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NAVSEA SS400-AD-MMO-010  
TO 13C7-51-21  
September 2007**

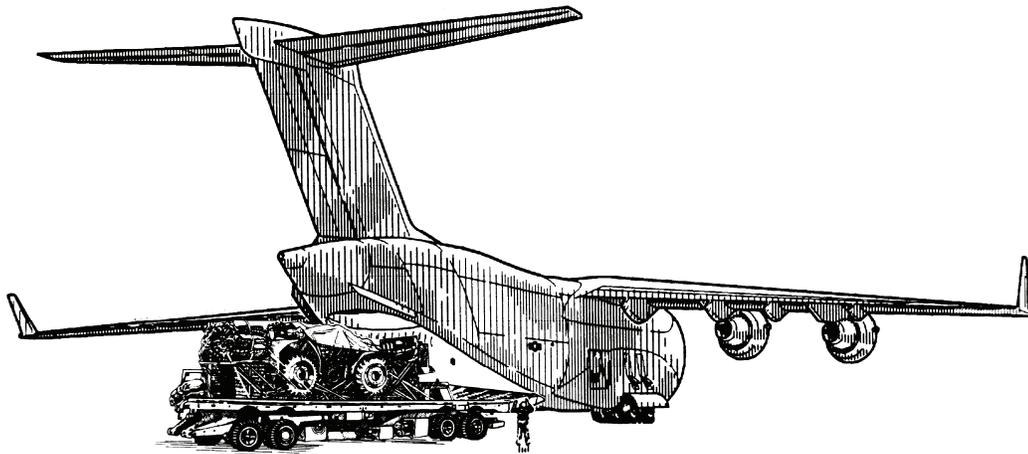
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**Airdrop of Supplies and Equipment:  
Rigging Loads for Special Operations**

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Headquarters  
Department of the Army  
United States Marine Corps  
Department of the Navy  
Department of the Air Force  
Washington, DC, 19 September 2007

# **AIRDROP OF SUPPLIES AND EQUIPMENT: RIGGING LOADS FOR SPECIAL OPERATIONS**

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# Preface

## SCOPE

This manual tells and shows how to rig the following airdrop loads for special operations:

- Four different High Speed Low Level Aerial Delivery System (HSSLADS) container loads rigged for airdrop from the MC-130 aircraft.
- Two different inflated Combat Rubber-Raiding Crafts (CRRC) rigged on a Combat Expendable Platform (CEP) for low-velocity airdrop from a C-130 or C-17 aircraft.
- The Rigging Alternate Method Zodiac (RAMZ) is rigged in an A-22 container for low-velocity airdrop from a C-130 or C-17 aircraft.
- The Naval Special Warfare Rigid Inflatable Boat (NSWRIB) is rigged for low-velocity airdrop on a specially designed platform from a C-130 or C-17 aircraft.
- Two different Advanced Rescue Crafts (ARC) rigged on a combat expendable platform (CEP) for low velocity airdrop from a C-130 or C-17 aircraft.
- The Wind Supported Aerial Delivery System (WSADS) Snow Goose is a low-cost, reusable, fully autonomous, Unmanned Aerial Vehicle (UAV) that can be used to carry out a variety of missions at otherwise inaccessible locations for low velocity airdrop from a C-130 or C-17 aircraft.

## APPLICABILITY

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

## USER INFORMATION

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

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## Preface

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# Introduction

## DESCRIPTION OF ITEMS

The descriptions of the items rigged in this manual are given below:

- **High Speed Low Level Aerial Delivery System (HSSLADS):** The HSSLADS container is an adjustable container made of an A-21 cargo cover and other airdrop items. The dimensions and weight capacity of the container is determined by the load being airdropped.
- **Zodiac F470U Combat Rubber Raiding Craft (CRRC):** The inflated Zodiac 470U boat is airdropped singly or in pairs. Each boat is 75 inches wide, 22 inches high, 185 inches long and may be airdropped utilizing a roll-up floor or hard deck. A single boat weighs approximately 322 pounds.
- **Zodiac F470U Combat Rubber Raiding Craft rigged in an A-22 Container or Rigging Alternate Method Zodiac (RAMZ):** The boat is rigged in an A-22 container rigged for low-velocity airdrop over water. The boat is deflated and rigged for rapid inflation and deployment once in the water.
- **Naval Special Warfare Rigid Inflatable Boat (NSWRIB):** The NSWRIB is 108 inches wide, 100 inches high and 432 inches long. The boat rigged on its platform can weigh a maximum of 20,640 pounds.
- **Advanced Rescue Craft (ARC):** The ARC is rigged on a 48- x 87-inch combat expendable platform for low-velocity airdrop. The load can be rigged with or without a 20-man life raft and a rescue board, a rucksack, and an aid bag. The ARC is 70 inches high, 48 inches wide and 111 inches long. The ARC is 1,140 pounds when rigged.
- **Snow Goose:** The Wind Supported Aerial Delivery System (WSADS) Snow Goose is a low-cost, reusable, fully autonomous, unmanned aerial vehicle (UAV) that can be used to carry out a variety of missions at otherwise inaccessible locations. It is quickly configurable for air or ground launch deployable missions.

## SPECIAL CONSIDERATIONS

### CAUTION

Only ammunition listed in FM 4-20.153/MCRP 4-11.3B/TO 13C7-18-41 may be airdropped. Only ammunition and supplies approved for high velocity or HSSLADS airdrop may be airdropped by HSSLADS. When a dangerous material is being rigged, the container must be marked, labeled and comply with AFMAN 24-204(I)/TM 38-250/NAVSUP PUB 505/MC0 P4030.19H/DLAI 4145.3. A copy of this manual must be available to the joint airdrop inspectors during the before and after loading inspections.

**HSSLADS Container.** The following items apply to the HSSLADS container:

- A multiple drop of four HSSLADS containers may be airdropped on one pass provided the total weight of the load does not exceed 2,200 pounds.
- The type XXVI nylon webbing used to secure multiple HSSLADS loads will be furnished by the US Army.
- HSSLADS containers are airdropped from the MC-130 aircraft only.

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*Note.* For Air Force use only. A HSSLADS container weighing at least 250 pounds may be airdropped for continuance training purposes only, provided the 35 pounds per square foot minimum is maintained. For unilateral training loads honeycomb is not required.

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**Boats and Parachutists.** The following items apply to boats and parachutists:

- At no time will the total number of static lines on the anchor line cable for personnel and cargo exceed 20.
- The total rigged weight of rubber raiding craft loads on CEP must be a minimum of 2,100 pounds. Sandbags or other ballast may be added to the platform for this purpose.

Chapter 1

## Rigging High Speed Low Level Aerial Delivery System (HSSLADS) Container Loads

### SECTION I-RIGGING THE CONTAINER

#### DESCRIPTION OF LOAD

1-1. The HSSLADS container (Figure 1-1) is an adjustable container made of an A-21 (nylon) cargo cover and other airdrop items. The assembled items are rigged to ensure that the container will withstand the shock of the parachute opening when airdropped at high speeds.



**Figure 1-1. High Speed Low Level Aerial Delivery System (HSSLADS)**

## PREPARING CONTAINER

1-2. Dimensions of the load base in these procedures are typical. The size of the load base may change to fit other supply loads. Prepare the load base and HSSLADS container as shown in Figures 1-2 and 1-3.

### CAUTION

When a container is rigged for delivery from Air Force aircraft, the rigged weight divided by the largest surface area (measured in square feet) must be a minimum of 35 pounds per square foot.

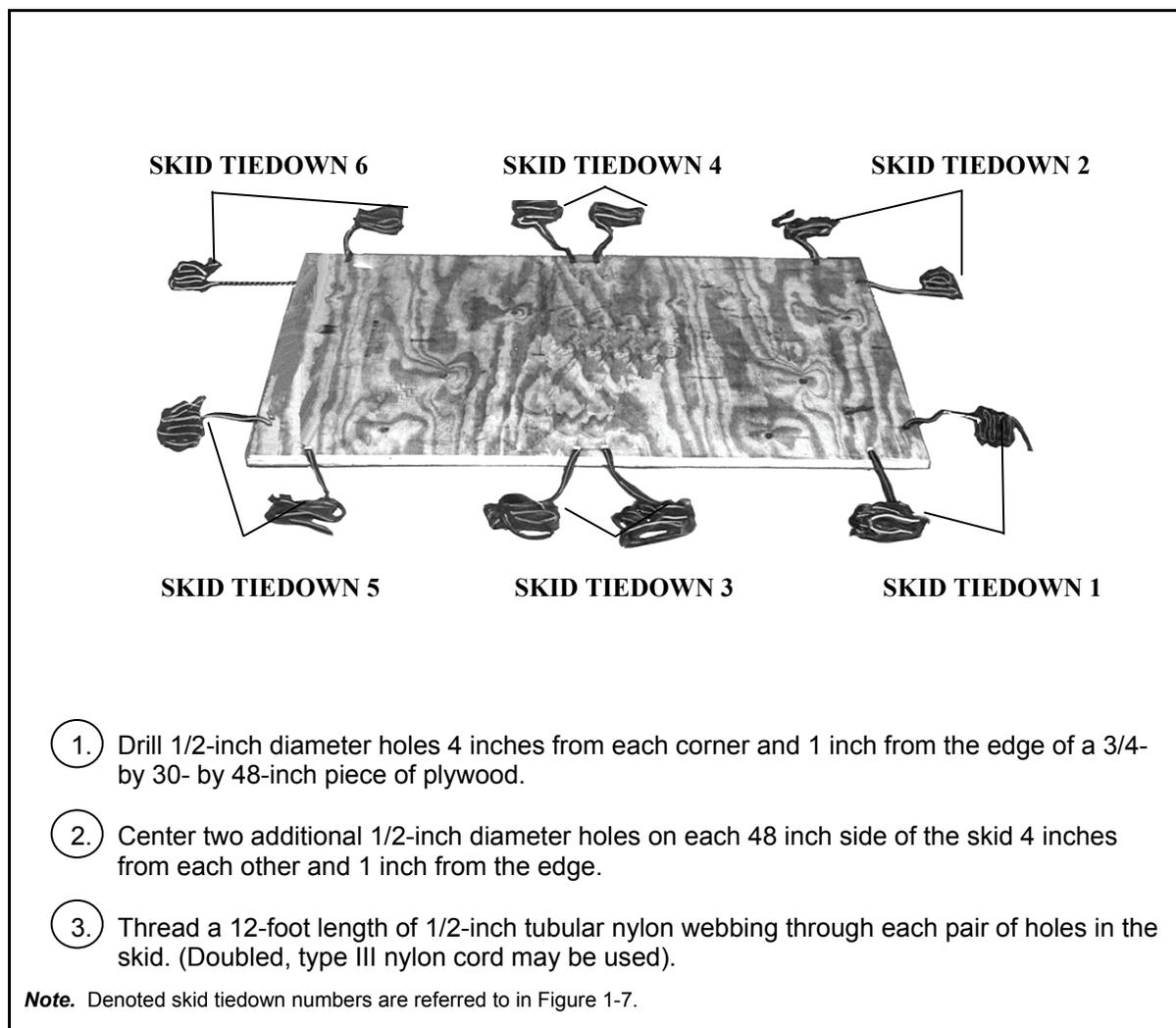
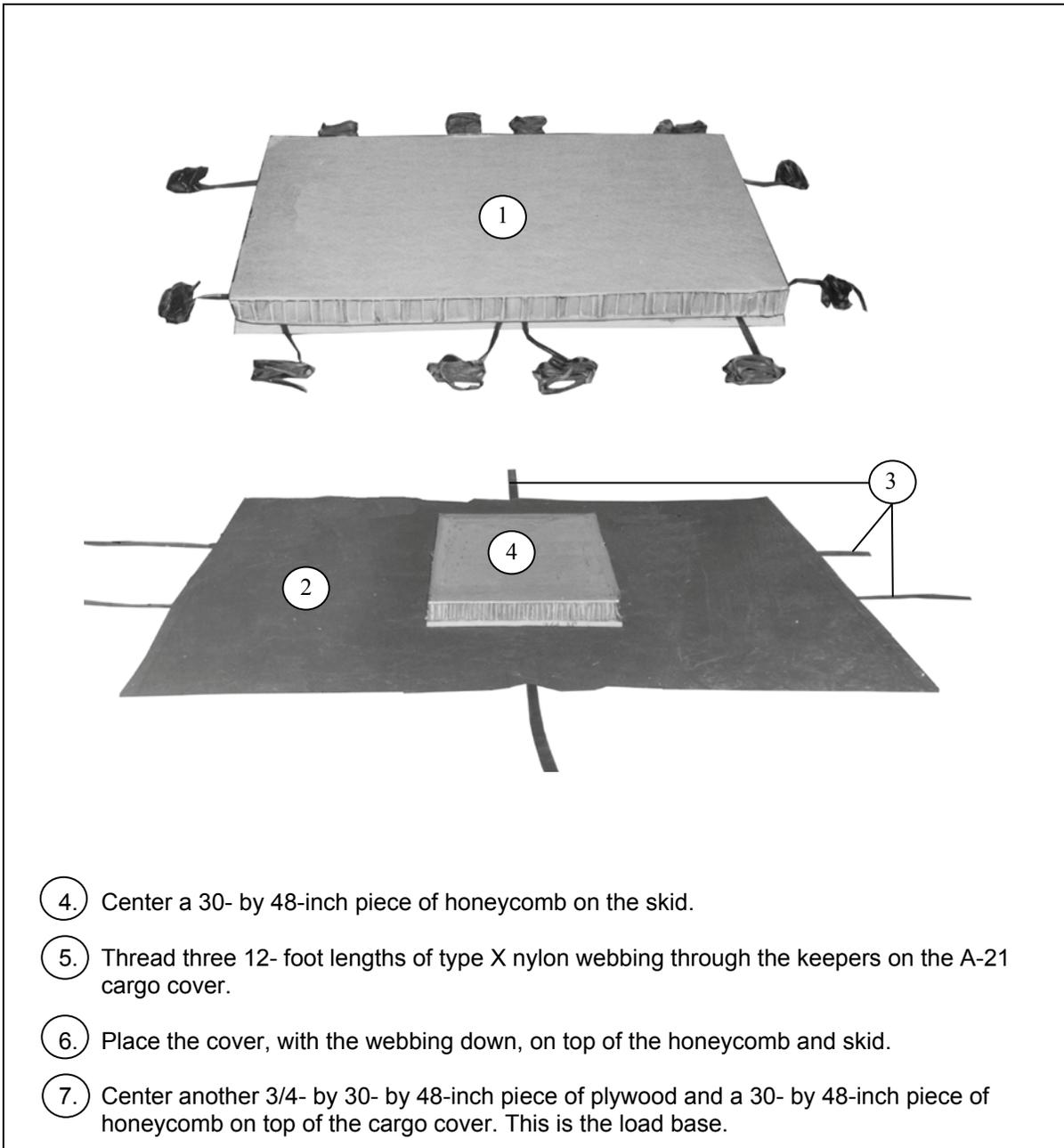


Figure 1-2. Skid Prepared

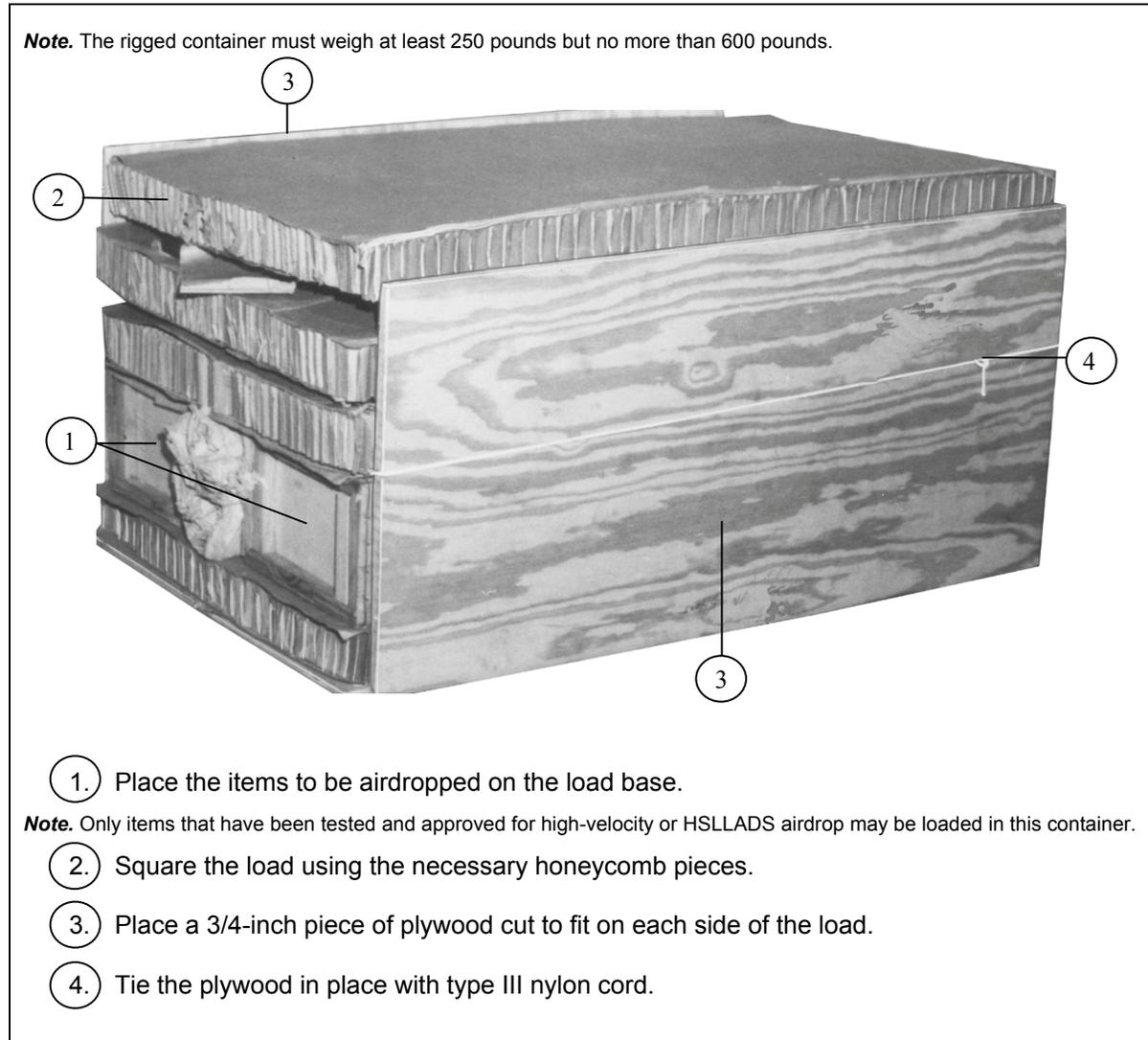


4. Center a 30- by 48-inch piece of honeycomb on the skid.
5. Thread three 12- foot lengths of type X nylon webbing through the keepers on the A-21 cargo cover.
6. Place the cover, with the webbing down, on top of the honeycomb and skid.
7. Center another 3/4- by 30- by 48-inch piece of plywood and a 30- by 48-inch piece of honeycomb on top of the cargo cover. This is the load base.

**Figure 1-3. A-21 Honeycomb, Container Cover and Load Base Placed on Skid**

## LOADING CONTAINER

1-3. Place the items to be airdropped on the honeycomb in the manner shown in Figure 1-4. Place the durable or heavy items on the bottom and the lighter or more fragile items on the middle or top layers. Use the cellulose wadding, felt or honeycomb to cushion the rigged items. Use honeycomb to level and square the load before closing the container.



**Figure 1-4. Load Positioned on Load Base with Sideboards in Place**

## CONSTRUCTING CONTAINER STRAPS

1-4. Construct two container straps as shown in Figure 1-5.

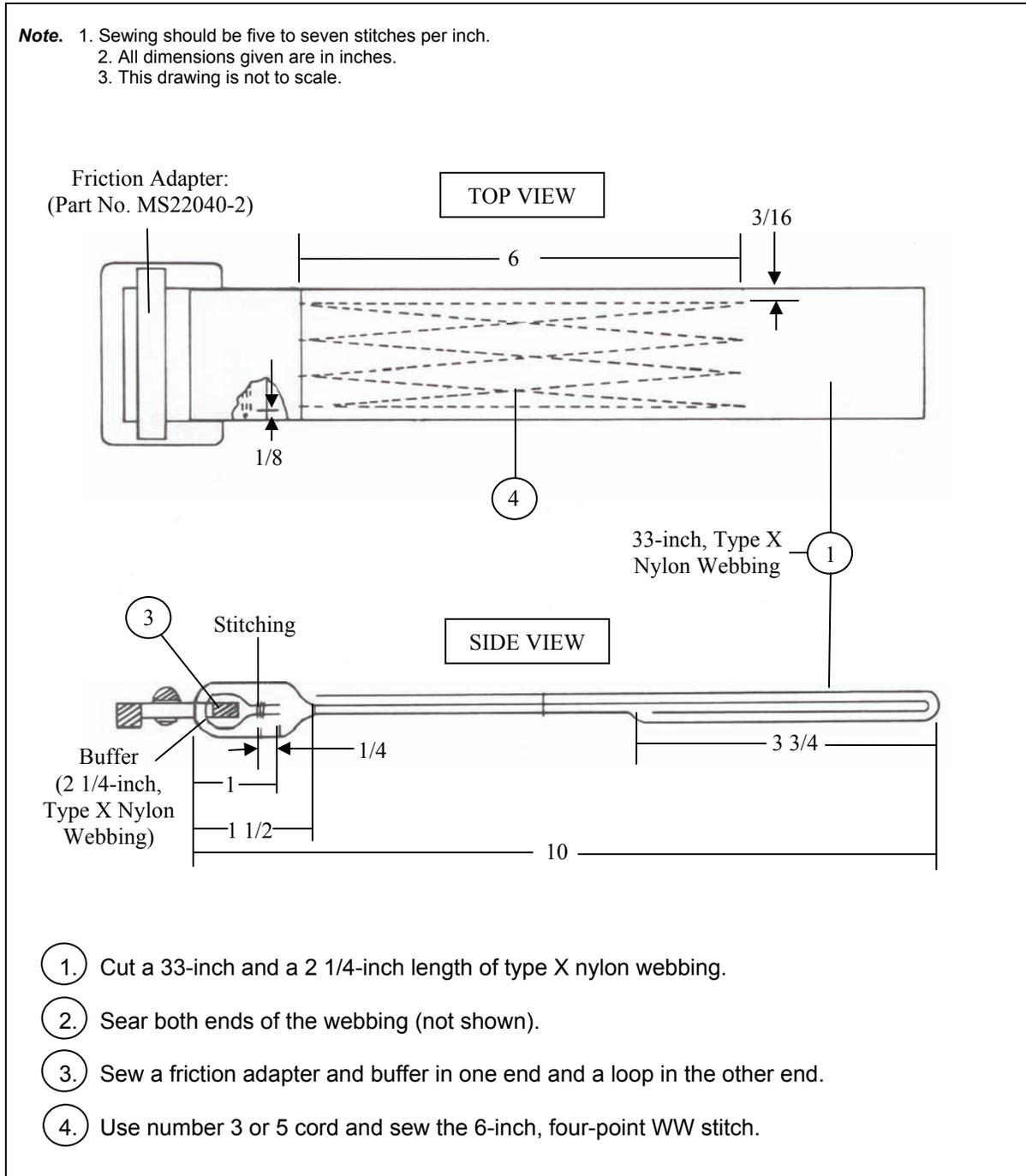
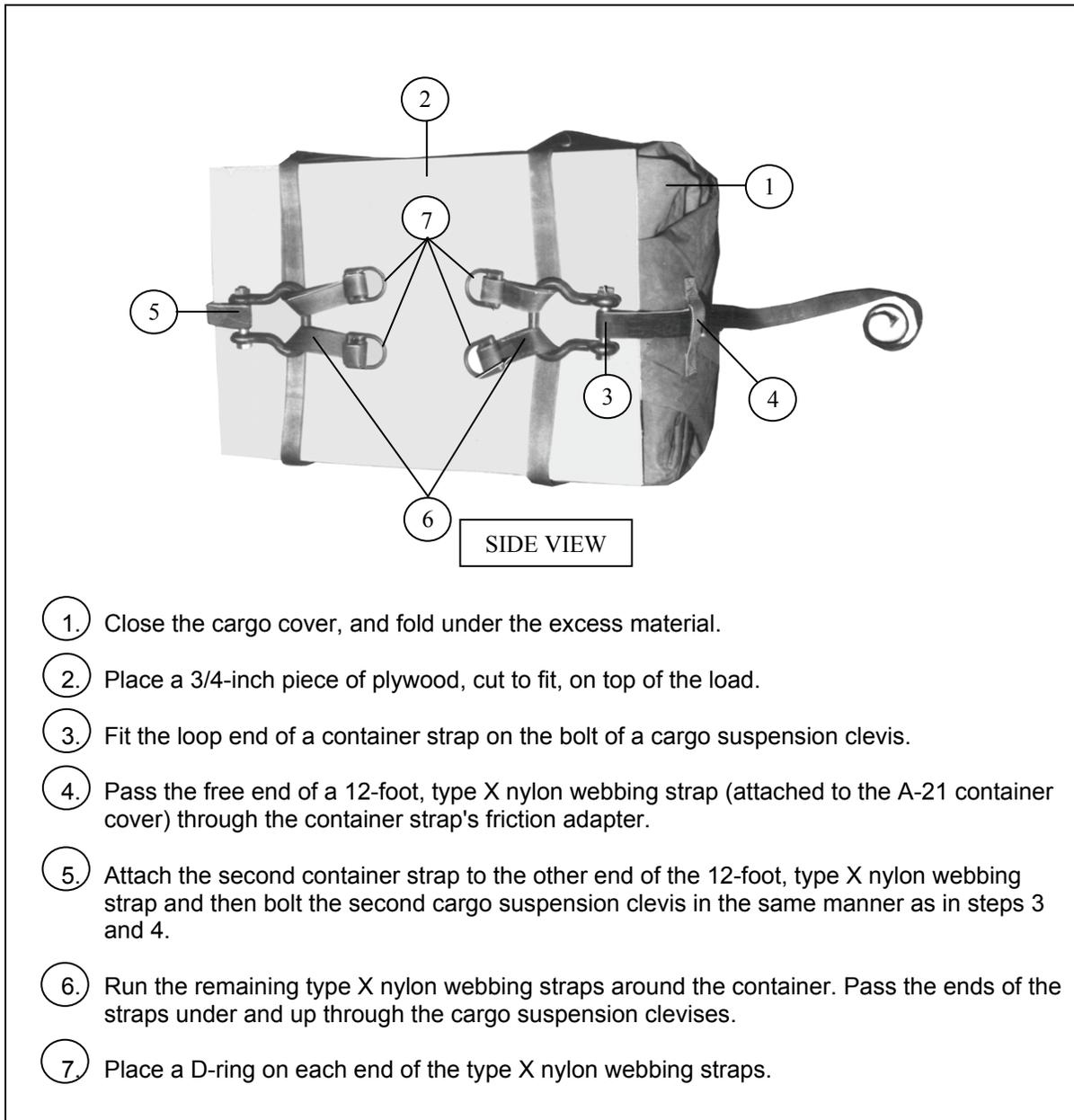


Figure 1-5. HSSLADS Container Strap Prepared

## CLOSING CONTAINER AND STOWING PARACHUTE

1-5. Close the container and secure the skid as shown in Figures 1-6 and 1-7. Attach and restrain a 22-foot cargo extraction parachute to the load as shown in Figures 1-8 and 1-9. If a 22-foot cargo extraction parachute is not available, use a 28-foot cargo extraction parachute.



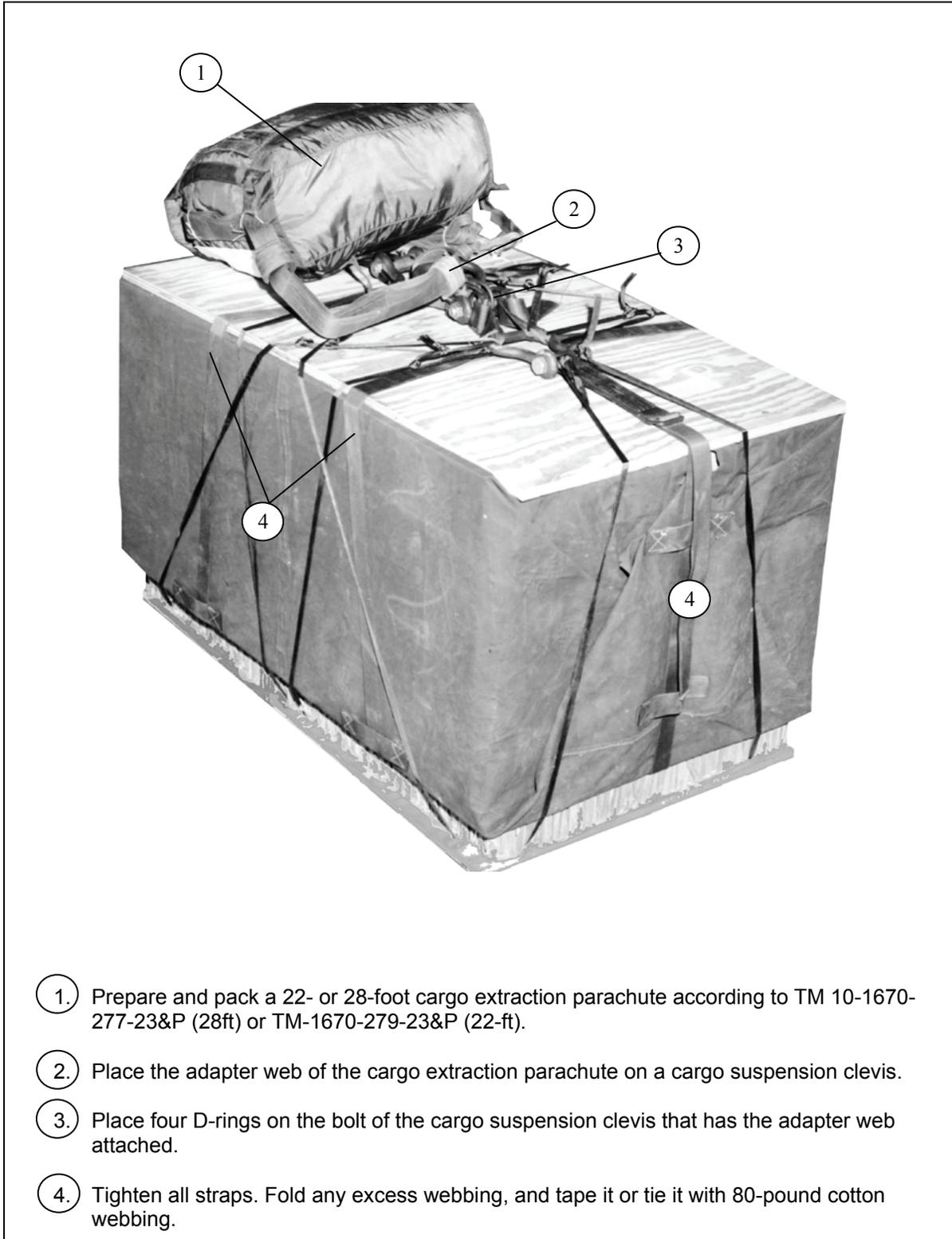
**Figure 1-6. HSSLADS Container Closed**

**Steps:**

1. Tie an end of the 12-foot length of 1/2-inch tubular nylon (positioned on the skid in Figure 1-1) to each clevis indicated below under the first tie column using three half-hitch knots and one overhand knot.
2. Form a loop an appropriate distance from the end of each piece of 1/2-inch tubular nylon for the second tie. Pass the free end through the clevis indicated below in the second tie column and back through the loop. Pull the 1/2-inch tubular nylon tight, and tie it with three half-hitch knots and one overhand knot.

<i>Skid Tie-down Number</i>	<i>First Tie</i>	<i>Second Tie</i>
1	Clevis 1	Clevis 2
2	Clevis 1	Clevis 2
3	Clevis 1	Clevis 2
4	Clevis 2	Clevis 1
5	Clevis 2	Clevis 1
6	Clevis 2	Clevis 1

**Figure 1-7. Skid Tied to the Container**

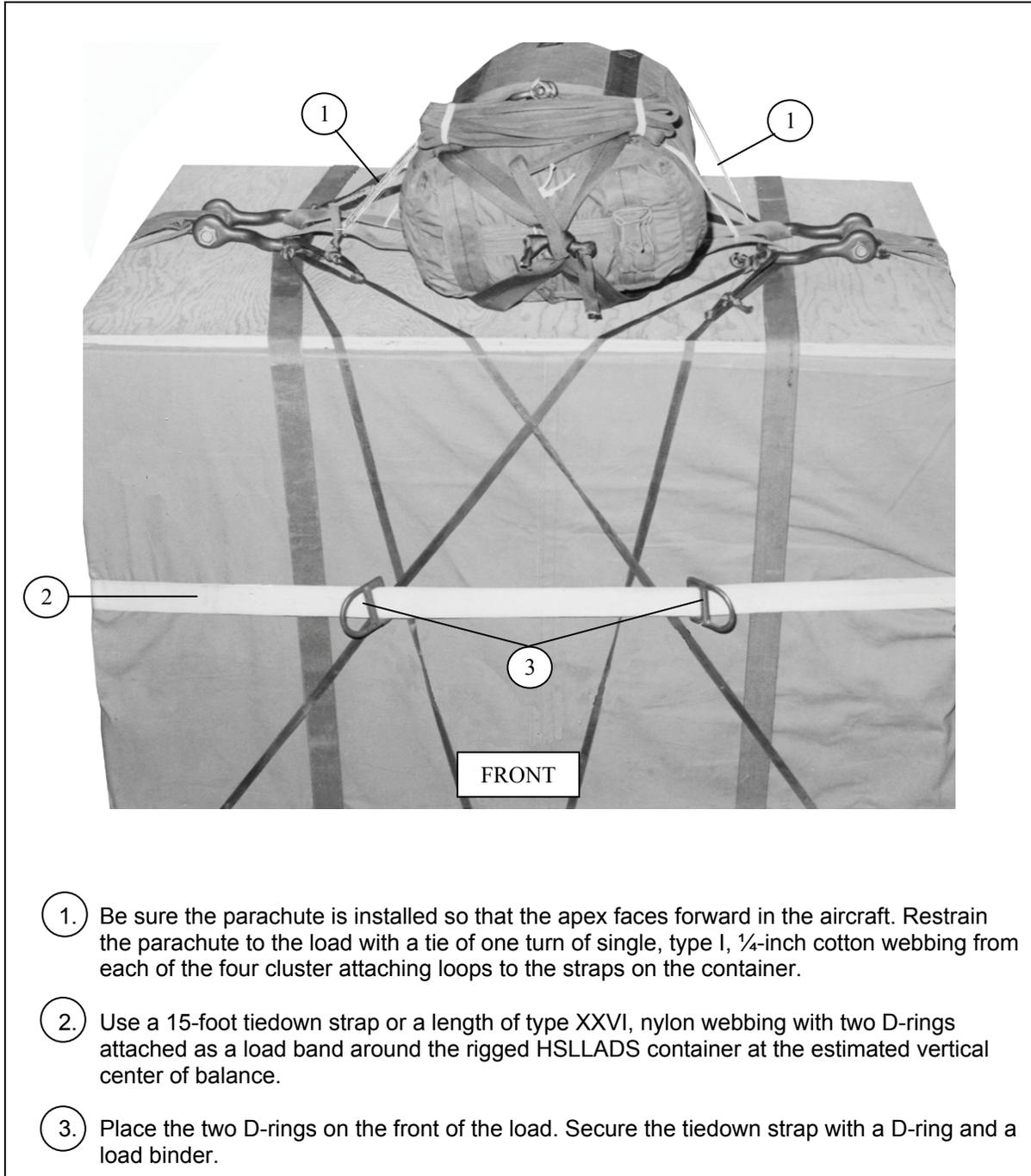


1. Prepare and pack a 22- or 28-foot cargo extraction parachute according to TM 10-1670-277-23&P (28ft) or TM-1670-279-23&P (22-ft).
2. Place the adapter web of the cargo extraction parachute on a cargo suspension clevis.
3. Place four D-rings on the bolt of the cargo suspension clevis that has the adapter web attached.
4. Tighten all straps. Fold any excess webbing, and tape it or tie it with 80-pound cotton webbing.

**Figure 1-8. Parachute Prepared**

**CAUTION**

The load band must be as tight as possible to prevent it from stretching when it is attached to the release system.



1. Be sure the parachute is installed so that the apex faces forward in the aircraft. Restrain the parachute to the load with a tie of one turn of single, type I, ¼-inch cotton webbing from each of the four cluster attaching loops to the straps on the container.
2. Use a 15-foot tiedown strap or a length of type XXVI, nylon webbing with two D-rings attached as a load band around the rigged HSSLADS container at the estimated vertical center of balance.
3. Place the two D-rings on the front of the load. Secure the tiedown strap with a D-ring and a load binder.

**Figure 1-9. Parachute Restrained and Load Band Installed**

## EQUIPMENT REQUIRED

1-6. The equipment needed to prepare and rig the HSSLADS container is listed in Table 1-1.

**Table 1-1. Equipment Required for Rigging a HSSLADS Container**

<i>National Stock Number</i>	<i>Item</i>	<i>Quantity</i>
4030-00-678-8562	Clevis, 3/4-inch medium	3
4030-00-360-0304	Clevis, small	3
4020-00-240-2146	Cord, nylon, type III, 550-lb	As required
1670-00-360-0321	Cover, canvas, type A-21 bag	1
8135-00-664-6958	Cushioning material (Cellulose wadding)	As required
5365-00-937-0147	D-ring, 10,000- lb	6
8305-00-958-3685	Felt, 1/2-inch	As required
1670-00-753-3928	Pad, energy-dissipating, honeycomb	As required
	Parachute, cargo extraction:	
1670-00-687-5458	22-ft. or	1
1670-00-262-1797	28-ft. with deployment-bag	1
5530-00-618-8073	Plywood, 3/4-inch	As required
1670-00-136-9820	Static line, cargo parachute with universal static line	1
No NSN	Strap, container assembly (fabricated locally)	2
1670-00-937-0271	* Tie-down assembly, 15-ft.	1
	Webbing:	
8305-00-268-2411	Cotton, type I, 1/4-inch	As required
8305-00-082-5752	Nylon, tubular, 1/2-inch	As required
8305-00-268-2455	Nylon, tubular, 1-inch	As required
8305-00-261-8585	Nylon, type VIII	As required
8305-00-261-8584	Nylon, type X	12 yd.
* When the following item is not available, the following items are required:		
1670-00-937-0272	Binder, load, 10,000-lb.	1
1670-00-937-0147	D-ring	2
8305-00-206-9219	Webbing, nylon, type XXVI	15-ft.

## SECTION II-MODIFYING AND PACKING THE 22-FOOT AND 28-FOOT CARGO EXTRACTION PARACHUTES

### MODIFYING CARGO EXTRACTION PARACHUTE DEPLOYMENT BAG

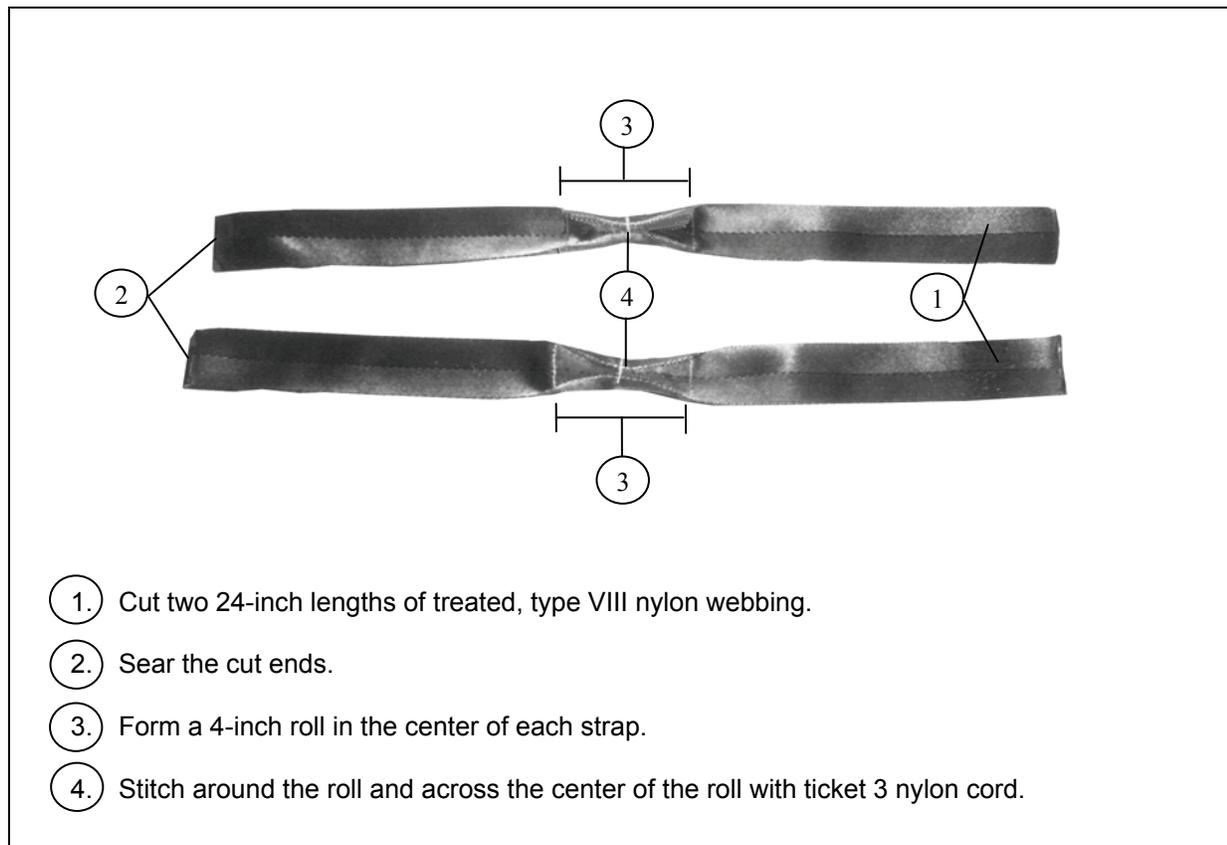
1-7. Remove the pendulum line, safety cords, deployment bag bridle loop, and V-rings from the deployment bag as shown in Figure 1-10. Construct two bridle straps as shown in Figure 1-11. Attach the bridle straps to the deployment bag as shown in Figure 1-12.

**Note.** 1. If the 28-foot cargo extraction parachute is to be used, the deployment bag must be used. Prepare the bag as you would for the 22-foot cargo extraction parachute.  
2. Do not remove the slot reinforcement.



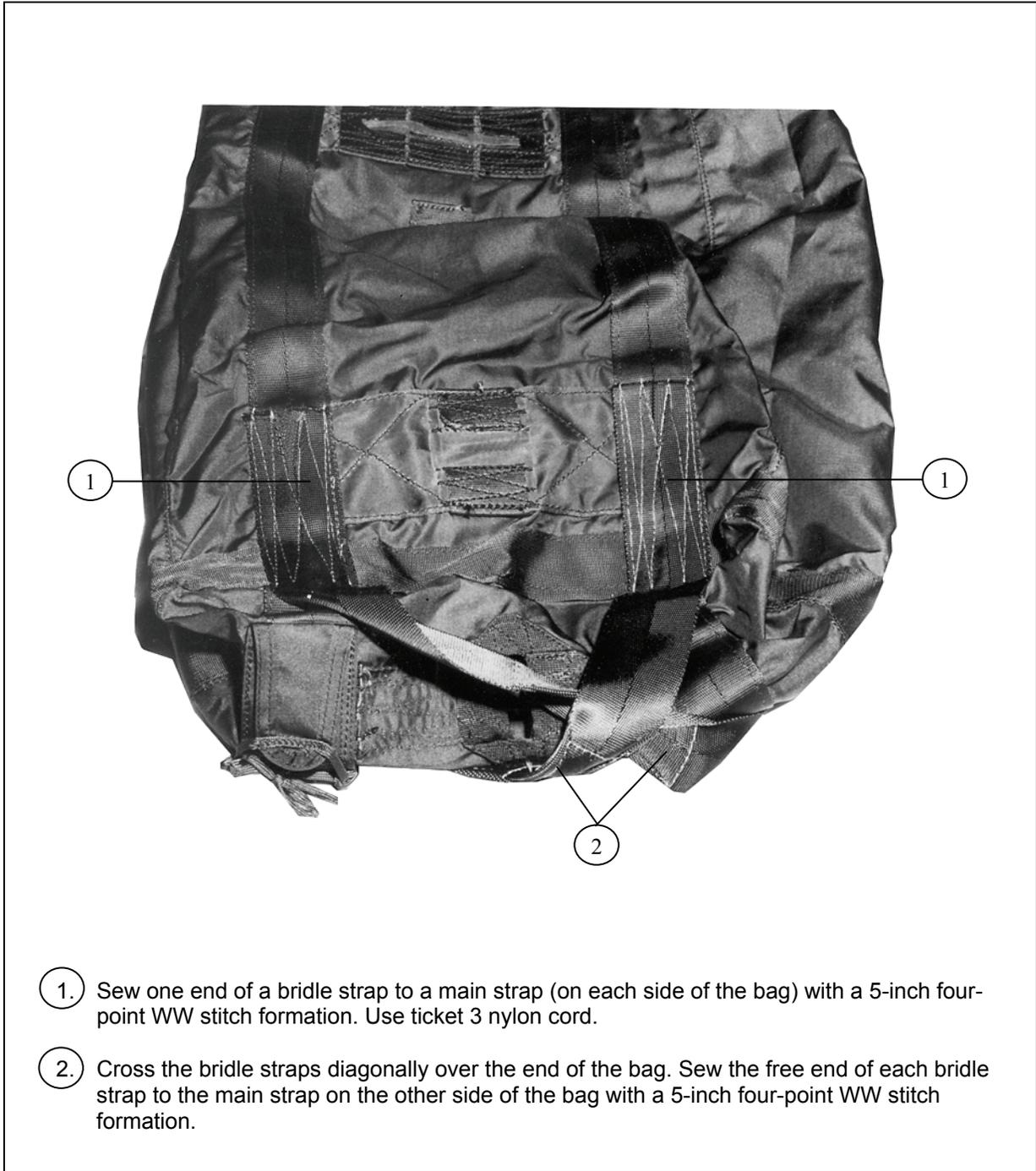
1. Cut the V-rings off the deployment bag.
2. Cut the safety cords off the bag.
3. Cut the bridle loop strap from the deployment bag.

Figure 1-10. Deployment Bag Modified



1. Cut two 24-inch lengths of treated, type VIII nylon webbing.
2. Sear the cut ends.
3. Form a 4-inch roll in the center of each strap.
4. Stitch around the roll and across the center of the roll with ticket 3 nylon cord.

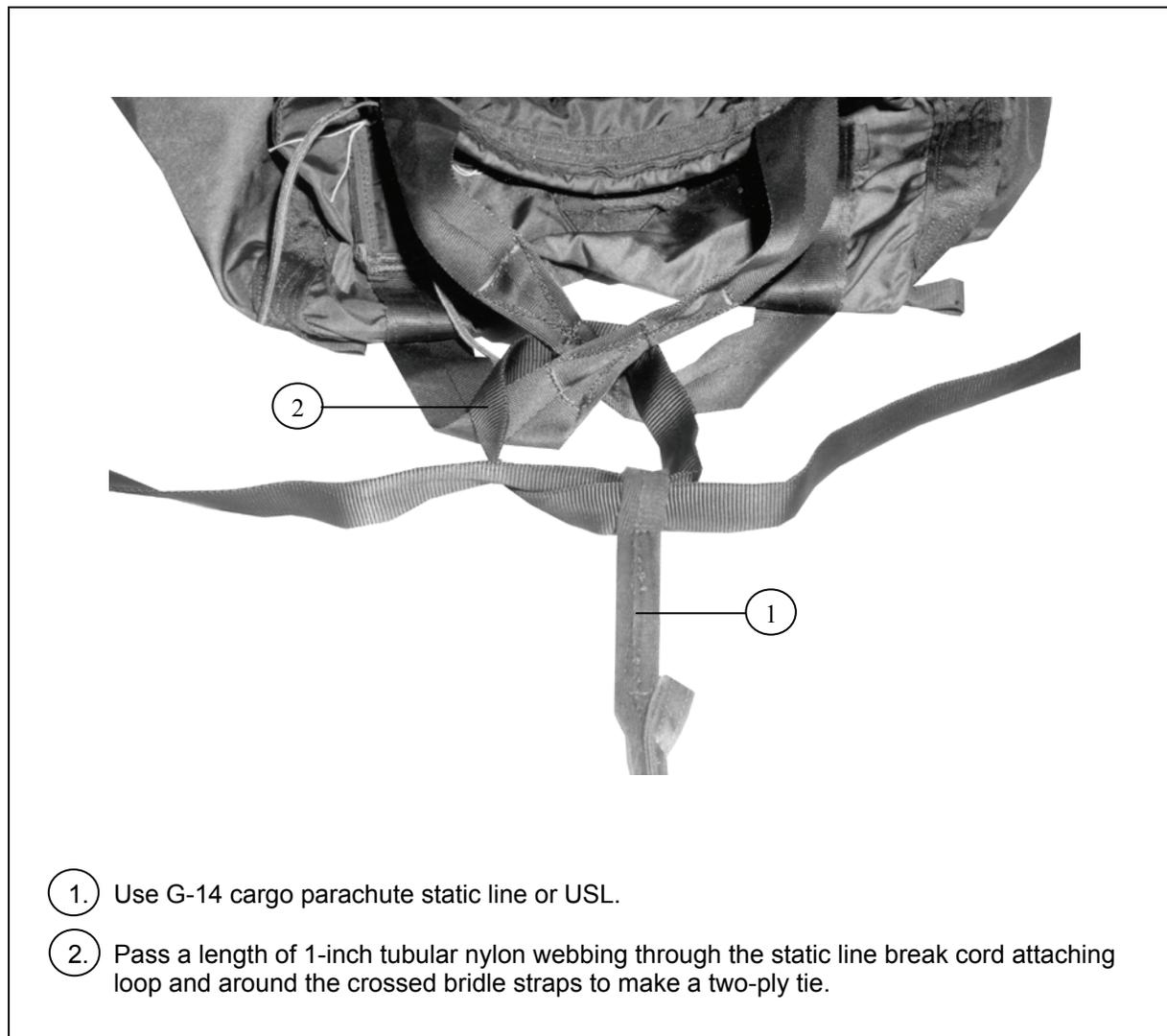
**Figure 1-11. Bridle Straps Formed**



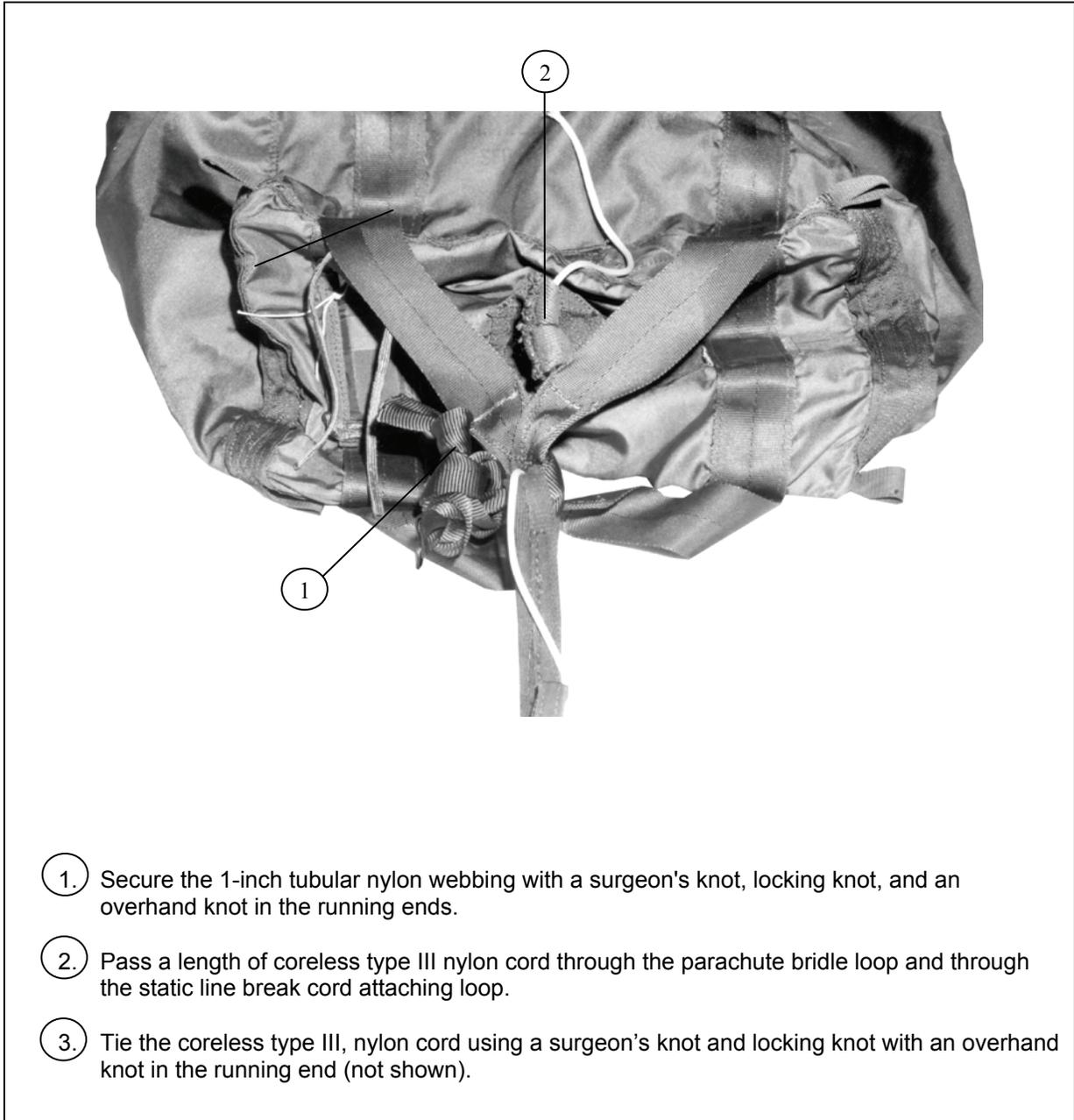
**Figure 1-12. Bridle Straps Attached to the 22-Foot Cargo Extraction Parachute Deployment Bag**

## ATTACHING STATIC LINE AND BRIDLE LOOP BREAKCORD

1-8. Using the G-14/Universal Static Line (USL) cargo parachute static line, attach the static line to the bag bridle straps with a length of 1-inch tubular nylon webbing as shown in Figure 1-13. Make the bridle loop break cord tie as shown in Figure 1-14. Stow the static line as shown in Figure 1-15.



**Figure 1-13. Static Line Positioned**



**Figure 1-14. Static Line Attached and Bridle Loop Break Cord Placed and Tied**

## STOWING SUSPENSION LINES

1-9. Use ticket number 8/7, cotton thread instead of retainer bands to stow the suspension lines. Attach the thread to the suspension line retaining straps by making a loop around the straps. Place the suspension line stow between both ends of a length of ticket number 8/7, cotton thread. Secure the ends with a surgeon's knot and a locking knot.

## PACKING PARACHUTE

1-10. Pack the 22-foot cargo extraction parachute according to the procedures in TM 10-1670-279-23&P/TO 13C5-27-2/NAVAIR 13-1-28. If using the 28-foot cargo extraction parachute, pack the parachute according to the procedures in TM 10-1670-277-23&P/TO 13C5-28-2/NAVAIR 13-1-30.

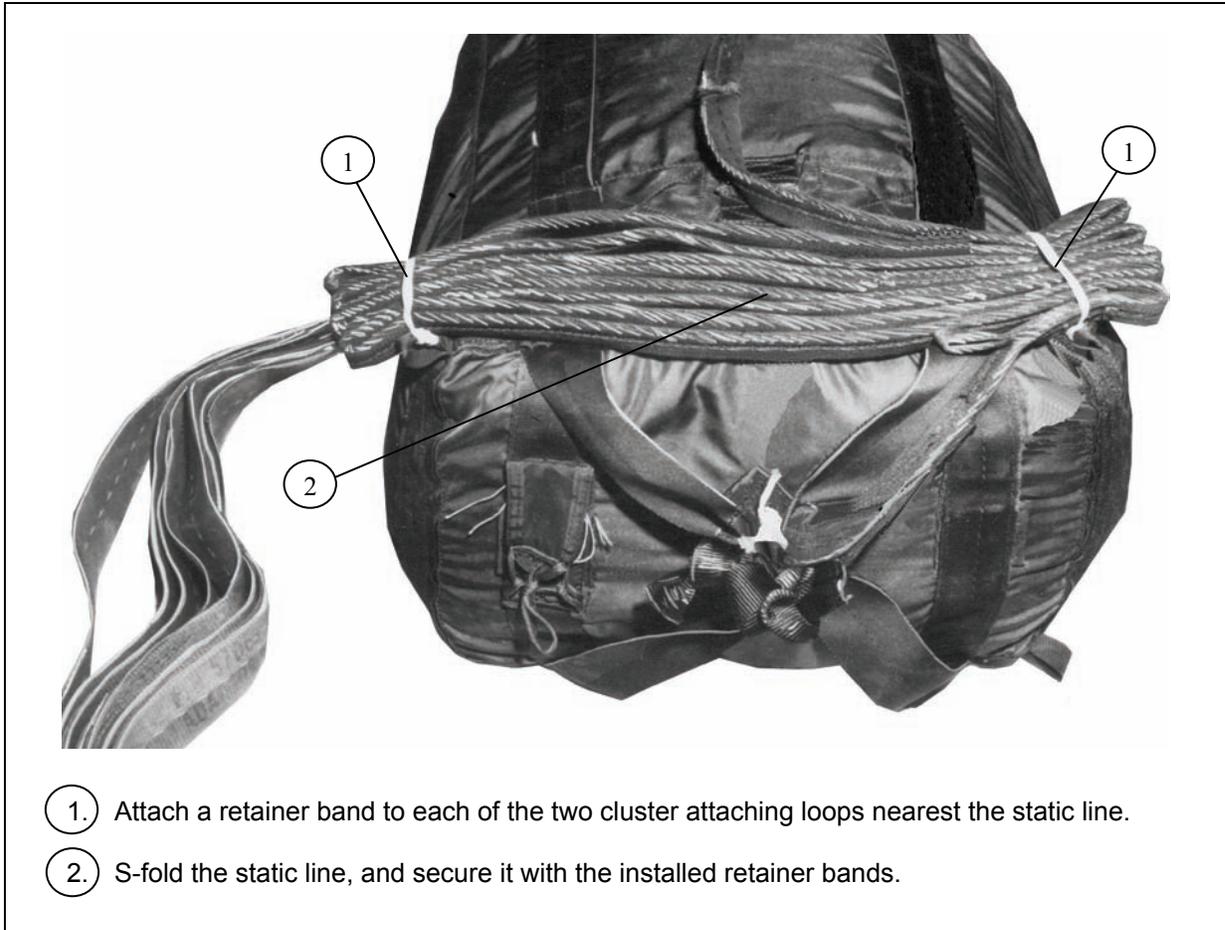
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*Note.* Make the bag-closing tie using one turn single, type I, ¼-inch cotton webbing.

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## STOWING STATIC LINE

1-11. Stow the static line as shown in Figure 1-15.



**Figure 1-15. Break Cord Tie Made and Static Line Stowed**

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## Chapter 2

# Rigging Combat Rubber Raiding Craft

### SECTION I-RIGGING SINGLE ZODIAC F470U BOAT

#### DESCRIPTION OF LOAD

2-1. The description of the load rigged in this section is given below.

- **Inflated zodiac F470U rubber raiding craft.** This boat is rigged on a 75- by 144-inch combat expendable platform (CEP) with one G-12E cargo parachute. The weight of the boat is 250 pounds. When inflated, the boat is 75 inches wide, 185 inches long and 22 inches high. One or two 35-horsepower outboard engines that weigh 136 pounds each power the boat shown or one 55 horsepower engine that weighs 215 pounds with a full fuel tank, six paddles weighing a total of 24 pounds and two sets of air pumps with hoses are parts of each boat's equipment.

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*Note.* A 40-horsepower engine is the largest that may be used on this boat when the boat is equipped with the accordion floor. An engine as large as 65-horsepower may be used on this boat without the accordion floor.

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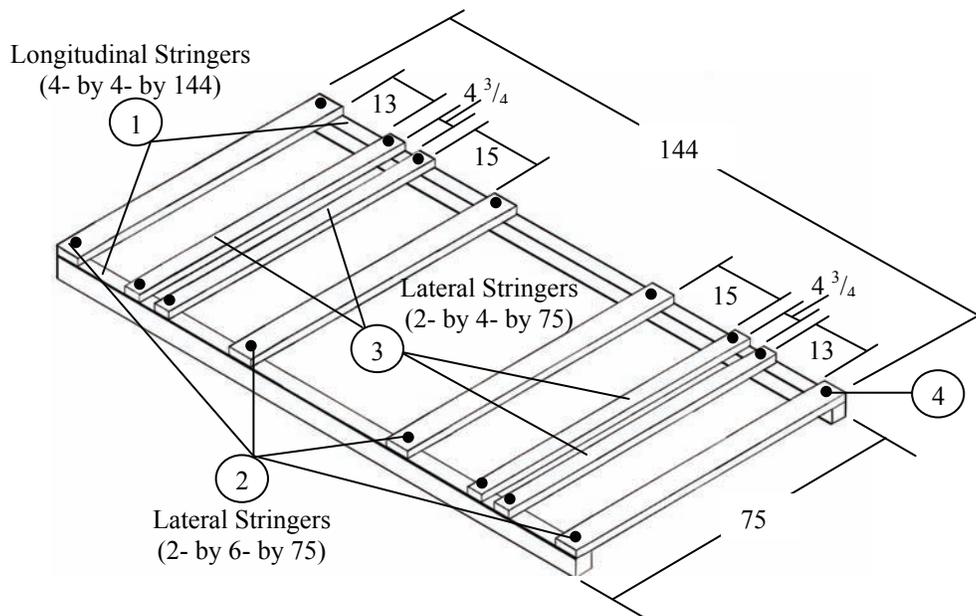
- **Accompanying load.** An accompanying load weighing at least 650 pounds but no more than 1,170 pounds must be dropped with the boat.

#### PREPARING THE PLATFORM

2-2. Build a new CEP, or recondition a used one, using the procedures shown in Figures 2-1 through 2-4 and as described below. This platform is used for all the loads in this chapter.

- **New platform.** When no used CEP is available, build a new platform for this load as shown in Figures 2-1 through 2-4. Salt-treated lumber is recommended for the platform frame.
- **Used platform.** When a used CEP is available, inspect and recondition it as described below.
- **Inspecting for damaged or missing parts.** Check the platform to see that all parts are present. Inspect each part carefully for damage. When the following conditions exist, the platform is not suitable for use until it is repaired:
  - Any part is missing.
  - A stringer or spacer block is broken, cracked, split, or severely gouged.
  - A plywood panel is cracked or gouged through at least one ply for a width of 2 inches or more.
  - A plywood panel is gouged for a length of 12 inches or more.
- **Inspecting parts, screws or nails.** Check the entire platform for loose stringers, spacer blocks, and plywood panels. Also, check for loose, missing, damaged, or protruding screws, bolts or nails. These defects may be corrected as follows:
  - Nail loose parts that are undamaged. Do not nail in original holes or in the grain line used before. Use screws when possible.
  - Replace loose, damaged, or missing nails, screws, and bolts. Reset or remove and replace protruding nails, screws, and bolts.

- Notes.** 1. All dimensions shown are in inches.  
2. Drawing is not to scale.

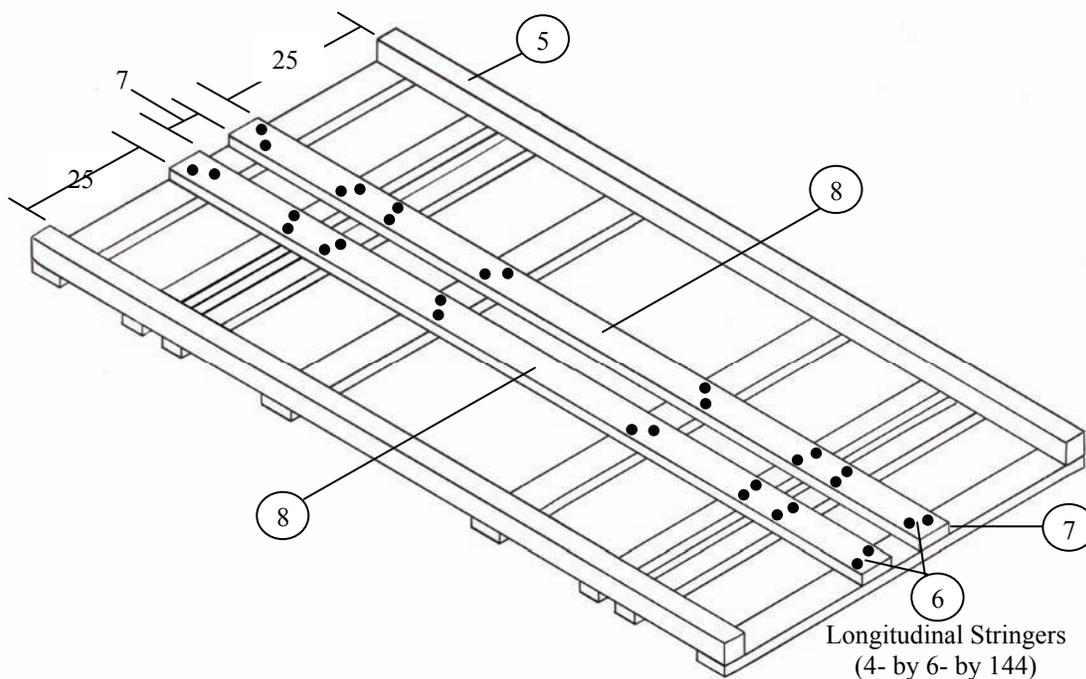


1. Mark, cut and layout two 4- by 4- by 144-inch pieces of treated lumber to be used as longitudinal stringers. Place them 75 inches apart on a level surface with the crowns of the stringers down.
2. Mark, cut and layout four 2- by 6- by 75-inch pieces of treated lumber to be used as lateral stringers across the longitudinal stringers, placing one at each end and the other two at the center as shown.
3. Mark, cut and layout the four 2- by 4- by 75-inch pieces of treated lumber to be used as lateral stringer across the longitudinal stringers, placing the two stringers next to each 2- by 6- by 75-inch end stringer as shown.
4. Using the measurements shown, measure and mark reference lines and position the eight lateral stringers in place. Apply waterproof construction adhesive to each lap joint. Square the platform frame and tack the lateral stringers to the longitudinal stringers using 16d nails. Place each nail 3 inches inboard of each lateral stringer.

**Note.** CEPs built before June 2006 that were used with the Type IV connector link will be used until exhausted.

**Figure 2-1. Platform Frame Built**

- Notes.** 1. All dimensions shown are in inches.  
2. Drawing is not to scale.

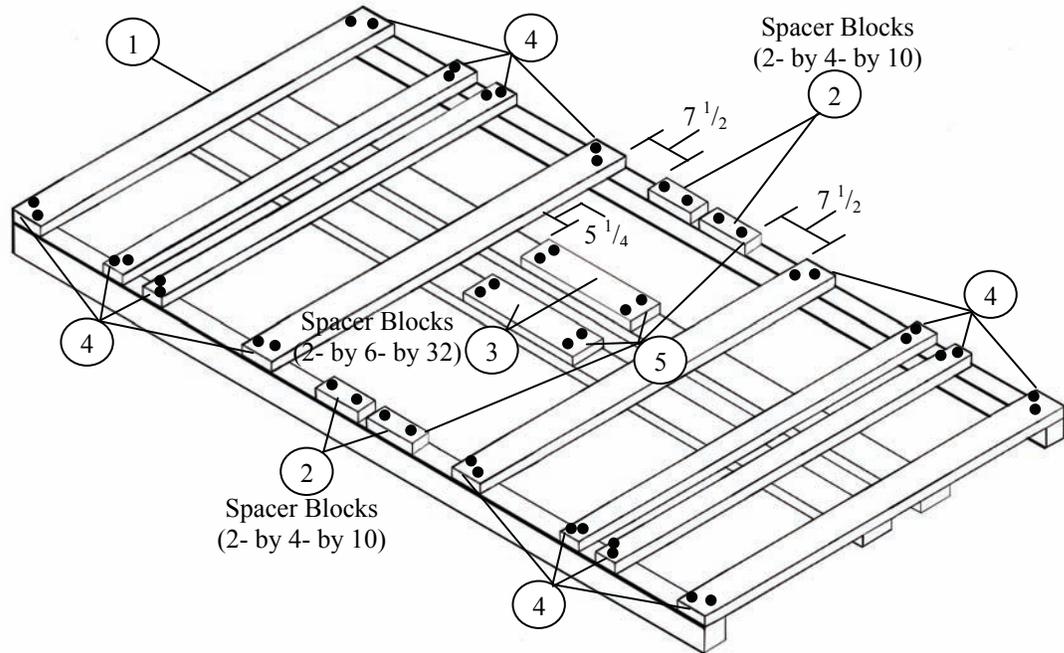


5. Turn the frame over and square the frame.
6. Mark, cut and place two 2- by 6- by 144-inch pieces of treated lumber to be used as longitudinal stringers on the frame. Assemble and position the inboard side of each stringer  $3\frac{1}{2}$  inches from the center of the frame's width as shown. This will create a 7 inch space between the two inboard longitudinal stringers.
7. Ensure the platform is still square and mark reference lines for the inboard longitudinal stringer placement across each lateral stringer. Apply waterproof construction adhesive to each lap joint and tack the longitudinal stringers to the outboard lateral stringers using one 8d nail placed 2 inches inboard from each end.
8. Drill two diagonally spaced  $\frac{3}{16}$ -inch diameter pilot holes,  $2\frac{1}{2}$  inches deep at each lateral stringer intersection of the two inboard longitudinal stringers. Install a  $2\frac{1}{2}$ -inch screw into each pilot hole.

**Note.** Ensure the screw heads are tightened flush with the surface of the longitudinal stringers.

**Figure 2-1. Platform Frame Built (Continued)**

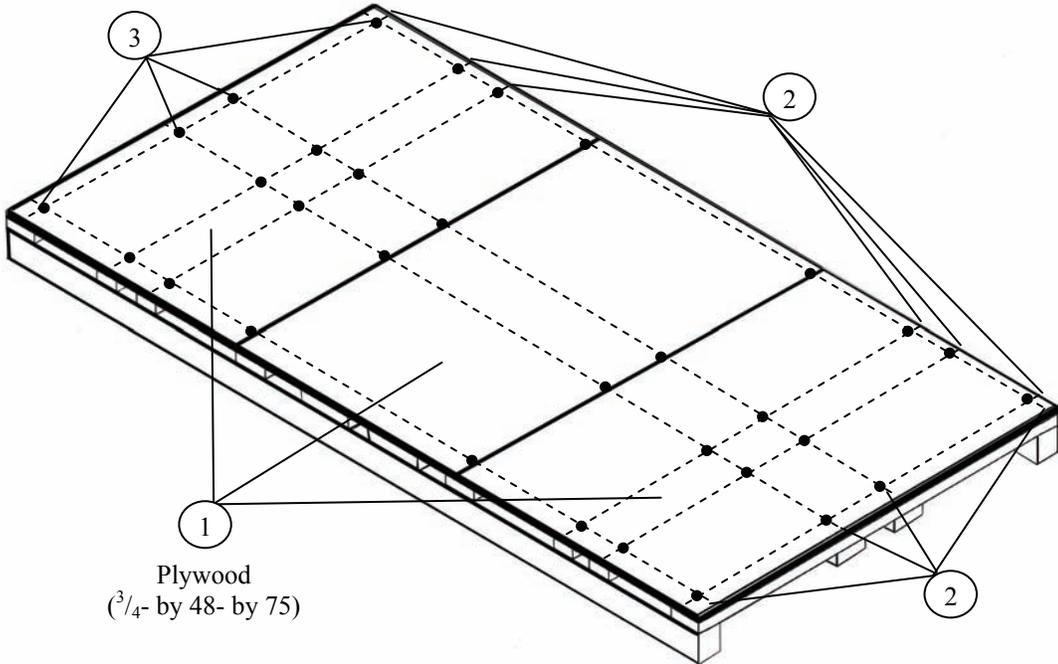
- Notes.** 1. All dimensions shown are in inches.  
2. Drawing is not to scale.



1. Turn the platform over so the lateral stringers are facing up and ensure the frame is square.
  2. Apply waterproof construction adhesive to one side of each spacer block. Adhere the four 2- by 4- by- 10-inch spacer blocks to the outboard longitudinal stringers as shown, maintaining 7 1/2 inches between the lateral stringers and stringer blocks.
  3. Center and adhere the two 2- by 6- by 32-inch spacer blocks on the inboard longitudinal stringers.
  4. Drill two diagonally spaced  $\frac{3}{16}$ -inch diameter pilot holes, 4 inches deep, 1 1/2-inches from the ends of the lateral stringer. Install a 4-inch screw into each pilot hole. Ensure the screw heads are tightened flush with the surface.
- Note.** Do not position the pilot holes on the extreme corners of the frame where the corners will be cut-off later.
5. Drill a  $\frac{3}{16}$ -inch diameter pilot hole, 2 1/2 inches deep, and 1 1/2 inches from the end of each spacer block. Drill one hole in each end of the four outboard spacer blocks and two holes at each end of both inboard spacer blocks. Install a 2 1/2-inch screw into each pilot hole. Ensure the screw heads are tightened flush with the surface.

**Figure 2-2. Spacer Blocks Attached to Frame**

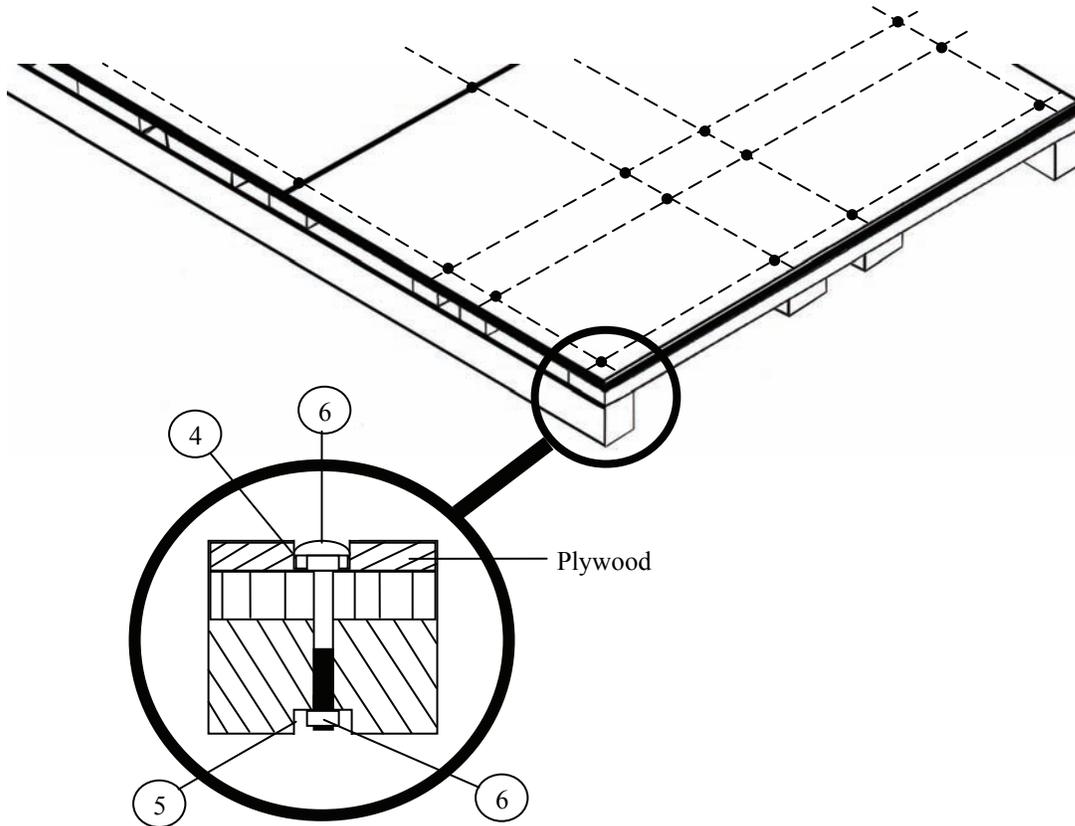
**Notes.** 1. All dimensions shown are in inches.  
2. Drawing is not to scale.



- 1. Apply waterproof construction adhesive to each lateral stringer and spacer block. Mark, cut and layout three  $\frac{3}{4}$ - by 48- by 75-inch sheets of plywood across the platform frame, positioning the plywood flush with the frame's edges. Nail each plywood sheet to the platform frame using one 8d nail placed 2 inches in from the corner of each plywood sheet.
- 2. Using a chalk line, locate and mark the centerline of each lateral stringer across the plywood as shown. Repeat for the four longitudinal stringers.
- 3. At the reference line intersection, drill a  $\frac{3}{8}$ -inch diameter hole through the plywood and framing.

**Figure 2-3. Plywood Attached to Frame**

- Notes.** 1. All dimensions shown are in inches.  
2. Drawing is not to scale.



4. Using a  $\frac{7}{8}$ -inch countersink bit, countersink a  $\frac{1}{4}$ -inch hole in each  $\frac{3}{8}$ -inch diameter hole prepared in Step 3.
5. Turn the platform over. Using a 1-inch diameter countersink bit, countersink a  $\frac{3}{4}$ -inch hole in each outboard  $\frac{3}{8}$ -inch diameter hole prepared in step 4. Additionally, countersink a  $\frac{3}{4}$ -inch hole in each inboard  $\frac{3}{8}$ -inch diameter hole prepared in step 4.

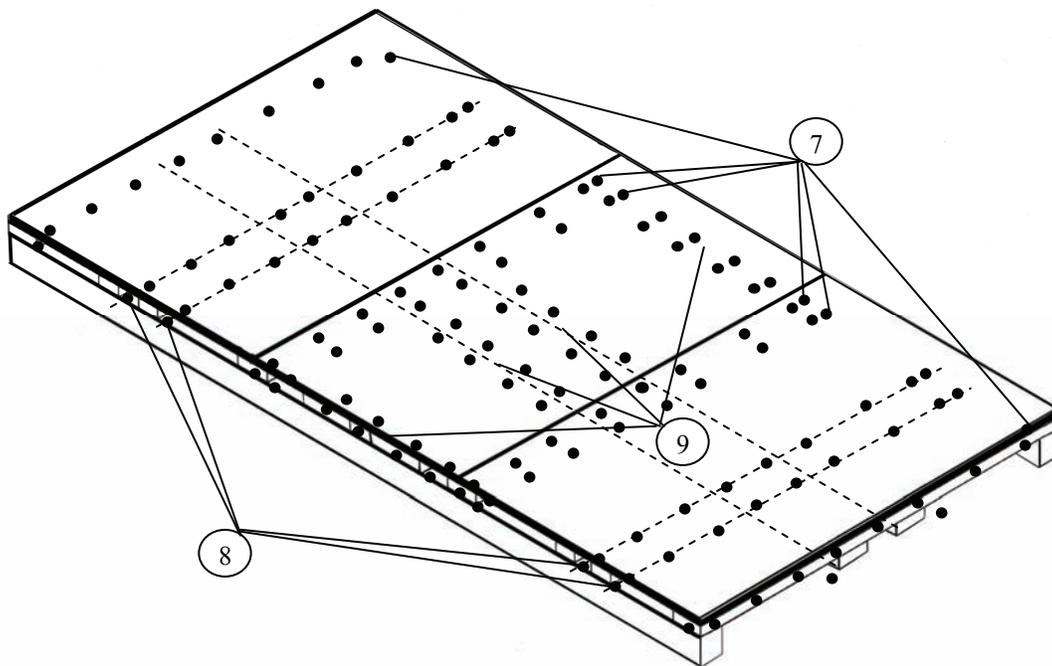
**Note.** Do not countersink holes too deep or the platform will be structurally weakened.

6. From the plywood side, insert 6-inch carriage bolts into each outboard longitudinal stringer hole and 4-inch carriage bolts into each inboard longitudinal stringer hole. Tap the bolt heads into place. Install a washer and nut to the outboard bolts only and tighten until the top of the bolt head is flush with the plywood surface.

**Note.** The washers and nuts will be installed onto the inboard carriage bolts when the platform is turned over.

**Figure 2-3. Plywood Attached to Frame (Continued)**

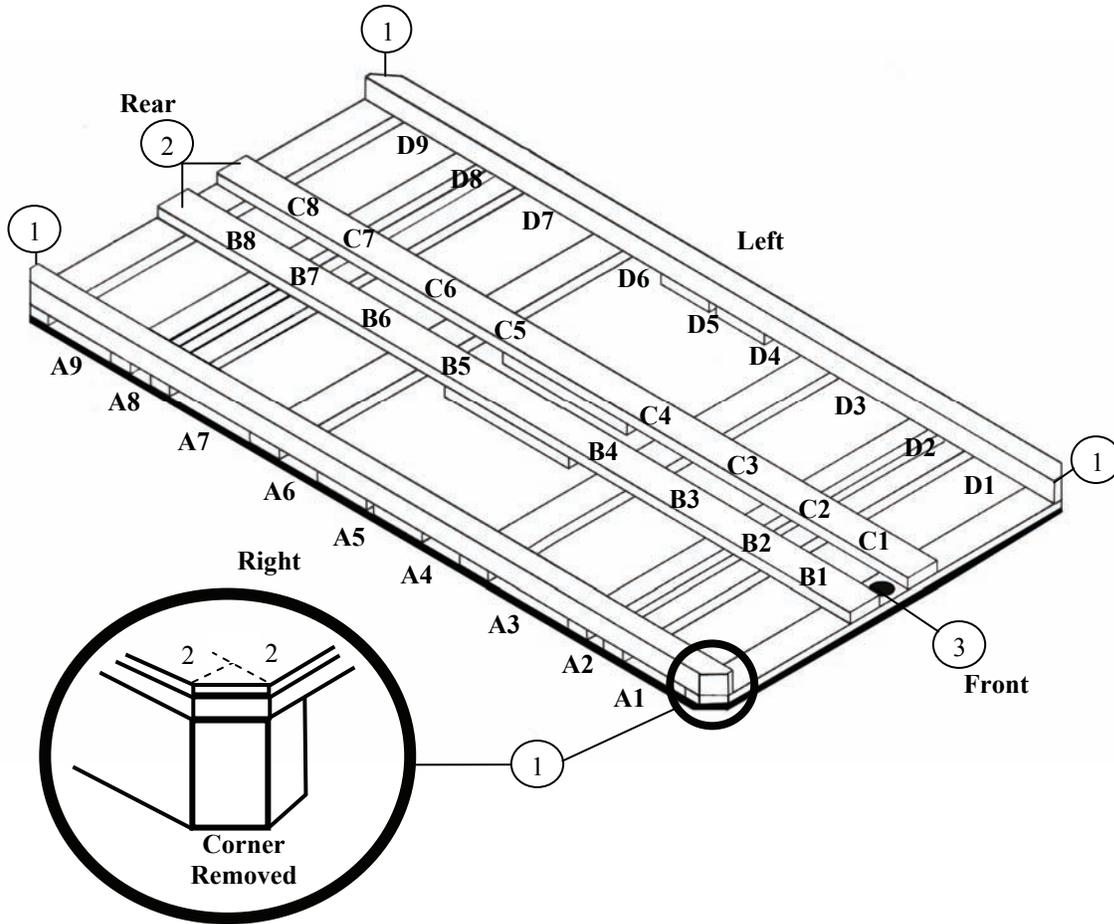
- Notes.** 1. All dimensions shown are in inches.  
2. Drawing is not to scale.



7. Starting 4½ inches inboard from the sides and 1 inch in from each end of the platform, drill a 2-inch deep pilot hole using a  $\frac{3}{16}$ -inch bit at 6-inch intervals. Repeat for the plywood edges that are flush together across the lateral stringers. Install a 2-inch screw into each pilot hole and tighten flush with the surface.
8. Using the inboard lateral stringer chalk lines previously prepared as a guide, drill  $\frac{3}{16}$ -inch diameter pilot holes across the platform at each lateral stringer. Start 4 1/2-inches inboard from the platform side at 6-inch intervals. Install a 2-inch screw into each pilot hole and tighten flush with the surface.
9. Drill additional pilot holes 1 inch inboard from the ends of each inboard lateral stringer, 1 inch inboard from each platform edge and at 6 inch intervals into the spacer blocks. Install a 2-inch screw into each pilot hole and tighten flush with the surface.

**Figure 2-3. Plywood Attached to Frame (Continued)**

- Notes.** 1. All dimensions shown are in inches.  
2. Drawing is not to scale.



1. Mark a 2-inch square on each corner of the platform. Draw a diagonal line across each square as a reference line and saw off each corner with a circular saw to start the cut, and a handsaw to finish through the cut thickness.
2. Turn the platform right side up, install washers and nuts to the inboard carriage bolts, and tighten until the top of the bolt head is flush with the plywood surface.
3. Drill a 2-inch hole, 3 inches and centered through the front lateral stringer and plywood as shown.

**Note.** Inspect the platform. Make sure there are no protruding screws, nails or bolts on the bottom of the platform.

4. Label the tiedown spaces on each longitudinal stringer as shown above.

**Figure 2-4. Corners Cut Off, Bolts Installed and Tiedown Spaces Numbered**

## INSTALLING SUSPENSION SLINGS

2-3. Install four 16-foot (2-loop), type XXVI nylon webbing slings as suspension slings on the platform. Use two 3/4-inch two-point link assemblies or two type IV link assemblies with covers to finish installing the suspension slings. Installation is shown in Figure 2-5.

*Note.* The two-point link cannot be installed on platforms manufactured before June 2006.

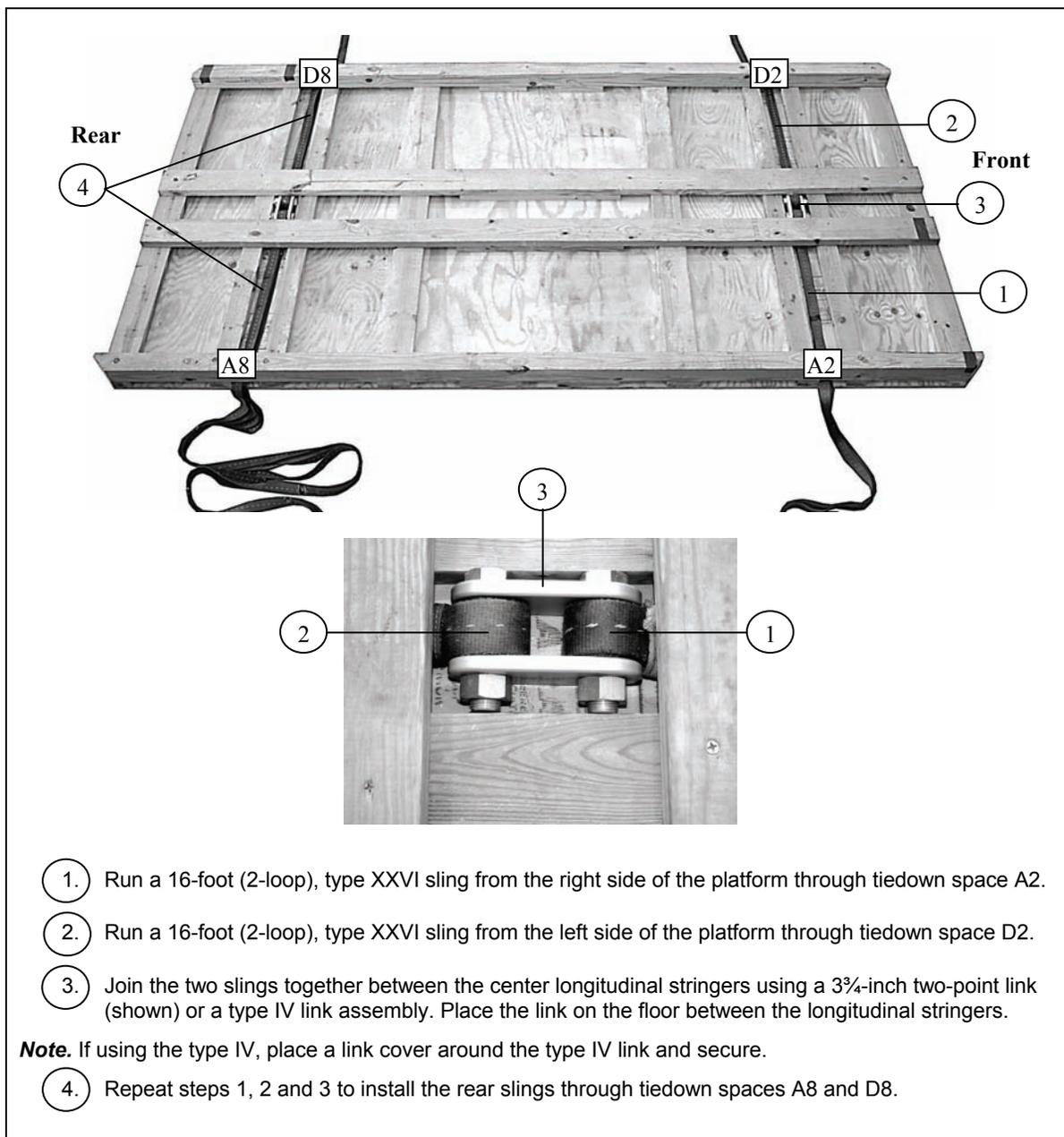
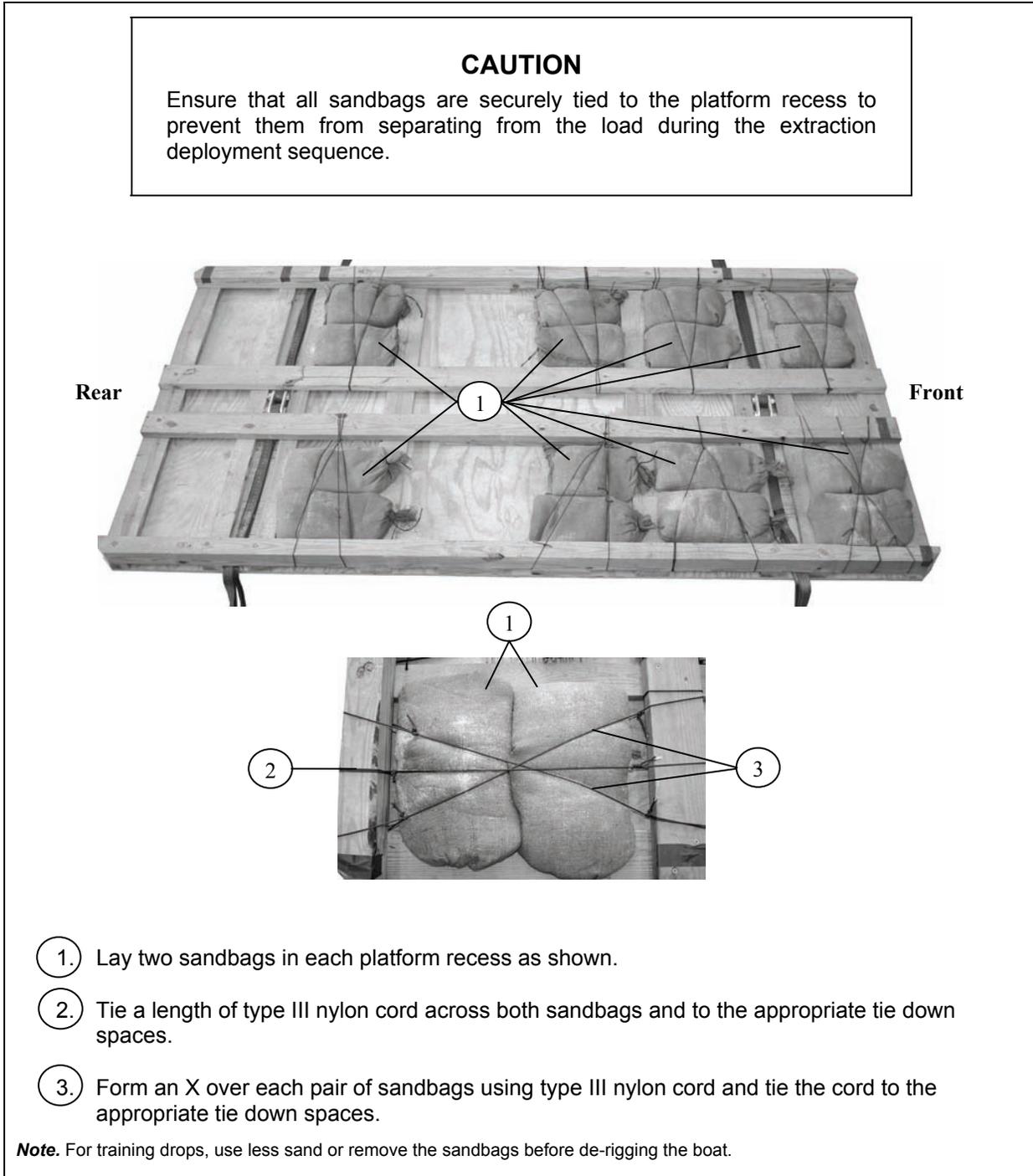


Figure 2-5. Suspension Slings Installed on Platform

## STOWING SANDBAGS

2-4. Fill 16 sandbags with 35 pounds of sand or gravel in each bag. Stow the sandbags in the platform recesses as shown in Figure 2-6.



**Figure 2-6. Sandbags Stowed on Platform**

## ATTACHING LASHINGS TO THE PLATFORM

2-5. Using ten 18-foot and two 26-foot lengths of 1/2-inch tubular nylon webbing, attach the lashings to the CEP as shown in Figure 2-7.

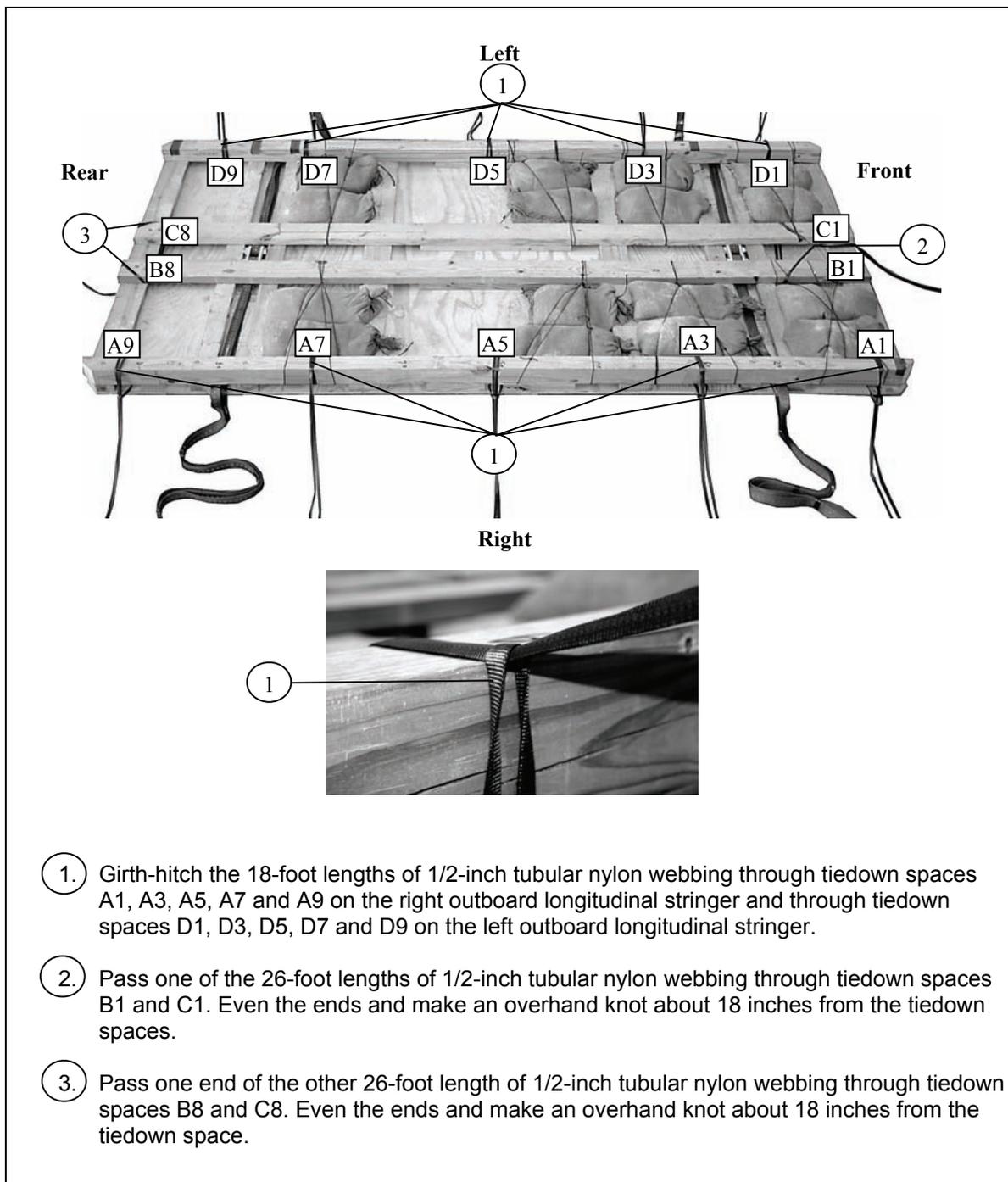
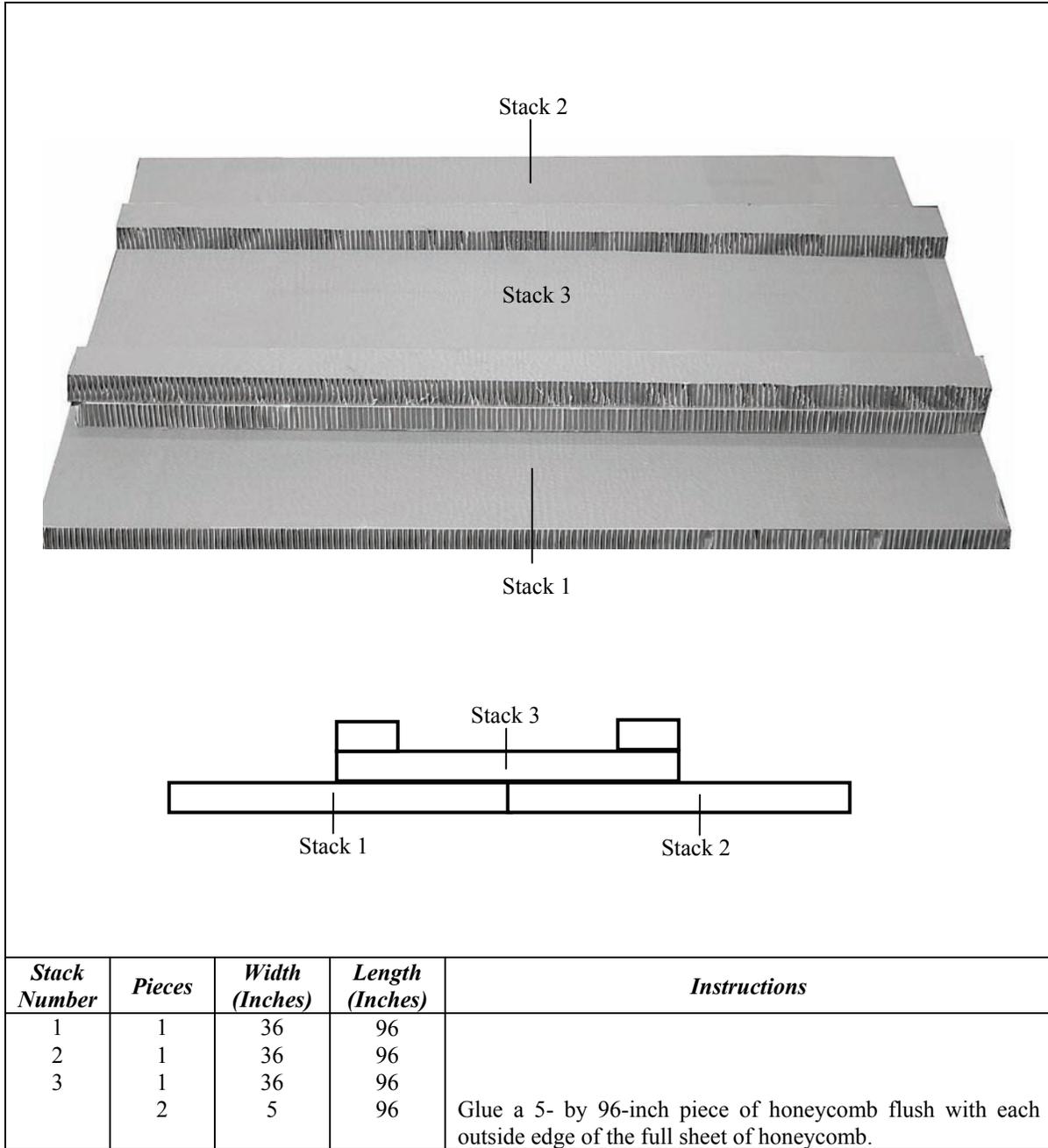


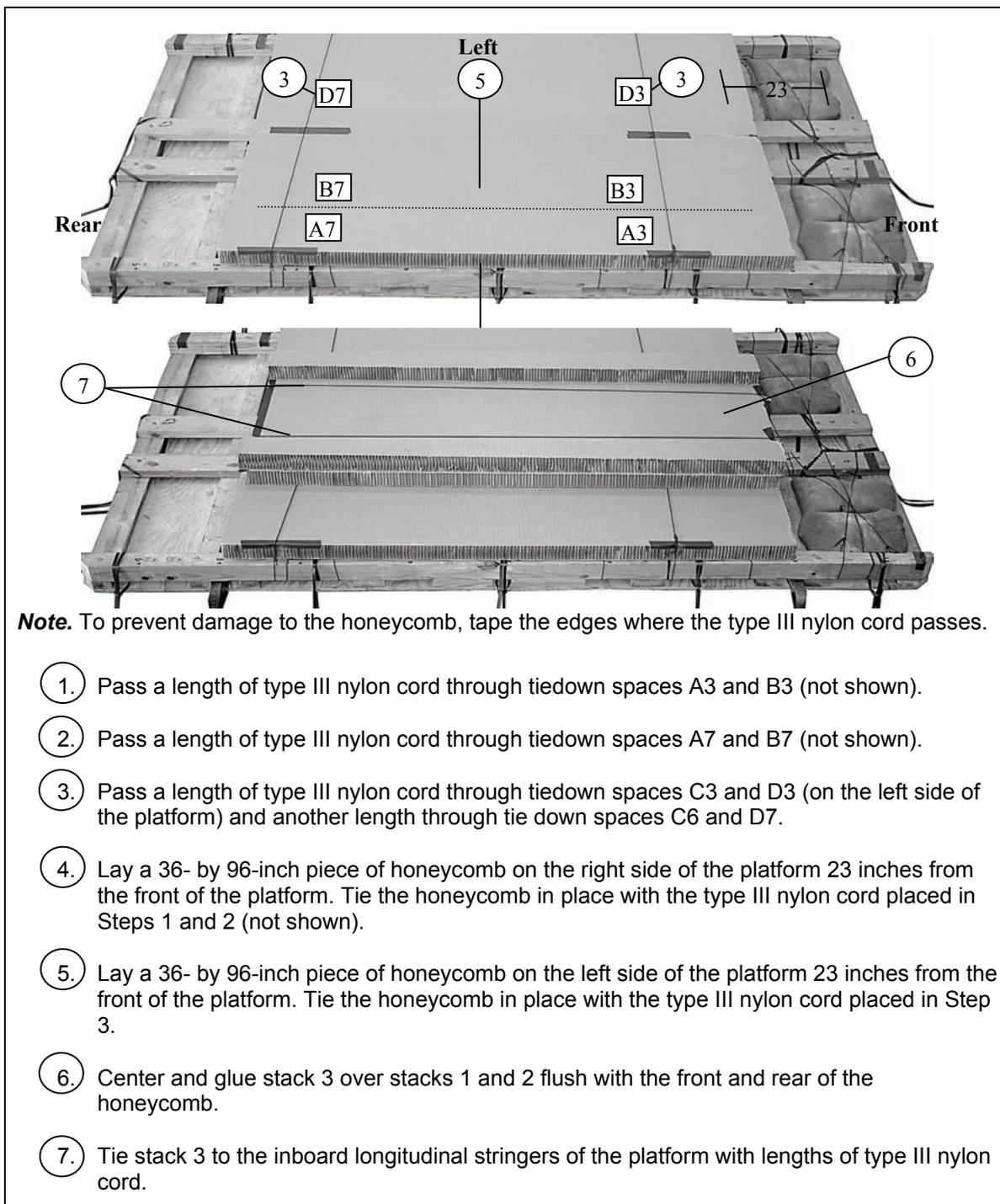
Figure 2-7. Boat Lashings Attached

## BUILDING, PLACING AND SECURING HONEYCOMB STACKS

2-6. Build the honeycomb stacks as shown in Figure 2-8. Place and secure the honeycomb stacks as shown in Figure 2-9.



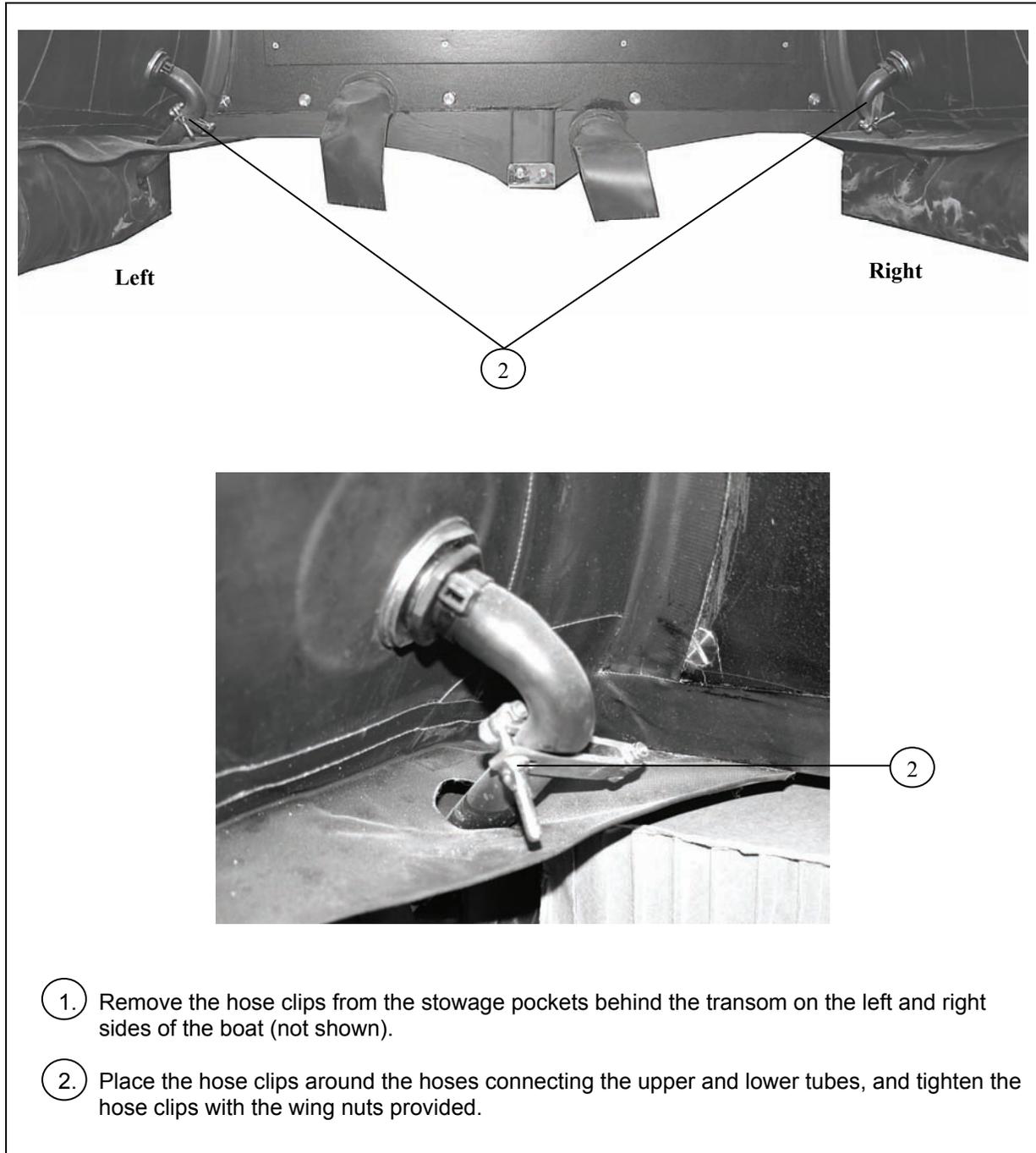
**Figure 2-8. Honeycomb Stacks Built**



**Figure 2-9. Honeycomb Placed and Secured**

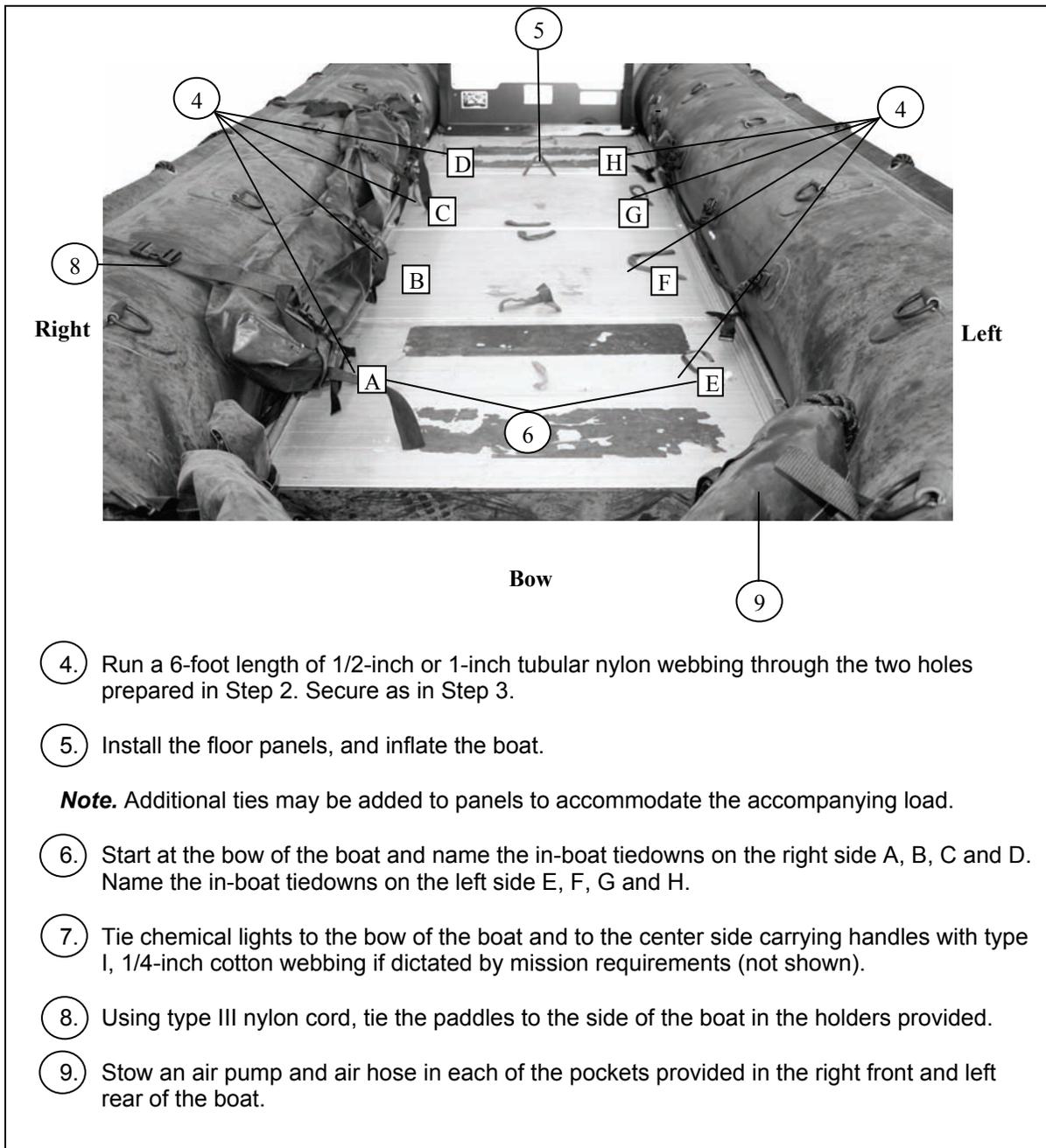
## PREPARING BOAT

2-7. Inflate the boat except the keel. If the keel is inflated, let the air out. Install the hose clips as shown in Figure 2-10. Prepare boats with a hard deck (aluminum floorboards) as shown in Figure 2-11. Prepare boats with a roll-up floor as shown in Figure 2-12. Prepare and position honeycomb in both boats as shown in Figure 2-13.



**Figure 2-10. Hose Clips Installed**

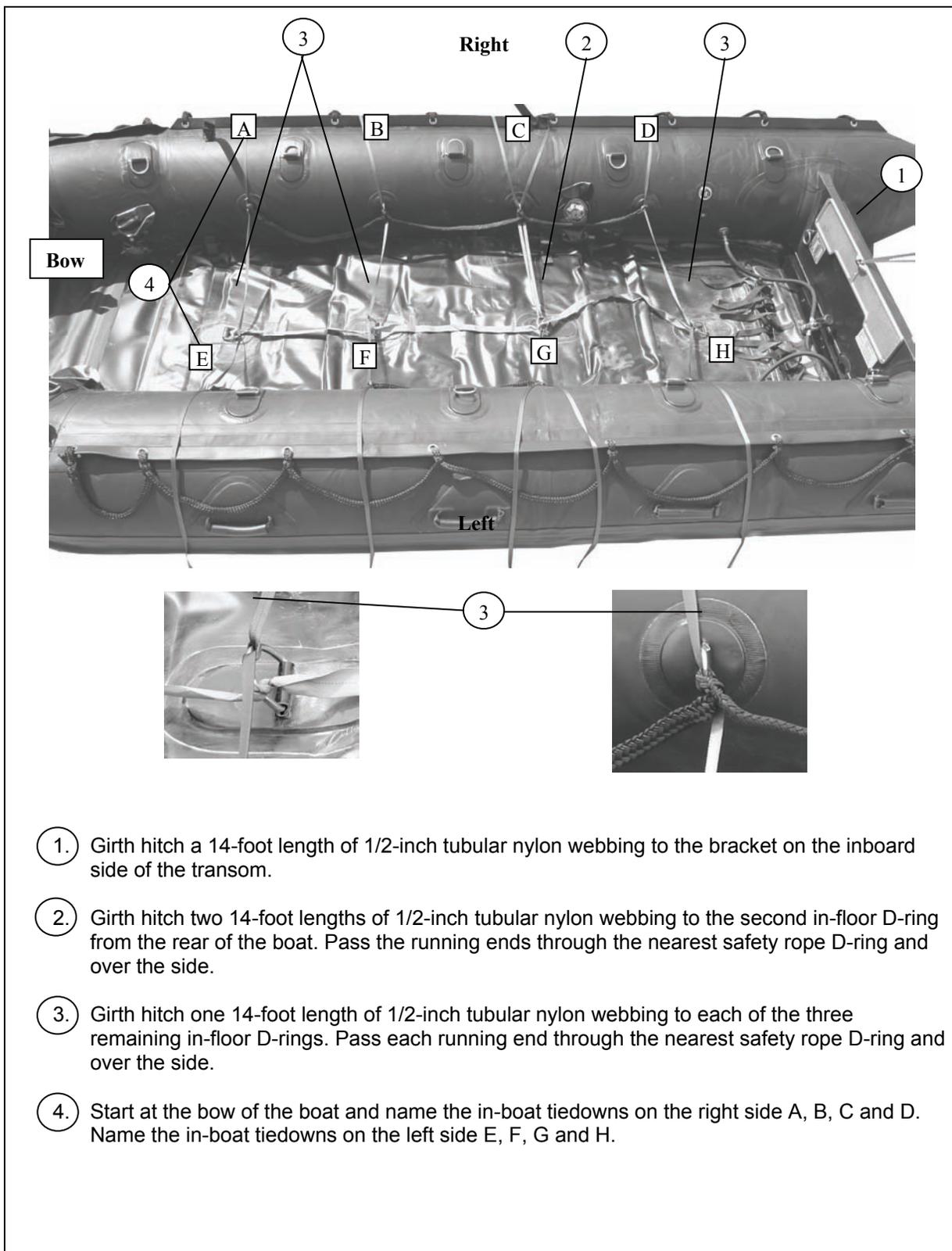




4. Run a 6-foot length of 1/2-inch or 1-inch tubular nylon webbing through the two holes prepared in Step 2. Secure as in Step 3.
5. Install the floor panels, and inflate the boat.
 

**Note.** Additional ties may be added to panels to accommodate the accompanying load.
6. Start at the bow of the boat and name the in-boat tiedowns on the right side A, B, C and D. Name the in-boat tiedowns on the left side E, F, G and H.
7. Tie chemical lights to the bow of the boat and to the center side carrying handles with type I, 1/4-inch cotton webbing if dictated by mission requirements (not shown).
8. Using type III nylon cord, tie the paddles to the side of the boat in the holders provided.
9. Stow an air pump and air hose in each of the pockets provided in the right front and left rear of the boat.

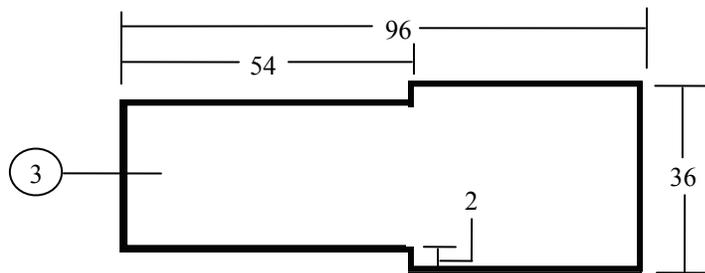
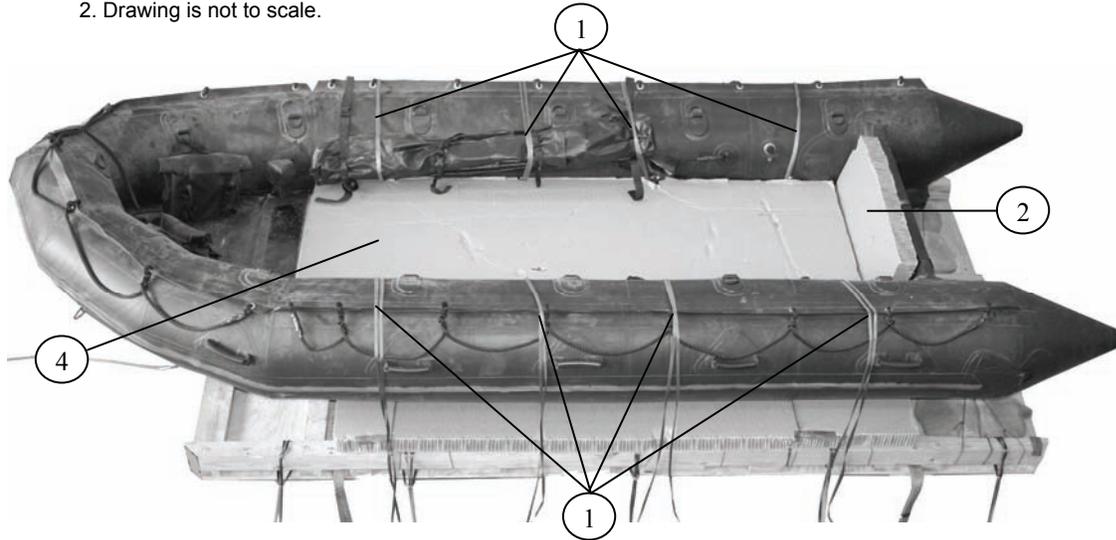
**Figure 2-11. Boat Prepared with Hard Deck (Aluminum Floorboards) (Continued)**



1. Girth hitch a 14-foot length of 1/2-inch tubular nylon webbing to the bracket on the inboard side of the transom.
2. Girth hitch two 14-foot lengths of 1/2-inch tubular nylon webbing to the second in-floor D-ring from the rear of the boat. Pass the running ends through the nearest safety rope D-ring and over the side.
3. Girth hitch one 14-foot length of 1/2-inch tubular nylon webbing to each of the three remaining in-floor D-rings. Pass each running end through the nearest safety rope D-ring and over the side.
4. Start at the bow of the boat and name the in-boat tiedowns on the right side A, B, C and D. Name the in-boat tiedowns on the left side E, F, G and H.

Figure 2-12. Boat Prepared with Roll-up Floor

**Notes.** 1. All dimensions given are in inches.  
2. Drawing is not to scale.



**Note.** The procedures in Step 1 are only used on boats with hard deck (aluminum floorboards).

1. Pass a 13-foot length of 1/2-inch tubular nylon webbing through each in-boat tiedown positioned in Steps 4 and 5 of Figure 2-11. Even the ends, and tie in place with a girth hitch. Lay the lengths outside the boat.

**Note.** Boats with or without hard deck (aluminum floorboards) will be prepared as shown in Steps 2, 3 and 4.

2. Set a 13- by 36-inch piece of honeycomb against the transom.
3. Make 2- by 54-inch cutout on each side, starting from the same end, of a 36- by 96-inch piece of honeycomb.
4. Place the honeycomb on the floor of the boat with the cutouts against the paddles.

**Figure 2-13. Honeycomb Prepared and Positioned**