TM 4-48.01
MCRP 4-11.3N
TO 13C7-2-1001

Airdrop of Supplies and Equipment: Rigging Potable Water and Water Purification Units

MARCH 2016

This publication supersedes FM 10-522/TO 13C7-2-1001 dated 3 June 1985; FM 4-20.158/TO 13C7-7-61, dated 11 May 2005.

*TM 4-48.01/MCRP 4-11.3N/TO 13C7-2-1001

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Headquarters
Department of the Army
Washington, DC

United States Marine Corps
Combat Development Command
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Headquarters
Department of the Air Force
Washington, DC

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Airdrop of Supplies and Equipment: Rigging Potable Water and Water Purification Units

Contents

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Preface

TM 4-48.01/MCRP 4-11.3N/TO 13C7-2-1001 provides doctrinal guidance and direction for United States Army, United States Marine Corps, and United States Air Force units conducting aerial delivery operations. This manual provides information on how to rig configurations of the following: 55-gallon and 250-gallon collapsible water drums, 600-gallons per hour Reverse Osmosis Water Purification Unit (ROWPU), and the Lightweight Water Purifier (LWP). These loads are rigged for low-velocity airdrop from a C-130 or C-17 aircraft.

The principal audience for TM 4-48.01/MCRP 4-11.3N/TO 13C7-2-1001 is all members of the profession of arms. Commanders and staffs of Army, Marine Corps, and Air Force headquarters serving as joint task force or multinational headquarters should also refer to applicable joint or multinational doctrine concerning the range of military operations and joint or multinational forces. Trainers and educators throughout the Army, Marine Corps, and Air Force will also use this publication.

Commanders, staffs, and subordinates ensure that their decisions and actions comply with applicable United States, international, and in some cases host-nation laws and regulations. Commanders at all levels ensure that their Soldiers, Marines, and Airmen operate in accordance with the law of war and the rules of engagement. (See FM 27-10).

TM 4-48.01/MCRP 4-11.3N/TO 13C7-2-1001 does not implement any STANAGs.

TM 4-48.01/MCRP 4-11.3N/TO 13C7-2-1001 uses joint terms where applicable. Selected joint and Army terms and definitions appear in both the glossary and the text. Terms for which TM 4-48.01/MCRP 4-11.3N/TO 13C7-2-1001 is the proponent publication (the authority) are italicized in the text and marked with an asterisk (*) in the glossary. Terms and definitions for which TM 4-48.01/MCRP 4-11.3N/TO 13C7-2-1001 is the proponent publication are boldfaced in the text. For other definitions shown in the text, the term is italicized and the number of the proponent publication follows the definition.

TM 4-48.01/MCRP 4-11.3N/TO 13C7-2-1001 applies to the Active Army, Army National Guard/Army National Guard of the United States, United States Army Reserve, the total force Marine Corps, and United States Airforce units unless otherwise stated.

The proponent of TM 4-48.01/MCRP 4-11.3N/TO 13C7-2-1001 is the United States Army Quartermaster School. The preparing agency is the G-3 Doctrine Division, USACASCOM. Send comments and recommendations on DA Form 2028 (Recommended Changes to Publications and Blank Forms) to Commander, United States Army Combined Arms Support Command and Fort Lee, ATTN: ATCL-TS, 2221 A Avenue, Fort Lee, Virginia 23801 or submit an electronic DA Form 2028 by e-mail to: usarmy.lee.tradoc.mbx.leee-cascom-doctrine@mail.mil. In addition to submission of DA Form 2028, provide same comments and recommendations in MilWiki for rapid dissemination to doctrine authors and for universal review at https://www.milsuite.mil.

Marine Corps readers of this publication are encouraged to submit suggestions and changes through the Universal Need Statement (UNS) process. The UNS submission process is delineated in Marine Corps Order 3900.15A, *Marine Corps Expeditionary Force Development System*, which can be obtained from the Marine Corps Publication Electronic Library Online (universal reference locator: http://www.usmc.mil/directiv.nsf/web+orders).

Marine Corps Combat Development Command will consolidate changes and forward to:

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Aerial Delivery and Field Services Department

U.S. Army Quartermaster School

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Air Force personnel will route reports on Air Force technical order (AFTO) Form 22, *Technical Manual (TM) Change Recommendation and Reply* through your respective command Weapons and Tactics to:

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Introduction

Publication of TM 4-48.01/MCRP 4-11.3N/TO 13C7-2-1001, supersedes FM 10-522/TO 13C7-2-1001, Airdrop of Supplies and Equipment Rigging Potable Water, 3 June 1985; FM 4-20.158/TO 13C7-7-61, Airdrop of Supplies and Equipment Rigging Water Purification Units, 11 May 2005. This special revision to the technical manual (TM) publishing medium/nomenclature has been accomplished to comply with the U.S. Army Training and Doctrine Command doctrine restructuring requirements. The title and content of TM 4-48.01/MCRP 4-11.3N/TO 13C7-2-1001 is identical to that of the superseded FM 10-522/TO 13C7-2-1001 and FM 4-20.158/TO 13C7-7-61. The grouping of the manuals has produced excess multi-service publication numbers. A single multi-service publication number will be retained on the new manual and the following remainder multi-service publication numbers will not be required/used: (TO 13C7-7-61).

This revision does not integrate any changes in Army doctrine since 27 October 1997 and does alter the publication's original references. 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.

DESCRIPTION OF ITEMS

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

Plastic canteens: twenty-four 1-quart plastic canteens filled with 6 gallons of water weight 54 pounds.

Zip-top water cans: one case of zip-top water cans weighs 39 pounds.

10-ounce water can: one case of 10-ounce water cans weighs 44.25 pounds.

Milk-dispensing container: milk-dispensing container filled with 5 gallons of water weighs 42 pounds. It is 10 inches square and 17 inches high. Forty containers can be delivered in one A-22 cargo bag, eight containers can be delivered in one A-21 cargo bag, and 160 containers can be delivered in four A-22 cargo bags

55-gallon collapsible water drum: The water drum is a durable, non-vented, cylindrically shaped, rubber container fitted with a faucet valve. Filled with 50-gallons of potable water, each drum weighs 465 pounds.

250-gallon collapsible water drum: The water drum is a durable, non-vented, cylindrically shaped, rubber container fitted with a faucet valve. Filled with 240 gallons of potable water, each drum weighs 2,197 pounds.

500-gallon drum: The 500-gallon drum filled with 432 gallons of water weighs 3,835 pounds. It is 62 inches long and 53 inches in diameter. Empty, the drum weighs 250 pounds. A pumping assembly can be rigged with the load as an accompanying load.

600-gallons per hour (GPH) reverse osmosis water purification unit (ROWPU): The ROWPU consists of a water purification unit and a 30-kilowatt (KW) generator mounted on a 5-ton, four wheel cargo trailer. The ROWPU with supporting equipment weighs 21,780 pounds rigged. It is 230 inches long and 96 inches wide. Its height is 97 inches (reducible to 91 inches.)

Lightweight Water Purifier (LWP): The lightweight water purifier consists of a loading truck, ultra-filtration module, control module, high-pressure pump module, chemical injection cleaning module, reverse osmosis element module, pump module, 3- KW generator, loading ramps, 1,000 gallon collapsible fabric tank (raw water and product), hose (raw water, back-wash, high-pressure and reject), pump skid cover, components of end items (COEI) box, basic issue items (BII) box, cold weather kit, (CWK) 1 box, CWK 2 box, CWK 3 box and the COEI cable box. The total weight of the LWP is approximately 6,140 pounds.

SPECIAL CONSIDERATIONS

Special considerations for this manual are given below.

Components of the pumping assembly that have been used to deliver petroleum products must not be used to pump water for human use.

The 600-GPH ROWPU is technically approved for airdrop from C-130 and C-17 aircraft.

The overall rigged height of the 600-GPH ROWPU will not exceed 101 inches for a distance of not more than 40 inches aft of the center of balance (CB). All high points should be verified each time this load is placed on the aircraft.

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

Check fuel levels to ensure that they do not exceed the fuel level of the specific rigging chapter.

Receive, storage, and handling of hazardous materials and waste according to DLAI 4145.11/TM 38-410/NAVSUP PUB 573/AFJMAN 23-209/MCO 4450.12A/DLSC-LDD.

Package, mark, and labeling of hazardous materials according to AFMAN 24-204/TM 38-250/ NAVSUP PUB 505; MCO P4030.19I; DLAI 4145.3 DCMAD1, CH3.4 (HM24).

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Chapter 1

Rigging Small Containers for Free Drop

SECTION I: RIGGING TWENTY-FOUR 1-QUART PLASTIC CANTEENS

DESCRIPTION OF LOAD

1-1. The twenty-four 1-quart plastic canteens are rigged inside two cardboard containers. Honeycomb is placed between the inner and outer containers. Figure 1-1 through 1-3b in this section display the process for rigging twenty four 1-quart plastic canteens.

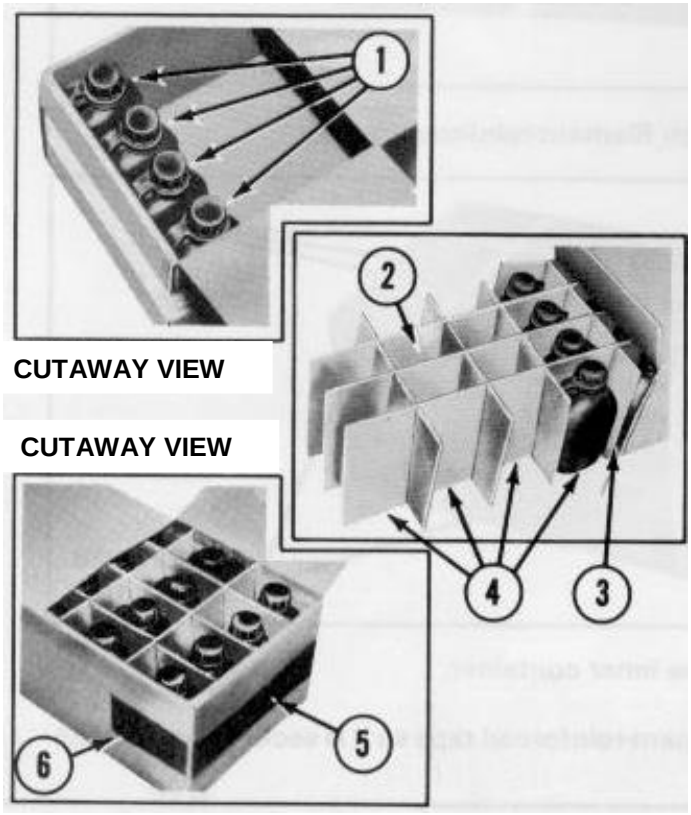
PREPARING INNER CONTAINER

1-2. Expand the 30-inch-long inner card- board container. Close one end by folding the end flaps. Seal the closed end with 3·inch tape. Make sure that the tape extends at least 6 inches down the sides of the container.

1-3. Expand the cardboard separator assembly.

PACKAGING CANTEENS

1-4. Check the canteens to make sure that the tops are tightly sealed. Package the canteens as shown in figure 1·1.



① Position the inner container and insert the four canteens as shown

② Insert the cardboard separator into the container until the first row of the separator is inside.

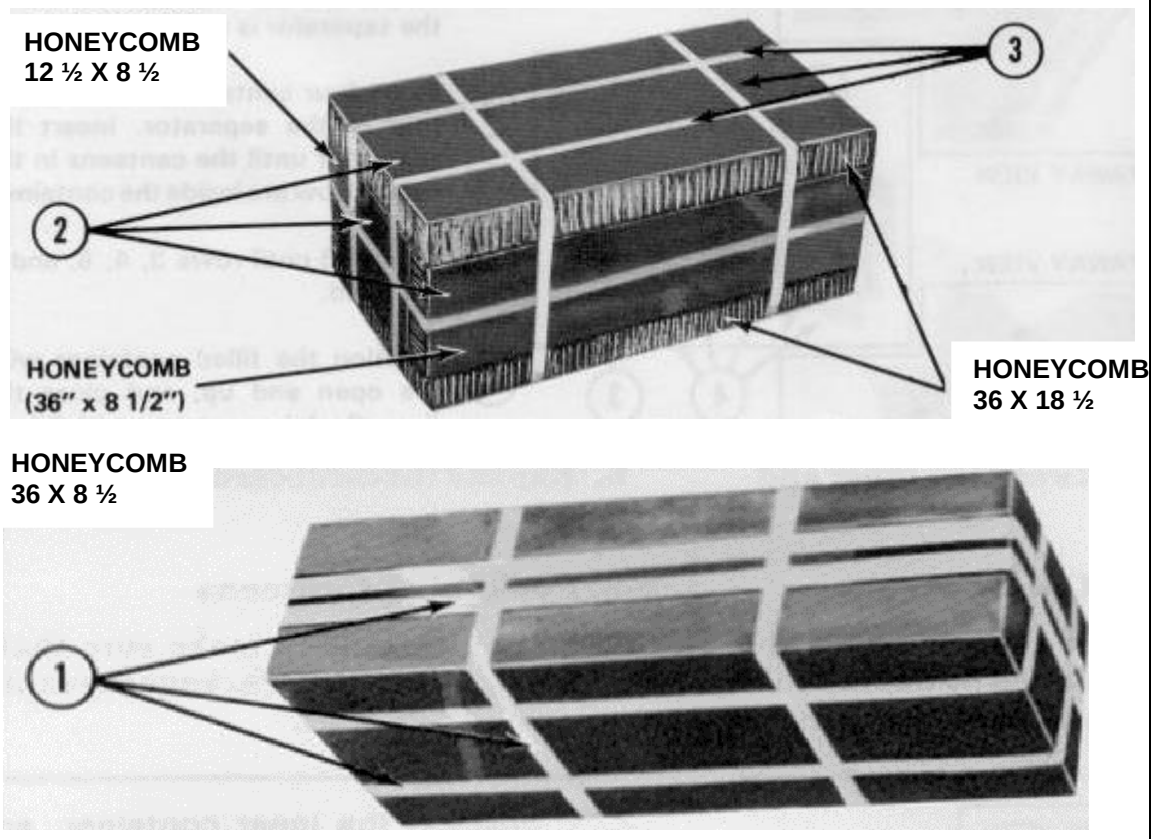
③ Place four canteens in the second row of the separator. Insert the separator until the canteens in the second row are inside the container.

④ Repeat 3 until rows 3, 4, 5, and 6 are filled

⑤ Position the filled container with the open end up, and close the flaps. Seal the container with 3-inch tape.

⑥ Make sure that the tape extends at least 6 inches down the sides of the container.

Figure 1-1. Canteens paced in the inner container

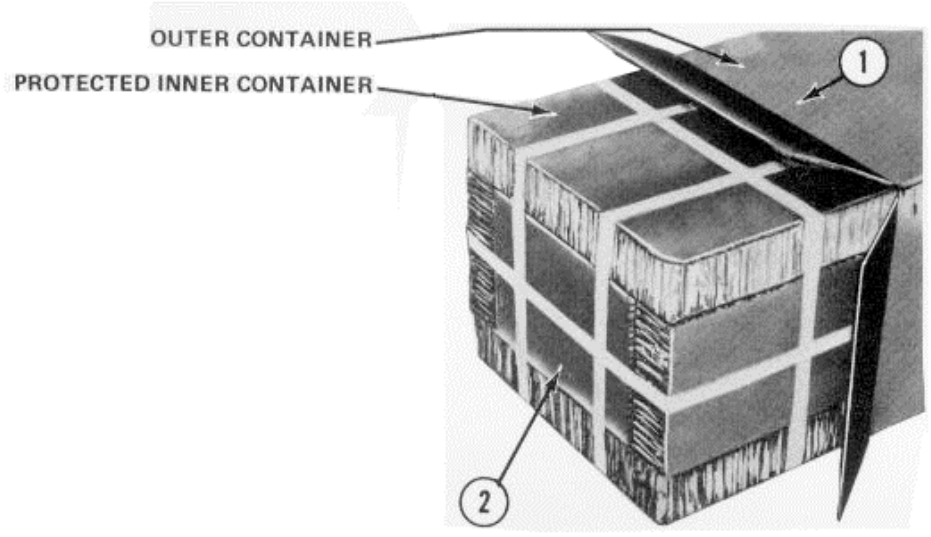


① Tape the inner contain with 1-inch filament-reinforced tape.

② Position the honeycomb around the inner container.

③ Tape the honeycomb with the filament reinforced tape so it is secured around the inner container.

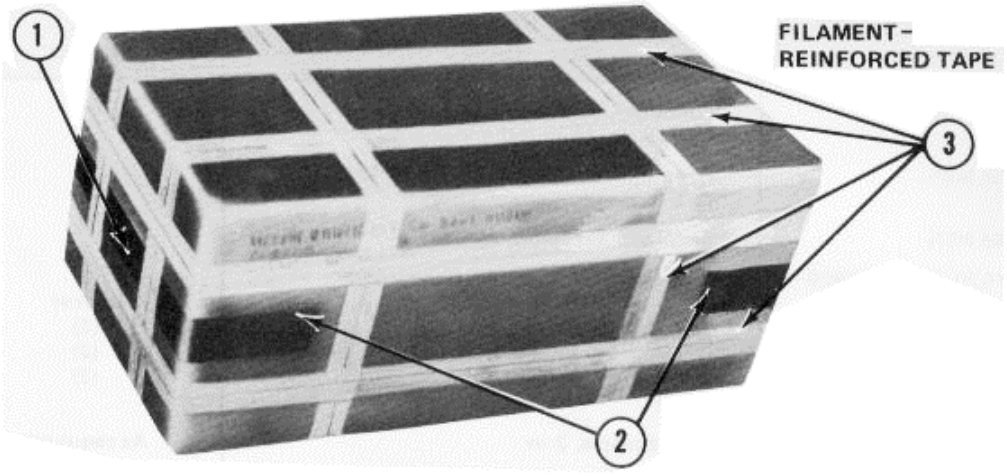
Figure 1-2. Inner container reinforced



① Expand the 36½ inch-long outer container. Close one end by folding the end flap. Seal the closed end with 3-inch tape. Make sure that the tape

② Slide the honeycomb-protected inner container into the outer container.

Figure 1-3. Inner container prepared



① Position the container with the open end up, and close the end flaps. Seal the container with 3-inch tape.

② Make sure the tape extends at least 6 inches down both sides of the container.

③ Reinforce the outer container with 1-inch filament–reinforced tape.

Figure 1-3b. Outer container prepared

MARKING RIGGED LOAD

1-5. The rigged container is 36½ inches long, 15¼ inches high and 19 inches wide. Stencil the following information on the outer container: Water, drinking , twenty-four 1 –quart plastic canteens, weight: 66 pounds, cube: 8.3 feet

EQUIPMENT REQUIRED

1-6. Equipment required to rig twenty-four 1-quart plastic canteens for free drop is listed in table 1-1.

Table 1-1. Equipment required for rigging small containers for free drop

National Stock Number (NSN)	Item	Quantity
No NSN	Container, cardboard, 36½ -by 18 7/8- by 15-inch (in) (expanded size)	1
No NSN	Container, cardboard, 30- by 12½ -by 8 5/8- by 15-inch (expanded size)	1
No NSN	Separator assembly, cardboard	1
1670-00-753-3928	Pad, energy-dissipating, honeycomb, 3- by 36- by 96-in	1
	12½- by 8½-in	2
	36- by 8½-in	2
	36- by 18¼-in	2
	Tape:	
7510-00-266-6710	Adhesive, 3-in	As required
7510-00-582-4772	Filament, reinforced, 1-in	As required

SECTION II RIGGING TWENTY-FOUR 16-OUNCE CANS

DESCRIPTION OF LOAD

1-7. One case of twenty four 16-ounce zip-top cans of water is rigged in a cardboard container. Honeycomb is placed between the case and outer container. Figure 1-4 through 1-7 in this section display the process for rigging twenty-four 16-ounce cans.

REINFORCING PACKING CASE

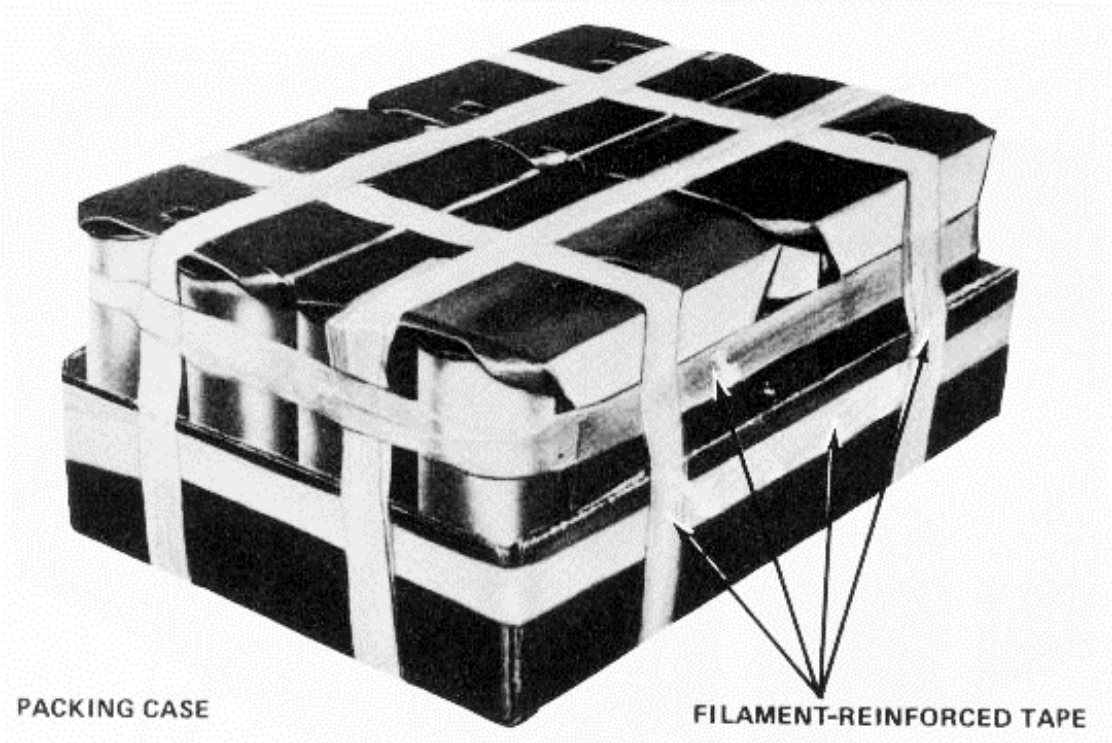
1-8. Reinforce the packing case with 1-inch filament reinforced tape as shown in figure 1-4.

POSITIONING HONEYCOMB

1-9. Position honeycomb as shown in Figure 1-5

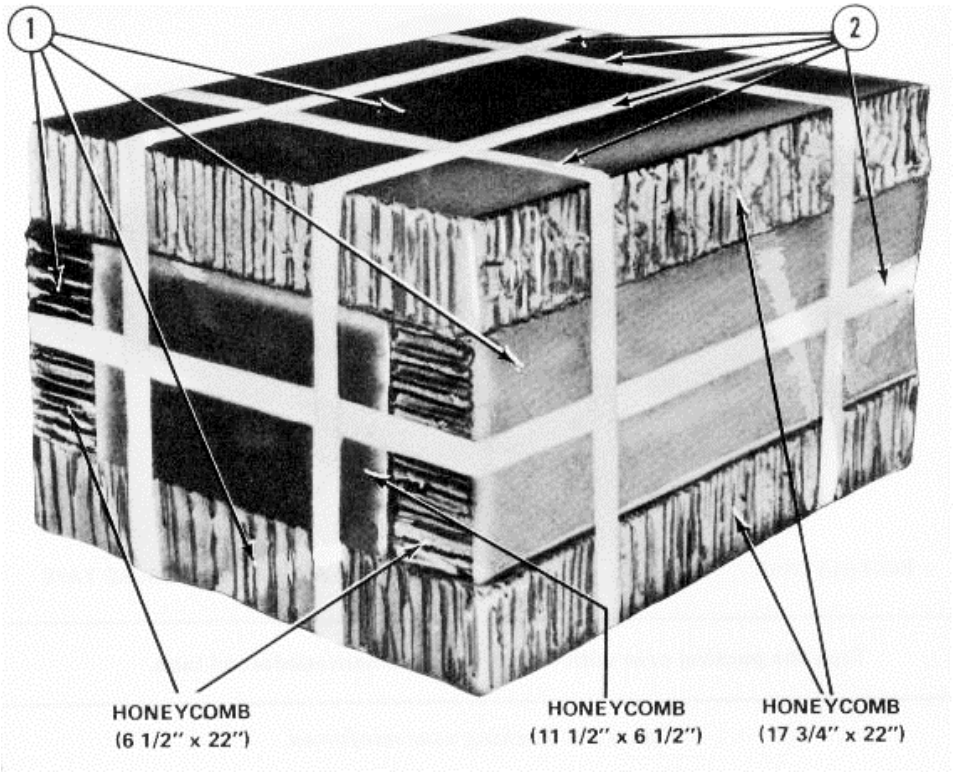
PREPARE AND PACK THE OUTER CONTAINER

1-10. Prepare and pack the outer container as shown in figure 1-6.



① Reinforce the packing case with 1-inch filament- reinforced tape.

Figure 1-4. Packing case reinforced



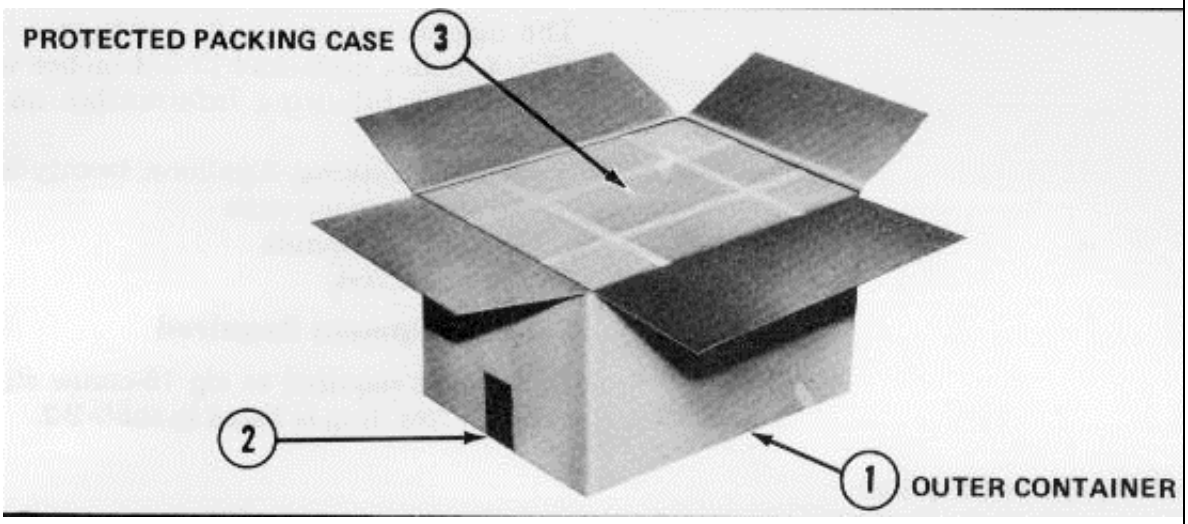
① Position two 6½ by 22·inch pieces of honeycomb on the sides. Place two l7¾- by 22-inch pieces of honeycomb on the top and bottom and two 11 1/2· by 6½-inch pieces of honeycomb on each end. around the packing case and secure the honeycomb with 1-inch filament-reinforced tape

② Secure the honeycomb with 1-inch filament-reinforced tape

③ Tape the honeycomb with the filament reinforced tape so it is secured around the inner container.

Legend: " = inches

Figure 1-5. Honeycomb placed

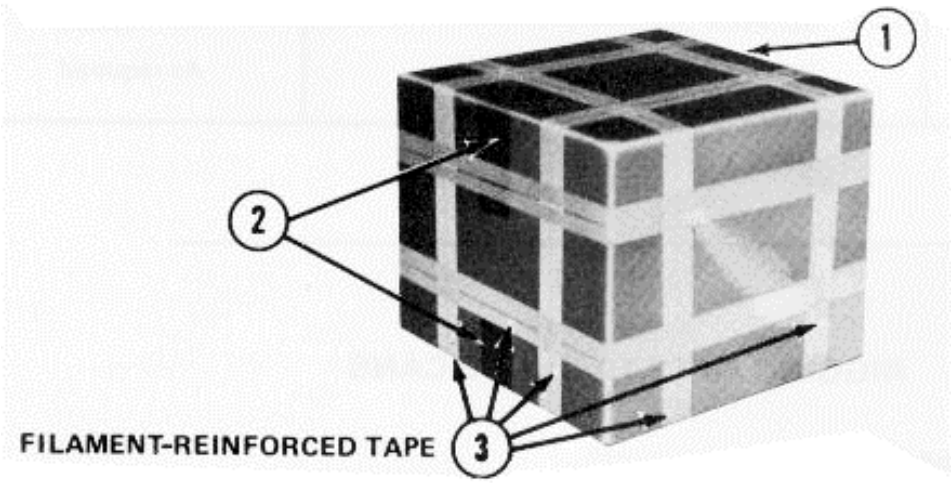


① Expand the 22 ¼-inch-long outer container. Close one end by folding the end flap. Seal the closed end with 3-inch tape.

② Make sure that the tape extends at least 6 inches down the sides of the container.

③ Slide the packing case protected with honeycomb, into the outer container.

Figure 1-6. Preparing the outer container



① Position the container with the open end up, and close the end flaps. Seal the container with 3-inch tape.

② Make sure the tape extends at least 6 inches down both sides of the container.

③ Reinforce the outer container with 1-inch filament–reinforced tape.

Figure 1-7. One case of zip-top cans of water prepared.

MARKING RIGGED LOAD

1-11. The rigged container is 22¼ inches long, 13¾ inches high and 17¾ inches wide. Stencil the following information on the outer container: Water, drinking , 16-ounce zip-top cans, weight: 39 pounds, cube: 3.2 feet

EQUIPMENT REQUIRED

1-12. Equipment required to rig 16 ounce zip top cans for free drop is listed in table 1-2.

Table 1-2. Equipment required for rigging small containers for free drop

National Stock Number (NSN)	Item	Quantity
No NSN	Container, cardboard, 22¼ -by 17¾- by 13¾-inch (in) (expanded size)	1
No NSN	Separator assembly, cardboard	1
1670-00-753-3928	Pad, energy-dissipating, honeycomb, 3- by 36- by 96-in	1
	6½- by 22-in	2
	11½- by 6½-in	2
	17¾- by 22-in	2
	Tape:	
7510-00-266-6710	Adhesive, 3-in	As required
7510-00-582-4772	Filament, reinforced, 1-in	As required

SECTION III RIGGING FIFTY 10-OUNCE CANS

DESCRIPTION OF LOAD

1-13. One case of fifty 10-ounce cans of water is rigged in a cardboard container. Honeycomb is placed between the case and outer container. Figure 1-8 through 1-10 in this section display the process for rigging fifty 10-ounce cans.

REINFORCING PACKING CASE

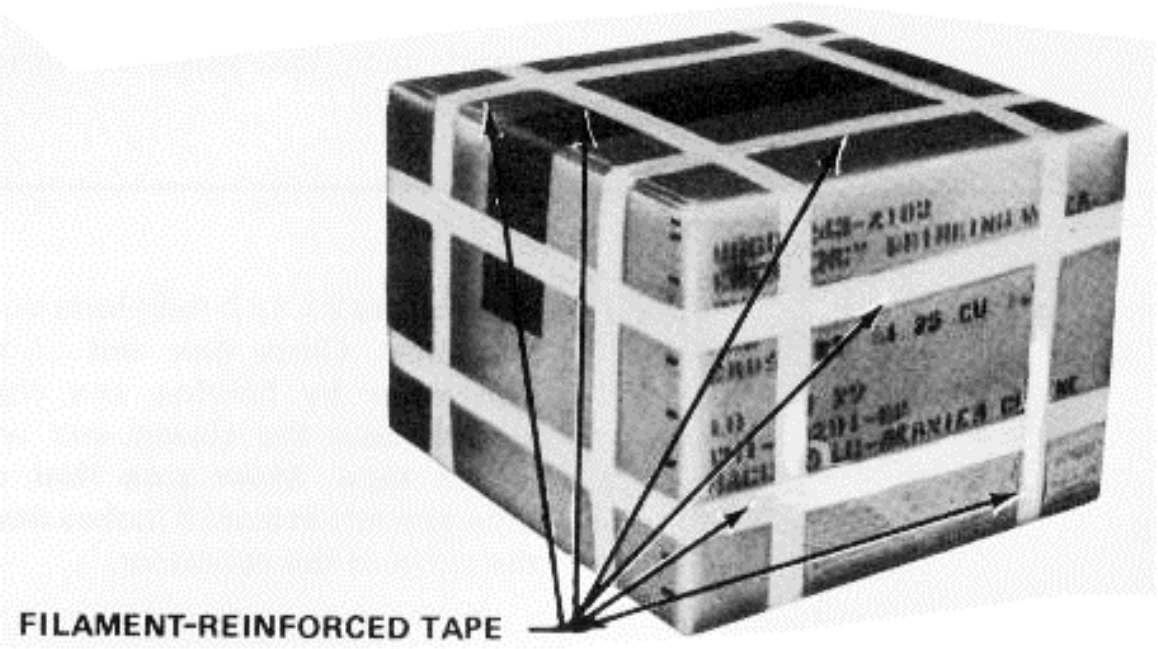
1-14. Reinforce the packing case with 1-inch filament reinforced tape as shown in figure 1-8.

POSITIONING HONEYCOMB

1-15. Position two 11- by 21-inch, two 11- by 15-inch, and two 21- by 21-inch pieces of honeycomb as shown in figure 1-9.

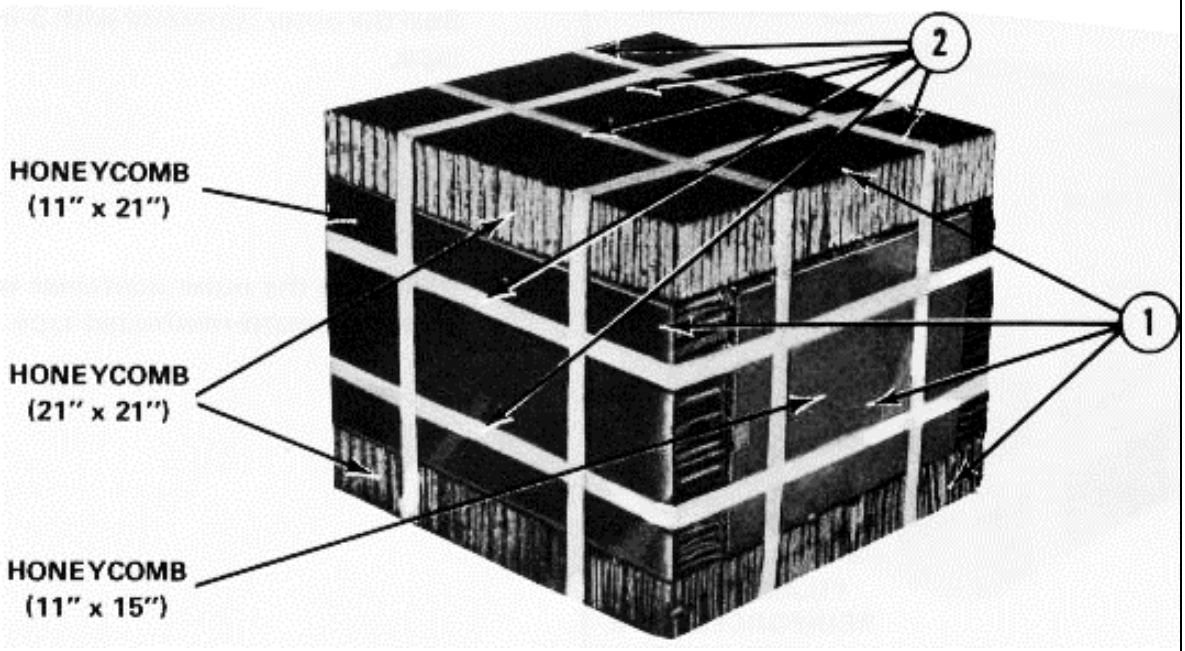
PREPARE AND PACK THE OUTER CONTAINER

1-16. Prepare and pack the outer container as shown in figure 1-10.



① Reinforce the packing case with 1-inch filament- reinforced tape.

Figure 1-8. Packing case reinforced

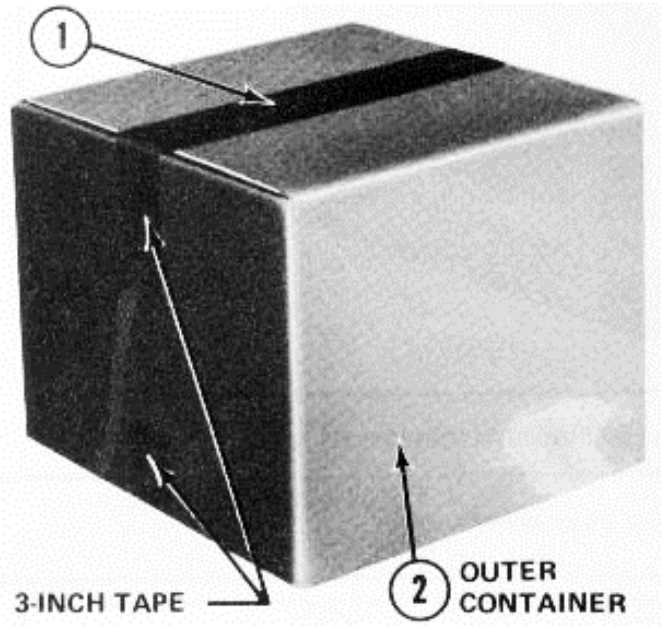


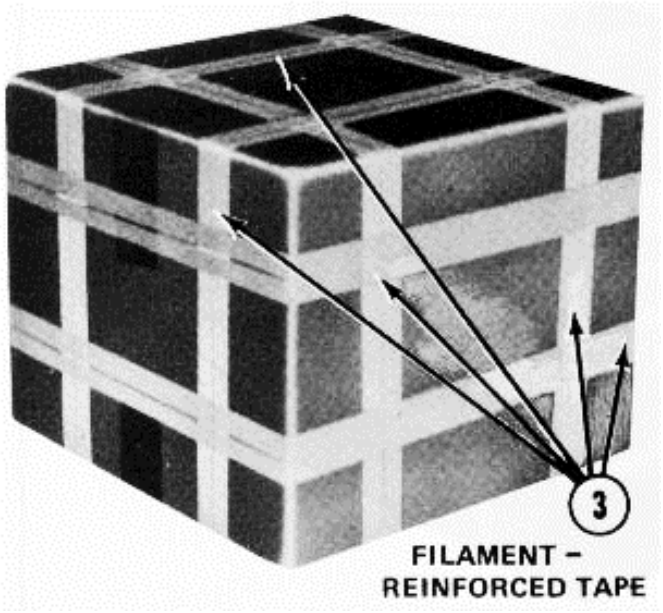
① Position the honeycomb around the packing case.

② Secure the honeycomb with 1-inch filament-reinforced tape

Legend: “ = inches

Figure 1-9. Honeycomb positioned





① Expand the 21 1/ 2-inch-long outer container. Close one end of the container by folding the f laps closed. Seal the closed end with 3-inch tape. Make sure that the tape extends at least 6 inches down the sides of the container.

② Slide the packing case, protected by honeycomb, into the outer container, and fold the end flaps down. Seal the outer container with 3-inch tape.

③ Reinforce the packing case with 1-inch filament- reinforced tape.

Figure 1-10. One case of l0 ounce cans of water prepared

MARKING RIGGED LOAD

1-17. The rigged load is 21½ inches long, 17½ inches high and 21½ inches wide. Stencil the following information on the outer container: Emergency drinking water, fifty 10-ounce cans**,** Weight: 59 pounds**,** Cube: 4.3 feet

EQUIPMENT REQUIRED

1-18. Equipment required to rig fifty 10-ounce cans for free drop is listed in table 1-3.

Table 1-3. Equipment required for rigging small containers for free drop

National Stock Number (NSN)	Item	Quantity
No NSN	Container, cardboard, 21¼ -by 21¼- by 17-inch (in) (expanded size)	1
No NSN	Separator assembly, cardboard	1
1670-00-753-3928	Pad, energy-dissipating, honeycomb, 3- by 36- by 96-in	1
	11- by 15-in	2
	21 by 11-in	2
	21- by 21-in	2
	Tape:	
7510-00-266-6710	Adhesive, 3-in	As required
7510-00-582-4772	Filament, reinforced, 1-in	As required

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Chapter 2

Rigging Milk Dispensing Containers

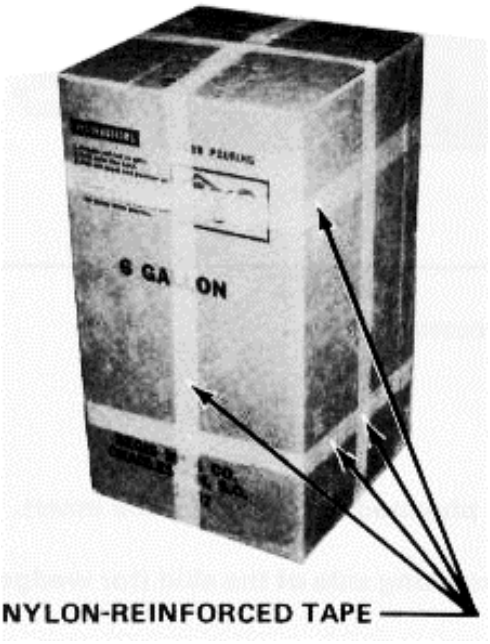
SECTION I: RIGGING MILK DISPENSING CONTAINERS

DESCRIPTION OF LOAD

2-1. The 6-gallon milk-dispensing container is used as an expandable container for potable water. It is made up of a fiberboard box and a plastic bag insert. Eight containers are rigged in an A-21 cargo bag. Each cargo bag can be rigged for drop from a door, ramp, or G-13 or one G-14 cargo parachute and a skid and honeycomb kit.

PREPARING CONTAINERS

2-2. Prepare eight milk-dispensing containers as shown in Figure 2-1



① Insert the plastic bag into the fiberboard box. Remove the cap, and fill the plastic bag with 5 gallons of potable water.

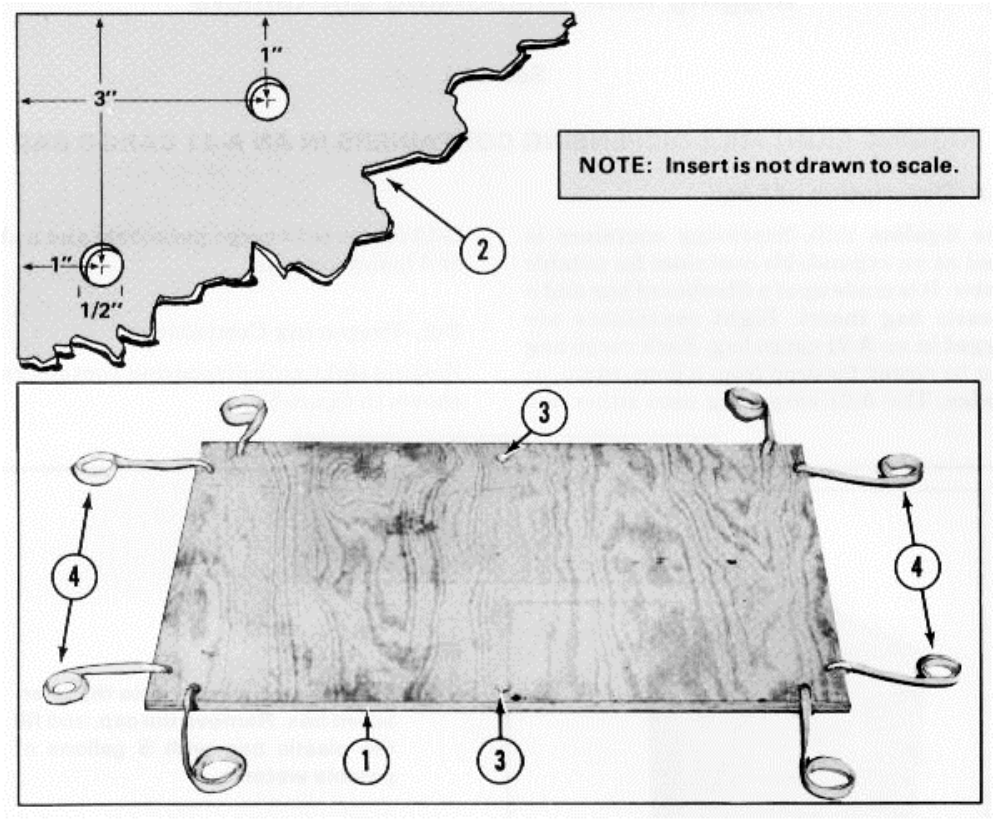
② Push down slowly on the plastic bag to squeeze out all of the air. Replace the cap on the bag.

③ Use nylon-reinforced tape to close the container. Wrap four bands of tape twice around each container as shown

Figure 2-1. Milk dispensing container prepared

RIGGING LOAD

2-3. Rig eight water containers in an A-21 cargo bag as shown in figures 2-2, 2-3, and 2-4.



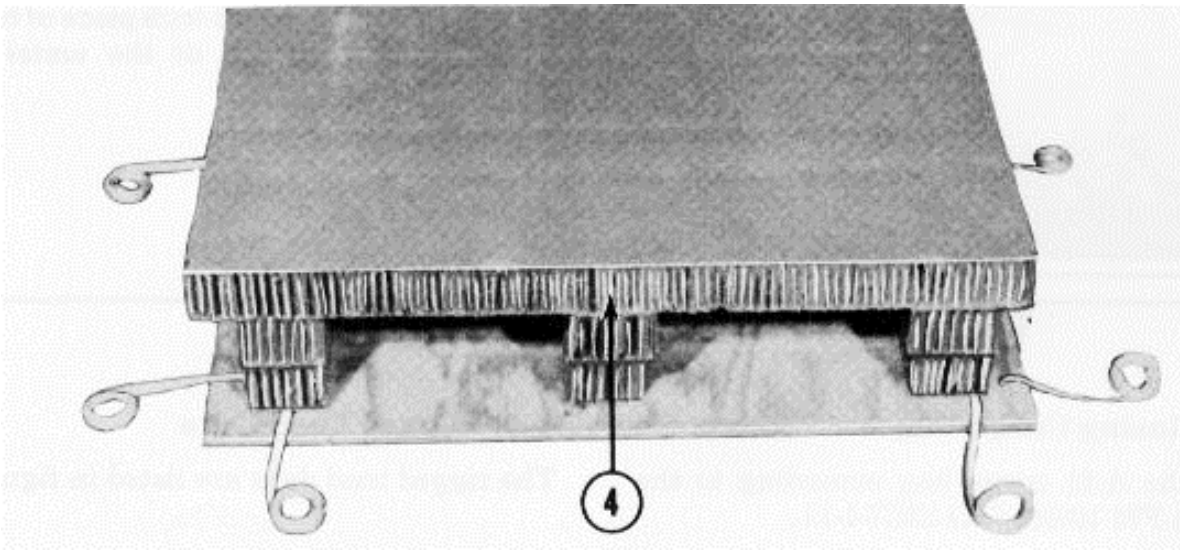
① Cut a 3/4-inch-thick sheet of plywood to the correct size: for ramp use -32 by 42 inches, for door use -27 by 42 inches, and for wedge use-27 by 42 inches.

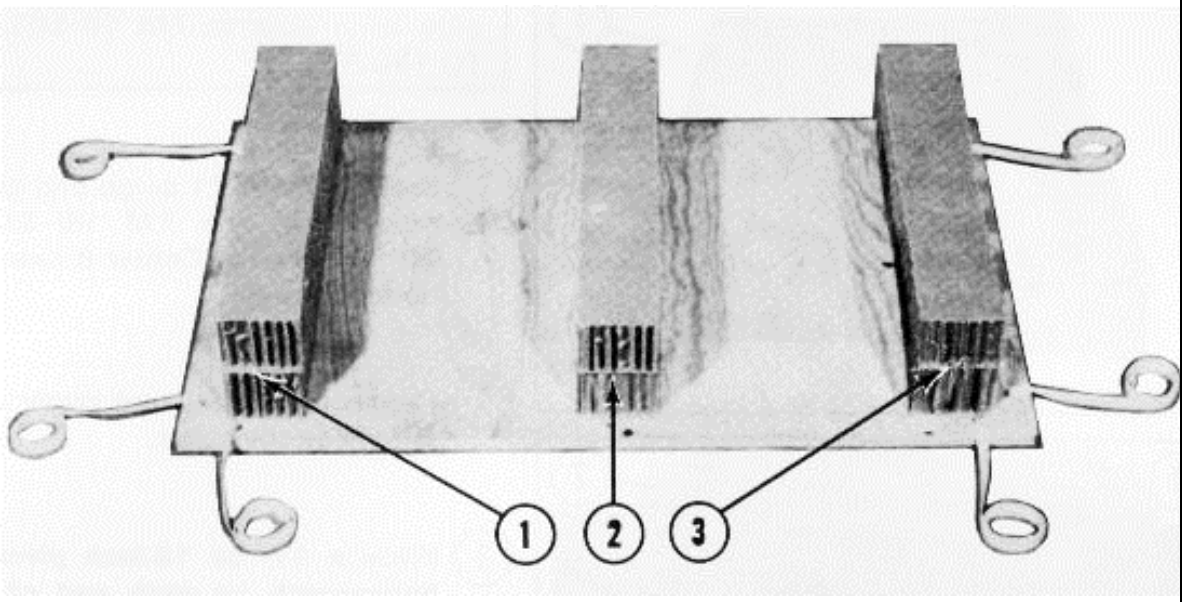
② Drill two 1/ 2-inch holes at each corner of the plywood as shown on the insert.

③ Drill a 1-inch hole centered and 1inch from each long side of the skid (for wedge use only).

④ Run an 8-foot length of 1/2-inch tubular nylon through the holes as shown.

Figure 2-2. Skidboard prepared





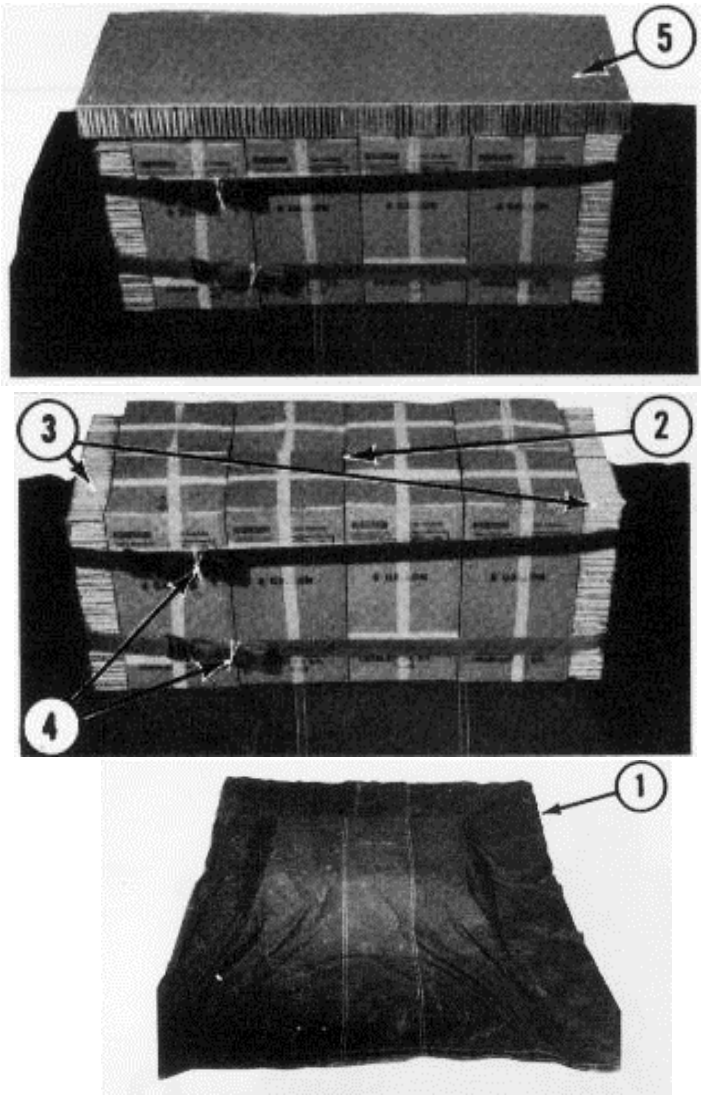
① Glue two 4- by 24-inch pieces of honeycomb together. Glue the honeycomb stack to the skid, 2 inches in from the side and centered between the front and rear edges.

② Follow step 1, but center the honeycomb stack on the skid.

③ Follow step 1.

④ Center a 24-by 42-inch piece of honeycomb on the three honeycomb stacks and glue it.

Figure 2-3. Outer container prepared



Note: Before doing step 1, install the restraint strap for wedge use only according to TO 13C7-1-11.

① Prepare the A-21 cargo bag cover according to FM 4-20.103. Center it over the honeycomb kit

② Center eight prepared water containers on the cover.

③ Place a 17·by 19-inch piece of honeycomb on each end of the water containers.

④ Bind the water containers together with either two A-7A sling straps or two 15-foot tiedown straps heavy- duty D-rings and load binders.

⑤ Set a 19- by 45-inch piece of honeycomb on top of the water containers.

Figure 2-4. Outer container prepared

CLOSING CARGO BAG

2-4. Close the A-21 cargo bag according to the steps in FM 4-20.103/TO 13C7-1-11.

INSTALLING PARACHUTE

2-5. Prepare and stow either one G-13 or G-14 cargo parachute according to FM 4-20.103/TO 13C7-1-11.

RIGGED LOAD DATA

2-6. The rigged load data are listed in figure 2-5

EQUIPMENT REQUIRED

2-7. Equipment required to rig twenty-four 1-quart plastic canteens for free drop is listed in table 2-2.

CAUTION

Make the final rigger inspection required by AR 59-4 (Using DD Form 1748, *Joint Airdrop Inspection Record (Platforms),* or appropriate DD Form 1748-1, *Joint Airdrop Inspection Record (Containers)*, DD Form 1748-2, *Airdrop Malfunction Report (Personnel-Cargo)*, and DD Form 1748-3, *Joint Airdrop Summary Report*).

RIGGED LOAD DATA	
Weight	401 pounds
Width	42 Inches
Height	43 inches
Length	27 inches

Figure 2-5. Milk dispensing containers rigged in a-21 cargo bag for low velocity airdrop

Table 2-1. Equipment required

National Stock Number	Item	Quantity
8040-00-273-8713	Adhesive, paste, 1-gallon	As required
1670-00-242-9173	Bag, cargo. type A-21	1
1670-00- 753-3928	Pad, energy. Dissipating, honeycomb,	
	3·by 36·by 96-inch (in):	2 Sheets
	4- by 24-in	6
	17- by 19-in	2
	19- by 45-ln	1
	24- by 42 -in	1
1670-00-984-3535	Parachute, cargo, G-13 or	1
1670-00-999-2658	Parachute. cargo, G-14	1
5530-00-128-4981	Plywood, 3/4- by:	
	27- by 42-in or	1
	32·by 42-in	1
1670-00-251-1153	Sling, cargo, airdrop, type A-7A	
	Tape:	
	Adhesive, 2-in	
7510·00-266-5016	Filament, reinforced, 1·in	As required
7510-00·582-4772	Tiedown assembly	As required
1670-00-937-0271	Webbing,cotton.80-pound	2
8305-00-268-2411	Webbing. nylon, tubular, 1/ 2 -in	As required
8305-00-082-5752		As required

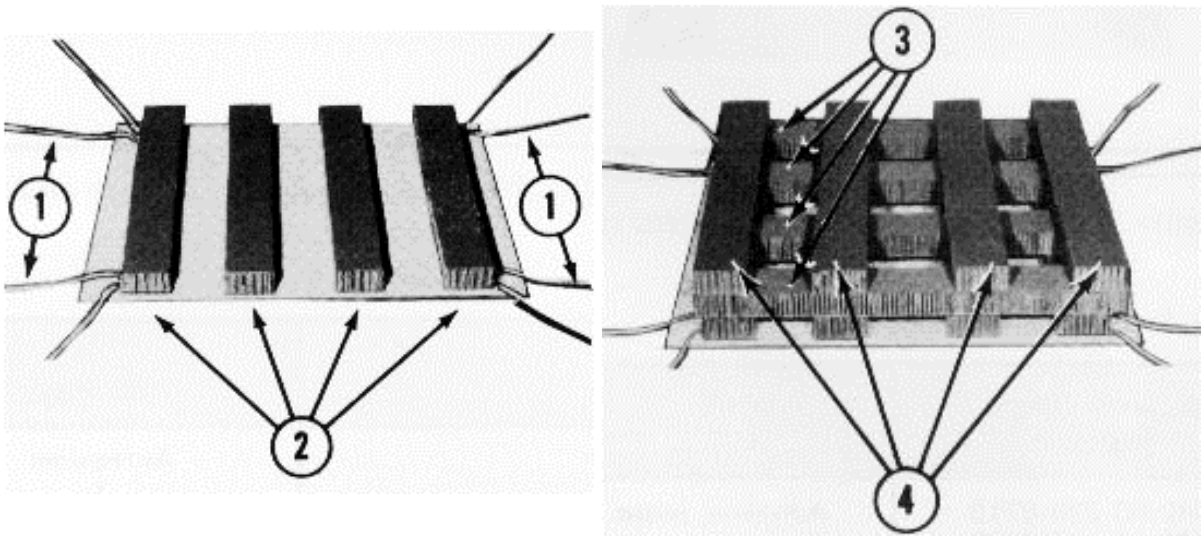
SECTION II: RIGGING 40 MILK DISPENSING CONTAINERS IN AN A-22 CARGO BAG

DESCRIPTION OF LOAD

2-8. The milk-dispensing container is used as an expendable container for potable water. It is made up of a fiberboard box and a plastic bag insert. Forty containers are rigged in an A-22 cargo bag on a standard skid, NSN 1670-00-883-1654. The load is rigged with one G-12D cargo parachute.

PREPARING CONTAINERS

2-9. Prepare 40 milk-dispensing containers as shown in Figure 2-6



① Run and 8-foot length of ½-inch tubular nylon webbing through each pair of holes at the four corners of the Skid. Place the skid on a level surface.

② Glue four 6- by 48-inch pieces of honeycomb to the skid. Place the two outside pieces 2¾ -inches in from the 48-inch side, and glue them. Space the inner pieces 8 inches from the outside pieces and glue them.

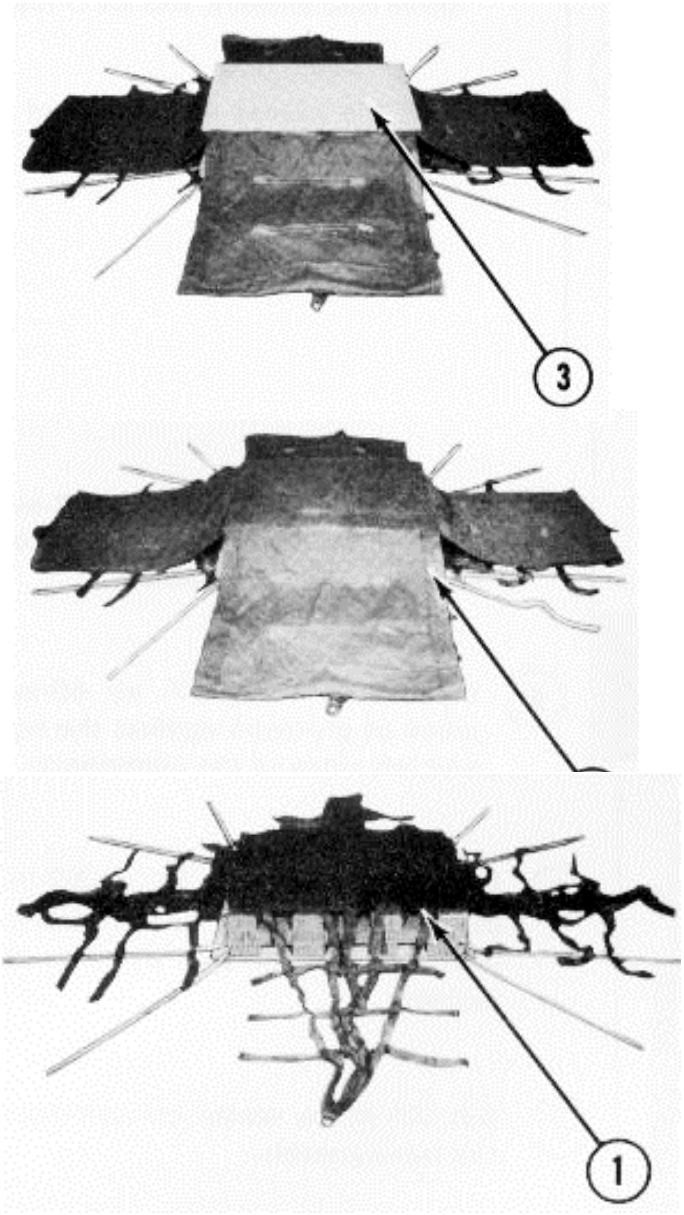
③ Cross stack and glue the second layer of four 6- by 48-inch pieces of honeycomb. Center the outside pieces flush with the ends of the first layer .Space the inner pieces 8 inches from the outside pieces, and glue them.

④ Place the third layer of four 6- by 48-inch pieces of honeycomb directly above the first layer, and glue it.

Figure 2-6. Skid prepared and honeycomb stacks placed

RIGGING LOAD

2-10. Rig 40 containers in an A-22 cargo bag as shown in figures 2-7, through 2-9.

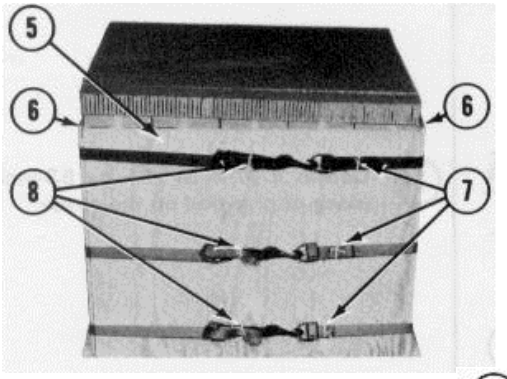


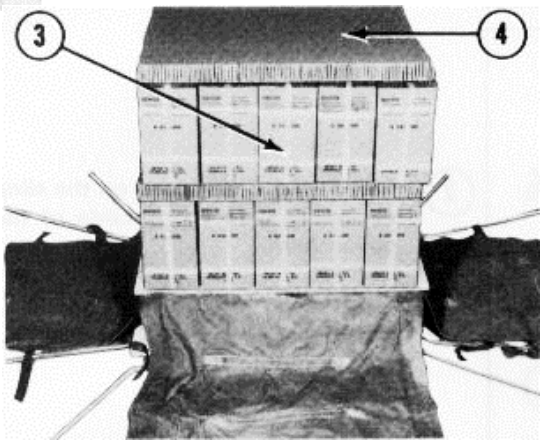
① Center the A-22 sling assembly on the stacks with the outside of the slings down.

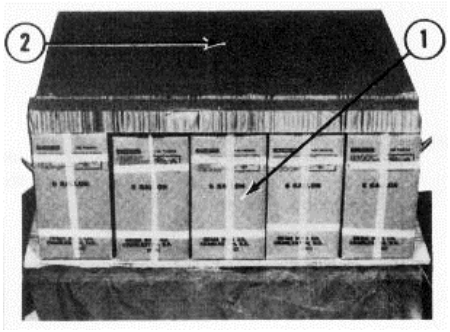
② Center the A- 22 cover on the sling assembly with the outside of the cover down.

③ Center a 3/4- by 40- by 63-inch piece of plywood on the cover.

Figure 2-7. Cargo bag and plywood placed







① Center 20 water containers on the plywood.

② Place a layer of on 36- by 50-inch piece of honeycomb on top of the containers.

③ Set 20 more water containers on the honeycomb.

④ Place another layer of honeycomb on the containers.

⑤ Place a 3/4 –inch by 37- by 48 piece of plywood against the right and left sides of the containers.

⑥ Place a 3/4 –inch by 37- by 40 piece of plywood against the right and left sides of the containers.

⑦ Bind and stacked containers and boards together with three 16-foot lengths of type X nylon webbings, three load binders, and six D-rings

⑧ Fold the excess webbing and tie the folds to the load binder.

Figure 2-8. Water containers placed and bound

CLOSING CARGO BAG

2-11. Close the A-21 cargo bag according to the steps in FM 4-20.103/TO 13C7-1-11.

INSTALLING PARACHUTE

2-12. Prepare and stow either one G-12D cargo parachute with a 68-inch pilot parachute according to FM 4-20.103/TO 13C7-1-11.

RIGGED LOAD DATA

2-13. The rigged load data are listed in figure 2-9

EQUIPMENT REQUIRED

2-14. Equipment required to rig twenty-four 1-quart plastic canteens for free drop is listed in table 1-1.

CAUTION

Make the final rigger inspection required by AR 59-4 (Using DD Form 1748, *Joint Airdrop Inspection Record (Platforms),* or appropriate DD Form 1748-1, *Joint Airdrop Inspection Record (Containers)*, DD Form 1748-2, *Airdrop Malfunction Report (Personnel-Cargo)*, and DD Form 1748-3, *Joint Airdrop Summary Report*).

RIGGED LOAD DATA	
Weight	2030 pounds
Width	53½ Inches
Height	65 inches
Length	48 inches

Figure 2-9. Milk dispensing containers rigged in A-22 cargo bag for low velocity airdrop

Table 2-2. Equipment required

National Stock Number	Item	Quantity
8040-00-273-8713	Adhesive, paste, 1-gallon	As required
1670-00-587-3421	Bag, cargo. type A-21	1
1670-00-937-0272	Binder, load, 10,000-pound-capacity	3
4020-00-240-2146	Cord, nylon, type III, 550-lbenergy	As required
5365-00-753-3928	D-ring, heavy-duty	6
1670-00-753-3928	Pad, Dissipating, honeycomb,	
	3·by 36·by 96-inch (inch):	5 Sheets
	4- by 40-inch	2
	6- by 48-inch	12
	36- by 50 -inch	2
1670-00-216-7297	Parachute, pilot, 68-inch diameter	1
1670-00-893-2371	Parachute. cargo, 64-foot, G-12D	1
5530-00-128-4981	Plywood, 3/4- by:	
	37- by 40-inch	2
	37·by 48-inch	2
	40- by 53-inch	1
1670-00-883-1654	Skid, cargo bag, platform	1
	Tape:	
7510·00-266-5016	Adhesive, 2-inch	As required
7510-00·582-4772	Filament, reinforced, 1·inch	As required
	Webbing:	
1670-00-937-0271	Cotton.80-pound	As required
8305-00-268-2411	Nylon, tubular, 1/ 2 –inch	As required
8305-00-082-5752	Nylon, type X, 16-foot	3

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Chapter 3

Rigging 55-Gallon Collapsible Water Drums in an A-22 Cargo Bag for Low-Velocity Airdrop

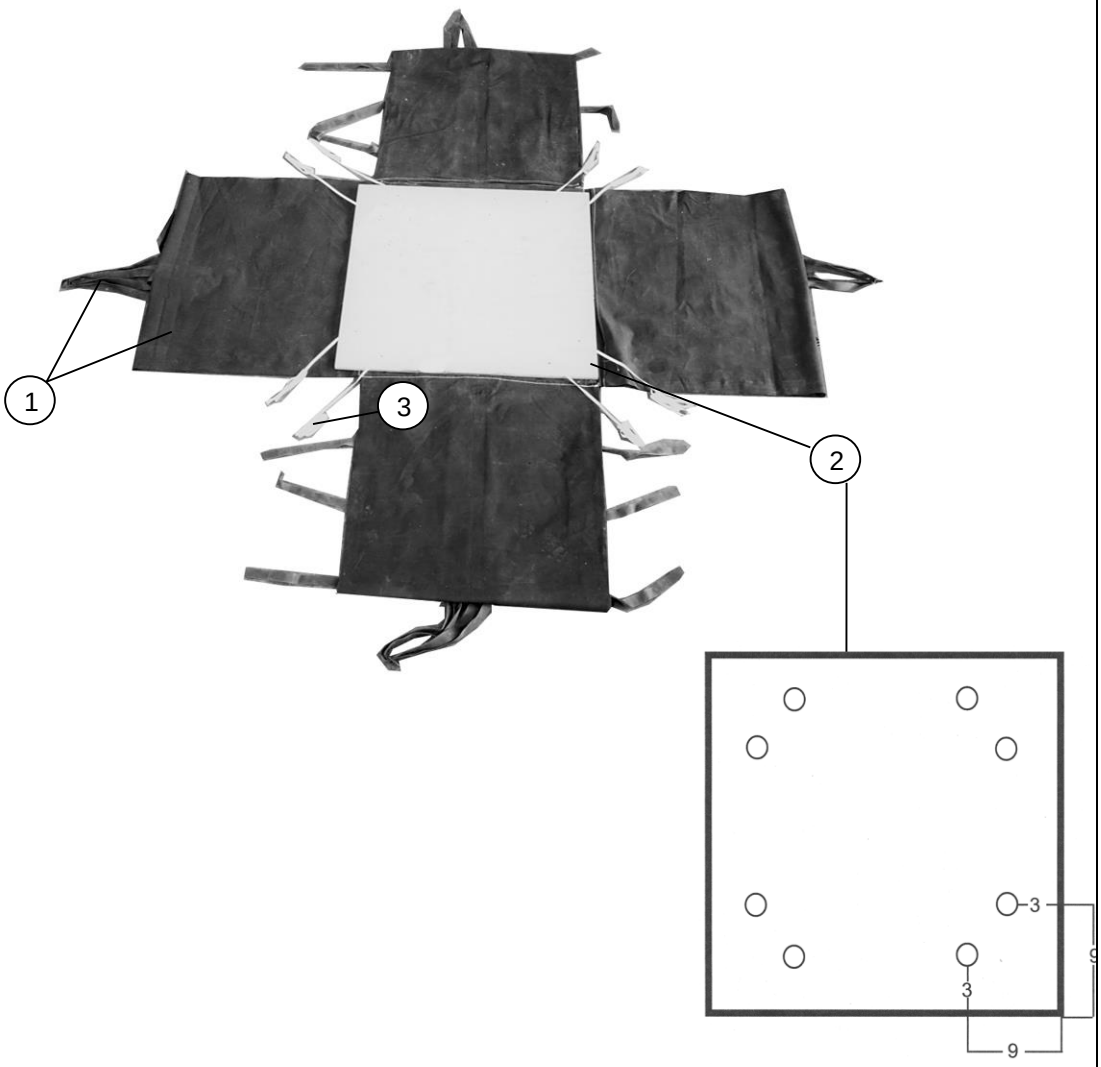
DESCRIPTION OF LOAD

3-1. The 55-gallon collapsible water drum is a durable, non-vented, cylindrically shaped, rubber container fitted with a faucet valve. Four drums are rigged in an A-22 cargo bag for low-velocity airdrop. Filled with 50-gallons of water, each drum weighs 465 pounds. Any parts or other information needed on the drums can be found in TM 10-8110-201-14&P.

PREPARING AND SECURING LOAD

3-2. Prepare and secure the A-22 aerial delivery cargo bag and load items as shown in Figure 3-1 through 3-6 and according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.

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



① Lay out a sling assembly with cover according to FM 4-20.103/MCRP 4-11.3C /TO 13C7-1-11.

② Drill two ½-inch holes in each corner of a ¾- by 48- by 48-inch piece of plywood or skid board. Place the holes 9 inches from each corner and 3 inches from the edge.

③ Position the plywood inside the cover. Pass a 15-foot length of ½-inch tubular nylon webbing through the holes in each corner of the plywood.

Figure 3-1. A-22 cargo bag prepared

① Center four 55-gallon collapsible water drums on the 48- by 48-inch plywood with the valves facing into the center.

Figure 3-2. Drums positioned

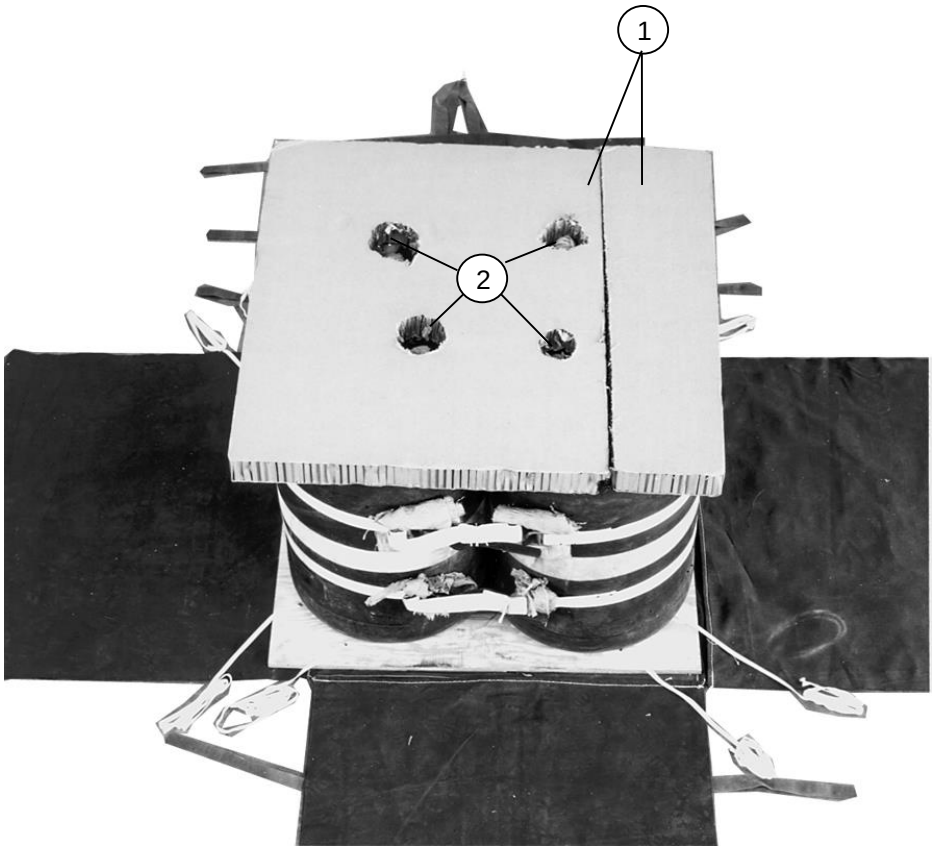
Note. Pad the load binders and D-rings with cellulose wadding.

① Pad the faucet valves with cellulose wadding and tape.

② Pass one 15-foot tie-down lashing around the lower half of the drums, and secure with a load binder and D-ring.

③ Repeat step 2 for the upper half of the drums.

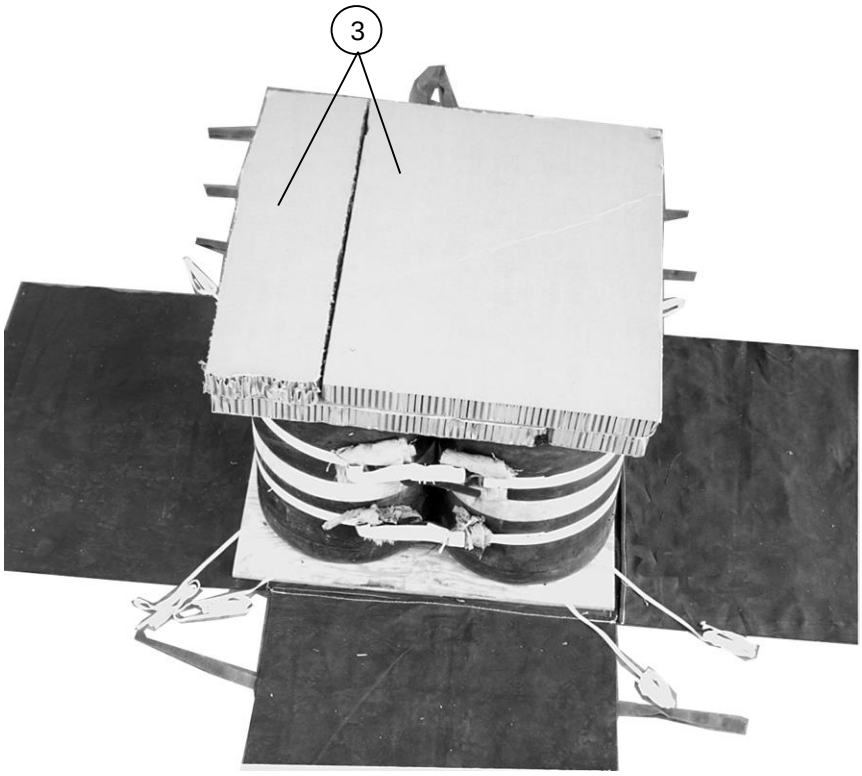
Figure 3-3. Drums secured together



① Center a layer of 48- by 48-inch honeycomb on top of the drums (one piece is 48 by 36 inches and another is 48 by 12 inches.

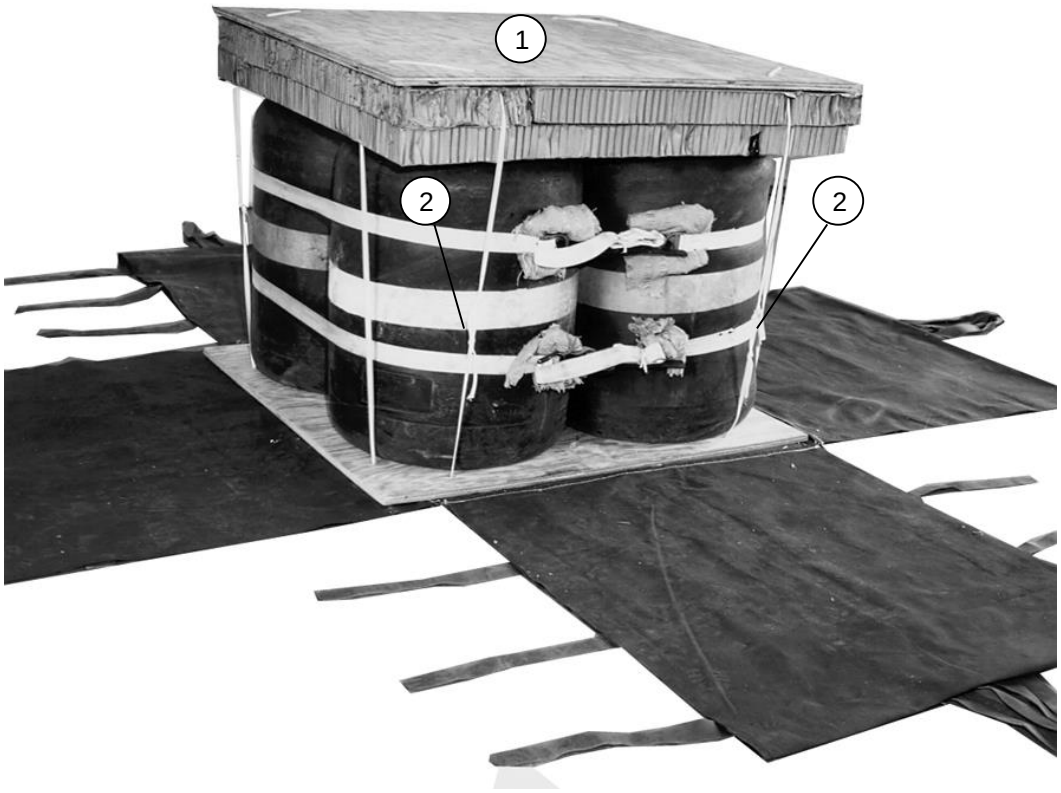
② Mark where the valves contact the 48- by 48-inch layer of honeycomb. Cut holes 5 inches larger than the valves at each mark.

Figure 3-4. Honeycomb positioned



① Place a second 48- by 48-inch layer of honeycomb on top of the first layer by positioning the 48- by 12-inch piece on the side opposite the same piece of the first layer. Complete the second layer by placing the 48- by 36-inch piece next to the 48- by 12-inch piece.

Figure 3-4. Honeycomb positioned (continued)



① Position a ¾- by 48- by 48-inch piece of plywood or skid board, with holes drilled as described in Figure 1-1 on top of the 48- by 48-inch layers of honeycomb.

② Secure the two pieces of plywood together by passing the ½-inch tubular nylon from each corner of the lower piece of plywood to the same corner of the upper piece of plywood. Tie the ends together with a surgeon's knot and a locking know according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.

Figure 3-5. Plywood and honeycomb secured

① Close the A-22 container (sling assembly and cover) according to FM 4-20.103/MCRP 4-11.3C/TO 13C7-1-11.

② Attach the suspension webs to the A-22 container according to FM 4-20.103/MCRP 4-11.3C/TO 13C7-1-11 (not shown).

Figure 3-6. A-22 container closed

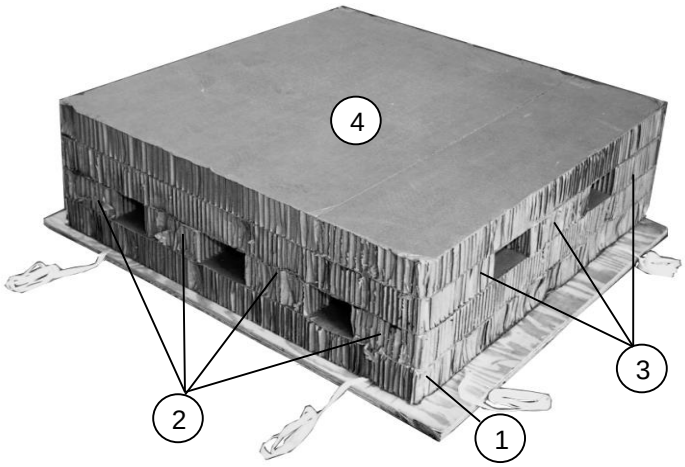
PREPARING SKID BOARD

3-3. Prepare a skid board according to FM 4-20.103/MCRP 4-11.3C/TO 13C7-1-11.

3-4. Building and Positioning Honeycomb on Skid Board

3-5. Build the honeycomb as shown in Figure 3-7. Position the honeycomb on the skid board according to FM 4-20.103/MCRP 4-11.3C/TO 13C7-1-11.

Note. The honeycomb stack should be glued together. It is not required to glue the stack to the skid board.



① Cut a 44- by 36-inch and a 44- by 8-inch piece of honeycomb to form the 44- by 44-inch bottom layer.

② Cut four 44- by 8-inch pieces of honeycomb. Place one piece on each end, flush with the edges of the bottom (first) layer. Evenly space the other two pieces between the end pieces to form the second layer.

③ Cut three 44- by 11-inch pieces of honeycomb. Place one piece on each end, flush with the edges, but running in the opposite direction of the second layer. Center the third piece between the end pieces to form the third layer.

④ Cut a 44- by 36-inch and a 44- by 8-inch piece of honeycomb to form the 44- by 44-inch top (fourth) layer.

Figure 3-7. Building honeycomb layers

SECURING SKID BOARD TO THE A-22 CARGO BAG

3-6. Secure the skid board to the container according to FM 4-20.103/MCRP 4-11.3C/TO 13C7-1-11.

INSTALLING PARACHUTE

3-7. Attach and secure the parachute according to FM 4-20.103/MCRP 4-11.3C/TO 13C7-1-11.

MARKING RIGGED LOAD

3-8. Mark the rigged load according to FM 4-20.103/MCRP 4-11.3C/TO 13C7-1-11, and as shown in Figure 3-8. Comply with the Shipper's requirements for Declaration of Dangerous/Hazardous Goods in accordance with AFMAN 24-204/TM 38-250/ NAVSUP PUB 505; MCO P4030.19I; DLAI 4145.3 DCMAD1, CH3.4 (HM24). If the load varies from the one shown, the weight, height, CB, and parachute requirements must be recomputed.

EQUIPMENT REQUIRED

3-9. Use the equipment listed in the Table in FM 4-20.103/MCRP 4-11.3C/TO 13C7-1-11 (rigging an A-22 container load for low-velocity airdrop) to rig four 55-gallon collapsible water drums in an A-22 cargo bag for low-velocity airdrop.

CAUTION

Make the final rigger inspection required by AR 59-4 (Using DD Form 1748-1, *Joint Airdrop Inspection Record (Containers),* or appropriate DD Form 1748, *Joint Airdrop Inspection Record (Platforms)*, DD Form 1748-2, *Airdrop Malfunction Report (Personnel-Cargo)*, and DD Form 1748-3, *Joint Airdrop Summary Report*).

Rigged load data must be verified.

NOT SHOWN
PHOTO NOT AVAILABLE

RIGGED LOAD DATA

Weight……..……..……..……..1,980 pounds
Height……..52 inches
Length……..……..48 inches
Width……..48 inches
Center of Balance……..…24 inches

Figure 3-8. Four 55-gallon collapsible water drums in an A-22 container rigged for low-velocity airdrop

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Chapter 4

Rigging 55-Gallon Collapsible Water Drum in Four A-22 Cargo Bags on an 8-Foot, Type V platform for Low-Velocity Airdrop

DESCRIPTION OF LOAD

4-1. The 55-gallon collapsible water drum is a durable, non-vented, cylindrically shaped rubber container fitted with a faucet valve. Four drums are rigged in an A-22 cargo bag, and four A-22 containers are rigged on an 8-foot, type V platform for low-velocity airdrop. Filled with 50 gallons of water, each drum weighs 465 pounds. Any parts or other information needed on the drums can be found in TM 10-8110-201-14 & P.

RIGGING PROCEDURES

4-2. If A-22 containers with 55-gallon collapsible water drums are to be rigged on an 8-foot, type V platform, rig four A-22 cargo bags according to paragraphs 1-2 and 1-7. Do NOT add the 48-by48-inch skid boards, the four layers of honeycomb, and the G-12 parachutes. Rig the platform load according to TM 4-48.12/MCRP 4-11.3K/TO 13C7-1-8 using the procedures for rigging bulk supplies in A-22 cargo bags on an 8-foot type V platform.

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Chapter 5

Rigging Three 250-Gallon Collapsible Water Drums on an 8-Ft, Type V platform for Low-Velocity Airdrop

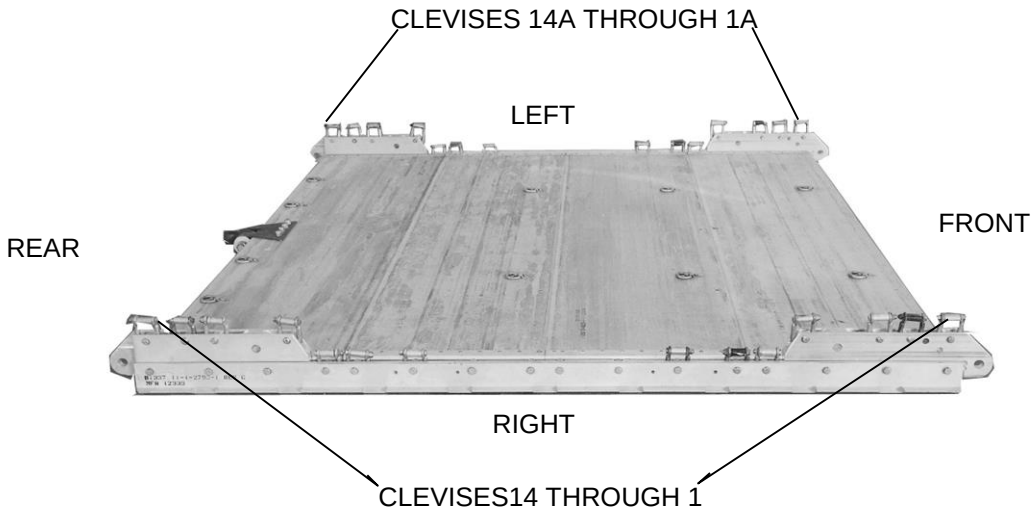
DESCRIPTION OF LOAD

5-1. Three drums are rigged on an 8-foot, type V platform with two G-11B cargo parachutes. Filled with 240 gallons of potable water, each drum weighs 2,197 pounds and is 60 inches long and 40 inches in diameter. Each drum weighs 205 pounds when empty. Any parts or other information needed on the drums can be found in TM 10-8110-201-14 & P.

PREPARING PLATFORM

5-2. Three drums are rigged on an 8-foot, type V platform with two G-11B cargo parachutes. Filled with 240 gallons of potable water, each drum weighs 2,197 pounds and is 60 inches long and 40 inches in diameter. Each drum weighs 205 pounds when empty. Any parts or other information needed on the drums can be found in TM 10-8110-201-14 & P. Figure 5-1 displays platform preparation requirements.

Note. 1. The nose bumper may or may not be installed.
2. Measurements are given in this section are from the front edge of the platform, NOT from the front edge of the nose bumper.



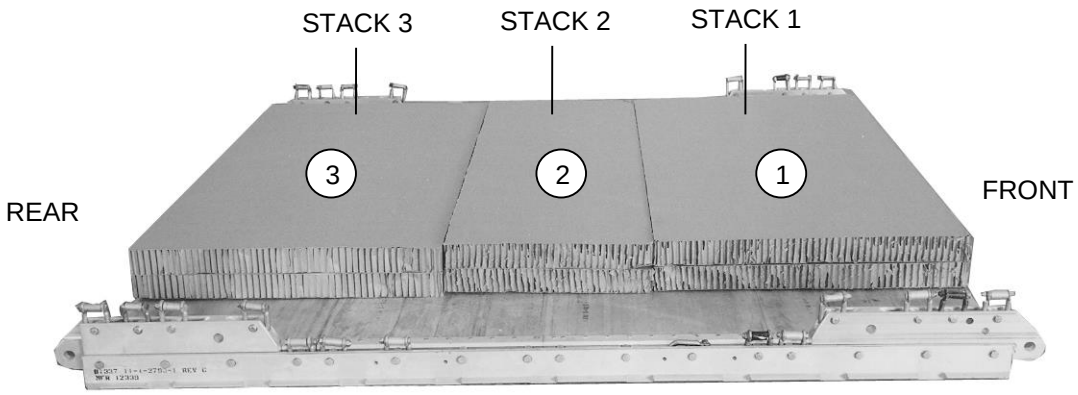
Step:

1. Inspect, or assemble and inspect, the platform according to TM 10-1670-268-20&P/TO 13C7-52-22.
2. Install a tandem link on the front of each platform side rail using holes 1, 2, and 3.
3. Install a tandem link on the rear of each platform side rail using holes 14, 15, and 16.
4. Install a tie-down clevis on bushings 1, 2, 3, and 4 on each front tandem link.
5. Starting at the front of each platform side rail, install a tie-down clevis to the bushings bolted to holes 4, 5, 6, 11, 12, and 13.
6. Install a tie-down clevis to bushings 1, 2, 3, and 4 on each rear tandem link.
7. Starting at the front of the platform, number the clevises bolted to the right side from 1 through 14 and those bolted to the left side from 1A through 14A.
8. Label the tie-down rings according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.

Figure 5-1. Platform prepared

PREPARING AND POSITIONING HONEYCOMB

5-3. Prepare and position the honeycomb on the platform as shown in Figure 5-2.



① Cut two 72- by 36-inch pieces of honeycomb. Center stack 1 flush with the front edge of the platform.

② Cut two 72- by 24-inch pieces of honeycomb. Center stack 2 flush with the rear edge of stack 1.

③ Cut two 72- by 36-inch pieces of honeycomb. Center stack 3 flush with the rear edge of the platform.

Figure 5-2. Honeycomb placed on platform

INSTALLING LIFTING SLINGS

5-4. Install the lifting slings to each drum using two 3-foot (2-loop) and two 9-feet (2-loop), type XXVI nylon webbing slings.

POSITIONING AND LASHING DRUMS

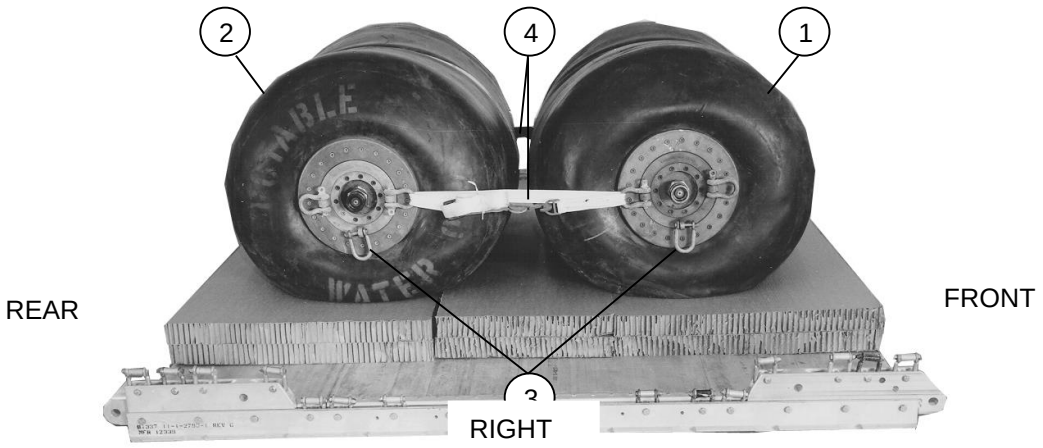
5-5. Position and lash the drums as shown in Figures 5-3.

POSITIONING DRUMS

5-6. Position the drums on the platform as shown in Figures 5-3 and 5-4.

LASHING DRUMS TOGETHER

5-7. Lash the drums together as shown in Figure 5-3.



① Center a drum on the front pieces of honeycomb.

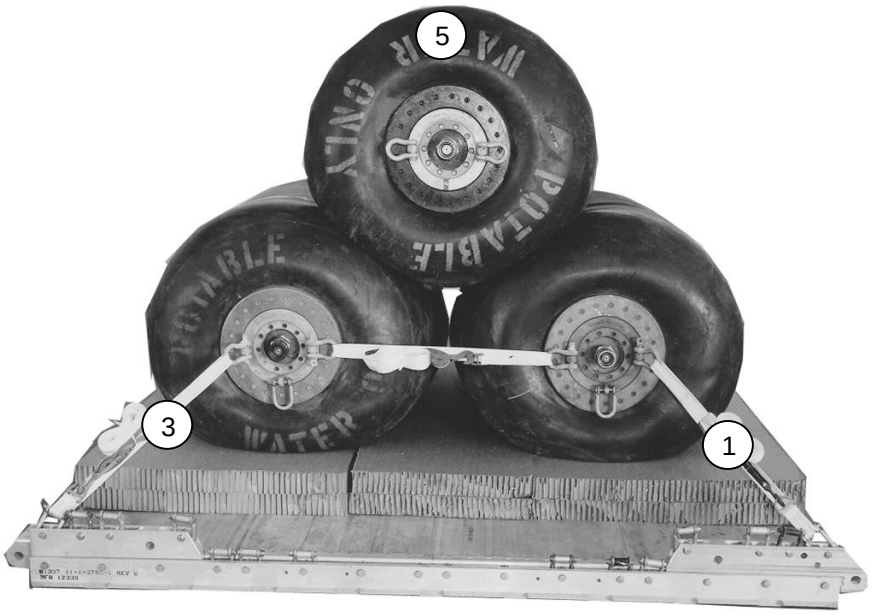
② Center a drum on the rear pieces of honeycomb.

Note. Remove all lifting slings.

③ Bolt a load tie-down clevis to the bottom shackle of each drum.

④ Lash the two drums together with a 15-foot tie-down assembly on each side. Pass the lashing through the inside shackles of the drums on each side.

Figure 5-3. Drums positioned and lashed together



① Pass a 15-foot tie-down assembly through clevis 1 and then through the right front shackle of the front drum.

② Pass a 15-foot tie-down assembly through clevis 1A and then through the left front shackle of the front drum (not shown).

③ Pass a 15-foot tie-down assembly through clevis 14 and then through the right rear shackle of the rear drum.

④ Pass a 15-foot tie-down assembly through clevis 14A and then through the left rear shackle of the rear drum (not shown).

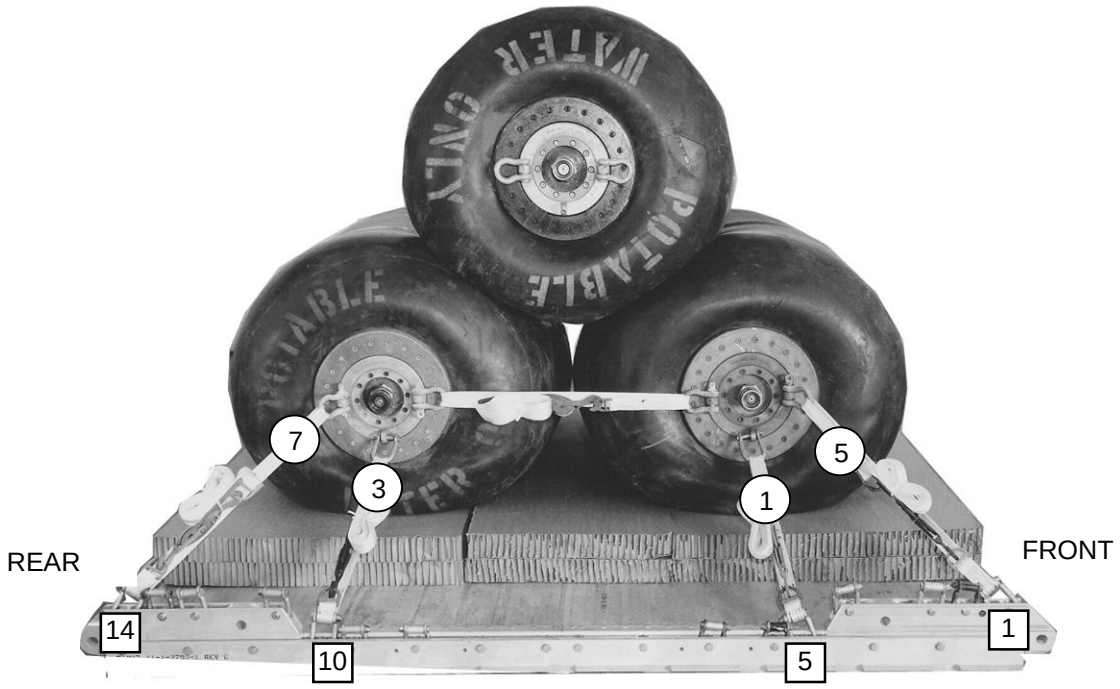
⑤ Center a drum on top of the first two drums, and remove slings.

Note. Make sure the shackles on the drums are parallel to the platform before installing.

Figure 5-4. Center drum positioned

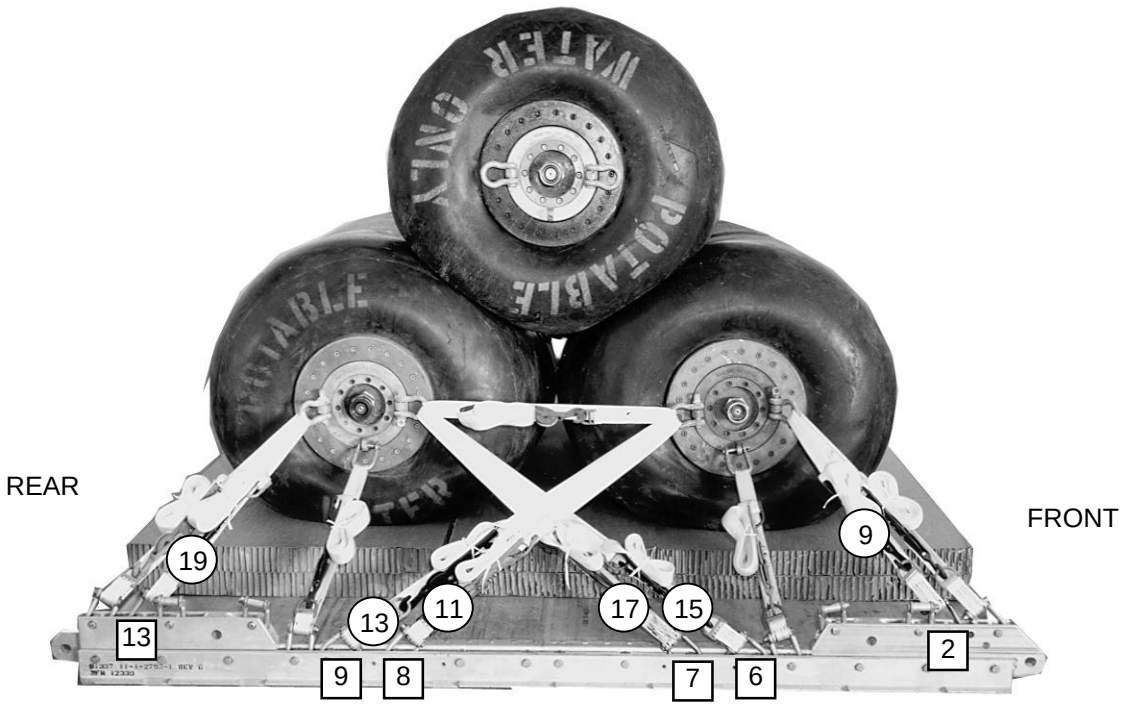
LASHING DRUMS TO THE PLATFORM

5-8. Use twenty-eight 15-foot tie-down assemblies to lash the drums to the platform as shown in Figures 5-5, through Figure 5-7 according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.



Lashing Number	Clevis Number	Instructions
		Pass lashing:
1 and 2	5 and 5A	Through the bottom of the clevis of the front drum.
3 and 4	10 and 10A	Through the bottom clevis of the rear drum.
*5 and 6	1 and 1A	Through the front shackle of the front drum.
*7 and 8	14 and 14A	Through the rear shackle of the rear drum.
*Lashings were previously installed.		

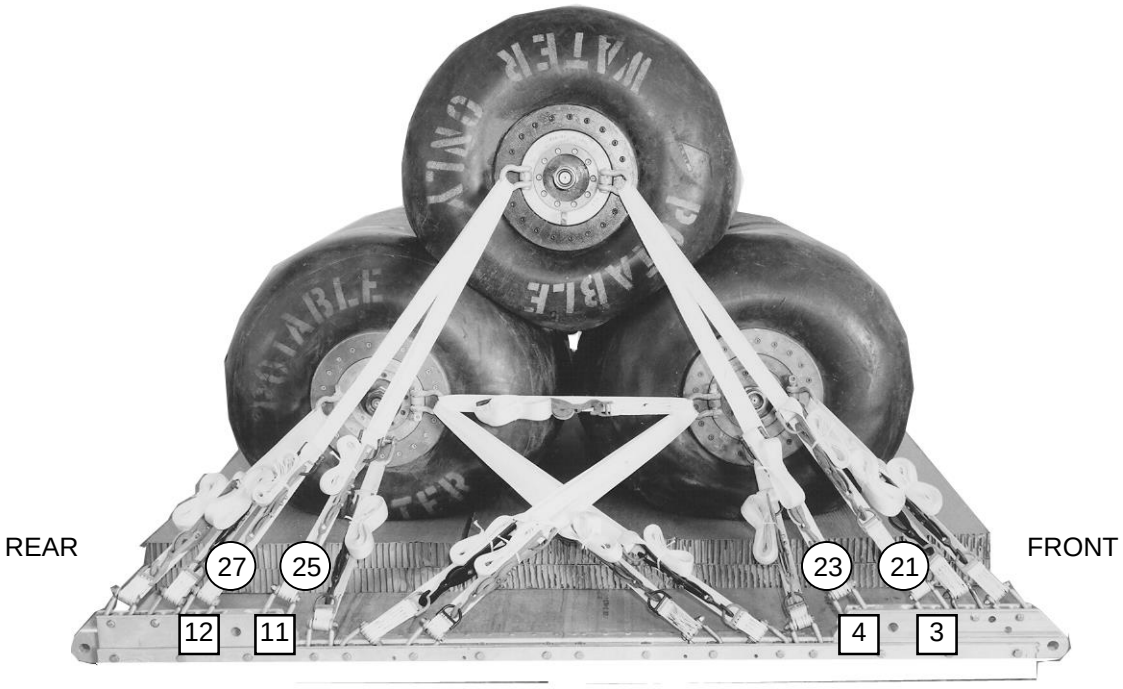
Figure 5-5. Lashings 1 through 8 installed



Lashing Number	Clevis Number	Instructions
		Pass lashing:
9 and 10	2 and 2A	Through the front shackle of the front drum.
11 and 12	8 and 8A	Through the rear shackle of the front drum.
13 and 14	9 and 9A	Through the rear shackle of the front drum.
15 and 16	6 and 6A	Through the front shackle of the rear drum.
17 and 18	7 and 7A	Through the front shackle of the rear drum.
19 and 20	13 and 13A	Through the rear shackle of the rear drum.

Figure 5-6. Lashings 9 through installed

Note. Secure the ends of the lashings with D-rings and load binders according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.

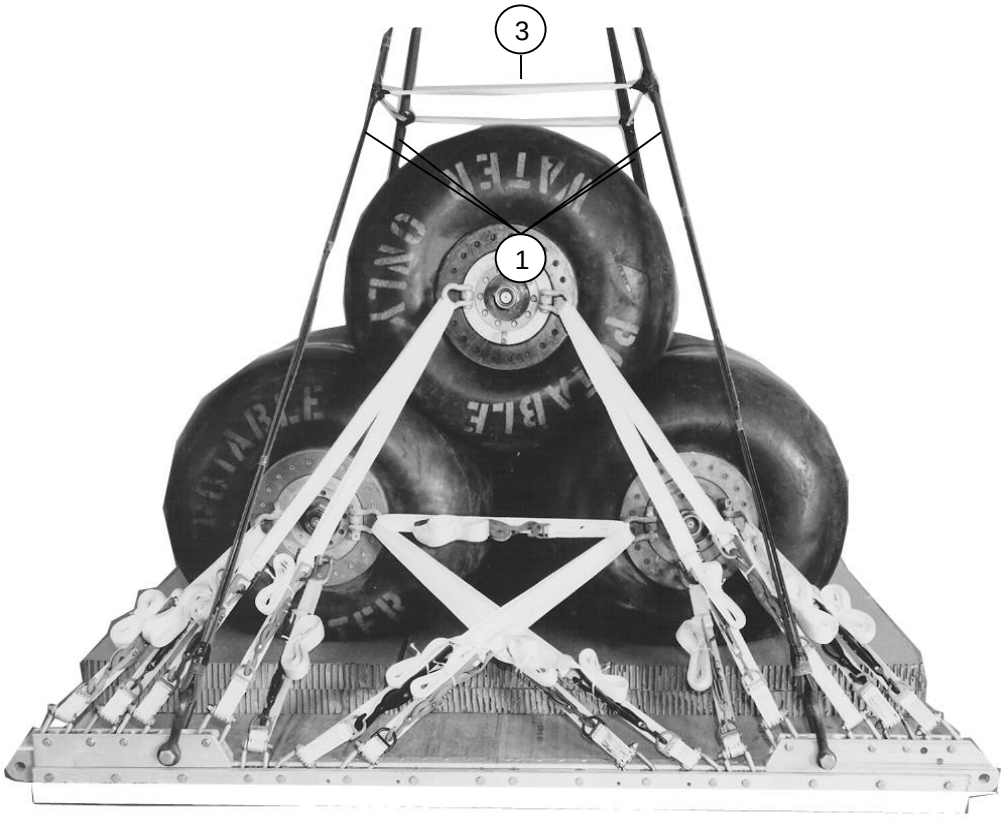


Lashing Number	Clevis Number	Instructions
		Pass lashing:
21 and 22	3 and 3A	Through the front shackle of the center drum.
23 and 24	4 and 4A	Through the front shackle of the center drum.
25 and 26	11 and 11A	Through the rear shackle of the center drum.
27 and 28	12 and 12A	Through the rear shackle of the center drum.

Figure 5-7. Lashings 21 through 28 installed

INSTALLING AND SAFETYING SUSPENSION SLINGS

5-9. Install four large suspension clevises and four 12-foot (2-loop), type XXVI nylon webbing slings to the tandem links as shown in Figure 5-8.



① Bolt a 12-foot sling to each tandem link using a large suspension clevis

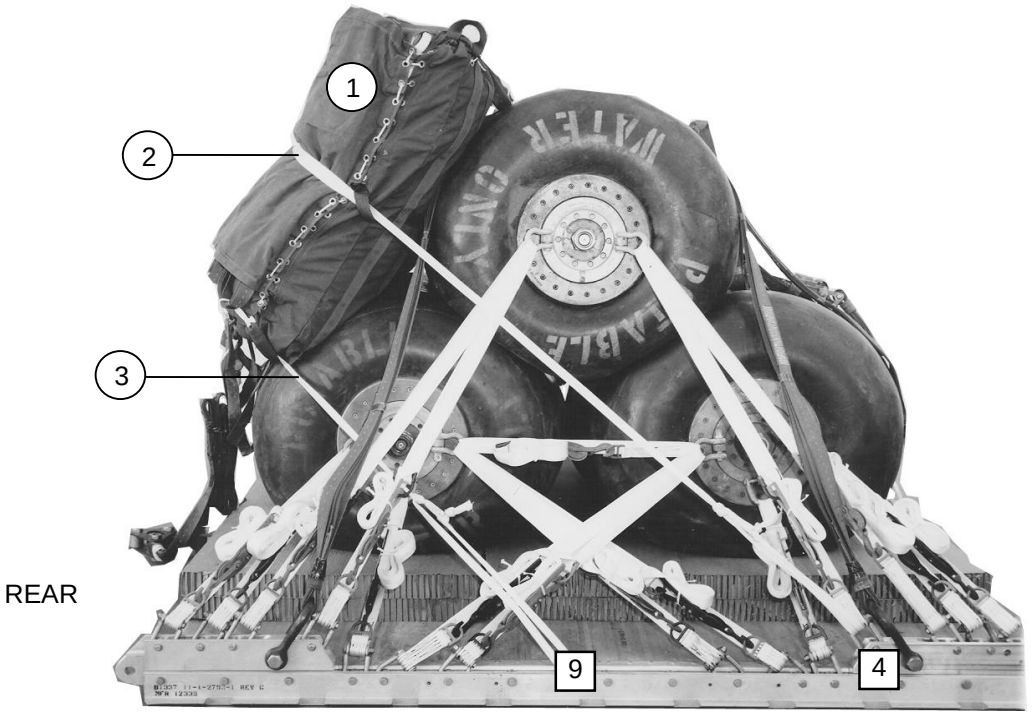
② Raise the suspension slings to their full length using a lifting provision (not shown).

③ Safety the slings with a dead man's tie according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.

Figure 5-8. Suspension slings installed

STOWING CARGO PARACHUTES

5-10. Prepare, place, and restrain two G-11B cargo parachutes according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figures 5-9 and 5-10.



① Place the cargo parachutes on top of the rear drum.

NOTICE OF EXCEPTION

As an exception to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 parachute restraint system, two restraints will be on this load.

② Restrain the parachutes according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 using two lengths of type VIII nylon webbing. Attach one length of webbing to clevises 4 and 4A.

③ Attach the second length of webbing as shown above and according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 to bushings 9 and 9A.

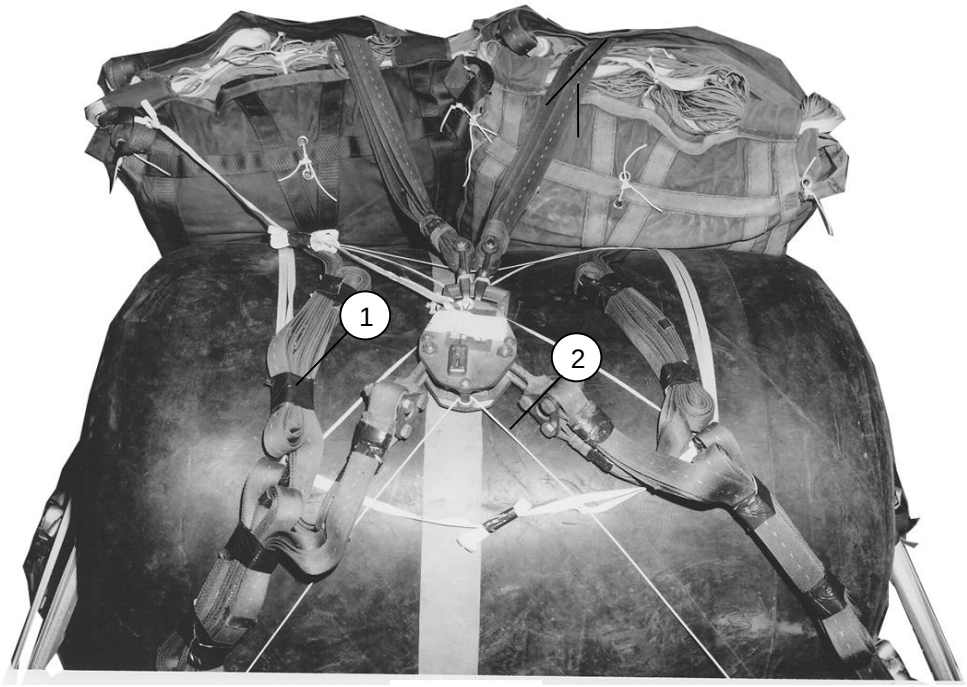
Figure 5-9. Parachute restraint straps installed

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

Figure 5-10. Parachute release straps installed

INSTALLING PARACHUTE RELEASE SYSTEM

5-11. Prepare and attach an M-1 cargo parachute release according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figure 5-11.



REAR

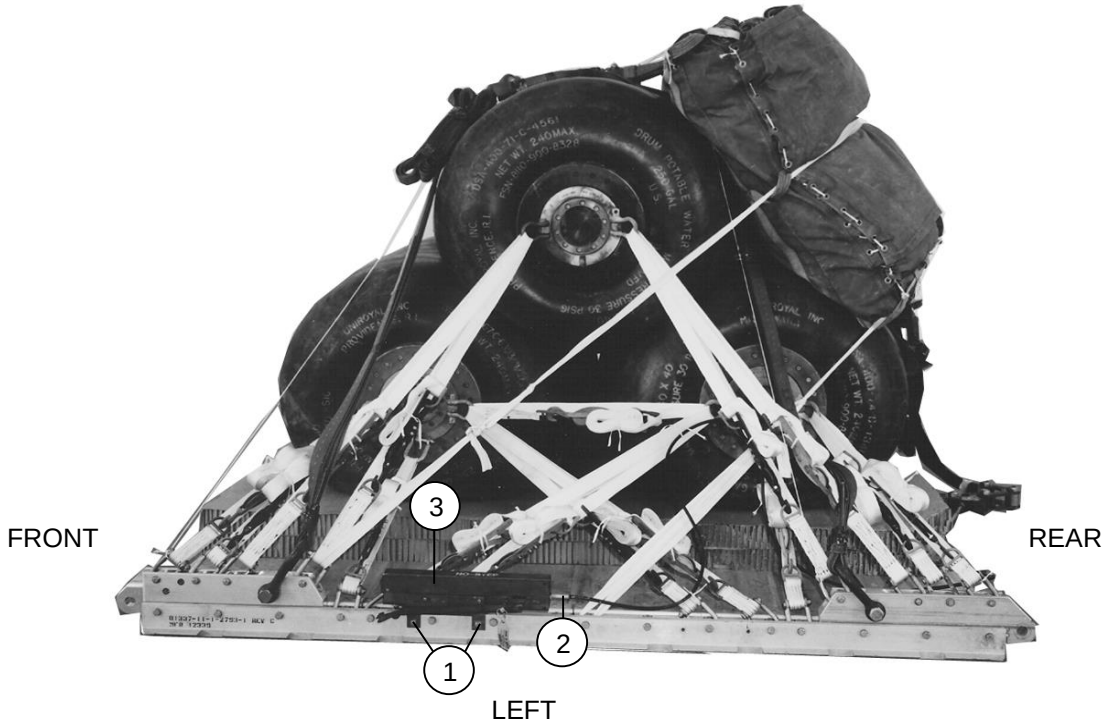
① Place the M-1 cargo parachute release on top of the drum as shown, and attach it according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5. S-fold and tape or tie the slings with type I, ¼-inch cotton webbing.

② Secure the M-1 cargo parachute release according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 with a length of type III nylon cord.

Figure 5-11. Parachute release attached

INSTALLING EXTRACTION SYSTEM

5-12. Install the extraction force transfer coupling system according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figures 5-12a and 5-12b.



① Install the actuator mounting brackets to the front extraction force transfer coupling system mounting holes on the left platform side rail.

② Install a 12-foot cable to the actuator assembly.

③ Attach the actuator assembly to the mounting brackets.

Figure 5-12a. Extraction force transfer coupling system installed

REAR

① Secure the cable to the inside of the lashings and tie-down ring D4 with type I, ¼-inch cotton webbing.

② Use a 9-foot (2-loop), type XXVI nylon webbing sling for the deployment line. S-fold the excess line, and tie with type I, ¼-inch cotton webbing.

Figure 5-12b. Extraction force coupling system installed (continued)

PLACING EXTRACTION PARACHUTE

5-13. Place the extraction parachute as described below.

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

- **C-17 AIRCRAFT.** Place a 22-foot cargo extraction parachute and a 140-foot (3-loop), type XXVI nylon webbing extraction line on the load for installation in the aircraft.

CAUTION

The extraction line will be a continuous 140-foot (3-loop), type XXVI nylon webbing extraction line. Shorter lines will not be used to form the 140-foot extraction line.

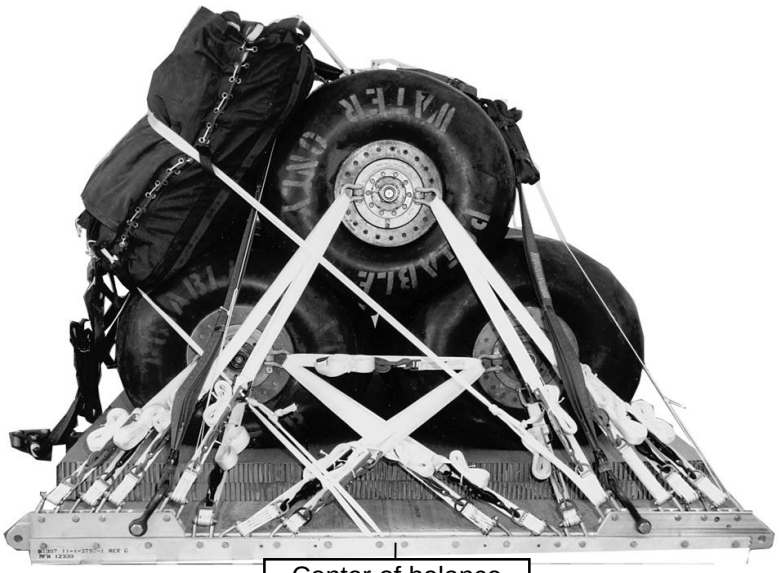
Note. Sling/extraction line bags must be used.

MARKING RIGGED LOAD

5-14. Mark the rigged load according to FM4-20.102/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5, and as shown in Figure 5-13. Comply with the Shipper's requirements for Declaration of Dangerous/Hazardous Goods in accordance with AFMAN 24-204/TM 38-250/ NAVSUP PUB 505; MCO P4030.19I; DLAI 4145.3 DCMAD1, CH3.4 (HM24). If the load varies from the one shown, the weight, height, CB, and parachute requirements must be recomputed.

CAUTION

Make the final rigger inspection required by AR 59-4 (Using DD Form 1748, *Joint Airdrop Inspection Record (Platforms),* or appropriate DD Form 1748-1, *Joint Airdrop Inspection Record (Containers)*, DD Form 1748-2, *Airdrop Malfunction Report (Personnel-Cargo)*, and DD Form 1748-3, *Joint Airdrop Summary Report*).



RIGGED LOAD DATA		
Weigh t	Load shown……..	8,300 pounds
	Maximum Load Allowed….	9,000 pounds
Height	…….	77 inches
Width	…….	108 inches
Overhang:	Front……	None
	Rear……	None
Center of balance	…….	50 inches

Figure 5-13. Three 250-gallon water drums rigged on an 8-foot, type V platform for low-velocity airdrop

EQUIPMENT REQUIRED

5-15. Use the equipment listed in Table 5-1 to rig this load.

Table 5-1. Equipment required for rigging three 250-gallon water drums for low-velocity airdrop on a 8-foot, type V platform

National Stock Number	Item	Quantity
040-00-273-8713	Adhesive, Paste, 1-gallon	As Required
	Clevis, Suspension:	
4030-00-678-8562	¾-inch (Medium)	2
4030-00-090-5354	1-inch (Large)	5
4020-00-240-2146	Cord, Nylon, Type III, 550-pound	As Required
	Coupling:	
	Airdrop, Extraction Force Transfer with cable:	
1670-00-434-5783	12-feet	1
	Cover:	
1670-00-360-0328	Clevis, Large	2
1670-00-360-0329	Link Assembly, Type IV	1
8135-00-664-6958	Cushioning Material, Packaging, Cellulose Wadding	As Required
	Link Assembly:	
	Two Point:	
5306-00-435-8994	Bolt, 1-inch diameter, 4-inch long	(2)
5310-00-232-5165	Nut, 1-inch	(2)
1670-00-003-1953	w/Plate, Side, 3 ¾-inch	(2)
5365-00-007-3414	Spacer, Large	(2)
1670-00-783-5988	Type IV	1
1670-00-753-3928	Pad, Energy-Dissipating, Honeycomb	
	3- by 36- by 96-inch:	6
	24- by 72-inch	(2)
	36- by 72-inch	(4)
	Parachute:	
	Cargo:	
1670-01-016-7841	G-11B	2
	Cargo Extraction:	
	22-feet	1
1670-01-063-3716	Platform, Air drop, Type V, 8-feet	

Table 5-1. Equipment required for rigging three 250-gallon water drums for low-velocity airdrop on a 8-foot, type V platform (continued)

National Stock Number	Item	Quantity
	Bracket:	1
1670-01-162-2375	Inside Extraction Force Transfer Coupling (EFTC)	(1)
1670-01-162-2374	Outside EFTC	(1)
1670-01-162-2372	Clevis Assembly (Type V)	(32)
1670-01-162-2376	Extraction Bracket Assembly	(1)
1670-01-162-2381	Tandem Link (Multi-purpose)	(4)
1670-01-097-8816	Release, Cargo Parachute: M-1	1
	Sling, Cargo Airdrop:	
1670-01-062-6304	For Deployment Line: 9-foot (2-loop), Type XXVI Nylon Webbing	1
1670-01-062-6313	For Extraction:	
1670-01-107-7651	60-foot (3-loop), type XXVI Nylon Webbing (Use with 22-foot parachute for C-130)	1
	140-foot (3-loop), Type XXVI Nylon Webbing (Use with 22-foot parachute for C-17)	1
1670-01-062-6301	For Lifting and for Suspension:	2
1670-01-062-6304	3-foot (2-loop), Type XXVI Nylon Webbing	2
1670-01-062-6303	9-foot (2-loop), Type XXVI Nylon Webbing 12-foot (2-loop), Type XXVI Nylon Webbing	4
1670-01-062-6302	For Riser Extensions: 20-foot (2-loop), Type XXVI Nylon Webbing	2
1670-01-998-0116	Strap, Multi-Knife Parachute Release	2
7510-00-266-6710	Tape, Adhesive, pressure sensitive adhesive, Cloth Back, 2-inch	As Required
1670-00-937-0271	Tape, Masking	As Required
8305-00-268-2411	Tie-Down Assembly, 15-foot	30
	Webbing:	As Required
	Cotton, ¼-inch, Type I	
	Nylon:	
8305-00-082-5752	Tubular: ½-inch, Natural	As Required
8305-00-268-2453	½-inch, Olive Drab	As Required
8305-00-263-3591	Type VIII	As Required

Chapter 6

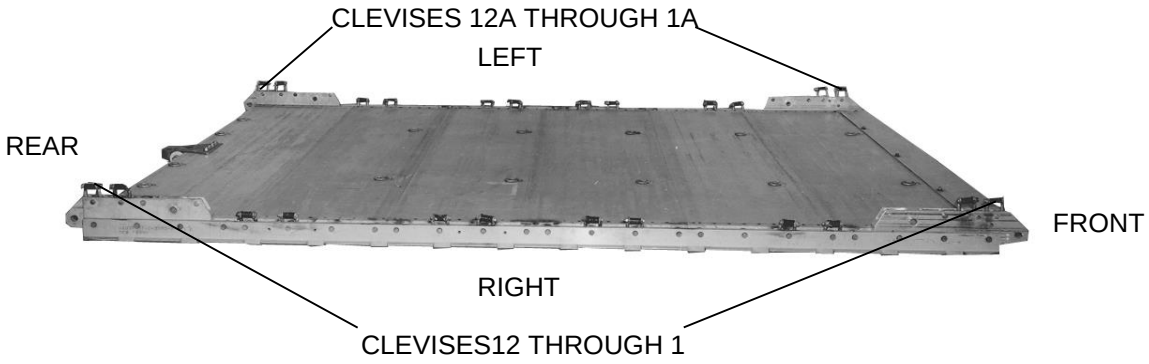
Rigging Three 250-Gallon Collapsible Water Drums on a 12-Ft, Type V platform for Low-Velocity Airdrop

DESCRIPTION OF LOAD

6-1. Three drums are rigged on a 12-foot, type V platform with two G-11B cargo parachutes. Filled with 240 gallons of potable water, each drum weighs 2,197 pounds and is 60 inches long and 40 inches in diameter. Each drum weighs 205 pounds when empty. Any parts or other information needed on the drums can be found in TM 10-8110-201-14&P.

PREPARING PLATFORM

6-2. Prepare a 12-foot, type V platform using four tandem links and 24 clevises as shown in Figure 6-1.



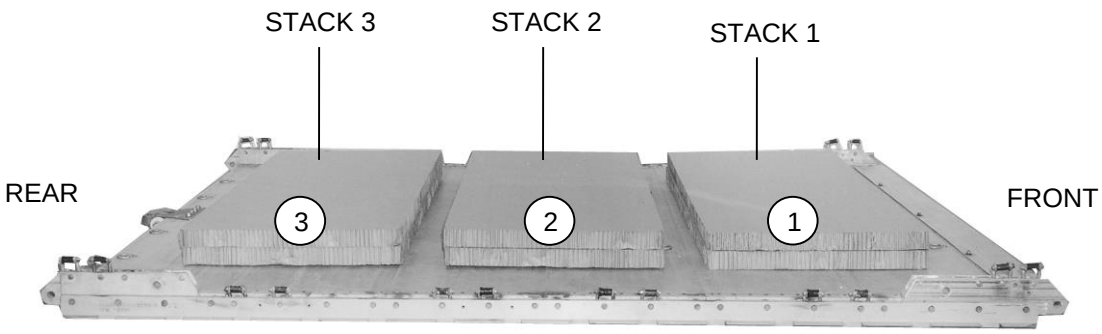
Step:

1. Inspect, or assemble and inspect, the platform according to TM 10-1670-268-20&P/TO 13C7-52-22.
2. Install a tandem link on the front of each platform side rail using holes 1, 2, and 3.
3. Install a tandem link on the rear of each platform side rail using holes 22, 23, and 24.
4. Install a tie-down clevis on bushings 1 and 2 on each front tandem link.
5. Starting at the front of each platform side rail, install a tie-down clevis to the bushings bolted to holes 5, 6, 10, 11, 14, 15, 19, and 20.
6. Install a tie-down clevis to bushings 3 and 4 on each rear tandem link.
7. Starting at the front of the platform, number the clevises bolted to the right side from 1 through 12 and those bolted to the left side from 1A through 12A.
8. Label the tie-down rings according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.

Figure 6-1. Platform prepared

PREPARING AND POSITIONING HONEYCOMB

6-3. Prepare and position the honeycomb on the platform as shown in Figure 6-2.



① Cut two 72- by 36-inch pieces of honeycomb for stack 1. Center the stack 11 inches from the front edge of the platform.

② Cut two 72- by 36-inch pieces of honeycomb for stack 2. Center the stack 7 inches from stack 1.

③ Cut two 72- by 36-inch pieces of honeycomb for stack 3. Center the stack 11 inches from the rear edge of the platform.

Figure 6-2. Honeycomb prepared and positioned

INSTALLING LIFTING SLINGS

6-4. Install the lifting slings to each drum using two 3-foot (2-loop) and two 9-foot (2-loop), type XXVI nylon webbing slings as shown in Figure 6-3.

POSITIONING AND LASHING DRUMS TOGETHER

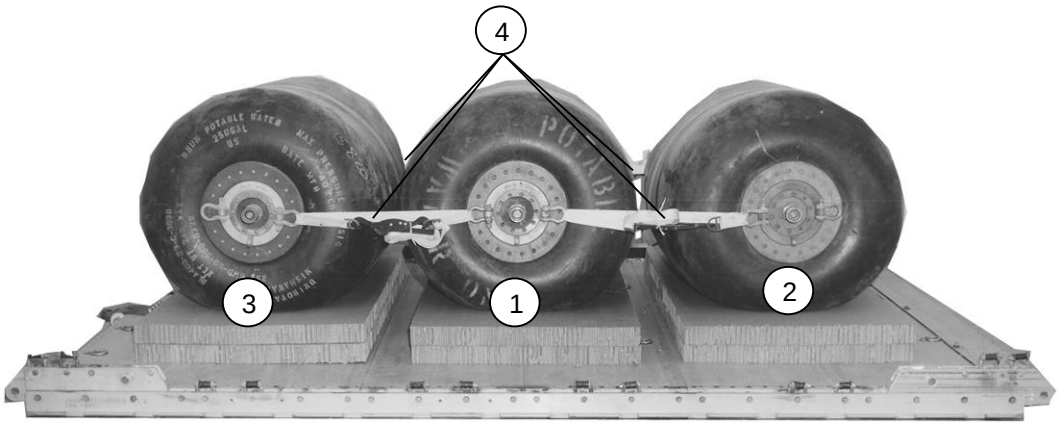
6-5. Position and lash the drums as described below.

POSITIONING DRUMS

6-6. Position the drums on the platform as shown in Figure 6-3.

LASHING DRUMS TOGETHER

6-7. Lash the drums together as shown in Figure 6-3.



① Center a drum on honeycomb stack 2, and remove the slings.

② Center a drum on honeycomb stack 1.

③ Center a drum on honeycomb stack 3.

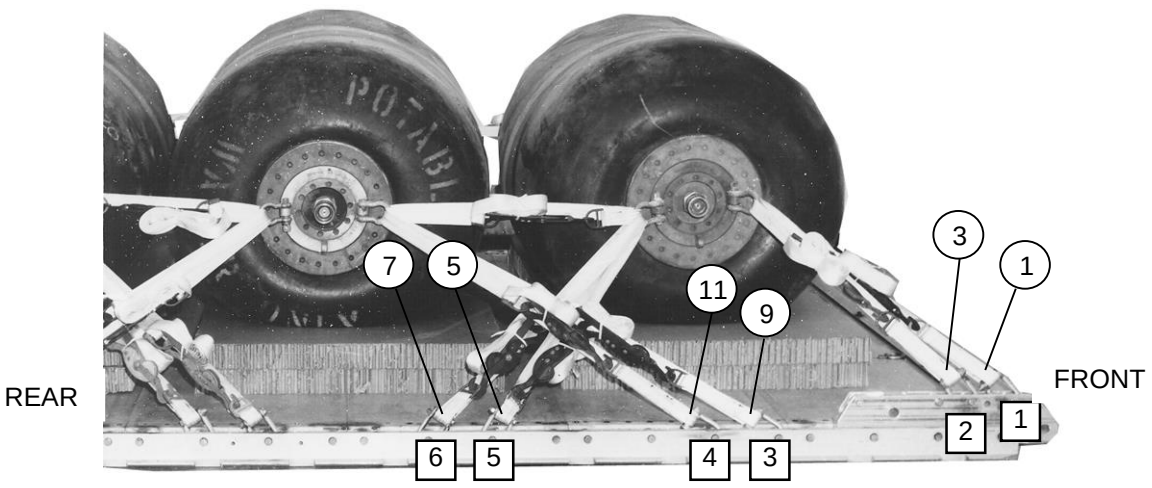
Note. Make sure the shackles on the drums are parallel to the platform before installing the lashings.

④ Lash the three drums together with four 15-foot tie-down assemblies. Pass the lashings through the inboard shackles of the outside drums and the shackles of the center drum.

Figure 6-3. Drums positioned and lashed together

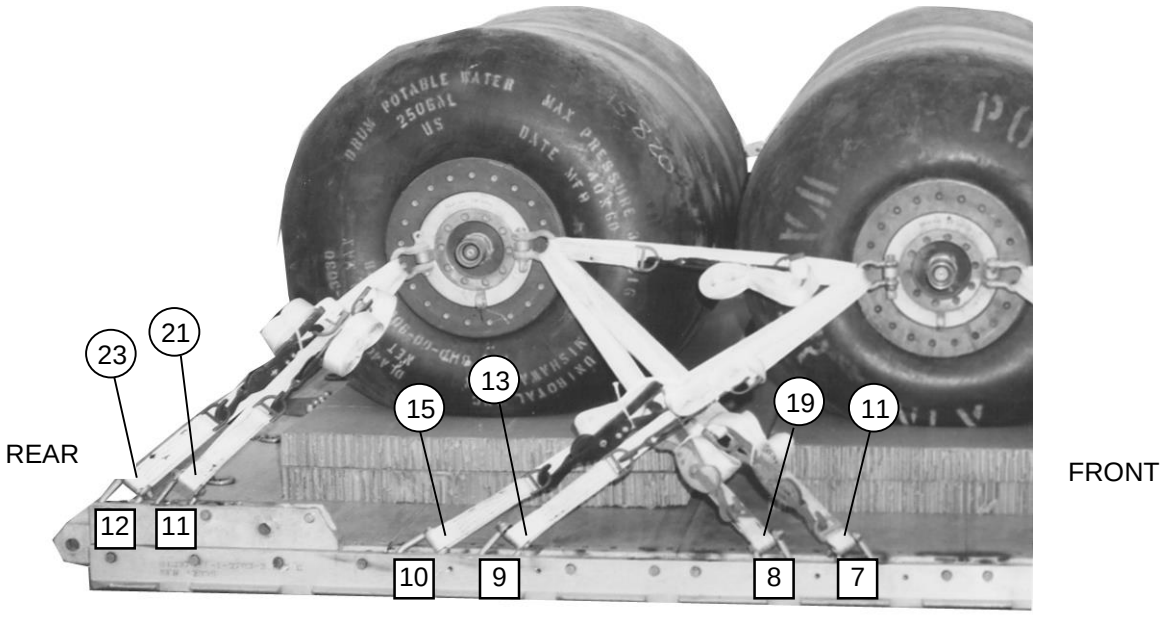
LASHING DRUMS TO THE PLATFORM

6-8. Use twenty-four 15-foot tie-down assemblies to lash the drums to the platform as shown in Figures 6-4 and 6-5 and according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.



Lashing Number	Clevis Number	Instructions
		Pass lashing:
		FIRST DRUM
1 and 2	1 and 1A	Through the front shackle of the first drum.
3 and 4	2 and 2A	Through the front shackle of the first drum.
5 and 6	5 and 5A	Through the rear shackle of the first drum.
7 and 8	6 and 6A	Through the rear shackle of the first drum.
		SECOND DRUM
9 and 10	3 and 3A	Through the front shackle of the second drum.
11 and 12	4 and 4A	Through the front shackle of the second drum.

Figure 6-4. Lashings 1 through 12 installed

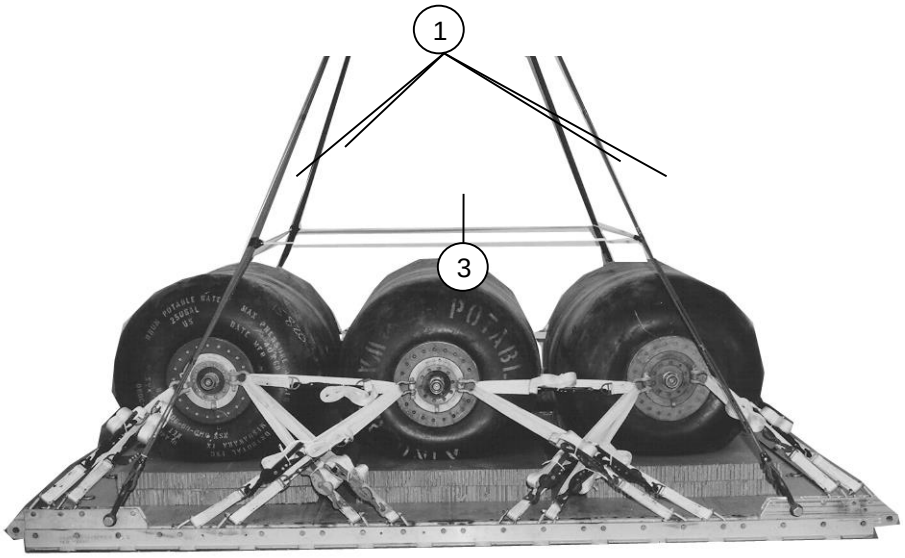


Lashing Number	Clevis Number	Instructions
		Pass Lashing:
		SECOND DRUM (Continued)
13 and 14	9 and 9A	Through the rear shackle of the second drum.
15 and 16	10 and 10A	Through the rear shackle of the second drum.
		THIRD DRUM
17 and 18	7 and 7A	Through the front shackle of the third drum.
19 and 20	8 and 8A	Through the front shackle of the third drum.
21 and 22	11 and 11A	Through the rear shackle of the third drum.
23 and 24	12 and 12A	Through the rear shackle of the third drum.

Figure 6-5. Lashings 13 through 24 installed

INSTALLING AND SAFETYING SUSPENSION SLINGS

6-9. Install four large suspension clevises and four 12-foot (2-loop), type XXVI nylon webbing slings to the tandem links as shown in Figure 6-6.



① Bolt a 12-foot sling to each tandem link using a large suspension clevis.

② Raise the suspension slings to their full length using a lifting provision (not shown).

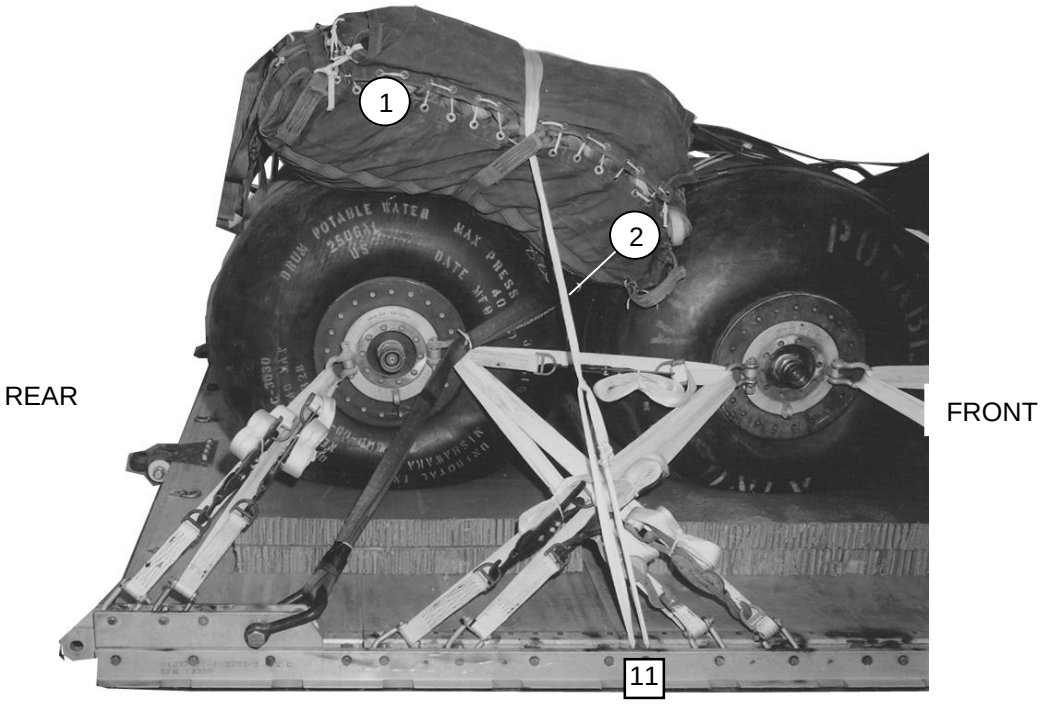
③ Safety the slings with a dead man's tie according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.

④ Secure each sling to the inboard shackles of the first and third drums with a one turn single length of type I, ¼-inch cotton webbing (not shown).

Figure 6-6. Suspension slings installed

STOWING CARGO PARACHUTES

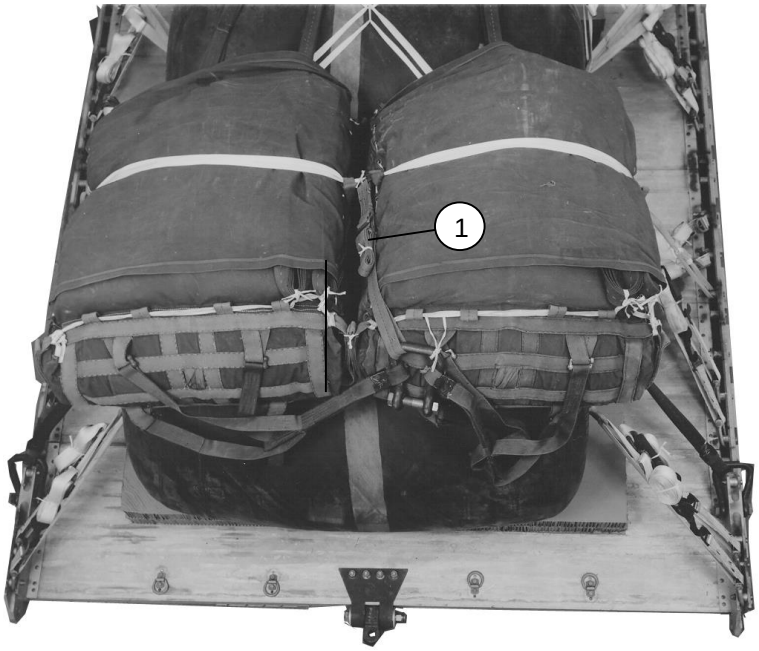
4-3. Prepare, place, and restrain two G-11B cargo parachutes according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figure 6-7and Figure 6-8.



① Place the cargo parachutes on top of the rear drum.

② Restrain the parachutes according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 using a length of type VIII nylon webbing. Attach a length of webbing to clevises 11 and 11A according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.

Figure 6-7. Parachute restraint strap installed

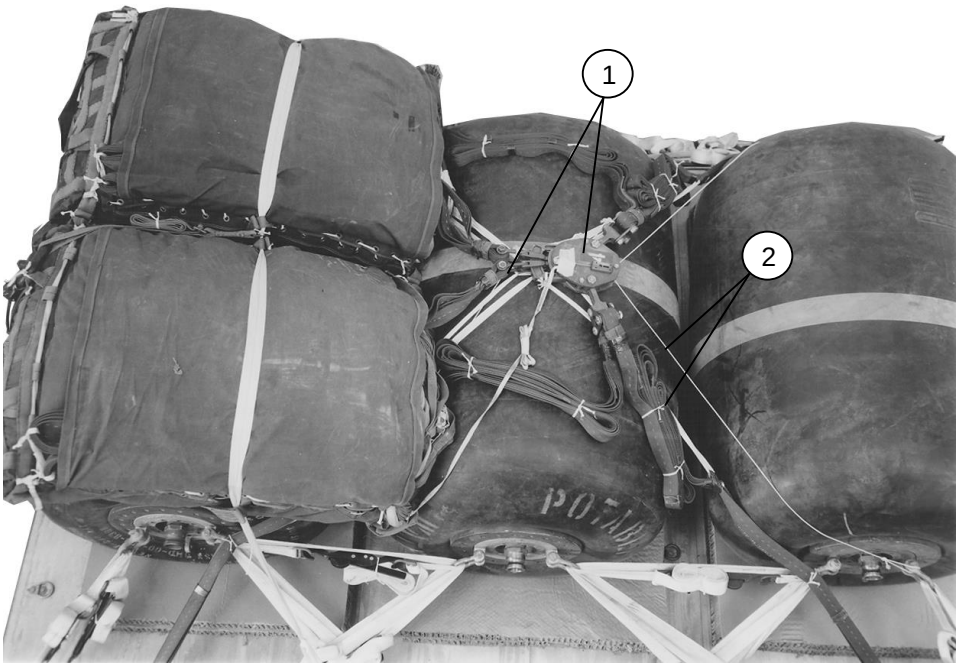


① Install a parachute release strap according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.

Figure 6-8. Parachute release strap installed

INSTALLING PARACHUTE RELEASE SYSTEM

6-10. Prepare and attach an M-1 cargo parachute release according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figure 6-9.



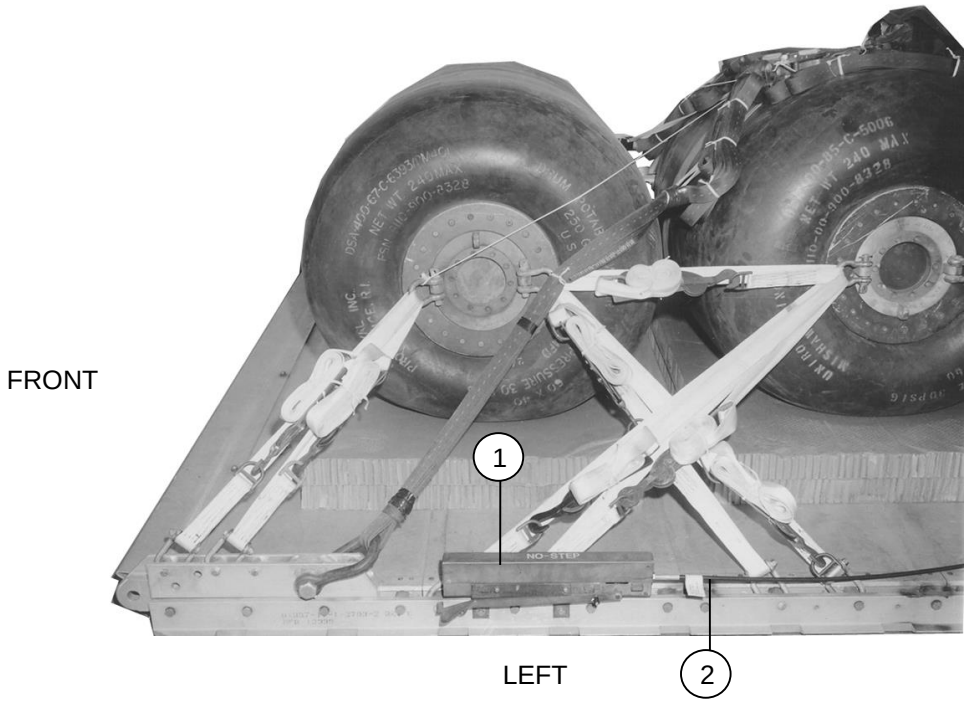
① Place the M-1 cargo parachute release on top of the drum as shown, and attach it according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5. S-fold and tape or tie the slings with type I, ¼-inch cotton webbing.

② Secure the M-1 cargo parachute release according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 with a length of type III nylon cord.

Figure 6-9. Parachute release attached

INSTALLING EXTRACTION SYSTEM

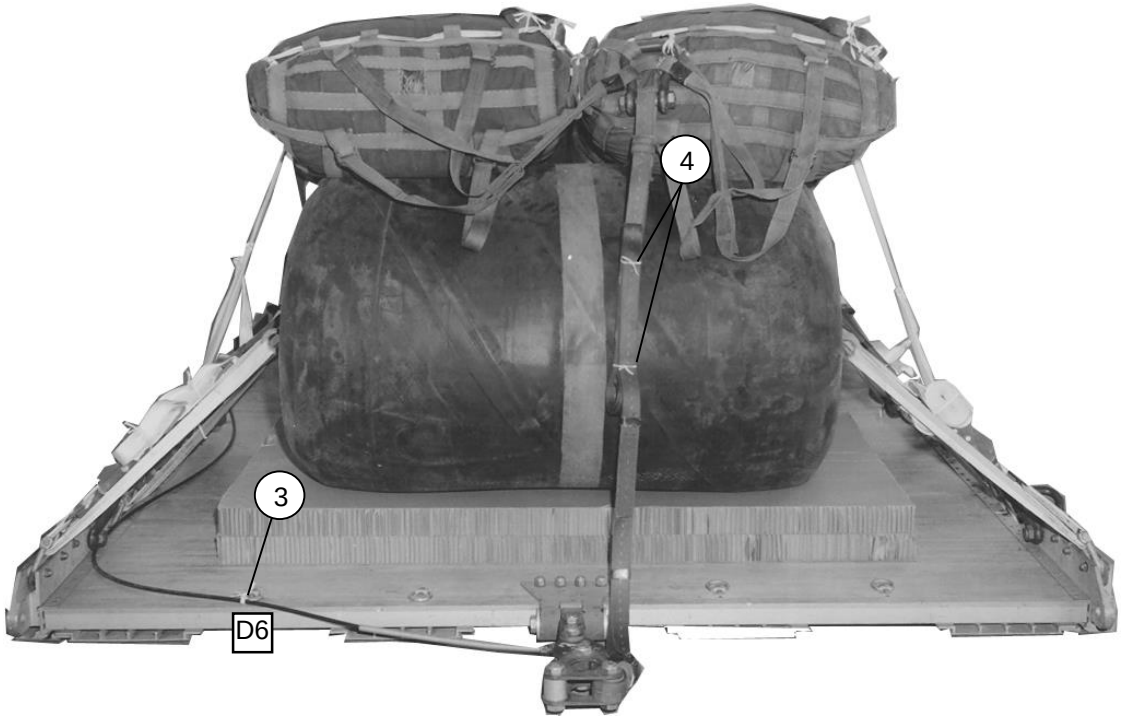
6-11. Install the extraction force transfer coupling system according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figures 6-10a and 6-10b.



① Install the components of the extraction force transfer coupling system according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5. Use the front mounting holes on the left side of the platform for the extraction force transfer coupling system brackets.

② Install a 12-foot extraction force transfer coupling system cable according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and safety the cable to convenient places on the platform with one turn of type I, ¼-inch cotton webbing.

Figure 6-10a. Extraction force transfer coupling system installed



REAR

① Secure the cable to tie-down ring D6 with type I, ¼-inch cotton webbing.

② 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 REV 1/TO 13C7-1-5 to be used as a deployment line. S-fold the excess and tie it in two places with type I, ¼-inch cotton webbing

Figure 6-10b. Extraction force transfer coupling system installed (continued)

PLACING EXTRACTION PARACHUTE

6-12. Place the extraction parachute as described below.

C-130 AIRCRAFT

6-13. Place a 22-foot cargo extraction parachute and a 60-foot (3-loop), type XXVI nylon webbing extraction line on the load for installation in the aircraft.

C-17 AIRCRAFT

6-14. Place a 22-foot cargo extraction parachute and a 140-foot (3-loop), type XXVI nylon webbing extraction line on the load for installation in the aircraft.

CAUTION

The extraction line will be a continuous 140-foot (3-loop), type XXVI nylon webbing extraction line. Shorter lines will not be used to form the 140-foot extraction line.

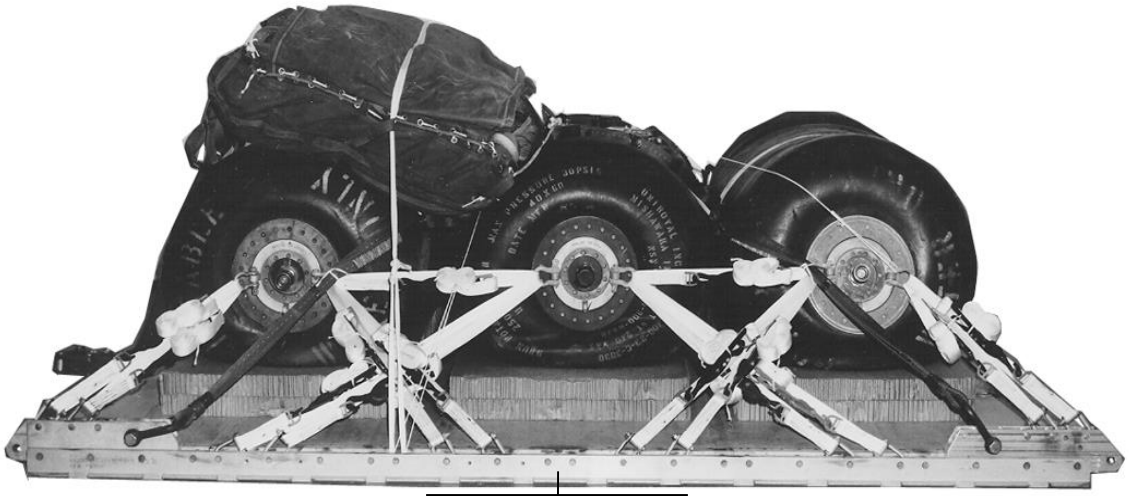
***Note*:** Sling/extraction line bags must be used.

MARKING RIGGED LOAD

6-15. Mark the rigged load according to FM 4-20.102/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5, and as shown in Figure 6-11. Comply with the Shipper's requirements for Declaration of Dangerous/Hazardous Goods in accordance with AFMAN 24-204/TM 38-250/ NAVSUP PUB 505; MCO P4030.19I; DLAI 4145.3 DCMAD1, CH3.4 (HM24). If the load varies from the one shown, the weight, height, CB, and parachute requirements must be recomputed.

CAUTION

Make the final rigger inspection required by AR 59-4 (Using DD Form 1748, *Joint Airdrop Inspection Record (Platforms),* or appropriate DD Form 1748-1, *Joint Airdrop Inspection Record (Containers)*, DD Form 1748-2, *Airdrop Malfunction Report (Personnel-Cargo)*, and DD Form 1748-3, *Joint Airdrop Summary Report*).



RIGGED LOAD DATA		
Weight	Load Shown……	8,760 pounds
	Maximum Load Allowed……	9,500 pounds
Height	……	60 inches
Width	……	108 inches
Length	……	162 inches
Overhang:	Front……	None
	Rear……	None
Center of balance	……	73 inches

Figure 6-11. Three 250-gallon water drums rigged on a 12-foot, type V platform for low-velocity airdrop

EQUIPMENT REQUIRED

6-16. Use the equipment listed in Table 6-1 to rig this load.

Table 6-1. Equipment required for rigging three 250-gallon water drums for low-velocity airdrop on a 12-foot, type V platform

National Stock Number	Item	Quantity
40-00-273-8713	Adhesive, Paste, 1-Gallon	As Required
	Clevis, Suspension:	
4030-00-678-8562	¾-inch (Medium)	2
4030-00-910-8354	1-inch (Large)	5
4020-00-240-2146	Cord, Nylon, Type III, 550-pound	As Required
	Coupling:	
	Airdrop, Extraction Force Transfer with Cable	
1670-00-434-5783	12-foot	1
	Cover:	
1670-00-360-0328	Clevis, Large	2
1670-00-360-0329	Link Assembly, Type IV	1
8135-00-664-6958	Cushioning Material, Packaging, Cellulose Wadding	As Required
	Link Assembly:	
	Two-Point:	1
5306-00-435-8994	Bolt, 1-inch diameter, 4-inch long	(2)
5310-00-232-5165	Nut, 1-inch, Hexagon	(2)
1670-00-003-1953	Plate, Side, 3 ¾-inch	(2)
5365-00-007-3414	Spacer, Large	(2)
1670-00-783-5988	Type IV	1
1670-00-753-3928	Pad, Energy-Dissipating, Honeycomb	
	3- by 36- by 96-inch:	6
	36- by 72-inch	(6)
	Parachute:	
	Cargo:	
1670-01-016-7841	G-11B	2
	Cargo Extraction:	
1670-01-063-3716	22-foot	1
	Platform, AIR DROP, Type V, 12-foot	1

Table 6-1. Equipment required for rigging three 250-gallon water drums for low-velocity airdrop on a 12-foot, type V platform (continued)

National Stock Number	Item	Quantity
	Bracket:	
1670-01-162-2375	Inside Extraction Force Transfer Coupling (EFTC)	(1)
1670-01-162-2374		(1)
1670-01-162-2372	Outside EFTC	(44)
1670-01-162-2376	Clevis, Assembly (Type V)	(1)
1670-01-162-2381	Extraction Bracket Assembly	(4)
	Tandem Link (Multi-purpose)	
1670-01-097-8816	Release, Cargo Parachute: M-1	1
	Sling, Cargo Airdrop:	
1670-01-062-6304	For Deployment Line: 9-foot (2-loop), Type XXVI Nylon Webbing	1
1670-01-062-6313	For Extraction: 60-foot (3-loop), Type XXVI Nylon Webbing (Use with 22-foot parachute for C-130)	1
1670-01-107-7651	140-foot (3-loop), Type XXVI Nylon Webbing (Use with 22-foot parachute for C-141)	1
1670-01-062-6301	For lifting and suspension:	2
1670-01-062-6304	3-foot (2-loop), Type XXVI Nylon Webbing	2
1670-01-062-6303	9-foot (2-loop), Type XXVI Nylon Webbing 12-foot (2-loop), Type XXVI Nylon Webbing	4
1670-01-062-6302	For Riser Extensions: 20-foot (2-loop), Type XXVI Nylon Webbing	2
1670-00-998-0116	Strap, Parachute Release	1
1670-00-998-5116	with V-Knife or with Fastener and Knife (Guillotine)	1
7510-00-266-5016	Tape, Adhesive, pressure sensitive adhesive, Cloth Back, 2-inch	As Required
7510-00-266-6710		As Required
1670-00-937-0271	Tape, Masking, 2-inch	28
8305-00-268-2411	Tie-Down Assembly, 15-foot	As Required
	Webbing:	
8305-00-082-5752	Cotton, ¼-inch, Type I	As Required
8305-00-268-2453	Tubular:	As Required
8305-00-263-3591	½-inch, Natural	As Required
	½-inch, Olive Drab Type VIII	

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Chapter 7

Rigging 600-GPH ROWPU on a 20-Foot, Type V Platform for Low-Velocity Airdrop

DESCRIPTION OF LOAD

7-1. The 600-GPH ROWPU, Figure 7-1, is rigged on a 20-foot, type V platform. The 600-GPH ROWPU consists of the equipment shown in Figure 7-1. The total rigged weight of the load is 21,780 pounds. The load is 101 inches high, 108 inches wide, 275 inches long, and the center of balance is 130 inches from the front edge of the platform. Refer to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 for the weight limitations and for the number of parachutes to be used.

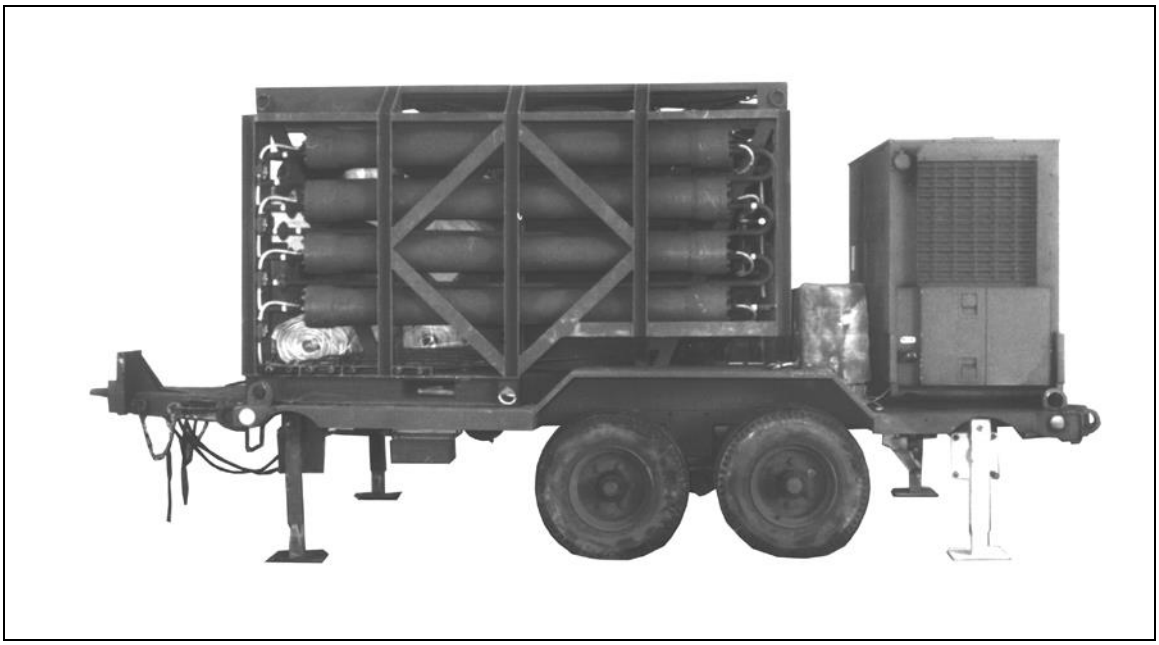
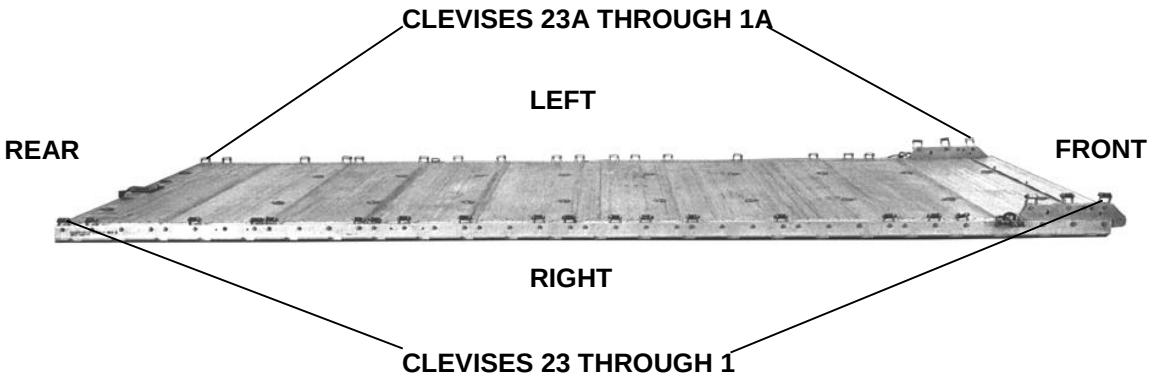


Figure 7-1 ROWPU

PREPARING PLATFORM

7-2. Prepare a 20-foot, type V platform as shown in Figure 7-2.



Step:

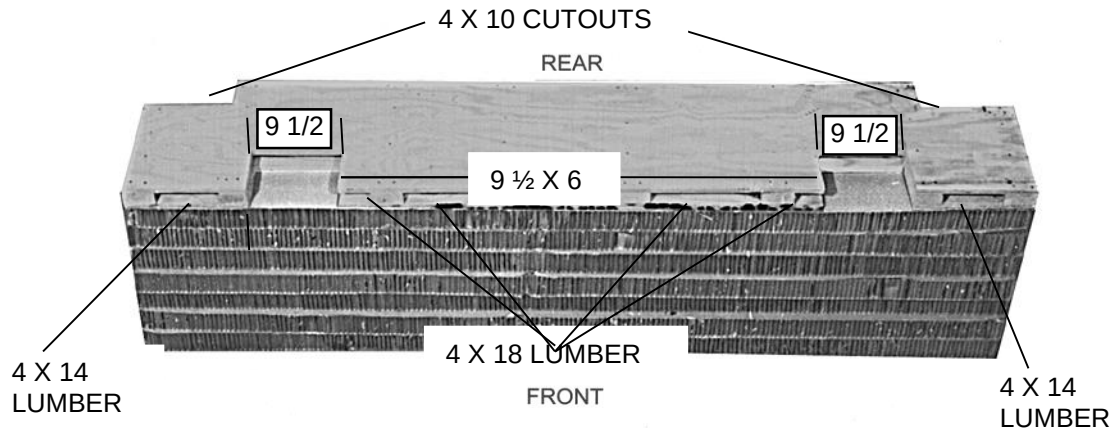
1. Inspect, or assemble and inspect, a 20-foot, type V platform as outlined in TM 10-1670-268-20&P/TO 13C7-52-22.
2. Inspect and install a tandem link to the front of each platform side rail using holes 1, 2, and 3.
3. Install clevises on bushings 1, 3, and 4 of each front tandem link.
4. Starting at the front of each platform side rail, install clevises on the bushings bolted on holes 4 (tripled), 6, 7, 9, 13, 16, 18, 19, 21, 22, 25, 27, 28, 29, 32, 33, 35, 39, and 40.
5. Starting at the front of each platform side rail, number the clevises 1 through 23 on the right side and 1A through 23A on the left side.
6. Label the tie down rings according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.

Figure 7-2. Platform prepared

PREPARING AND POSITIONING HONEYCOMB STACKS

7-3. Prepare five honeycomb stacks according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figures 7-3 through 7-9. Position the honeycomb stacks on the platform as shown in Figure 7-9.

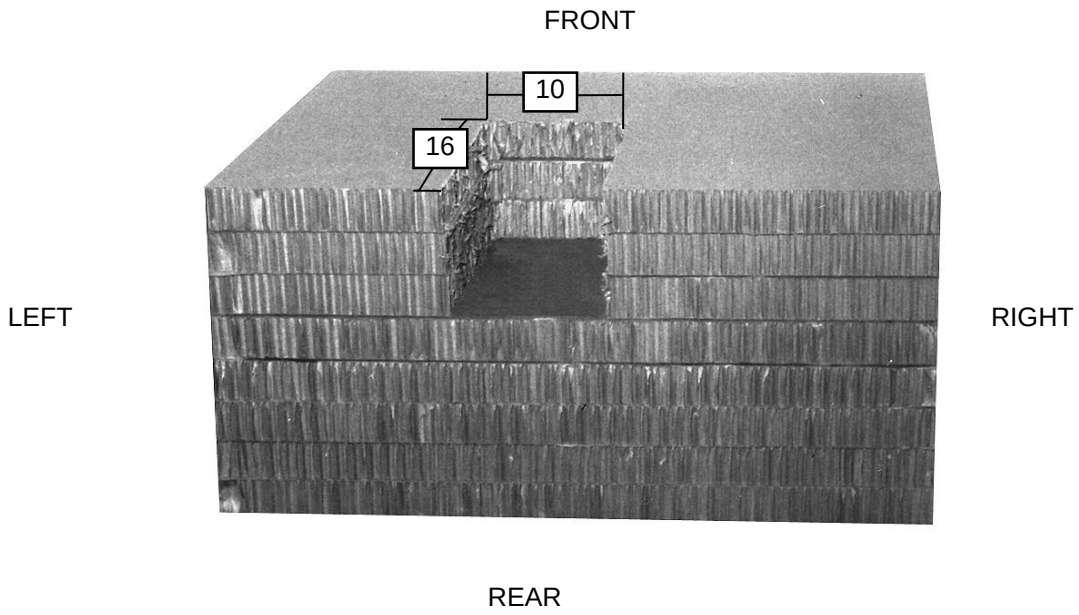
Notes. 1. All dimensions are in inches.
2. Use 8-penny Nails.



Stack Number	Pieces	Width (inches)	Length (inches)	Material	Instructions
1	7	18	96	Honeycomb	Use honeycomb as the base layers
	2	18	96	Plywood	Place ¾-inch plywood on top of the honeycomb base. Cut a 4- by 10-inch cutout in the rear corners of both pieces of plywood. Cut a 9 ½- by 6-inch cutout 13 inches from each end on the front sides of both pieces of plywood (clearance for trailer lights).
	2	4	14	Lumber	Nail lumber to each 14-inch edge of plywood (between the sheets of plywood).
	6	4	18	Lumber	Nail two pieces of lumber flush to each 6-inch of plywood. Space the remaining lumber evenly between the two sheets of plywood, nail it to the plywood.

Figure 7-3. Honeycomb stack 1 prepared

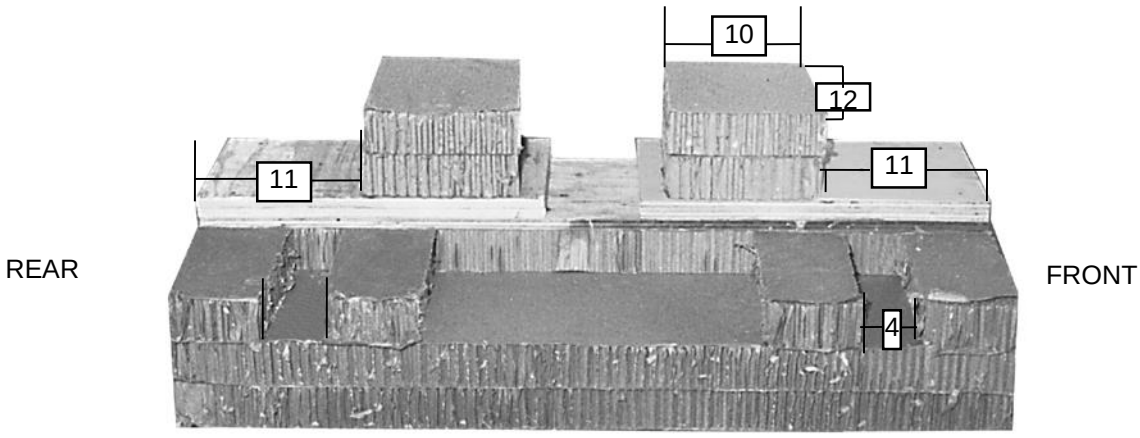
Note. All dimensions are in inches.



Stack Number	Pieces	Width (inches)	Length (inches)	Material	Instructions
2	8	34	48	Honeycomb	Use honeycomb as base layers. Cut a 10- by 16-inch cutout on the rear edges of the top three layers, starting 16 inches from the left side.

Figure 7-4. Honeycomb stack 2 prepared

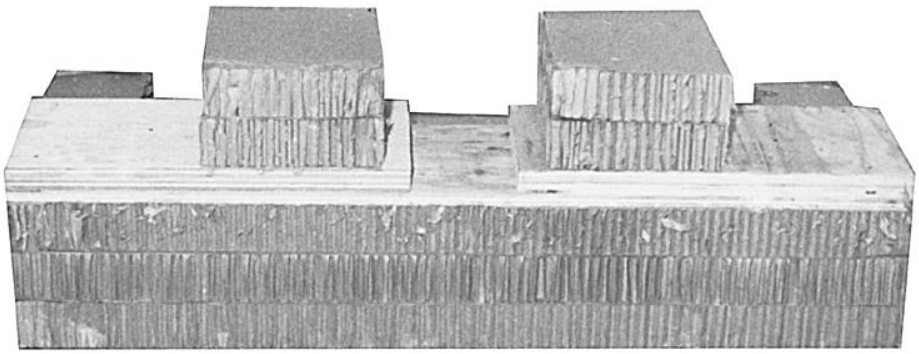
Note. All dimensions are in inches.



Stack Number	Pieces	Width (inches)	Length (inches)	Material	Instructions
3	2	24	52	Honeycomb	Use honeycomb as the base layers on the right side of the platform.
	1	12	52	Honeycomb	Place a piece on top of the base on the inside edge.
	1	12	52	Plywood	Place ¾-inch plywood on top of the 12- by 52-inch honeycomb.
	4	12	23	Plywood	Place two pieces of ¾-inch plywood flush with the front edge and two pieces flush with the rear edge of the 12- by 52-inch piece of plywood.
	4	10	12	Honeycomb	Place two pieces 11 inches from the front edge and two pieces 11 inches from the rear edge of the plywood.
	4	6	12	Honeycomb	Place pieces on top of the base layers. Place one piece on the rear outside corner, one piece 4 inches from the rear piece, one piece on the front outside corner, and one piece 4 inches from the front piece.

Figure 7-5. Honeycomb stack 3 prepared

REAR

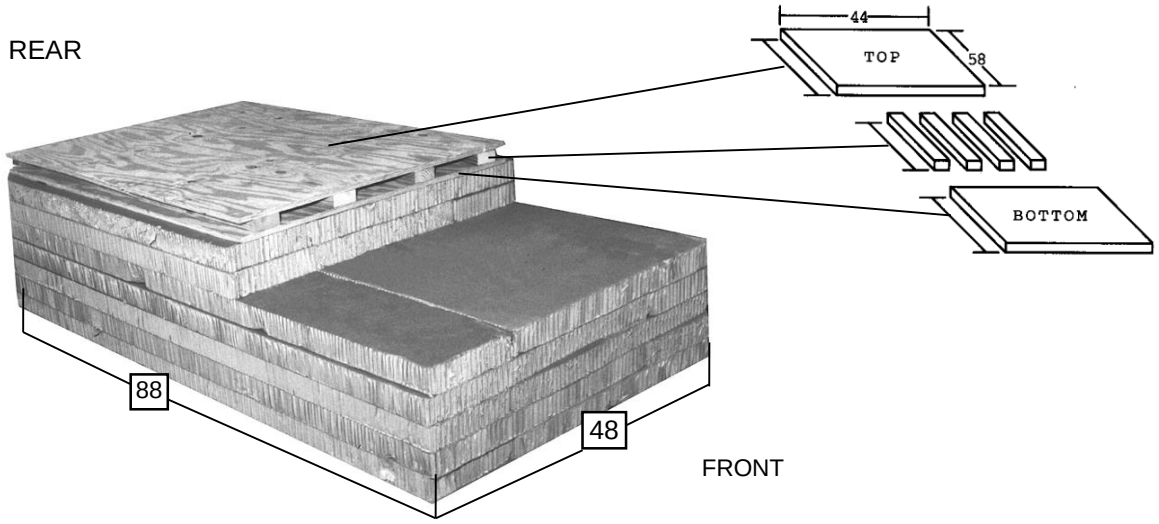


FRONT

Stack Number	Pieces	Width (inches)	Length (inches)	Material	Instructions
4					Same as stack 3 but placed on the left side of the platform.

Figure 7-6. Honeycomb stack 4 prepared

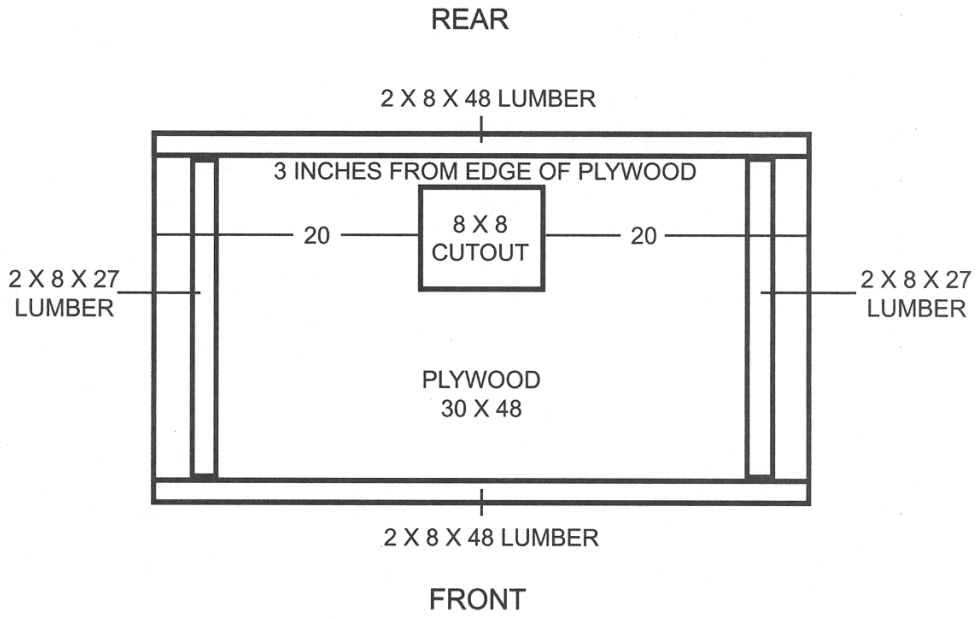
Notes. 1. This drawing is not to scale.
2. All dimensions are in inches.
3. Use 8-penny nails.



Stack Number	Pieces	Width (inches)	Length (inches)	Material	Instructions
5	5	36	88	Honeycomb	Use honeycomb as the base layers.
	5	12	88	Honeycomb	Use honeycomb as the base layers. Place pieces next to the 36- by 88-inch pieces and stagger.
	2	36	58	Honeycomb	Place the pieces on top at the rear edges of the base layers.
	2	12	58	Honeycomb	Place the pieces next to the 36- by 58-inch pieces of honeycomb and stagger.
	1	44	58	Plywood	Place ¾-inch plywood on top of the 48- by 58-inch honeycomb and center.
	4	2	58	Lumber	Place one piece of 2-inch lumber 2 inches from the right edge and one piece 2 inches from the left edge of the plywood. Place the other two pieces of lumber 8 inches from the pieces on the edge.
	1	44	58	Plywood	Place ¾-inch plywood on top of the lumber. Nail the plywood and lumber together.

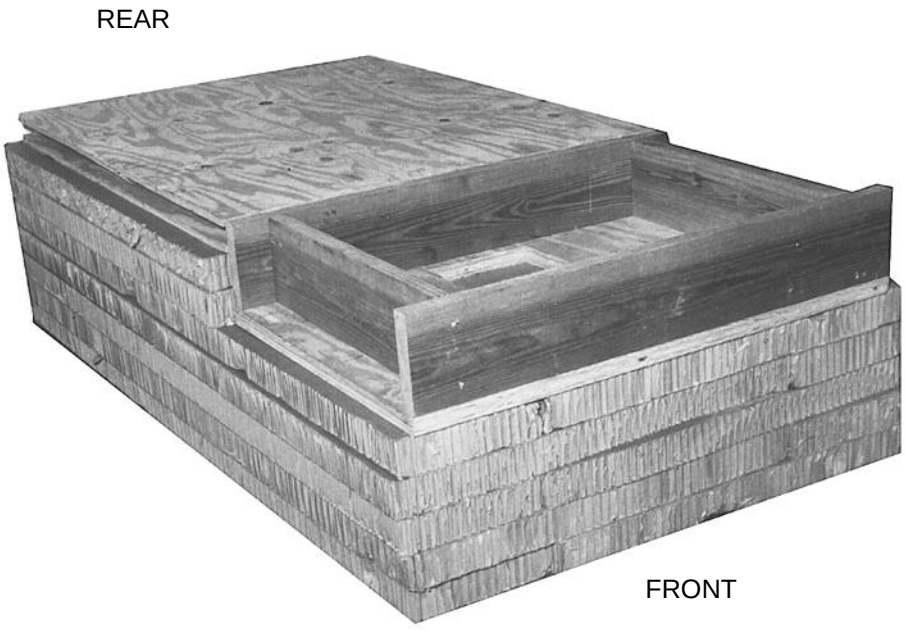
Figure 7-7. Honeycomb stack 5 prepared

Notes. 1. This drawing is not to scale.
2. All dimensions are in inches.
3. Use 8-penny nails.
4. Lumber is stood on edge.



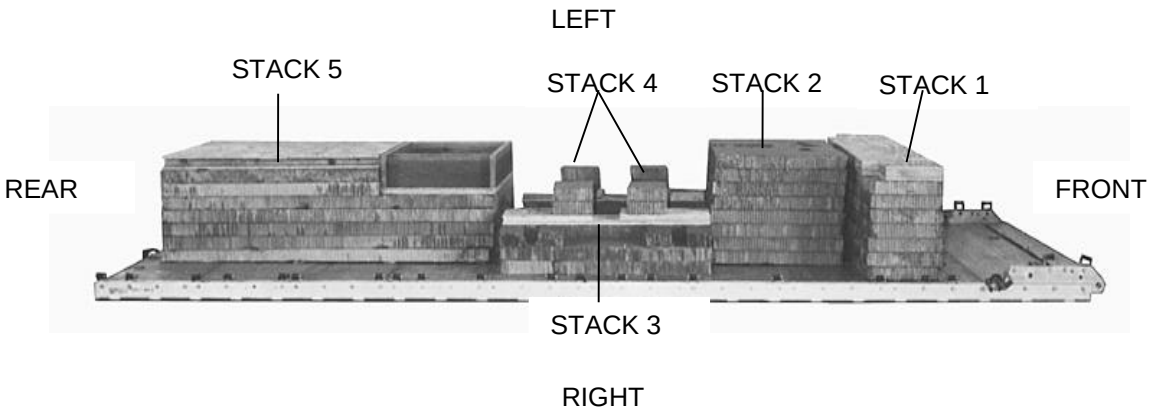
Stack Number	Pieces	Width (inches)	Length (inches)	Material	Instructions
5	2	30	48	Plywood	Use two pieces of ¾-inch plywood as the base for the box. Cut an 8- by 8-inch cutout in both pieces of plywood 3 inches from the 48-inch rear edge and centered between the 30-inch edges.
	2	8	48	Lumber	Nail the lumber on each 48-inch edge of the plywood.
	2	8	27	Lumber	Nail the lumber 3 inches from each 30-inch edge of the plywood.

Figure 7-8. Box for honeycomb stack 5 prepared



Stack Number	Pieces	Width (inches)	Length (inches)	Material	Instructions
5					Place the completed box from Figure 3-8 on top of the 48- by 88-inch honeycomb at the front of honeycomb stack 5.

Figure 7-8. Box for honeycomb stack 5 prepared (continued)



Stack Number	Position on Platform
	Place stack:
1	Centered and 35 inches from the front edge of the platform.
2	Centered and flush against stack 1
3	Flush against stack 2 and 22 inches from the right side rail.
4	Flush against stack 2 and 22 inches from the left side rail.
5	Centered and 4 inches from the rear of stacks 3 and 4.

Figure 7-9. Honeycomb stacks positioned on platform

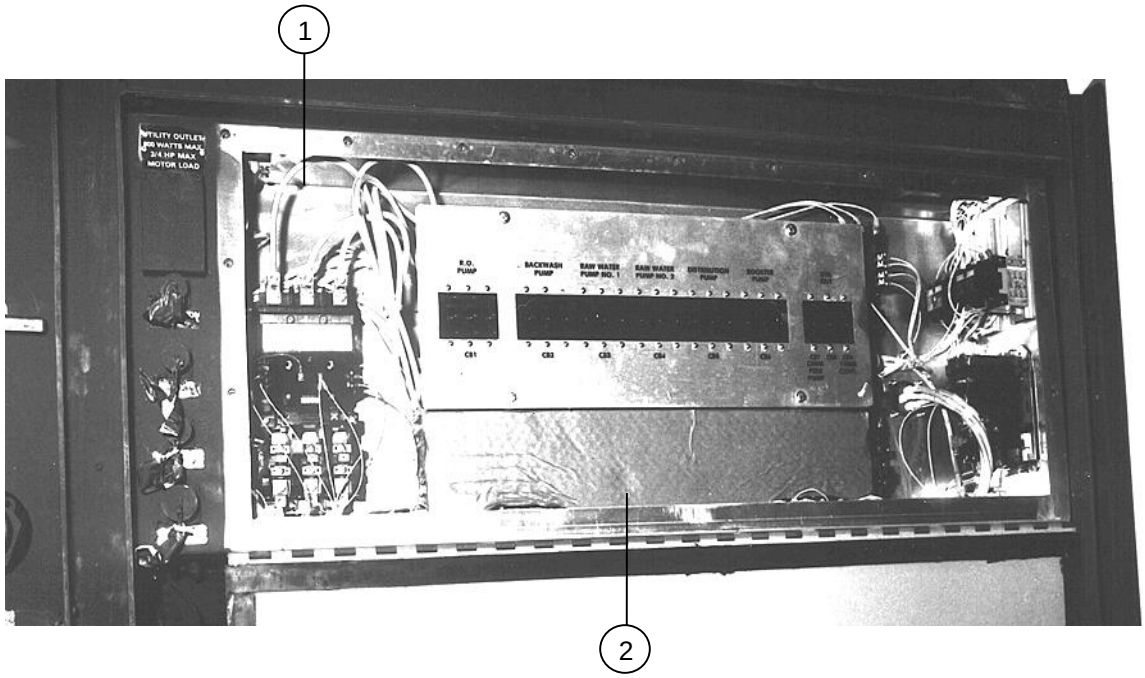
PREPARING ROWPU

7-4. Prepare the ROWPU as described below. Secure all lashings and safety them according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.

7-5. Pad the top corners of the ROWPU frame and the top corners of the generator using cellulose wadding and 2-inch adhesive tape (not shown).

7-6. Pad and tape the trailer lights using cellulose wadding and 2-inch adhesive tape (not shown).

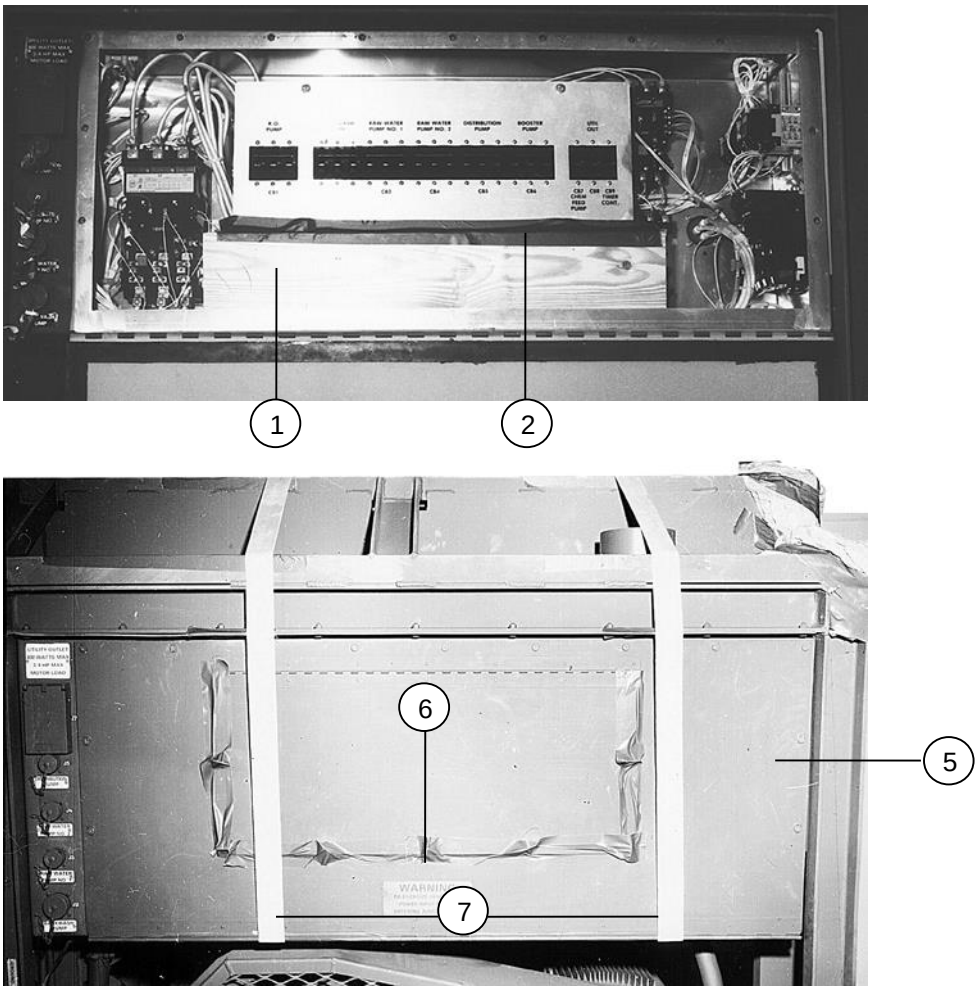
7-7. Prepare and lash the control box assembly as shown in Figures 7-10 through 7-12, and secure the lashings as shown in Figure 7-13.



① Open the control assembly cover.

② Position a 6- by 26-inch piece of honeycomb between the bottom of the circuit breaker plate and the bottom of the control box.

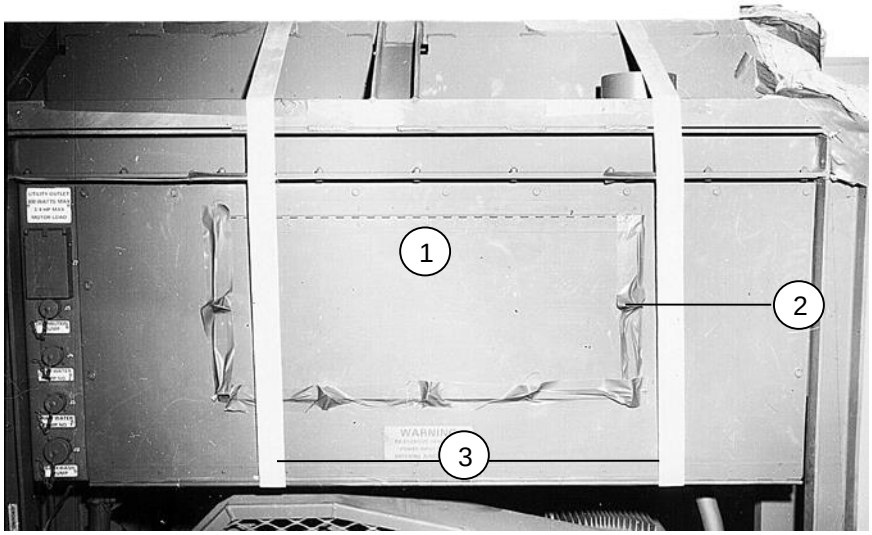
Figure 7-10. Control box assembly prepared



① Place a 2- by 6- by 26-inch piece of lumber between the honeycomb and the edge of the control panel.

② Tape the lumber in place using 2-inch adhesive tape.

Figure 7-11. Control box assembly secured

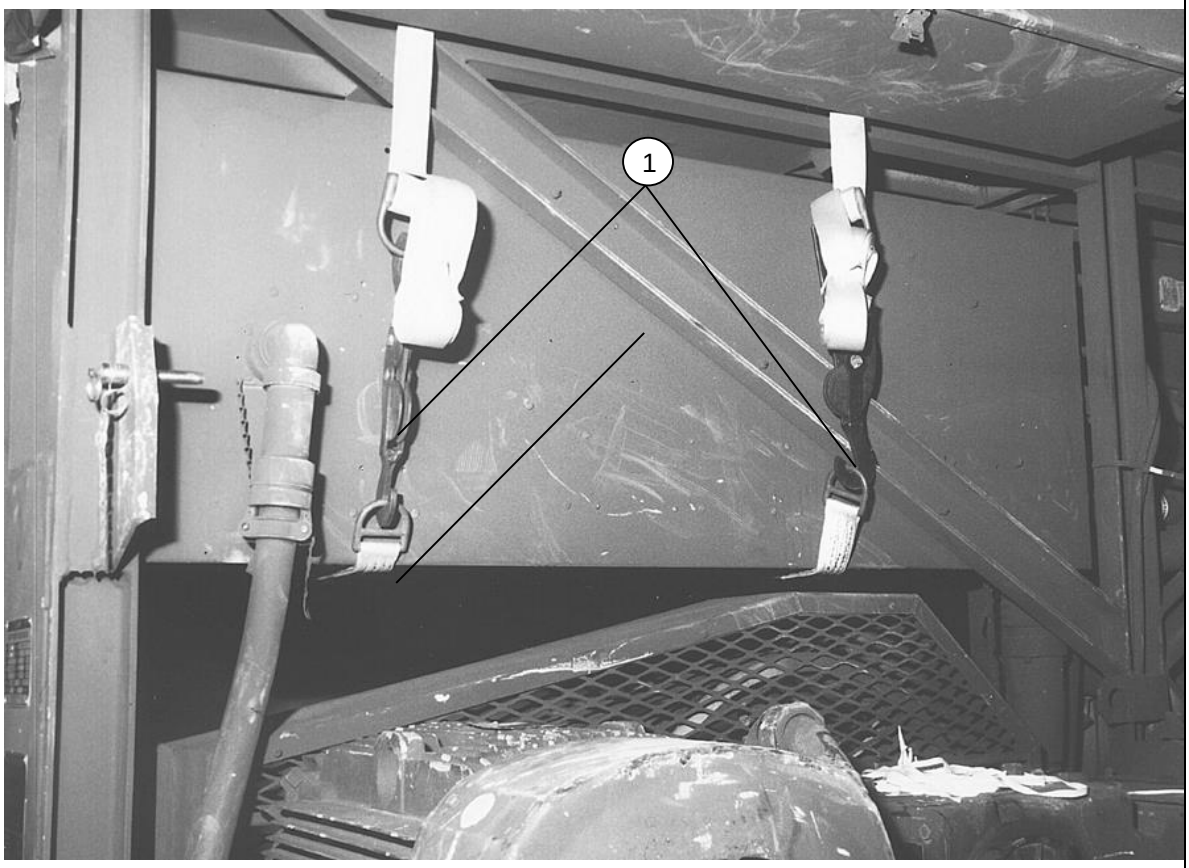


① Close the control box assemblies cover and secure it with the screws provided.

② Close the circuit breaker plate cover. Secure it with the twist locks provided, and tape the twist locks using 2-inch adhesive tape.

③ Use two 15-foot lashings to secure the control box assembly to the top frame. Pass the lashings around the front panel and over the frame.

Figure 7-12. Control box assembly secured

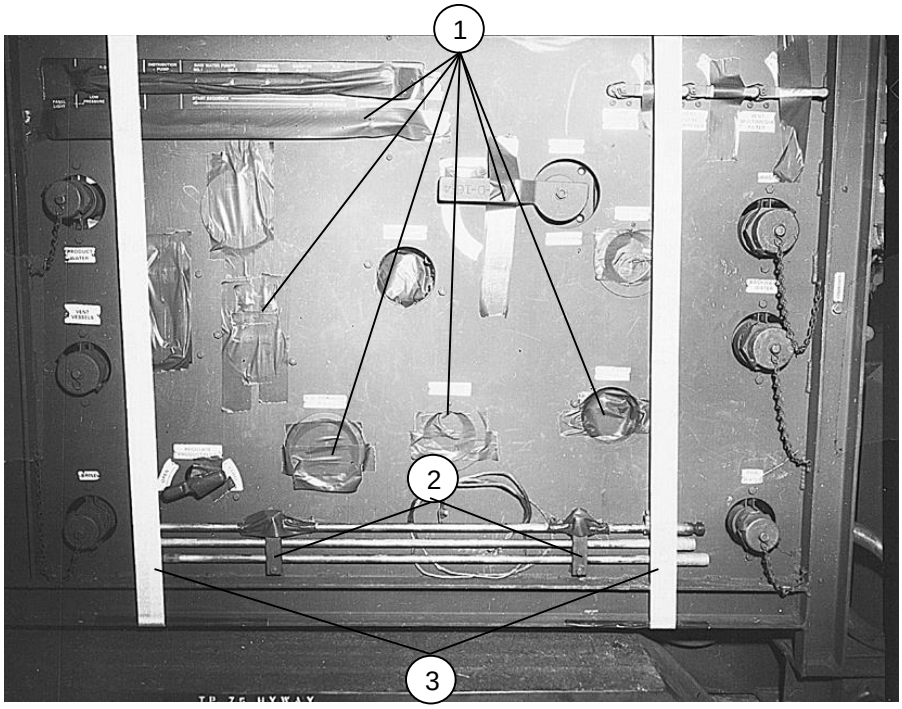


① Secure each lashing on the inside of the ROWPU using two D-rings and a load binder.

Figure 7-13. . Control box assembly prepared

PREPARING AND SECURING CONTROL PANEL

7-8. Prepare and secure the control panel as shown in Figure 7-14.



① Tape all lights, switches and gauges on the control panel with 2-inch adhesive tape.

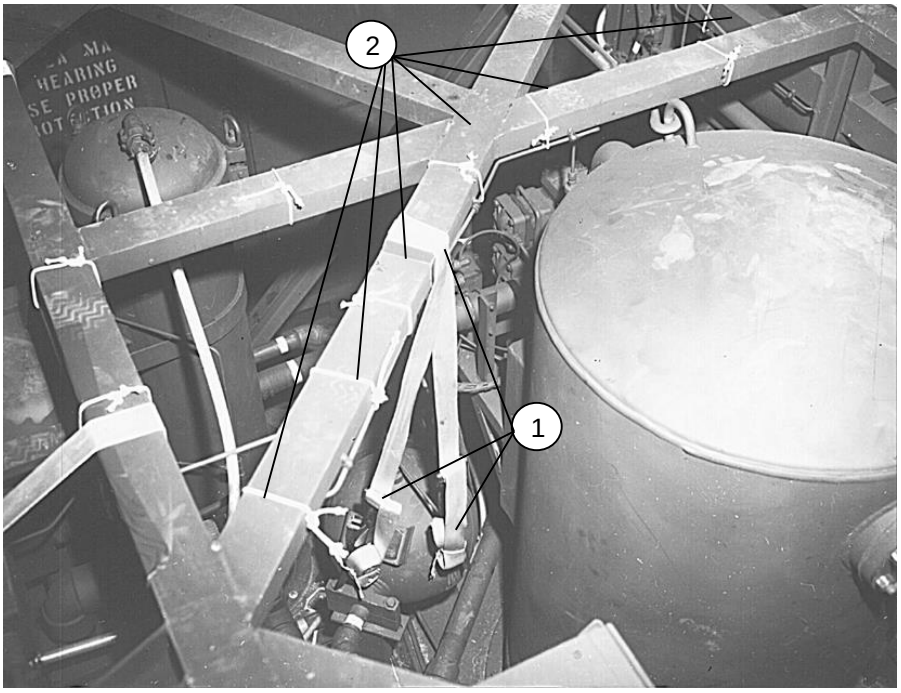
② Secure the ground rods in the carrying racks on the bottom of the control panel and tape the latches in place using 2-inch adhesive tape.

③ Use two 15-foot lashings to secure the operational control panel to the top of the frame. Secure each lashing on the inside of the ROWPU using two D-rings and a load binder.

Figure 7-14. Control panel prepared and secured

PREPARING AND SECURING PULSE DAMPENER

7-9. Secure the pulse dampener as shown in Figure 7-15.



① Route two 15-foot lashings around the pulse dampener and the top of the ROWPU frame. Secure each lashing with two D-rings and a load binder.

② Secure the 3/8-inch vent lines to the top of the ROWPU frame using type III nylon cord.

***Note*.** When securing the 3/8-inch vent lines ensure that safety ties are made around the top of the ROWPU frame.

Figure 7-15. Pulse dampener prepared and secured

PREPARING AND VEHICULAR CABLES, STRAPS, CHAINS, JACKS AND THE JACK HANDLES

7-10. Secure the inter-vehicular cables and chains to the trailer using type III nylon cord (not shown).

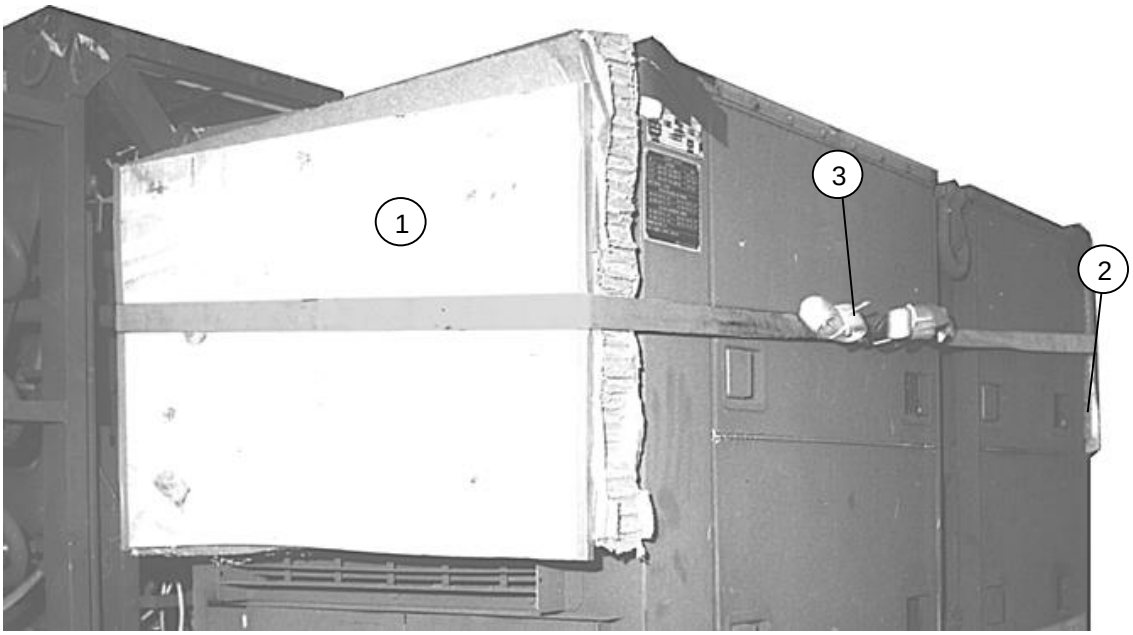
7-11. Fold the pump tie down straps and tape them to the floor of the ROWPU (not shown).

7-12. Stow the jacks and the jack handles on their support brackets, and secure them using type III nylon cord (not shown).

PREPARING THE GENERATOR

7-13. Make sure the generator's fuel tank is at least ½ but no more than ¾ full. Ensure hazardous materials are packaged, marked, and labeled as required by AFMAN(I) 24-204/TM 38-250 (not shown).

7-14. Prepare the generator as shown in Figure 7-16.



① Glue a ¾- by 19- by 34- inch piece of plywood to a 19- by 34-inch piece of honeycomb. Position the plywood and honeycomb with the honeycomb against one end of the generator at the top.

② Repeat step 1 for the other end of the generator.

Note. Tape the edges of the plywood where the lashing is routed over the edge.

③ Form a 30-foot lashing according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and route it around the end protectors and generator. Secure the lashing in the front using two D-rings and a load binder.

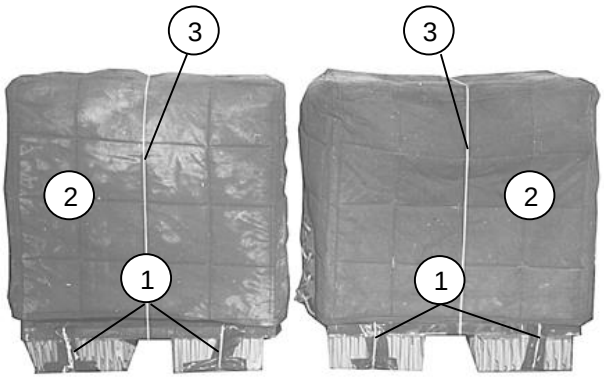
Figure 7-16. Generator prepared

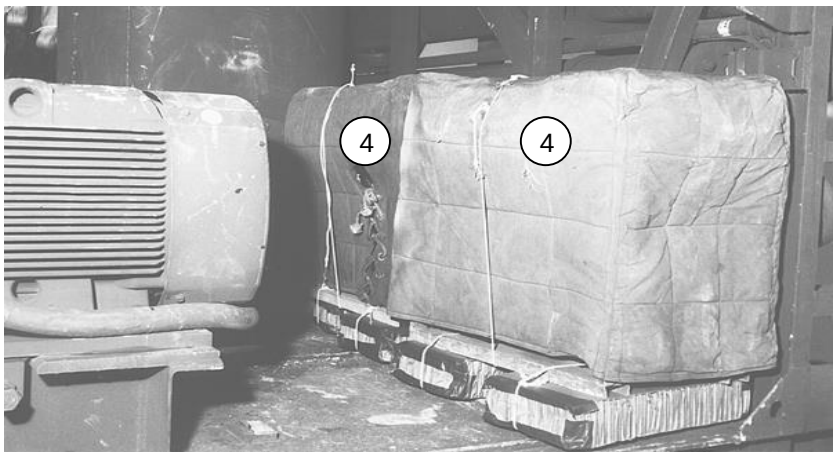
PREPARING AND STOWING RAW WATER PUMPS

7-15. Prepare and stow the raw water pumpers on the ROWPU as shown in Figure 7-17.

CAUTION

Make the final rigger inspection required by AR 59-4 (Using DD Form 1748, *Joint Airdrop Inspection Record (Platforms),* or appropriate DD Form 1748-1, *Joint Airdrop Inspection Record (Containers)*, DD Form 1748-2, *Airdrop Malfunction Report (Personnel-Cargo)*, and DD Form 1748-3, *Joint Airdrop Summary Report*).





① Secure two pieces of 8- by 13-inch honeycomb to the bottom frame of each of the two raw water pumps using type III nylon cord.

② Cover the pumps with their covers.

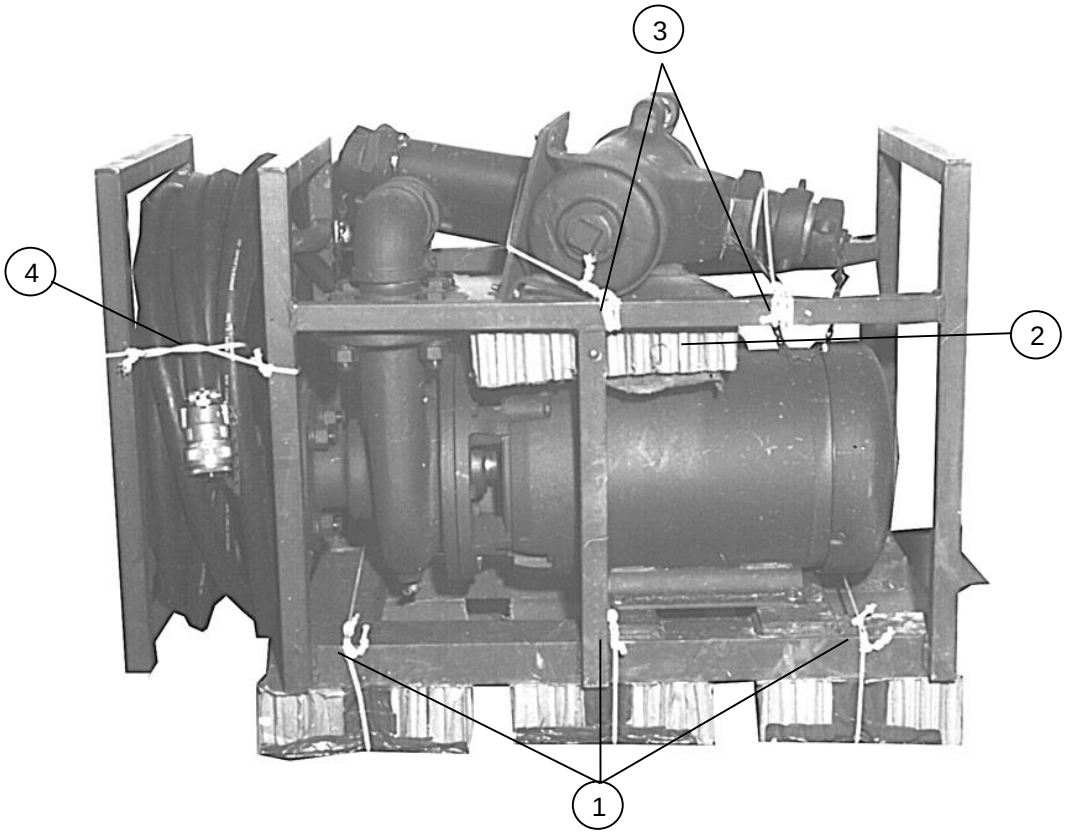
③ Secure the covers using type III nylon cord.

④ Stow the raw water pumps inside the ROWPU along the right side as viewed from the rear of the load.

Figure 7-17. Raw water pumps prepared and stowed

PREPARING, STOWING, AND SECURING BACKWASH PUMPS

7-16. Prepare and stow the backwash pumps on the ROWPU as shown in Figures 7-18 and 7-19.



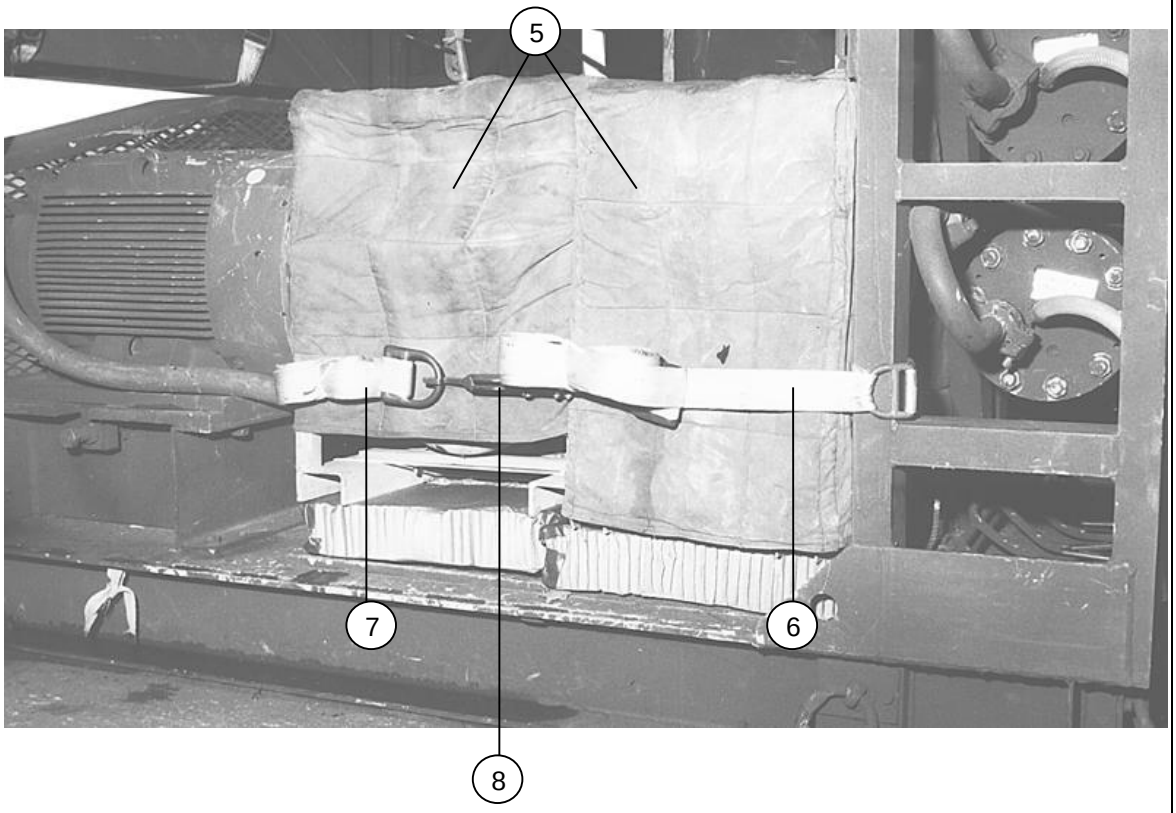
① Secure three 8- by 16-inch pieces of honeycomb to the bottom frame of the backwash pump using type III nylon cord.

② Place one 10- by 13-inch piece of honeycomb on top of the motor of the backwash pump.

③ Position the pump strainer on the previously positioned honeycomb, and secure it to the top frame of the pump using type III nylon cord.

④ Secure the end of the hose to the frame to prevent the hose from unraveling.

Figure 7-18. Backwash pump prepared, stowed and secured



① Place the cover on the backwash pump and secure it using type III nylon cord. Set the pump inside the ROWPU between the raw water pumps and the ROWPU motor.

② Pass one 15-foot lashing to the inside vertical brace of the ROWPU, around the frame and through its own D-ring.

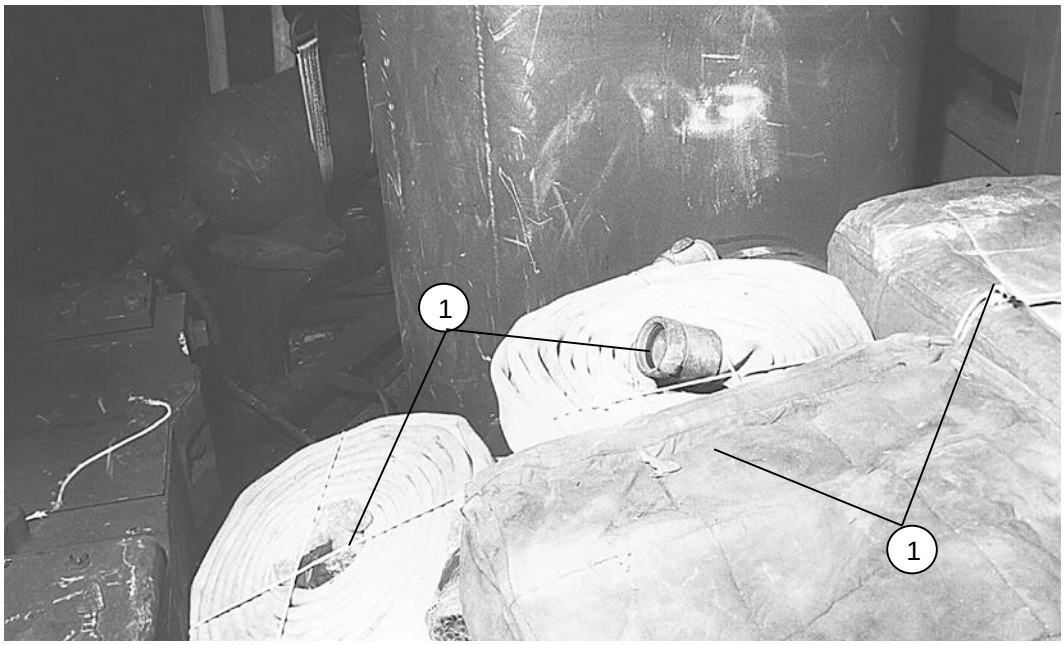
③ Pass another 15-foot lashing to the third vertical brace of the ROWPU in the same manner as step 6.

④ Pass the straps around the three pumps and secure with two D-rings and a load binder.

Figure 7-19. Backwash pump prepared, stowed and secured

PREPARING AND STOWING CANVAS HOSES

7-17. Prepare and stow the canvas hoses as shown in Figure 7-20.



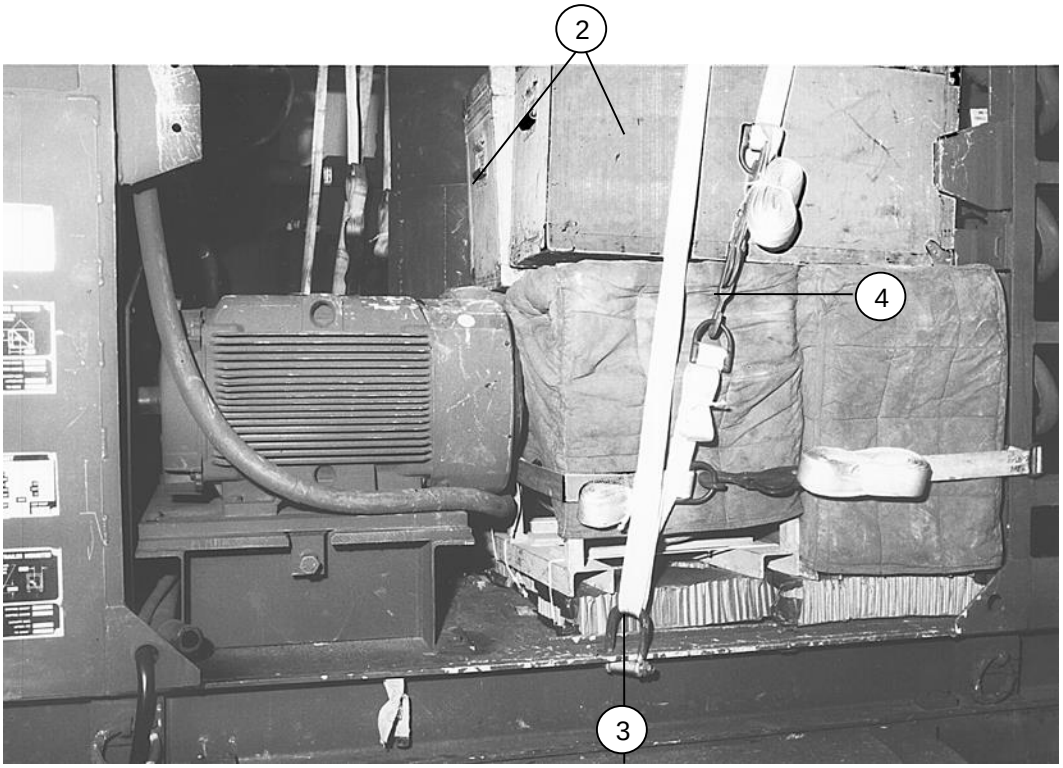
① Roll up each canvas hose section and tie it using type III nylon cord.

② Stow the canvas hoses behind the pumps

Figure 7-20. Canvas hose prepared and stowed

PREPARING, STOWING AND SECURING STORAGE CHESTS

7-18. Prepare, stow and secure the two storage chests as shown in Figure 7-21.



① Pad the contents inside the two storage chests using cellulose wadding. Secure the chest closed using type III nylon cord (not shown).

② Stow the two storage chests on top of the three pumps.

③ Attach a tie down clevis to the center tie down hole on the floor of the ROWPU.

④ Prepare and route a 30-foot lashing around the third inside vertical brace of the ROWPU. Pass the free end of the lashing over the chests and through the tie down clevis. Secure the lashing using two D-rings and a load binder.

Figure 7-21. Storage chests prepared, stowed and secured

STOWING AND SECURING WOODEN STAVES

7-19. Place the wooden staves of the water tank beside the ROWPU pump and motor. Secure the staves to the floor using type III nylon cord (not shown).

STOWING AND SECURING SLEDGEHAMMER

7-20. Set the sledgehammer next to the third inside vertical brace. Secure it to the brace using type III nylon cord (not shown)

STOWING AND SECURING PADDLE AND FLOAT

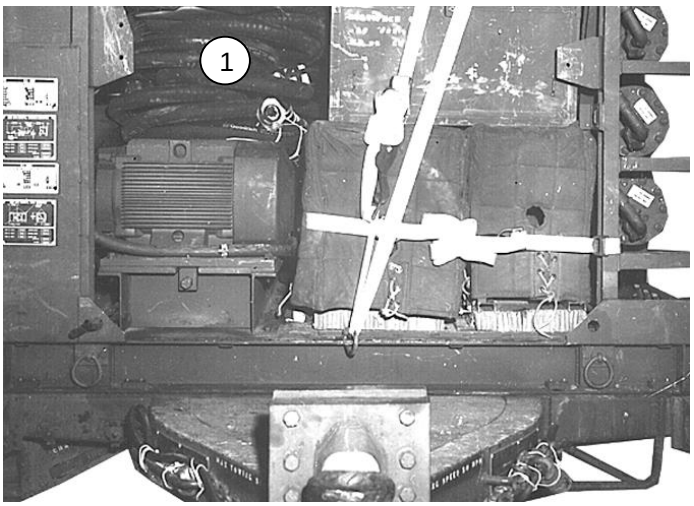
7-21. Set the paddle and the float behind the inside storage chest and secure them together using type III nylon cord (not shown).

STOWING AND SECURINGE WATER CONTAINERS

7-22. Stack the five gallon plastic water containers behind the ROWPU pump and tie them to a convenient point using type III nylon cord (not shown).

PREPARING AND STOWING RUBBER HOSES

7-23. Prepare and stow the rubber hoses as shown in Figure 7-22.

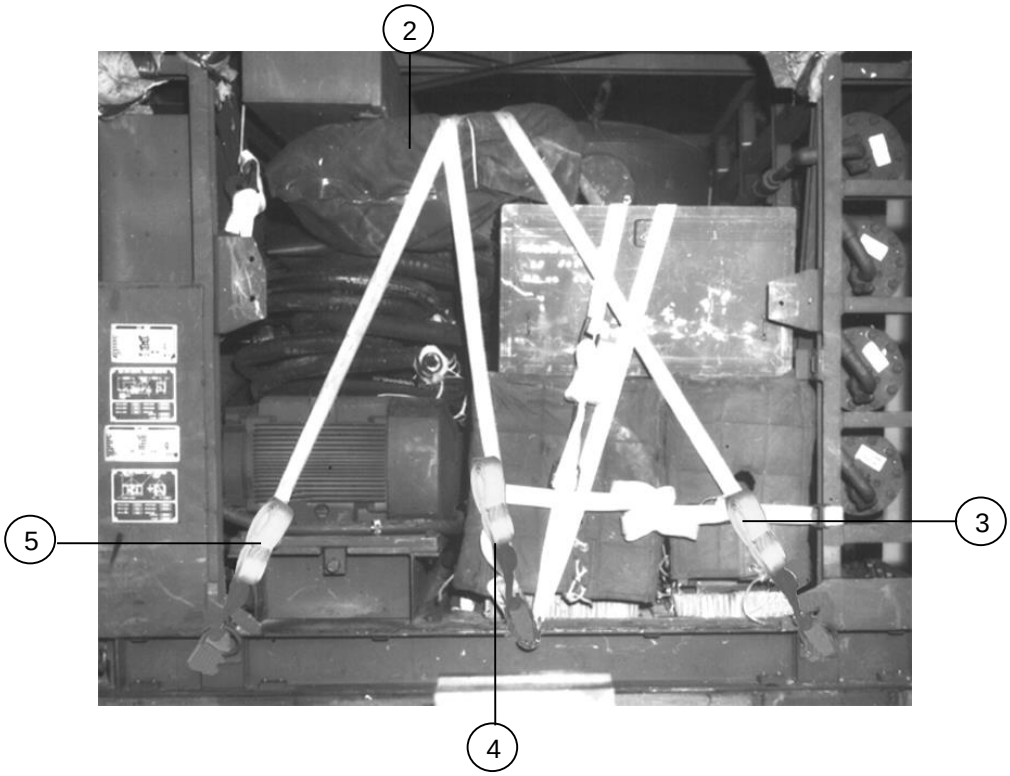


① Roll up each 10-foot section of rubber hose and secure it using type III nylon cord. Stow the rubber hoses on top of the ROWPU pump.

Figure 7-22. Rubber hoses prepared and stowed

PREPARING, STOWING AND SECURING WATER TANKS

7-24. Prepare, stow and secure the water tanks as shown in Figure 7-23.



① Fold each water tank and tie it using type III nylon cord (not shown).

② Cover the water tanks with canvas and secure the canvas using type III nylon cord. Stow the water tanks and the ROWPU cover on top of the rubber hoses.

③ Route a 15-foot lashing around the tie down provision and back through itself on the third vertical brace on the right side. Pass the lashing over the tanks and secure it to the left bottom corner tie down provision using a single D-ring and load binder.

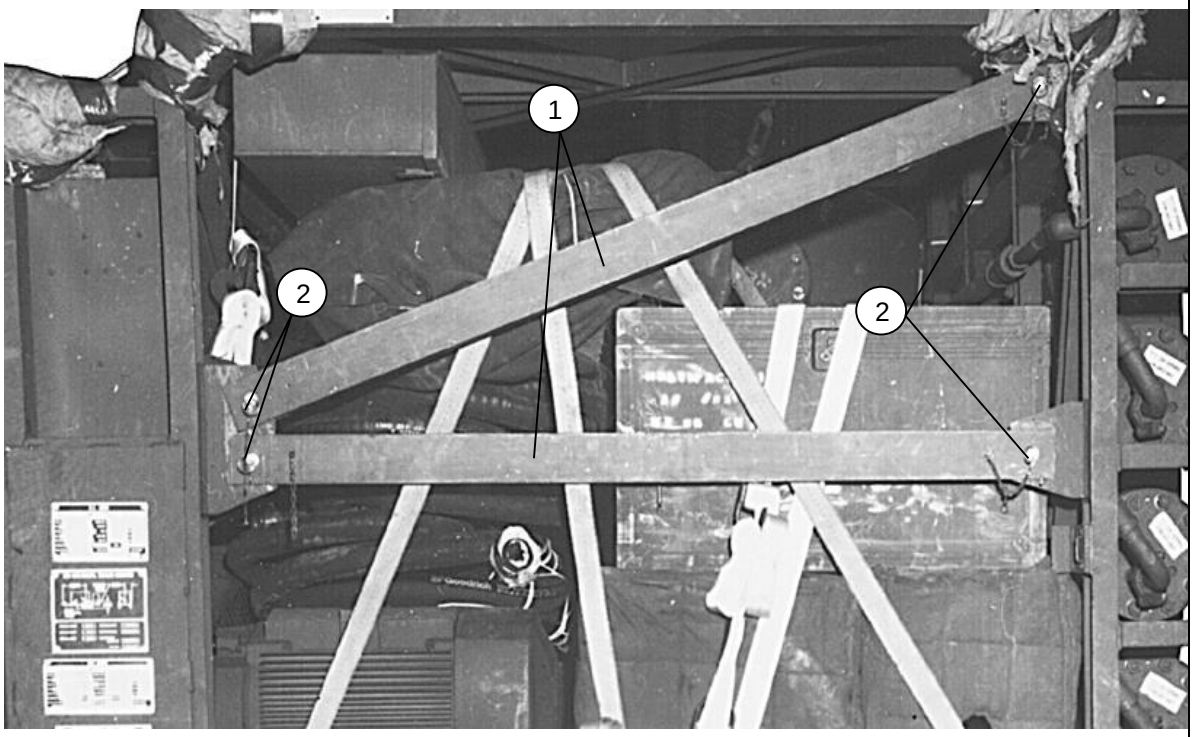
④ Route a 15-foot lashing around the center rear tie down provision and back through itself. Pass the lashing over the tanks and to the center floor tie down provision and secure it using a single D-ring and load binder.

⑤ Route a 15-foot lashing around the tie down provision and back through itself on the third inside vertical brace on the left side. Pass the lashing over the tanks and secure it to the right bottom corner tie down provision using a single D-ring and load binder.

Figure 7-23. Water tanks prepared stowed and secured

INSTALLING AND SECURING CROSS BRACES

7-25. Install and secure cross braces as shown in Figure 7-24.



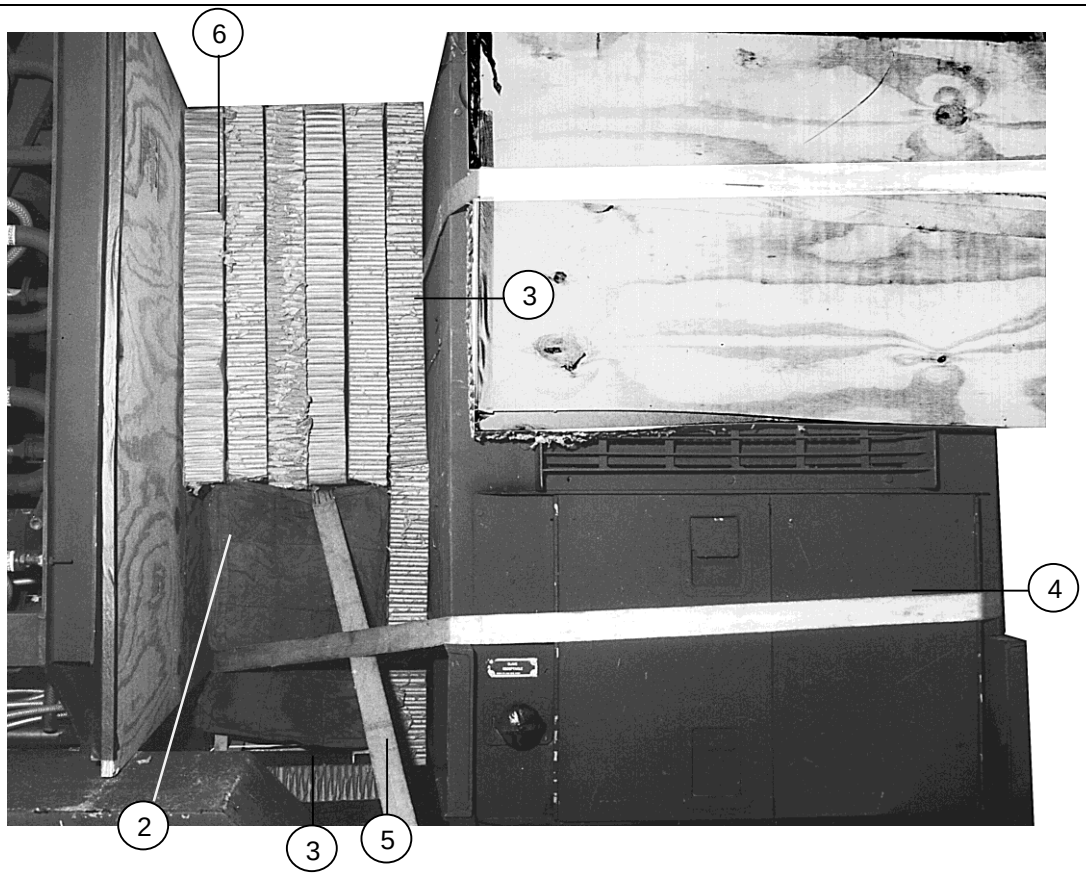
① Install the cross braces on the ROWPU frame.

② Secure the cross braces using the locking pins provided.

Figure 7-24. Cross braces installed and secured

PREPARING, STOWING AND SECURING DISTRIBUTION PUMP

7-26. Prepare, stow and secure the distribution pump as shown in Figure 7-25.



① Secure two pieces of 8- by 13-inch honeycomb to the bottom frame of the distribution pump using type III nylon cord (not shown).

② Cover the pump and stow in the bed of the trailer between the water purification unit and the generator.

③ Cut two pieces of 23- by 24-inch honeycomb. Lift the pump and place one piece under the pump. Place the other piece between the pump and generator.

④ Form one 30-foot lashing according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and pass it around the distribution pump and generator. Secure the lashing in the rear of the generator using two D-rings and a load binder.

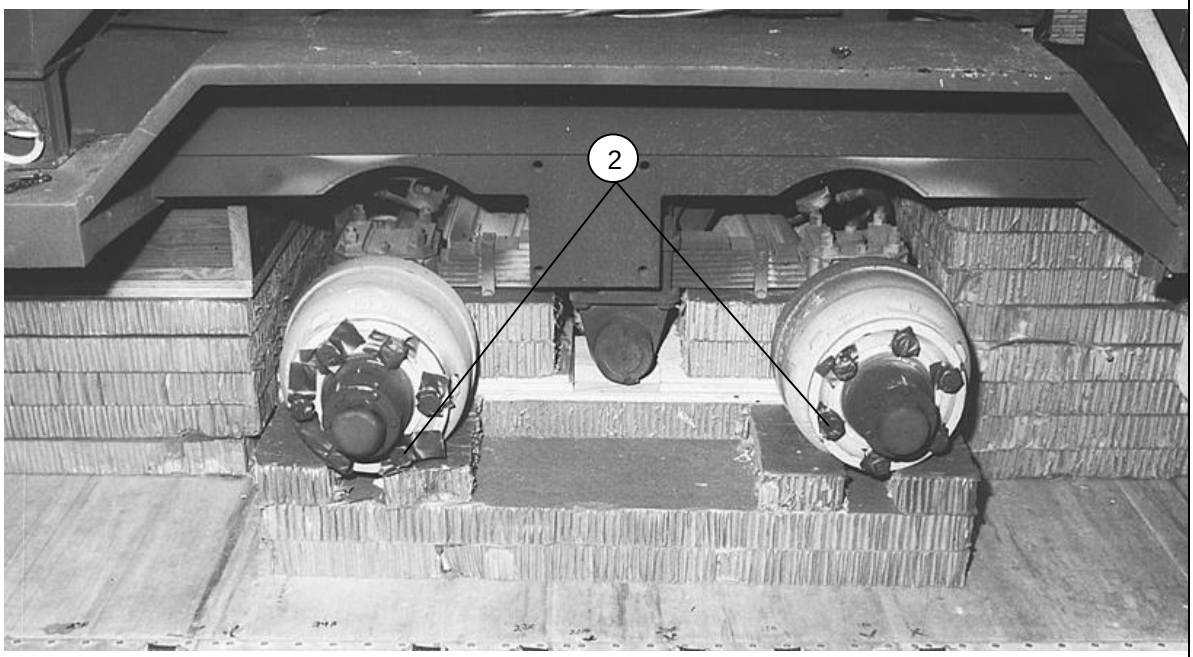
⑤ Form one 30-foot lashing according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and route it over the distribution pump and under the trailer. Secure the lashing using two D-rings and a load binder.

⑥ Cut six pieces of 36- by 48-inch honeycomb and place them on top of the distribution pump.

Figure 7-25. Distribution pump stowed and secured

LIFTING AND POSITIONING LOAD

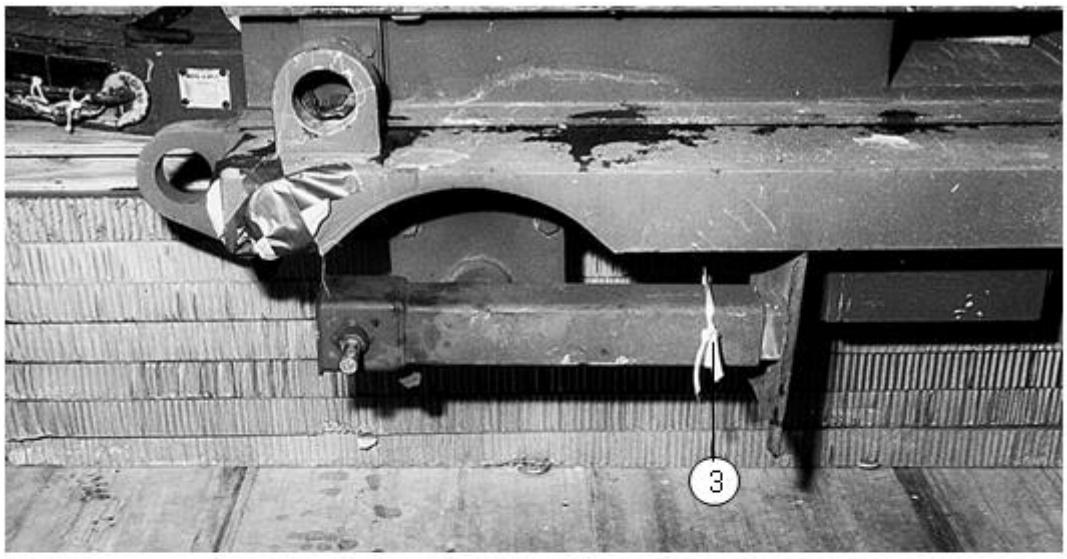
7-27. Use available slings to lift the ROWPU. After lifting the ROWPU, prepare it for positioning as shown in Figure 7-26 through Figure 7-27. Position the ROWPU as shown in Figure 7-28.

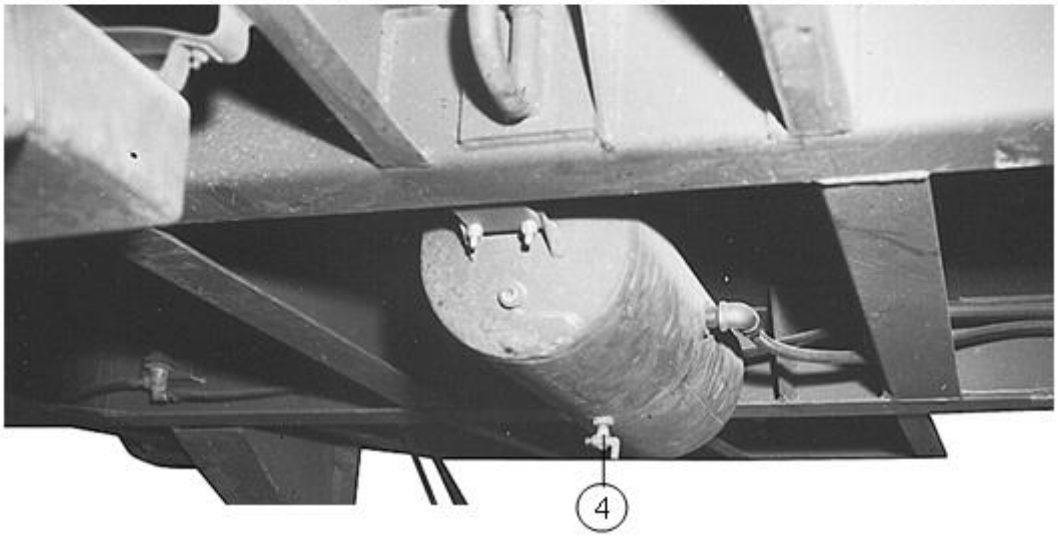


① Remove the four wheels and the spare from the ROWPU. They will be stored on the platform after the lashings are installed (not shown).

② Place the lug nuts back on the lugs and tape them in place using 2-inch adhesive tape.

Figure 7-26. ROWPU prepared for positioning





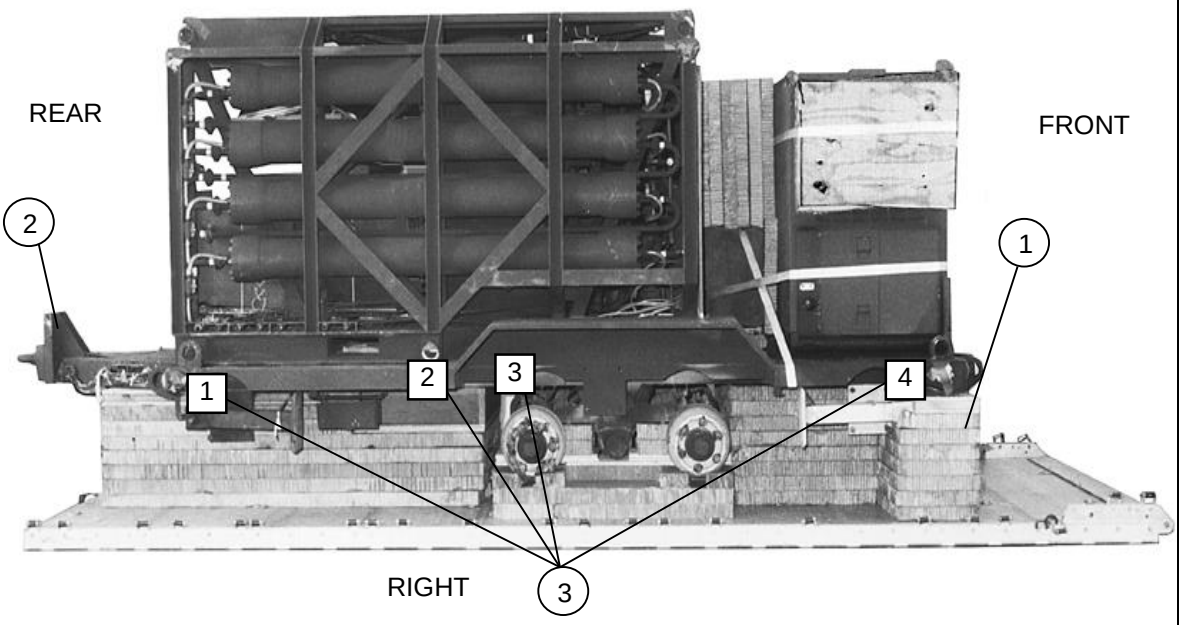
(1) Raise the leveling jacks into the travel position and secure them with ½-inch tubular nylon webbing.

CAUTION

Ensure that the air tank release valve fits in the 8-inch by 8-inch hole in the plywood of honeycomb stack 5.

(2) Position the air tank release valve over the 8- by 8-inch hole in the plywood of honeycomb stack 5.

Figure 7-27. ROWPU prepared for positioning



① Set the ROWPU on the honeycomb stacks with the rear of the trailer 3 ½ inches from the front edge of honeycomb stack 1.

② Allow the drawbar to overhang the rear edge of the platform by 35 inches.

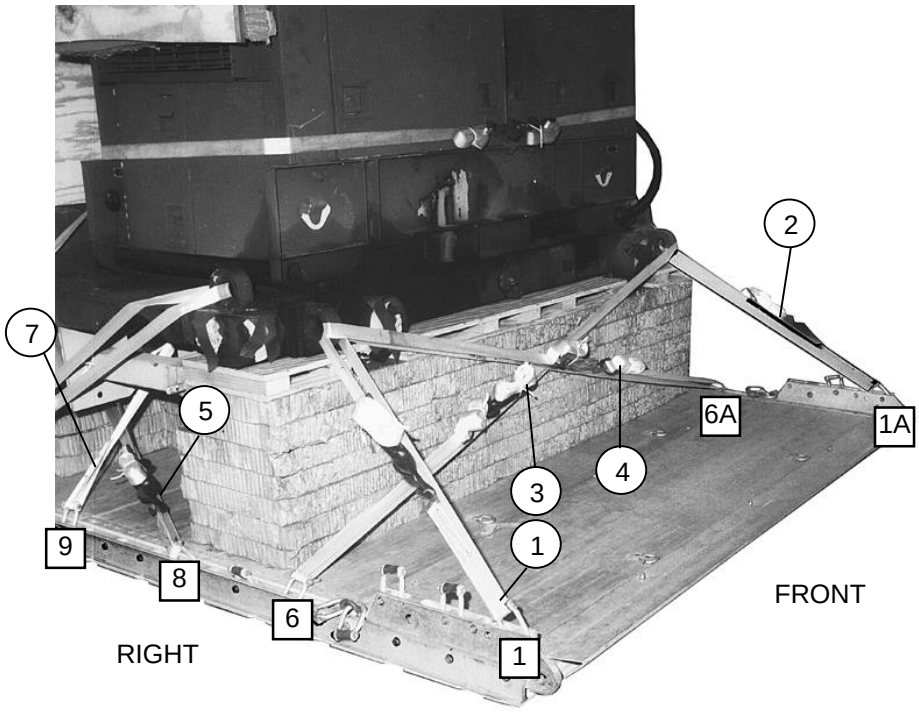
③ Tie down provisions 1, 2, 3 and 4 are built into the trailer along its length under the frame.

Figure 7-28. ROWPU positioned on platform

INSTALLING LASHINGS

7-28. Lash the ROWPU to the platform according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figures 7-29 through 7-31.

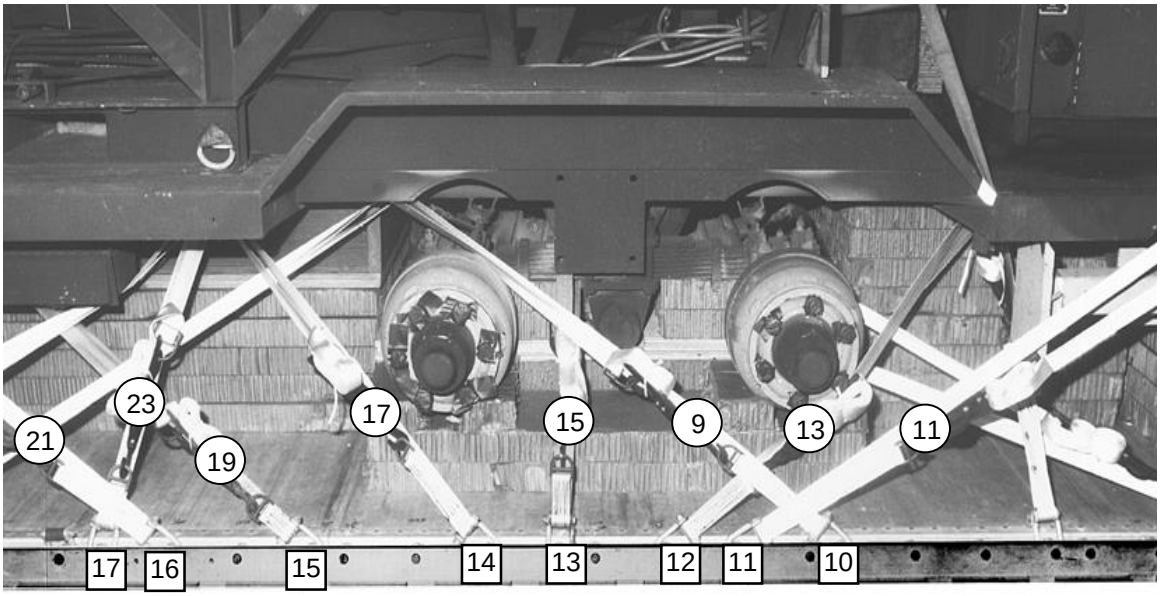
Note. When routing lashings ensure all suspension and lifting points are padded and taped.



Lashing Number	Tie down Clevis Number	*I*nstructions
		Pass lashing through:
1	1	Left rear tie down eye of the ROWPU.
2	1A	Right rear tie down eye of the ROWPU.
3	6	Right rear tie down eye of the ROWPU.
4	6A	Left rear tie down eye of the ROWPU.
5	8	Around rear axle.
6	8A	Around rear axle.
7	9	Tie down provision number 4 right side.
8	9A	Tie down provision number 4 left side.

Figure 7-29. Lashings 1 through 8 installed

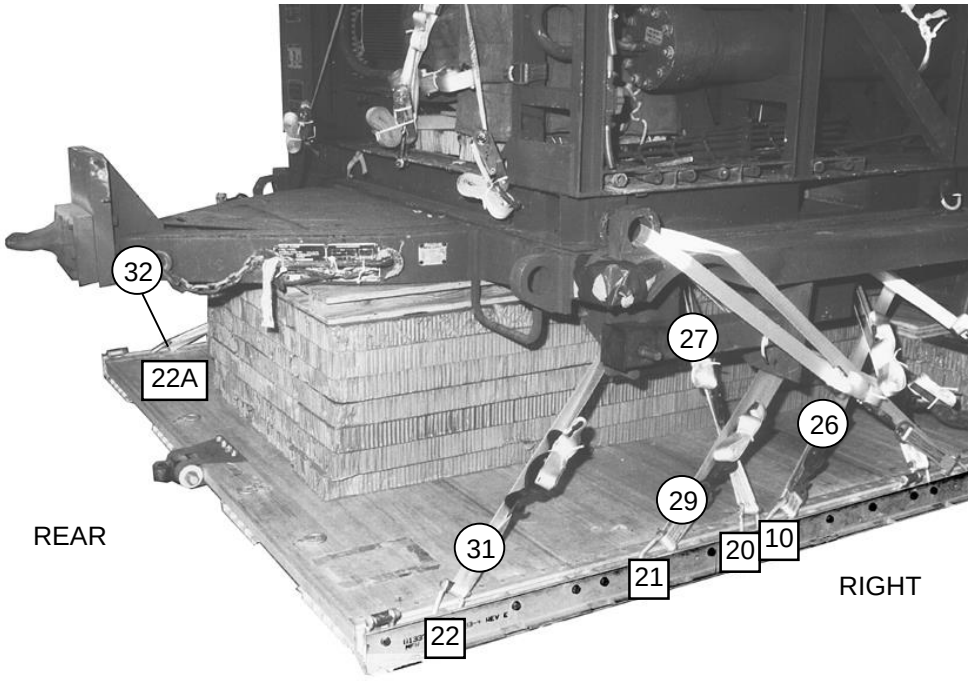
Note. When routing lashings ensure all suspension and lifting points are padded and taped.



Lashing Number	Tie down Clevis Number	RIGHT Instructions
		Pass lashing through:
9	10	Tie down provision number 3 right side.
10	10A	Tie down provision number 3 left side.
11	11	Rear lifting eye.
12	11A	Rear lifting eye.
13	12	Tie down provision number 4 right side.
14	12A	Tie down provision number 4 left side.
15	13	Around leaf spring.
16	13A	Around leaf spring.
17	14	Tie down provision number 2 right side.
18	14A	Tie down provision number 2 left side.
19	15	Tie down provision number 1 right side.
20	15A	Tie down provision number 1 left side.
21	16	Front lifting eye.
22	16A	Front lifting eye.
23	17	Tie down provision number 2 right side.
24	17A	Tie down provision number 2 left side.

Figure 7-30. Lashings 9 through 24 installed

Note. When routing lashings ensure all suspension and lifting points are padded and taped.



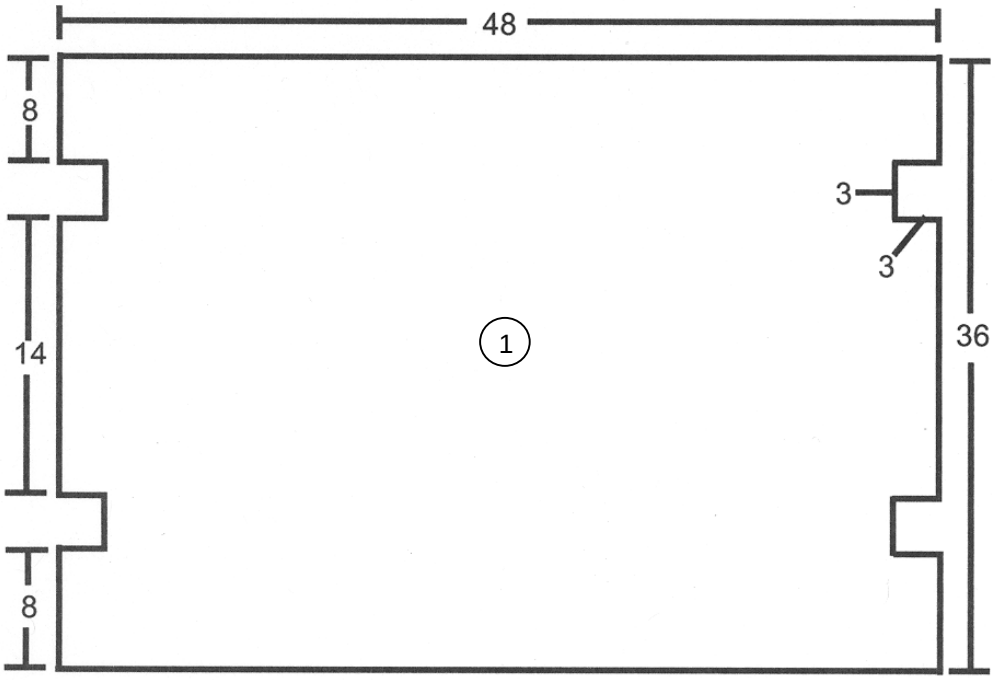
Lashing Number	Tie Down Clevis Number	Instructions
		Pass lashing through:
25	19	Tie down provision 3 right side.
26	19A	Tie down provision 3 left side.
27	20	Tie down provision 1 right side.
28	20A	Tie down provision 1 left side.
29	21	Tie down provision 2 right side.
30	21A	Tie down provision 2 left side.
31	22	Tie down provision 1 right side.
32	22A	Tie down provision 1 left side.

Figure 7-31. Lashings 25 through 32 installed.

CONSTRUCTING ENDBOARDS

7-29. Construct two end boards as shown in Figure 7-32.

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

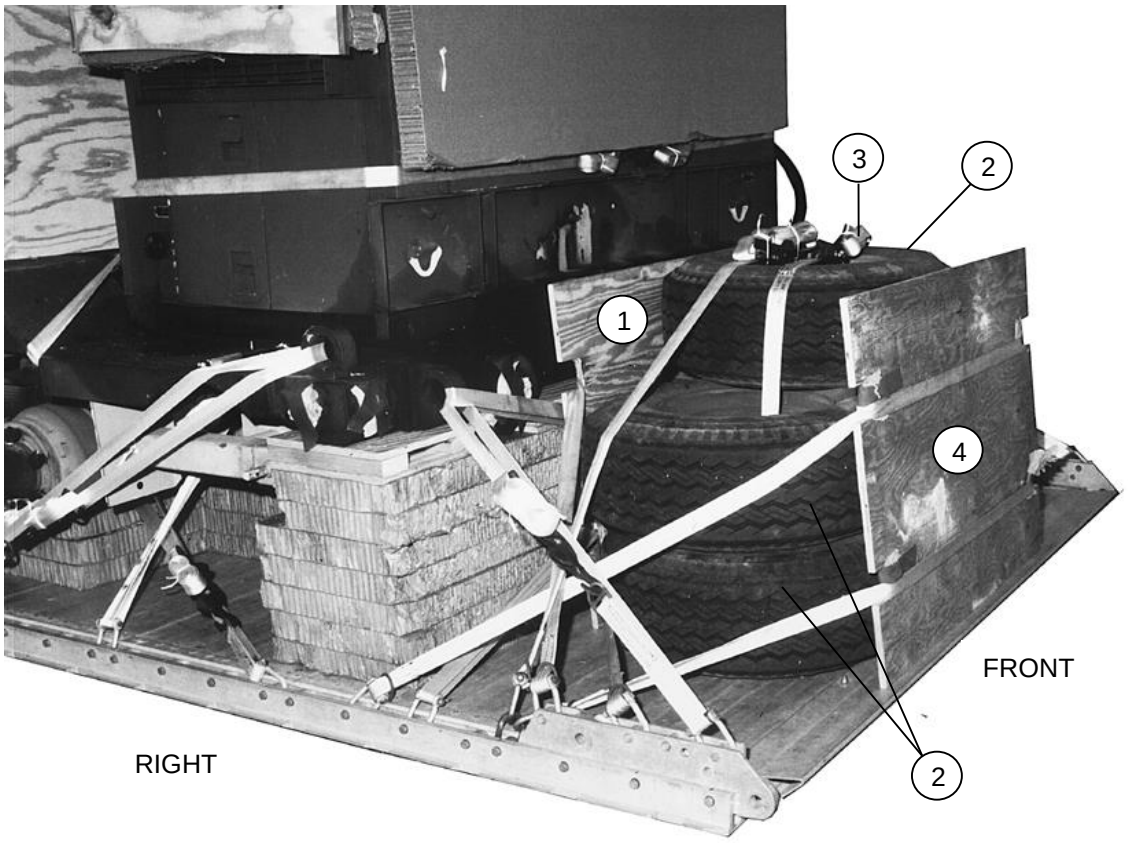


① Cut two pieces of ¾- by 36- by 48-inch plywood. Cut four 3- by 3-inch notches in each end board. Make the notches 8 inches from the top and bottom of the board.

Figure 7-32. End boards constructed

POSITIONING AND SECURING END BOARDS AND STOWING TIRES

7-30. Position and secure the end boards, stow the tires as shown in Figure 7-33.



① Position one end board against the rear of the ROWPU and honeycomb stack 1.

② Stow the five tires on the front of the platform against the end board. Ensure the spare tire is placed and centered on top.

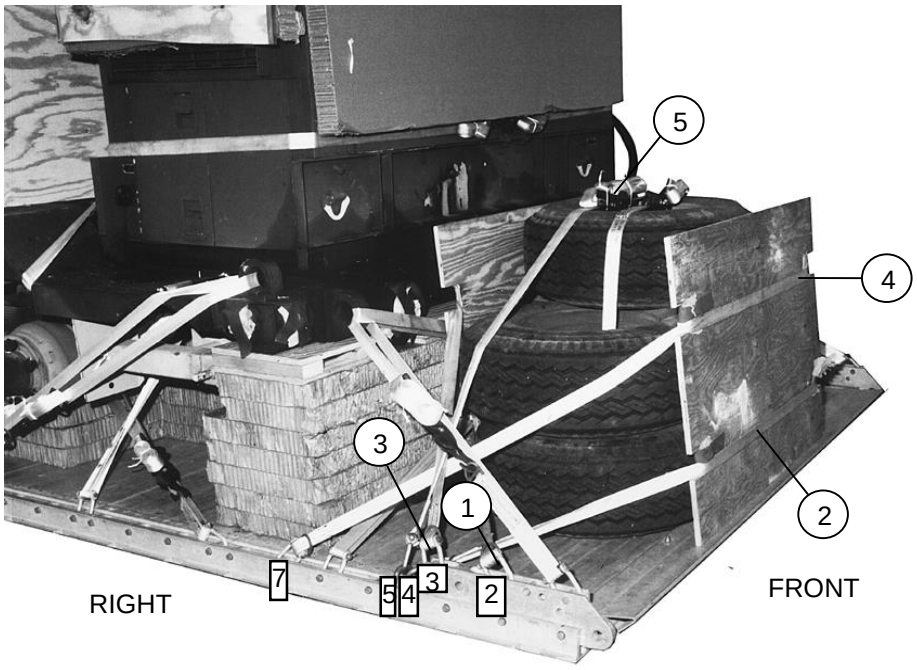
③ Pass a 15-foot lashing through the centers of the four tires and secure on top of the spare using a single D-ring and load binder. Ensure that the lashing is routed through the side rings of all four tires.

④ Position the second end board against the front of the tires.

Figure 7-33. End boards positioned and tires stowed

SECURING TIRES

7-31. Lash the tires as shown in Figure 7-34.



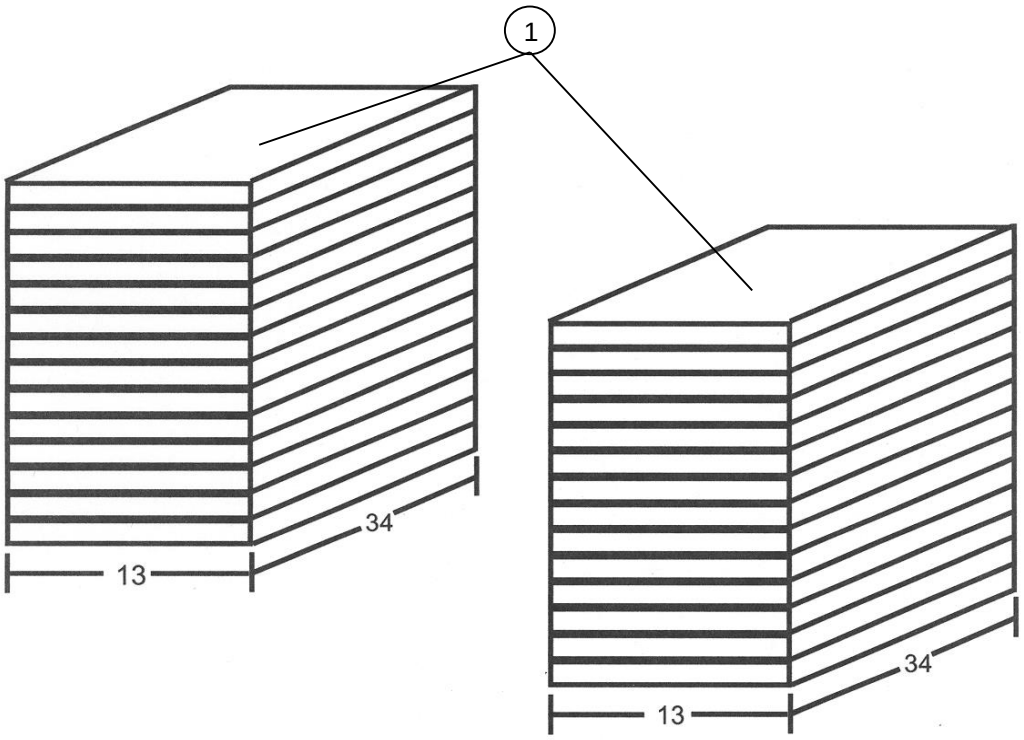
Lashing Number	Tie down Clevis Number	Instructions
		Pass lashing through:
1	2 to 2A	Its own D-ring through the rear bottom cutouts to clevis 2A.
2	4 to 4A	Its own D-ring through the front bottom cutouts to clevis 4A.
3	3 to 3A	Its own D-ring through the rear top cutouts to clevis 3A.
4	7 to 7A	Its own D-ring through the front top cutouts to clevis 7A.
5	5 to 5A	Clevis 5 and its own D-ring and run over the top of the tire. Pass the second lashing through clevis 5A and its own D-ring and run over the top of the tires. Secure to lashing from clevis 5 on top of the tires with two D-rings and a load binder.

Figure 7-34. Lashings 1 through 5 installed

PREPARING, CONSTRUCTING AND POSITIONING PARACHUTE STOWAGE POSITION

7-32. Prepare the honeycomb stacks for the parachute stowage platform as shown in Figure 7-35.

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



① Cut 28 pieces of 13- by 34- inch honeycomb. Place 14 pieces of honeycomb in each stack and glue them together.

② Set each stack on the rear of the platform inside the trailer's front tie down eyes and flush with the front of the trailer (not shown).

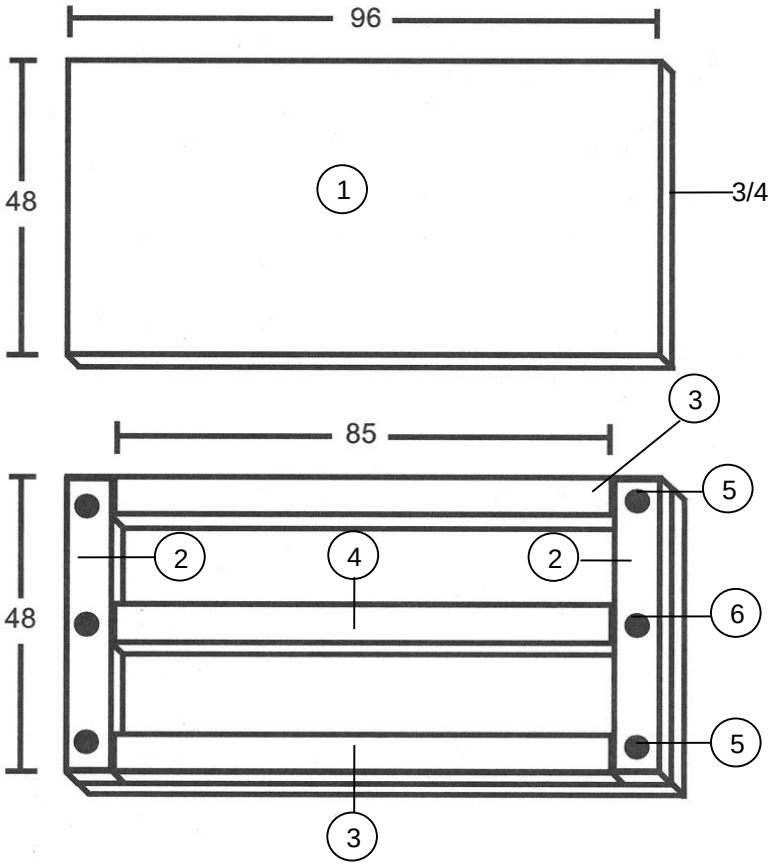
③ Center the stowage platform on top of each of the honeycomb stacks (not shown).

Figure 7-35. Honeycomb stacks for parachute platform prepared

CONSTRUCT THE PARACHUTE STOWAGE PLATFORM

7-33. Construct the parachute stowage platform as shown in Figure 7-36.

Note.
1. This drawing is not to scale.
2. All dimensions are in inches.
3. All nailing is done from the plywood side to maintain a smooth surface using 8-penny nails.



① Start construction of the parachute stowage platform using a ¾- by 48- by 96-inch piece of plywood.

② Nail a 2- by 6- by 48-inch piece of lumber along each 48-inch side of the plywood.

③ Nail a 2- by 6- by 85-inch piece of lumber along each 96-inch side of the plywood.

④ Center a 2- by 6- by 85-inch of lumber between the other two 2- by 6- by 85-inch pieces of lumber and nail it to the plywood.

⑤ Drill 2-inch holes 3 inches from each corner.

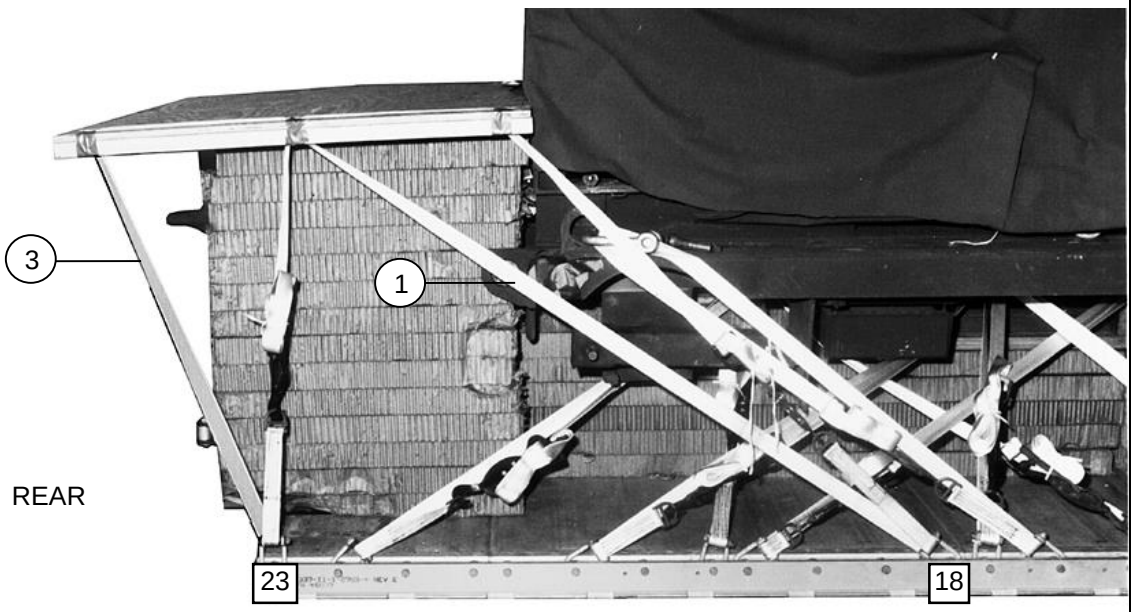
⑥ Drill one 2-inch hole centered between the corner holes on each 48-inch side of the plywood.

Figure 7-36. Parachute stowage platform constructed

SECURING PARACHUTE STOWAGE PLATFORM

7-34. Lash the parachute stowage platform as shown in Figure 7-37.

Note. Tape all cutouts in the stowage in the stowage platform prior to routing lashings.

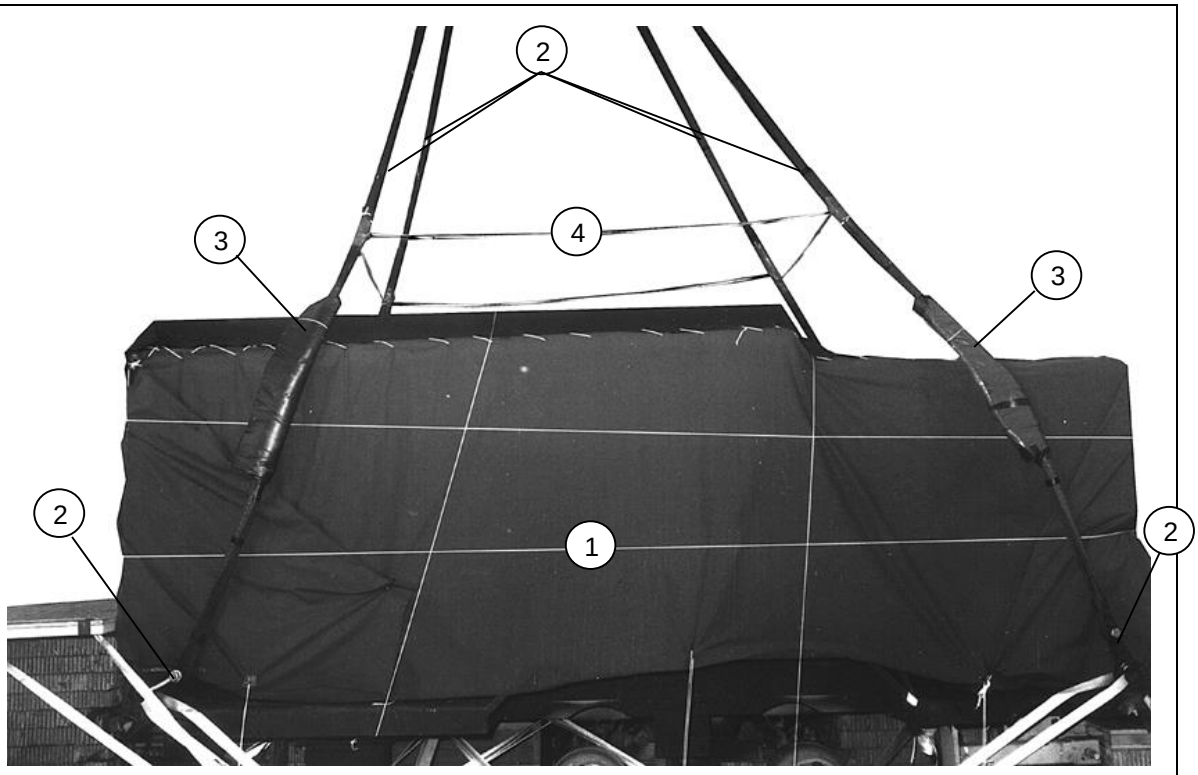


Lashing Number	Tie Down Clevis Number	Instructions
		Pass lashing through:
1	18	Clevis 18, up through the right center hole, down through the right front hole. Secure with a D-ring and load binder.
2	18A	Repeat for the left side using clevis 18A.
3	23	Clevis 23, up through the right rear hole, down through the right center hole. Secure with a D-ring and load binder.
4	23A	Repeat for the left side using clevis 23A.

Figure 7-37. Parachute stowage platform constructed

INSTALLING LOAD COVER, SUSPENSION SLINGS AND SAFETY TIE

7-35. Cover the load; install the suspension slings and safety tie as shown in Figure 7-38.



① Place a 17- by 35-foot canvas cover over the load from the generator to the front of the ROWPU. Secure the cover in place using type III nylon cord.

② Attach a 16-foot (4-loop), type XXVI nylon suspension sling to each lifting point with a large clevis. Attach the clevis with the bell of the clevis through the lifting point and secure the bolt through the plies of the sling.

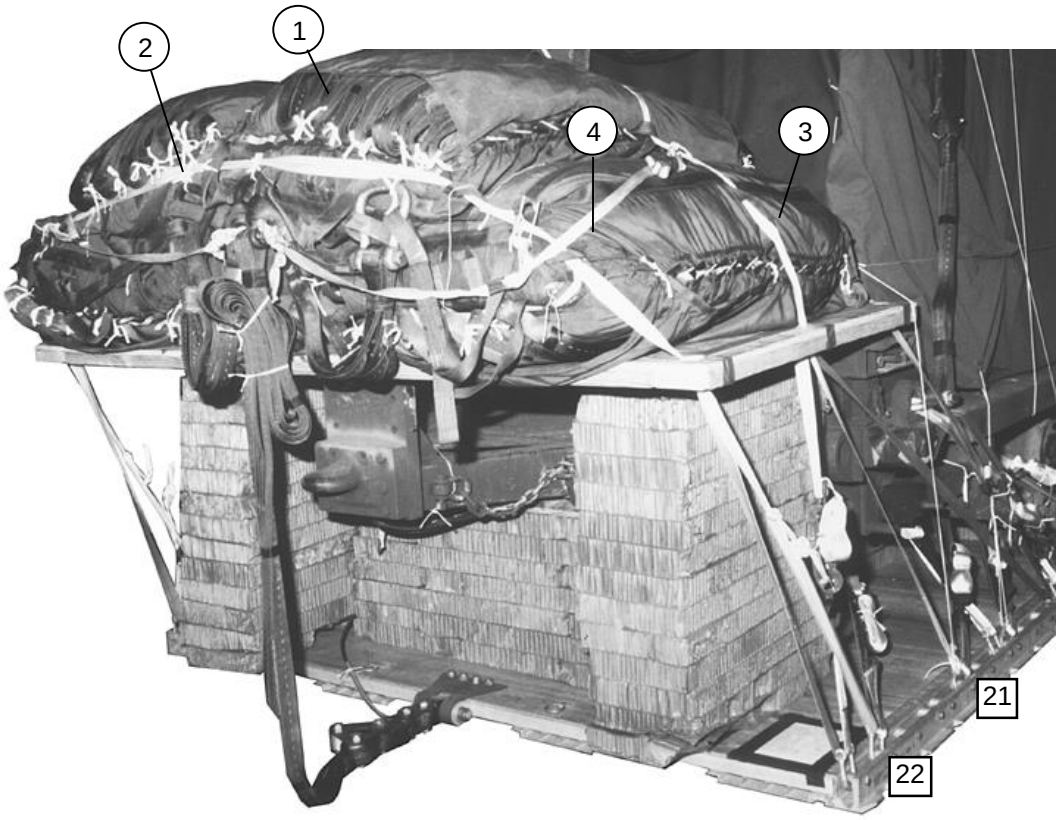
③ Pad the front and rear suspension slings using four 36- by 10-inch pieces of felt and tape in place. Place the felt where the slings come in contact with the top of the ROWPU. Extend the tape beyond the top and bottom of the felt to secure it in place.

④ Raise the suspension slings and install the deadman's tie according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.

Figure 7-38. Load cover, suspension sings and safety tie installed

PREPARING AND STOWING CARGO PARACHUTES

7-36. Prepare and stow the cargo parachutes as shown in Figure 7-39.



① Prepare, position and stow 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 REV 1/TO 13C7-1-5.

② Using type VIII nylon webbing install the cargo parachute restraint through the front carrying handles to clevises 22 and 22A according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.

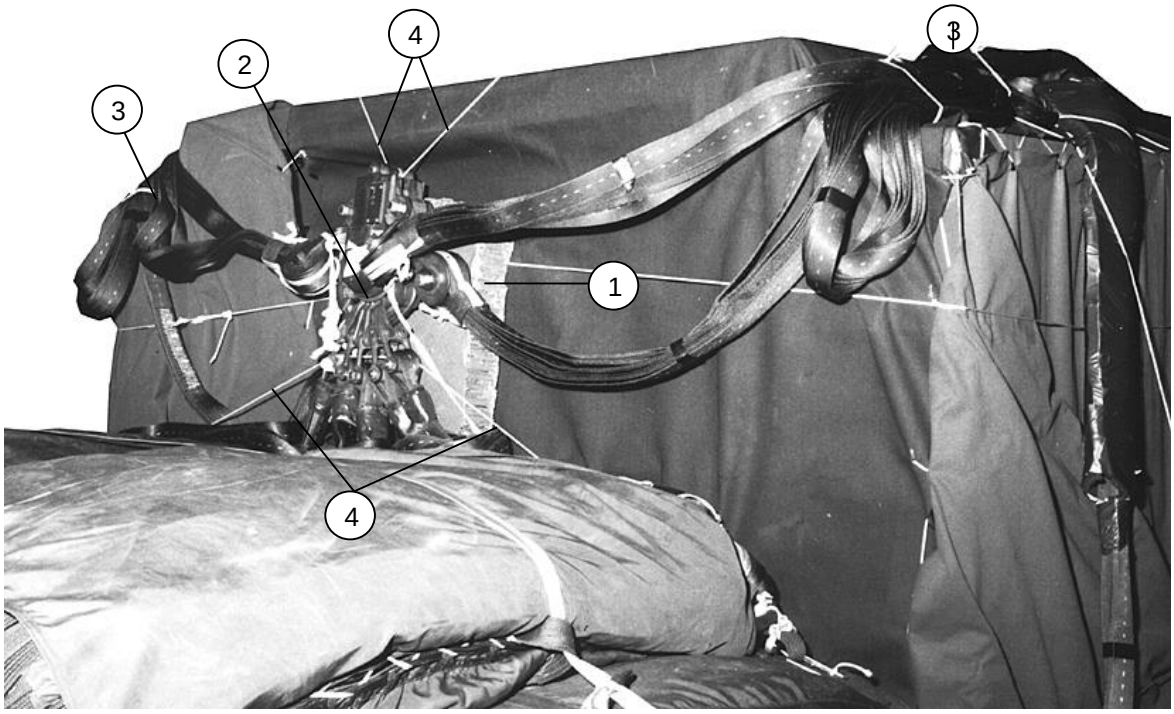
③ Using type VIII nylon webbing install the cargo parachute restraint through the center carrying handles to clevises 21 and 21A according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.

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

Figure 7-39. Cargo parachutes prepared and stowed

INSTALLING PARACHUTE RELEASE SYSTEM

7-37. Prepare, attach and safety an M-2 cargo parachute release according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figure 7-40.



① Center a 24- by 24-inch piece of honeycomb on the front of the ROWPU. Tape the edges of the honeycomb and secure using type III cord.

② Prepare and install the M-2 cargo parachute release according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5. Center the assembly on top of honeycomb.

③ S-fold and tie any excess in the suspension slings using one turn single type I, ¼-inch cotton webbing.

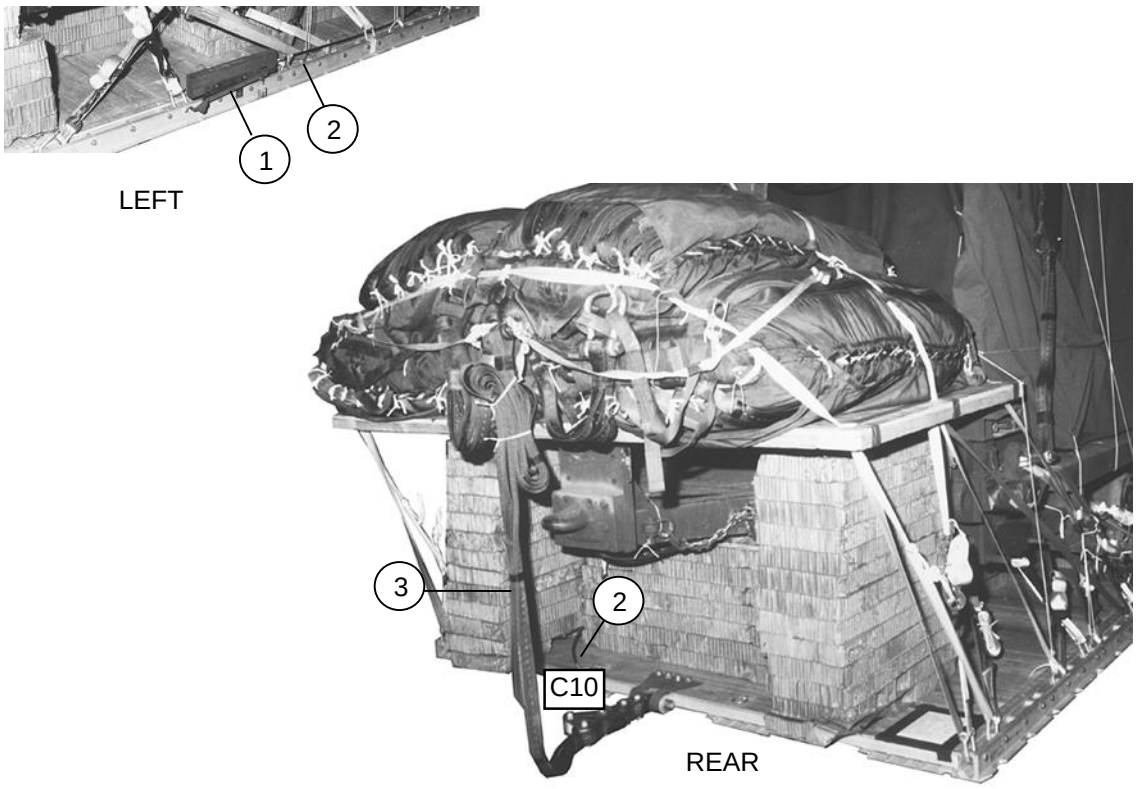
④ Safety the M-2 cargo parachute release to a convenient point on the load using type III nylon cord according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.

Note. All slings must be made safety in such a manner as not to increase the height of the load.

Figure 7-40. Cargo parachute release installed

INSTALLING EXTRACTION SYSTEM

7-38. Install the extraction system as shown in Figure 7-41.



① Install the components of the extraction force transfer coupling system according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5. Use the rear mounting holes on the left side of the platform for the extraction force transfer coupling system brackets.

② Install a 20-foot extraction force transfer coupling system cable according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5. Safety tie the cable to convenient places on the platform with one turn of type I, ¼-inch cotton webbing.

Note. Safety the cable to tie down ring C10 using type I, ¼-inch cotton webbing.

③ Attach a 9-foot (2-loop) type XXVI nylon sling according to be used as a deployment line. S-fold the excess and tie it in two places with type I, ¼-inch cotton webbing.

Figure 7-41. Extraction system installed

PLACING EXTRACTION PARACHUTE

7-39. 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 REV 1/TO 13C7-1-5. Place the extraction parachute and line on the load for installation in the aircraft.

INSTALLING PROVISIONS FOR EMERGENCY RESTRAINTS

7-40. 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 REV 1/TO 13C7-1-5.

MARKING RIGGED LOAD

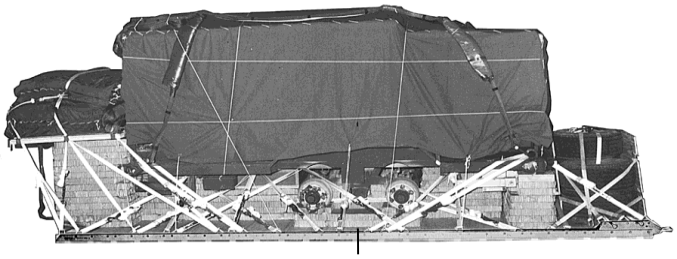
7-41. Mark the rigged load according FM4-20.102/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5, and as shown in Figure 7-42. Comply with the Shipper's requirements for Declaration of Dangerous/Hazardous Goods in accordance with AFMAN 24-204/TM 38-250/ NAVSUP PUB 505; MCO P4030.19I; DLAI 4145.3 DCMAD1, CH3.4 (HM24). If the load varies from the one shown, the weight, height, CB, and parachute requirements must be recomputed.

EQUIPMENT REQUIRED

7-42. Use the equipment listed in Table 7-1 to rig this load.

CAUTION

Make the final rigger inspection required by AR 59-4 (Using DD Form 1748, *Joint Airdrop Inspection Record (Platforms),* or appropriate DD Form 1748-1, *Joint Airdrop Inspection Record (Containers)*, DD Form 1748-2, *Airdrop Malfunction Report (Personnel-Cargo)*, and DD Form 1748-3, *Joint Airdrop Summary Report*).



Center of balance

NOTICE OF EXCEPTION

The height limitation of this load is greater than what is authorized in TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5. The overall rigged height of the 600-GPH ROWPU will not exceed 101 inches for a distance of not more than 40 inches aft of the center of balance. All high points should be verified each time this load is placed on the aircraft. An exception to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 is granted. The procedures in this paragraph must be followed.

RIGGED LOAD		
Weight:	Load shown……:.	21,780 pounds
	Maximum weight……	23,030 pounds
Height:	……	101 inches
Width:	……	108 inches
Length:	……	275 inches
Overhang:	Front……	5 inches
	Rear……...	35 inches
Center of balance:	……	130 inches

Figure 7-42. ROWPU rigged on a 20-foot, type V platform for low-velocity airdrop

Table 7-1. Equipment required for rigging a ROWPU on a 20-foot, type V platform for low-velocity airdrop

National Stock Number	Items	Quantity
8040-00-273-8713	Adhesive Paste, 1-Gallon	As Required
4030-00-678-8562	Clevis, ¾-inch medium	6
4030-00-090-5354	Clevis, 1-inch large	7
4020-00-240-2146	Cord, Nylon, Type III, 550-pound	As Required
1670-00-434-5783	Coupling, Airdrop Extraction Force Transfer, w 20-foot cable	1
1670-00-360-0328	Cover, Clevis	5
8135-00-664-6958	Cushioning Material (Cellulose Wadding)	As Required
8305-00-958-3685	Felt, ½-inch thick	As Required
1670-01-183-2678	Leaf, Extraction Line (Line Bag) (for C-130)	1
1670-01-183-2678	Leaf, Extraction Line (Line Bag) (for C-17)	2
1670-00-003-4391	Knife, Parachute Bag (for C-17)	1
1670-01-062-6313	Line Extraction:	1
1670-01-107-7651	60-foot (3-loop), Type XXVI (for C-130)	1
1670-01-064-4452	140-foot (3-loop), Type XXVI (for C-17)	1
	60-foot (1-loop), Type XXVI (for C-17), (Drogue Line)	
1670-01-493-6420	Link Assembly:	2
1670-01-493-6418	Two-Point, 5 ½-inch (for C-130 and C-17)	1
	Two-Point, 3 ¾-inch (for C-17), Drogue Line	
5510-00-220-6146	Lumber:	As Required
5510-00-220-6148	2- by 4- by 96-inch	As Required
5510-00-220-6246	2- by 6-inch	As Required
	2- by 8-inch	
5315-00-010-4659	Nail, Steel Wire, Common, 8-penny	As Required
1670-00-753-3928	Pad, Energy Dissipating, Honeycomb, 3- by 36- by 96-inch	40 Sheets

Table 7-1. Equipment required for rigging a ROWPU on a 20-foot, type V platform for low-velocity airdrop (continued)

National Stock Number	Items	Quantity
	Parachute:	
	Cargo:	
1670-01-016-7841	G-11C	5
	Parachute, Cargo Extraction:	
1670-00-040-8135	28-foot (for C-130)	1
1670-00-040-8135	28-foot (C-17)	1
1670-00-063-3715	15-foot (for C-17), (Drogue Parachute)	1
	Platform, Airdrop, Type V, 20-feet:	
1670-01-162-2372	Clevis Assembly	46
1670-01-353-8424	Extraction Bracket Assembly	1
1670-01-162-2381	Tandem Link Assembly (Multipurpose Link)	2
	Plywood, ¾-inch	As Required
1670-01-097-8817	Release, Cargo, Airdrop:	1
	Sling, Cargo, Airdrop:	
1670-01-062-6304	9 foot (2-loop), Type XXVI	1
1670-01-062-6308	16-foot (4-loop), Type XXVI	4
1670-01-062-6311	120-foot (2-loop), Type XXVI	5
1670-01-062-6301	3 foot (2-loop), Type XXVI	2
1670-00-040-8219	Strap, Parachute Release, Multicut	2
7510-00-266-5016	Tape, Adhesive, 2-inch	As Required
	Textile:	
8305-00-433-5986	Cloth, Cotton Muslin, Type III (for C-17)	As Required
8310-00-917-3945	Thread, Cotton, Ticket Number 8/7 (for C-17)	As Required
1670-00-937-0271	Tie down Assembly, 15-foot	60
1670-01-483-8259	Tow plate Release Mechanism (H-Block) (C-17 only)	1
	Webbing:	
8305-00-268-2411	Cotton, ¼-inch, Type I	As Required
8305-00-082-5752	Nylon, Tubular, ½-inch	As Required
8305-00-261-8585	Type VIII Nylon	As Required

Chapter 8

Rigging Lightweight Water Purifier (LWP) on a 12-Foot, Type V platform for Low-Velocity Airdrop

DESCRIPTION OF LOAD

8-1. The lightweight water purifier (Figure 8-1) is rigged on a 12-foot, type V platform. The lightweight water purifier consists of equipment as shown in Figure 8-1. The total weight of the lightweight water purifier is approximately 2,052 pounds. The total rigged weight of the load is 6,140 pounds. The load is 92 inches high, 108 inches wide, 144 inches long, and the center of balance is 70 inches from the front edge of the platform. Refer to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 for the weight limitations and for the number of parachutes to be used.

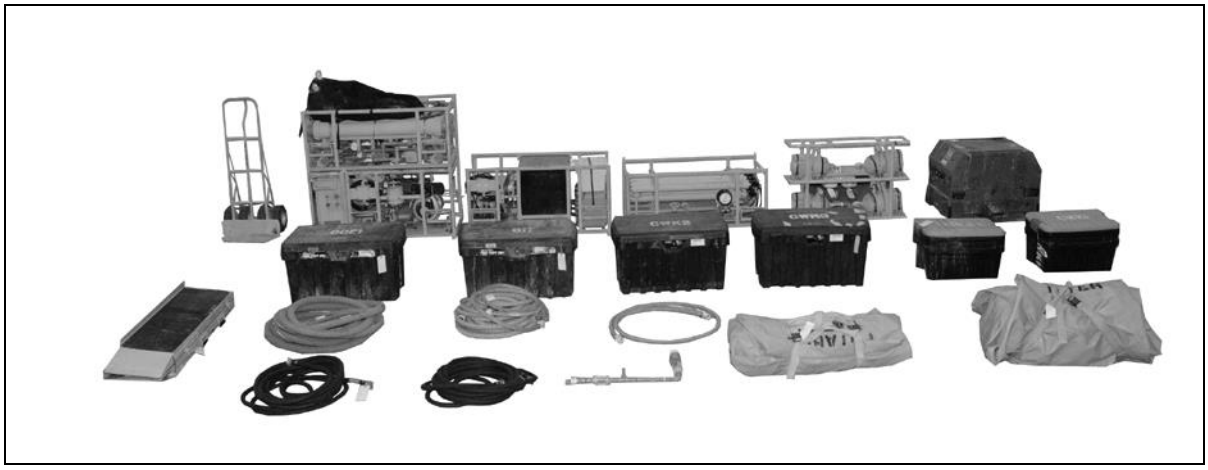
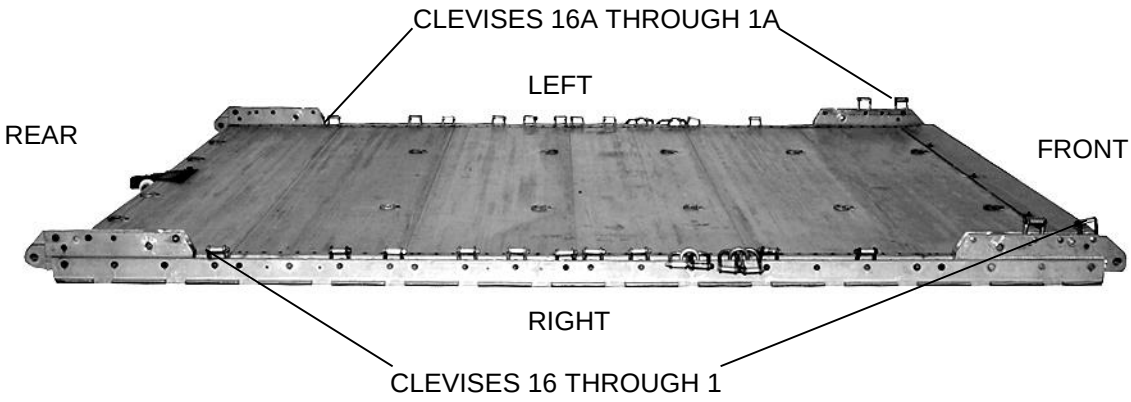


Figure 8-1. Lightweight water purifier (LWP)

PREPARING PLATFORM

8-2. Prepare a 12-foot, type V platform as shown in Figure 8-2.



Step:

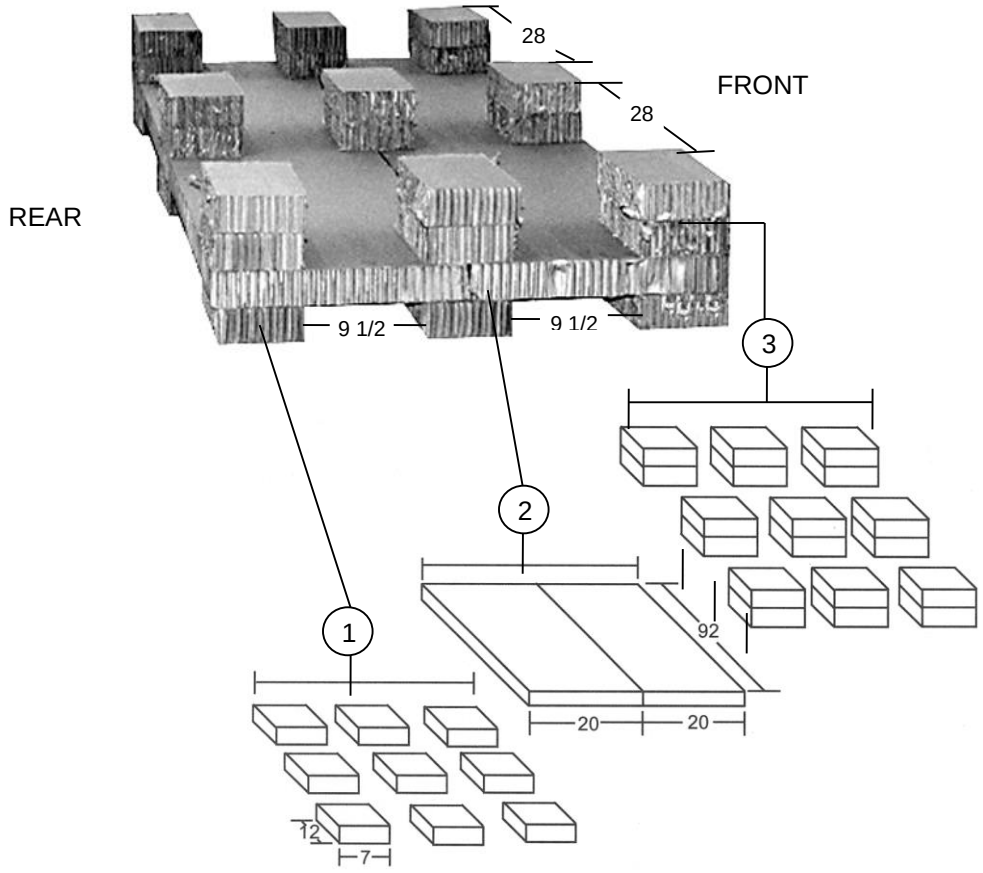
1. Inspect, or assemble and inspect, a 12-foot, type V platform as outlined in TM 10-1670-268-20&P/TO 13C7-52-22.
2. Inspect and install a tandem link to the front of each platform side rail using holes 1, 2 and 3.
3. Inspect and install a tandem link to the rear of each platform side rail using holes 22, 23, and 24.
4. Install clevises on bushings 1 and 3 of each front tandem link.
5. Starting at the front of each platform side rail, install clevises on the bushings bolted on holes 6, 8, 9 (tripled), 10 (tripled), 11, 12, 13, 14, 15, 17, 18, and 21.
6. Starting at the front of each platform side rail, number the clevises 1 through 16 on the right side and 1A through 16A on the left side.
7. Label the tie down rings according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.

Figure 8-2. Platform prepared

PREPARING AND POSITIONING HONEYCOMB STACK 1

8-3. Prepare honeycomb stack 1 as shown in Figure 8-3

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



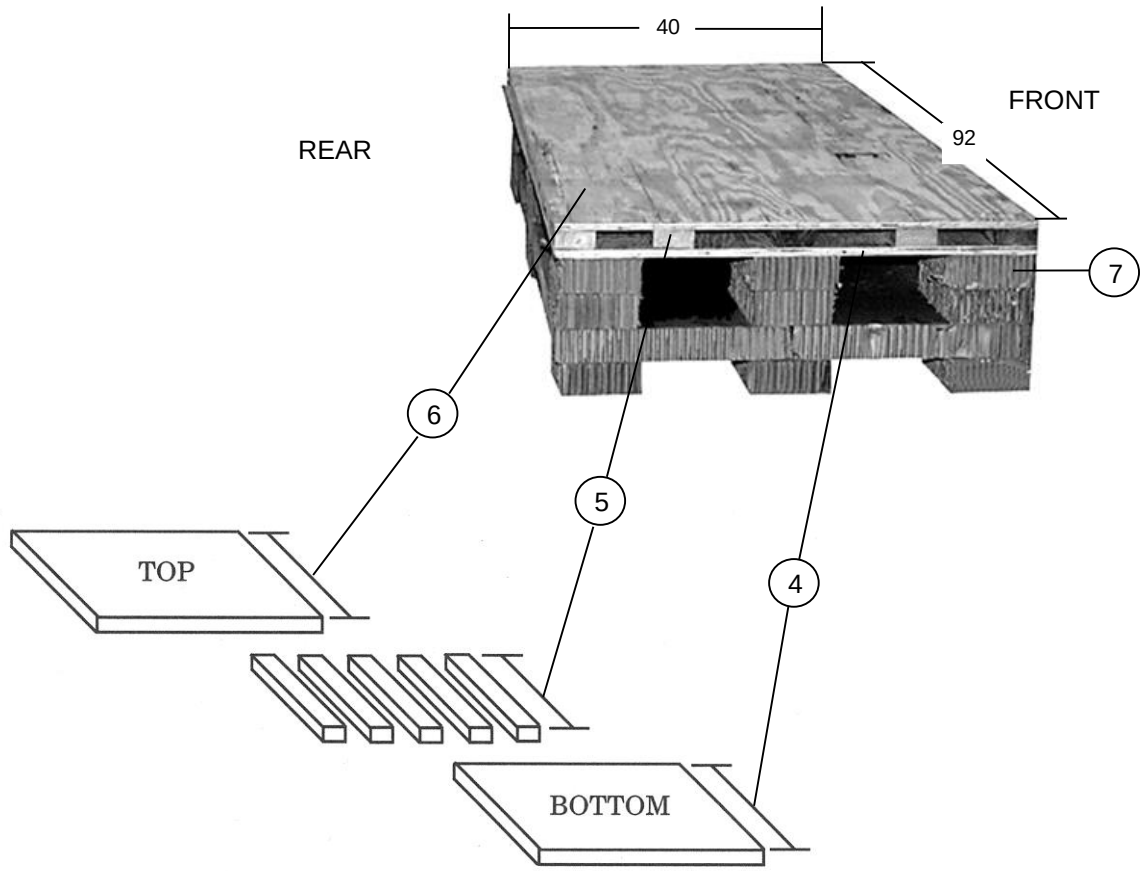
① Cut nine pieces of 7- by 12-inch honeycomb. Place the honeycomb to form three rows of three. Leave 9 ½ inches between the pieces from front to rear and 28 inches between pieces from right to left.

② Cut two pieces of 20- by 92-inch honeycomb. Place the pieces side by side to form a 40- by 92-inch piece of honeycomb. Glue the pieces to the honeycomb placed in step 1.

③ Cut and glue eighteen pieces of 7- by 12-inch honeycomb to form nine two layer stacks. Position and glue the honeycomb on top of the 40- by 92-inch piece of honeycomb as described in step 1.

Figure 8-3. Honeycomb stack 1 prepared

Notes.
1. This drawing is not to scale.
2. All dimensions are in inches.
3. Use 8-penny nails.



① Cut a 40- by 92- by ¾-inch piece of plywood to form the base for the strong back.

② Position and nail five 2- by 4- by 92-inch pieces of lumber evenly spaced on top of the plywood in step 4.

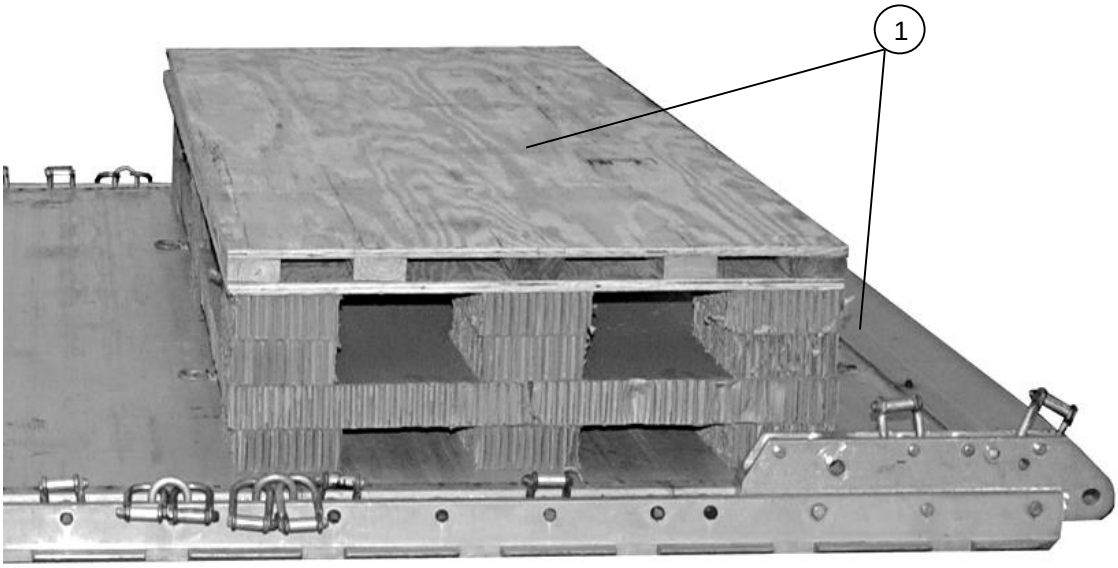
③ Cut a 40- by 92- by ¾-inch piece of plywood and place on top of the 2- by 4-inch lumber placed in step 5. Nail flush in place with 8-penny nails.

④ Position and glue the strong back built in steps 4, 5, and 6 on top of the honeycomb stack built in step 3.

Figure 8-3. Honeycomb stack 1 prepared (continued)

POSITIONING HONEYCOMB STACK 1

8-4. Position stack 1 on the platform as shown in Figure 8-4.



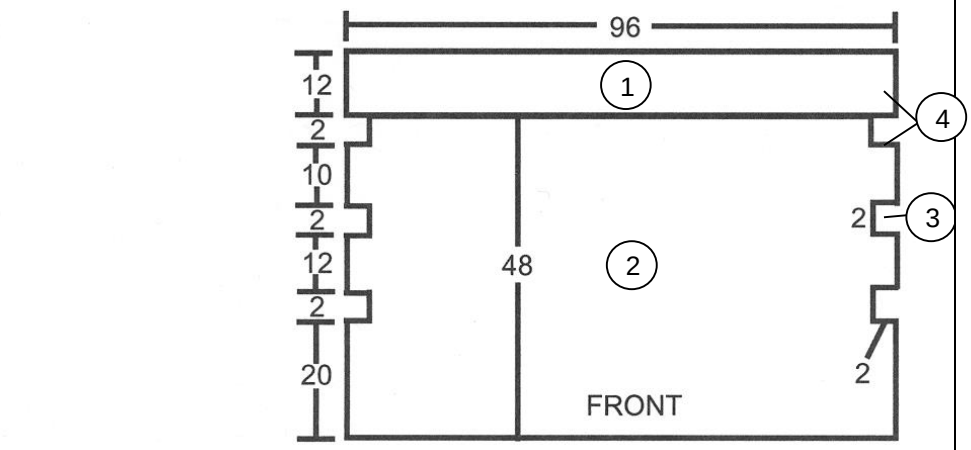
① Position the front edge of stack one 13 inches from the front edge of the platform and centered.

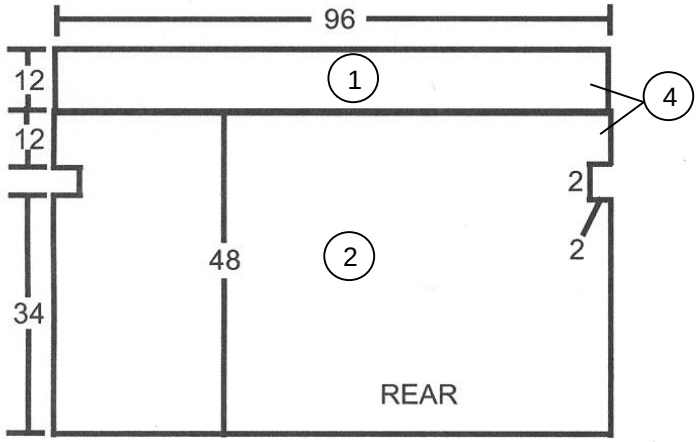
Figure 8-4. Honeycomb stack 1 positioned platform

CONSTRUCTING AND POSITIONING EQUIPMENT BOX 1

8-5. Construct the individual components of equipment box 1 as shown in Figures 8-5a, 8-5b and 8-6.

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





① Cut two ¾- by 12- by 96-inch pieces of plywood. Face the finished side of the plywood up.

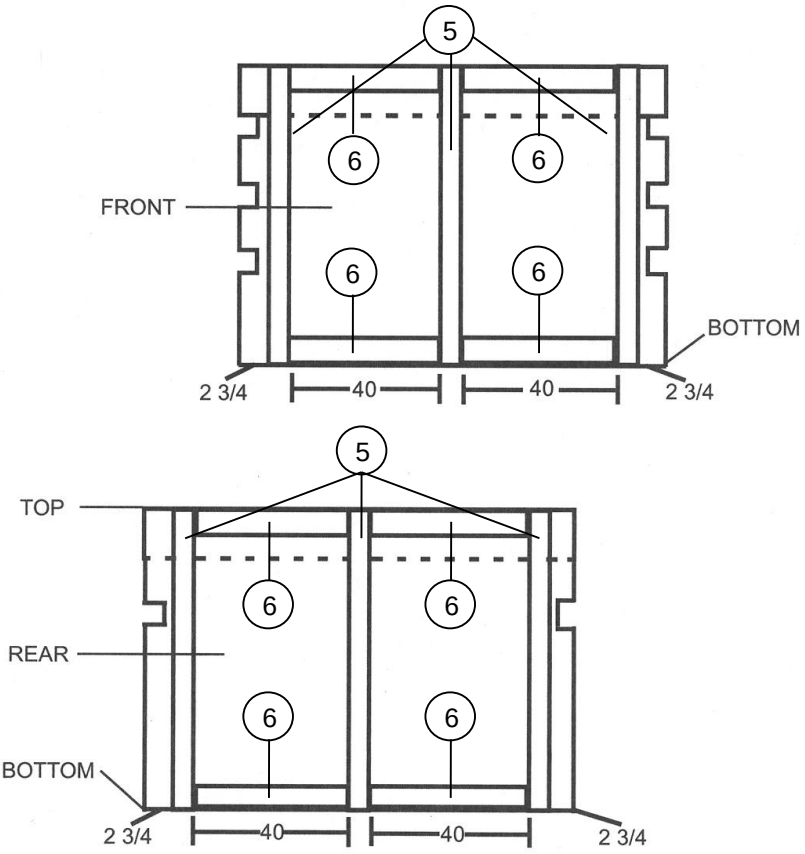
② Cut two ¾- by 48- by 96-inch pieces of plywood. Face the finished side of the plywood up.

③ Make 2- by 2-inch cutouts as shown in the plywood previously cut in step 2.

④ Lay the plywood previously cut in steps 1, 2, and 3 flush lengthwise to form two 60- by 96-inch pieces of plywood. Face the finished sides of the plywood up.

Figure 8-5a. Equipment box 1 front and rear constructed

***Notes*.**
1. This drawing is not to scale.
2. All dimensions are in inches.
3. Use 8-penny nails.

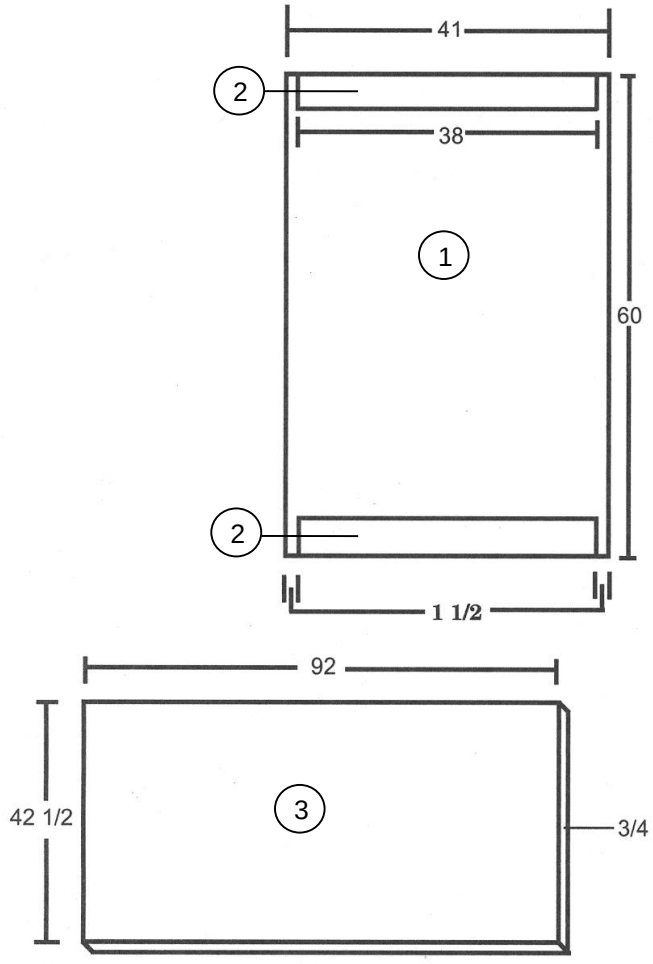


⑤ Cut six 2- by 4- by 60-inch pieces of lumber. Nail four of the pieces 2 ¾ inches from the edge of the plywood positioned in step 4. Nail the remaining two pieces centered between the previously nailed pieces. Ensure there are 40 inches between pieces.

⑥ Cut eight 2- by 4- by 40-inch pieces of lumber. Nail the pieces flush between the pieces positioned in step 5. Ensure the lumber is aligned along the top and bottom exterior edges of the plywood.

Figure 8-5b. Equipment box 1 front and rear constructed (continued)

Notes.
1. This drawing is not to scale.
2. All dimensions are in inches.
3. Use 8-penny nails.



① Cut two ¾- by 41- by 60-inch pieces of plywood to make the sides of the equipment box.

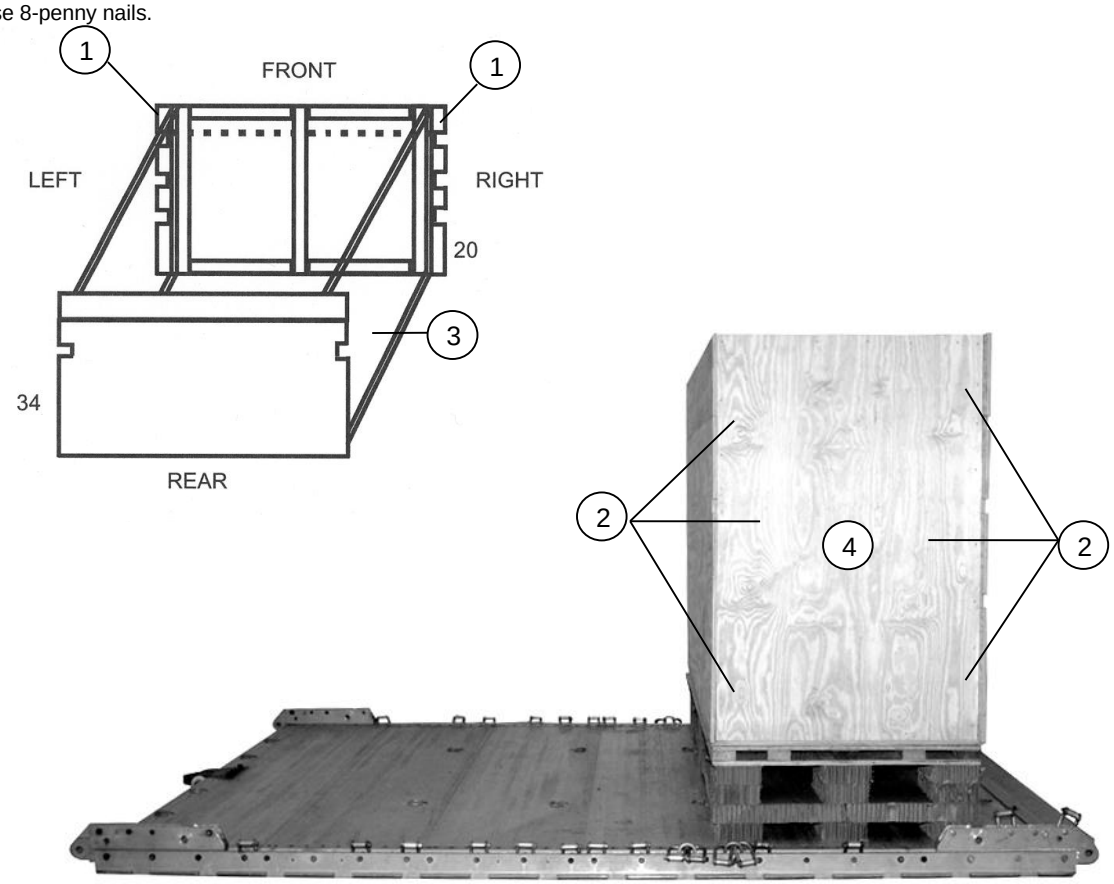
② Nail a 2- by 4- by 38-inch piece of lumber along the top and bottom edges of each of the two side pieces with 8-penny nails as shown. Allow the plywood to extend past the lumber 1 ½ inches on each side.

③ Cut two ¾- by 42 ½- by 92-inch pieces of plywood to make the top and bottom of equipment box 1.

Figure 8-6. Equipment box 1 sides, top and bottom constructed

8-6. Assemble and position equipment box 1 as shown in Figure 8-7.

***Notes*.**
1. This drawing is not to scale.
2. Use 8-penny nails.



Note. The side boards are transparent for clarity during construction.

① Assemble the box. When positioning the ends, ensure that the 20-inch cutout is positioned at the front bottom and the 34-inch cutout is positioned at the rear bottom portion of the box.

② Nail the pieces positioned in step 1 together with 8-penny nails through the sides of the box and into the vertical lumber pieces in the front and rear of the box.

③ Position and center the plywood for the bottom of the box on the horizontal lumber supports and nail in place with 8-penny nails.

④ Position and center equipment box 1 on top of honeycomb stack 1 as shown.

Figure 8-7. Equipment box 1 partially assembled and positioned for loading

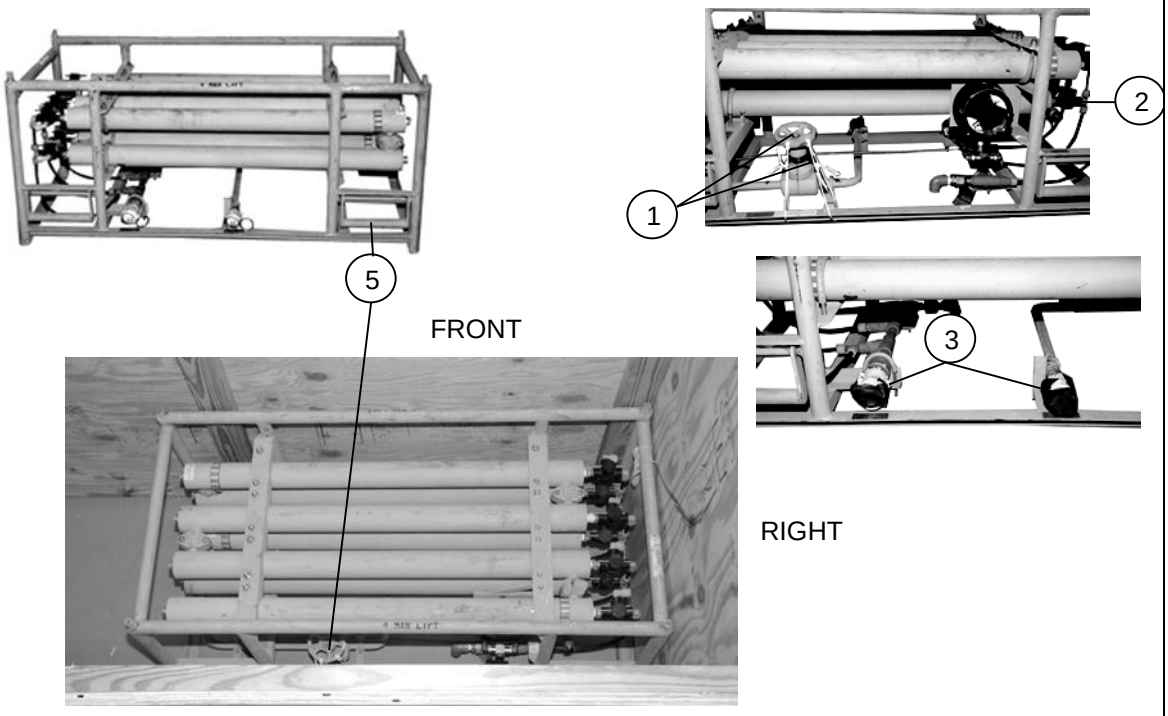
PREPARING AND STOWING THE EQUIPMENT FOR EQUIPMENT BOX 1

8-7. Prepare the components for equipment box 1 and stow them in the container as described below.

PREPARING REVERSE OSMOSIS ELEMENT MODULE

8-8. Prepare the reverse osmosis element module, and stow in the container as shown in Figure 8-8.

Note. The total weight of the module is 189 pounds.



① Secure the reject control valve with type III nylon cord as shown.

② Place a piece of 2-inch adhesive or masking tape over the pressure gauge.

③ Tape the permeate and reject outlets with 2-inch adhesive tape.

④ Cut and position a 36- by 87 ½-inch piece of honeycomb in the bottom of equipment box 1 (not shown).

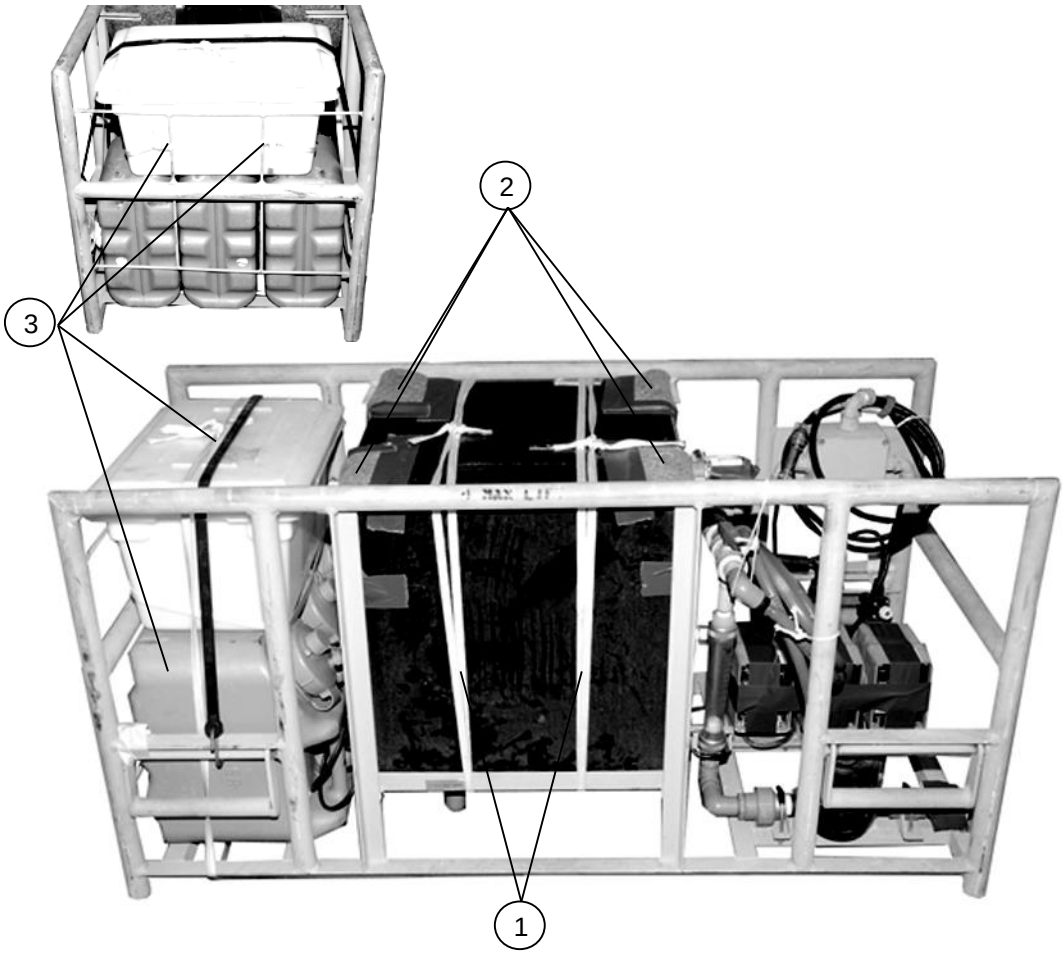
⑤ Position the reverse osmosis element module to the right front corner of equipment box 1 with the reject control valve facing to the rear of the box.

Figure 8-8. Reverse osmosis element module prepared and stowed

PREPARING CHEMICAL INJECTION CLEANING MODULE

8-9. Prepare the chemical injection cleaning module and stow in the container as shown in Figure 8-9a and 8-9b.

Note. The total weight of the module is 124 pounds.

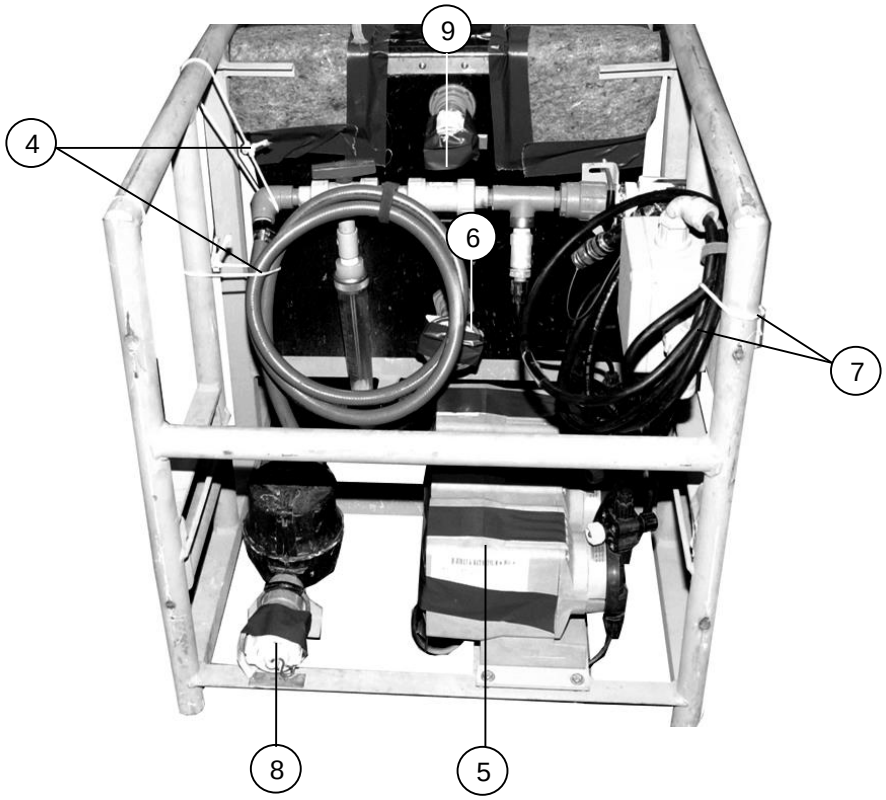


① Secure the cleaning tank to the module frame using ½-inch tubular nylon webbing.

② Pad each top corner of the cleaning tank with felt and tape in place with 2-inch adhesive tape.

③ Secure the three tanks (anti-sealant, coagulant, and hypochlorite) and the plastic storage box using inch tubular nylon webbing to the module frame so they will not move.

Figure 8-9a. Chemical injection cleaning module prepared and stowed



① Secure the hose from the diverter valve to the frame using type III nylon cord.

② Tape the three injection pumps (anti-sealant, coagulant, and hypochlorite) with 2-inch adhesive tape.

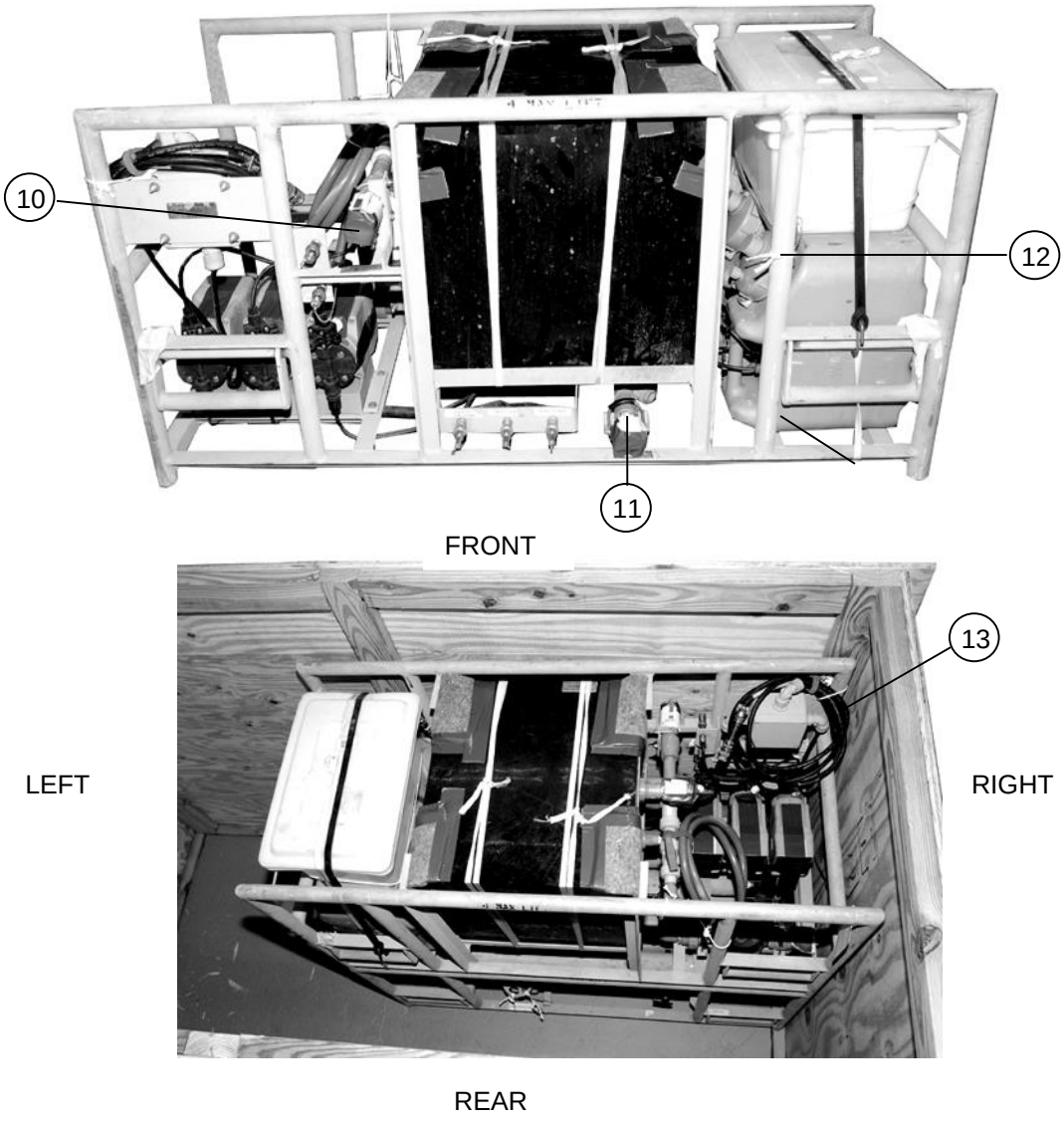
③ Tape the pressure gauge on the cleaning tank with 2-inch adhesive tape.

④ Secure the hose from the junction box to the frame using type III nylon cord.

⑤ Tape the product water-in valve using 2-inch adhesive tape.

⑥ Tape the cleaning inlet valve on the cleaning tank using 2-inch adhesive tape.

Figure 8-9b. Chemical injection cleaning module prepared and stowed (continued)



① Tape the product water-out valve with 2-inch adhesive tape.

② Tape the drain outlet valve with 2-inch adhesive tape.

③ Secure any loose hoses to the frame using type III nylon cord.

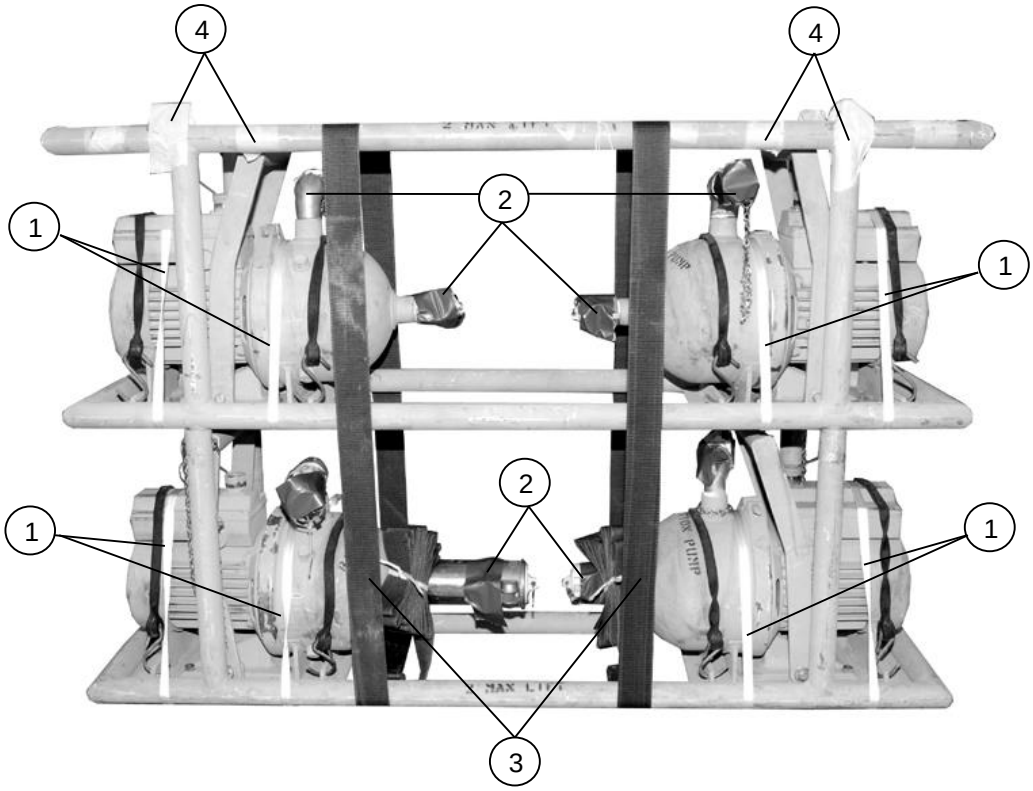
④ Position the chemical injection cleaning module on top of the reverse osmosis element module and ensure the product water-in valve faces to the right side of equipment box 1.

Figure 8-9. Chemical injection cleaning module prepared and stowed (continued)

PREPARING PUMP MODULE

8-10. Prepare the pump module and stow in the container as shown in Figures 8-10a and 8-10b.

Note. The total weight of the module is 152 pounds.



① Secure each individual pump to the module frame using two lengths of ½-inch tubular nylon webbing.

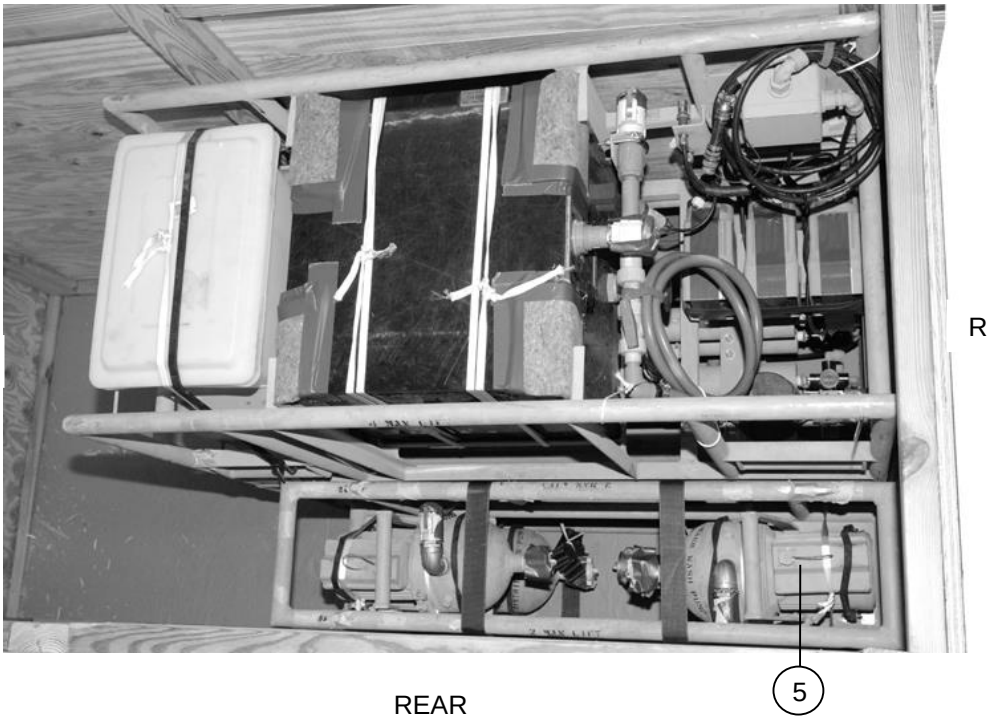
② Tape all valves with 2-inch adhesive tape.

③ Secure two A-7A straps vertically around the center of the module frame.

Note. Ensure the fraction adapter of the A-7A strap is positioned at the bottom of the module frame and secure the excess webbing to the bottom inside vales using type I, ¼-inch cotton webbing.

④ Tape the male portions of the frame using 2-inch masking tape.

Figure 8-10a. Pump module prepared and stowed



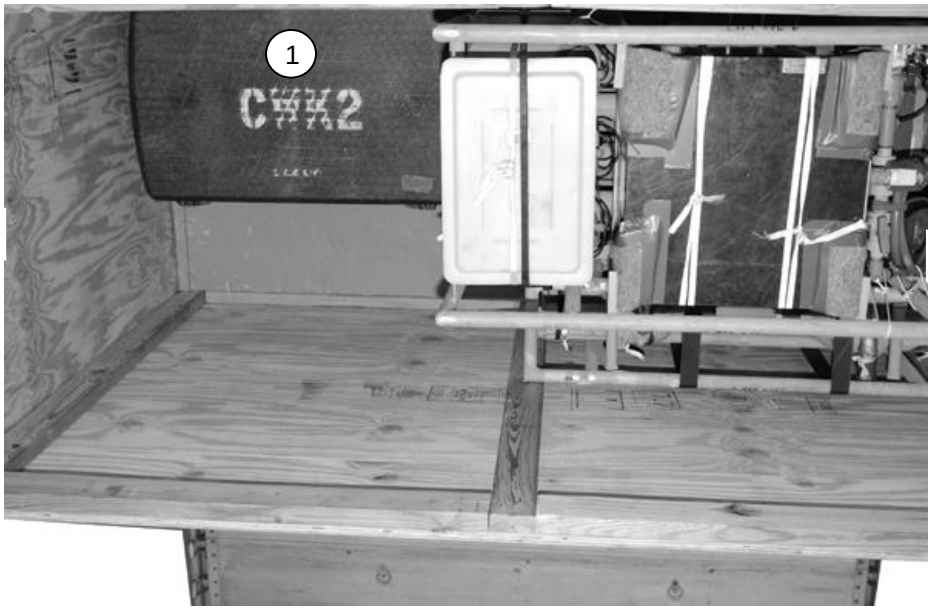
① Position the pump module to the rear of the reverse osmosis element module and flush against the right rear corner of equipment box 1.

Figure 8-10b. Pump module prepared and stowed (continued)

STOWING COLD WEATHER KIT (CWK) 2 BOX AND CWK 3 BOX

8-11. Stow the CWK 2 box and the CWK 3 box in the container as shown in Figures 8-11a and 8-11b.

FRONT



LEFT

RIGHT

REAR

Note. The components listed below are stored inside the over pack kit box of cold weather kit 2. The total weight of the cold weather kit 2 box is 64 pounds

Item Description	Quantity
Thermal Blanket, 10-feet, 0.75-inch hose	2
Thermal Blanket, 20-feet, 0.75-inch hose	4

Note. Ensure the cold weather kit 2 box is flush against the front and left side of the container.

① Position the cold weather kit 2 box to the left front of the container.

Figure 8-11a. CWK 2 box and Cold weather 3 box stored

FRONT

LEFT

RIGHT

REAR

Note. The components listed below are stored inside the over pack kit box of cold weather kit 3. The total weight of the cold weather kit box is 61 pounds.

Item Description	Quantity
Thermal Blanket, 10-feet, 1.5-inch hose	1
Thermal Blanket, 20-feet, 1.5 inch hose	2
Thermal Blanket, 10-feet, 1-inch hose	1
Thermal Blanket, 20-feet, 1-inch hose	2

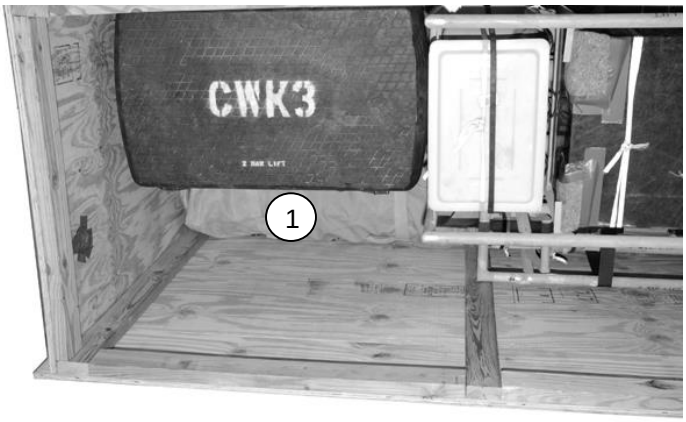
① Position the cold weather kit 3 box on top of the cold weather kit 2 box.

Figure 8-11b. CWK 2 box and CWK 3 box stowed (continued)

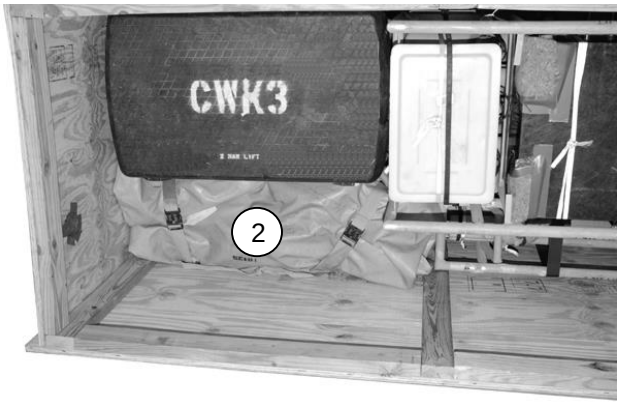
STOWING 1,000-GALLON COLLAPSIBLE RAW WATER AND PRODUCT FABRIC TANKS

8-12. Stow the 1,000-gallon collapsible raw water and product fabric tanks in the container as shown in Figure 8-12.

Note. The total weight of the 1,000 gallon collapsible raw water fabric tank is 59 pounds.



Note. The total weight of the 1,000 gallon collapsible product fabric tank is 50 pounds.



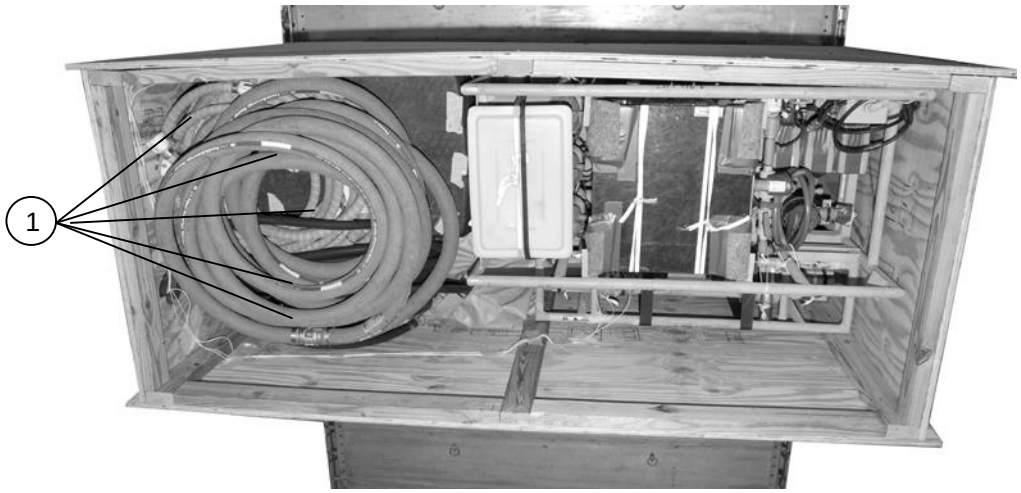
① Position the 1,000-gallon collapsible raw water fabric tank to the rear of the cold weather kit 2 box and the cold weather kit box.

② Position the 1,000-gallon collapsible product fabric tank on top of the 1,000-gallon collapsible raw water fabric tank.

Figure 8-12. 1,000-gallon collapsible raw water and product fabric tank stowed

STOWING HIGH PRESSURE HOSE, BACKWASH HOSES, REJECT HOSES, TUBE RAW WATER HOSES AND PRODUCT WATER HOSES

8-13. Stow the high pressure hose, backwash hoses; reject hoses, raw water hoses and product hoses in the container as shown in Figure 8-13.



Note. The components listed below are stored on the cold weather kits and two fabric tanks. The combined weight of the hose is 238 pounds.

Item Description	Quantity
High-pressure hose (orange code)	1
Backwash hose (yellow code)	2
Reject hose (red code)	2
Tube, raw water hose	2
Product water hose	3

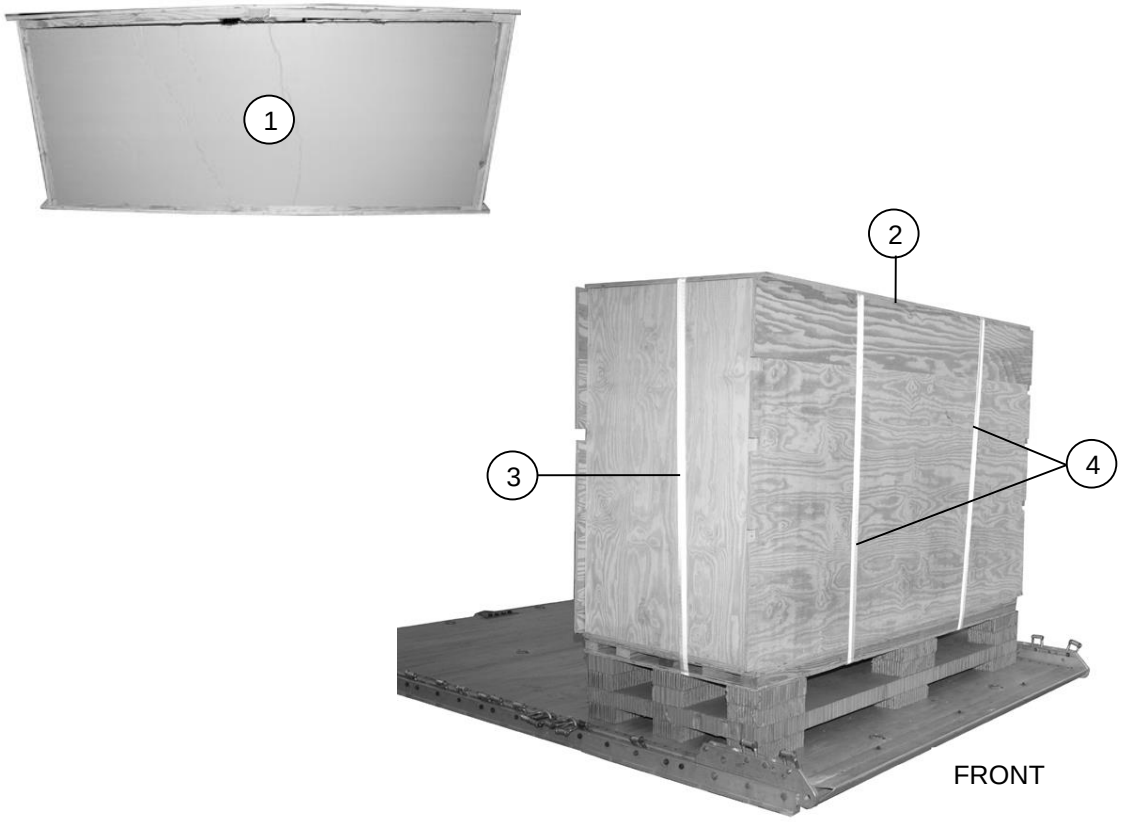
① Position the high pressure hose (orange code) (1 each), backwash hose (yellow code) (2 each), reject hose (red code) (2 each), tube, raw water hose (2 each), and product hose (3 each) on top of the cold weather kits and two fabric tanks.

Figure 8-13. High pressure hose, backwash hoses, reject hoses, tube raw water hoses and product water hoses stowed

CLOSING AND SECURING EQUIPMENT BOX 1

8-14. Close and secure equipment box 1 as shown in Figures 8-14a and 8-14b.

Note. Ensure the lashings placed in steps 3 and 4 are routed under the strong back and between the spaces of honeycomb stack 1.



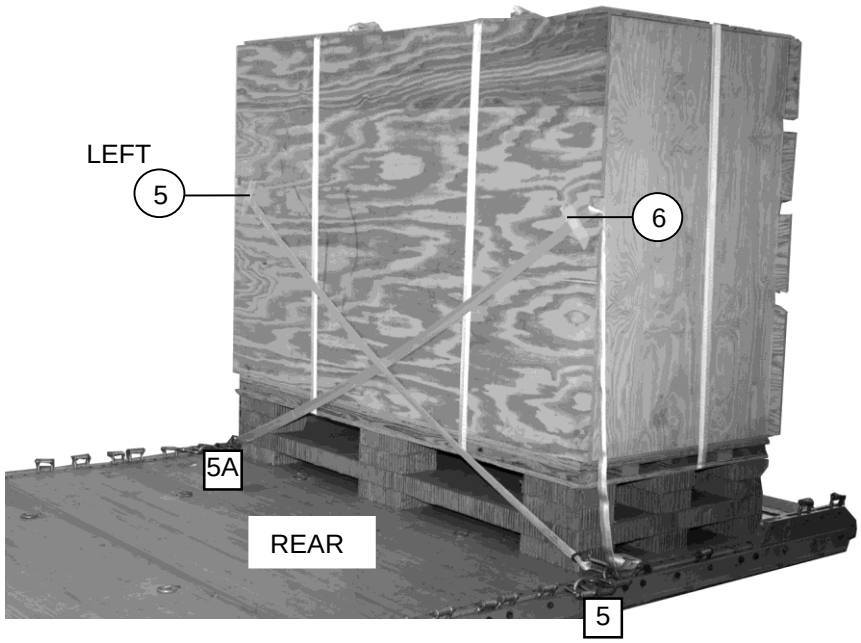
① Fill the remaining space of the container with honeycomb and place a full sheet on top.

② Nail the plywood top (built in Figure 4-6, step 3) to the container using 8-penny nails.

③ Form one 30-foot lashing and route it around the container widthwise and centered. Secure it on top of the container using two D-rings and a load binder.

④ Form two 30-foot lashings and route them around the box lengthwise. Secure each lashing on top of the container using two D-rings and a load binder.

Figure 8-14a. Equipment box 1 closed and secured



***Note**:* Pad and tape all cutouts prior to routing lashings.

① Pass a 15-foot lashing through clevis 5 and through its own D-ring. Route the lashing across the rear of the equipment box 1 and through the left cutout. Temporarily tape in place using 2-inch masking tape.

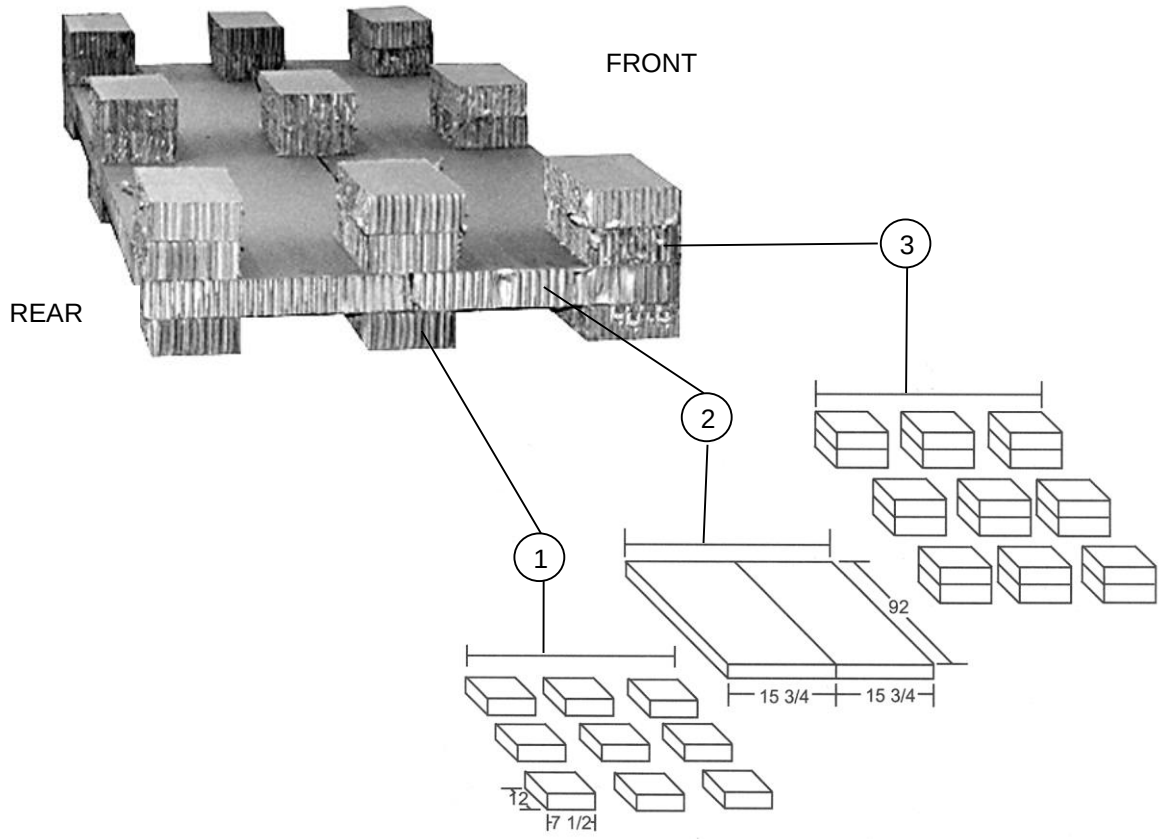
② Pass a 15-foot lashing through clevis 5A and through its own D-ring. Route the lashing across the rear of equipment box 1 and through the right cutout. Temporarily tape in place using a 2-inch masking tape.

Figure 8-14b. Equipment box 1 closed and secured (continued)

PREPARING AND POSITIONING HONEYCOMB STACK 2

8-15. Prepare honeycomb stack 2 as shown in Figures 8-15a and 8-15b. Position stack 2 as shown in Figure 8-16.

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



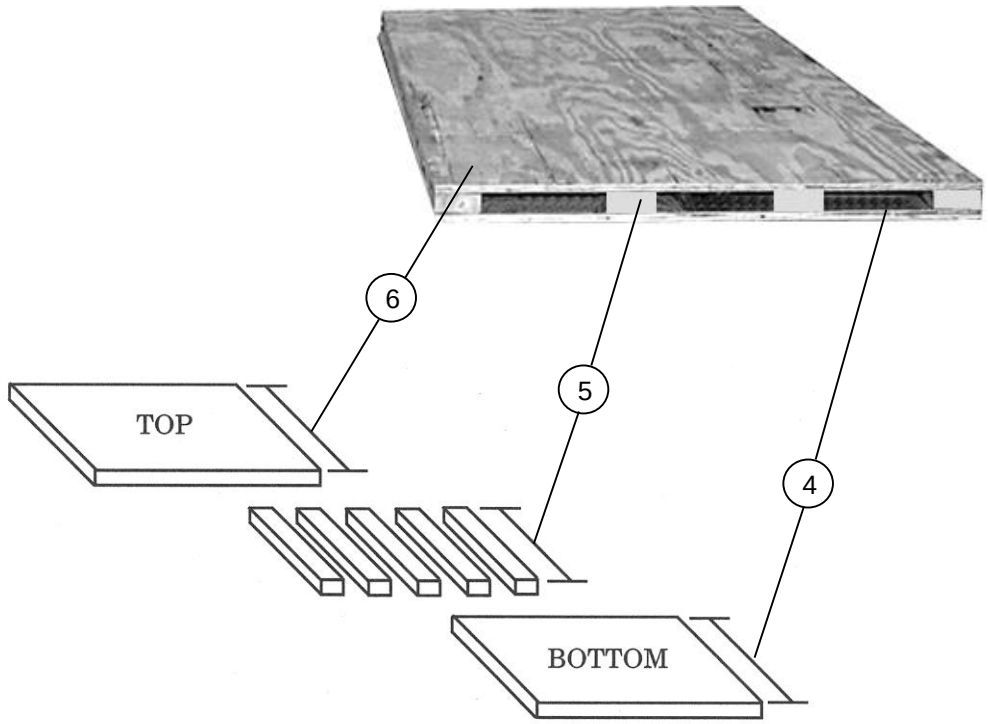
① Cut nine pieces of 7 ½- by 12-inch honeycomb. Place the honeycomb to form three rows of three. Leave 4 ½ inches between the pieces from front to rear and 28 inches between pieces from right to left.

② Cut two pieces of 15 ¾- by 92-inch honeycomb. Place the pieces side by side to form a 31 ½- by 92-inch piece. Glue the pieces to the honeycomb placed in step 1.

③ Cut and glue eighteen pieces of 7 ½- by 12-inch honeycomb to form nine two layer stacks. Position and glue the honeycomb on top of the 31 ½- by 92-inch piece of honeycomb as described in step 1.

Figure 8-15a. Honeycomb stack 2 prepared

Notes.
1. This drawing is not to scale.
2. All dimensions are in inches.
3. Use 8-penny nails.

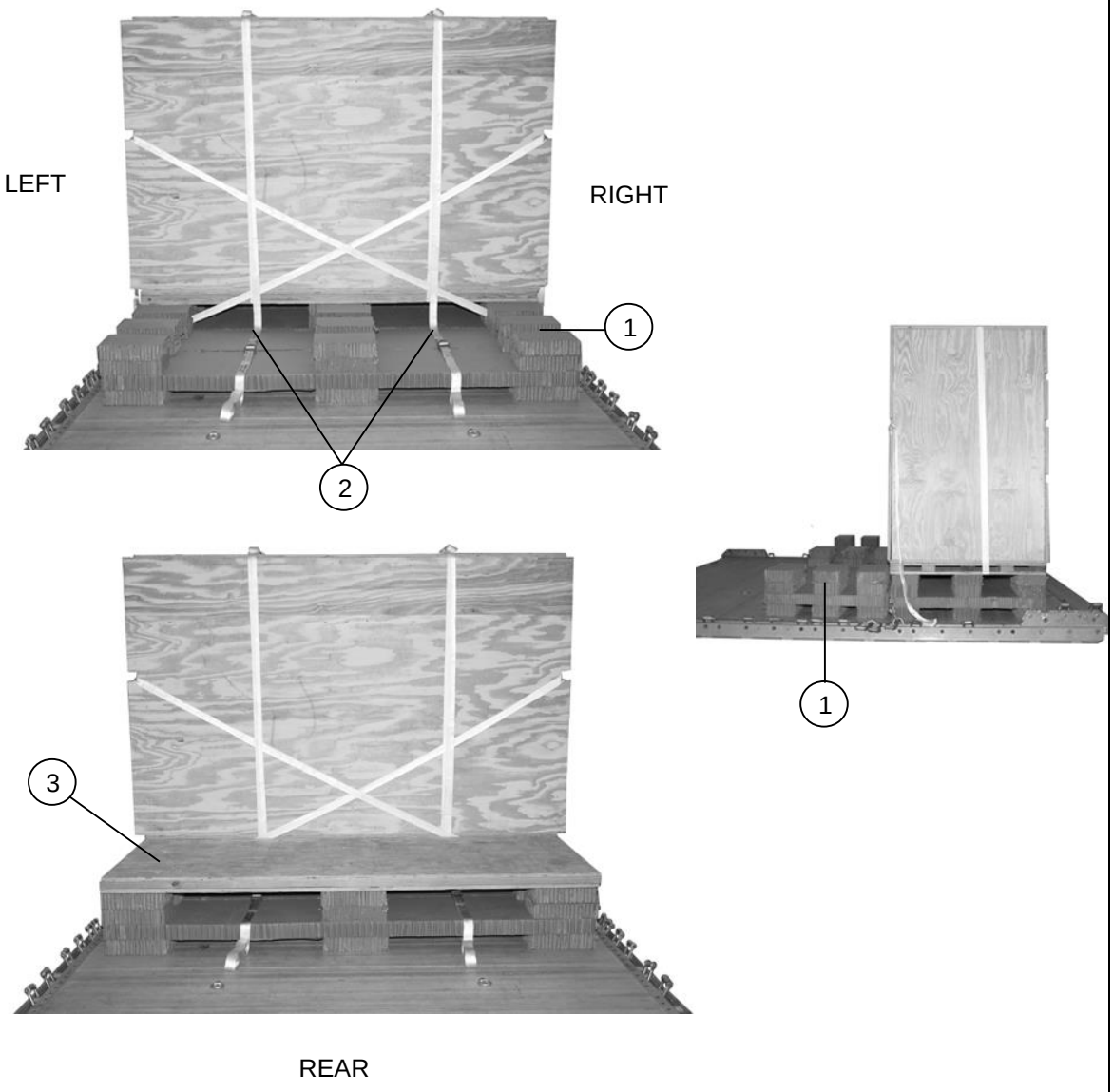


① Cut a 31 ½- by 92- by ¾-inch piece of plywood to form the base for the strongback.

② Position and nail four 2- by 4- by 92-inch pieces of lumber evenly spaced on top of the plywood in step 4.

③ Cut a 31 ½- by 92- by ¾-inch piece of plywood and place on top of the 2- by 4-inch lumber placed in step 5. Nail flush in place with 8-penny nails.

Figure 8-15b. Honeycomb stack 2 prepared (continued)



① Position and center honeycomb stack 2 one-inch from the rear of honeycomb stack 1.

② Form two 30-foot lashings. Position and center a lashing lengthwise between the spaces of honeycomb stack 2 on the right and left. Ensure the sewn D-rings are positioned in the center of the stack.

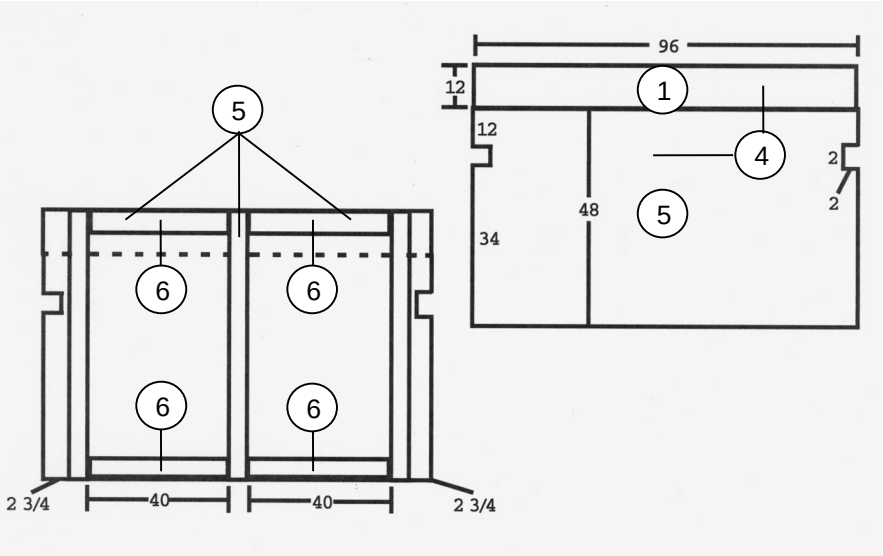
③ Position and glue the strongback (built in Figure 4-15, steps 4, 5, and 6) flush on top of the honeycomb stack 2.

Figure 8-16. Honeycomb stack 2 positioned

CONSTRUCTING AND POSITIONING EQUIPMENT BOX 2

8-16. Construct the individual components of equipment box 2 as shown in Figures 8-17 and 8-18. Assemble and position the equipment box 2 as shown in Figure 8-19.

Notes.
1. This drawing is not to scale.
2. All dimensions are in inches.
3. Use 8-penny nails.



① Cut two ¾- by 12- by 96-inch pieces of plywood. Face the finished side of the plywood up.

② Cut two ¾- by 48- by 96-inch pieces of plywood. Face the finished side of the plywood up.

③ Make 2- by 2-inch cutouts as shown in the plywood previously cut in step 2.

④ Lay the plywood previously cut in steps 1, 2 and 3 flush lengthwise to form two 60- by 96-inch pieces. Face the finished sides of the plywood up.

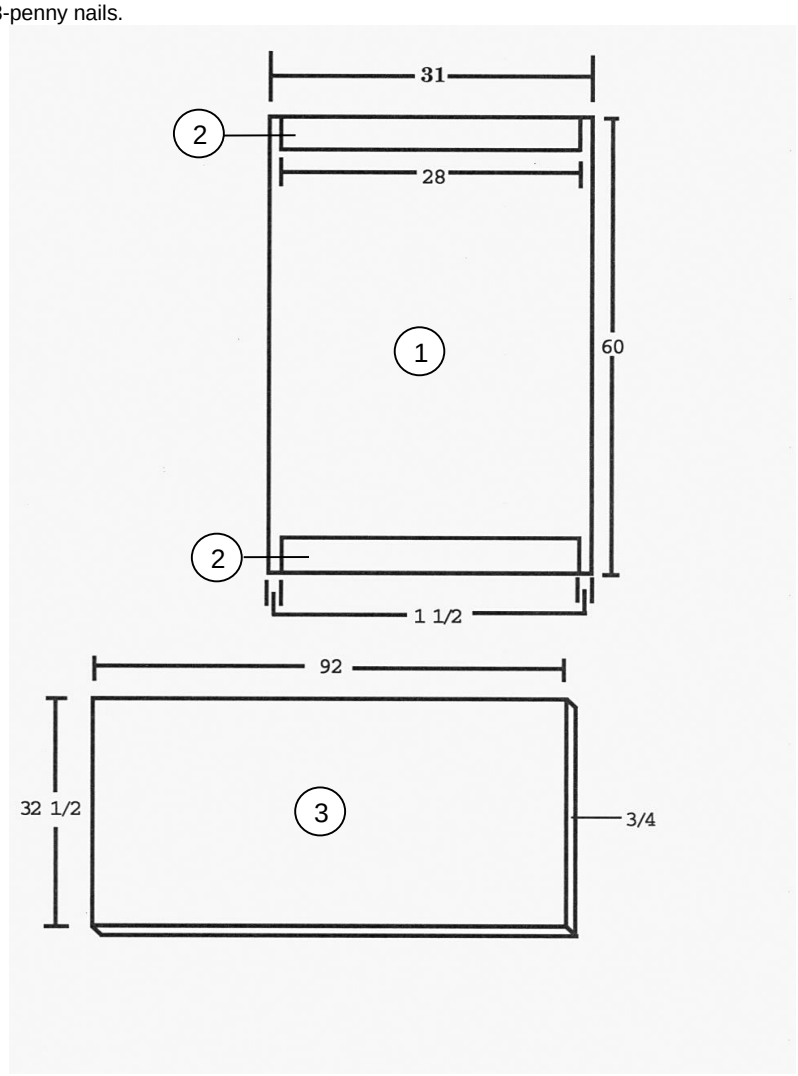
⑤ Cut six 2- by 4- by 60-inch pieces of lumber. Nail four of the pieces 2 ¾ inches from the edge of the plywood positioned in step 4. Nail the remaining two pieces centered between the previously nailed pieces. Ensure there are 40 inches between pieces.

⑥ Cut eight 2- by 4- by 40-inch pieces of lumber. Nail the pieces flush between the pieces positioned in step 5. Ensure the lumber is aligned along the top and bottom exterior edges of the plywood.

Figure 8-17. Equipment box 2 front and rear constructed

Notes.

1. This drawing is not to scale.
2. All dimensions are in inches.
3. Use 8-penny nails.



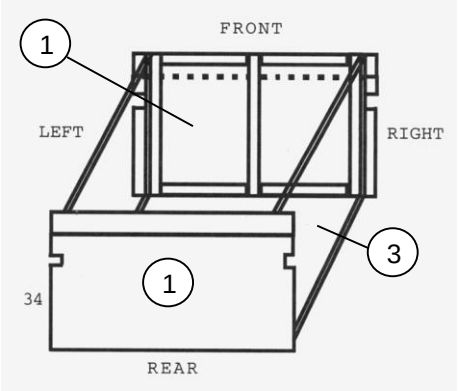
① Cut two ¾- by 31- by 60-inch pieces of plywood to make the sides of the equipment box.

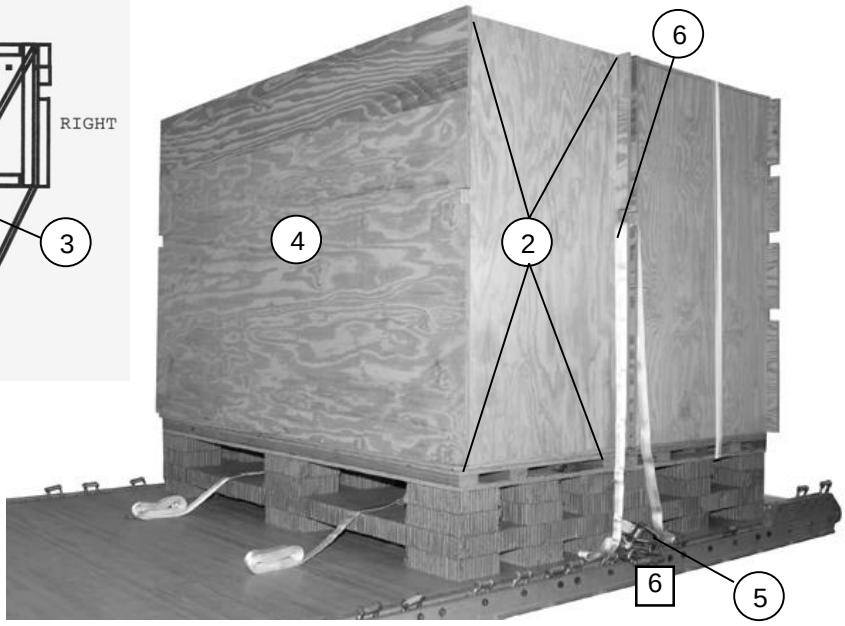
② Nail a 2- by 4- by 28-inch piece of lumber along the top and bottom edges of each of the two side pieces with 8-penny nails as shown. Allow the plywood to extend past the lumber 1 ½ inches on each side.

③ Cut two ¾- by 32 ½- by 92-inch pieces of plywood to make the top and bottom of equipment box 2.

Figure 8-18. Equipment box 2 sides, top and bottom constructed

Notes.
1. This drawing is not to scale.
2. Use 8-penny nails.





Note. The side boards are transparent for clarity during construction.

① Assemble the box by fitting the front and rear flush against the sides with the left and right of each side flush against the inside vertical lumber uprights and plywood. When positioning the ends ensure the 34-inch cutout is positioned as shown in the figure above.

② Nail the pieces positioned in step 1 together with 8-penny nails through the sides of the box and into the vertical lumber pieces in the front and rear of the box.

③ Position and center the plywood for the bottom of the box on the horizontal lumber supports and nail in place with 8-penny nails.

④ Position and center equipment box 2 on top of honeycomb stack 2 as shown.

⑤ Pass a 15-foot lashing through clevis 6 and through its own D-ring. Pass the lashing across the front of equipment box 2 and through the left front cutout. Temporarily tape the lashing in place using masking tape.

⑥ Pass a 15-foot lashing through clevis 6A and through its own D-ring. Pass the lashing across the front of equipment box 2 and through the right front cutout. Temporarily tape the lashing in place using masking tape.

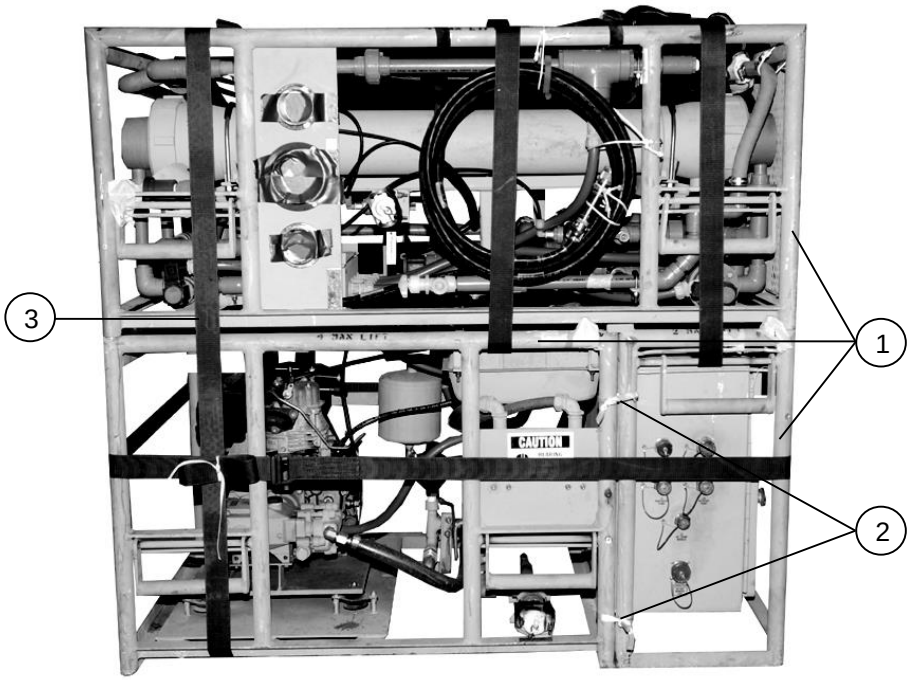
Figure 8-19. Equipment box 2 partially assembled and positioned for loading

PREPARING AND STOWING THE EQUIPMENT FOR EQUIPMENT BOX 2

8-17. Prepare the components for equipment box 2 and stow them in the container as described below.

PREPARING CONTROL MODULE ULTRA-FILTRATION MODULE, AND HIGH-PRESSURE PUMP MODULE

8-18. Prepare the control module, ultra-filtration module, and high-pressure pump module as shown in Figures 8-20a-d. Stow them in the container as shown in Figure 8-21.

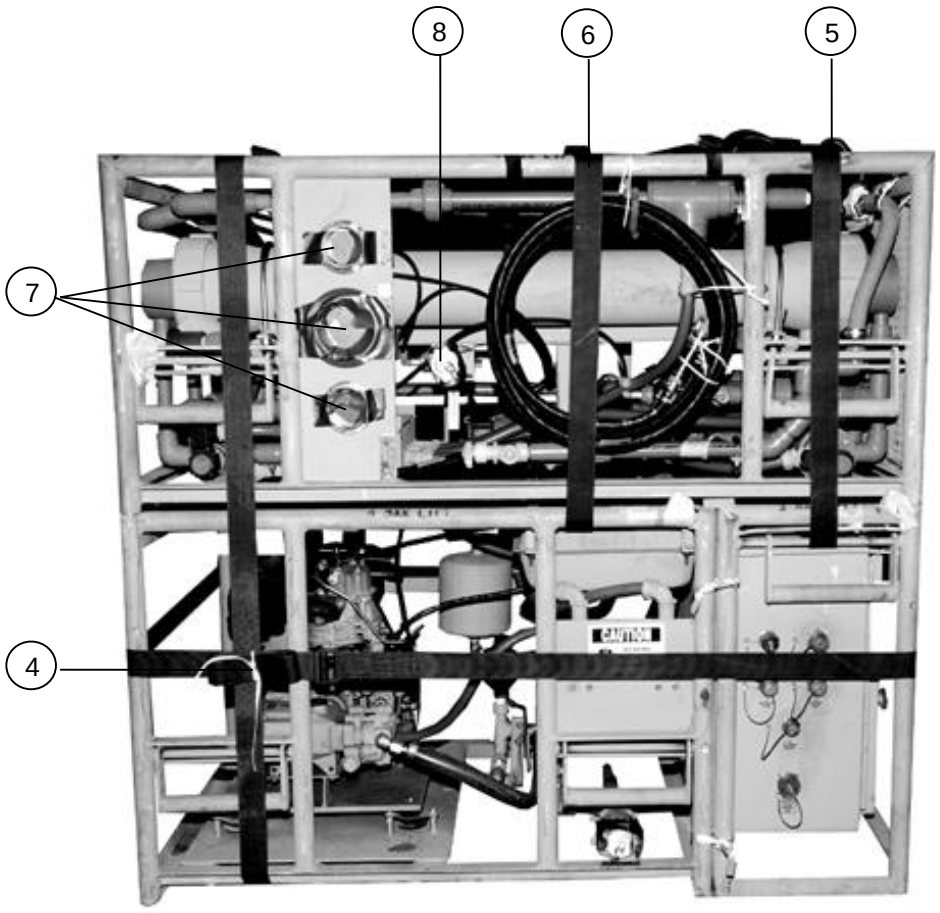


① Position the control module, ultra-filtration module, and high-pressure pump module as shown above. The control module and high-pressure pump module are on the bottom with the ultra-filtration module on the top.

② Secure the frames of the control module and high-pressure pump module together using ½-inch tubular nylon webbing.

③ Route an A-7A strap vertically around the high-pressure pump module and ultra-filtration module and secure on top.

Figure 8-20a. Control module, ultra-filtration module, and high-pressure pump module prepared



④ Route an A-7A strap horizontally around the control module and high-pressure pump module and secure on the side.

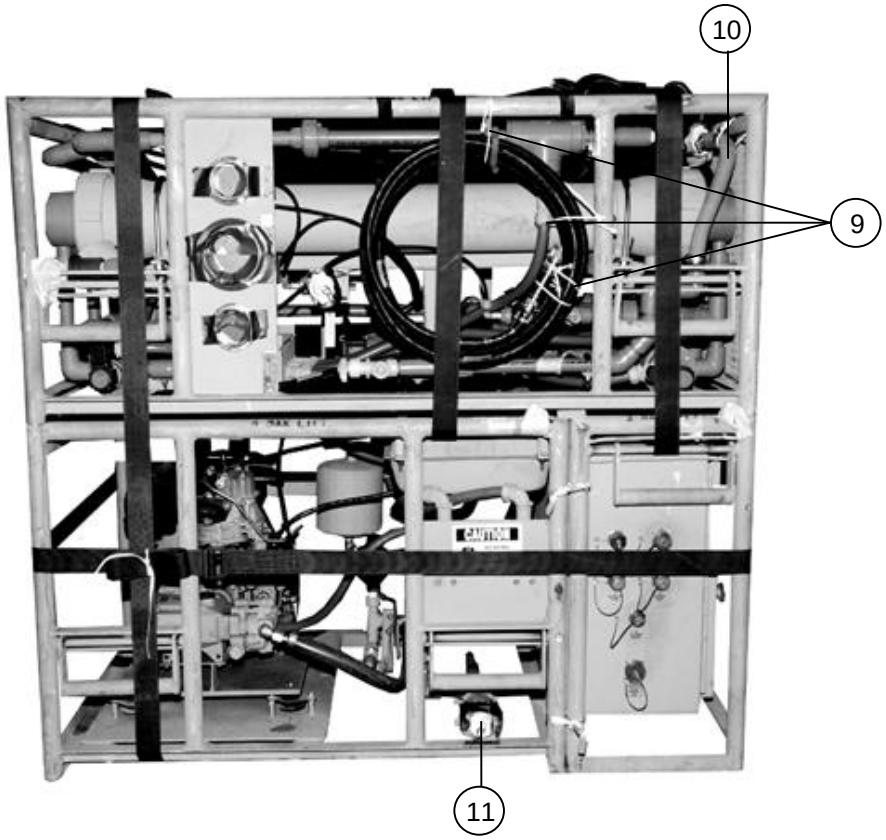
⑤ Route an A-7A strap under the top bar of the control module frame and vertically around the top of the ultra-filtration module. Secure it on top of the ultra-filtration module.

⑥ Route an A-7A strap between the frame and fuel tank of the high-pressure pump module, and vertically around the ultra-filtration module. Secure it on top of the ultra-filtration module.

⑦ Tape the back wash pressure gauge, differential gauge, and the feed pressure gauge on the ultra-filtration mode.

⑧ Tape the back wash-in valve and feed-in valve on the ultra-filtration module.

Figure 8-20b. Control module, ultra-filtration module, and high-pressure pump module prepared (continued)

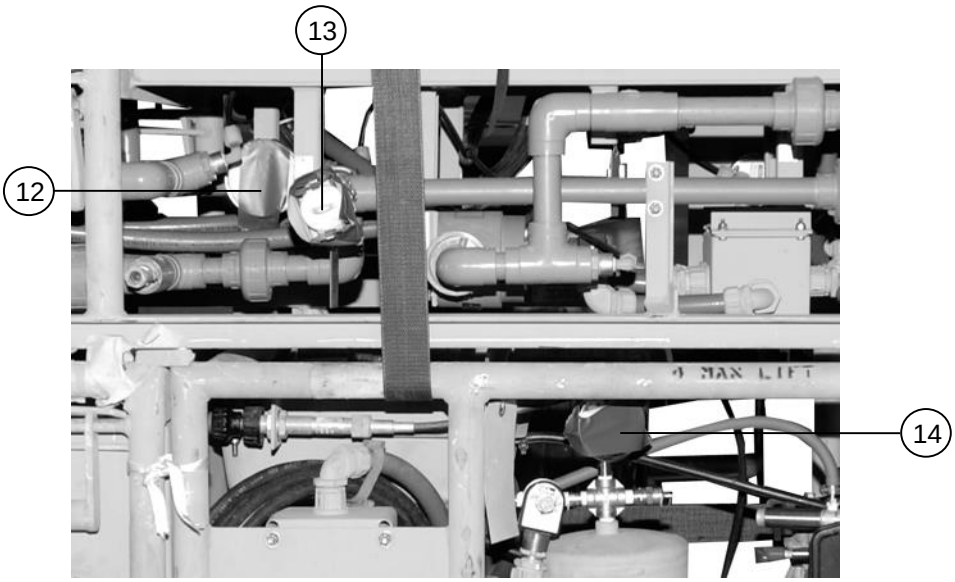


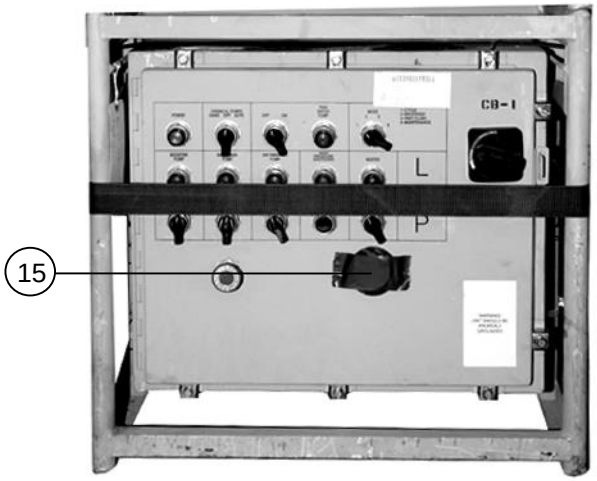
⑨ Secure the hose from the junction box of the ultra-filtration module using type III nylon cord.

⑩ Secure the hose by the protection grill on the ultra-filtration module using type III nylon cord.

⑪ Tape the feed water-in valve of the high-pressure pump module with 2-inch adhesive tape.

Figure 8-20c. Control module, ultra-filtration module, and high-pressure pump module prepared (continued)





⑫ Tape the thermometer on the ultra-filtration module using 2-inch adhesive tape.

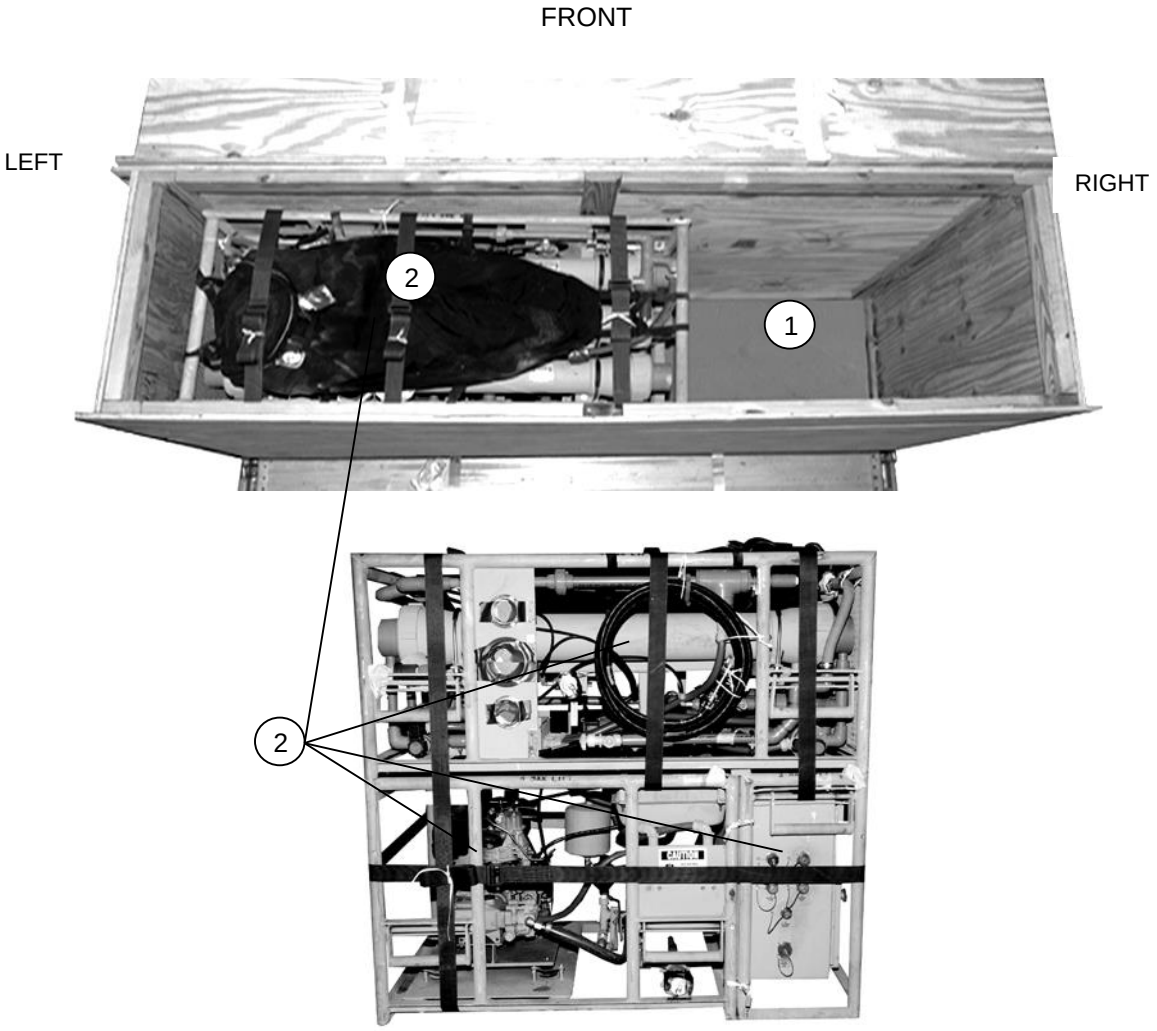
⑬ Tape the reject out valve of the ultra-filtration modeling using 2-inch adhesive tape.

⑭ Tape the diesel engine shut-off device air tank gauge on the high-pressure pump module using 2-inch adhesive tape.

⑮ Tape the hour meter of the control module using 2-inch adhesive tape.

Figure 8-20d. Control module, ultra-filtration module, and high-pressure pump module prepared (Continued)

Note. The protection grill of the ultra-filtration module will face the side of the box.



① Cut and place a 28- by 87-inch piece of honeycomb in the bottom of equipment box 2.

② Position the control module, ultra-filtration module and the high-pressure pump module to the left front corner of equipment box 2.

Figure 8-21. Control module, ultra-filtration module, and high-pressure pump module stowed

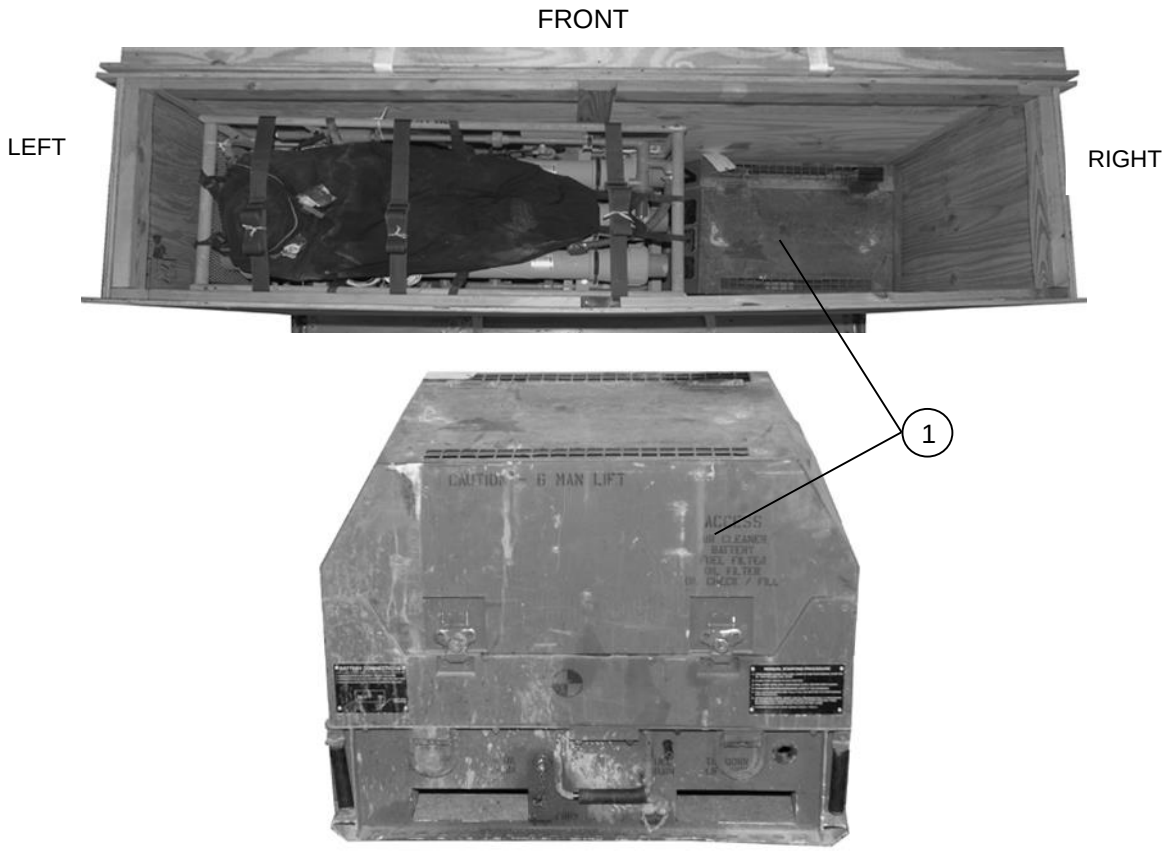
STOWING 3 KILOWATT GENERATOR

8-19. Make sure the 3 KW generator is no more than 75% full. Stow the 3 KW generator in the equipment box as shown in Figure 8-22.

CAUTION

A full tank does not allow for expansion, and is a danger to aircraft and air crew. Ensure the 3 KW generator complies with AFMAN 24-204/TM 38-250.

Note. Ensure the controls of the 3 kilowatt generator face towards the center of the box.



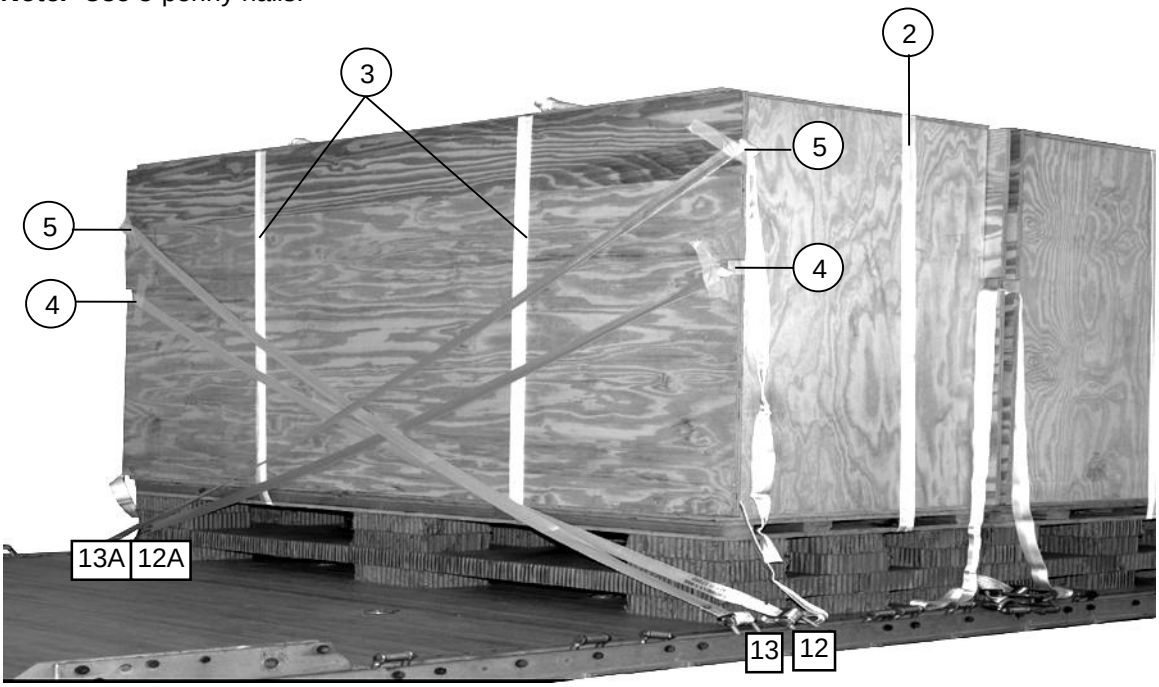
① Position the 3kw generator at the right front corner inside equipment box 2.

Figure 8-22. 3 KW generator stowed

CLOSING AND SECURING EQUIPMENT BOX 2

8-20. Close and secure equipment box 2 as shown in Figure 8-23.

Note. Use 8-penny nails.



Note. Pad and tapes all cutouts prior to routing lashings.

① Fill the remaining space with honeycomb to the top of the box. Place the plywood lid on top of equipment box 2 and nail together using 8-penny nails (not shown).

② Form a 30-foot lashing and route it around equipment box 2 widthwise. Secure the lashing on top using two D-rings and a load binder. Ensure the lashing is routed under the strongback.

③ Route the two pre-positioned 30-foot lashings around equipment box 2 lengthwise. Secure each lashing on top using two D-rings and a load binder.

④ Pass a 15-foot lashing through clevis 12 and through its own D-ring. Route the lashing across the rear of the equipment box 2 and through the left bottom cutout. Temporarily tape in placing using 2-inch masking tape. Repeat for clevis 12A to the right bottom cutout.

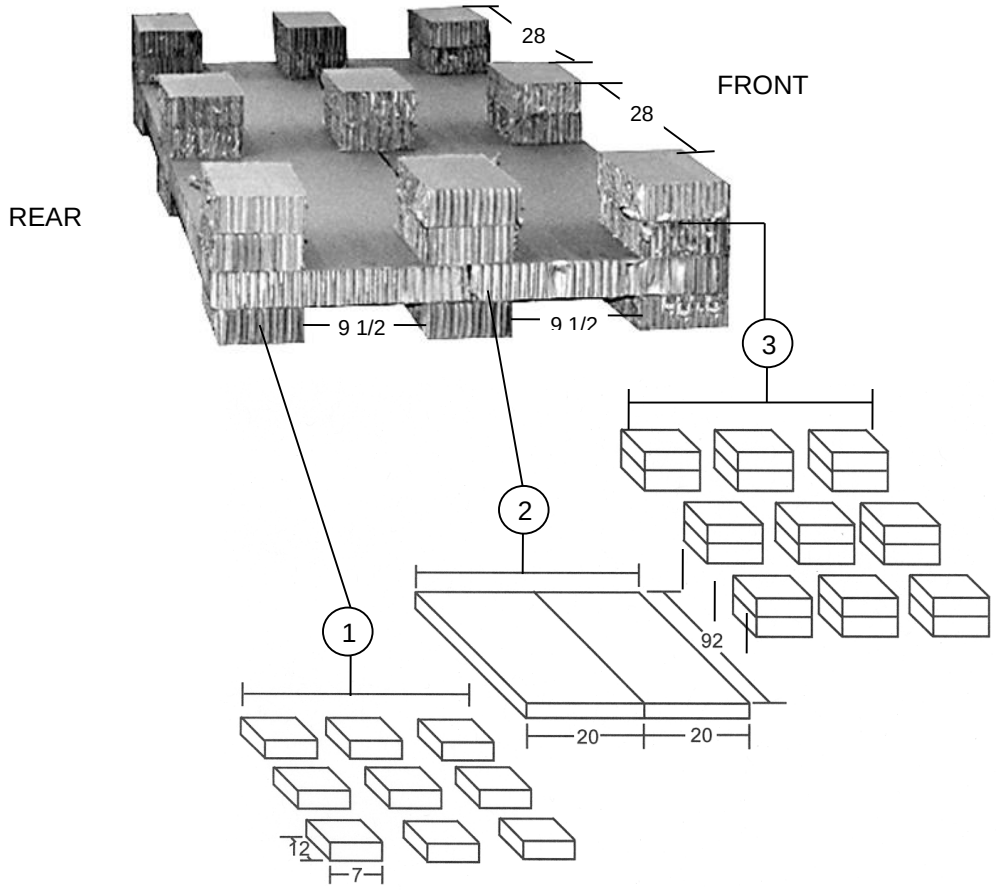
⑤ Pass a 15-foot lashing through clevis 13 and through its own D-ring. Route the lashing across the rear of equipment box 2 and through the left top cutout. Temporarily tape in place using 2-inch masking tape. Repeat for clevis 13A to the right top cutout.

Figure 8-23. Equipment box 2 closed and secured

PREPARING AND POSITIONING HONEYCOMB STACK 3

8-21. Prepare honeycomb stack 3 as shown in Figure 8-24. Position honeycomb stack 3 as shown in Figure 8-25.

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

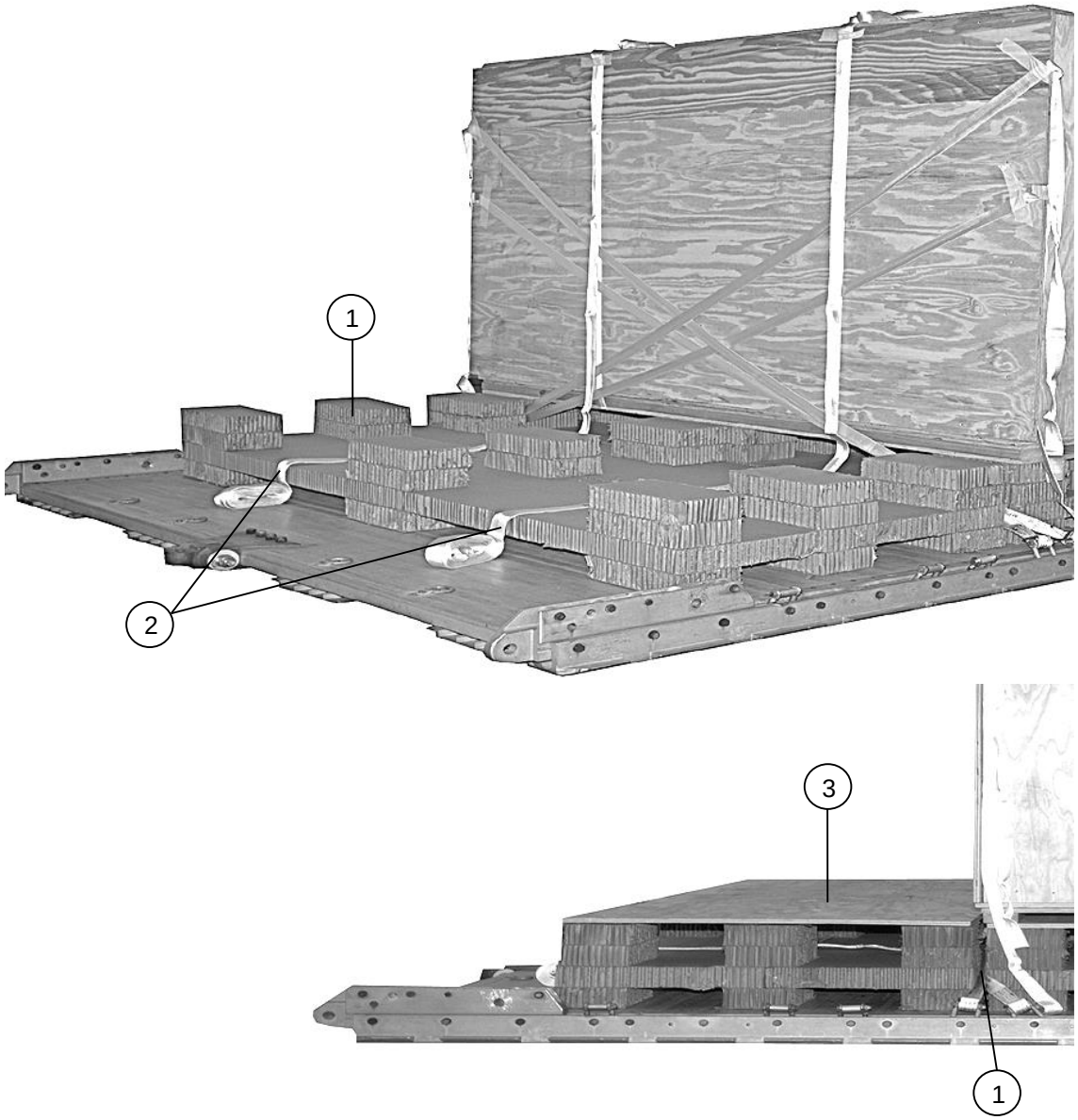


① Cut nine pieces of 7- by 12-inch honeycomb. Place the honeycomb to form three rows of three. Leave 9 ½ inches between the pieces from front to rear and 28 inches between pieces from right to left.

② Cut two pieces of 20- by 92-inch honeycomb. Place the pieces side by side to form a 40- by 92-inch piece of honeycomb. Glue the pieces to the honeycomb placed in step 1.

③ Cut and glue eighteen pieces of 7- by 12-inch honeycomb to form nine two layer stacks. Position and glue the honeycomb on top of the 40- by 92-inch piece of honeycomb as described in step 1.

Figure 8-24. Honeycomb stack 3 prepared



① Position and center honeycomb stack 3 one-inch from the rear of honeycomb stack 2.

② Form two 30-foot lashings. Position and center a lashing lengthwise between each space of honeycomb stack 3 on the right and left. Ensure the sewn D-rings are positioned in the center of the stack.

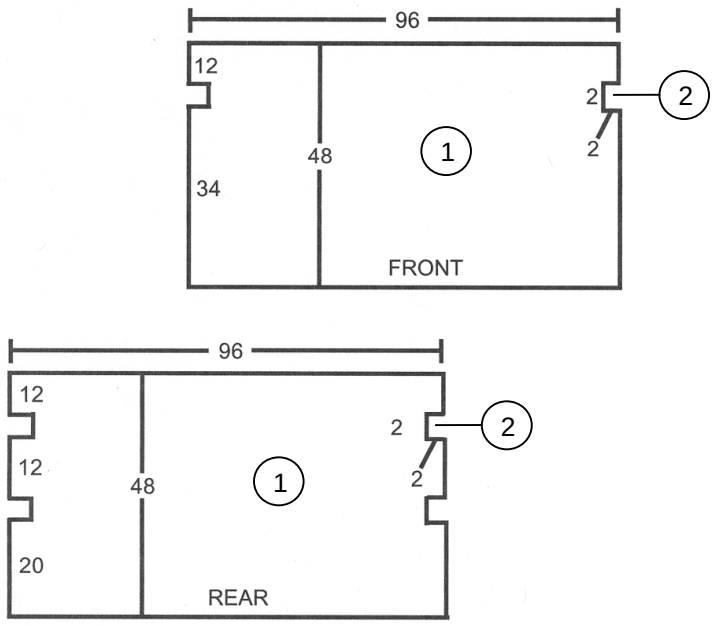
③ Cut and position a 40- by 92- by ¾-inch piece of plywood on top of honeycomb stack 3.

Figure 8-25. Honeycomb stack 3 positioned

CONSTRUCTING AND POSITIONING EQUIPMENT BOX 3

8-22. Construct the individual components of equipment box 3 as shown in Figures 8-26a, 8-26b, and 8-27.

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

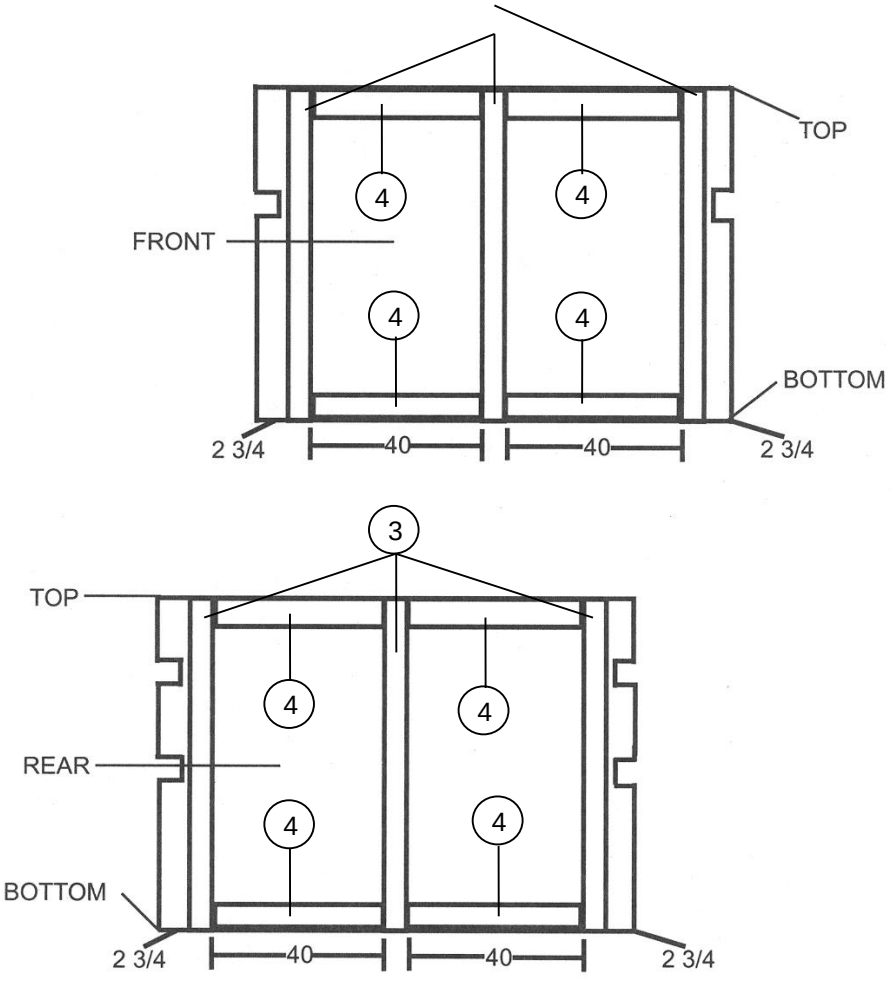


① Cut two ¾- by 48- by 96-inch pieces of plywood. Face the finished side of the plywood up.

② Make 2- by 2-inch cutouts as shown in the plywood previously cut in step 1.

Figure 8-26a. Equipment box 3 front and rear constructed

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

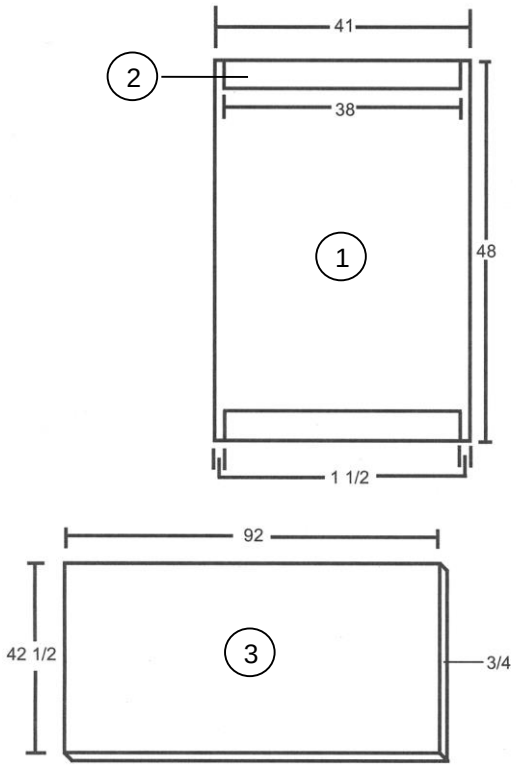


③ Cut six 2- by 4- by 48-inch pieces of lumber. Nail four of the pieces 2 ¾ inches from the edge of the plywood cut in step 1. Nail one of the remaining two pieces centered between the previously nailed pieces. Ensure there are 40 inches between pieces.

④ Cut eight 2- by 4- by 40-inch pieces of lumber. Nail the pieces flush between the pieces positioned in step 3. Ensure the lumber is aligned along the top and bottom exterior edges of the plywood.

Figure 8-26b. Equipment box 3 front and rear constructed (continued)

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



① Cut two ¾- by 41- by 48-inch pieces of plywood to make the sides of the equipment box.

② Nail a 2- by 4- by 38-inch piece of lumber along the top and bottom edges of each of the two side pieces with 8-penny nails as shown. Allow the plywood to extend past the lumber 1 ½ inches on each side.

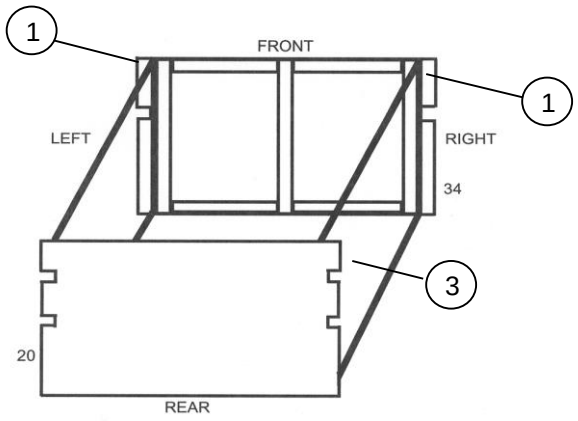
③ Cut two ¾- by 42 ½- by 92-inch pieces of lumber to make the top and bottom of the equipment box.

Figure 8-27. Equipment box 3 sides, top and bottom constructed

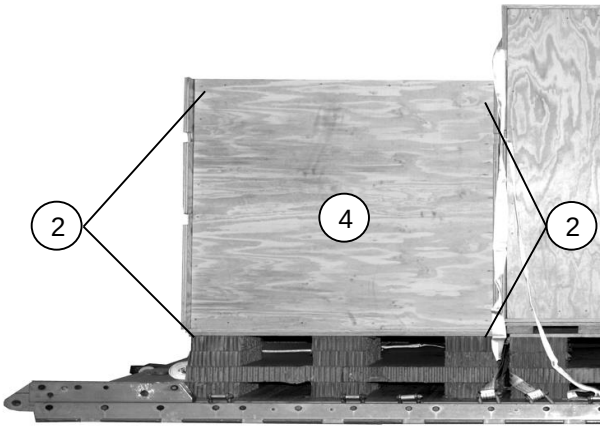
CONSTRUCTING AND POSITIONING EQUIPMENT BOX 3

8-23. Assemble and position the equipment box 3 as shown in Figure 8-28.

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



Note. The side boards are transparent for clarity during construction.



① Assemble the box. When positioning the ends ensure that the 34-inch cutout is positioned at the front bottom and the 20-inch cutout is positioned at the rear bottom portion of the box.

② Nail the pieces positioned in step 1 together with 8-penny nails through the sides of the box and into the vertical lumber pieces in the front and rear of the box.

③ Position and center the plywood for the bottom of the box on the horizontal lumber supports and nail in place with 8-penny nails.

④ Position and center equipment box 3 on top of honeycomb stack 3 as shown.

Figure 8-28. Equipment box 3 partially assembled and positioned for loading

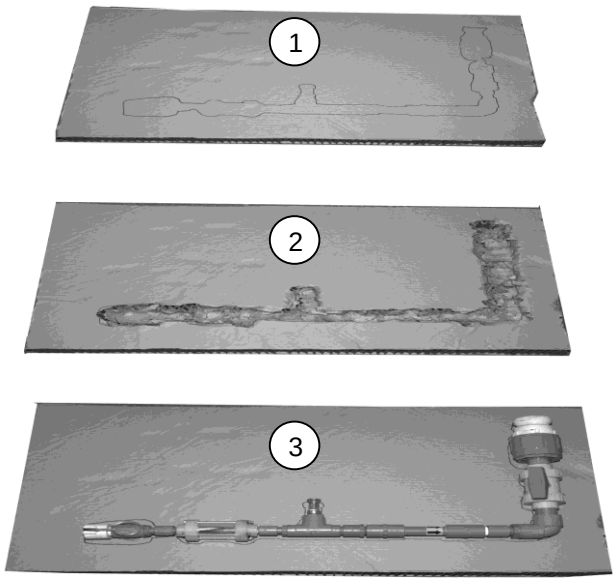
PREPARING AND STOWING THE EQUIPMENT FOR EQUIPMENT BOX 3

8-24. Prepare the components for equipment box 3 and stow them in the container as described below.

PREPARING SECURE PUMP SKID COVER (CONTAMINATION AVOIDANCE)

8-25. Prepare the secure pump skid cover as shown in Figures 8-29a and 8-29b.

Note. Ensure that the secure pump skid cover is removed from the components of end items (COE) box.

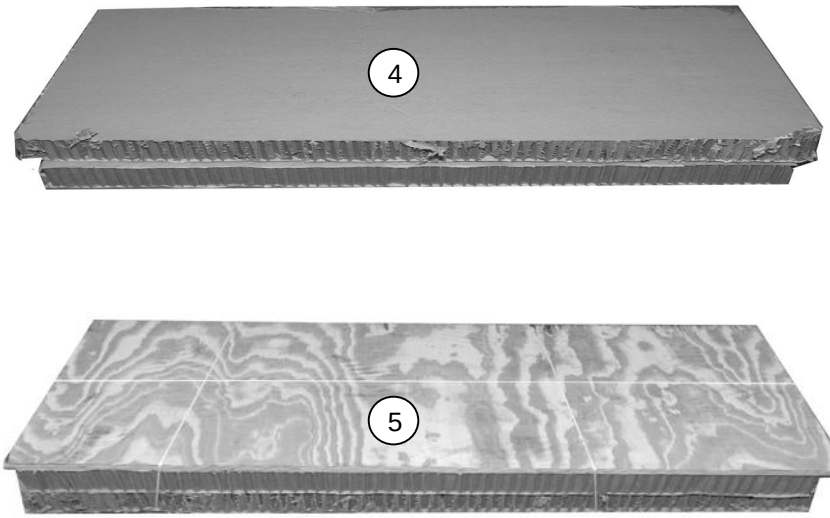


① Cut two 37- by 23-inch pieces of honeycomb. Using one piece, place the secure pump skid cover (contamination avoidance) on top of the piece of honeycomb. Trace around secure pump skid cover (contamination avoidance) with a marker. Mark the second piece of honeycomb in the same manner.

② Remove the secure pump skid cover (contamination avoidance) from the piece of honeycomb and crush the area that was marked with a hammer on both pieces.

③ Place the secure pump skid cover (contamination avoidance) inside the crushed area of the honeycomb.

Figure 8-29a. Secure pump skid cover prepared



① Place the second piece of 37- by 23- inch honeycomb on top of the piece with the secure pump skid cover (contamination avoidance) inside it.

② Cut two ¾- by 37- by 23- inch piece so plywood. Place one piece under and one piece over the honeycomb housing the secure pump skid cover (contamination avoidance). Secure the pieces together with three lengths of type III nylon cord.

Figure 8-29b. Secure pump skid cover (continued)

PREPARING BASIC ISSUE ITEMS (BII) BOX, COMPONENTS OF END ITEMS (COEI) BOX AND COEI CABLE

8-26. Prepare the BII box, COEI box and COEI cable box, and stow in the container as shown in Figures 8-30a-d.

Note. The components listed below are stored inside issue items box. The total weight is 100 pounds.

Item Description	Quantity
Instrument Case	1
Fire Extinguisher	1
Apron	2
Gloves	2
Pipe Repair System	1
Sand Bags	20
Small Funnel	1
Large Funnel	1
Goggles	2
Dust Masks	25
Rope	50-feet
Flotation Device	1
Retaining Rings	7
Chlorine Photometer	1
Utility Pail, 5-Quart	1
Hearing Protection	1
Tool Kit	1
Ultra-Filtration Cleaning Outlet	1
Stirring Paddle	1
Cleaning Adapter	1
Flushing Adapter	1
Textile Hose, 3/8-inch	1
End Cap Removal Tool	1
Pipe Wrench, Adjustable Strap	1
Over-Pack Kit Box	1
Fabric-Tank Repair Kit	1

Figure 8-30a. BII box, COEI box and COEI cable box prepared and stowed

Note. The components listed below are stored inside the end items box. The total weight of the box is 119 pounds.

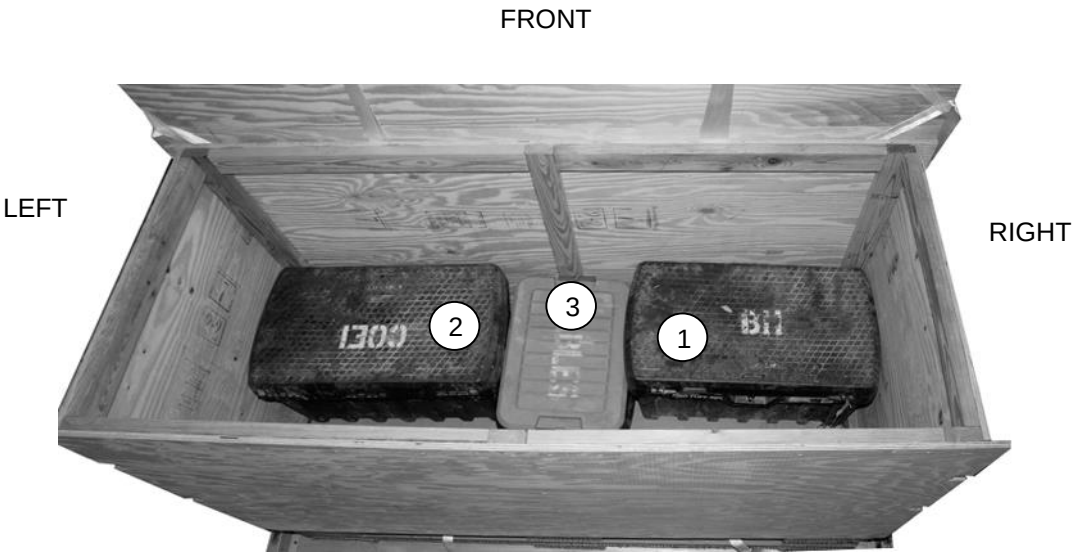
Item Description	Quantity
Floating Strainer, Raw Water	1
Ultra-Filtration Module Cover, Contamination Avoidance	1
High Pressure Module Cover, Contamination Avoidance	1
Control Module, Reverse Osmosis Module, Chemical Injection/Cleaning Module Cover, Contamination Avoidance	1
Spool Piece, Settling Tank Inlet	1
Spool Piece, Settling Tank Outlet	1
Spool Piece, Product Tank Inlet	1
Spool Piece, Product Tank Outlet	1
Feed Tank, Settling Tank	1
Nuclear, Biological, Chemical Cartridge Assembly	1
Immersion Heater Assembly	1
Distribution Nozzle	1
Hose Assembly, 1-inch by 25-feet	1
Hose Assembly, 1-inch by 25-feet	3
Hose, High-Pressure with Union	1
Tubing Assembly, Anti-Scalant	1
Tubing Assembly, Coagulant	1
Over-Pack Kit Box	1
Pump Priming	1

Figure 8-30b. BII box, COEI box and COEI cable box prepared and stowed (continued)

Note. The components listed below are stored inside the components of the items cable box. The total weight of the box is 79 pounds.

Item Description	Quantity
Cable 1, 40-feet, Generator to Control Module	1
Cable 2, 100-feet, Raw Water Service Pump to Control Module	1
Cable 3, 50-feet, Booster Service Pump to Control Module	1
Cable 4, 20-feet, Backwash Service Pump to Control Module	1
Cable 5, 30-feet, Distribution Service Pump to Control Module	1
Cable 11, 40-feet, Ground Cable, Control Module to Grounding Rod	1
Storage Container	1

Figure 8-30c. BII box, COEI box and COEI cable box prepared and stowed (continued)



① Position the basic issue items box on the front right side of equipment box 3.

② Position the components of end items box on the front left side of equipment box 3.

③ Position the cable box between the two boxes positioned in steps 1 and 2 of equipment box 3.

Figure 8-30d. BII box, COEI box and COEI cable box prepared and stowed (continued)

PREPARING CWK 1 BOX AND LOADING TRUCK

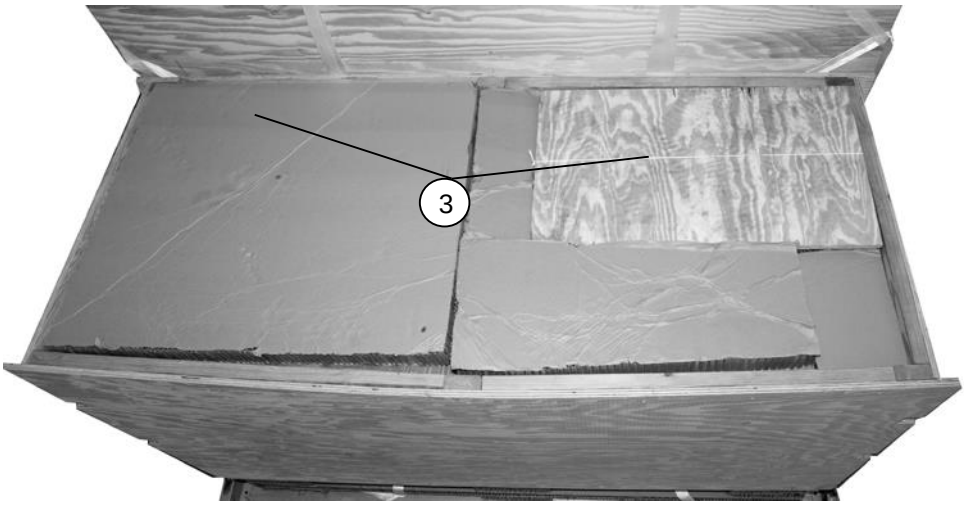
8-27. Prepare the CWK 1 box and loading truck, and stow in the container as shown in Figures 8-31a and 8-31b.

Note. The components listed are stored inside the cold weather kit 1 box. The total weight of the box is 56 pounds.

Item Description	Quantity
Power Distribution Panel	1
Cable Assembly, Extension, 15 feet	5
Service Pump Thermal Blanket	1
Exhaust hose, 6 feet	1
Carbon Monoxide Detector	1
Exhaust Adapter	1
Hose Clamp, 2 to 3 inches	1
Hose Clamp, 1.25 inches	1
Storage Container	1

Figure 8-31a. CWK 1 box and loading truck prepared and stowed

LEFT RIGHT



① Place the cold weather kit box on top of the basic issue items box.

② Place the loading truck on top of the components of end items box with the wheels facing the left side of equipment box 3.

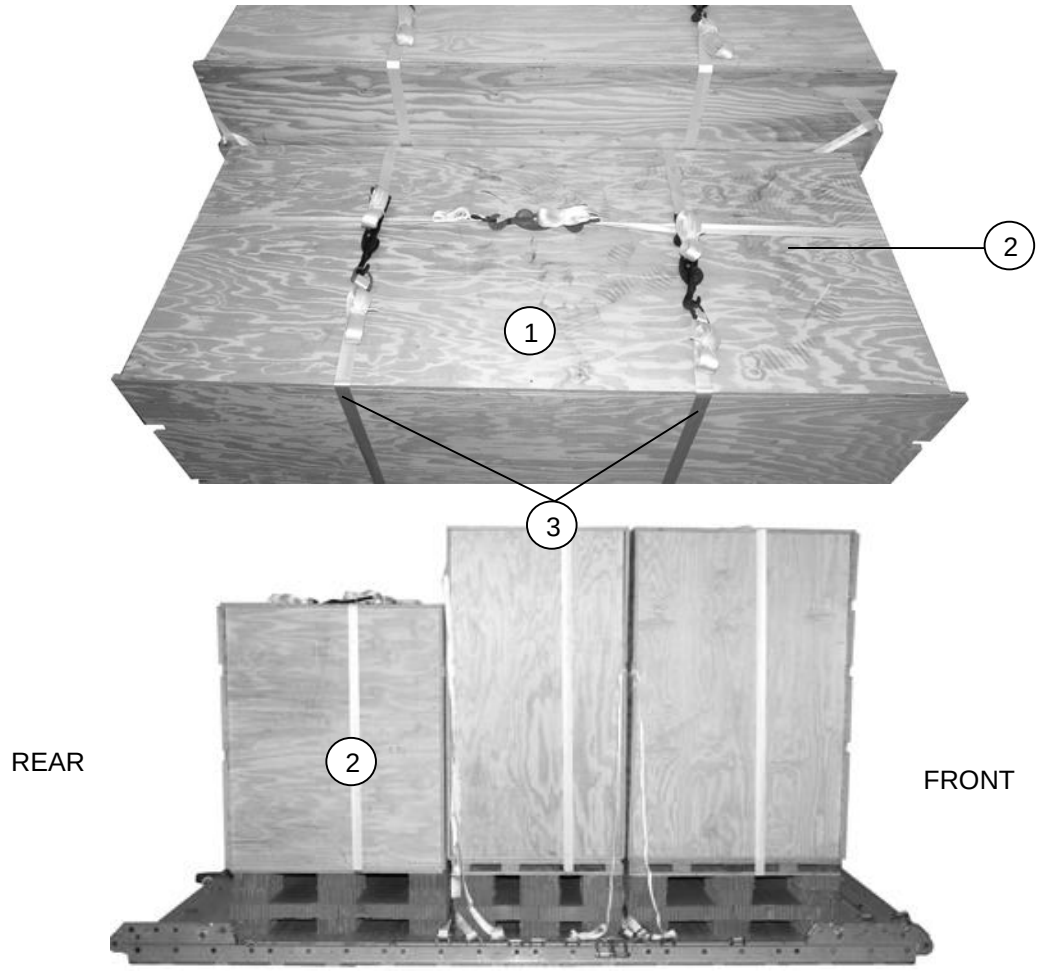
③ Fill the remaining empty spaces with honeycomb leaving enough space to place the prepared secure pump skid cover (contamination avoidance) (Figure 6-29, steps 1 through 5) in the front right top corner of equipment box 3.

Figure 8-31b. CWK 1 box and loading truck prepared and stowed (continued)

CLOSING AND SECURING EQUIPMENT BOX 3

8-28. Close and secure equipment box 3 as shown in Figure 8-32.

Note. Use 8-penny nails.



① Place the plywood lid on top of equipment box 3 and nail in place using 8-penny nails.

② Form a 30-foot lashing. Route the 30-foot lashing around box 3 widthwise. Secure the lashing on top using two D-rings and a load binder. Ensure the lashing is routed under the strongback.

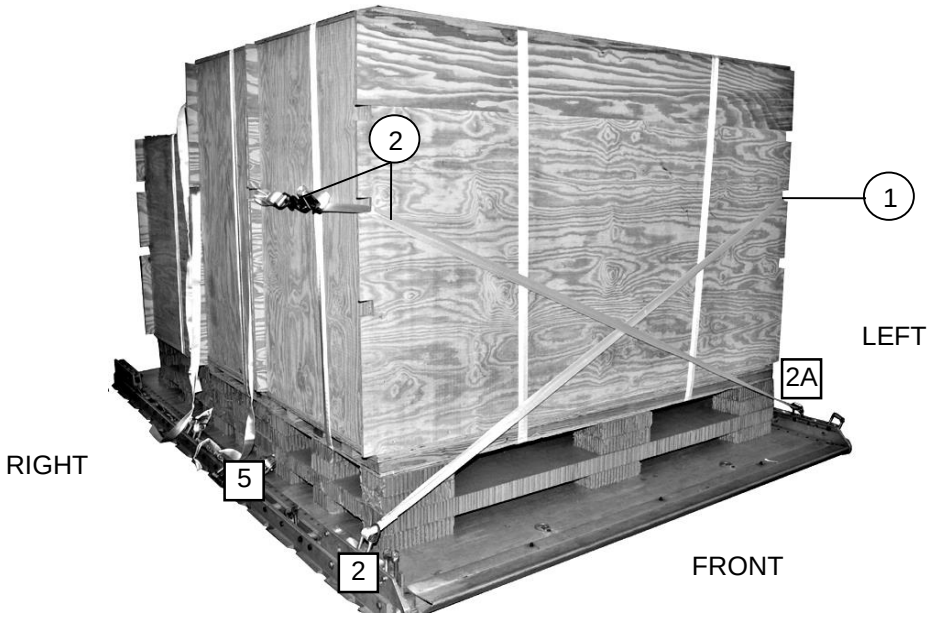
③ Route the two pre-positioned 30-foot lashings around equipment box 3 lengthwise. Secure each lashing on top using two D-rings and a load binder.

Figure 8-32. Equipment box 3 closed and secured

INSTALLING LASHINGS

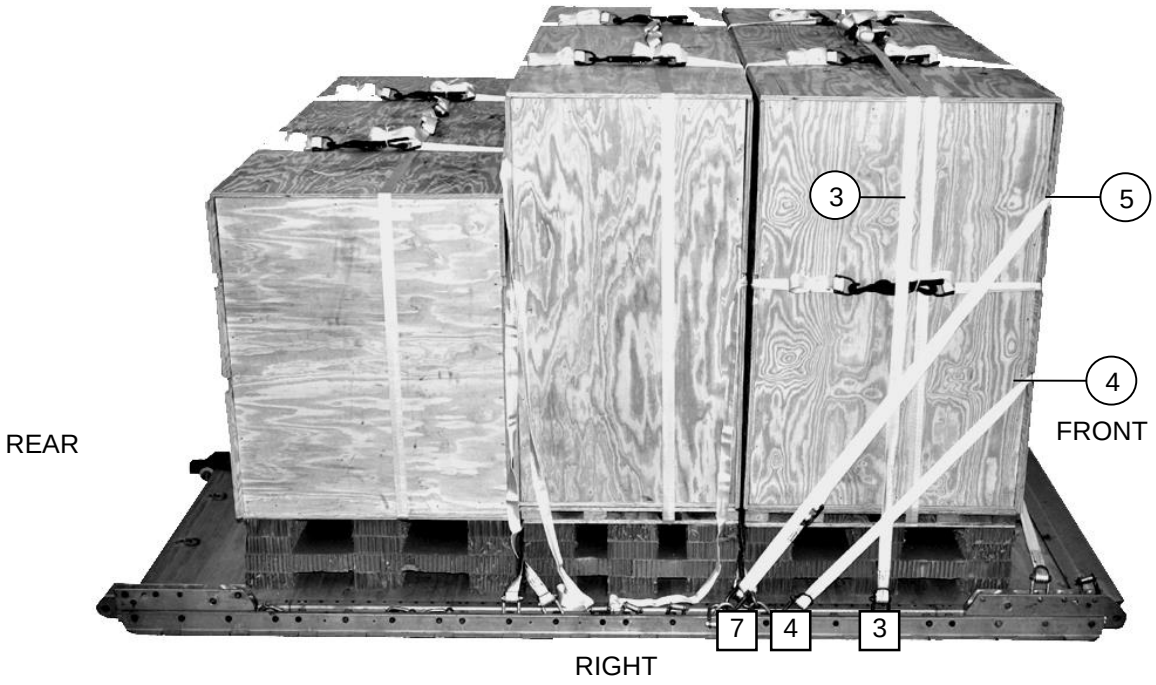
8-29. Lash the load to the platform according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5, and as shown in Figures 8-33a-e.

Notes.
1. This load requires lashings over 30 feet in length. Lashings must be positioned through clevises before sections are joined together.
2. Pad and tape all cutouts prior to routing lashings.



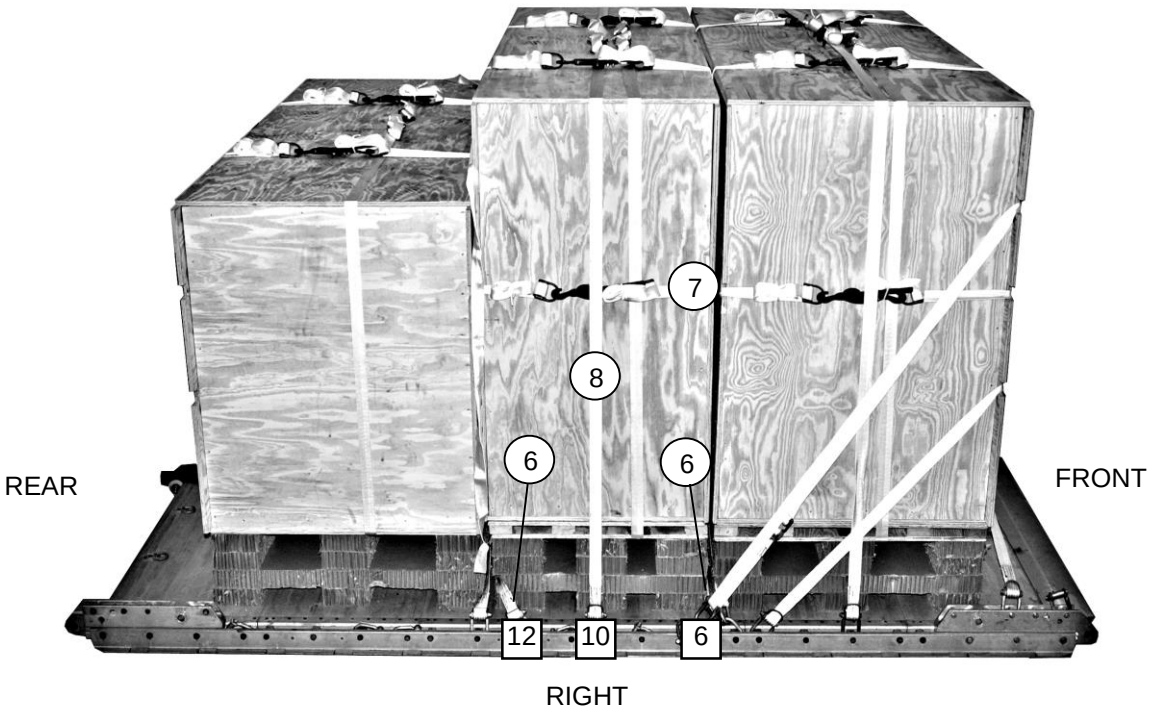
Lashing Number	Tie Down Clevis Number	Instructions
1	2 and 5	Route a 15-foot lashing through clevis 2 and through its own D-ring. Route the lashing across the front of equipment box 1 to the left middle cutout. Secure the lashing to the pre-routed lashing from clevis 5 centered on the left side of equipment box 1 with two D-rings and load binder.
2	2A and 5A	Route a 15-foot lashing through clevis 2A and through its own D-ring. Route the lashing across the front of equipment box 1 to the right middle cutout. Secure the lashing to the pre-routed lashing from clevis 5A centered on the right side of equipment box 1 with two D-rings and load binder.

Figure 8-33a. Lashings Installed



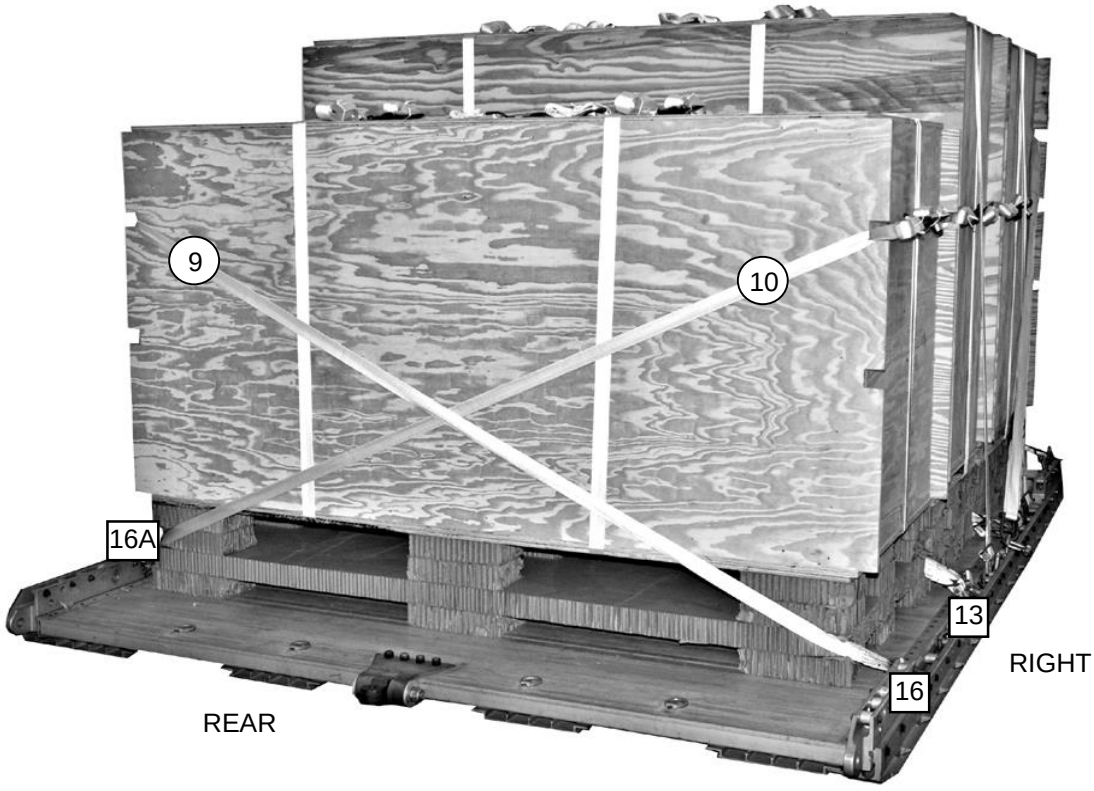
Lashing Number	Tie Down Clevis Number	Instructions
3	3 and 3A	Route a 15-foot lashing through clevis 3 and through its own D-ring. Route it to the top of equipment box 1. Route a 15-foot lashing through clevis 3A and through its own D-ring. Route it to the top of equipment box 1. Secure the lashing with the lashing from clevis 3 on top of equipment box 1 with two D-rings and a load binder.
4	4 and 4A	Route a 15-foot lashing through clevis 4 and through its own D-ring. Route the lashing to the front right bottom cutout of equipment box 1. Route a 15-foot lashing through clevis 4A and through its own D-ring. Route the lashing to the front left bottom cutout of equipment box 1. Secure the lashing with the lashing from clevis 4 centered on the front of equipment box 1 with two D-rings and a load binder.
5	7 and 7A	Form a 45-foot lashing. Route a free end through clevis 7 and the other free end through clevis 7A. Route the lashing through the front top cutouts of equipment box 1. Secure the lashing centered on the front of equipment box 1 with two D-rings and a load binder.

Figure 8-33b. Lashings installed (continued)



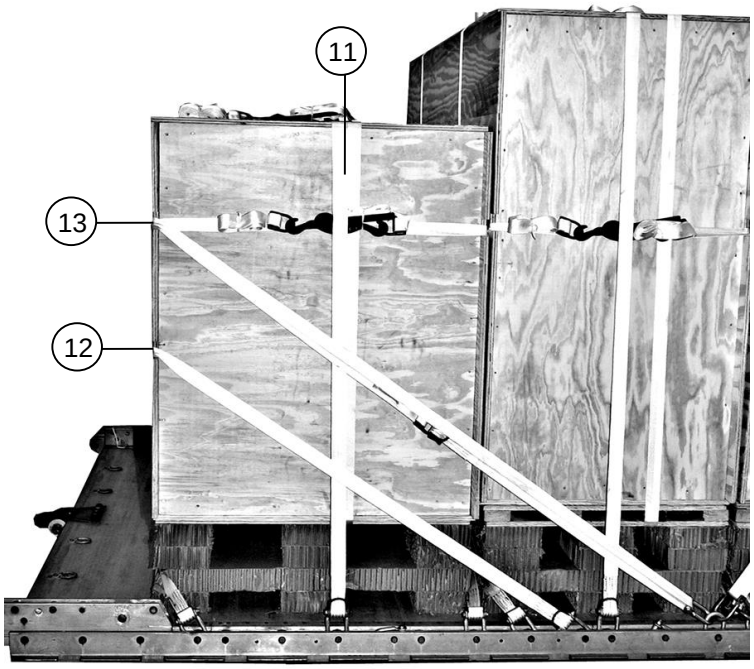
Lashing Number	Tie Down Clevis Number	Instructions
6	6 and 12	Using the 15-foot lashing on clevis 6, secure the lashing from clevis 12, centered on the left side of equipment box 2 with two D-rings and load binder.
7	6A and 12A	Using the 15-foot lashing on clevis 6A, secure the lashing to the pre-routed lashing from clevis 12A, centered on the right side of equipment box 2 with two D-rings and load binder.
8	10 and 10A	Route a 15-foot lashing through clevis 10 and through its own D-ring. Route it to the top of equipment box 2. Route a 15-foot lashing through clevis 10A and through its own D-ring. Route it to the top of equipment box 2. Secure the lashing with the lashing from clevis 10 on top of equipment box 2 with two D-rings and a load binder.

Figure 8-33c. Lashings Installed (Continued)



Lashing Number	Tie Down Clevis Number	Instructions
9	13 and 16	Route a 15-foot lashing through clevis 16 and through its own D-ring. Route the lashing across the rear of equipment box 3 to the rear left top cutout. Secure the lashing to the pre-routed lashing from clevis 13, centered on the left side of equipment box 3 with two D-rings and load binder.
10	13A and 16A	Route a 15-foot lashing through clevis 16A and through its own D-ring. Route the lashing across the rear of equipment box 3 to the rear right top cutout. Secure the lashing to the pre-routed lashing from clevis 13A, centered on the right side of equipment box 3 with two D-rings and load binder.

Figure 8-33d. Lashings installed (continued)

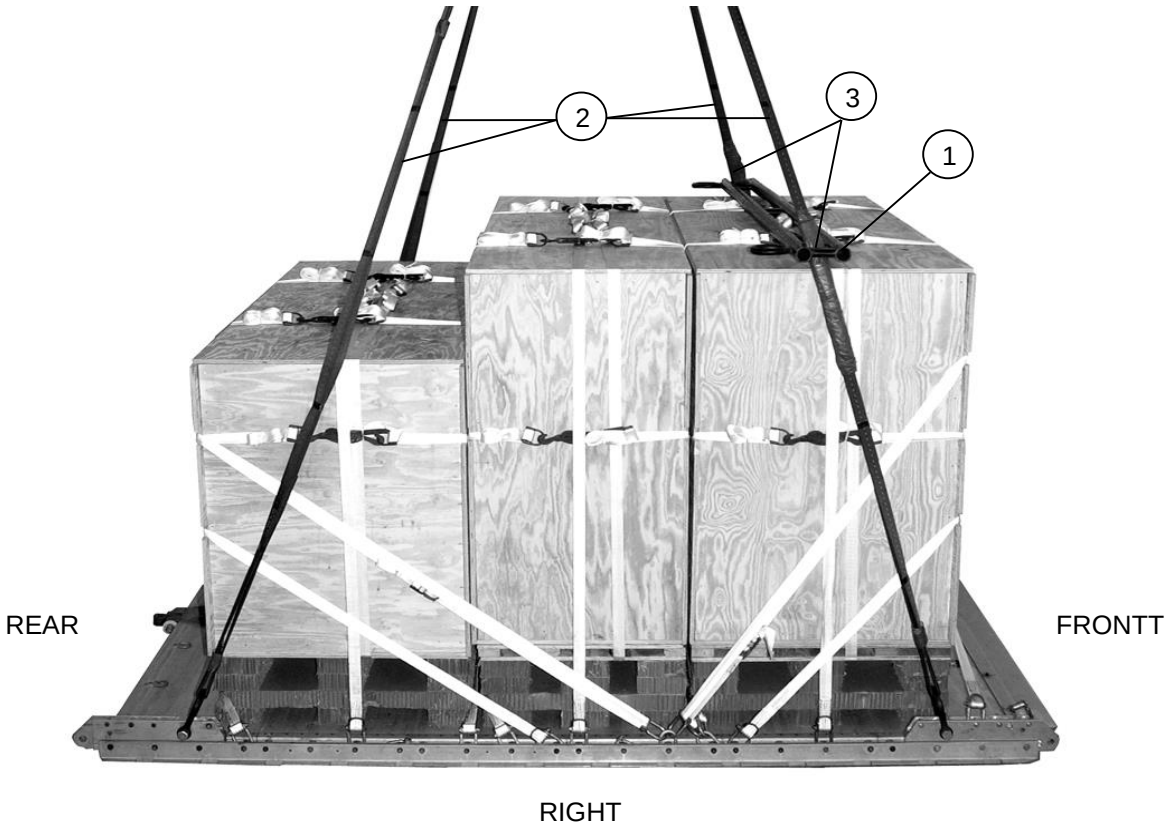


Lashing Number	Tie Down Clevis Number	Instructions
11	15 and 15A	Route a 15-foot lashing through clevis 15 and through its own D-ring. Route it to the top of equipment box 3. Route a 15-foot lashing through clevis 15A and through its own D-ring. Route it to the top of equipment box 3. Secure the lashing with the lashing from clevis 15 on top of equipment box 3 with two D-rings and a load binder.
12	11 and 11A	Route a 15-foot lashing through clevis 11 and through its own D-ring. Route the lashing to the rear right bottom cutout of equipment box 3. Route a 15-foot lashing through clevis 11A and through its own D-ring. Route the lashing to the rear left bottom cutout of equipment box 3. Secure the lashing with the lashing from clevis 11 centered on the rear of equipment box 3 with two D-rings and a load binder.
13	8 and 8A	Form a 45-foot lashing. Route a free end through clevis 8 and the other free end through clevis 8A. Route the lashing through the rear top cutouts of equipment box 3. Secure the lashing centered on the rear of equipment box 3 with two D-rings and a load binder.

Figure 8-33e. Lashings installed (continued)

POSITIONING THE ATTITUDE CONTROL BAR AND INSTALLING SUSPENSION SLINGS AND SAFETY TIES

8-30. Position the attitude control bar (ACB) and install the suspension slings and safety tie as shown in Figures 8-34a and 8-34b.

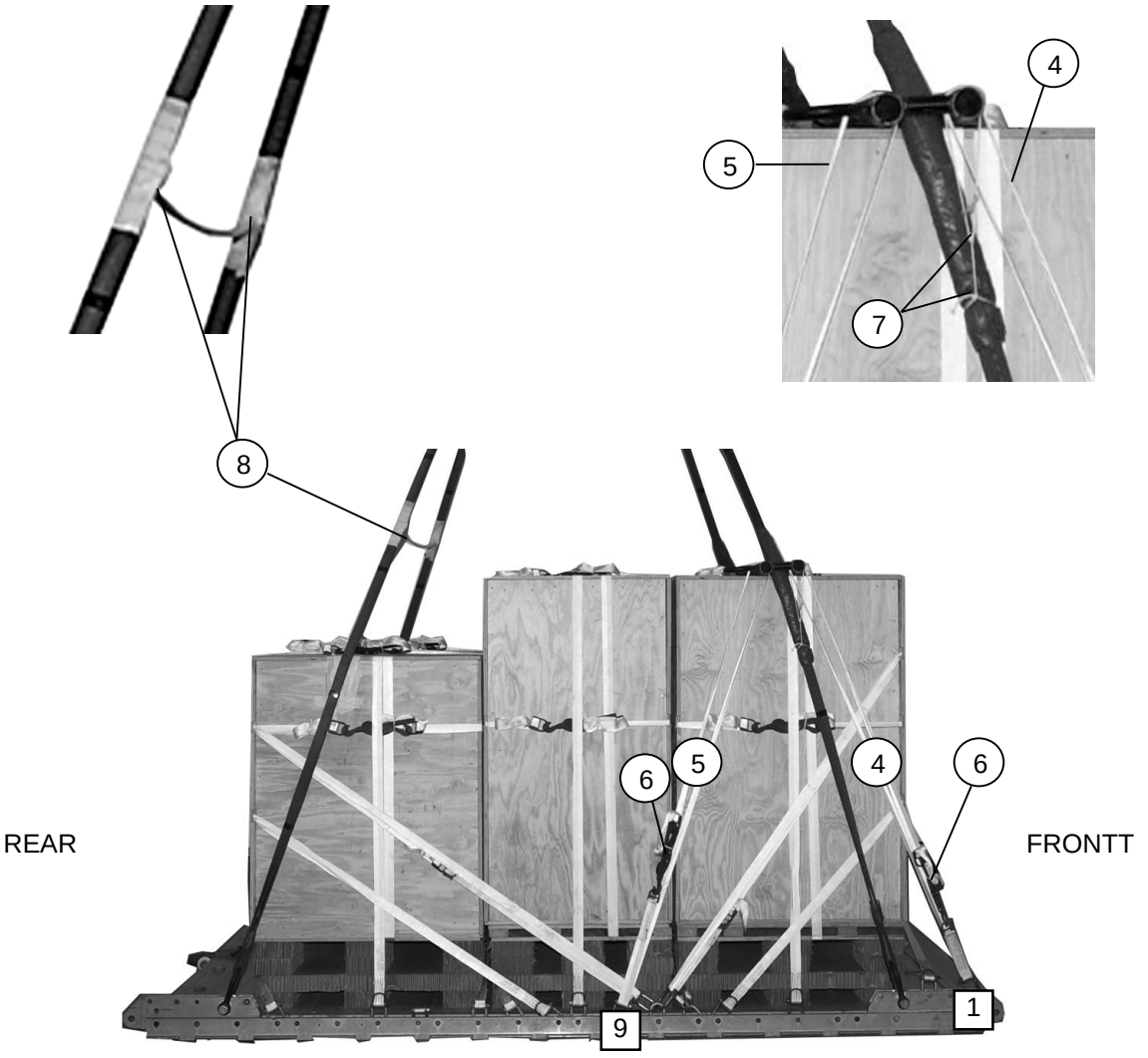


① Position and center the attitude control bar (ACB) on top of equipment box 1 with the attaching holes facing toward the rear of the platform.

② Attach a 16-foot (2-loop), type XXVI nylon suspension sling to each tandem link with a large clevis. Route the opposite end of the front slings up through the ACB ends. Extend the slings upward to position the ACB.

③ Pad the front suspension slings with felt and tape in place 24 inches below the ACB to a point 6 inches above the top of the ACB. Extend the tape beyond the top and bottom of the felt to secure in place.

Figure 8-34a. Attitude control bar, suspension slings and safety tie positioned and installed



① Route a 15-foot lashing through clevis 1, up through the front inside of the hole of the attitude control bar (ACB), around the front, and back to clevis 1. Connect the lashing using a D-ring and load binder but do not tighten at this time. Repeat for clevis 1A on the left side.

② Route a 15-foot lashing through clevis 9, up through the rear inside of the hole of the ACB, around the rear, and back to clevis 9. Connect the lashing using a D-ring and load binder but do not tighten at this time. Repeat for clevis 9A on the left side.

③ At this point tighten all lashings at the same time.

④ Safety tie each front suspension sling to the ACB using type III nylon cord.

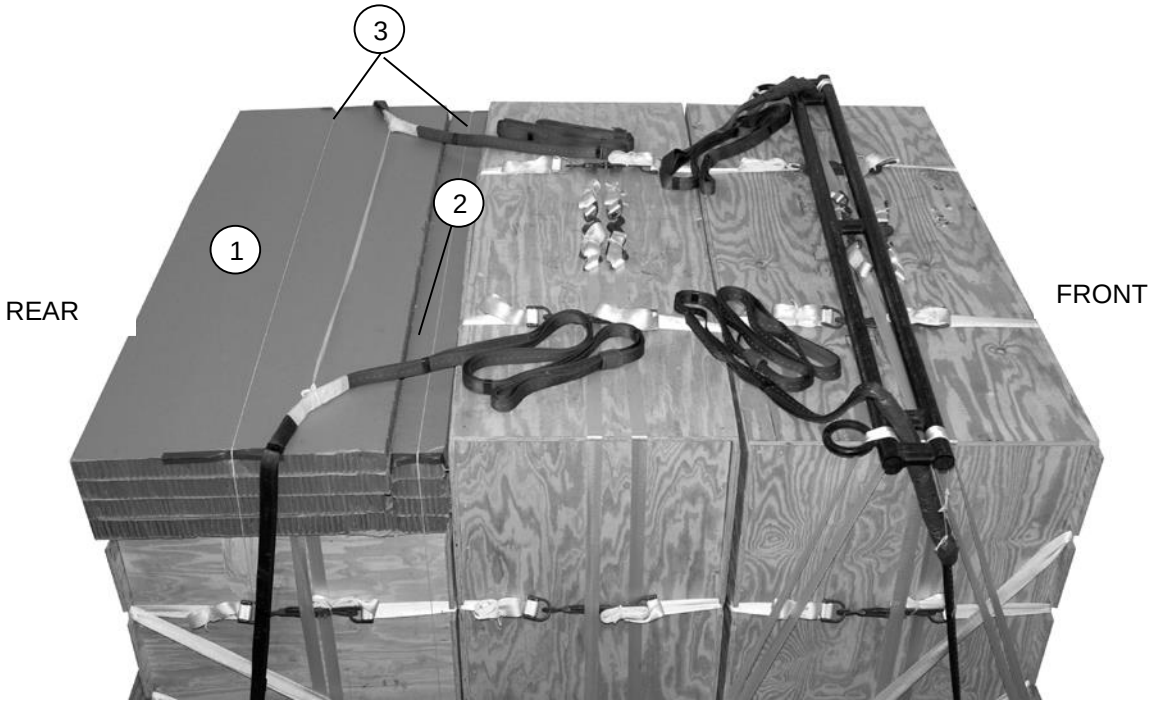
⑤ Make a suspension sling safety tie between the rear suspension slings only using ½-inch tubular nylon webbing according to the appendix at the rear of this manual.

Figure 8-34b. Attitude control bar, suspension slings and safety tie positioned and installed (continued)

BUILDING AND POSITIONING PARACHUTE STOWAGE PLATFORM

8-31. Build and position the parachute stowage platform as shown in Figure 8-35.

Note. Make sure the safety tie and suspension slings are on top the parachute stowage platform.



① Prepare a parachute platform by cutting and positioning a 36- by 96-inch piece of honeycomb on top of equipment box 3 flush with the rear edge. Make cutouts in this piece where it comes in contact with the lashings on top of equipment box 3. Place three additional pieces of 36- by 96-inch pieces on top of the first piece. Tape the 36-inch side with 2-inch adhesive tape.

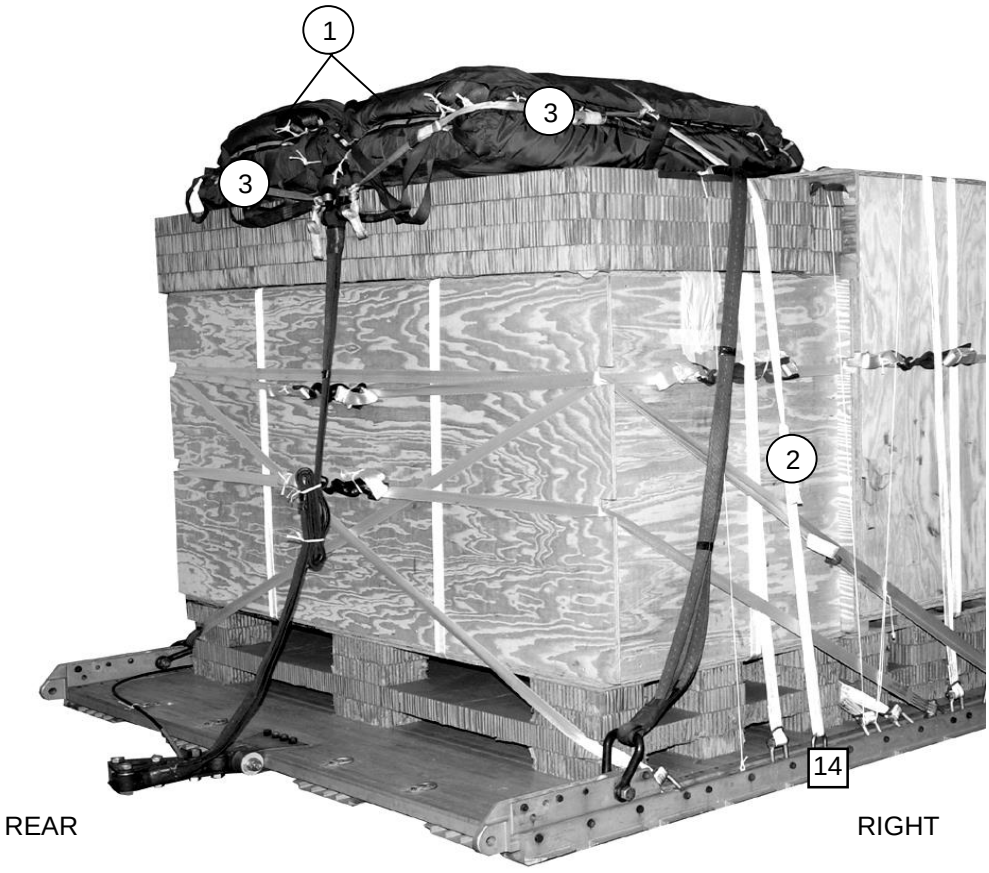
② Cut and position four 6- by 96-inch pieces of honeycomb to the front of the 36- by 96-inch pieces of honeycomb previously placed. Tape the 6-inch side with 2-inch adhesive tape.

③ Secure the parachute platform to the bushings on the type V platform on each side using type III nylon cord.

Figure 8-35. Parachute stowage platform built and positioned

PREPARING AND STOWING CARGO PARACHUTES

8-32. Prepare and stow the cargo parachutes as shown in Figure 8-36.



① Prepare, position and stow two G-11B cargo parachutes on the parachute stowage platform according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.

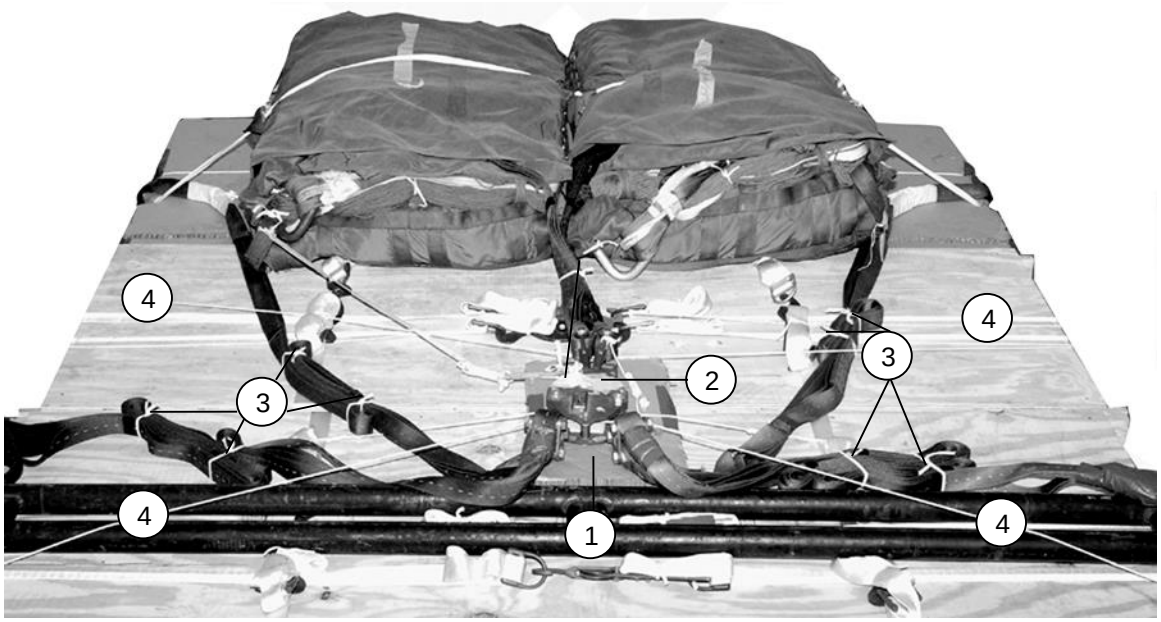
② Using type VIII nylon webbing install the cargo parachute restraint to clevises 14 and 14A according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.

③ Install the parachute release straps according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.

Figure 8-36. Cargo parachutes prepared and stowed

INSTALLING PARACHUTE RELEASE SYSTEM

8-33. Prepare, attach and safety an M-1 cargo parachute release according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figure 8-37.



① Center a 15- by 18-inch piece of honeycomb to the rear of the attitude control bar. Tape the edges of the piece of honeycomb. Secure the honeycomb to the load using two lengths of type III cord.

② Prepare and install the M-1 cargo parachute release according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5. Center the assembly on top of honeycomb.

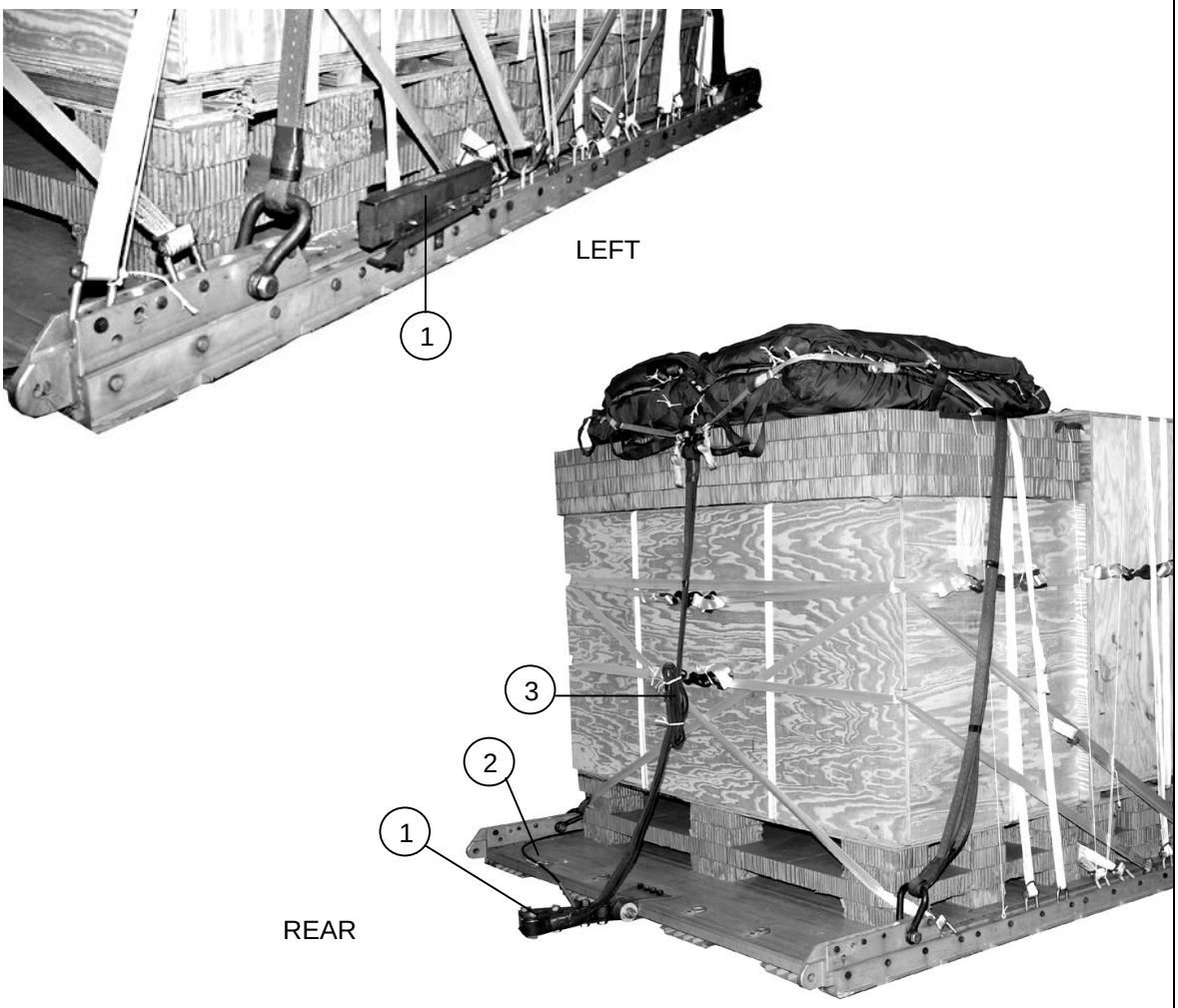
③ S-fold and tie any excess in the suspension slings using one turn single type I, ¼-inch cotton webbing.

④ Safety tie the M-1 cargo parachute release to convenient bushings on the type V platform using type III nylon cord according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.

Figure 8-37. Cargo parachute release installed

INSTALLING EXTRACTION SYSTEM

8-34. Install the extraction system as shown in Figure 8-38.



① Install the components of the extraction force transfer coupling system according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5. Use the front mounting holes on the left side of the platform for the extraction force transfer coupling system brackets.

② Install a 12-foot extraction force transfer coupling system cable according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and safety the cable to convenient places on the platform with one turn of type I, ¼-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 REV 1/TO 13C7-1-5to be used as a deployment line. S-fold the excess and tie it in two places with type I, ¼-inch cotton webbing.

Figure 8-38. Extraction system installed

PLACING EXTRACTION PARACHUTE

8-35. 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 REV 1/TO 13C7-1-5. Place the extraction parachute and line on the load for installation in the aircraft.

INSTALLING PROVISIONS FOR EMERGENCY RESTRAINTS

8-36. 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 REV 1/TO 13C7-1-5.

MARKING RIGGED LOAD

8-37. Mark the rigged load according to TM 4-48.02 (FM4-20.102)/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5, and as shown in Figure 8-39. Comply with the Shipper's requirements for Declaration of Dangerous/Hazardous Goods in accordance with AFMAN 24-204/TM 38-250/ NAVSUP PUB 505; MCO P4030.19I; DLAI 4145.3 DCMAD1, CH3.4 (HM24). If the load varies from the one shown, the weight, height, CB, and parachute requirements must be recomputed.

CAUTION

Make the final rigger inspection required by AR 59-4 (Using DD Form 1748, *Joint Airdrop Inspection Record (Platforms),* or appropriate DD Form 1748-1, *Joint Airdrop Inspection Record (Containers)*, DD Form 1748-2, *Airdrop Malfunction Report (Personnel-Cargo)*, and DD Form 1748-3, *Joint Airdrop Summary Report*).

RIGGED LOAD

Weight		
	Load shown……..	6,140 pounds
	Maximum weight……..	6,700 pounds
Height:	…….	92 inches
Width:	…….	108 inches
Length:	…….	144 inches
Overhang:	Front……..	N/A
	Rear……...	18 inches
Center of balance	…….	70 inches
	..	

Figure 8-39. Lightweight water purifier rigged on a 12-foot, type V platform for low-velocity airdrop

EQUIPMENT REQUIRED

8-38. Use the equipment listed in Table 8-1 to rig this load.

Table 8-1. Equipment required for rigging a lightweight water purifier on a 12-foot, type V platform for low-velocity airdrop

National Stock Number	Items	Quantity
8040-00-273-8713	Adhesive Paste, 1-Gallon	As Required
1670-00-251-1153	A-7A, Cargo Strap	7
1670-00-003-4389	Bar, Attitude Control	1
4030-00-678-8562	Clevis, 3-4-inch medium	2
4030-00-090-5354	Clevis, 1-inch large	5
4020-00-240-2146	Cord, Nylon, Type III, 550-pound	As Required
1670-00-434-5783	Coupling, Airdrop Extraction Force Transfer, W/12-foot cable	1
1670-00-360-0328	Cover, Clevis	2
8135-00-664-6958	Cushioning Material (Cellulose Wadding)	As Required
8305-00-958-3685	Felt, ½-inch thick	As Required
1670-01-183-2678	Leaf, Extraction Line (Line Bag) (for C-130)	1
1670-01-183-2678	Leaf, Extraction Line (Line Bag) (for C-17)	1
1670-00-003-4391	Knife, Parachute Bag (for C-17)	1 1
1670-01-064-4452	Line Extraction:	1
1670-01-107-7652	60-foot (1-loop), Type XXVI (for C-130)	1
1670-01-064-4452	160-foot (1-loop), Type XXVI (for C-17) 60-foot (1-loop), Type XXVI (for C-17), (Drogue Line)	1
5306-00-435-8994	Link Assembly: Two-Point, 3 ¾-inch	2
5306-00-435-8994	Bolt, 2-inch diameter, 4-inch long (for C-130) Bolt, 1-inch diameter, 4-inch long (for C-17)	4

Table 8-1. Equipment required for rigging a lightweight water purifier on a 12-foot, type V platform for low-velocity airdrop (continued)

National Stock Number	Items	Quantity
5310-00-232-5165	Nut, 1-inch, hexagonal (for C-130)	2
5310-00-232-5165	Nut, 1-inch, hexagonal (for C-17	4
1670-00-003-1953	Plate, Side, 3 ¾-inch (for C-130)	2
1670-00-003-1953	Plate, Side, 3 ¾-inch (for C-17)	4
5365-00-007-3414	Spacer, Large(for C-130)	2
5365-00-007-3414	Spacer, Large(for C-17)	4
	Lumber:	
5510-00-220-6146	2- by 4- by 96-inch	As Required
5315-00-010-4659	Nail, Steel Wire, Common, 8-penny	As Required
5530-00-618-8073	Plywood, ¾-inch	As Required
1670-00-753-3928	Pad, Energy Dissipating, Honeycomb, 3- by 36- by 96-inch	As Required
	Parachute:	
	Cargo:	
1670-01-016-7841	G-11B	2
	Parachute:, Cargo Extraction	
1670-00-063-3715	15-foot (for C-130)	1
1670-00-063-3715	15-foot (for C-17)	2
	Platform, Airdrop, Type V, 12-foot:	
1670-01-162-2372	Clevis Assembly	32
1670-01-353-8424	Extraction Bracket Assembly	1
1670-01-162-2381	Tandem Link Assembly (Multipurpose link)	4
1670-01-097-8816	Release, Cargo Parachute, M-1	1
	Sling, Cargo, Airdrop:	
1670-01-062-6304	9-foot, (2-loop), Type XXVI	1
1670-01-063-7761	16-foot (2-loop), Type XXVI	4
1670-01-062-6302	20-foot (2-loop), Type XXVI	2
1670-00-040-8219	Strap, Parachute Release, Multicut	2
7510-00-266-5016	Tape, Adhesive, 2-inch	As Required
7510-00-266-6710	Tape, Masking	As Required

Table 8-1. Equipment required for rigging a lightweight water purifier on a 12-foot, type V platform for low-velocity airdrop (continued)

National Stock Number	Items	Quantity
	Textile:	
8305-00-433-5986	Cloth, Cotton Muslin, Type III (for C-17)	As Required
8310-00-917-3945	Thread, Cotton, Ticket Number 8/7 (for C-17)	As Required
1670-00-937-0271	Tie down Assembly, 15-foot	55
1670-01-483-8259	Tow plate Release Mechanism (H-Block) (C-17 only)	1
	Webbing:	
8305-00-268-2411	Cotton, ¼-inch, Type I	As Required
8305-00-082-5752	Nylon, Tubular, ½-inch	As Required
8305-00-268-2455	Nylon, Tubular, 1-inch	As Required
8305-00-261-8585	Type VIII Nylon	As Required

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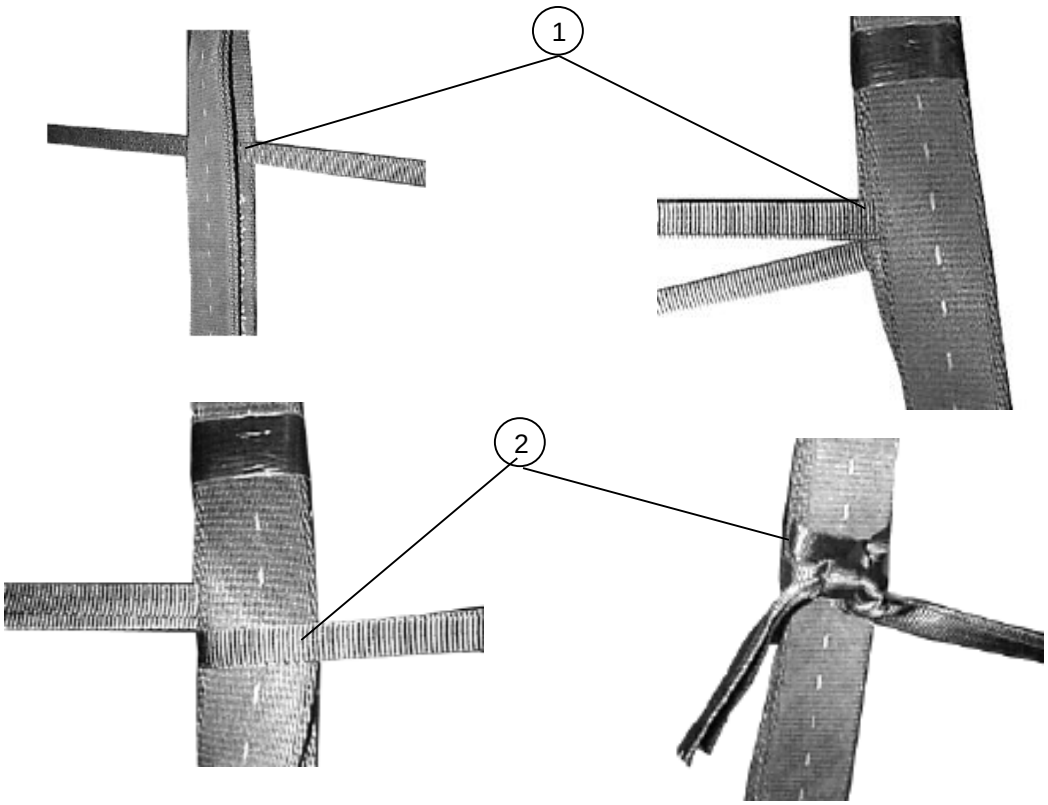
Appendix A

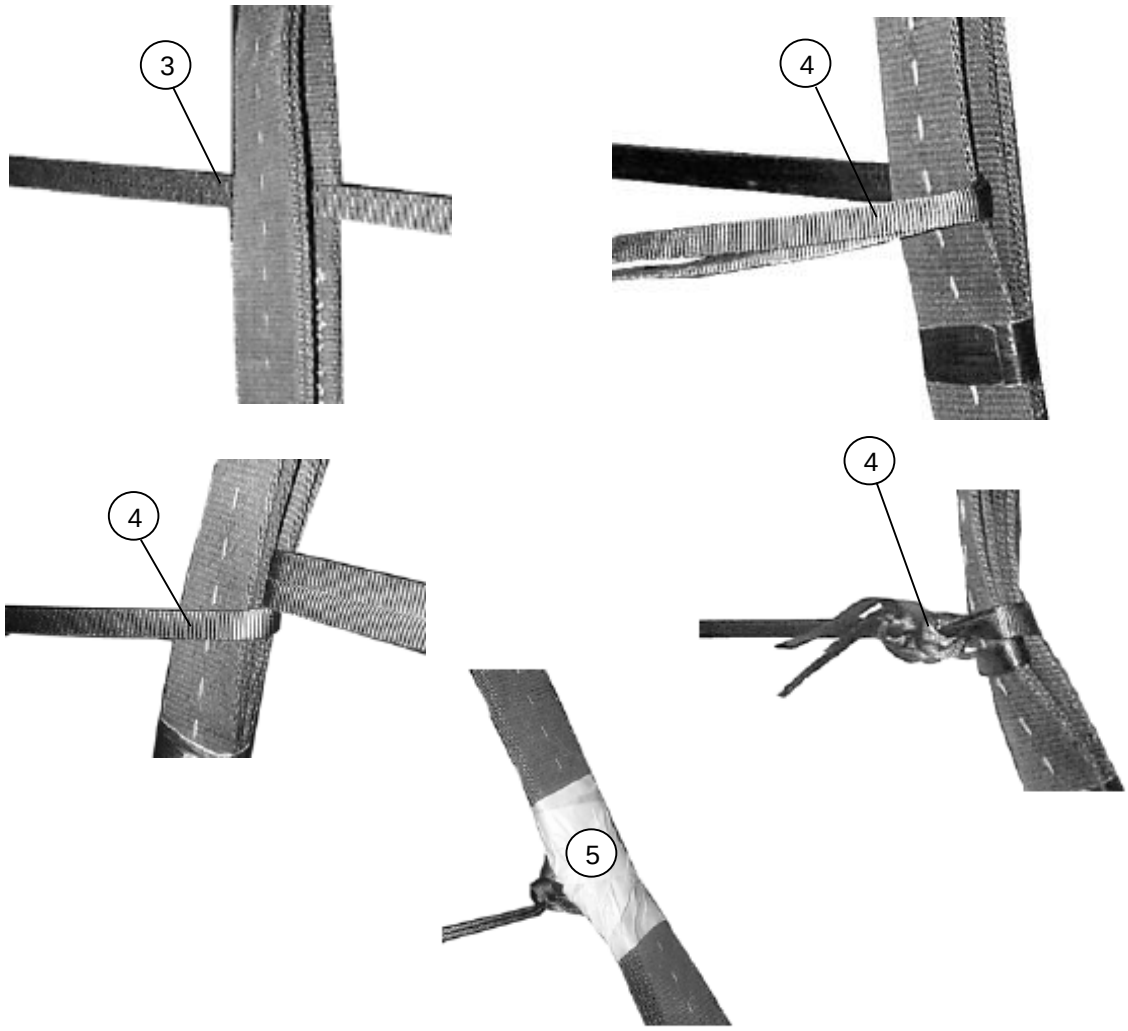
Installing Suspension Sling Safety Ties

A-1. Installing the suspension sling safety ties keeps the suspension slings from making contact with the load. The procedures in this Appendix are different from those in TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5. An exception to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 is granted. The procedures in this Appendix must be followed. Safety tie the rear suspension slings according to instructions shown below.



① Cut two lengths of ½-inch tubular nylon webbing, making each long enough to reach from the left rear suspension sling to the right rear suspension sling plus 8 feet. Split the plies of the left rear suspension sling. Route two lengths of the ½-inch tubular webbing through the plies of the sling from inboard to outboard about 3 feet.

② Route the 3 foot running end from outboard to inboard around the inside plies and around the outboard plies from inboard to outboard. Tie it in place on the inboard side with three alternating half-hitches with an overhand knot in the running end.



① Split the plies of the right rear suspension sling and route the running ends of the two lengths of ½-inch tubular nylon webbing through the plies of the sling from inboard to outboard. Pass enough of the webbing through the sling to take the slack out, but not enough to keep the slings from hanging in their natural position.

② Route the running end from outboard to inboard around the inside plies and around the outboard plies from inboard to outboard. Tie it in place on the inboard side with three alternating half-hitches with an overhand knot in the running end.

③ Tape the webbing to the slings with masking tape.

④ When using four-loop, type XXVI suspension slings, wrap each four plies with a 10-by 10-inch piece of cotton muslin. Secure each wrap with one single turn of ¼-inch cotton webbing (not shown).

Glossary

SECTION I – ACRONYMS AND ABBREVIATIONS

ACB	attitude control bar
AFMAN	Air Force manual
AFTO	Air Force technical order
AMC	Air Mobility Command
AR	Army regulation
BII	basic issue items
CB	center of balance
COEI	components of end item
CWK	cold weather kit
DA	Department of the Army
DD	Department of Defense
DLAI	Defense Logistics Agency instruction
FM	field manual
KW	kilowatt
LWP	lightweight water purifier
MCO	Marine Corps order
MCRP	Marine Corps reference publication
NAVSEA	Naval Sea Systems Command
NAVSUP	Naval Supply Systems Command
ROWPU	reverse osmosis water purification unit
TM	technical manual
TO	technical order

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(FM 10-522/TO 13C7-2-1001;
FM 4-20.158/TO 13C7-7-61)

15 March 2016

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