

Chapter 3

Rigging the Advanced Antitank Weapon System-Medium (Javelin) for Low-Velocity Airdrop

SECTION I-RIGGING TWO-ROUND A-7A DOOR BUNDLE

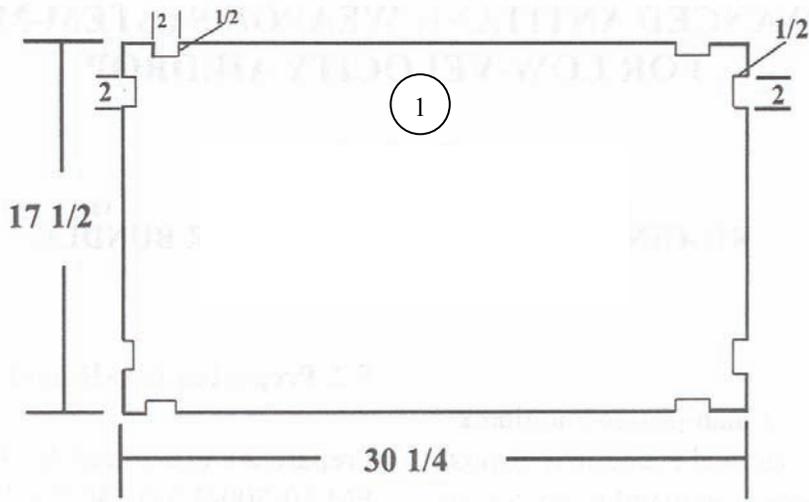
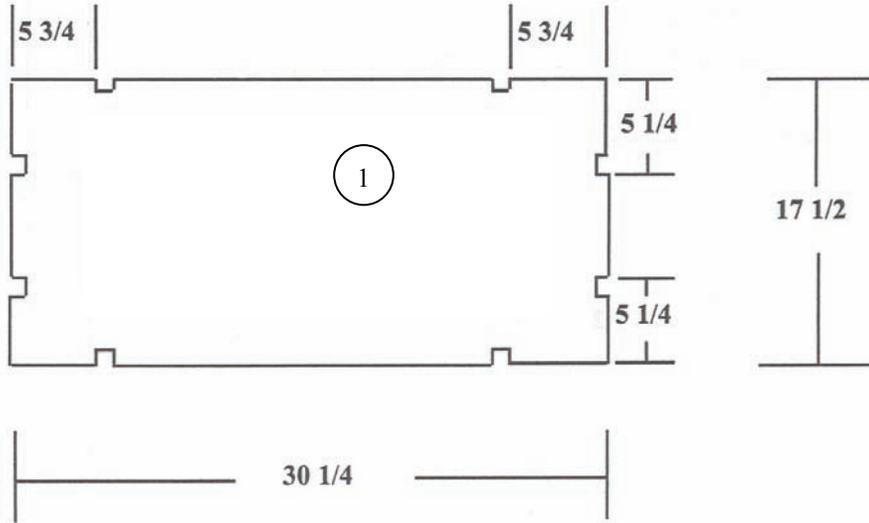
DESCRIPTION OF LOAD

3-1. The Javelin Missile System is a man-portable antitank weapon system made up of a tactical round in a disposable launch tube and a reusable Command Launch Unit (CLU). The CLU is not rigged with the tactical rounds. The Javelin can be airdropped as a door bundle in two-round and four-round configurations. As a door bundle, the Javelin can be dropped only from C-130 and C-17 aircrafts. The Javelin two-round A-7A door bundle has an approximate rigged weight of 146 pounds. It has an approximate height of 65 1/2 inches, a width of 17 1/2 inches and a length of 30 1/4 inches. The two-round bundle uses the T-10 cargo parachute.

PREPARING TWO-ROUND A-7A DOOR BUNDLE

3-2. Prepare the two-round A-7A door bundle according to FM 4-20.103/MCRP 4-11.3C/TO 13C7-1-11 and as shown in Figure 3-1.

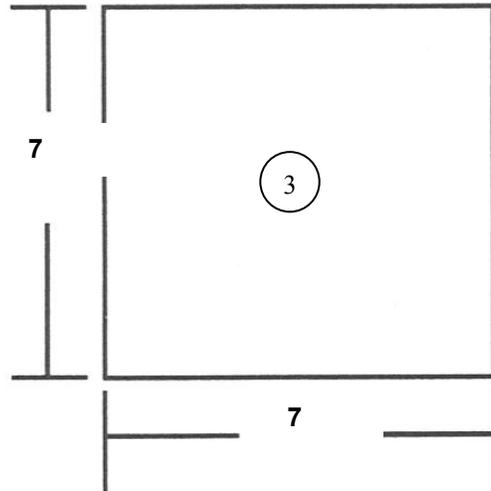
- Notes.** 1. This drawing is not to scale.
 2. All dimensions are in inches.



1. Cut two 17 1/2- by 30 1/4-inch pieces of 3/4-inch plywood with eight 1/2-inch by 2-inch cutouts. Pad and tape sharp edges of the cutout.
2. Cut two 17 1/2- by 30 1/4-inch pieces of honeycomb. (Not shown)

Figure 3-1. Two-Round A-7A Door Bundle Prepared

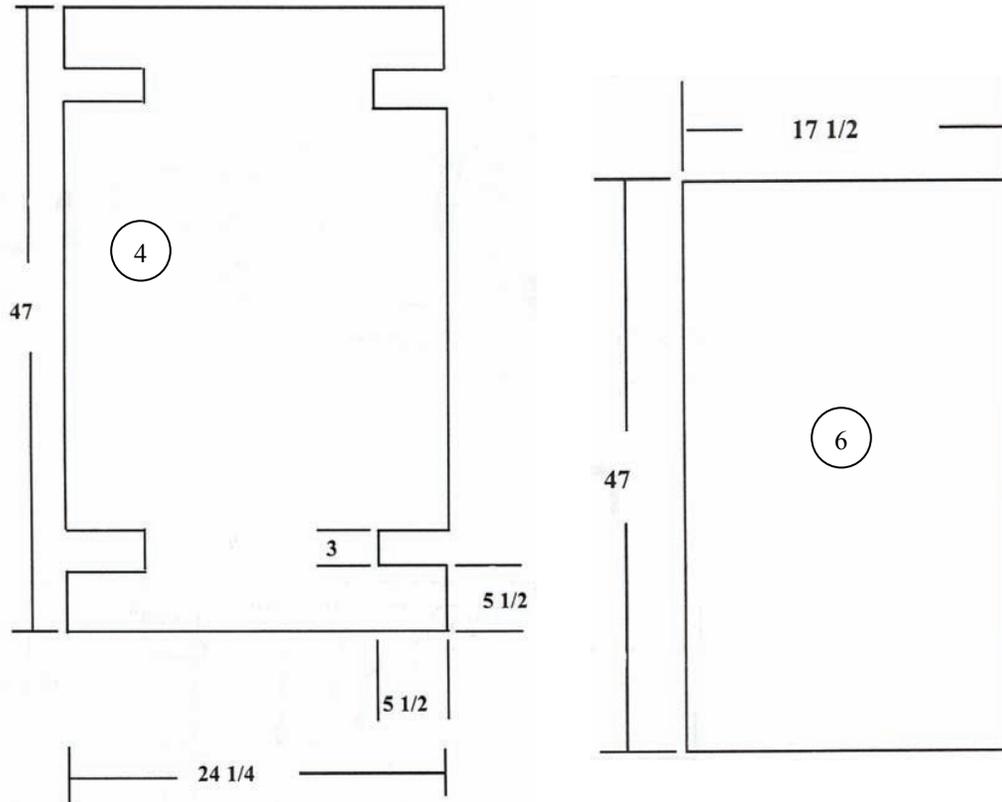
- Notes.** 1. This drawing is not to scale.
2. All dimensions are in inches.



3. Cut two 7- by 7-inch pieces of honeycomb.

Figure 3-1. Two-Round A-7A Door Bundle Prepared (Continued)

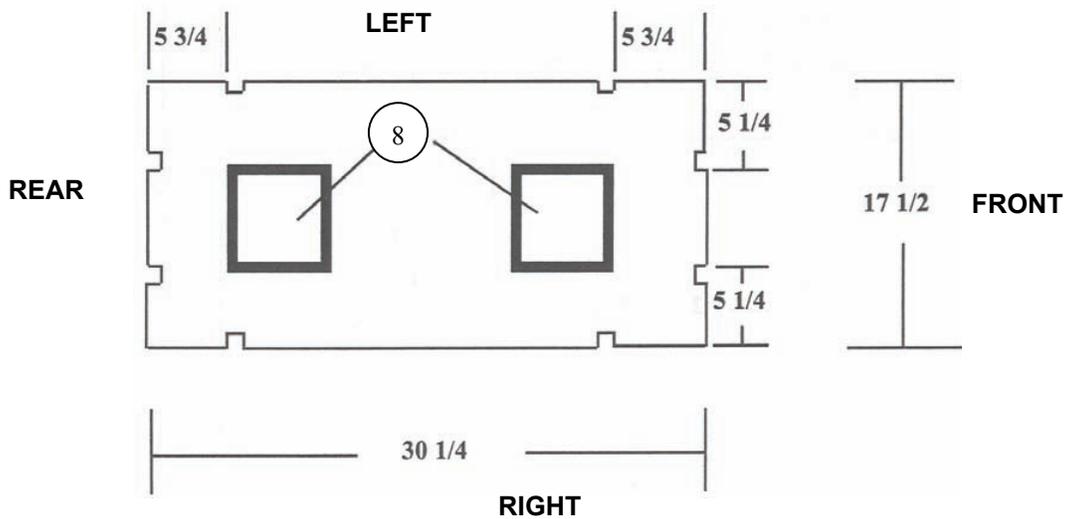
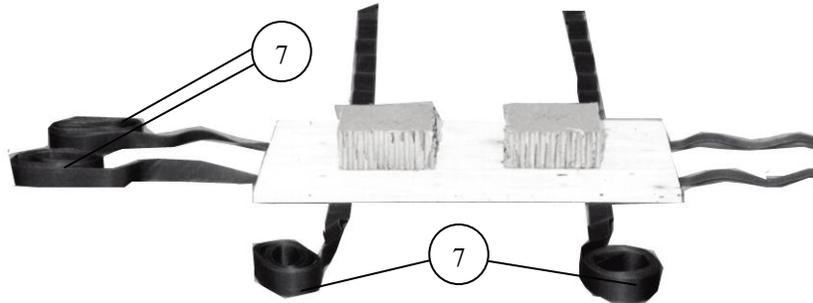
- Notes.** 1. This drawing is not to scale.
2. All dimensions are in inches.



- ④ Cut two 3/4- by 24 1/4- by 47-inch pieces of plywood with four 3- by 5 1/2-inch cutouts. Pad and tape sharp edges of the cutouts.
- ⑤ Cut two pieces of honeycomb to match step 4. (Not shown)
- ⑥ Cut two 17 1/2- by 47-inch pieces of honeycomb.

Figure 3-1. Two-Round A-7A Door Bundle Prepared (Continued)

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



7. Position four A-7A straps under one of the 17 1/2- by 30 1/4-inch pieces of plywood. Position each strap about 5 inches from each edge of the platform.
8. Position and glue the two 7- by 7-inch pieces of honeycomb on top of the plywood. Each piece should be 5 1/4 inches from the right and left edges of the plywood. Each piece should also be 5 3/4 inches from the forward edge and 5 3/4 inches from the rear edge of the plywood.

Figure 3-1. Two-Round A-7A Door Bundle Prepared (Continued)

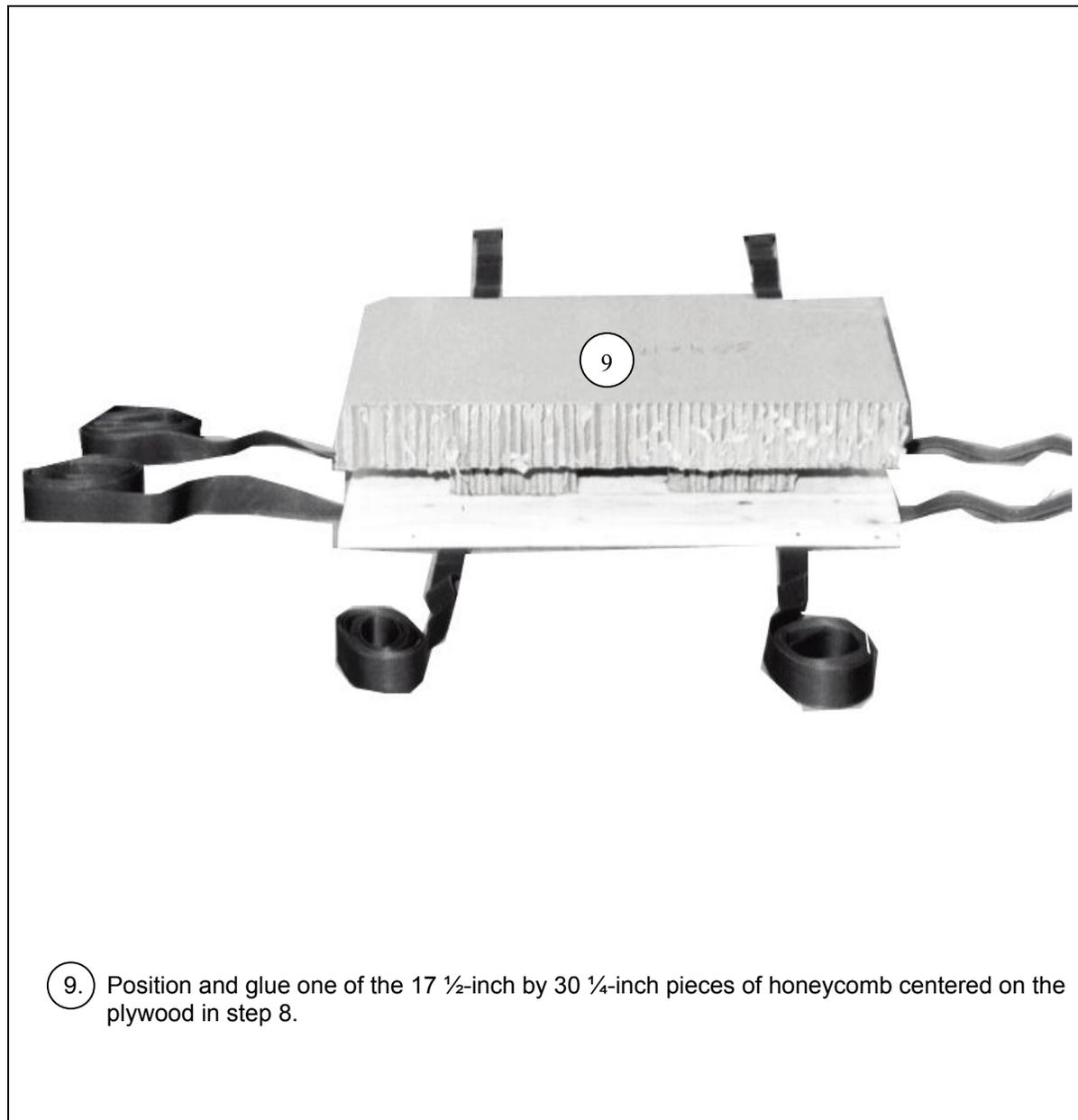


Figure 3-1. Two-Round A-7A Door Bundle Prepared (Continued)

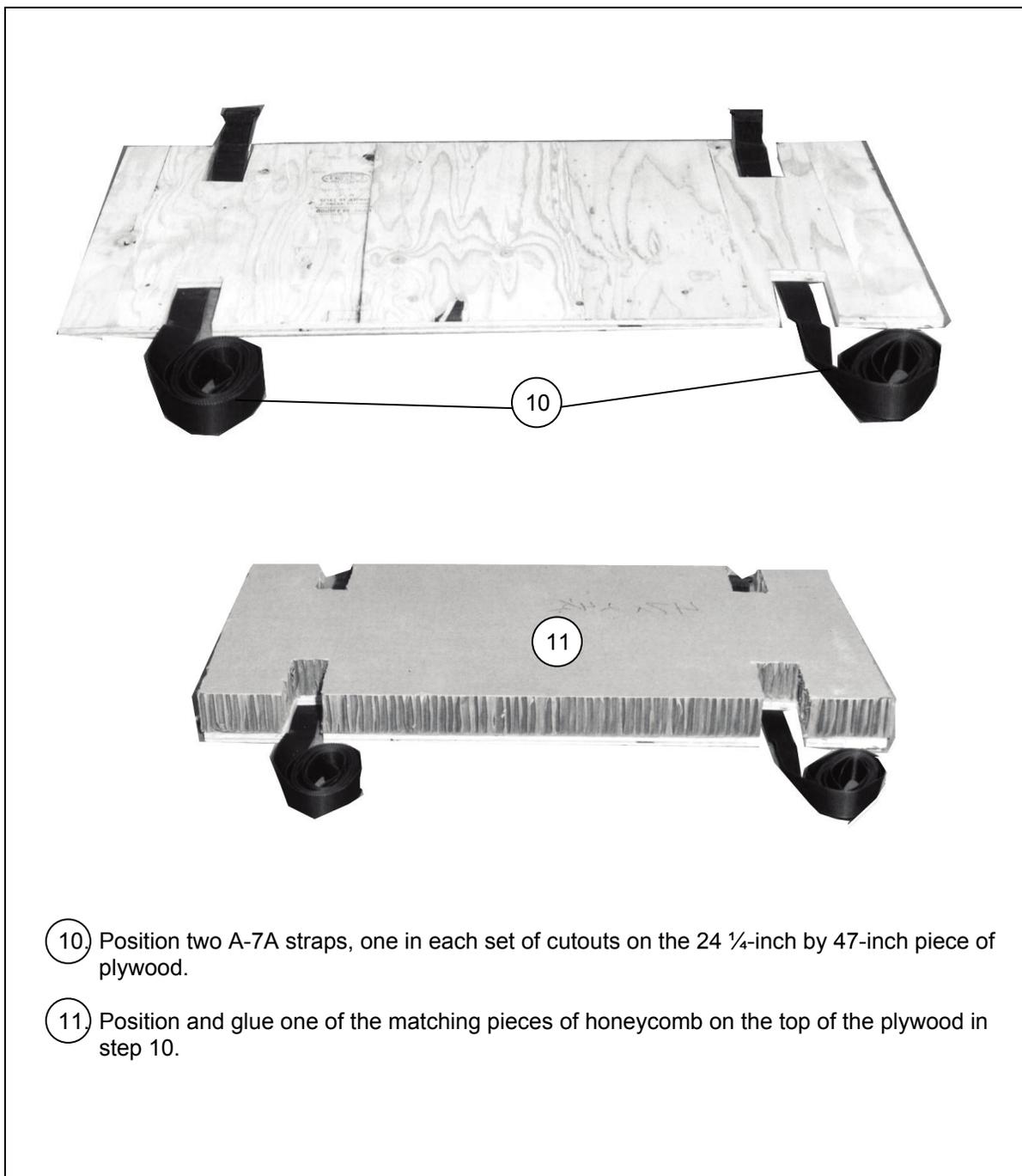


Figure 3-1. Two-Round A-7A Door Bundle Prepared (Continued)

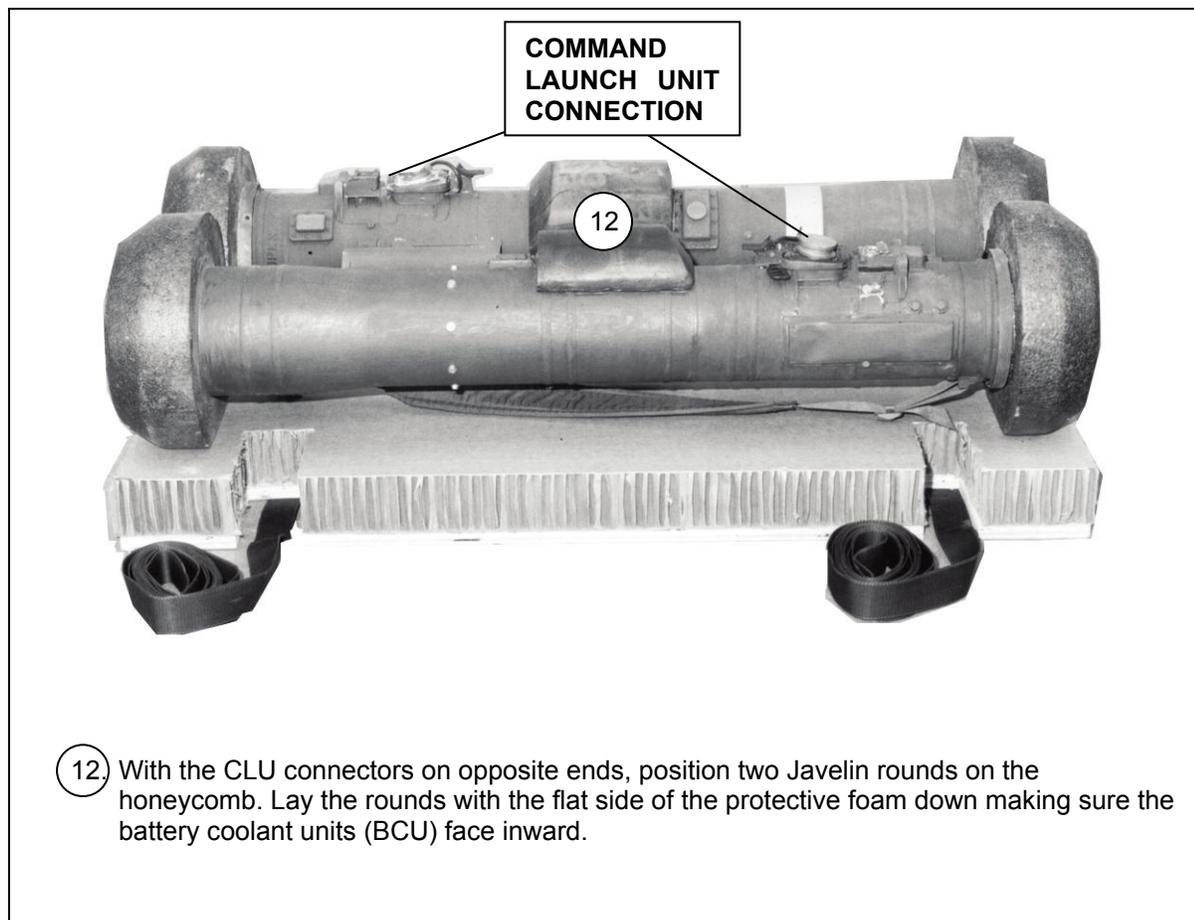


Figure 3-1. Two-Round A-7A Door Bundle Prepared (Continued)

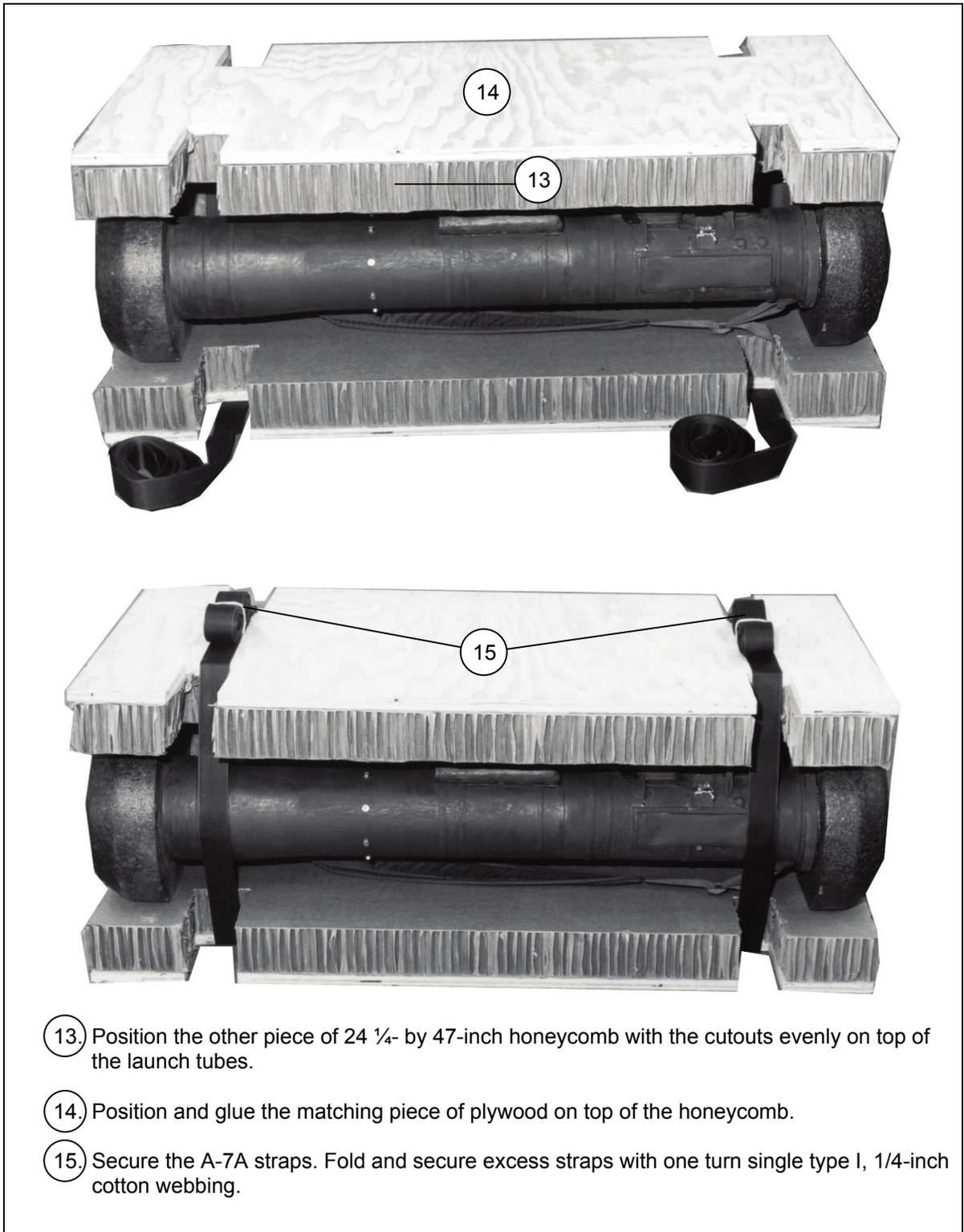
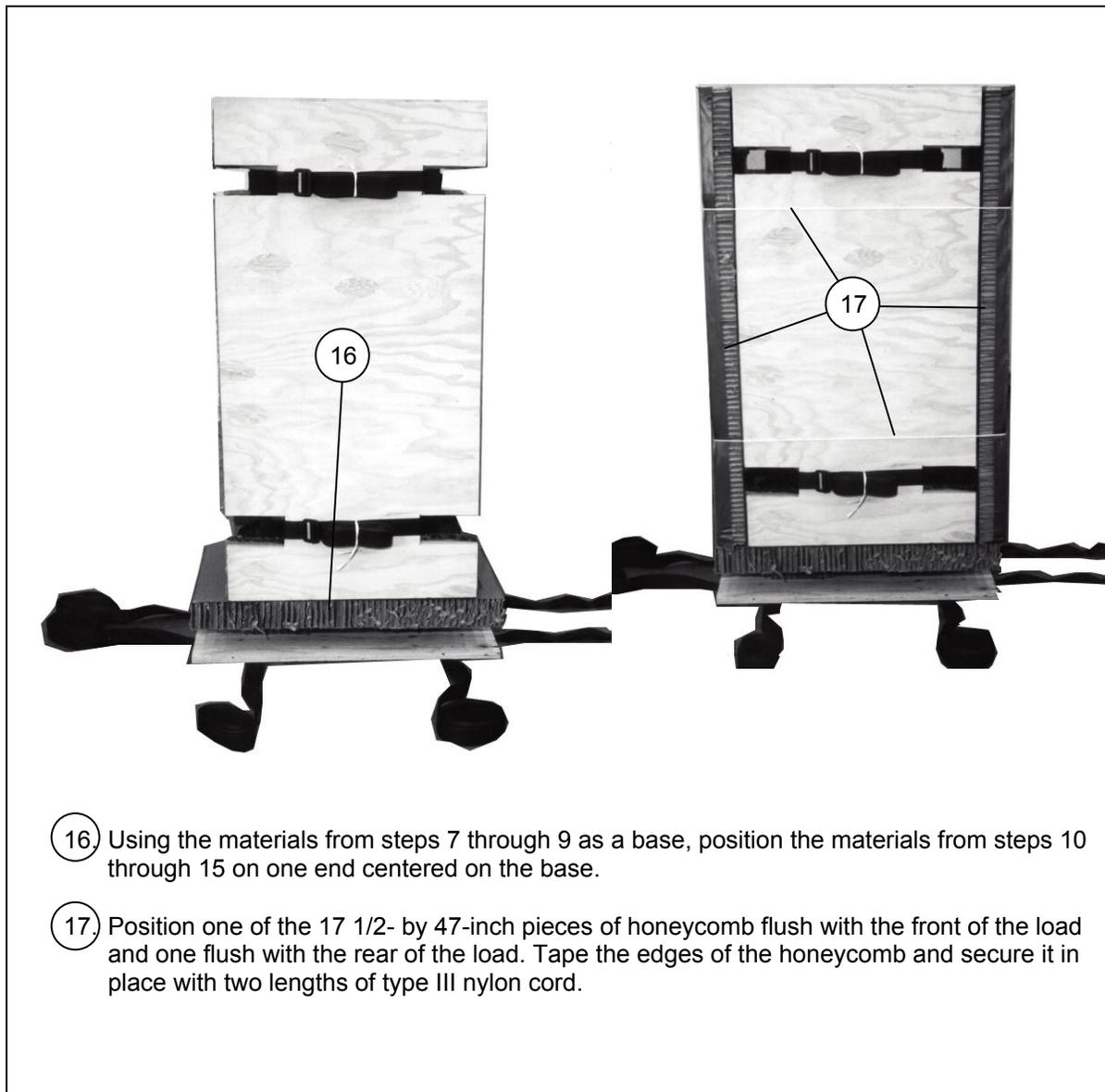
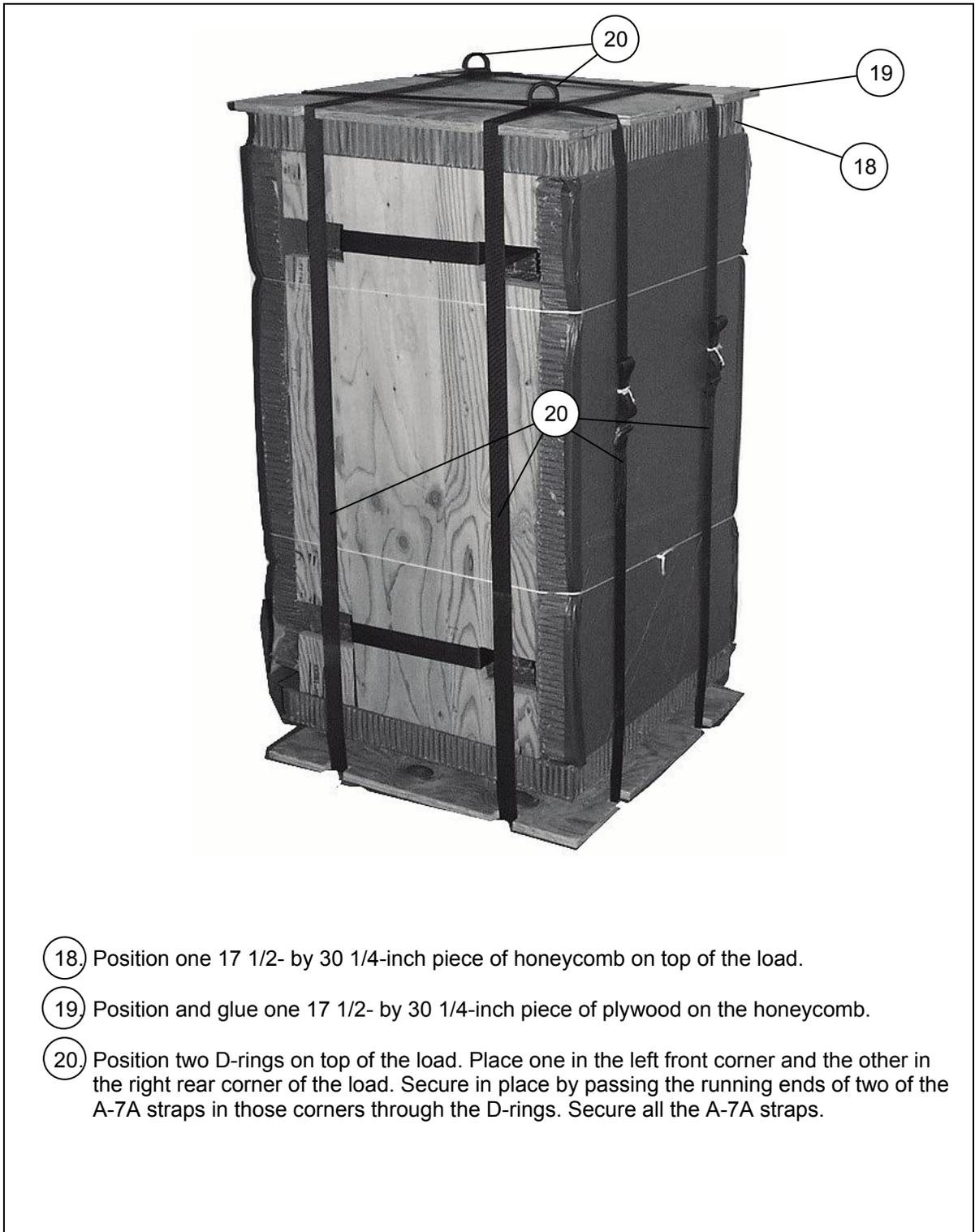


Figure 3-1. Two-Round A-7A Door Bundle Prepared (Continued)



- ①6 Using the materials from steps 7 through 9 as a base, position the materials from steps 10 through 15 on one end centered on the base.
- ①7 Position one of the 17 1/2- by 47-inch pieces of honeycomb flush with the front of the load and one flush with the rear of the load. Tape the edges of the honeycomb and secure it in place with two lengths of type III nylon cord.

Figure 3-1. Two-Round A-7A Door Bundle Prepared (Continued)



- ⑱ Position one 17 1/2- by 30 1/4-inch piece of honeycomb on top of the load.
- ⑲ Position and glue one 17 1/2- by 30 1/4-inch piece of plywood on the honeycomb.
- ⑳ Position two D-rings on top of the load. Place one in the left front corner and the other in the right rear corner of the load. Secure in place by passing the running ends of two of the A-7A straps in those corners through the D-rings. Secure all the A-7A straps.

Figure 3-1. Two-Round A-7A Door Bundle Prepared (Continued)

ATTACHING PARACHUTE TO LOAD

3-3. Attach a T-10 cargo parachute as shown in Figure 3-2.

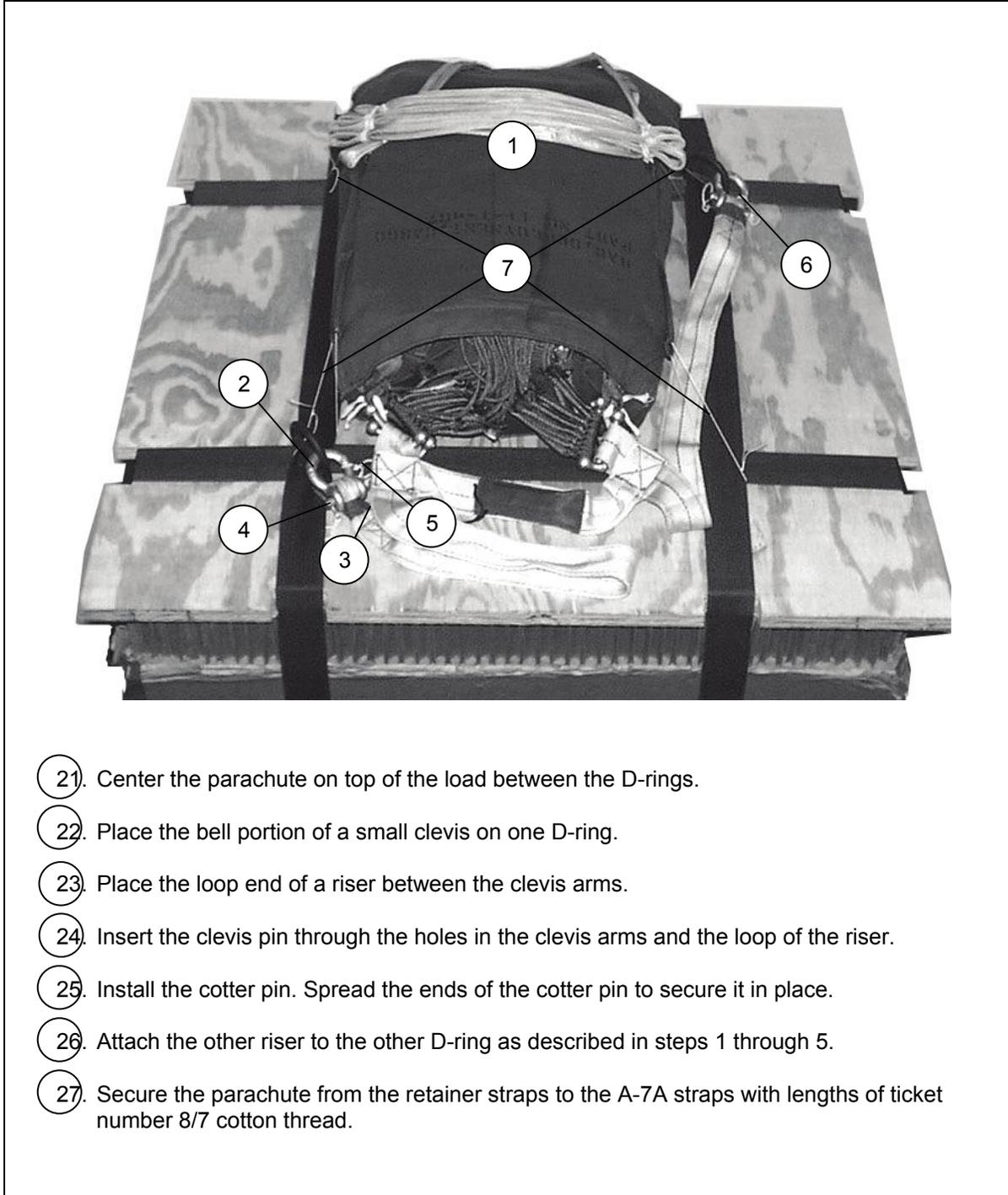


Figure 3-2. Parachute Attached to Load

MARKING RIGGED LOAD

3-4. Mark the rigged load according to FM 4-20.102/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 and as shown in Figure 3-3. Complete Shippers Declaration for Dangerous Goods and affix to load.

EQUIPMENT REQUIRED

3-5. Use the equipment in Table 3-1 to rig this load.

CAUTION
Mark the load "Door Bundle Only, Do Not Drop From ATF Ramp"



RIGGED LOAD DATA

Weight: Load shown.....	146 pounds
Height	65 1/2 inches
Width	17 1/2 inches
Overall Length.....	30 1/4 inches
Parachute	T-10 Cargo

Figure 3-3. Javelin Two-Round A-7A Door Bundle Rigged

Table 3-1. Equipment Required for Rigging the Javelin Two-Round A-7A Door Bundle for Low-Velocity Airdrop

<i>National Stock Number</i>	<i>Item</i>	<i>Quantity</i>
8040-00-273-8713	Adhesive, paste, 1-gal	As required
4020-00-240-2146	Cord, nylon, type III, 550-lb	As required
1670-00-753-3928	Pad, energy-dissipating, honeycomb	3 sheets
No NSN	Parachute: T-10 cargo with 20-ft USL for C-17	1
5530-00-128-4981	Plywood, 3/4- by 48- by 96-in	2 sheets
1670-00-251-1153	Sling, assembly, cargo, airdrop, A-7A	6
8310-01-102-4487	Strap parachute release, multicut	1
7501-00-266-6710	Tape, masking	As required
7515-00-266-5016	Thread, cotton, ticket 8/7	As required
8305-00-268-2411	Webbing, cotton, 1/4-in, 80-lb	As required

SECTION II-RIGGING FOUR-ROUND A-7A DOOR BUNDLE

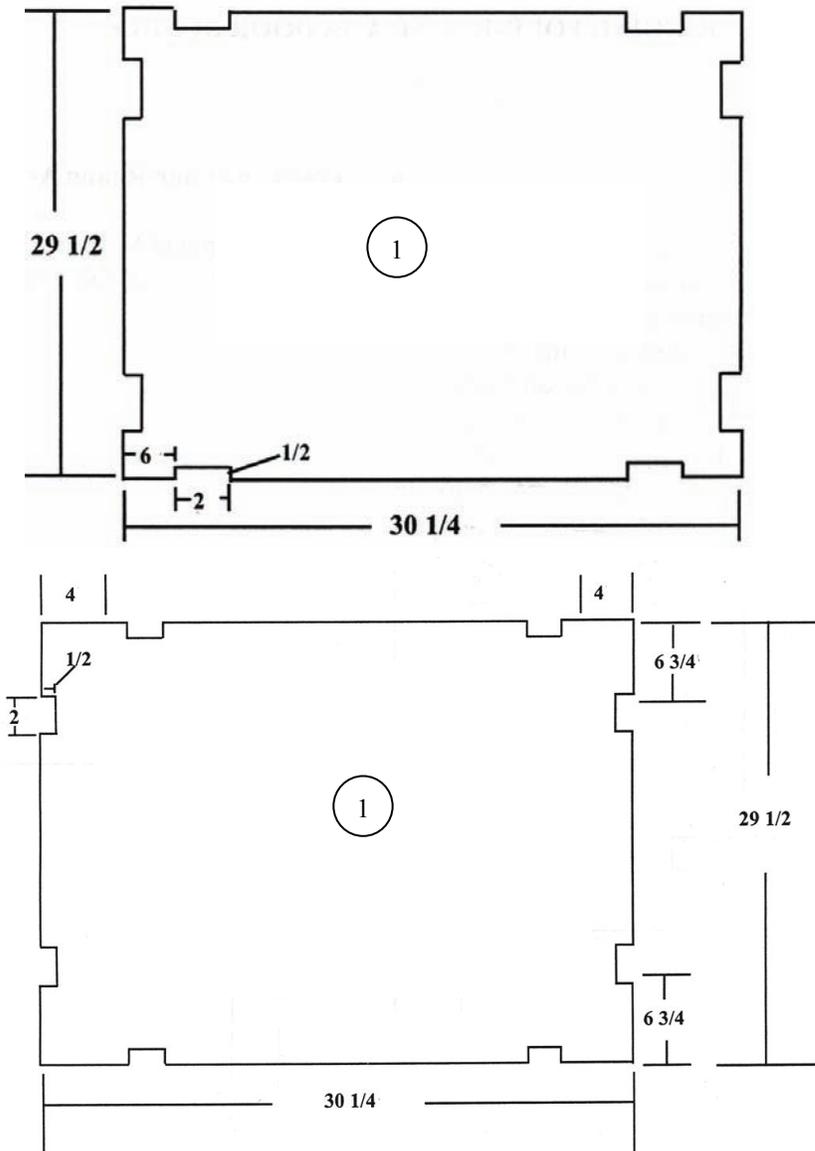
DESCRIPTION OF LOAD

3-6. The Javelin Missile System is a man-portable antitank weapon system made up of a tactical round in a disposable launch tube and a reusable Command Launch Unit (CLU). The CLU is not rigged with the tactical rounds. The Javelin four-round A-7A door bundle has an approximate rigged weight of 271 pounds. It has an approximate height of 57 1/2 inches (G-14) and 65 1/2 inches (T-10), a width of 37 1/2 inches and a length of 44 1/4 inches. The four-round bundle uses the G-14 or T-10 cargo parachute.

PREPARING FOUR-ROUND A-7A DOOR BUNDLE

3-7. Prepare the four-round A-7A door bundle according to FM 4-20.103/MCRP 4-11.3C/TO 13C7-1-11 and as shown in Figure 3-4.

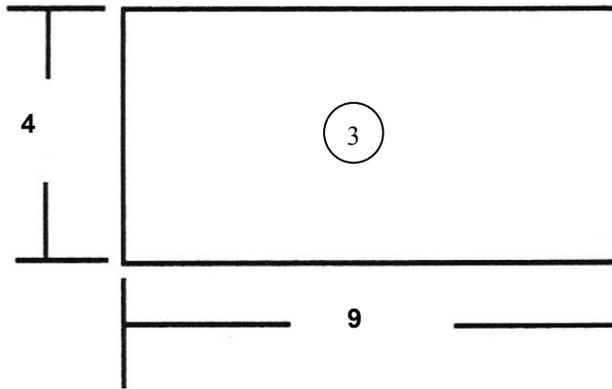
- Notes.** 1. This drawing is not to scale.
 2. All dimensions are in inches.



1. Cut two 29 1/2- by 30 1/4-inch pieces of 3/4-inch plywood with eight 2-inch cutouts. Pad and tape sharp edges of the cutout.
2. Cut two 29 1/2- by 30 1/4-inch pieces of honeycomb. (Not shown)

Figure 3-4 Four -Round A-7A Door Bundle Prepared

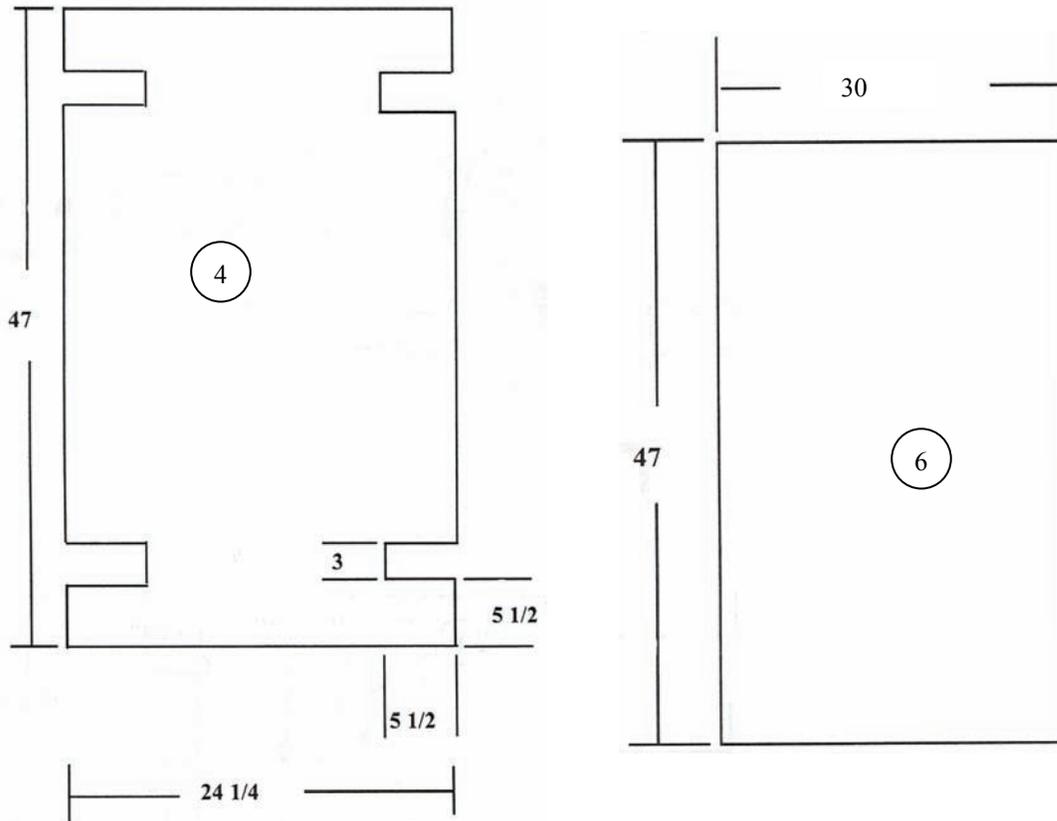
- Notes.** 1. This drawing is not to scale.
2. All dimensions are in inches.



3. Cut four 4- by 9-inch pieces of honeycomb.

Figure 3-4. Four-Round A-7A Door Bundle Prepared (Continued)

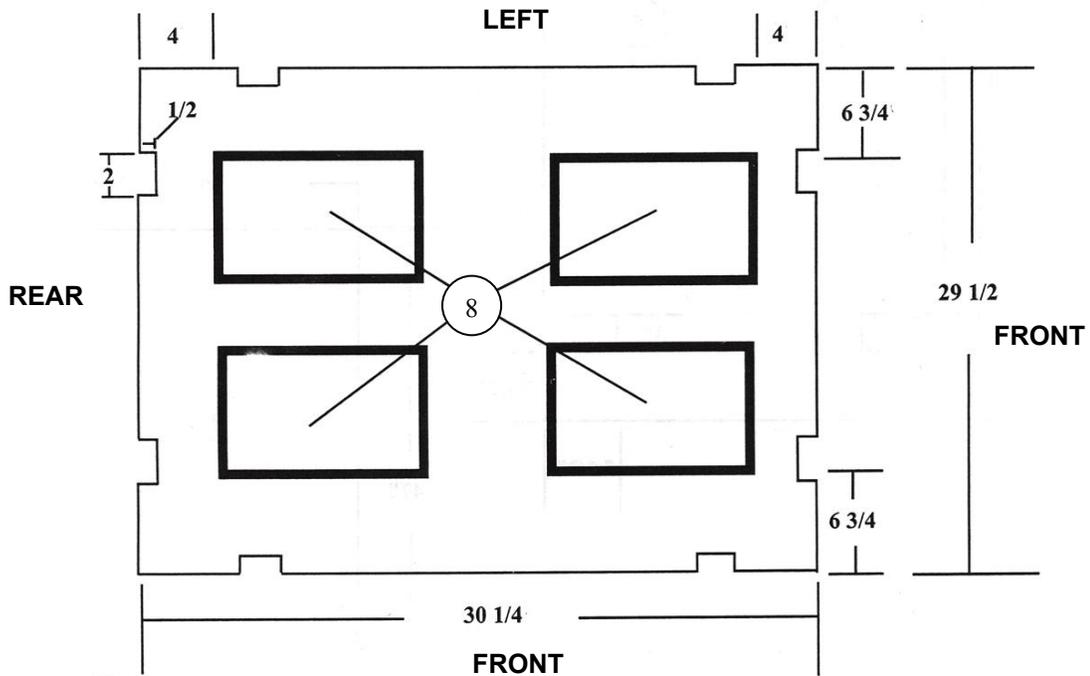
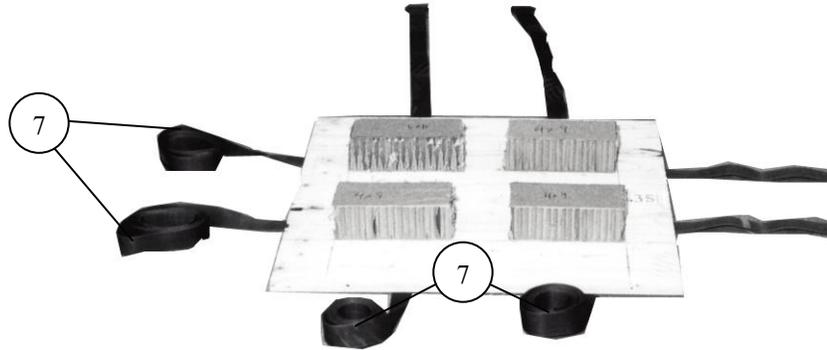
- Notes.** 1. This drawing is not to scale.
2. All dimensions are in inches.



- 4. Cut three 3/4- by 24 1/4- by 47-inch pieces of plywood with four 3- by 5 1/2-inch cutouts. Pad and tape sharp edges of the cutouts.
- 5. Cut two pieces of honeycomb to match those prepared in step 4. (Not shown)
- 6. Cut two 30- by 47-inch pieces of honeycomb.

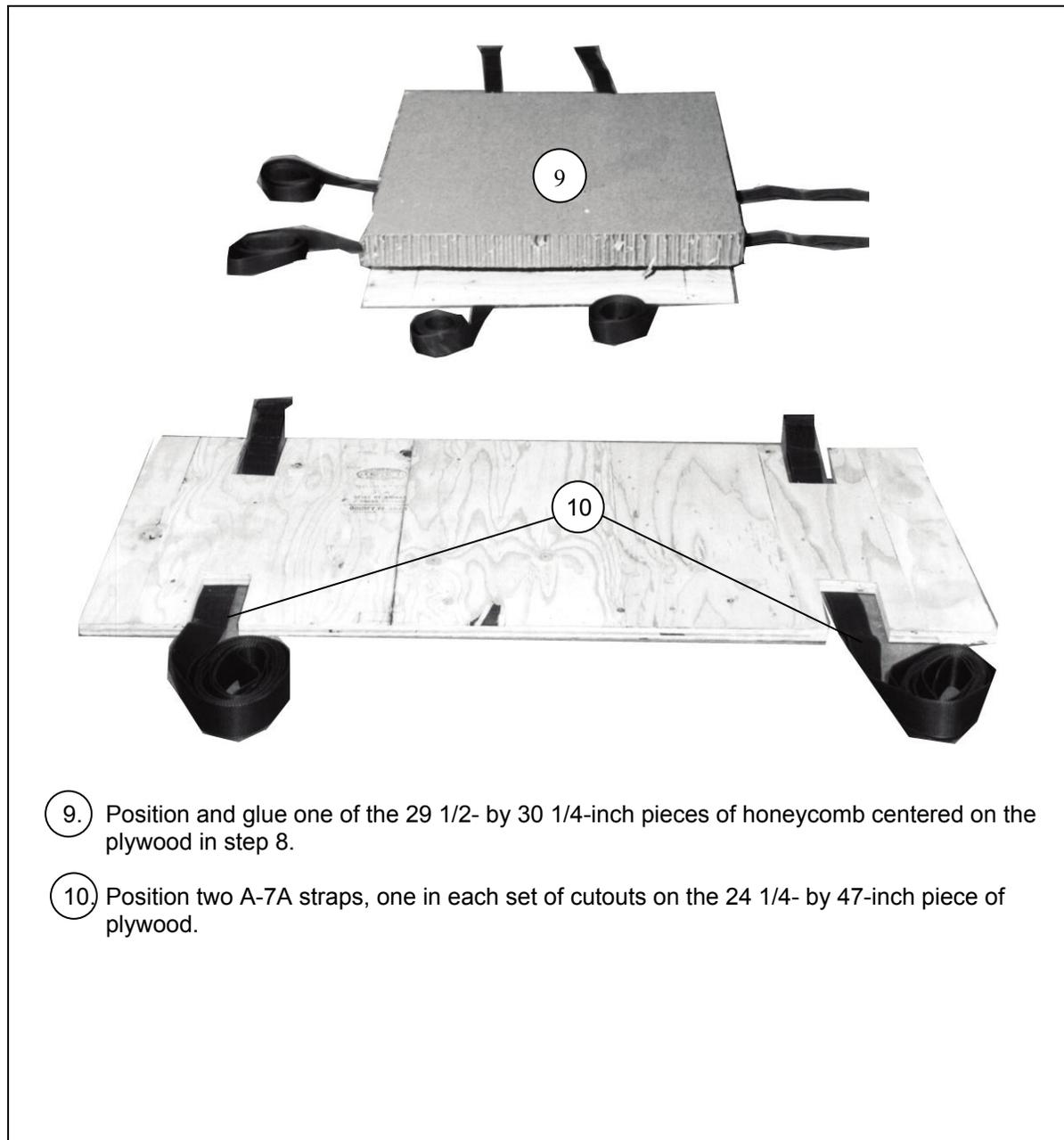
Figure 3-4. Four-Round A-7A Door Bundle Prepared (Continued)

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



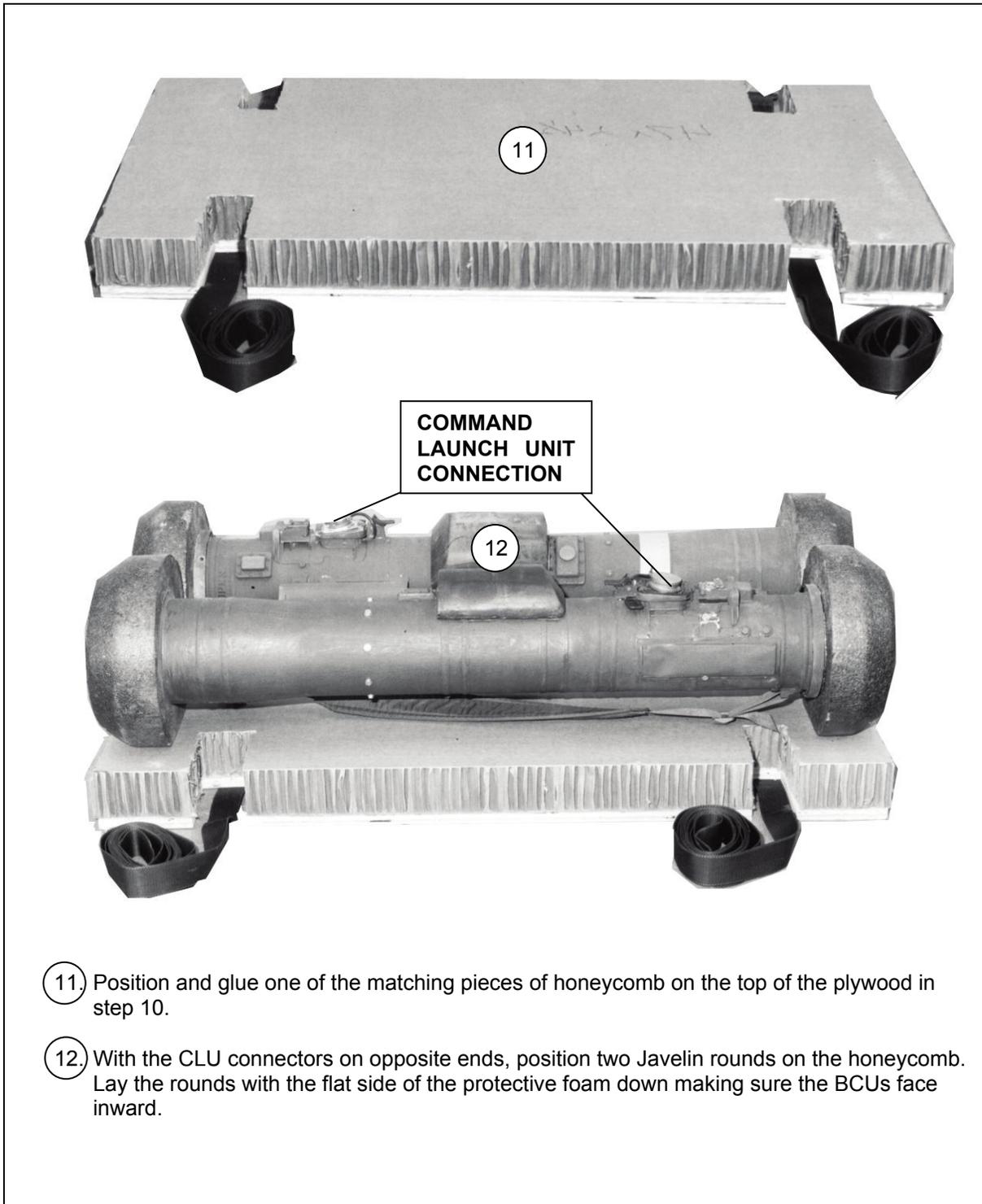
7. Position four A-7A straps under one of the 29 1/2- by 30 1/4-inch pieces of plywood. Position each strap in each set of cutouts of the plywood.
8. Position and glue the four 4- by 9-inch pieces of honeycomb on top of the plywood. The pieces on the left side should be 6 3/4 inches from the left edge of the plywood and the right side pieces should be 6 3/4 inches from the right edge of the plywood. The forward pieces should be 4 inches from the forward edge of the plywood and the rear pieces should be 4 inches from the rear edge of the plywood.

Figure 3-4. Four-Round A-7A Door Bundle Prepared (Continued)



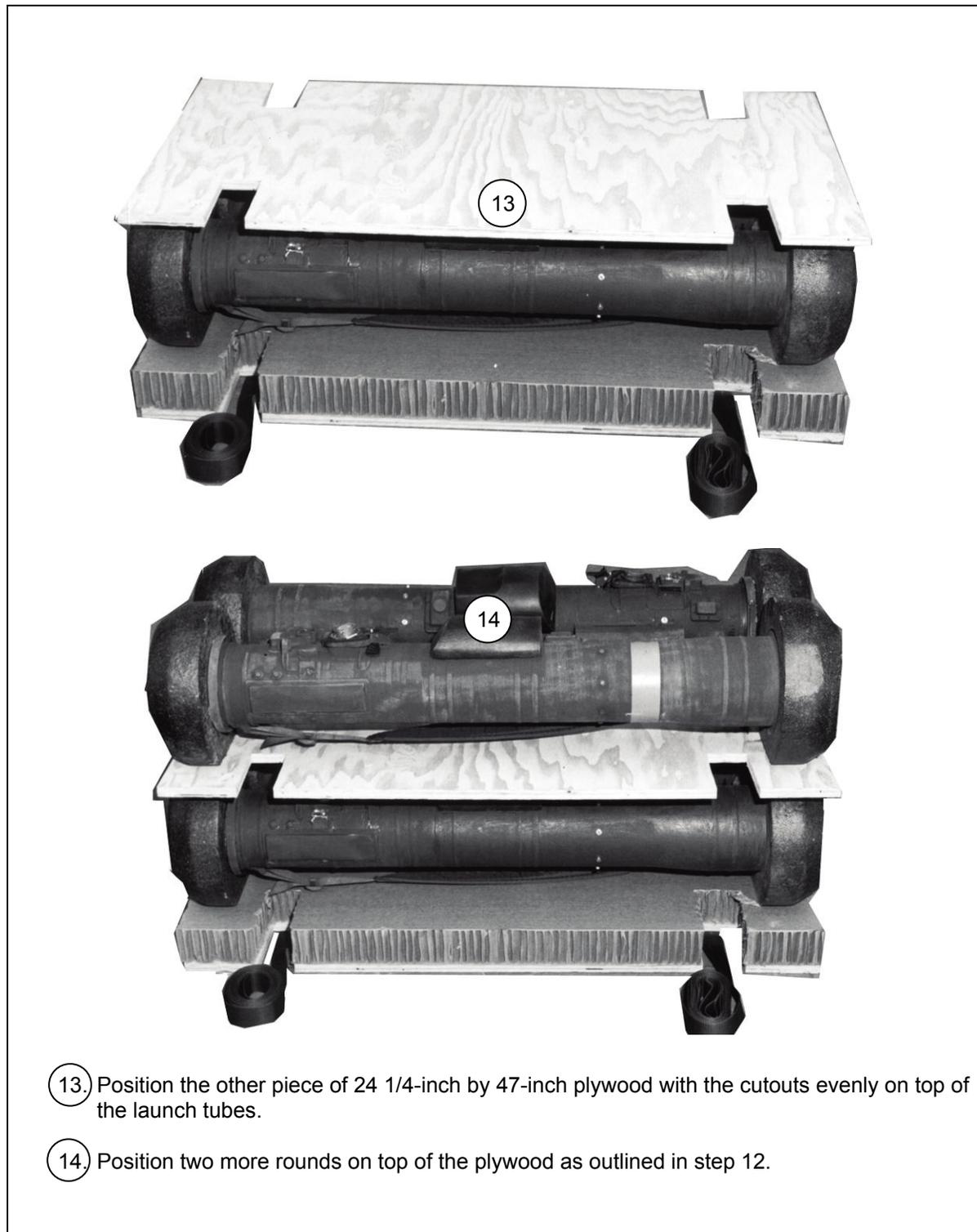
- 9. Position and glue one of the 29 1/2- by 30 1/4-inch pieces of honeycomb centered on the plywood in step 8.
- 10. Position two A-7A straps, one in each set of cutouts on the 24 1/4- by 47-inch piece of plywood.

Figure 3-4. Four-Round A-7A Door Bundle Prepared (Continued)



11. Position and glue one of the matching pieces of honeycomb on the top of the plywood in step 10.
12. With the CLU connectors on opposite ends, position two Javelin rounds on the honeycomb. Lay the rounds with the flat side of the protective foam down making sure the BCUs face inward.

Figure 3-4. Four-Round A-7A Door Bundle Prepared (Continued)



13. Position the other piece of 24 1/4-inch by 47-inch plywood with the cutouts evenly on top of the launch tubes.

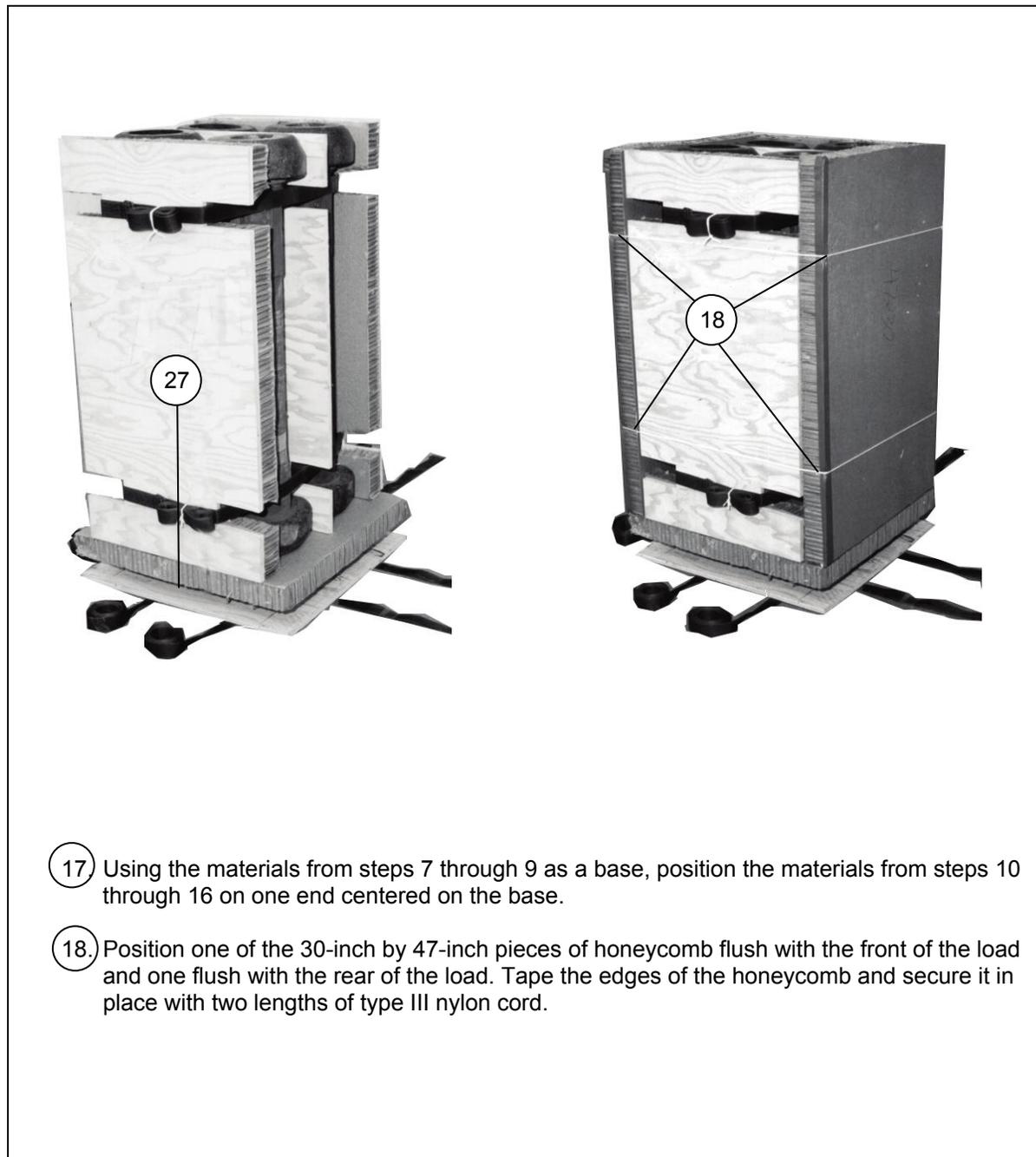
14. Position two more rounds on top of the plywood as outlined in step 12.

Figure 3-4. Four-Round A-7A Door Bundle Prepared (Continued)



- 15. Position a piece of 24 1/4- by 47-inch honeycomb with the cutouts evenly on top of the launch top.
- 16. Position and glue the matching piece of plywood on top of the honeycomb. Secure the A-7A straps.

Figure 3-4. Four-Round A-7A Door Bundle Prepared (Continued)



- 17 Using the materials from steps 7 through 9 as a base, position the materials from steps 10 through 16 on one end centered on the base.
- 18 Position one of the 30-inch by 47-inch pieces of honeycomb flush with the front of the load and one flush with the rear of the load. Tape the edges of the honeycomb and secure it in place with two lengths of type III nylon cord.

Figure 3-4. Four-Round A-7A Door Bundle Prepared (Continued)

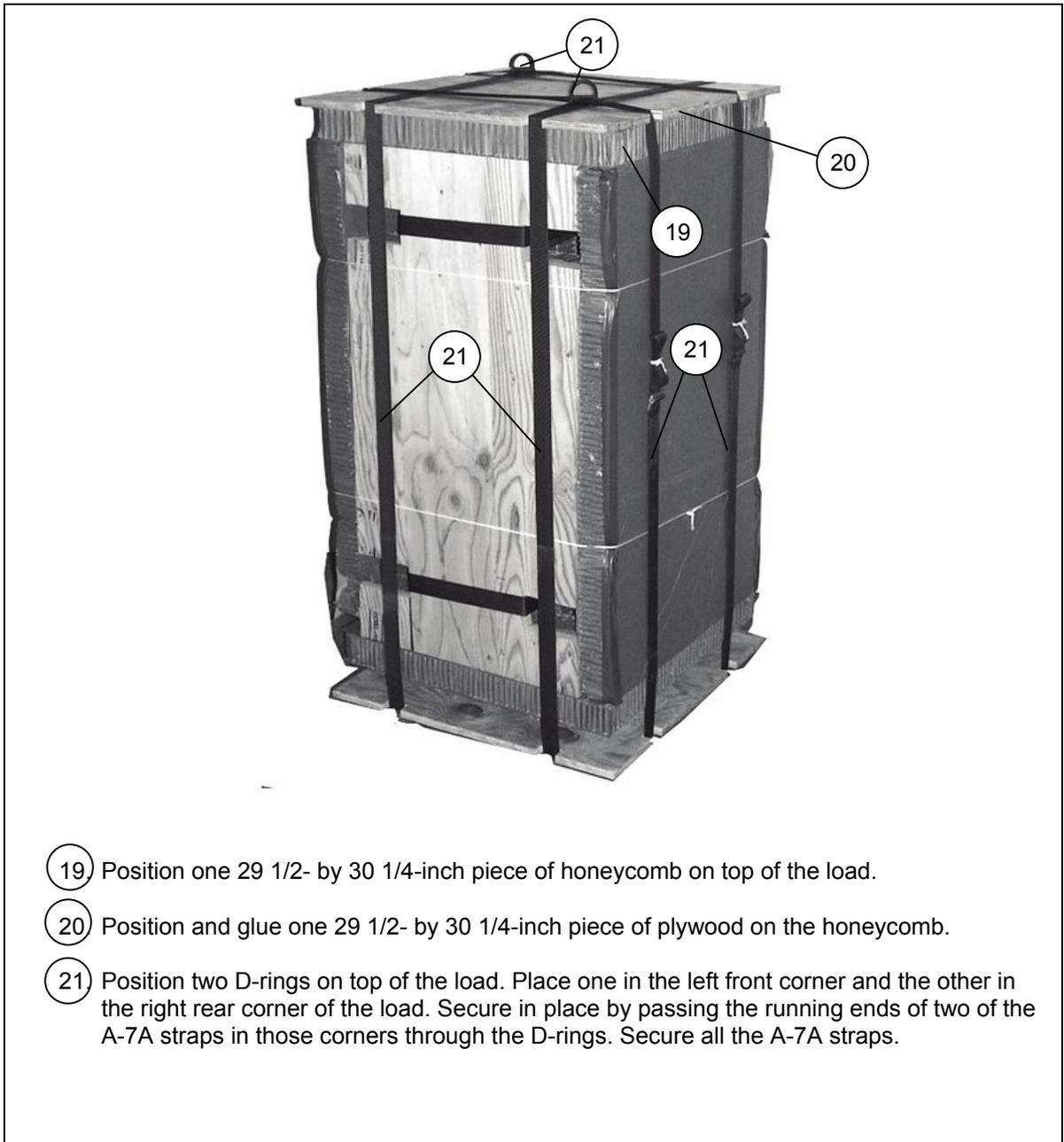


Figure 3-4. Four-Round A-7A Door Bundle Prepared (Continued)

ATTACHING PARACHUTE

3-8. Attach a T-10 cargo parachute as shown in paragraph 3-3, Figure 3-2 or a G-14 cargo parachute as shown in Figure 3-5.

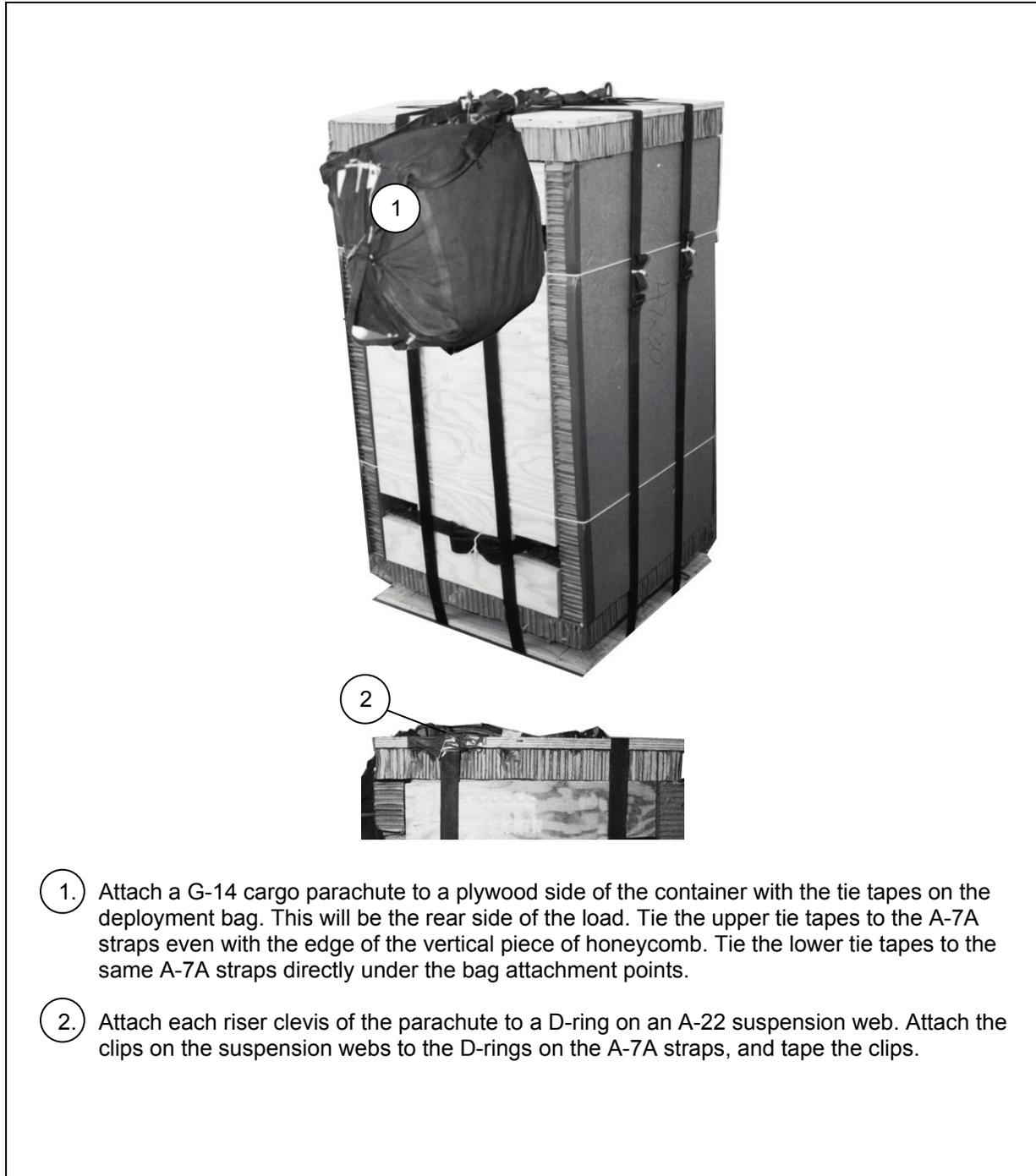


Figure 3-5. Parachute Attached to Load

MARKING RIGGED LOAD

3-9. Mark the rigged load according to FM 4-20.102/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 and as shown in Figure 3-6. Complete Shippers Declaration for Dangerous Goods and affix to load.

EQUIPMENT REQUIRED

3-10. Use the equipment in Table 3-2 to rig this load.

CAUTION

Mark the load "Door Bundle Only, Do Not Drop From ATF Ramp"



RIGGED LOAD DATA

Weight: Load shown	271 pounds
Height	57 1/2 inches (G-14)
.....	65 1/2 inches (T-10)
Width.....	37 1/2 inches
Overall Length	44 1/2 inches (Plus the length of a G-14)
Parachute	T-10 or G-14

Figure 3-6. Javelin Four-Round A-7A Door Bundle Rigged (G-14)

Table 3-2. Equipment Required for Rigging the Javelin Four-Round A-7A Door Bundle for Low-Velocity Airdrop

<i>National Stock Number</i>	<i>Item</i>	<i>Quantity</i>
8040-00-273-8713	Adhesive, paste, 1-gal	As required
4020-00-240-2146	Cord, nylon, type III, 550-lb	As required
1670-00-753-3928	Pad, energy-dissipating, honeycomb	3 sheets
No NSN	Parachute: T-10 cargo with 20-ft USL for C-17	1
5530-00-128-4981	Plywood, 3/4- by 48- by 96-in	2 sheets
1670-00-251-1153	Sling, assembly, cargo, airdrop, A-7A	6
8310-01-102-4487	Strap parachute release, multicut	2
7501-00-266-6710	Tape, masking	As required
7515-00-266-5016	Thread, cotton, ticket 8/7	As required
8305-00-268-2411	Webbing, cotton, 1/4-in, 80-lb	As required

SECTION III-RIGGING NINE-ROUND CONTAINER DELIVERY SYSTEM (CDS) RIGGED IN AN A-22 CONTAINER

DESCRIPTION OF LOAD

3-11. The Javelin Missile System is a man-portable antitank weapon system made up of a tactical round in a disposable launch tube and a reusable Command Launch Unit (CLU). The CLU is not rigged with the tactical rounds. The Javelin missile system rigged in an A-22 container has an approximate rigged weight of 810 pounds. It has an approximate height of 65 1/2 inches, a width of 48 inches and a length of 60 inches. The nine-round Javelin missile system rigged in an A-22 stretch container uses the G-12E cargo parachute.

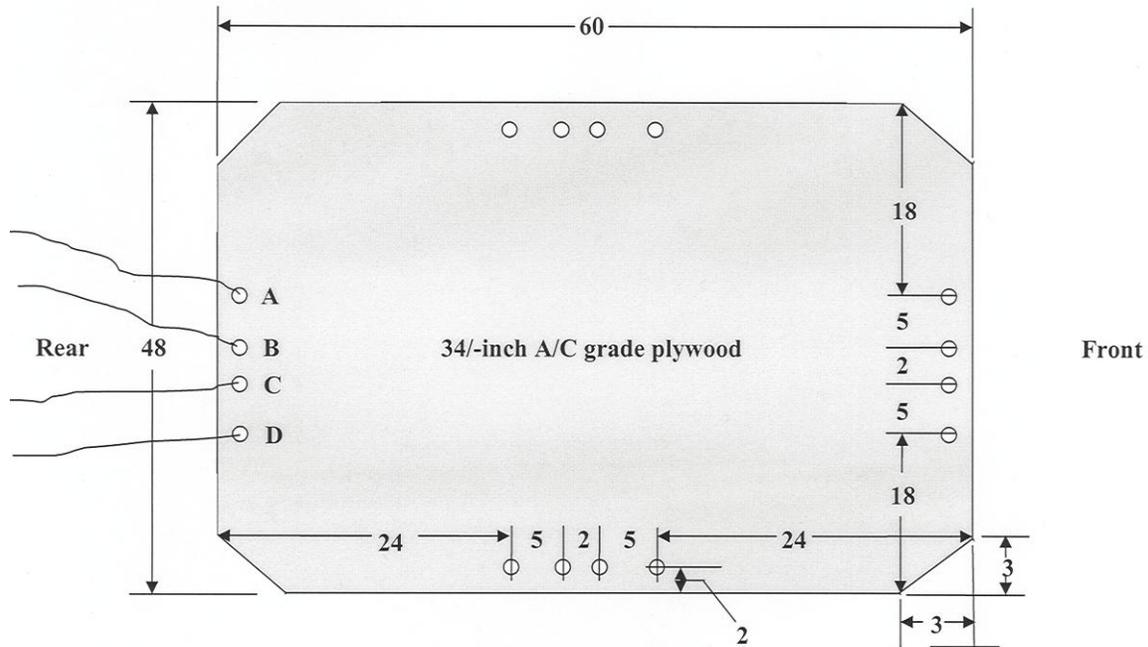
PREPARING SKID BOARD AND TIES

3-12. Construct and prepare the skid board, and ties according to FM 4-20.103/MCRP 4-11.3C/TO 13C7-1-11 and as shown in Figure 3-7. Use the measurements in this manual if they should differ from FM 4-20.103/MCRP 4-11.3C/TO 13C7-1-11.

Note. These dimensions and instructions are load specific.

Notes.

1. Drawing not to scale.
2. All dimensions are given in inches.
3. Always use A/C grade plywood.



Step:

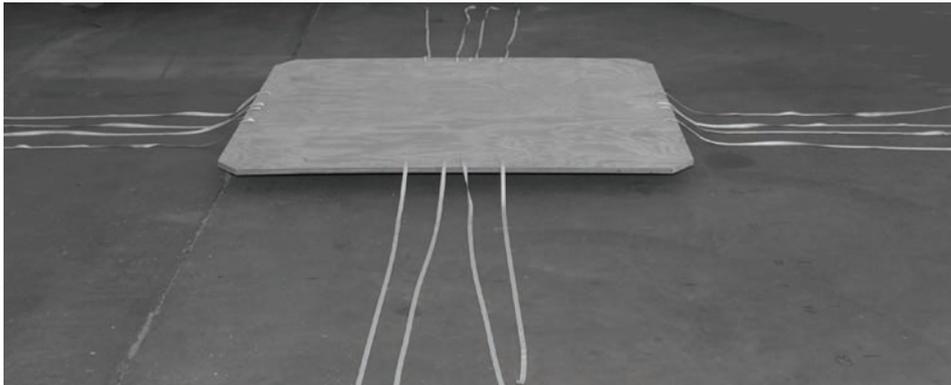
1. Construct and prepare a skid board as shown above.

Note. These instructions are load specific.

Figure 3-7. Skid Board and Ties Prepared

Notes.

1. Drawing not to scale.
2. All dimensions are given in inches.
3. Always use A/C grade plywood.



Step:

2. Cut and place a $\frac{3}{4}$ - by 48- by 60-inch piece of A/C grade plywood on a flat surface.
3. Drill sixteen $\frac{1}{2}$ -inch holes as shown.
4. Measure 3 inches in from each corner of the skid board and make a diagonal cut.
5. Prepare and route the skid board ties according to FM 4-20.103/MCRP 4-11.3C/TO 13C7-11 and as described below.
6. Cut sixteen, 10-foot lengths of $\frac{1}{2}$ -inch tubular, nylon webbing. Route one length through hole A from the bottom and the other through hole B from the bottom. Even the ends.
7. Repeat step 6 for holes C and D and the remaining sides.

Figure 3-7. Skid Board and Ties Prepared (Continued)

PREPARING AND POSITIONING HONEYCOMB AND A-22 SLING ASSEMBLIES

3-13. Prepare and position honeycomb and position two A-22 sling assemblies on the load according to FM 4-20.103/MCRP 4-11.3C/TO 13C7-1-11 and as shown in Figure 3-8.

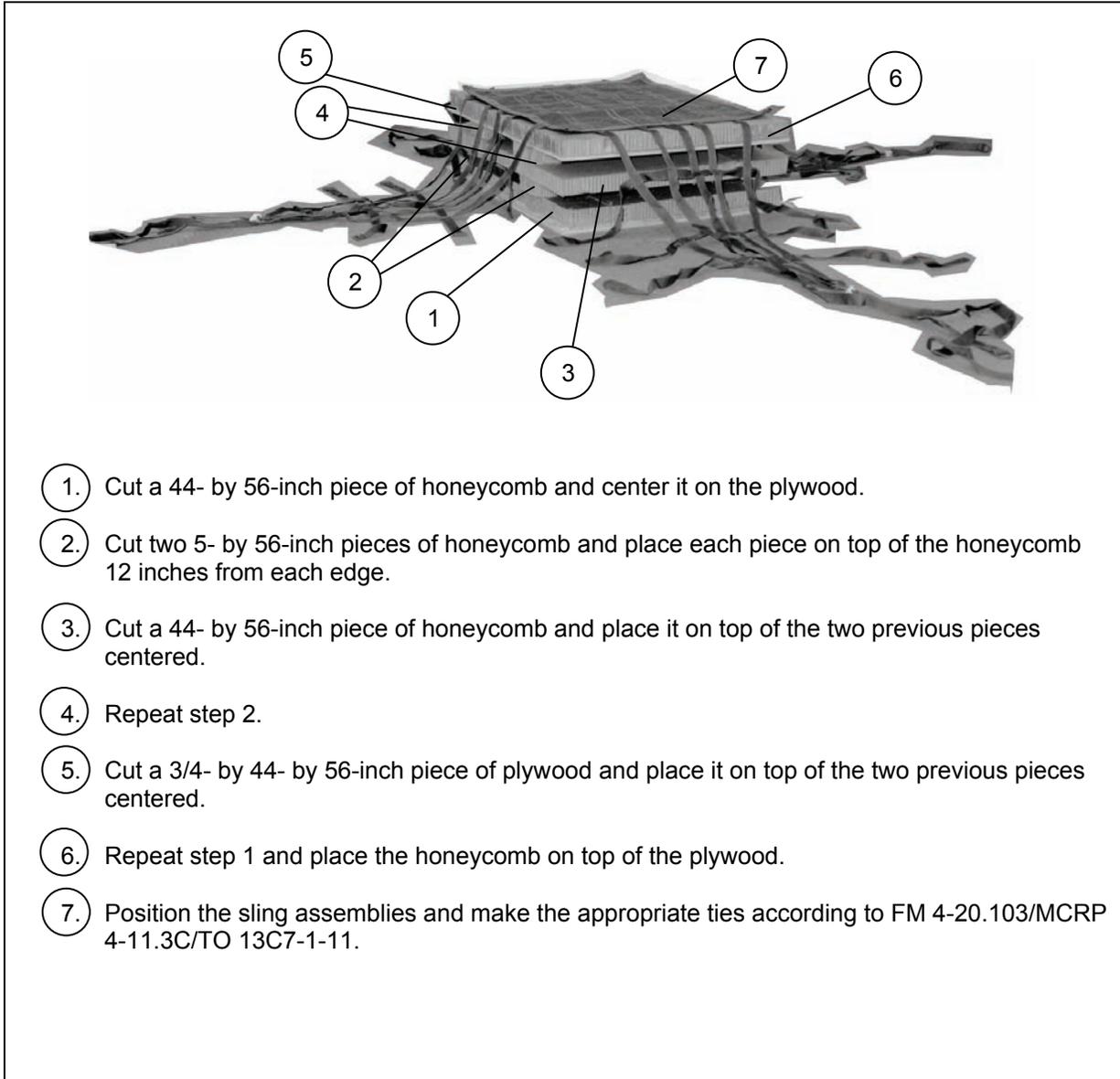


Figure 3-8. Honeycomb and A-22 Sling Assemblies Positioned

POSITIONING COVERS AND A-7A STRAPS

3-14. Position two covers and two A-7A straps on top of the sling assemblies as shown in Figure 3-9.

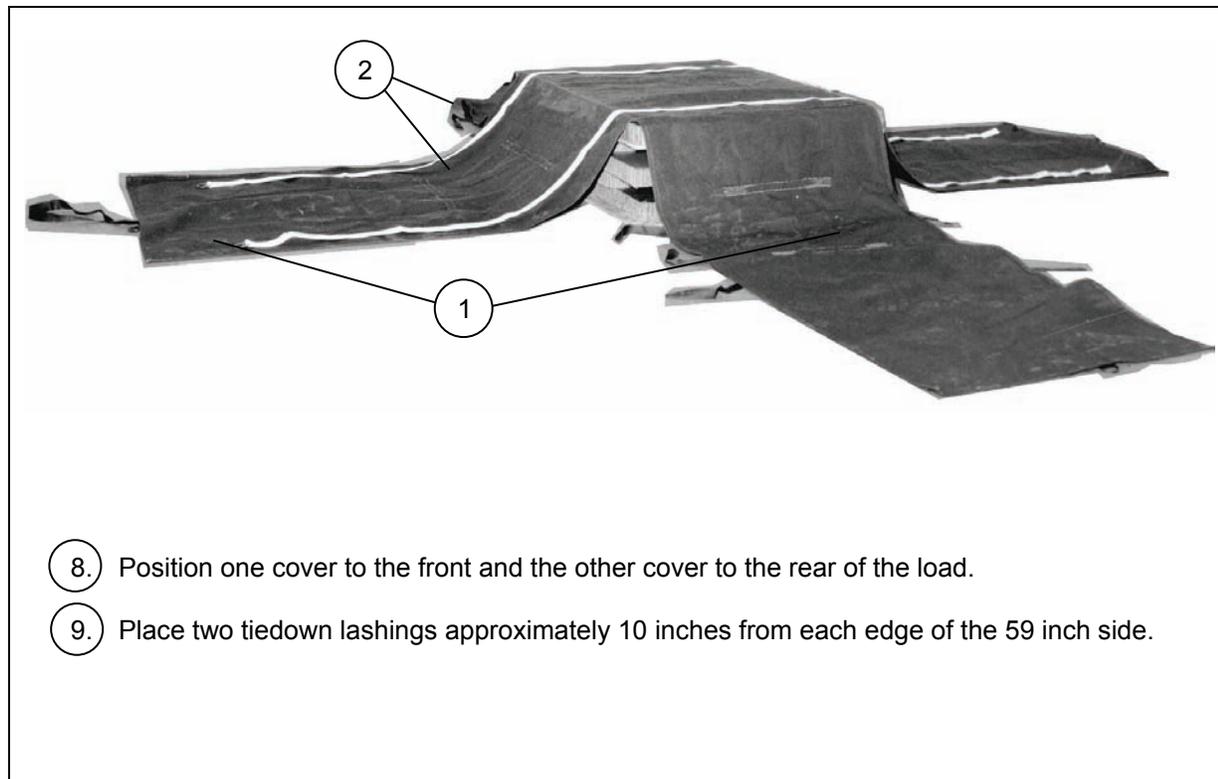


Figure 3-9. Covers and A-7A Straps Positioned

POSITIONING AND SECURING JAVELIN MISSILES

3-15. Position nine Javelin missiles and secure them as shown in Figure 3-10.

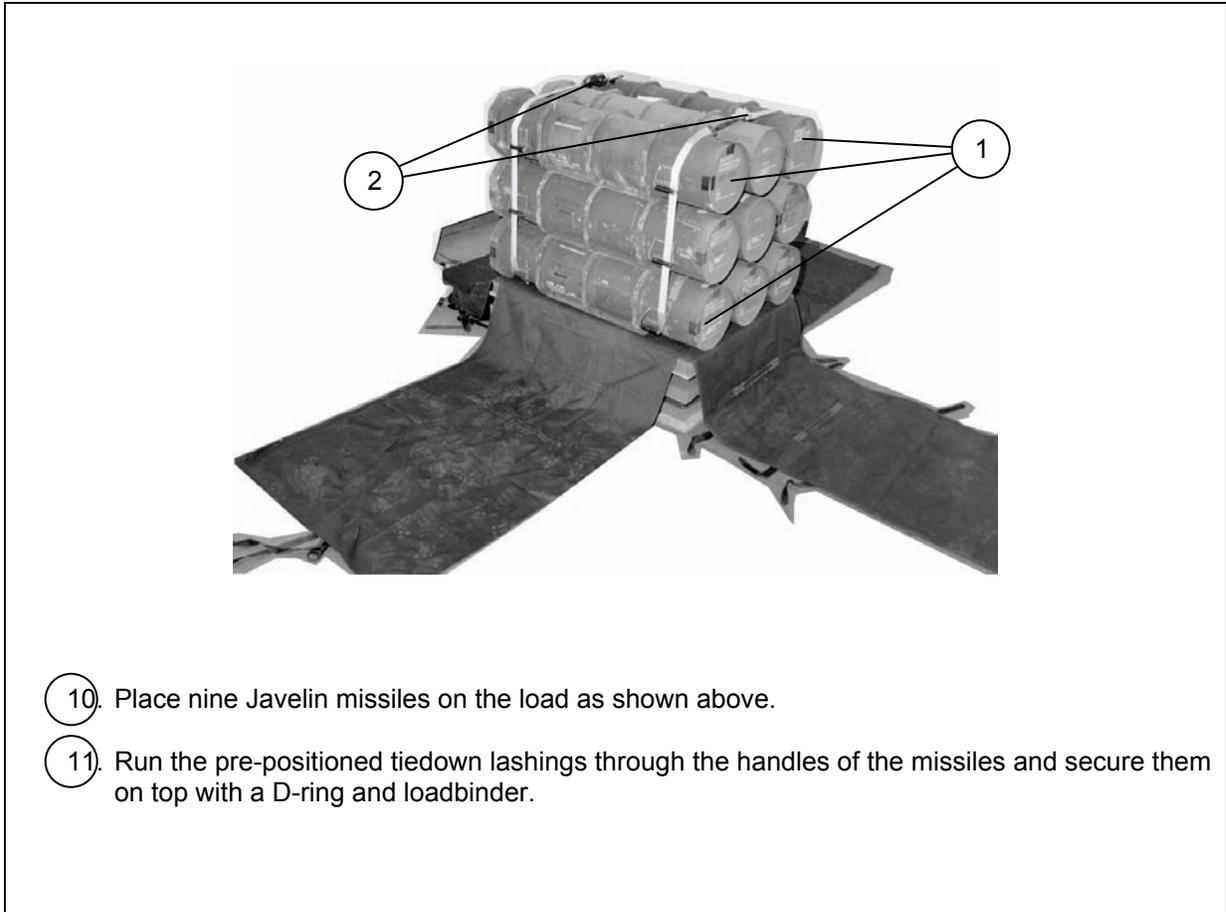


Figure 3-10. Javelin Missiles Positioned and Secured

SECURING THE LATERAL STRAPS AND INSTALLING SUSPENSION SLINGS

3-16. Secure the lateral straps according to FM 4-20.103/MCRP 4-11.3C/TO 13C7-1-11 and install the suspension slings as shown in Figure 3-11.

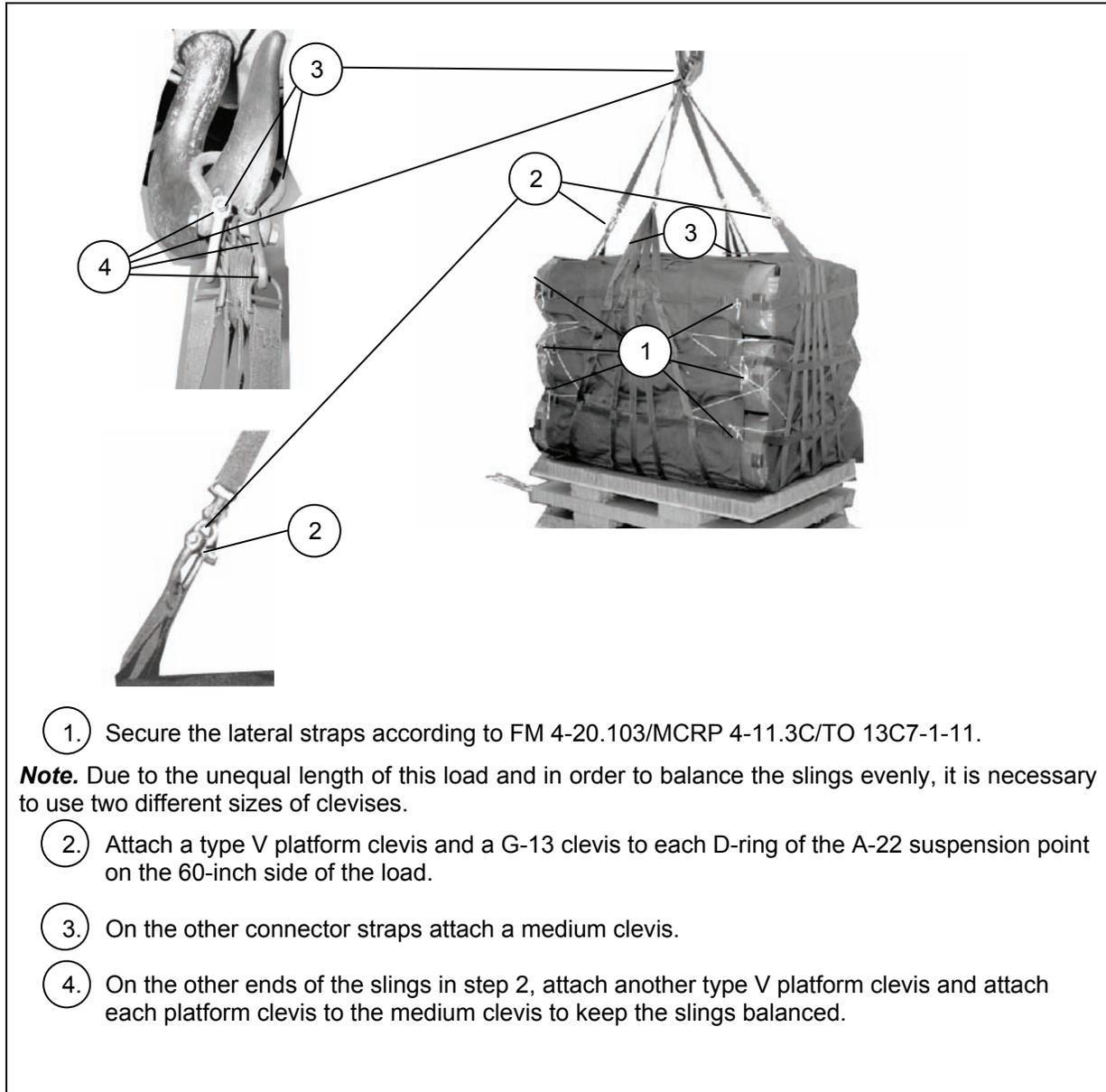


Figure 3-11. Lateral Straps Secured and Suspension Slings Installed

SECURING SKID BOARD TIES AND INSTALLING PARACHUTE

3-17. Secure the skid board ties according to FM 4-20.103/MCRP 4-11.3C/TO 13C7-1-11. Install a G-12E cargo parachute as shown in Figure 3-12.

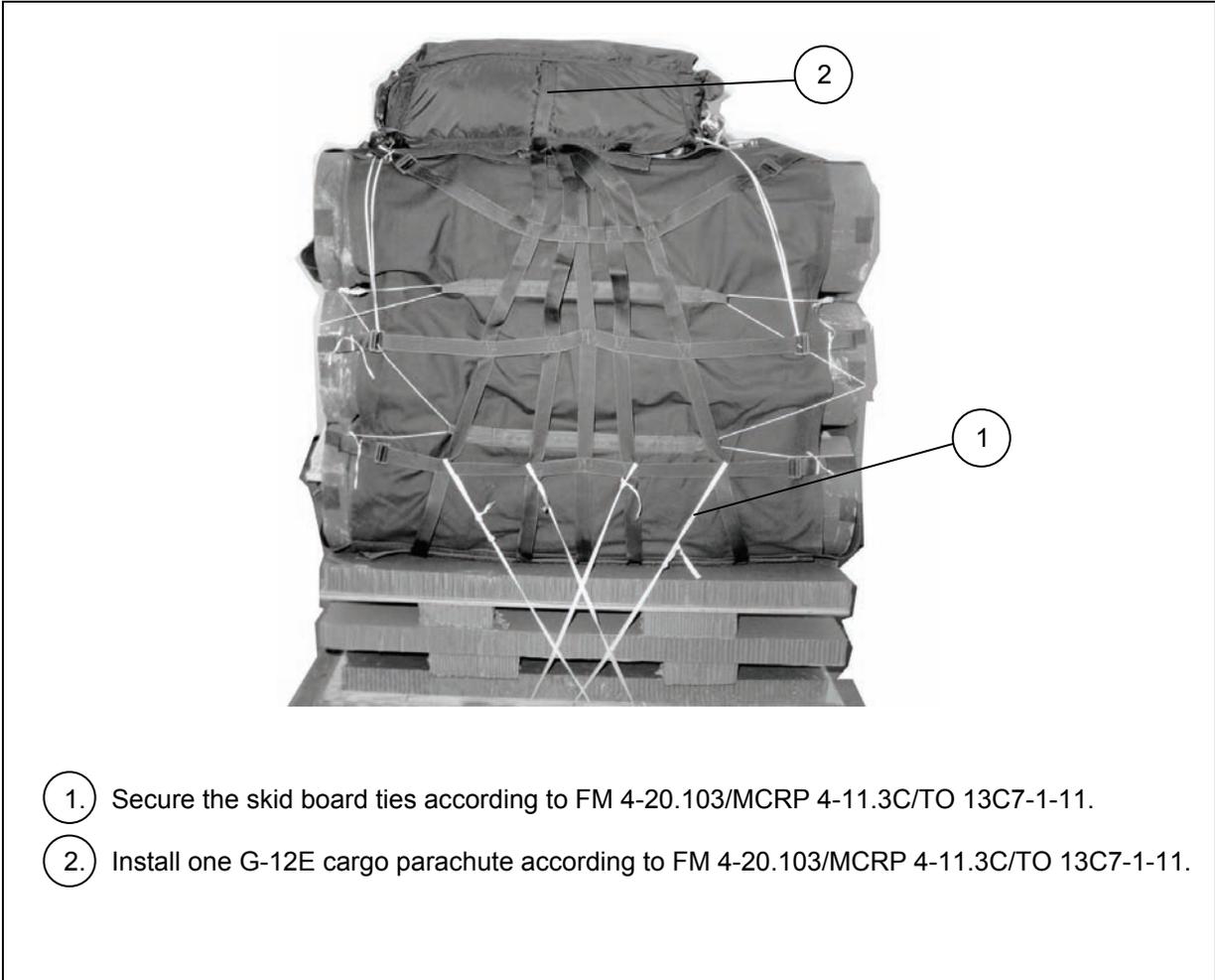


Figure 3-12. Skid Board Ties Secured and Parachute Installed

MARKING RIGGED LOAD

3-18. Mark the rigged load according to FM 4-20.102/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 and as shown in Figure 3-13. Complete Shippers Declaration for Dangerous Goods and affix to load.

EQUIPMENT REQUIRED

3-19. Use the equipment in Table 3-3 to rig this load.

CAUTION

Make the final rigger inspection required by AR 59-4 and FM 4-20.102/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 before the load leaves the rigging site.



RIGGED LOAD DATA

Weight: Load shown.....	810 pounds
Height	65 1/2 inches
Width	48 inches
Overall Length.....	60 inches
Parachute	G-12E

Figure 3-13. Javelin Nine-Round CDS in an A-22 Container Rigged

Table 3-3. Equipment Required for Rigging the Javelin Nine-Round CDS on an A-22 Container for Low-Velocity Airdrop

<i>National Stock Number</i>	<i>Item</i>	<i>Quantity</i>
8040-00-273-8713	Adhesive, paste, 1-gal	As required
4030-00-678-8562	Clevis, suspension, 3/4-in (medium)	2
4020-00-240-2146	Cord, nylon, type III, 550-lb	As required
1670-00-753-3928	Pad, energy-dissipating, honeycomb	3 sheets
	Parachute:	
1670-01-065-3755	G-12 cargo	1
5530-00-128-4981	Plywood, 3/4- by 48- by 96-in	2 sheets
1670-00-937-0271	Tie-down, assembly 15-ft	2
1670-01-062-6301	Sling, cargo, airdrop, 3-ft (2-loop)	2
	Webbing:	
8305-00-268-2411	Cotton, 1/4-in	As required
	Nylon:	
8305-00-082-5752	Tubular, 1/2-in	As required
8305-00-263-3591	Type VIII	As required

**SECTION IV-RIGGING JAVELIN MISSILE CONTAINERS (PLASTIC / LC-RSSC)
IN AN A-22 CONTAINER CARGO BAG ASSEMBLY FOR LOW-VELOCITY
AIRDROP**

DESCRIPTION OF LOAD

3-20. The Javelin Missile System (Plastic Containers / LC-RSSC) is a man-portable surface to surface anti-tank missile made up of a tactical round in a disposable launch tube. The Javelin nine-round missile system is rigged in an A-22 cargo bag for low-velocity airdrop on a ¾- by 48- by 55 ½ -inch skid board. The load uses one G-12E cargo parachute with a 68-inch pilot parachute only. Each missile is 20 inches in diameter, 55 ½ inches in length and weighs approximately 96 pounds. The load has an approximate suspended weight of 1061 pounds. It has a total height of 85 inches, a width of 48 inches and a length of 55 ½ inches. The load has a total rigged weight of 1189 pounds.

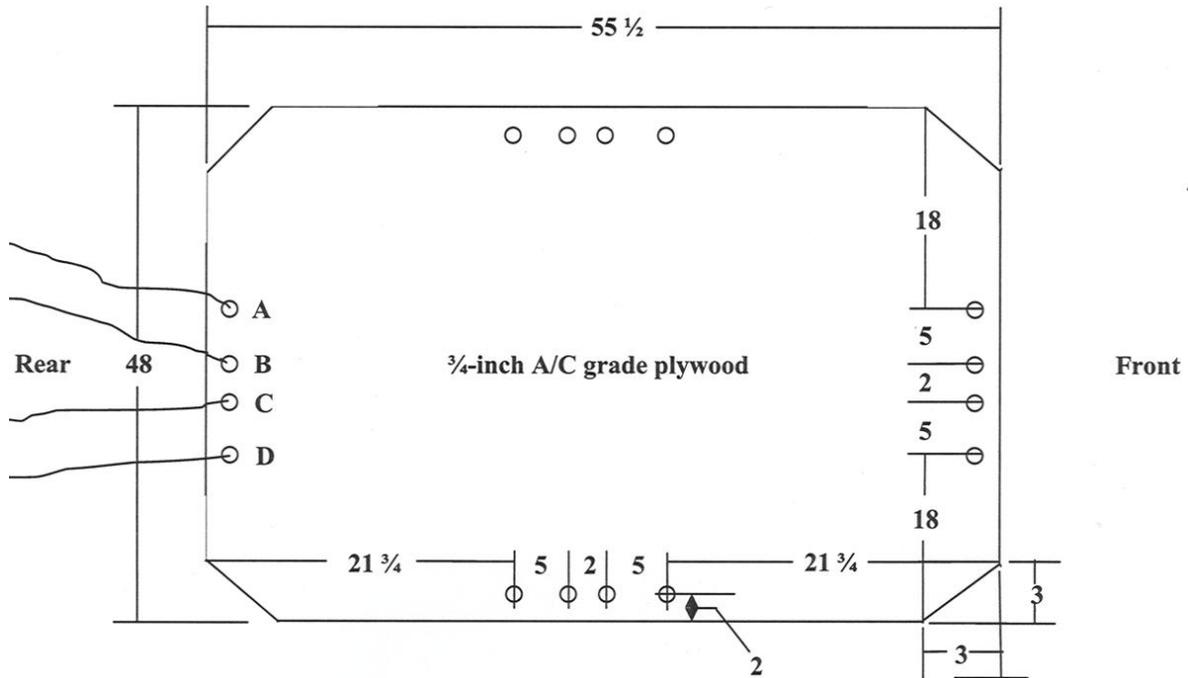
PREPARING SKID BOARD AND TIES

3-21. Construct and prepare a skid board, and ties according to FM 4-20.103/MCRP 4-11.3C/TO 13C7-1-11 and as shown in Figure 3-14. Use the measurements in this manual if they should differ from FM 4-20.103/MCRP 4-11.3C/TO 13C7-1-11.

Note. These dimensions and instructions are load specific.

Notes.

1. Drawing not to scale.
2. All dimensions are given in inches.
3. Always use A/C grade plywood.



Step:

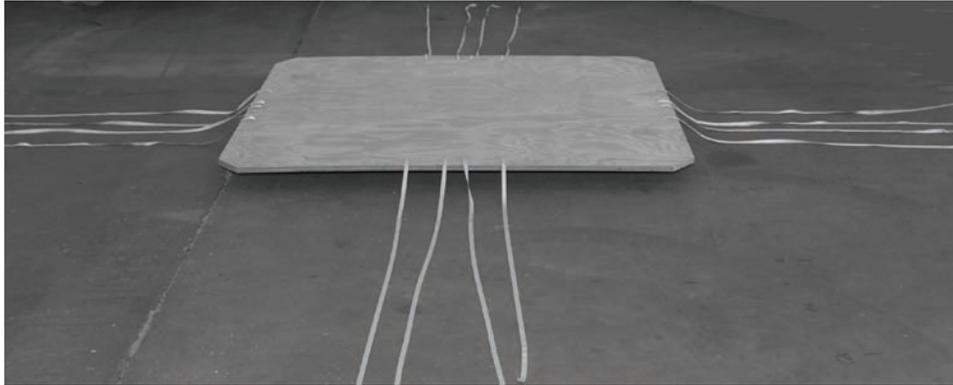
1. Construct and prepare a skid board as shown above.

Note. These instructions are load specific.

Figure 3-14. Skid Board and Ties Prepared

Notes.

1. Drawing not to scale.
2. All dimensions are given in inches.
3. Always use A/C grade plywood.



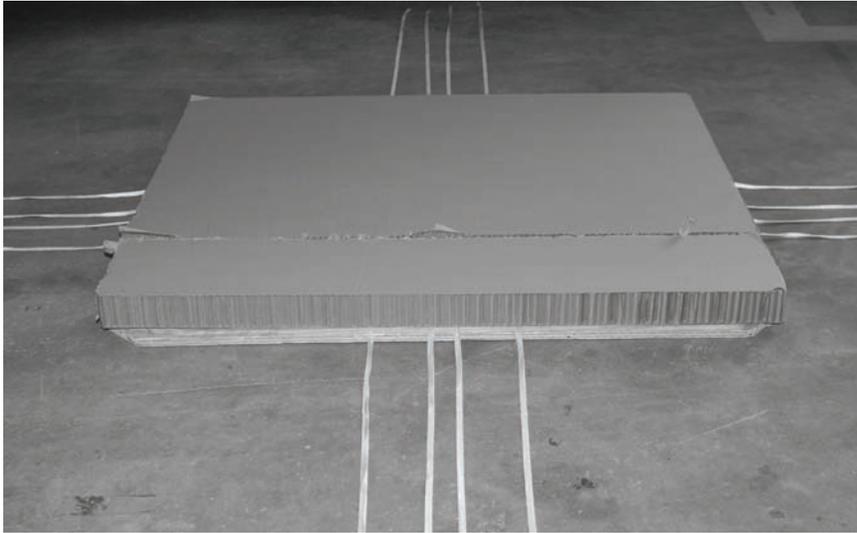
Step:

2. Cut and place a $\frac{3}{4}$ - by 48- by 55 $\frac{1}{2}$ -inch piece of A/C grade plywood on a flat surface.
3. Drill sixteen $\frac{1}{2}$ -inch holes.
4. Measure 3 inches in from each corner of the skid board and make a diagonal cut.
5. Prepare and route the skid board ties according to FM 4-20.103/MCRP 4-11.3C/TO 13C7-1-11 and as described below.
6. Cut eight each, 10-foot lengths of $\frac{1}{2}$ -inch tubular, nylon webbing. Route one length through hole A from the bottom and the other through hole B from the bottom. Even the ends.
7. Repeat step 6 for holes C and D and the remaining sides.

Figure 3-14. Skid Board and Ties Prepared (Continued)

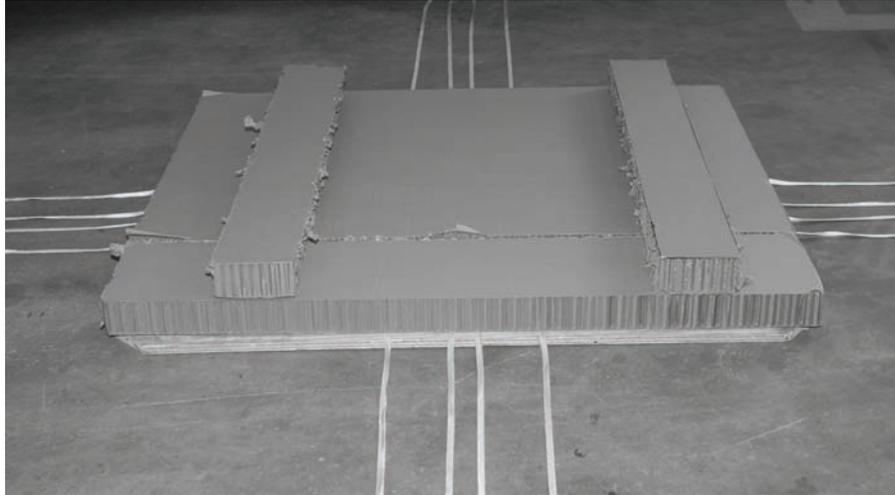
PREPARING AND POSITIONING HONEYCOMB STACK

3-22. Prepare the honeycomb and position the honeycomb stack as shown in Figure 3-15. Cut two pieces of honeycomb 36 by- 55 ½-inches, two pieces of honeycomb 8- by 55 ½-inches, six pieces of honeycomb 6 by- 44-inches, two pieces of 40 ½ by- 44 by- ¾-inch A/C grade plywood, and one 44 by- 55 ½-inch by- ¾- A/C grade plywood.



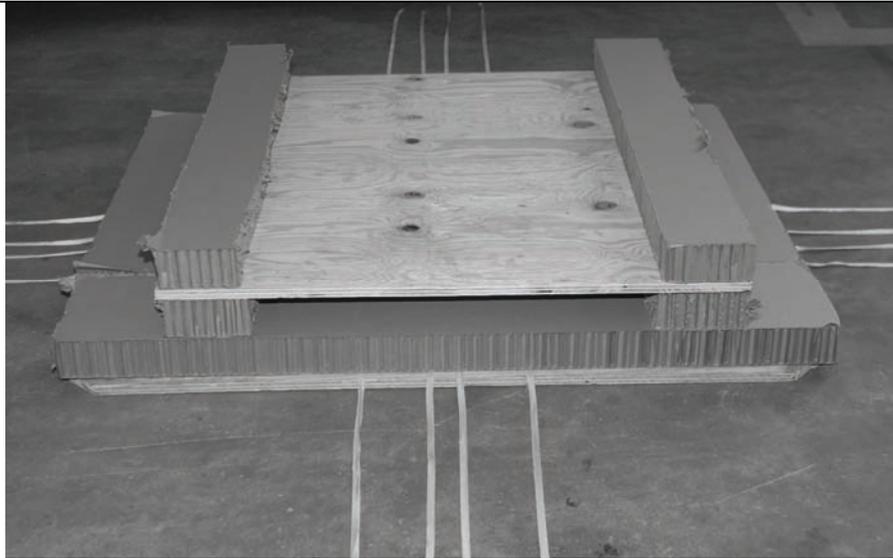
<i>Stack Number</i>	<i>Pieces</i>	<i>Width (Inches)</i>	<i>Length (Inches)</i>	<i>Material</i>	<i>Instructions</i>
1	1	36	55 ½	Honeycomb	Form a base stack 44- by 55 ½. Center and glue the pieces on the skid board. Ensure the 55 ½ -inch edges of the honeycomb pieces are flush and facing the 55 ½ -inch edge of the skid board.
	1	8	55 ½	Honeycomb	Used to form the base stack in the previous step.

Figure 3-15. Honeycomb Stack Prepared and Positioned



<i>Stack Number</i>	<i>Pieces</i>	<i>Width (Inches)</i>	<i>Length (Inches)</i>	<i>Material</i>	<i>Instructions</i>
	2	44	6	Honeycomb	Position and glue one the pieces 6-inches from one of the 44-inch edges of the base stack. Position and glue the second piece 9-inches from the opposite edge of the base stack. Ensure the 6-inch edges are flush along the 55 ½-inch edges.

Figure 3-15. Honeycomb Stack Prepared and Positioned (Continued)



<i>Stack Number</i>	<i>Pieces</i>	<i>Width (Inches)</i>	<i>Length (Inches)</i>	<i>Material</i>	<i>Instructions</i>
	1	44	40 ½	¾-inch Plywood	Center and glue the plywood piece on top of the previously positioned honeycomb pieces. Ensure the 44-inch edges are flush.
	2	44	6	Honeycomb	Position and glue each piece flush along the 44-inch edge of the previously positioned plywood piece. Ensure the 6-inch edges are flush along the 40 ½-inch edges.

Figure 3-15. Honeycomb Stack Prepared and Positioned (Continued)



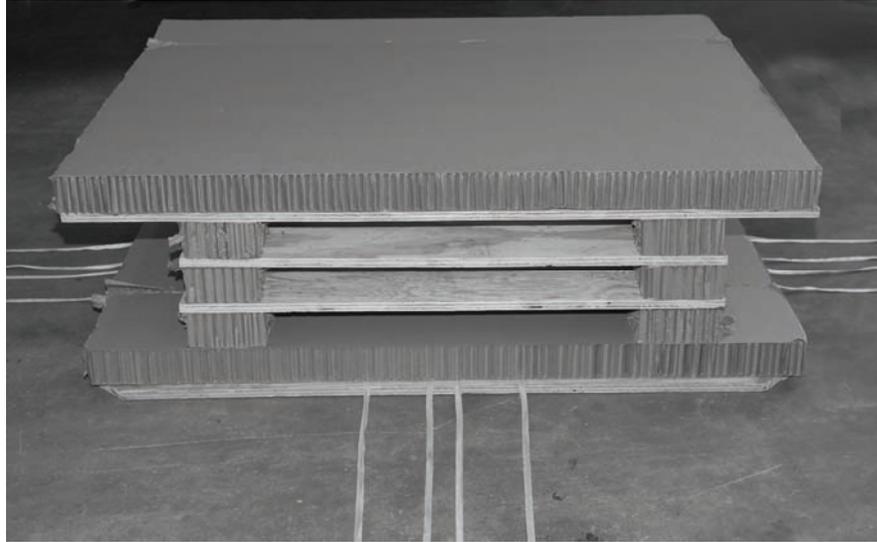
<i>Stack Number</i>	<i>Pieces</i>	<i>Width (Inches)</i>	<i>Length (Inches)</i>	<i>Material</i>	<i>Instructions</i>
	1	44	40 ½	¾-inch Plywood	Center and glue the plywood piece on top of the previously positioned honeycomb pieces. Ensure the 44-inch edges are flush.
	2	44	6	Honeycomb	Position and glue each piece flush along the 44-inch edge of the previously positioned plywood piece. Ensure the 6-inch edges are flush along the 40 ½-inch edges.

Figure 3-15. Honeycomb Stack Prepared and Positioned (Continued)



<i>Stack Number</i>	<i>Pieces</i>	<i>Width (Inches)</i>	<i>Length (Inches)</i>	<i>Material</i>	<i>Instructions</i>
	1	44	55 ½	¾-inch Plywood	Center and glue the plywood piece on top of the previously positioned honeycomb pieces. Ensure the piece is aligned with the honeycomb base stack.

Figure 3-15. Honeycomb Stack Prepared and Positioned (Continued)



<i>Stack Number</i>	<i>Pieces</i>	<i>Width (Inches)</i>	<i>Length (Inches)</i>	<i>Material</i>	<i>Instructions</i>
	1	36	55 ½	Honeycomb	Form a top stack 44- by 55 ½. Center and glue the pieces on top of the previous positioned plywood piece. Ensure the 55 ½ - inch edges of the honeycomb pieces are flush and facing the 55 ½ -inch edge of the plywood.
	1	8	55 ½	Honeycomb	Used to form the top stack in the previous step.

Figure 3-15. Honeycomb Stack Prepared and Positioned (Continued)

POSITIONING A-22 CARGO BAG SLING, COVER AND LOAD

3-23. Position and prepare the A-22 cargo bag sling and cover according to FM 4-20.103/MCRP 4-11.3C/TO 13C7-1-11 and as shown in Figure 3-16.

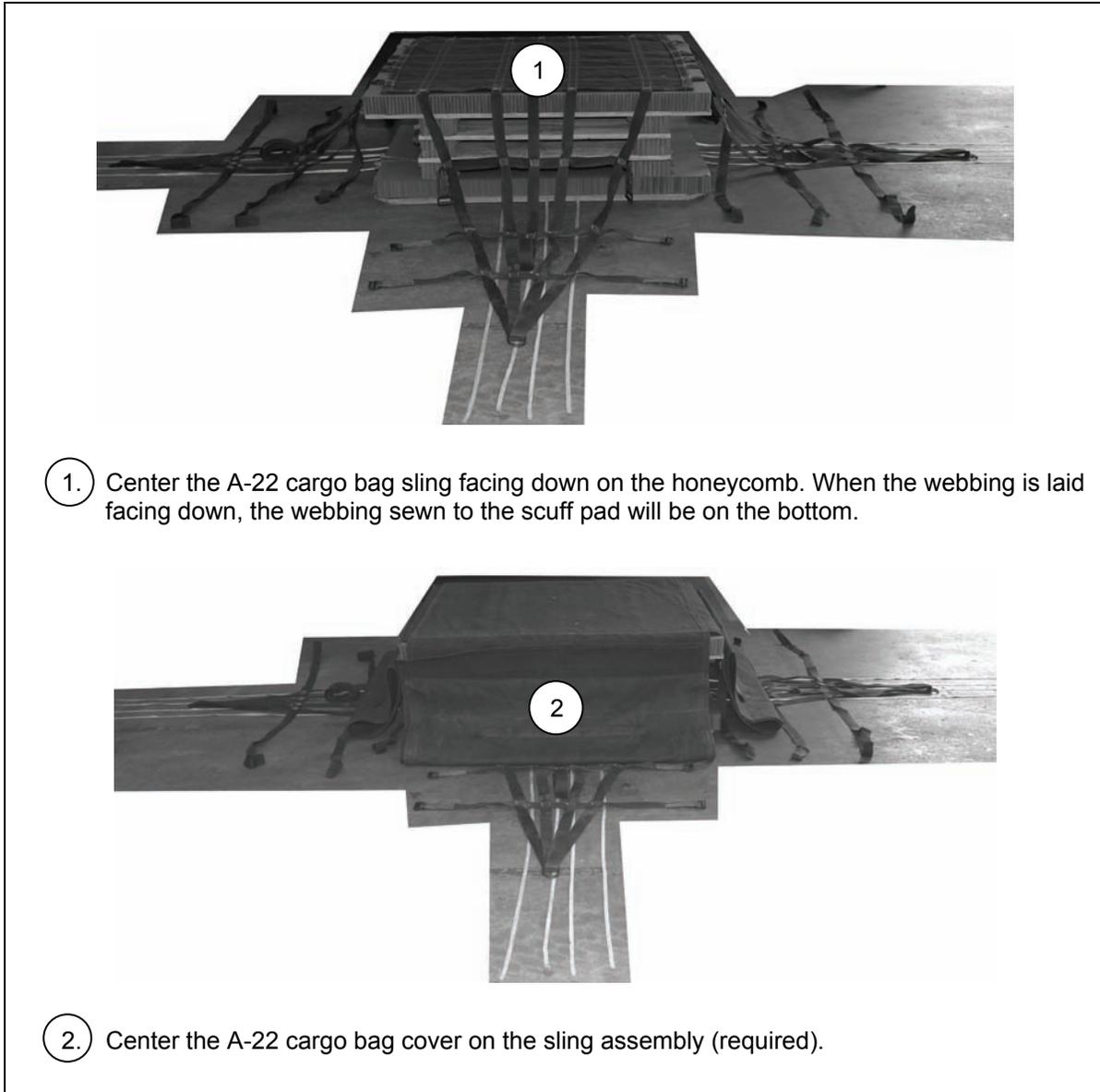
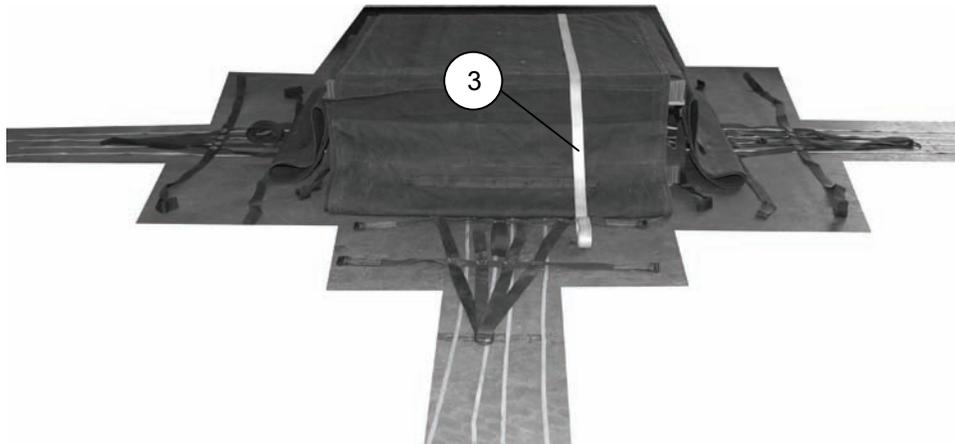
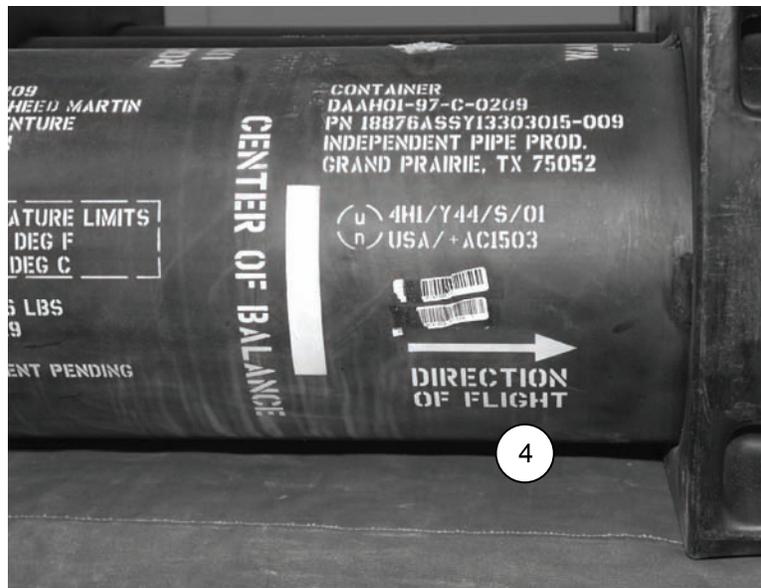


Figure 3-16. A-22 Cargo Bag Sling, Cover and Load Positioned



3. Position a 15-foot Dacron lashing 6-inches to the left or right of the center of the honeycomb stack. Ensure the lashing is positioned parallel along the 44-inch edge of the honeycomb stack (used to secure Javelin stack 1 and stack 2 after placement).



4. When positioning the Javelin missiles, ensure the direction of flight arrow is facing toward the front of the skid board along the 44-inch edge of the honeycomb stack.

Figure 3-16. A-22 Cargo Bag Sling, Cover and Load Positioned (Continued)

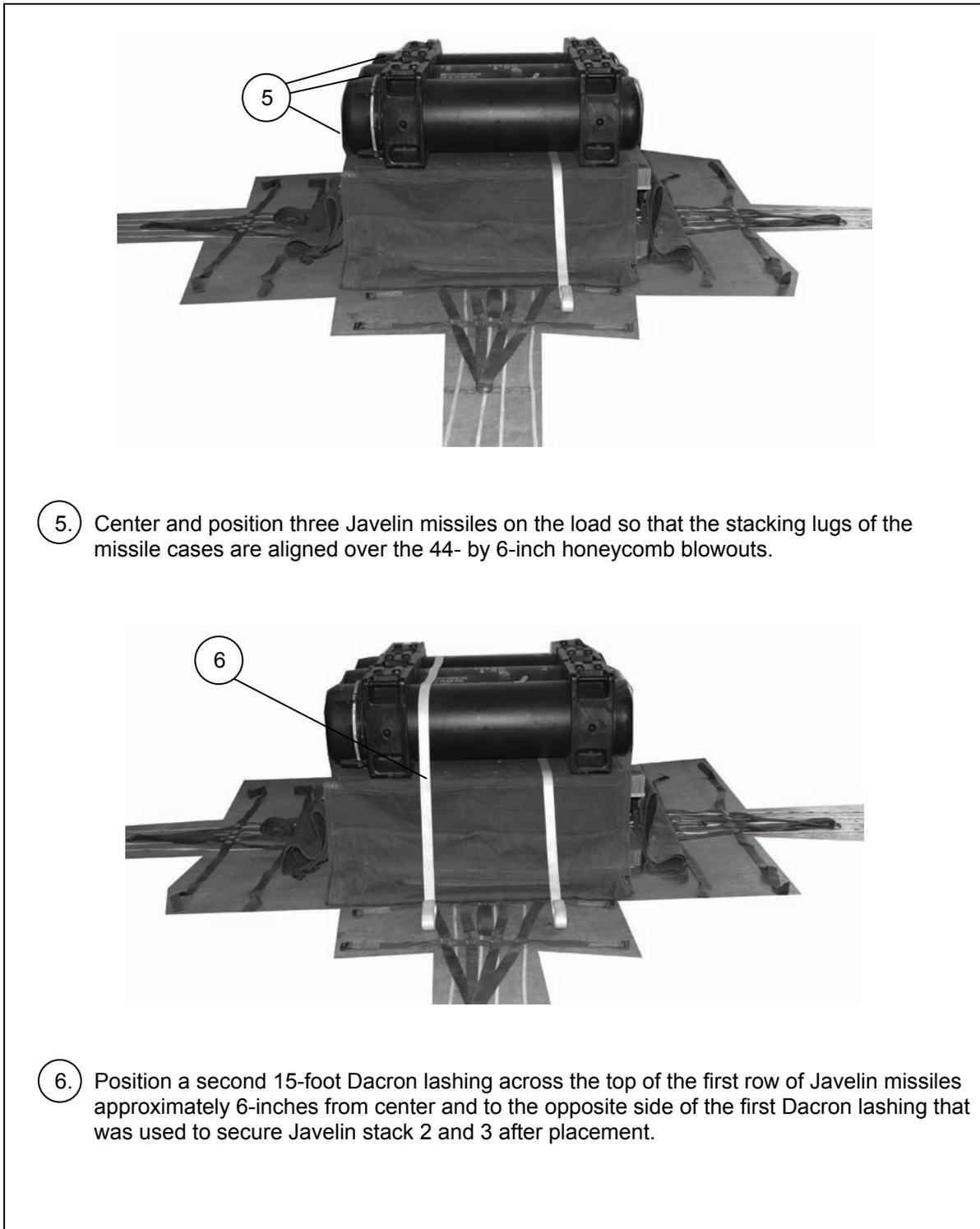
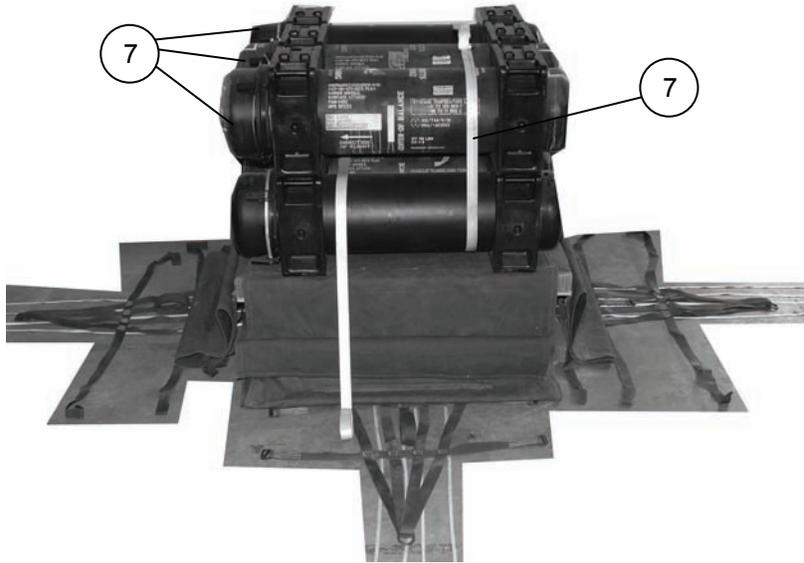
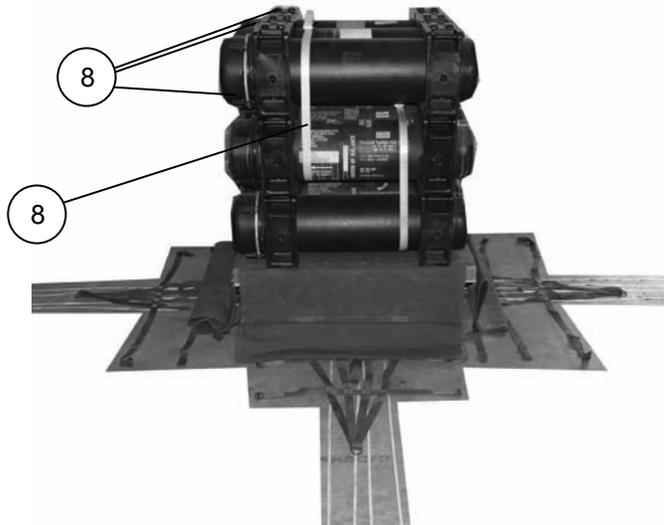


Figure 3-16. A-22 Cargo Bag Sling, Cover and Load Positioned (Continued)



7. Center and position three more Javelin missiles on top of the first three containers (aligning the stacking lugs) to form a second row. Secure the first (bottom) lashing around the containers and secure on top using a D-ring and loadbinder.



8. Center and position three more Javelin missiles on top of the second row of containers (aligning the stacking lugs) to form a third row. Secure the second (top) lashing around the second and third row of containers and secure on top using a D-ring and loadbinder.

Figure 3-16. A-22 Cargo Bag Sling, Cover and Load Positioned (Continued)

SECURING THE A-22 BAG COVER AND SLING ASSEMBLY

3-24. Secure the A-22 cargo bag sling and cover according to FM 4-20.103/MCRP 4-11.3C/TO 13C7-1-11 and as shown in Figure 3-17.

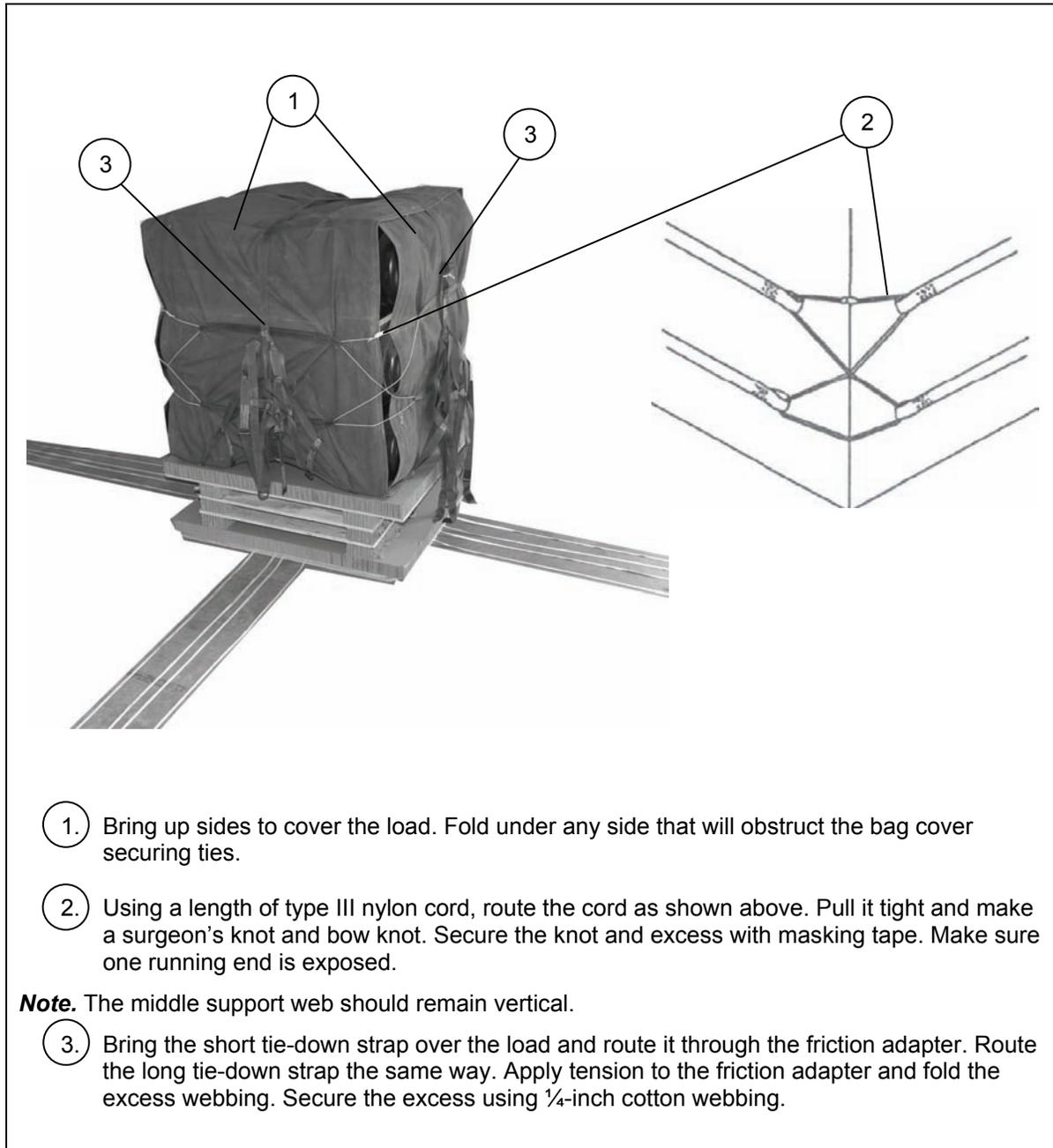
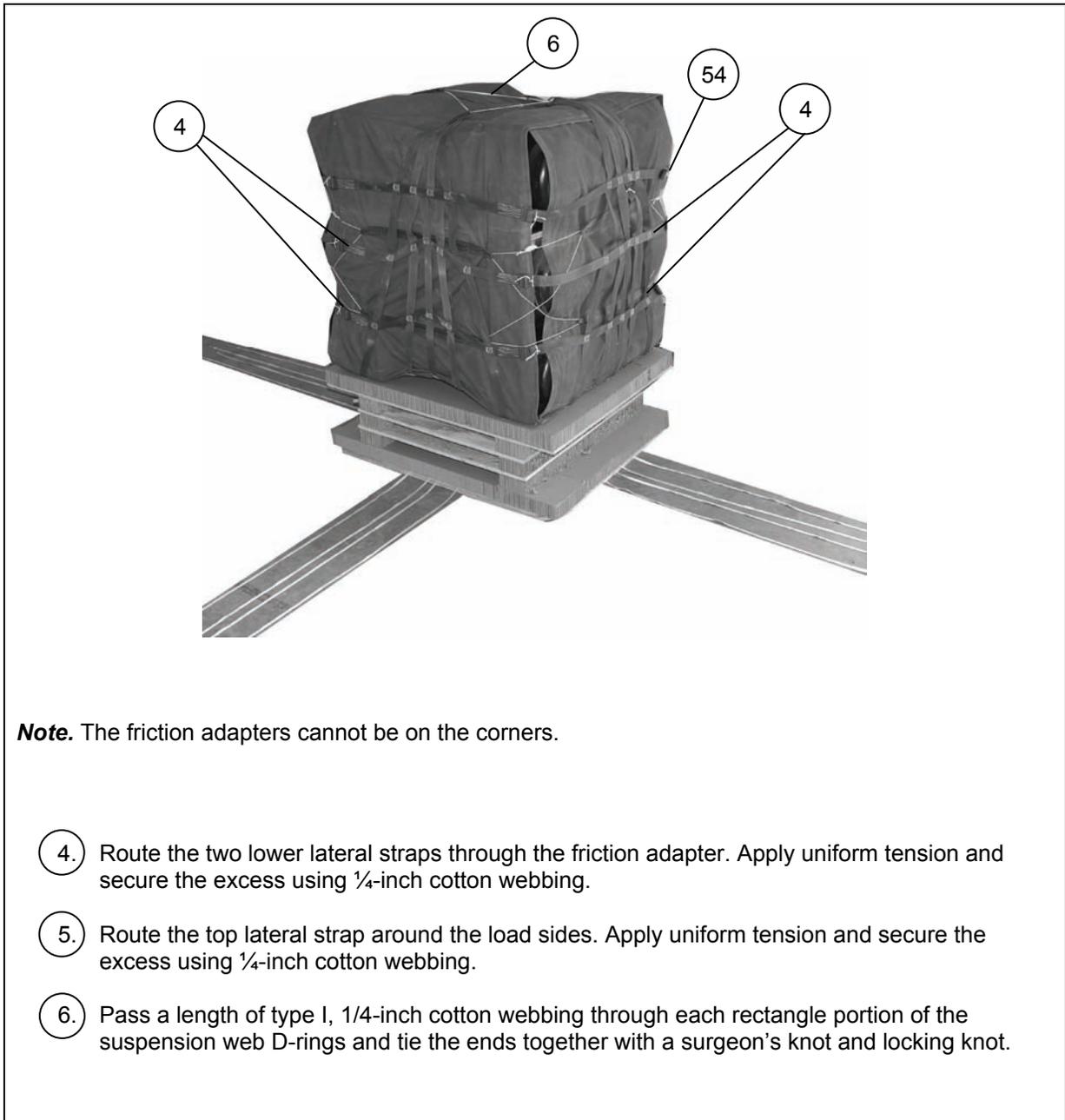


Figure 3-17. A-22 Bag Cover and Sling Assembly Secured



Note. The friction adapters cannot be on the corners.

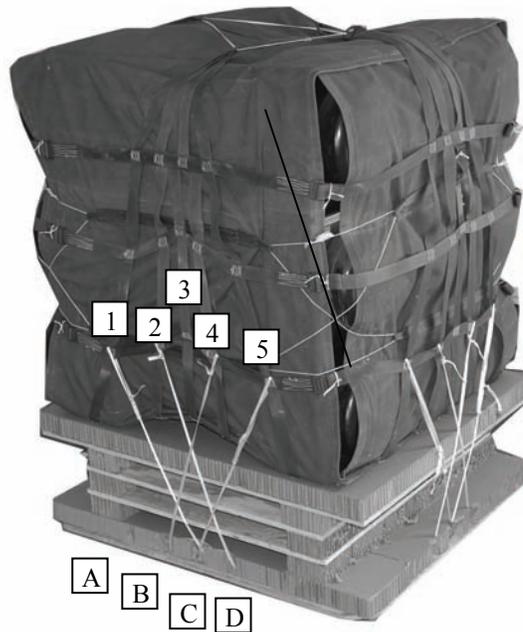
4. Route the two lower lateral straps through the friction adapter. Apply uniform tension and secure the excess using 1/4-inch cotton webbing.
5. Route the top lateral strap around the load sides. Apply uniform tension and secure the excess using 1/4-inch cotton webbing.
6. Pass a length of type I, 1/4-inch cotton webbing through each rectangle portion of the suspension web D-rings and tie the ends together with a surgeon's knot and locking knot.

Figure 3-17. A-22 Bag Cover and Sling Assembly Secured (Continued)

SECURING THE SKID BOARD TO A-22 CARGO BAG

3-25. Secure the skid board ties to the A-22 cargo bag according to FM 4-20.103/MCRP 4-11.3C/TO 13C7-1-11 and as shown in Figure 3-18.

Note. When tightening skid board tie, make sure excess tension is not applied causing the sewn portion at the intersection of lateral straps and support web to separate.



Step:

1. Starting at the left side take tie-down A and diagonally tie it around the intersection of lower lateral strap and fourth support web. Use three half-hitch knots and an overhand knot in the running end according to FM 4-20.103/MCRP 4-11.3C/TO 13C7-1-11.
2. Route tie-down B around the fifth support web and lower lateral strap intersection diagonally. Pull the excess slack out and tie it with a trucker's hitch knot and an overhand knot in the running end. Cut excess webbing, leaving end approximately 6 inches long according to FM 4-20.103/MCRP 4-11.3C/TO 13C7-1-11.
3. Repeat step 1 for skid board tie D and secure it to the second intersection on the lower lateral strap according to FM 4-20.103/MCRP 4-11.3C/TO 13C7-1-11.
4. Repeat step 2 for skid board tie C, and secure it to the first intersection on the lower lateral strap according to FM 4-20.103/MCRP 4-11.3C/TO 13C7-1-11.
5. Repeat steps 1 through 4 for the other skid board ties according to FM 4-20.103/MCRP 4-11.3C/TO 13C7-1-11.

Figure 3-18. Skid Board Secured to the A-22 Cargo Bag

ATTACHING THE SUSPENSION WEBS

3-26. Attach the suspension webs to the A-22 cargo bag sling according to FM 4-20.103/MCRP 4-11.3C/TO 13C7-1-11 and as described below.

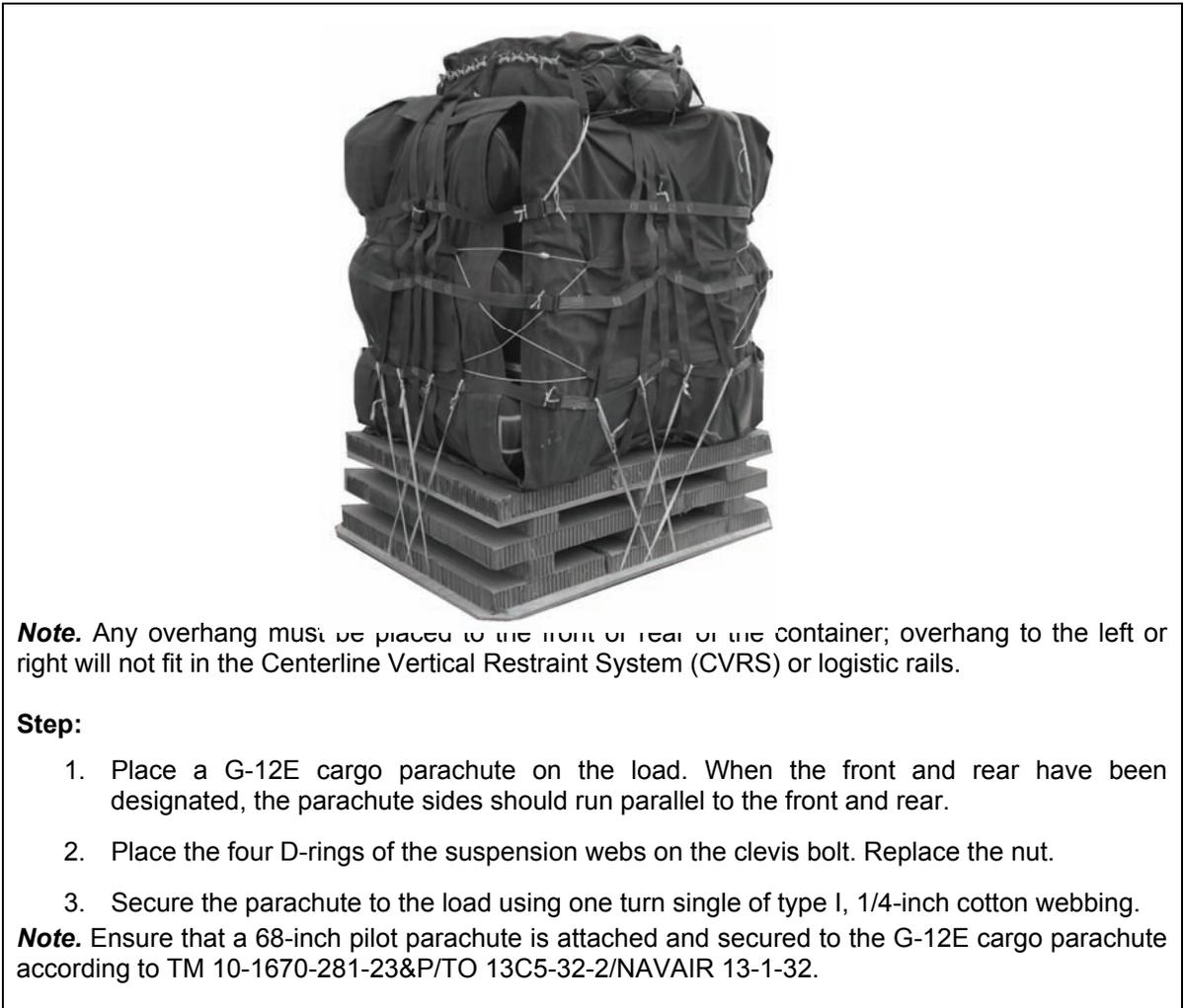
- Attach a suspension web to each D-ring of the cargo sling. Route the snap fasteners from outside to inside. Wrap masking tape around the snap fastener.

Note. Prior to securing the suspension webs with masking tape ensure the webs are not twisted.

- Tape all suspension webs together near the free end using masking tape.
- Tape all suspension webs together 2 inches above the snap fasteners using masking tape.

ATTACHING AND SECURING THE G-12E CARGO PARACHUTE

3-27. Attach and secure the cargo parachute to the load according to FM 4-20.103/MCRP 4-11.3C/TO 13C7-1-11 and as shown in Figure 3-19.



Note. Any overhang must be placed to the front or rear of the container; overhang to the left or right will not fit in the Centerline Vertical Restraint System (CVRS) or logistic rails.

Step:

1. Place a G-12E cargo parachute on the load. When the front and rear have been designated, the parachute sides should run parallel to the front and rear.
2. Place the four D-rings of the suspension webs on the clevis bolt. Replace the nut.
3. Secure the parachute to the load using one turn single of type I, 1/4-inch cotton webbing.

Note. Ensure that a 68-inch pilot parachute is attached and secured to the G-12E cargo parachute according to TM 10-1670-281-23&P/TO 13C5-32-2/NAVAIR 13-1-32.

Figure 3-19. G-12E Cargo Parachute Attached and Secured

MARKING RIGGED LOAD

3-28. Mark the rigged load according to FM 4-20.102/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 and as shown in Figure 3-20. Complete Shippers Declaration for Dangerous Goods and affix to load.

EQUIPMENT REQUIRED

3-29. Use the equipment in Table 3-4 to rig this load.

CAUTION

Make the final rigger inspection required by AR 59-4 and FM 4-20.102/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 before the load leaves the rigging site.



RIGGED LOAD DATA

Weight: Load shown	1,189 pounds
Suspended Weight	1,061 pounds
Height	85 inches
Width.....	48 inches
Overall Length	55 1/2 inches
Parachute	G-12E only with a 68-inch pilot parachute

Figure 3-20. Javelin Missile Containers (Plastic) in an A-22 Stretch Container Cargo Bag Rigged for Low-Velocity Airdrop

Table 3-4. Equipment Required for Rigging the Javelin Missile Containers (Plastic) in an A-22 Stretch Container Cargo Bag for Low-Velocity Airdrop

<i>National Stock Number</i>	<i>Item</i>	<i>Quantity</i>
8040-00-273-8713	Adhesive, paste, 1-gal	As required
4030-00-678-8562	Clevis, suspension, 3/4-in (medium)	1
4020-00-240-2146	Cord, nylon, type III, 550-lb	As required
1670-00-753-3928	Pad, energy-dissipating, honeycomb	4 sheets
	Parachute:	
1670-01-065-3755	G-12E cargo	1
5530-00-128-4981	Plywood, 3/4- by 48- by 96-in	2 sheets
	Webbing:	
8305-00-268-2411	Cotton, 1/4-in	As required
	Nylon:	
8305-00-082-5752	Tubular, 1/2-in	As required

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Chapter 4

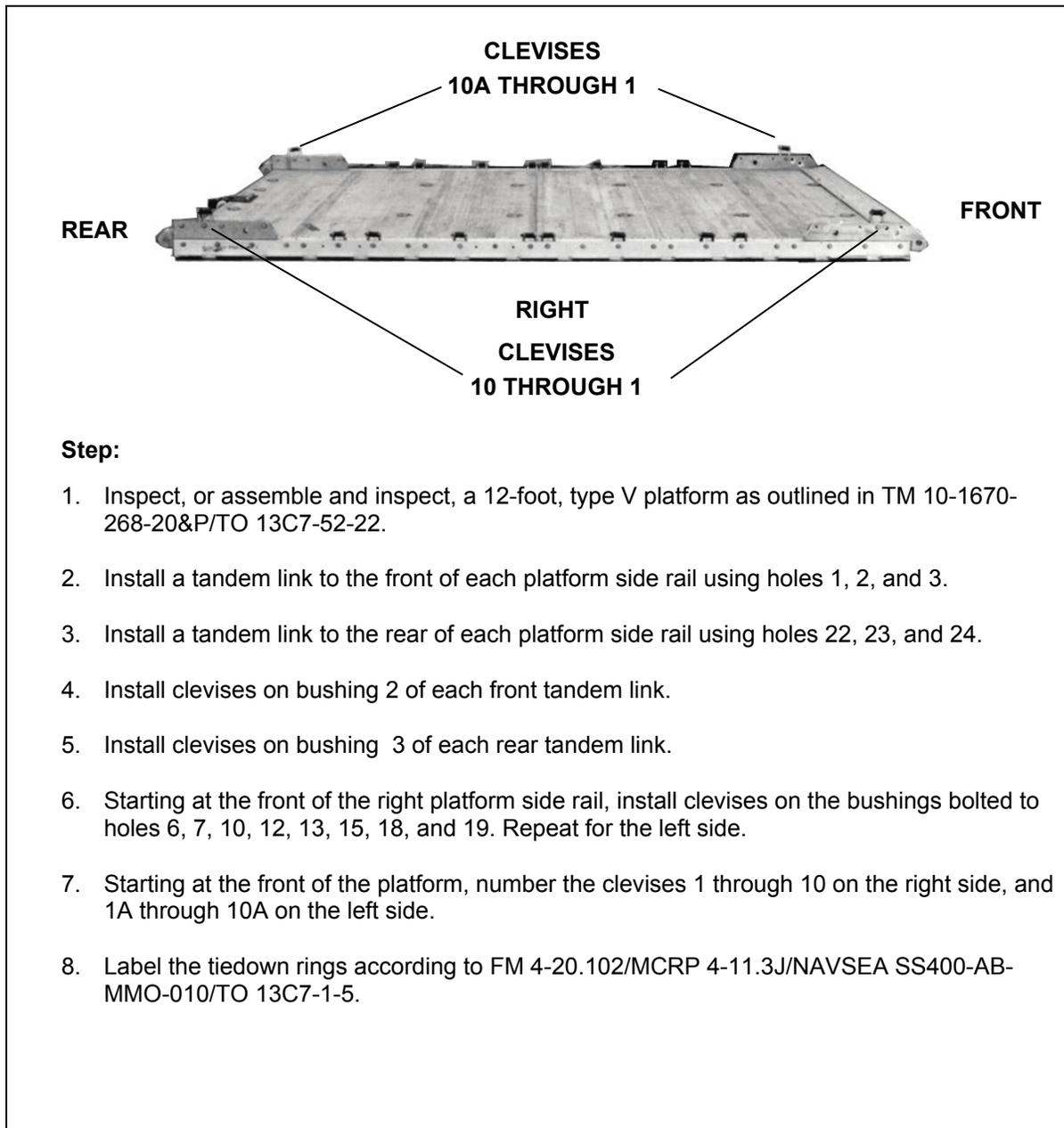
Rigging Thirty-Six Javelin Rounds as a Mass Supply Load on a 12-Foot, Type V Airdrop Platform for Low-Velocity Airdrop

DESCRIPTION OF LOAD

4-1. The Javelin mass supply load consists of 36 Javelin rounds in shipping containers rigged on a 12-foot, type V platform. Each round in its container weighs approximately 77 pounds and has a length of 59 inches and diameter of 15 1/4 inches. The load rigged has a total rigged weight of 5,976 pounds, a length of 166 inches with a 5-inch front overhang and a 17-inch rear overhang. The width is 108 inches and the height is 86 inches. The center of balance is 76 inches from the front end of the platform and is rigged using two G-11B cargo parachutes.

PREPARING PLATFORM

4-2. Prepare a 12-foot, type V platform as shown in Figure 4-1.



Step:

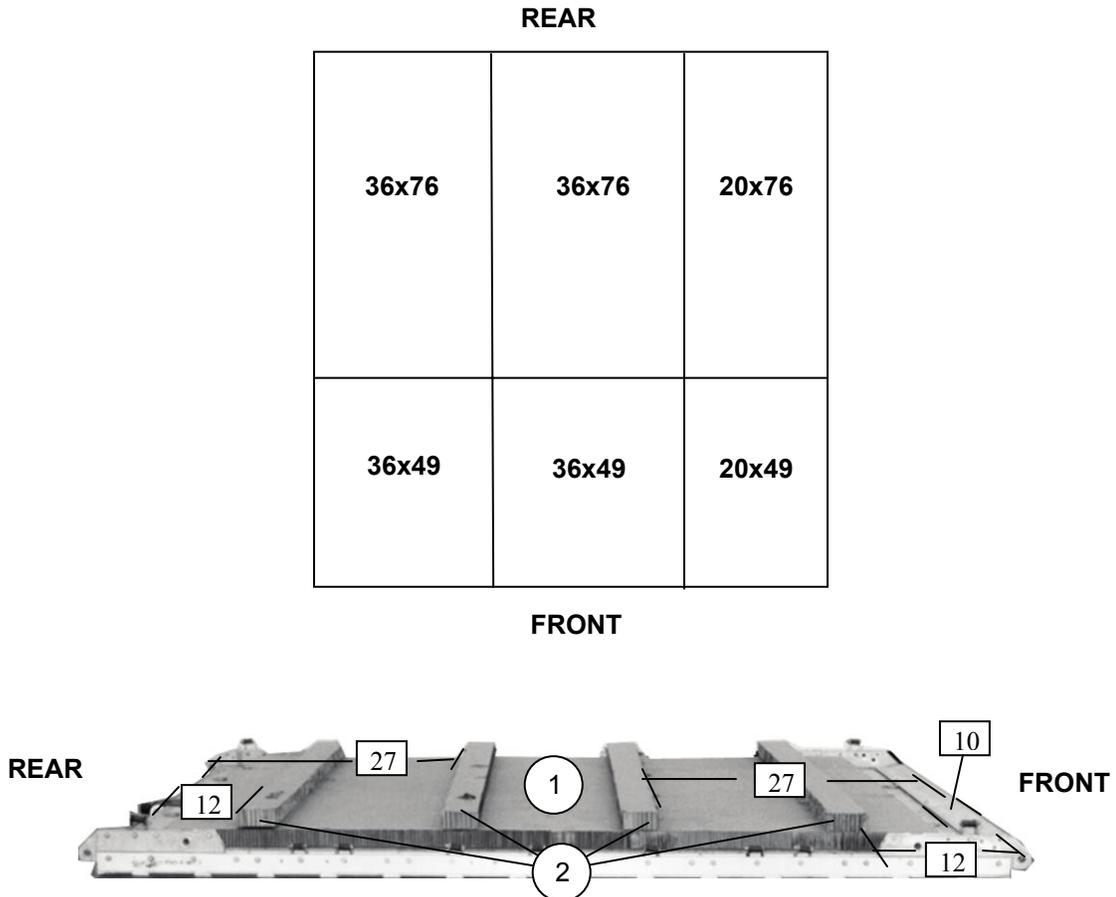
1. Inspect, or assemble and inspect, a 12-foot, type V platform as outlined in TM 10-1670-268-20&P/TO 13C7-52-22.
2. Install a tandem link to the front of each platform side rail using holes 1, 2, and 3.
3. Install a tandem link to the rear of each platform side rail using holes 22, 23, and 24.
4. Install clevises on bushing 2 of each front tandem link.
5. Install clevises on bushing 3 of each rear tandem link.
6. Starting at the front of the right platform side rail, install clevises on the bushings bolted to holes 6, 7, 10, 12, 13, 15, 18, and 19. Repeat for the left side.
7. Starting at the front of the platform, number the clevises 1 through 10 on the right side, and 1A through 10A on the left side.
8. Label the tiedown rings according to FM 4-20.102/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.

Figure 4-1. Platform Prepared

BUILDING AND POSITIONING HONEYCOMB STACKS

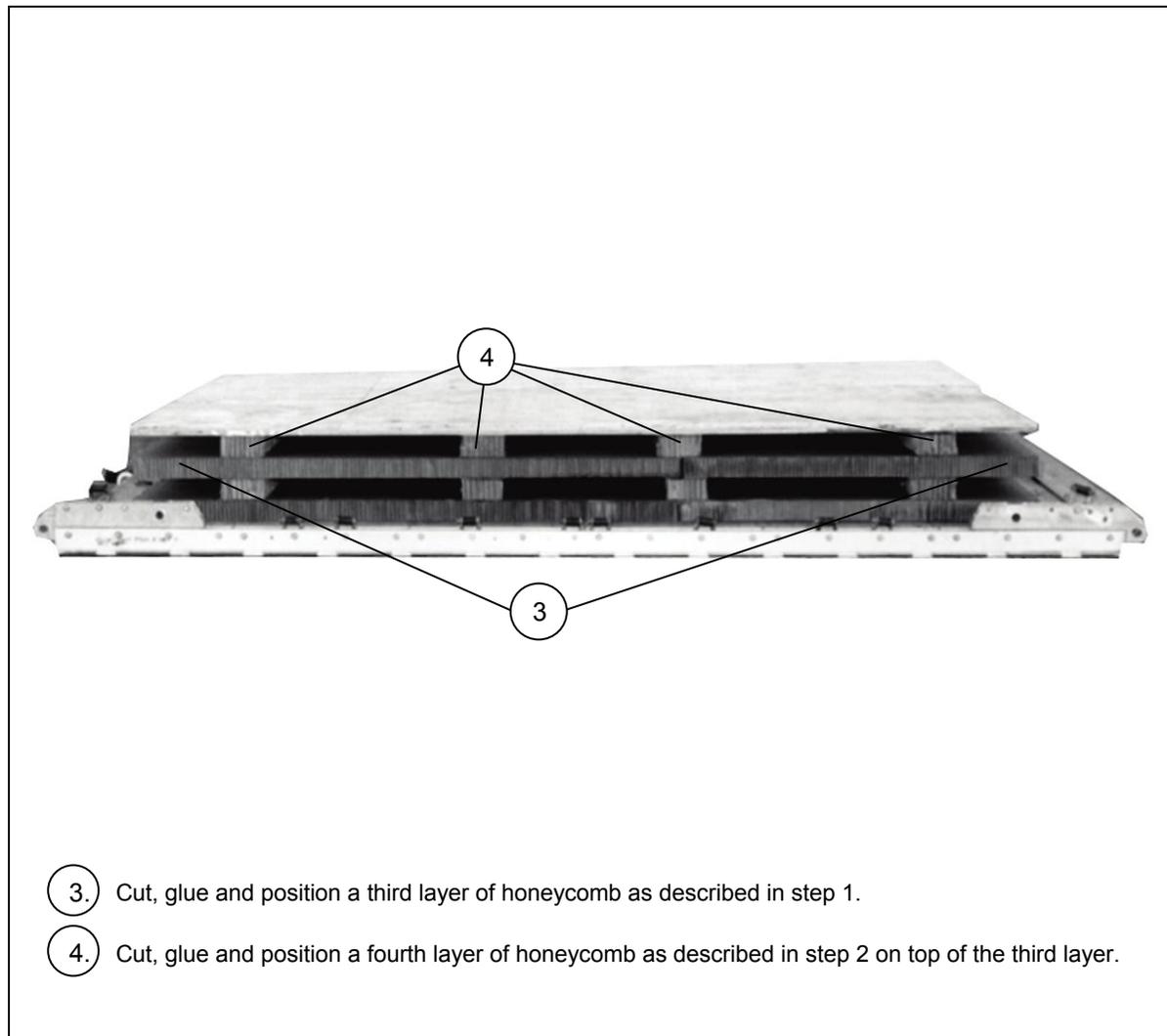
4-3. Build and position the honeycomb stacks as shown in Figure 4-2.

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



1. Cut six pieces of honeycomb as shown in the diagram above and position the honeycomb on the platform centered and 10 inches from the front edge of the platform.
2. Cut four 6- by 92-inch pieces of honeycomb. Position and glue the first piece 12 inches from the front edge of the honeycomb stack in step 1. Position and glue the second piece 27 inches from the front edge. Position and glue the third piece 27 inches from the rear edge and the fourth piece 12 inches from the rear edge.

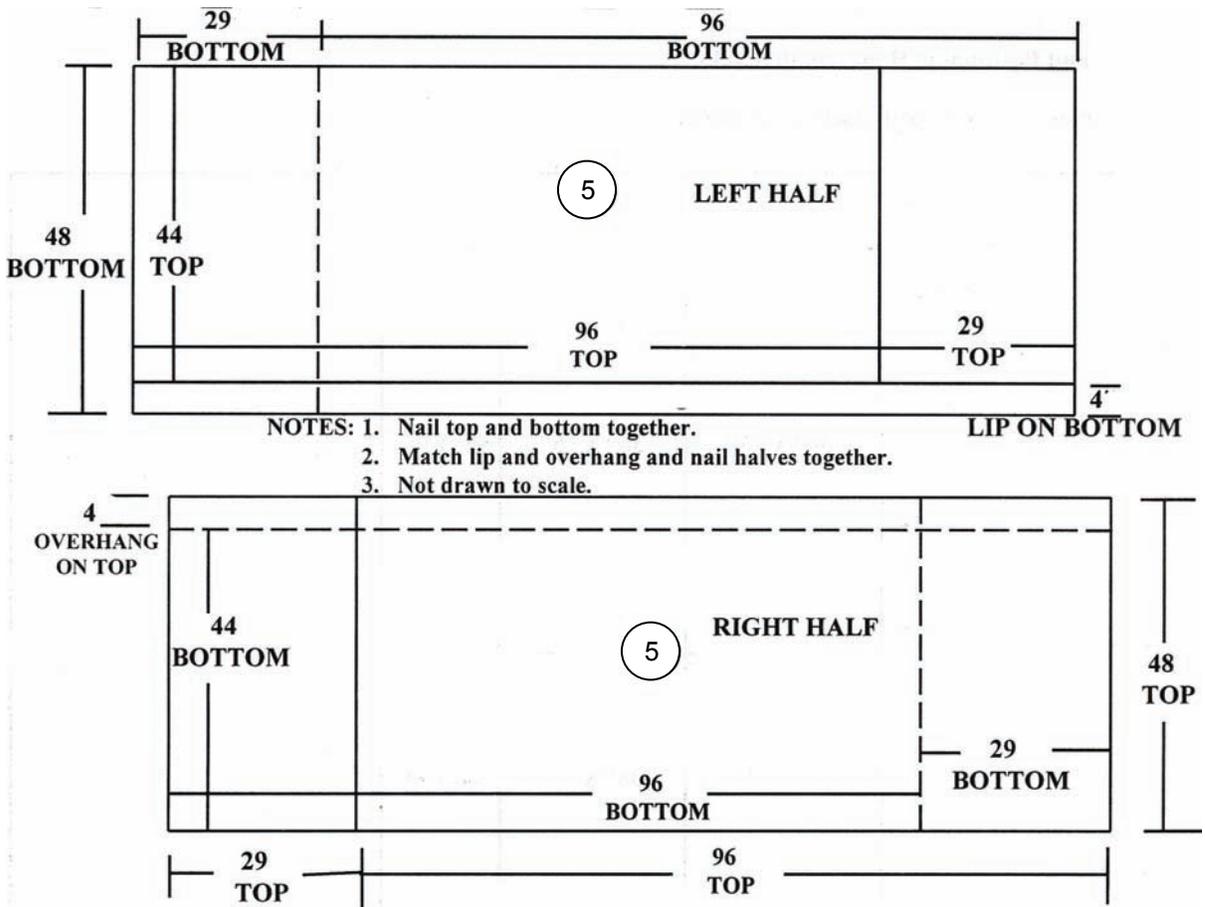
Figure 4-2. Honeycomb Stacks Built and Positioned



- 3. Cut, glue and position a third layer of honeycomb as described in step 1.
- 4. Cut, glue and position a fourth layer of honeycomb as described in step 2 on top of the third layer.

Figure 4-2. Honeycomb Stacks Built and Positioned (Continued)

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



5. The fifth layer is constructed of doubled 3/4-inch plywood. Using two 48- by 96-inch pieces of 3/4-inch plywood, cut two 48- by 29-inch pieces, two 44- by 49-inch pieces and two 44- by 96-inch pieces. Nail the plywood together as shown in the above diagrams. Position one 48- by 96-inch piece of plywood and one 48- by 29-inch piece of plywood end to end forming one layer 125-inches in length. Position one 44- by 96-inch piece of plywood and one 44- by 29-inch piece of plywood end to end on top of the first layer even with one of the long sides of the section. There should be a 4 inch lip when the plywood is in place. Nail the plywood together. Position one 44- by 96-inch piece of plywood and one 44- by 29-inch piece of plywood end to end and even with the lip. Position one 48- by 96-inch piece of plywood and one 48- by 29-inch piece of plywood end to end and even on top of the last pieces and nail all the plywood together.

Figure 4-2. Honeycomb Stacks Built and Positioned (Continued)

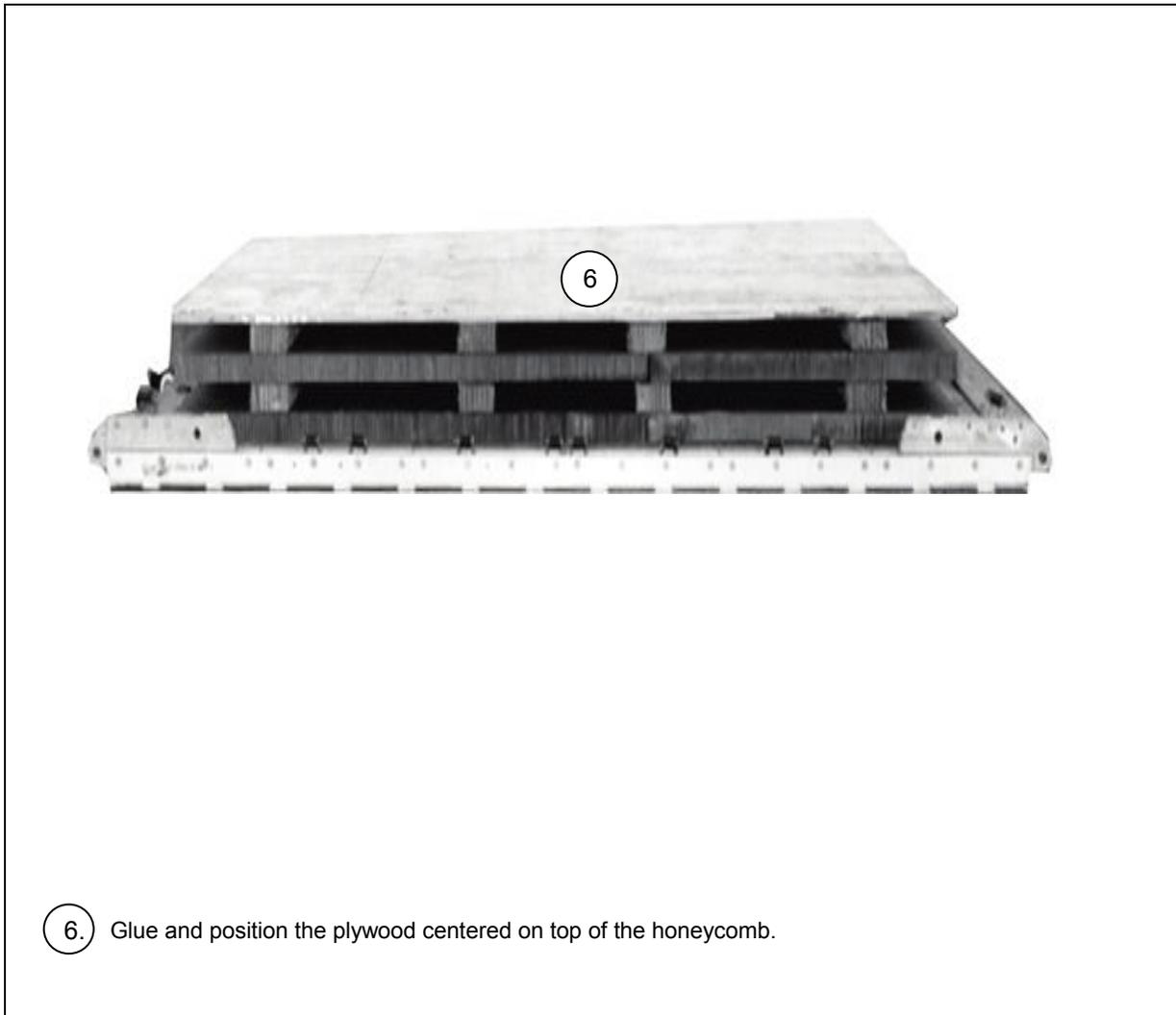


Figure 4-2. Honeycomb Stacks Built and Positioned (Continued)

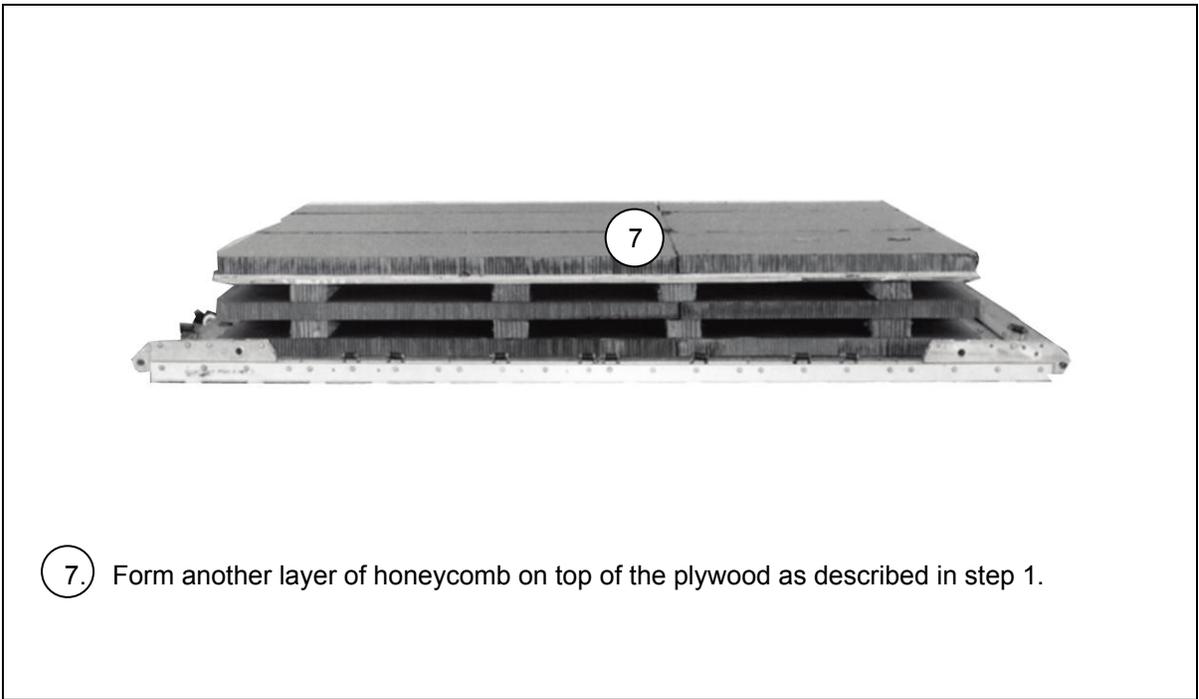


Figure 4-2. Honeycomb Stacks Built and Positioned (Continued)

POSITIONING AND SECURING JAVELIN ROUNDS

4-4. Position and secure 36 Javelin rounds as shown in Figure 4-3.

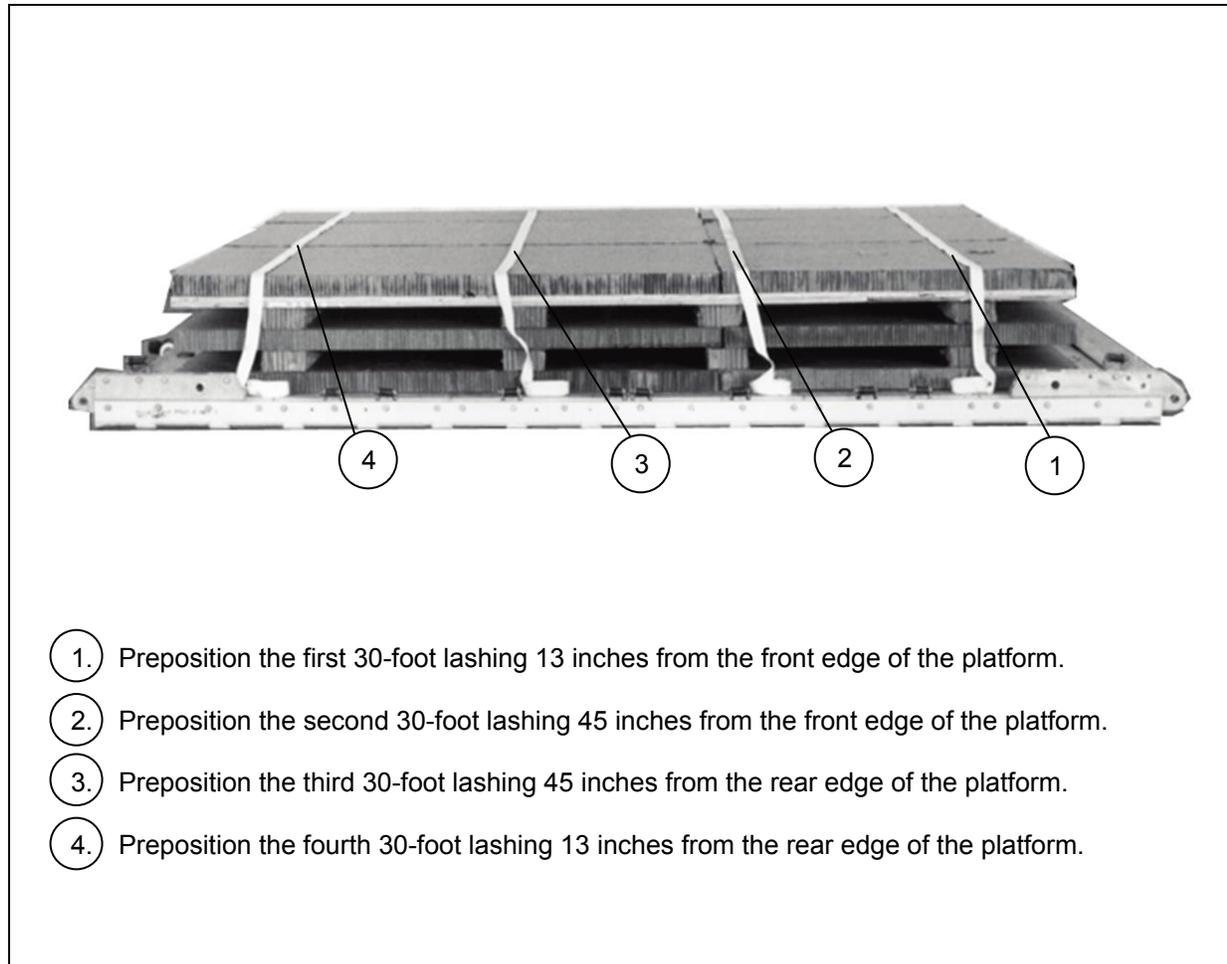
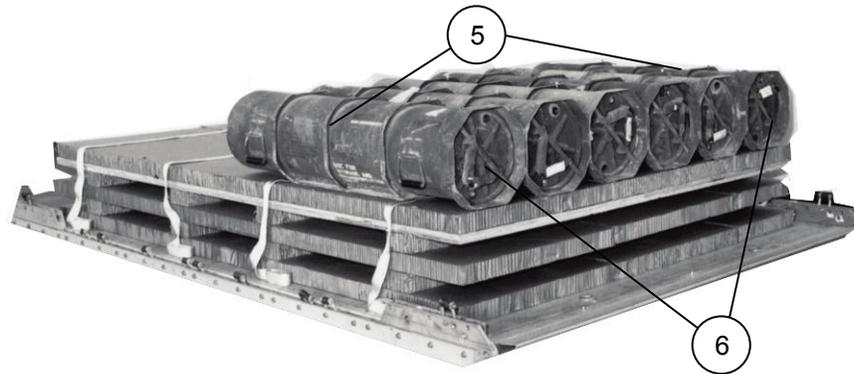
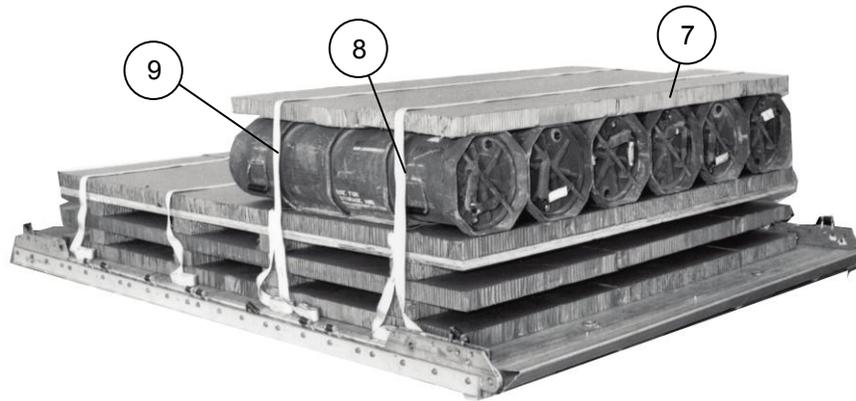


Figure 4-3. Javelin Rounds Positioned and Secured



- 5. Position six Javelin containers on the front section of the honeycomb centered and even with the front edge of the honeycomb.
- 6. Position the container opening ends to the front of the platform.

Figure 4-3. Javelin Rounds Positioned and Secured (Continued)



- 7. Cut and position a 59- by 92-inch piece of honeycomb centered on top of the containers.
- 8. Pre-position one 30-foot lashing 16 inches from the front edge of the honeycomb.
- 9. Pre-position a second 30-foot lashing 40 inches from the front of the honeycomb.

Figure 4-3. Javelin Rounds Positioned and Secured (Continued)

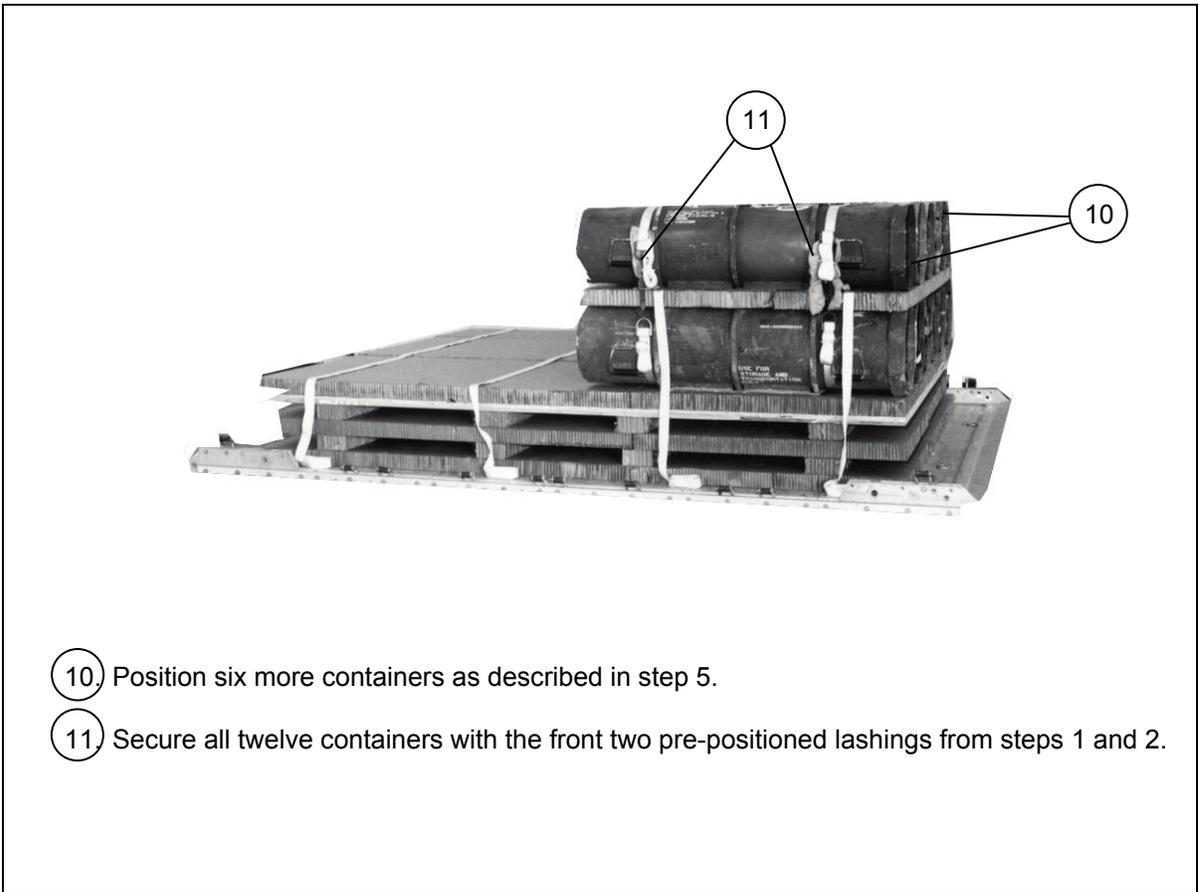
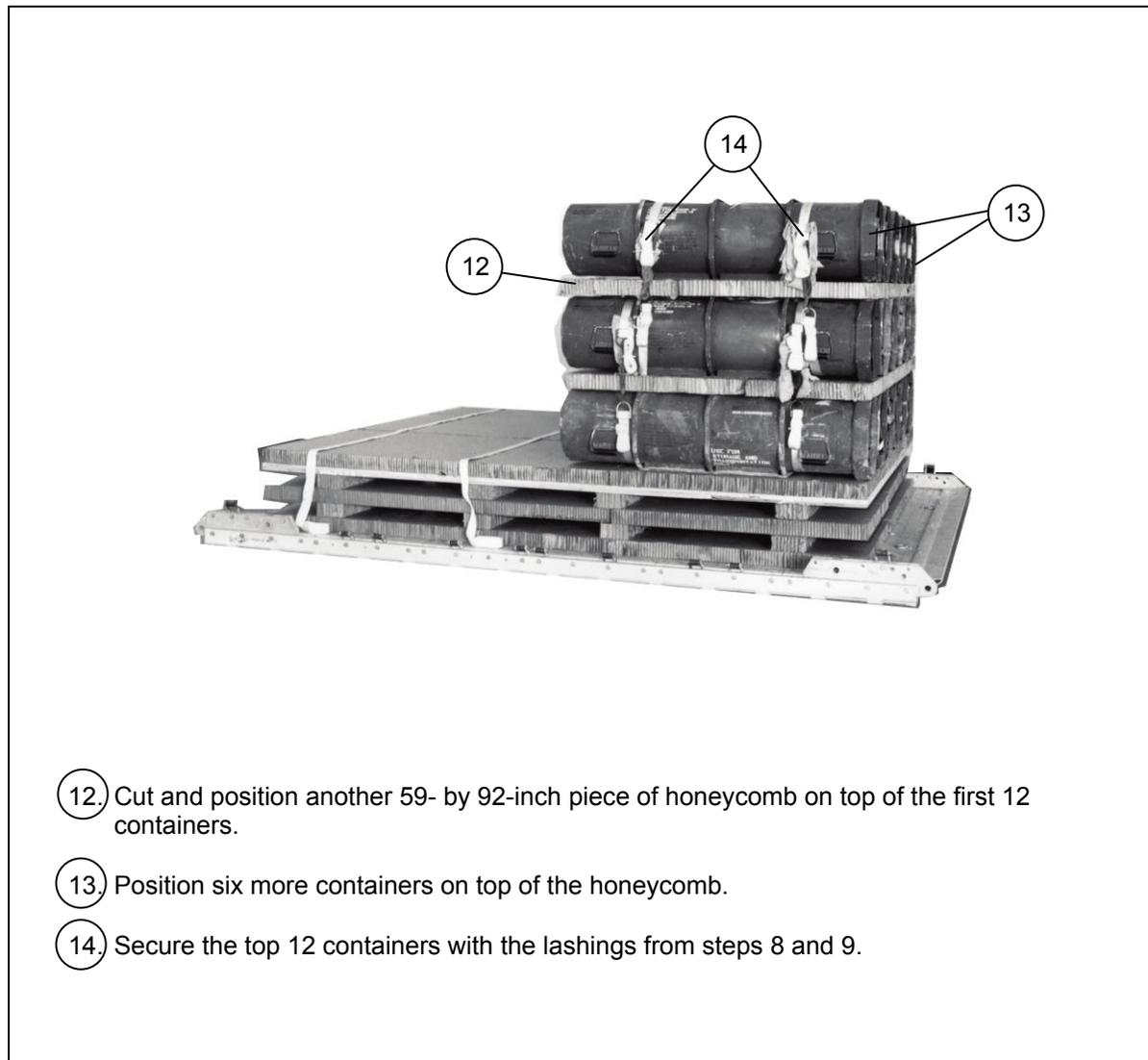


Figure 4-3. Javelin Rounds Positioned and Secured (Continued)



- 12. Cut and position another 59- by 92-inch piece of honeycomb on top of the first 12 containers.
- 13. Position six more containers on top of the honeycomb.
- 14. Secure the top 12 containers with the lashings from steps 8 and 9.

Figure 4-3. Javelin Rounds Positioned and Secured (Continued)

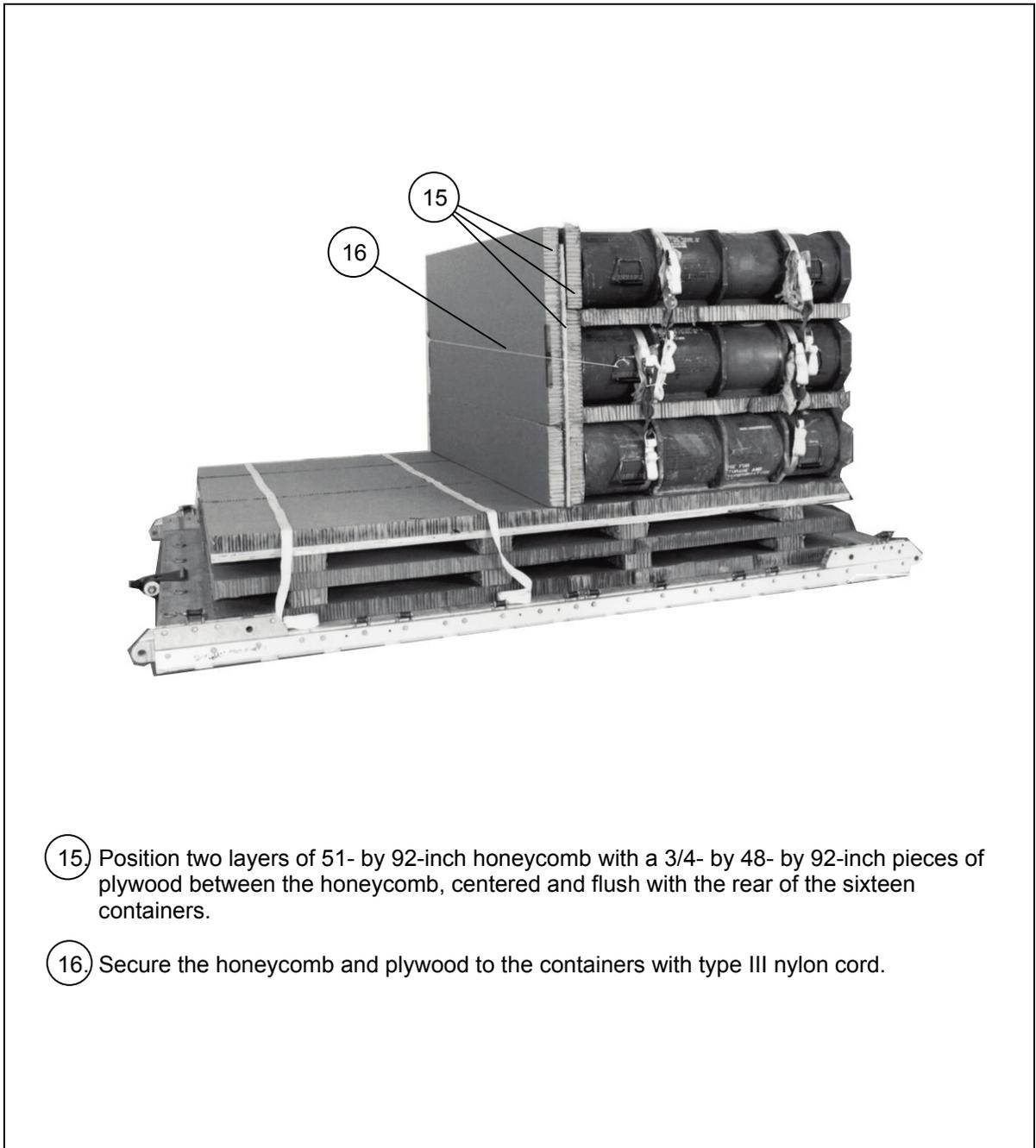
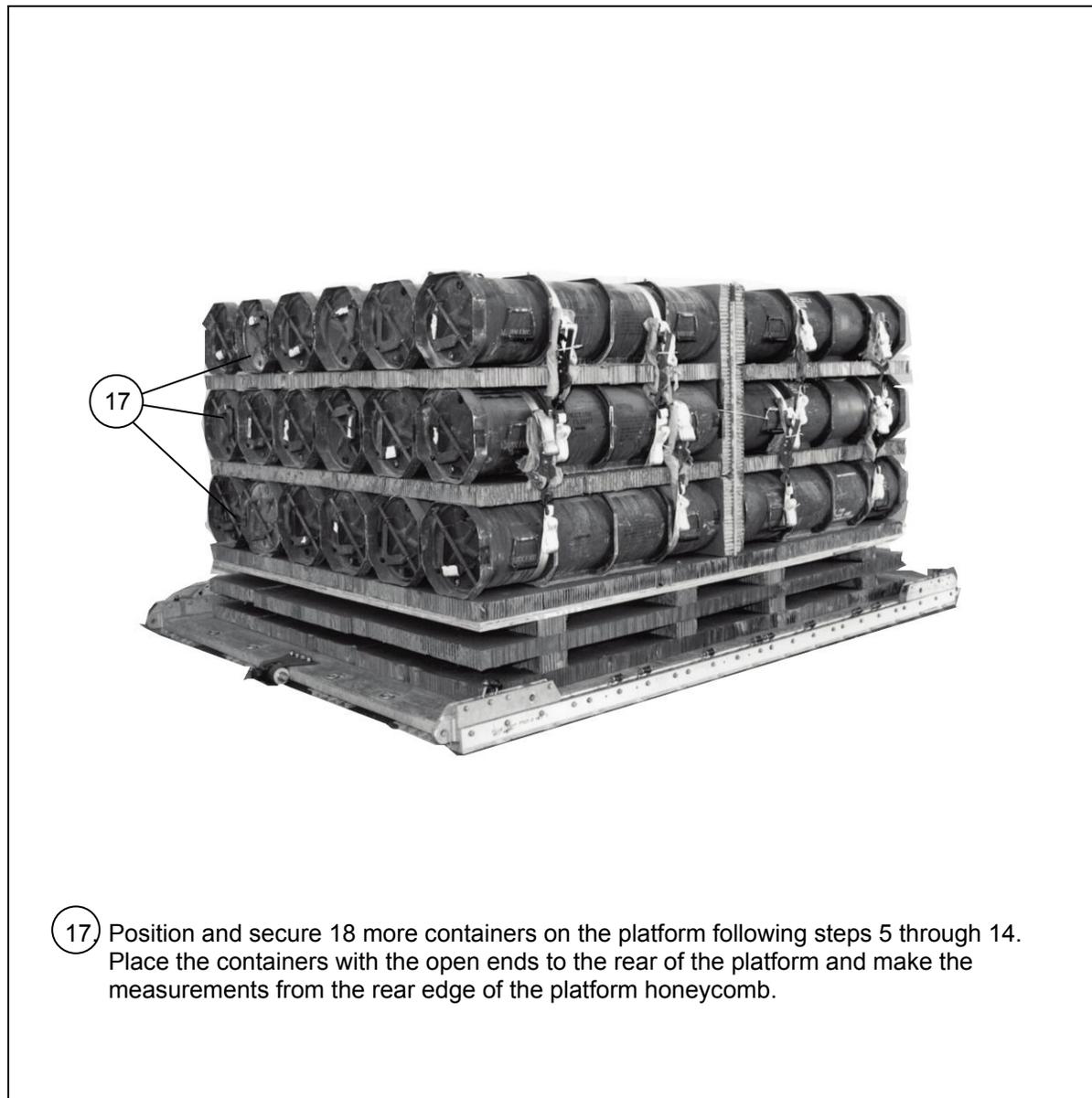


Figure 4-3. Javelin Rounds Positioned and Secured (Continued)



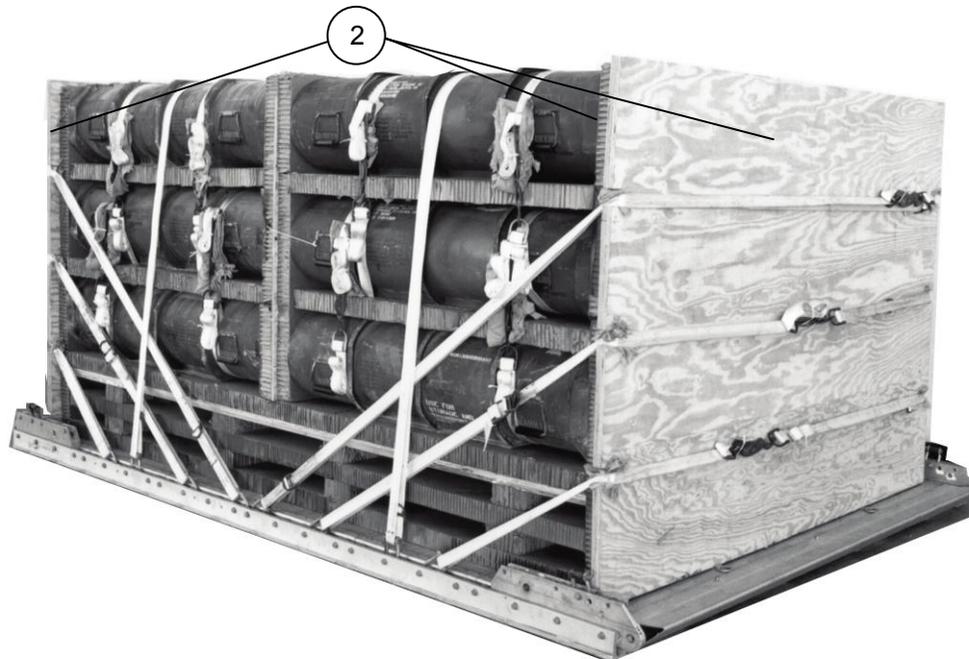
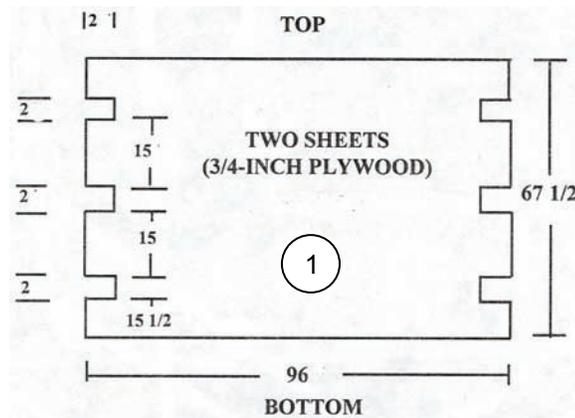
- 17 Position and secure 18 more containers on the platform following steps 5 through 14. Place the containers with the open ends to the rear of the platform and make the measurements from the rear edge of the platform honeycomb.

Figure 4-3. Javelin Rounds Positioned and Secured (Continued)

LASHING LOAD TO PLATFORM

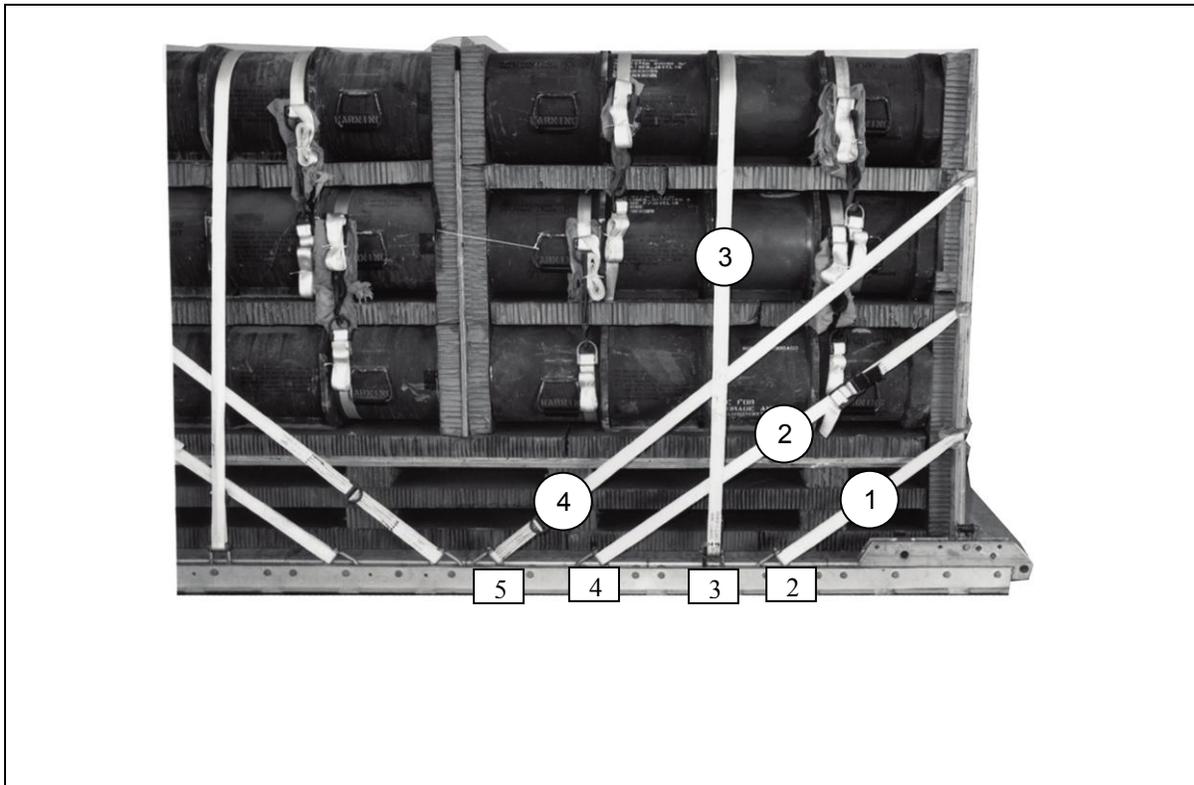
4-5. Lash the load to the platform as shown in Figure 4-4.

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



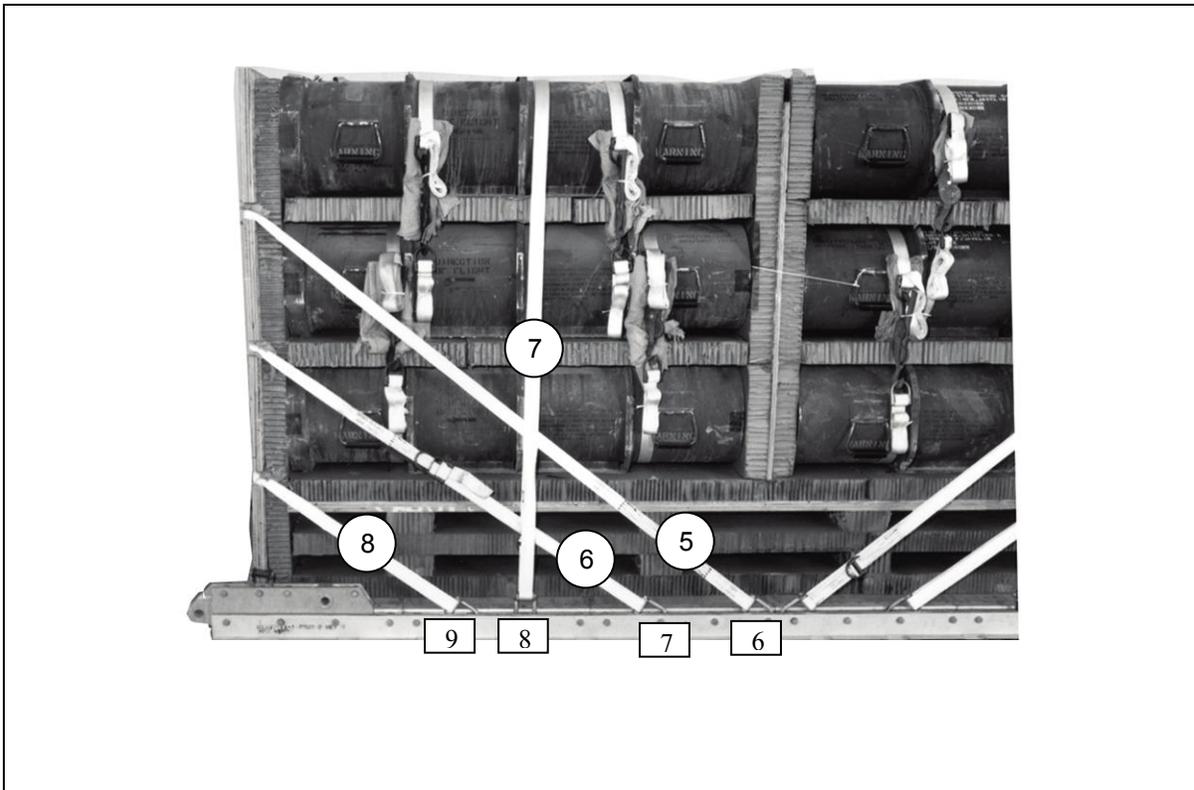
1. Cut two endboards as shown in the diagram above.
2. Cut two pieces of 36- by 92-inch honeycomb and two pieces of 31 1/2- by 96-inch honeycomb and place one piece of each size on each end of the load with one endboard.

Figure 4-4. Load Lashed to Platform



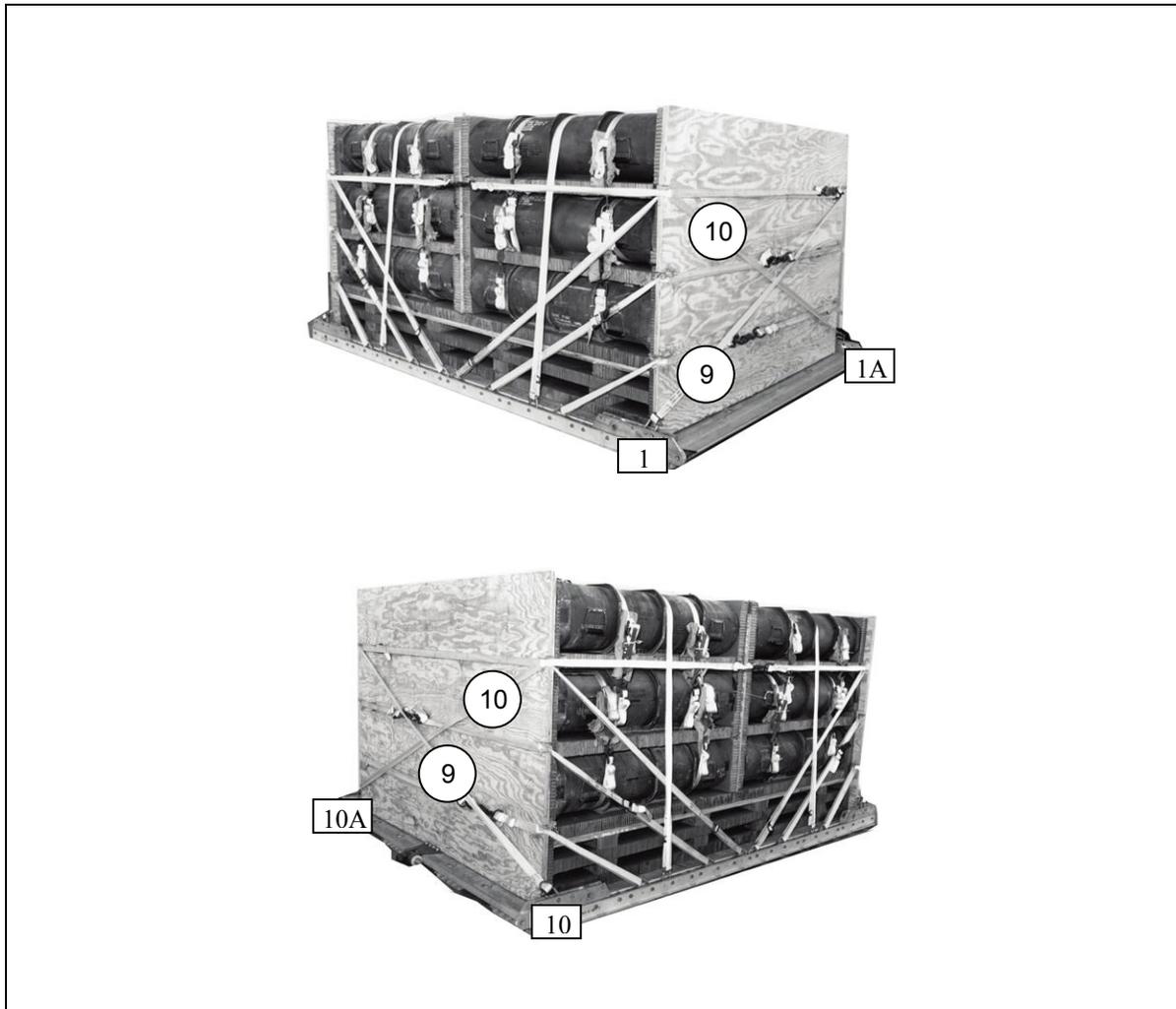
Lashing Number	Tiedown Clevis Number	Instructions
1	2 and 2A	Run a 15-foot lashing from clevis 2 and a 15-foot lashing from clevis 2A. Pass the lashings through the bottom notch of the front end board. Secure the lashings on the front using two D-rings and a load binder.
2	4 and 4A	Run a 15-foot lashing from clevis 4 and a 15-foot lashing from clevis 4A. Pass the lashings over the top of the load. Secure the lashings on top using another 15-foot lashing and two D-rings and a load binder.
3	3 and 3A	Run a 15-foot lashing from clevis 3 and a 15-foot lashing from clevis 3A. Pass the lashings through the middle notch of the front end board. Secure the lashings on the front using another 15-foot lashing and two D-rings and a load binder.
4	5 and 5A	Run a 15-foot lashing from clevis 5 and a 15-foot lashing from clevis 5A. Pass the lashings through the top notch of the front end board. Secure the lashings on the front using another 15-foot lashing and two D-rings and a load binder.

Figure 4-4. Load Lashed to Platform (Continued)



Lashing Number	Tiedown Clevis Number	Instructions
5	6 and 6A	Run a 15-foot lashing from clevis 6 and a 15-foot lashing from clevis 6A. Pass the lashings through the top notch of the rear end board. Secure the lashings on the rear using another 15-foot lashing and two D-rings and a load binder.
6	7 and 7A	Run a 15-foot lashing from clevis 7 and a 15-foot lashing from clevis 7A. Pass the lashings through the middle notch of the rear end board. Secure the lashings on the rear using another 15-foot lashing and two D-rings and a load binder.
7	8 and 8A	Run a 15-foot lashing from clevis 8 and a 15-foot lashing from clevis 8A. Pass the lashings over the top of the load. Secure the lashings on top using another 15-foot lashing and two D-rings and a load binder.
8	9 and 9A	Run a 15-foot lashing from clevis 9 and a 15-foot lashing from clevis 9A. Pass the lashings through the bottom notch of the rear end board. Secure the lashings on the rear using two D-rings and a load binder.

Figure 4-4. Load Lashed to Platform (Continued)



Lashing Number	Tiedown Clevis Number	Instructions
9	1 and 10	Run a 15-foot lashing through clevis 1 and its own D-ring. Pass the running end up through the top left side notch of the front end board. Run another 15-foot lashing through clevis 10 and its own D-ring. Pass the running end up through the top left side notch of the rear end board. Secure the lashings together on the left side of the load using another 15-foot lashing and two D-rings and a load binder.
10	1A and 10A	Run a 15-foot lashing through clevis 1A and its own D-ring. Pass the running end up through the top right side notch of the front end board. Run another 15-foot lashing through clevis 10A and its own D-ring. Pass the running end up through the top right side notch of the rear end board. Secure the lashings together on the right side of the load using another 15-foot lashing and two D-rings and a load binder.

Figure 4-4. Load Lashed to Platform (Continued)

COVERING LOAD, INSTALLING SUSPENSION SLINGS AND DEADMAN'S TIE

4-6. Cover the load and install the suspension slings as shown in Figure 4-5.

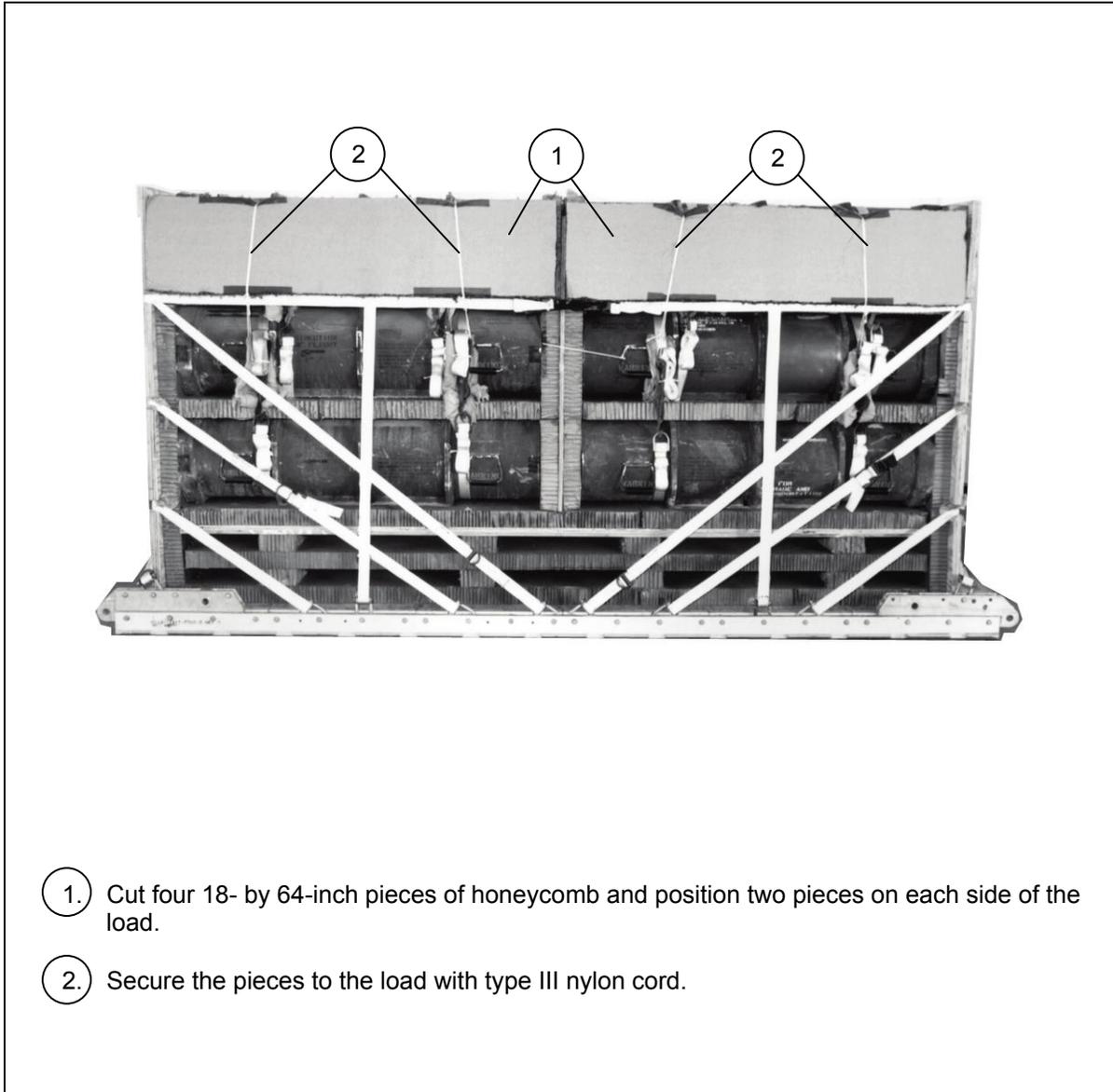
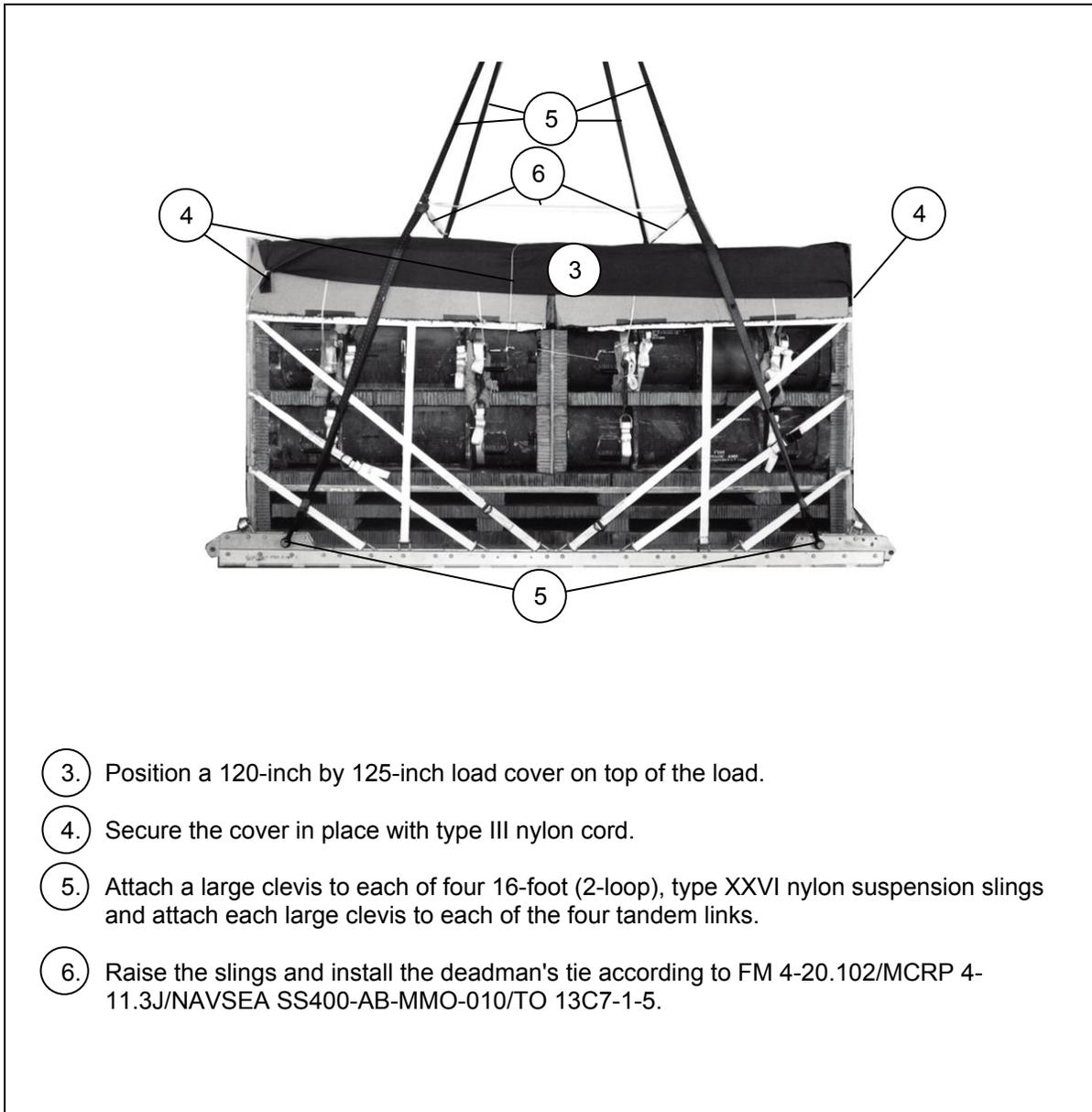


Figure 4-5. Load Covered and Suspension Slings and Deadman's Tie Installed



3. Position a 120-inch by 125-inch load cover on top of the load.
4. Secure the cover in place with type III nylon cord.
5. Attach a large clevis to each of four 16-foot (2-loop), type XXVI nylon suspension slings and attach each large clevis to each of the four tandem links.
6. Raise the slings and install the deadman's tie according to FM 4-20.102/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.

Figure 4-5. Load Covered and Suspension Slings and Deadman's Tie Installed (Continued)

STOWING CARGO PARACHUTES AND INSTALLING EXTRACTION SYSTEM

4-7. Stow two G-11 cargo parachutes and install the EFTC according to FM 4-20.102/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.

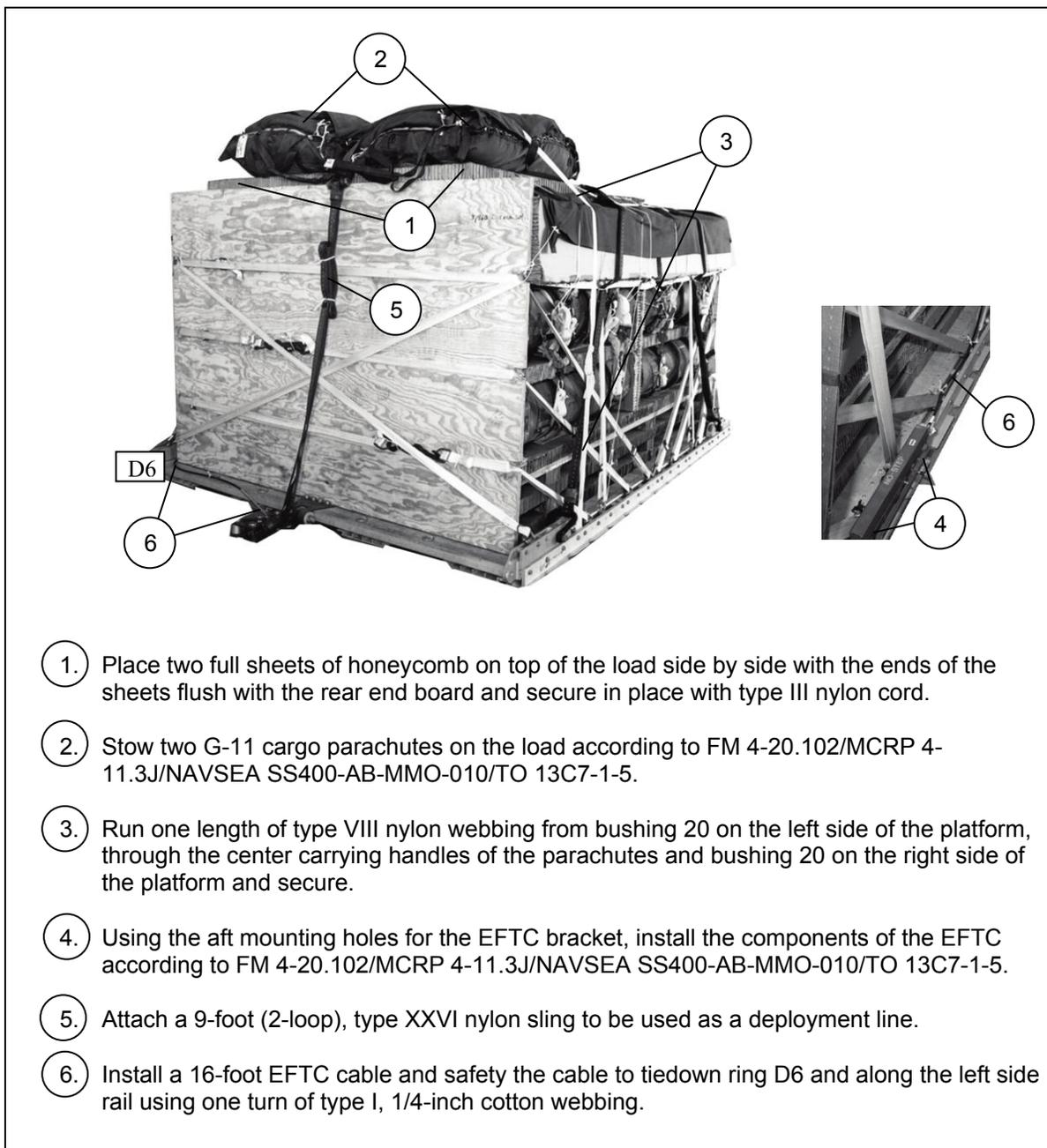
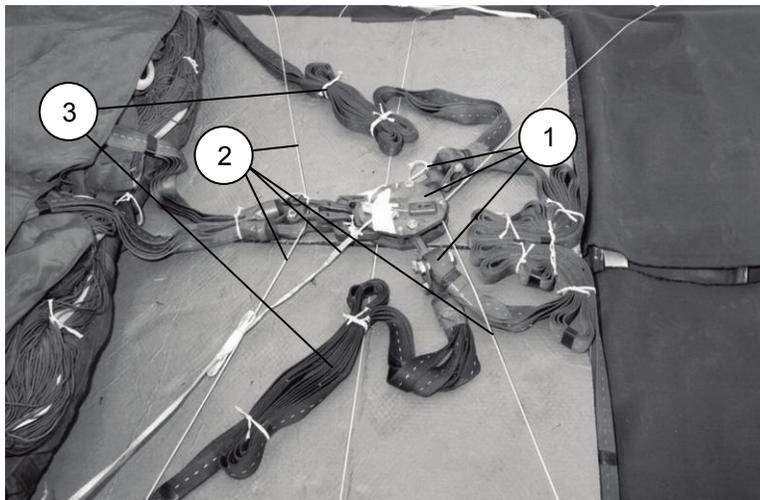


Figure 4-6. Cargo Parachutes Stowed and Extraction System Installed

INSTALLING PARACHUTE RELEASE

4-8. Prepare, attach, and safety an M-1 release according to FM 4-20.102/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 and as shown in Figure 4-7.



1. Place the M-1 release on top of the previous placed honeycomb located on top of the load and attach the suspension slings and parachute riser extensions.
2. Secure the M-1 release to convenient points on the load with type III nylon cord.
3. S-fold and tie any excess suspension slings.

Figure 4-7. M-1 Cargo Parachute Installed

PLACING EXTRACTION PARACHUTE

4-9. Select the extraction parachute and extraction line needed using the extraction line requirements table in FM 4-20.102/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5. Place the extraction parachute and line on the load for installation in the aircraft.

INSTALLING PROVISIONS FOR EMERGENCY RESTRAINTS

4-10. Select and install the provisions for the emergency aft restraints according to the emergency aft restraint requirements table in FM 4-20.102/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.

MARKING RIGGED LOAD

4-11. Mark the rigged load according to FM 4-20.102/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5, and as shown in Figure 4-8 complete Declaration for Dangerous Goods. If the load varies from the one shown, the weight, height, CB, and parachute requirements must be recomputed.

EQUIPMENT REQUIRED

4-12. Use the equipment listed in Table 4-1 to rig this load.

CAUTION

Make the final rigger inspection required by AR 59-4 and FM 4-20.102/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5 before the load leaves the rigging site.



RIGGED LOAD DATA

Weight: Load shown	5,976 pounds
Height86 inches
Width.....	108 inches
Overall Length	166 inches
Overhang: Front0 inches
Rear0 inches
Center of Balance (from front edge of the platform).....	.94 inches
Extraction System with 16-foot cable (adds 18 inches to length of platform)	EFTC

Figure 4-8. Thirty-Six Javelin Rounds in Containers Rigged on a 12-Foot, Type V Platform for Low-Velocity Airdrop

Table 4-1. Equipment Required for Rigging 36 Javelin Rounds in Containers on a 12-Foot, Type V Platform for Low-Velocity Airdrop

<i>National Stock Number</i>	<i>Item</i>	<i>Quantity</i>
8040-00-273-8713	Adhesive, paste, 1-gallon	As required
	Clevis, suspension:	
4030-00-678-8562	3/4-inch (medium) emergency restraint	2
4030-00-090-5354	1-inch (large)	4
4020-00-240-2146	Cord, nylon, type III	As required
1670-00-434-5785	Coupling, airdrop, extraction force transfer with 16-foot cable	1
1670-00-360-0328	Cover, clevis, large	5
8135-00-664-6958	Cushioning material, packaging, cellulose wadding	As required
1670-01-183-2678	Leaf, extraction line	2
	Line, extraction, type XXVI nylon webbing:	
1670-01-064-4452	60-foot (1-loop)	1
1670-01-107-7651	160-foot (1-loop)	1
1670-01-064-4452	60-foot (1-loop), type XXVI for C-17 drogue line	1
	Link assembly, two-point:	
5306-00-435-8994	Bolt, 1-inch diameter, 4-inch long	1
5310-00-232-5165	Nut, 1-inch, hexagonal	1
1670-00-003-1953	Plate, side 3 3/4-inch	1
5365-00-007-3414	Spacer, large	1
1670-00-753-3928	Pad, energy-dissipating, honeycomb	9 sheets
	Parachute:	
1670-01-016-7841	Cargo, G-11B	1
1670-01-063-3716	Cargo, extraction, 22-foot	1
	Platform, airdrop, type V, 12-foot	
1670-01-353-8425	Bracket assembly, EFTC	1
1670-01-162-2372	Bracket assembly, extraction	1
1670-01-162-2376	Clevis assembly	20
1670-01-162-2381	Tandem link	4
5530-00-128-4981	Plywood, 3/4-inch	9 sheets
1670-01-097-8816	Release, cargo parachute, M-1	1

Table 4-1. Equipment Required for Rigging 36 Javelin Rounds in Containers on a 12-Foot, Type V Platform for Low-Velocity Airdrop (Continued)

<i>National Stock Number</i>	<i>Item</i>	<i>Quantity</i>
	Sling, cargo airdrop:	
	For deployment line:	
1670-00-753-3792	9-foot (2-loop), type XXVI nylon webbing	1
	For riser extension:	
1670-01-062-6301	3-foot (2-loop), type XXVI nylon webbing	2
	For suspension:	
1670-01-063-7761	16-foot (2-loop), type XXVI nylon webbing	4
1670-00-040-8219	Strap parachute release, multicut	1
7515-00-266-5016	Tape, adhesive, 2-inch	As required
7501-00-266-6710	Tape, masking	As required
1670-00-937-0271	Tie-down assembly, 15-foot	28
	Webbing:	
8305-00-268-2411	Cotton, 1/4-inch, type I	As required
	Nylon:	
8305-00-082-5752	Tubular, 1/2-inch	As required
8305-00-263-3591	Type VIII webbing	As required

Chapter 5

Rigging Javelin Missile Containers

SECTION I-RIGGING JAVELIN MISSILE CONTAINERS (PLASTIC) ON AN 8-FOOT, TYPE V PLATFORM

DESCRIPTION OF LOAD

5-1. The guided missile, surface, attack Javelin (plastic) container mass supply load is rigged on an 8-foot type V platform. The rigged weight is 6,620 pounds. Each individual missile container weighs approximately 96 pounds. The load is rigged with 36 Javelin containers. The height of the load is 94 inches, length is 125 inches and the width is 108 inches. The accompanying load has a weight of 6,336 pounds. The load is rigged with two G-11 cargo parachutes.

PREPARING PLATFORM

5-2. Prepare an 8-foot, type V platform as shown in Figure 5-1.

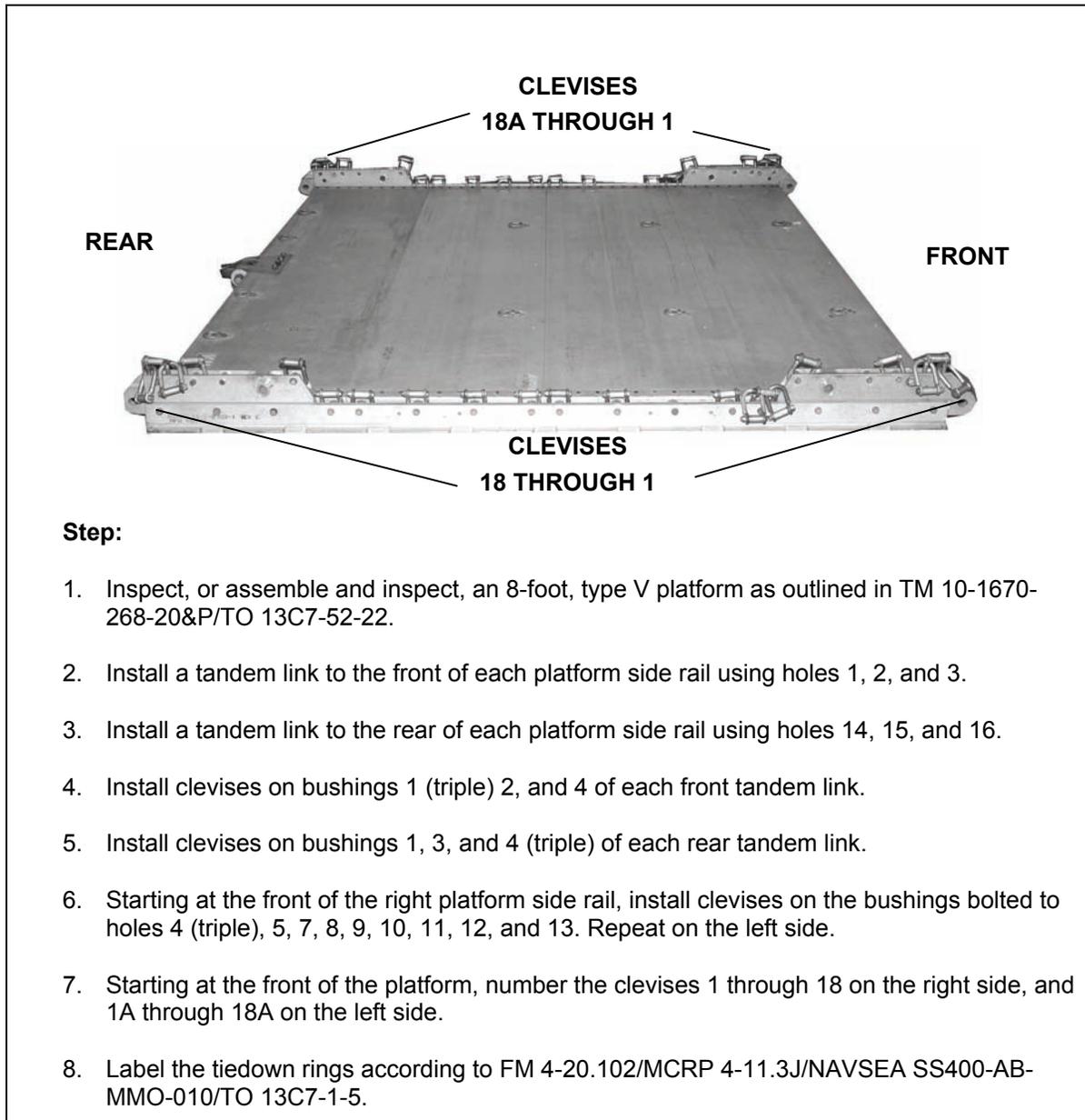


Figure 5-1. Platform Prepared

PREPARING AND PLACING HONEYCOMB ON PLATFORM

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

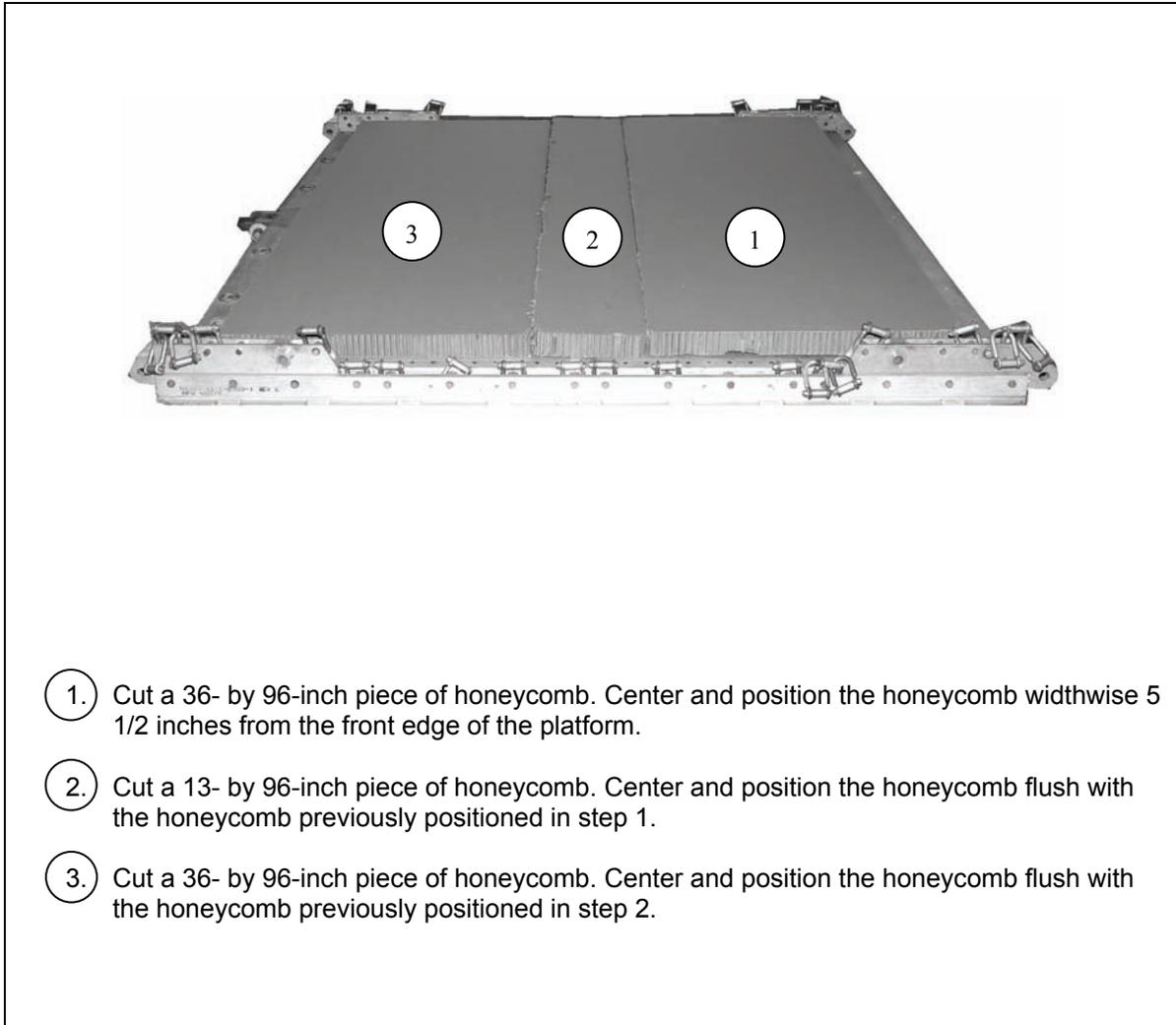


Figure 5-2. Honeycomb Prepared and Placed on Platform

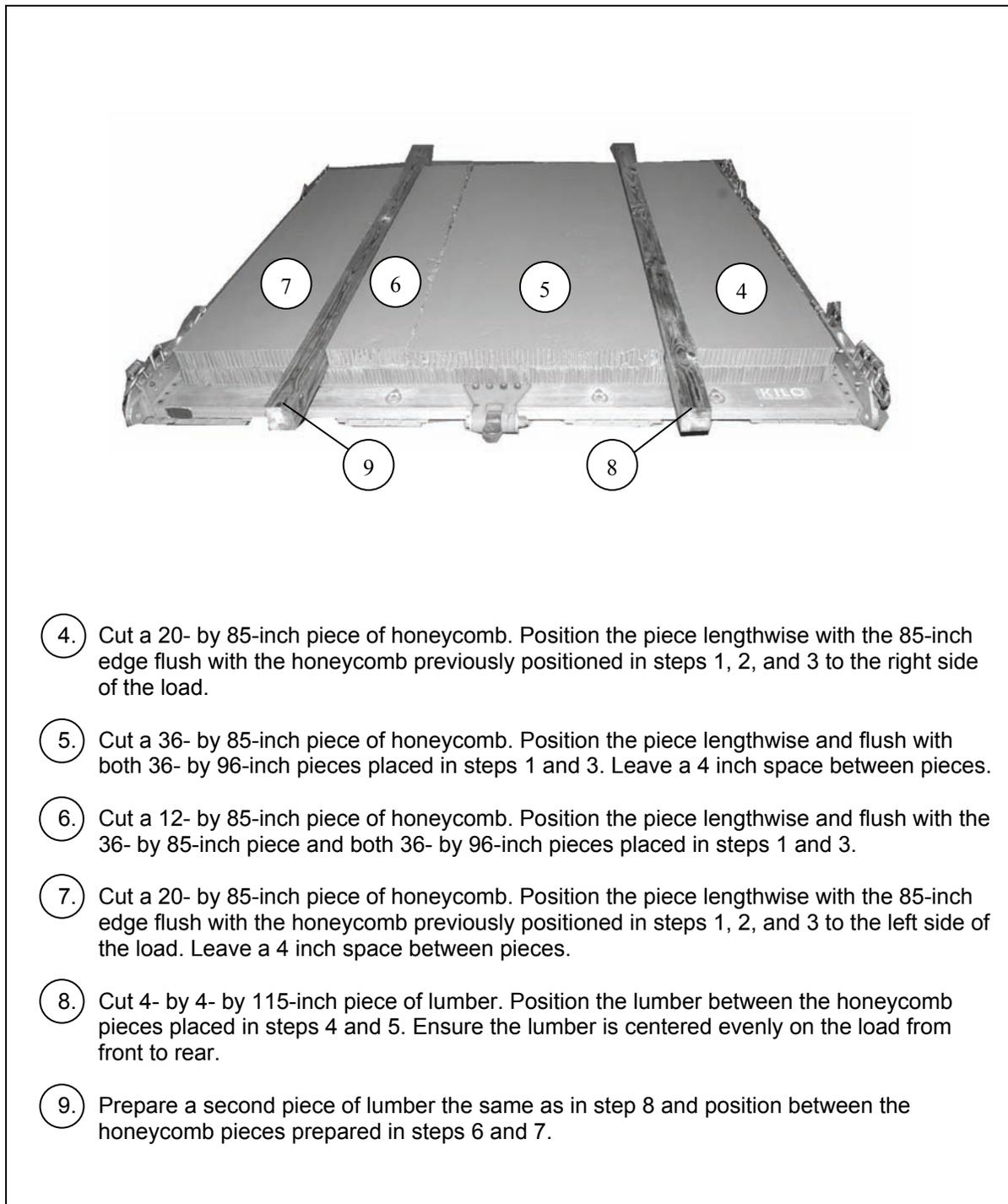


Figure 5-2. Honeycomb Prepared and Placed on Platform (Continued)

PREPARING HONEYCOMB STACKS

5-4. Prepare honeycomb stacks 1 and 2 as shown in Figure 5-3.



Stack Number	Pieces	Width (Inches)	Length (Inches)	Material	Instructions
1 and 2	1	24	48	Honeycomb	Cut a piece to start to form the base.
	2	36	48	Honeycomb	Cut the pieces and position to the outside of the 48- by 24-inch piece of honeycomb.
	2	8	96	Honeycomb	Cut pieces and glue 6 inches from the front and rear on top of the previous step.
	1	96	48	3/4-inch plywood	Glue the plywood on top of the 8- by 96-inch pieces of honeycomb.
	2	8	96	Honeycomb	Cut pieces and glue 6 inches from the front and the rear on top of the plywood.
	1	96	48	3/4-inch plywood	Glue the plywood on top of the 8- by 96-inch pieces of honeycomb.
	2	8	96	Honeycomb	Cut pieces and glue 6 inches from the front and the rear on top of the plywood.
	1	96	48	3/4-inch plywood	Glue the plywood on top of the 8- by 96-inch pieces of honeycomb.
	1	24	48	Honeycomb	Glue centered on top of the 96- by 48-inch plywood.
	2	36	48	Honeycomb	Cut the pieces and position to the outside of the 48- by 24-inch piece of honeycomb.

Figure 5-3. Honeycomb Stacks 1 and 2 Prepared