb.

Figure 3-86. Pallet Lashings Installed and Secured

BUILDING AND POSITIONING RESTRAINT BOARDS

3-26. Build the restraint boards as shown in Figures 3-87 and 3-88. Position the restraint boards as shown in Figure 3-89.

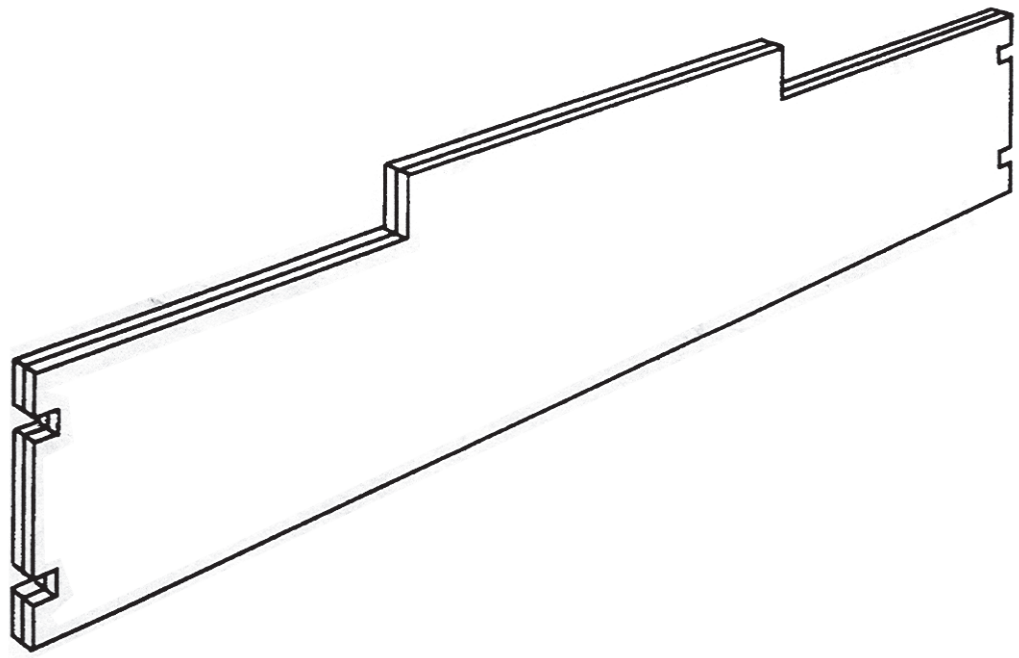
Notes.
1. This drawing is not to scale.
2. All dimensions are in inches.



Item Number	*Pieces*	*Width (Inches)*	*Length (Inches)*	*Material*
1	4	89	27	¾-inch plywood

Figure 3-87. Materials Required to Build Restraint Boards

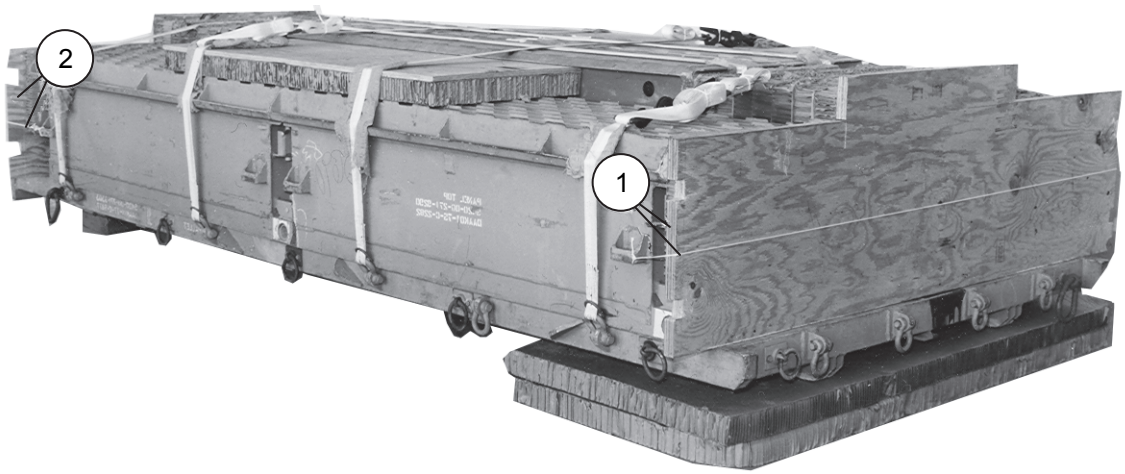
Notes. This drawing is not to scale.



Step.

1. Build each restraint board using two pieces of plywood as given in Figure 3-87.
2. Use eightpenny nails to secure each restraint board.

Figure 3-88. Restraint Boards Built



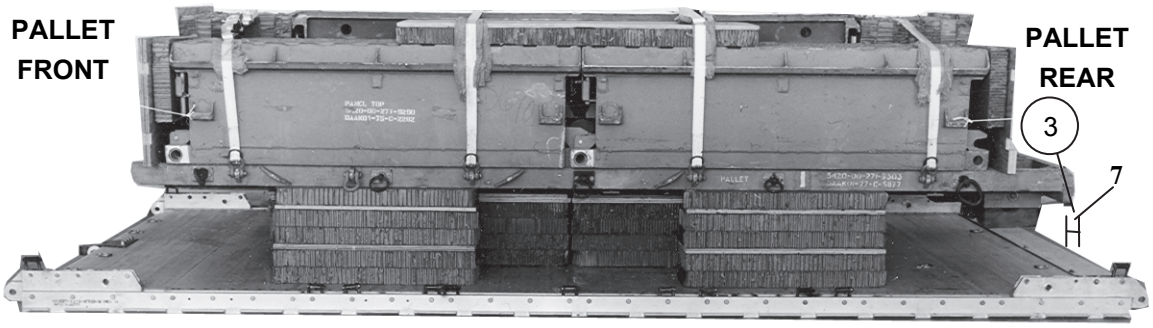
1. Position one restraint against the front of the load. Secure the board in place using a length of type III nylon cord.
2. Position one restraint board against the rear of the load. Secure the board in place using a length of type III nylon cord.

Figure 3-89. Restraint Boards Positioned

POSITIONING PALLET ON PLATFORM

3-27. Position the pallet on the platform using four 12-foot (2-loop), type XXVI nylon webbing slings and four medium suspension clevises as shown in Figure 3-90.

Notes.
1. All dimensions are in inches.
2. Tape the unused pallet tie-down rings and lifting shackles in the UP position while positioning the pallet (not shown).

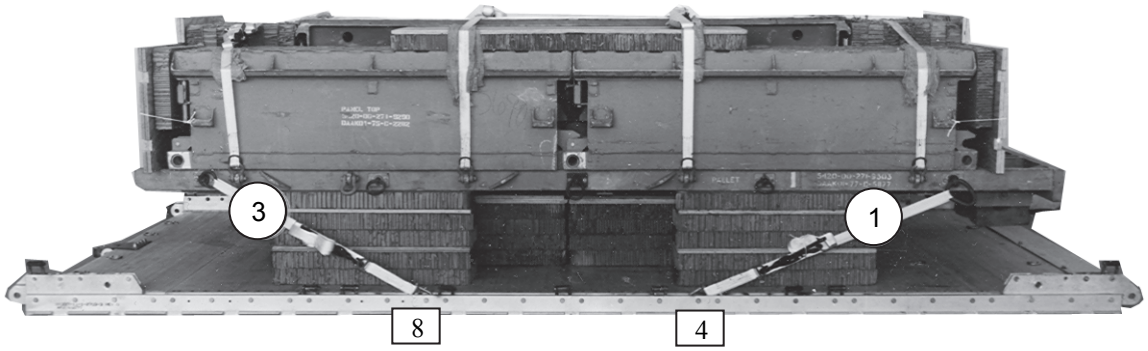


1. Attach four 12-foot (2-loop), type XXVI nylon webbing slings through a medium suspension clevis (not shown).
2. Attach the medium suspension clevises to lifting shackles 1, 1A, 10 and 10A (not shown).
3. Position the pallet on the platform so that the rear of the pallet is 7 inches from the front edge of the platform.

Figure 3-90. Pallet Positioned on Platform

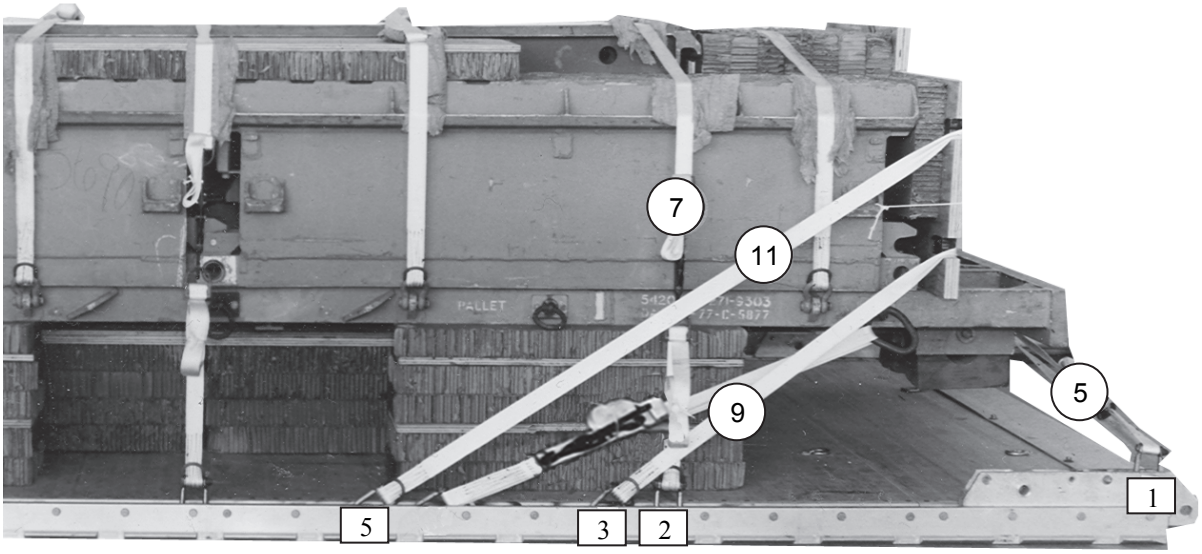
LASHING PALLET

3-28. Lash the pallet to the platform with twenty-two 15-foot tie-down assemblies as shown in Figures 3-91 through 3-93. Secure the lashings according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.



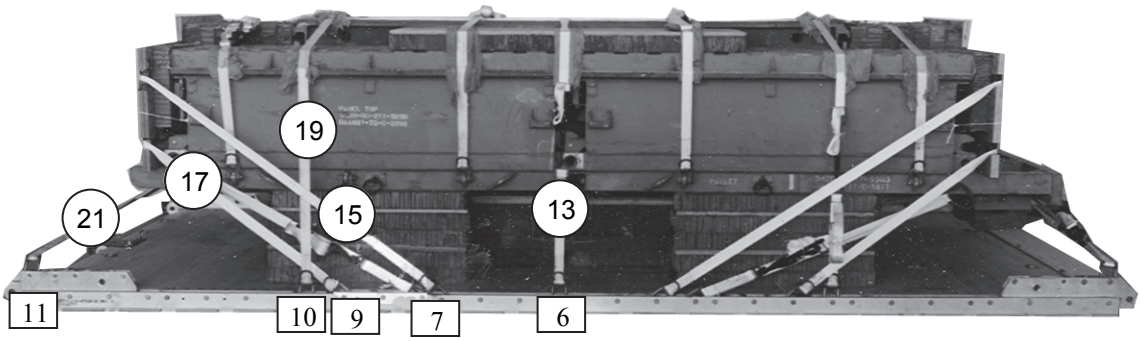
Lashing Number	*Tiedown Clevis Number*	*Instructions*
1	4	Pass the lashing to the lifting shackle 10A.
2	4A	Pass the lashing to the lifting shackle 10.
3	8	Pass the lashing to the lifting shackle 1A.
4	8A	Pass the lashing to the lifting shackle 1.

Figure 3-91. Lashings 1 through 4 Installed



Lashing Number	*Tiedown Clevis Number*	*Instructions*
5	1	Pass the lashing to the lifting shackle A3.
6	1A	Pass the lashing to the lifting shackle F3.
7	2	Pass the lashing through own D-ring and over top of load.
8	2A	Pass the lashing through own D-ring and over top of load. Secure it to lashing 7.
9	3	Pass the lashing through own D-ring and through bottom cutout of restraint board.
10	3A	Pass the lashing through own D-ring and through the bottom cutout of restraint board. Secure it to lashing 9.
11	5	Pass the lashing through its own D-ring and through the top cutout of restraint board.
12	5A	Pass the lashing through its own D-ring and through the top cutout of restraint board. Secure it to lashing 11.

Figure 3-92. Lashings 5 through 12 Installed

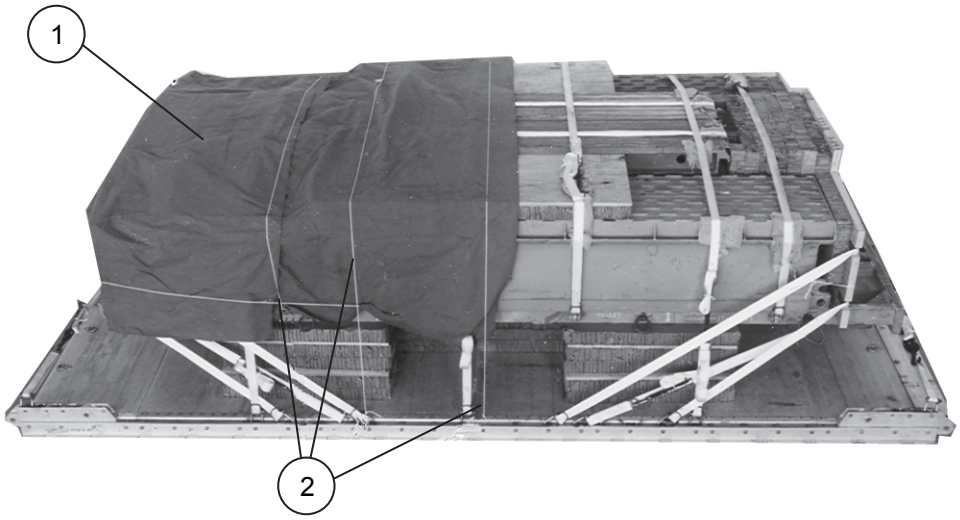


Lashing Number	*Tiedown Clevis Number*	*Instructions*
13	6	Pass the lashing through own D-ring and over top of load.
14	6A	Pass the lashing through own D-ring and over top of load. Secure it to lashing 13.
15	7	Pass the lashing through own D-ring and through top cutout of restraint board.
16	7A	Pass the lashing through own D-ring and through top cutout of restraint board. Secure it to lashing 15.
17	9	Pass the lashing through own D-ring and through bottom cutout of restraint board.
18	9A	Pass the lashing through own D-ring and through the bottom cutout of restraint board. Secure it to lashing 17.
19	10	Pass the lashing through own D-ring and over top of load.
20	10A	Pass the lashing through own D-ring and over top of load. Secure it to lashing 19.
21	11	To lifting shackle A1.
22	11A	To lifting shackle F1

Figure 3-93. Lashings 13 through 22 Installed

LASHING PALLET

3-29. Prepare and position the load cover as shown in Figure 3-94.



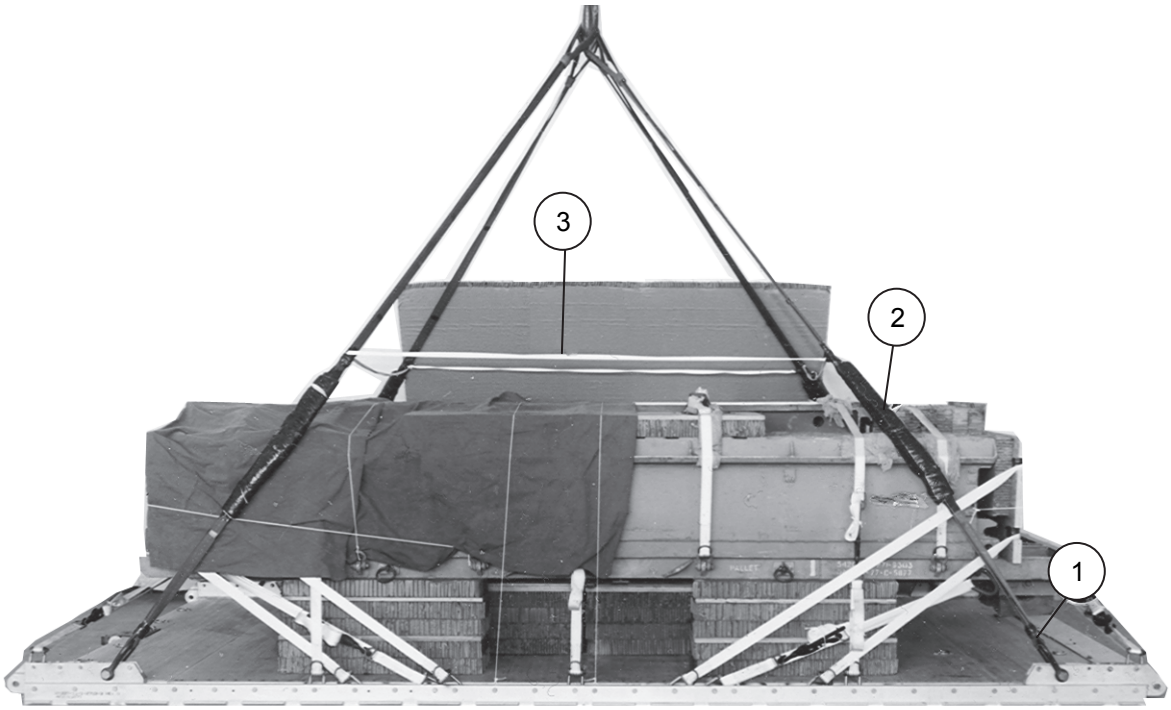
1. Prepare an 8- by 12-foot cotton duck load cover. Place the load cover on the front end of the pallet toward the rear of the platform.
2. Secure the load cover in place to convenient points on the load and platform with lengths of type III nylon cord.

Figure 3-94. Load Covered

INSTALLING SUSPENSION SLINGS

3-30. Install the suspension slings as shown in Figure 3-95.

Note. Raise the suspension slings until they are tight.

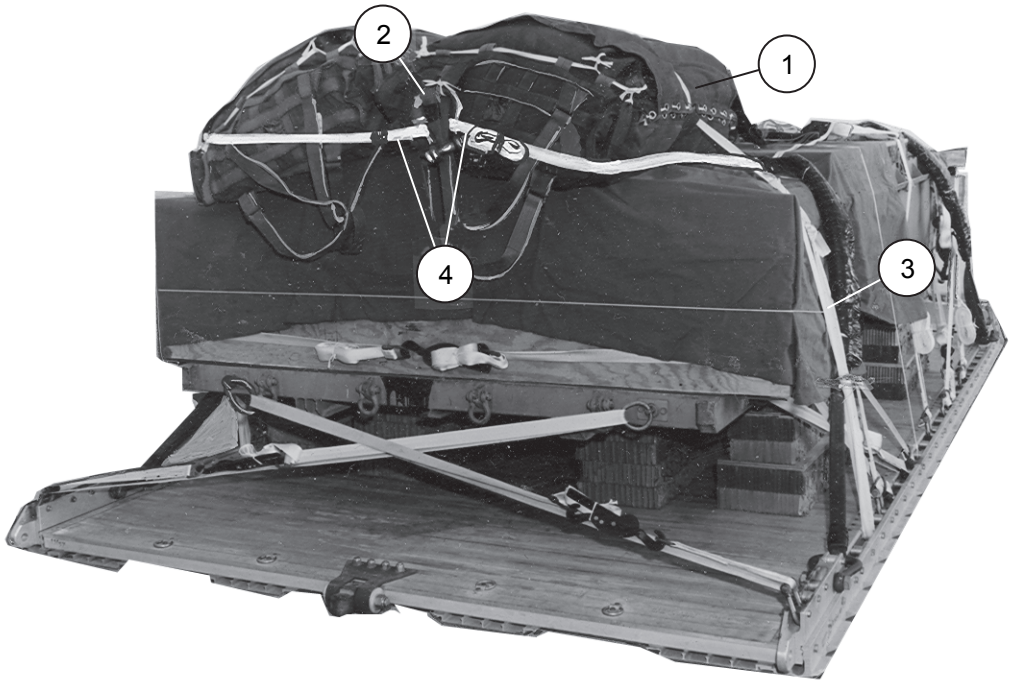


1. Fit a 12-foot (2-loop), type XXVI nylon webbing sling to the bell portion of a large suspension clevis. Bolt the large suspension clevis to the right front tandem link. Adapt this step for the other three suspension slings.
2. Pad the suspension slings by wrapping an 8- by 36-inch piece of felt 30 inches from the top of the large suspension clevis of each sling. Secure the padding with three lengths of type III nylon cord and pressure-sensitive tape.
3. Safety the suspension slings by installing a deadman's tie according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5
4. Lower the suspension slings on the load (not shown).

Figure 3-95. Suspension Slings Installed and Safetied

STOWING CARGO PARACHUTES

3-31. Prepare, stow, and restrain two G-11B cargo parachutes on the front pallet according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 and as shown in Figure 3-96.

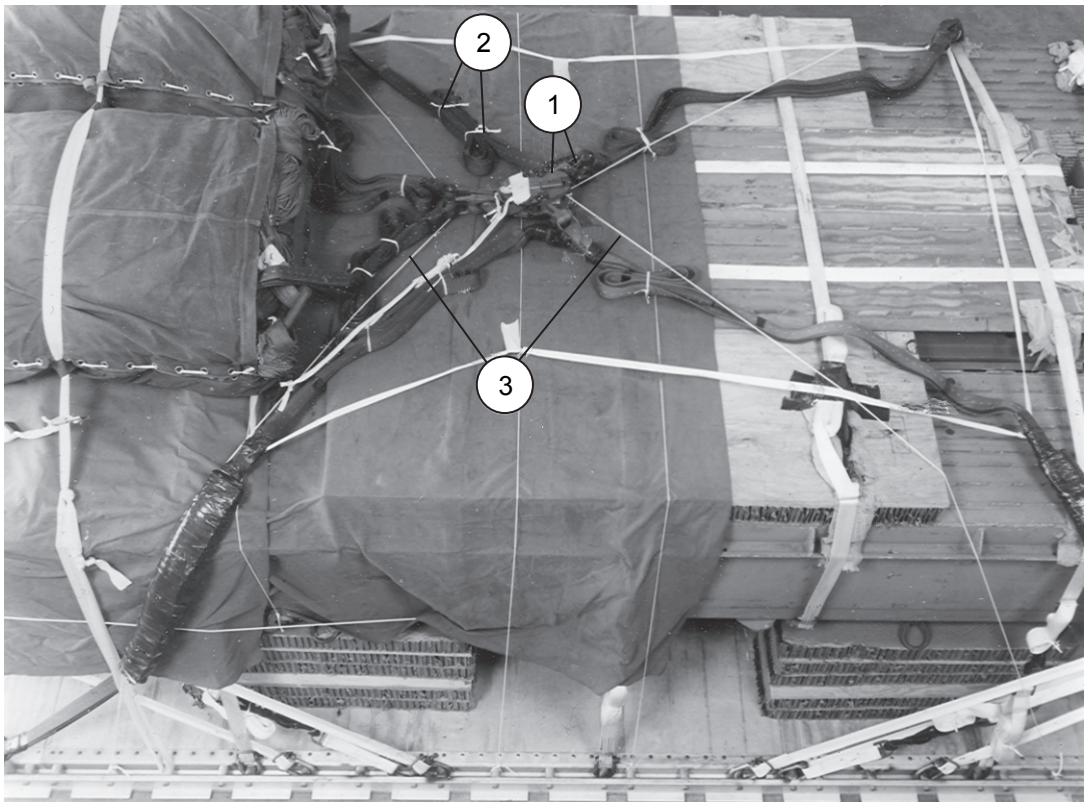


1. Set two G-11B cargo parachutes according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 side-by-side on the front of the pallet to the rear of the platform.
2. Group the two bridle assemblies on the right side with a large suspension clevis.
3. Restrain the cargo parachutes to convenient points on the platform with lengths of type VIII nylon webbing according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.
4. Install two multicut parachute release straps according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.

Figure 3-96. Cargo Parachutes Stowed

INSTALLING RELEASE SYSTEM

3-32. Prepare, and install the M-1 release system according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 and as shown in Figure 3-97.



1. Prepare an M-1 cargo release assembly according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5. Attach the M-1 cargo release assembly to the suspension slings and the cargo parachutes according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.

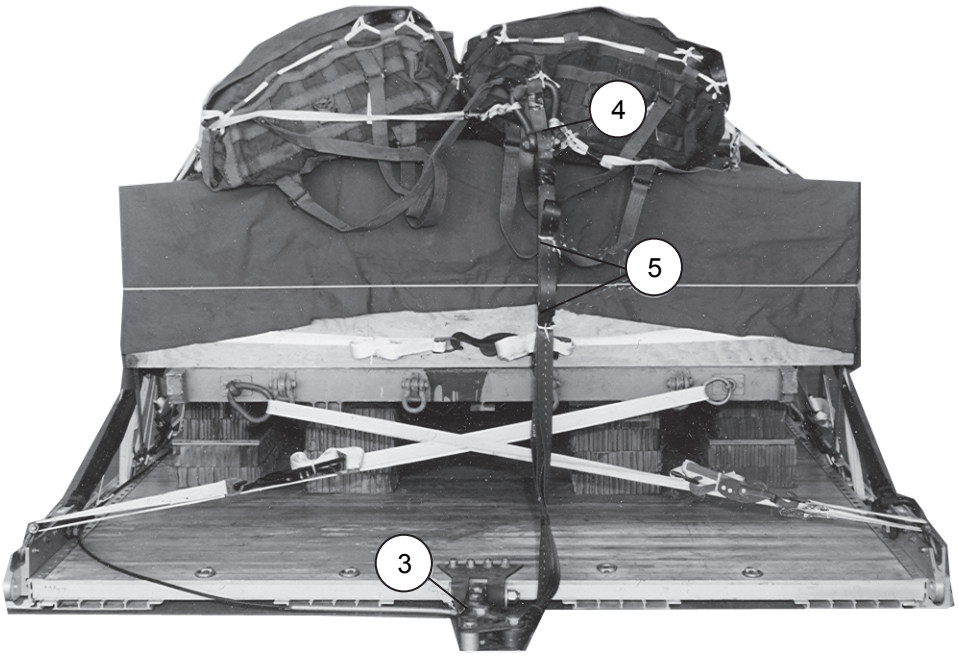
2. S-fold the suspension slings. Secure the folds with lengths of type I, ¼-inch cotton webbing.

3. Secure the top and bottom of the M-1 cargo parachute release according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.

Figure 3-97. Release System Installed

INSTALLING EXTRACTION SYSTEM

3-33. Install the EFTC extraction system according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 and as shown in Figure 3-98.



1. Attach the EFTA mounting brackets to the front mounting holes on the left platform side rail (not shown).
2. Install the actuator to the EFTA mounting brackets with a 16-foot cable according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 (not shown).
3. Attach the latch assembly to the extraction bracket with the locking nut hole facing toward the left side of the platform according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.
4. Connect one end of a 9-foot (2-loop), type XXVI nylon webbing sling as a deployment line to the right spacer of the link assembly. Connect the free end of the deployment line to the large clevis clustering the bridle assemblies.
5. S-fold the excess deployment line. Secure the folds with I, ¼-inch cotton webbing.
6. Safety the 16-foot cable to the lashings along the left platform side rail using lengths of type I, ¼-inch cotton webbing (not shown).

Figure 3-98. Extraction System Installed

PLACING EXTRACTION PARACHUTE

3-34. Select the extraction parachute and extraction line needed using the extraction line requirements table in TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5. Place the extraction parachute and line on the load for installation in the aircraft.

INSTALLING PROVISIONS FOR EMERGENCY RESTRAINTS

3-35. Select and install the provisions for the emergency aft restraints according to the emergency aft restraint requirements table in TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.

MARKING RIGGED LOAD

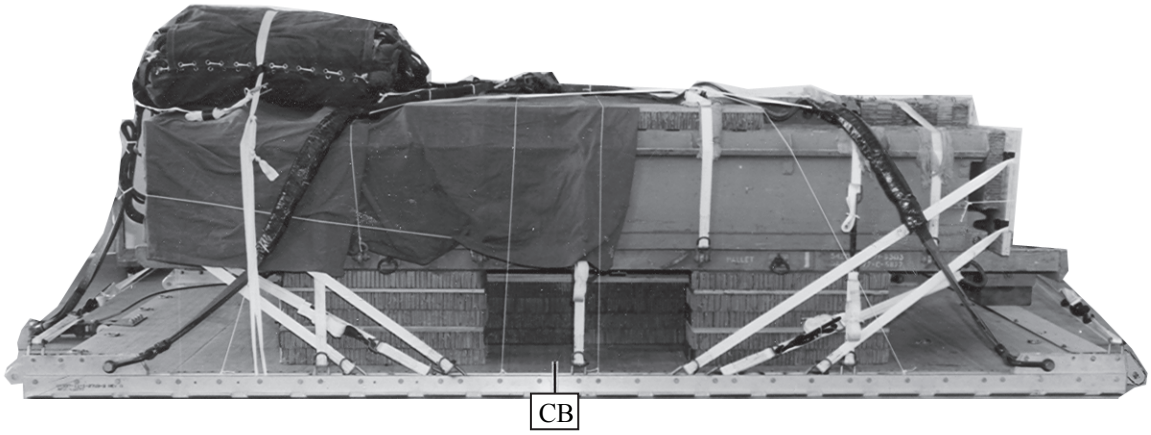
3-36. Mark the rigged load according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5, and as shown in Figure 3-99. Comply with the Shipper's requirements for Declaration of Dangerous/Hazardous Goods in accordance with AFMAN 24-204 (I)/TM 38-250/NAVSUP PUB 505/MCOP4030.191/DLAI 4145.3.. If the load varies from the one shown, the weight, height, CB, and parachute requirements must be recomputed.

EQUIPMENT REQUIRED

3-37. Use the equipment listed in Table 3-2 to rig this load.

CAUTION

Make the final rigger inspection required by AR 59-4 and TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 before the load leaves the rigging site.



RIGGED LOAD DATA

Weight: Load shown	6,310 pounds
Maximum Load Allowed	8,800 pounds
Height	67 1/2 inches
Width	108 inches
Overall Length	215 inches
Overhang: Front	0 inches
Rear	0 inches
Center of Balance (from front edge of the platform)	101 inches
Extraction System with 16-foot cable (adds 18 inches to length of platform)	EFTC

Figure 3-99. Two-Bay Components for the Seven-Bay, Single-Story, Medium Girder (Fixed) Bridge Rigged on a 16-Foot, Type V Platform for Low-Velocity Airdrop

Table 3-2. Equipment Required for Rigging the Two-Bay Components for the Seven-Bay, Single-Story, Medium Girder (Fixed) Bridge for Low-Velocity Airdrop on a Type V Platform

National Stock Number	*Item*	*Quantity*
8040-00-273-8713	Adhesive, paste, 1-gallon	As required
	Clevis, suspension:	
4030-00-678-8562	3/4-inch (medium) emergency restraint	4
4030-00-090-5354	1-inch (large)	5
4020-00-240-2146	Cord, nylon, type III	As required
1670-00-434-5785	Coupling, airdrop, extraction force transfer with 16-foot cable	1
1670-00-360-0328	Cover, clevis, large	5
8135-00-664-6958	Cushioning material, packaging, cellulose wadding	As required
8305-00-191-1101	Felt, 1/2-inch thick	As required
1670-01-183-2678	Leaf, extraction line (line bag) (add 2 for C-17)	2
	Line, extraction, type XXVI nylon webbing:	
1670-01-062-6313	60-foot (3-loop), type XXVI	1
1670-01-107-7652	160-foot (3-loop), type XXVI	1
1670-01-064-4452	60-foot (1-loop), type XXVI for C-17 drogue line	1
5315-00-010-4657	Nail, steel wire, common 6d	As required
5315-00-010-4661	Nail, steel wire, common 10d	As required
1670-00-753-3928	Pad, energy-dissipating, honeycomb	14 sheets
5530-00-128-4981	Plywood, ¾-inch	6 sheets
	Parachute:	
1670-01-016-7841	Cargo, G-11B	2
1670-01-063-3715	Cargo, extraction, 15-foot for C-17	1
	Platform, airdrop, type V, 32-foot	1
1670-01-353-8425	Bracket assembly, EFTC	1
1670-01-162-2372	Bracket assembly, extraction	1
1670-01-162-2376	Clevis assembly	22
1670-01-247-2389	Suspension link	2
1670-01-162-2381	Tandem link	2
1670-01-097-8816	Release, cargo parachute, M-1	1

Table 3-2. Equipment Required for Rigging the Two-Bay Components for the Seven-Bay, Single-Story, Medium Girder (Fixed) Bridge for Low-Velocity Airdrop on a Type V Platform (Continued)

National Stock Number	*Item*	*Quantity*
	Sling, cargo airdrop:	
1670-01-062-6304	9-foot (2-loop), type XXVI nylon webbing	1
1670-01-062-6303	12-foot (2-loop), type XXVI nylon webbing	8
1670-01-062-6302	20-foot (2-loop), type XXVI nylon webbing	2
5340-00-040-8219	Strap parachute release, multicut	2
7501-00-266-5016	Tape, adhesive, 2-inch	As required
7501-00-266-6710	Tape, masking	As required
1670-00-937-0271	Tiedown assembly, 15-foot	34
1670-01-483-8259	Towplate release mechanism (H-block) (C-17)	1
	Webbing:	
8305-00-268-2411	Cotton, 1/4-inch, type I	As required
	Nylon:	
8305-00-082-5752	Tubular, 1/2-inch	As required
8305-00-263-3591	Type VIII webbing	As required

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Glossary

AD	Airdrop
AFB	Air Force Base
AFMAN	Air Force manual
AFR	Air Force Regulation
AFTO	Air Force technical order
AR	Army Regulation
attn	Attention
BSB	bank seat beam
CB	center of balance
cap	capacity
chap	chapter
d	penny
DA	Department of the Army
DC	District of Columbia
DD	Department of Defense
diam	diameter
EFTC	extraction force transfer coupling
FM	field manual
TM	general service technical manual
HQ	headquarters
IAW	in accordance with
in	inch
lb	pound
LV	low-velocity
MGB	medium girder bridge
mm	millimeter
no	number
NSN	national stock number
sec	second
TM	technical manual
TO	technical order
TRADOC	United States Army Training and Doctrine Command
w	with
yd	yard

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These are the sources quoted or paraphrased in this publication.

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TM 4-48.07
TO 13C7-50-1
5 July 2013

By Order of the Secretary of the Army:

RAYMOND T. ODIERNO
General, United States Army
Chief of Staff

Official:

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