CHAPTER 13

RIGGING FORWARD AREA SURGICAL TEAM EQUIPMENT ON A 12-FOOT, TYPE V PLATFORM FOR LOW-VELOCITY AIRDROP

13-1. Description of Load

The FAST equipment is rigged as a bulk supply load on a 12-foot type V airdrop platform. These procedures may be used to rig other bulk supply loads consisting of rations, equipment, fuel, lubricants, ammunition or other items of general supply. As load weights can vary widely, the parachute requirements must be computed for each load. Each load must weigh at least 3,780 pounds, but not more than 12,750 pounds. These loads may not be more than 140 inches long, or 100 inches wide.

13-2. Preparing Platform

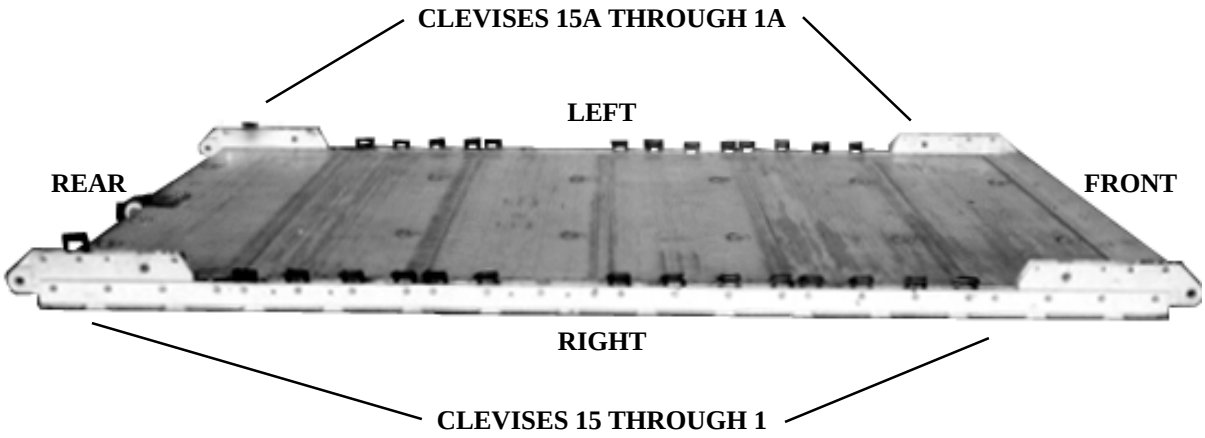
Prepare a 12-foot, type V airdrop platform as given below:

a. Inspecting Platform. Inspect, or assemble and inspect, the platform according to TM 10-1670-268-20&P/TO 13C7-52-22.

b. Installing Tandem Links. Install four tandem links as shown in Figure 13-1.

c. Attaching and Numbering Clevises. Attach and number 30 clevis assemblies as shown in Figure 13-1.

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



Step:

1. Install a tandem link on the front of each platform side rail using holes 1, 2, and 3.

2. Install a tandem link on the rear of each platform side rail using holes 22, 23, and 24.

3. Install a clevis on the third bushing of each rear tandem link.

3. Starting at the front of the platform, install clevises on each platform side rail using the bushings bolted on holes 5, 6, 7, 8, 9, 10, 11, 12, 15, 16, 17, 18, 19, and 20 .

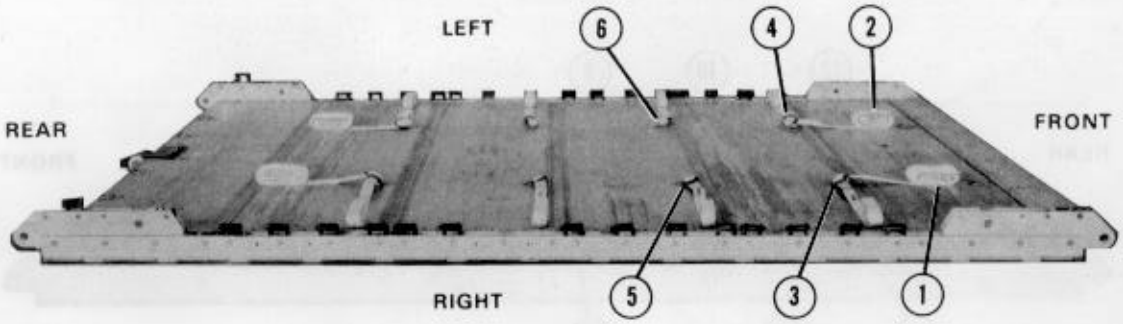
4. Starting at the front of the platform, number the clevises bolted to the right side of the platform from 1 through 15, and those bolted to the left side from 1A through 15A.

5. Label the tie-down rings according to FM 10-500-2/TO 13C7-1-5.

Figure 13-1. Platform prepared

13-3. Positioning Lashings

Use twelve 15-foot tiedown straps, and position the straps on the platform as shown in Figure 13-2.



(1) Pass the free end of a 15-foot tiedown strap through tiedown ring A2 and through its own D-ring. Pull the free end of the strap toward the front of the platform.

(2) Pass the free end of a 15-foot tiedown strap through tiedown ring B2 and through its own D-ring. Pull the free end of the strap toward the front of the platform.

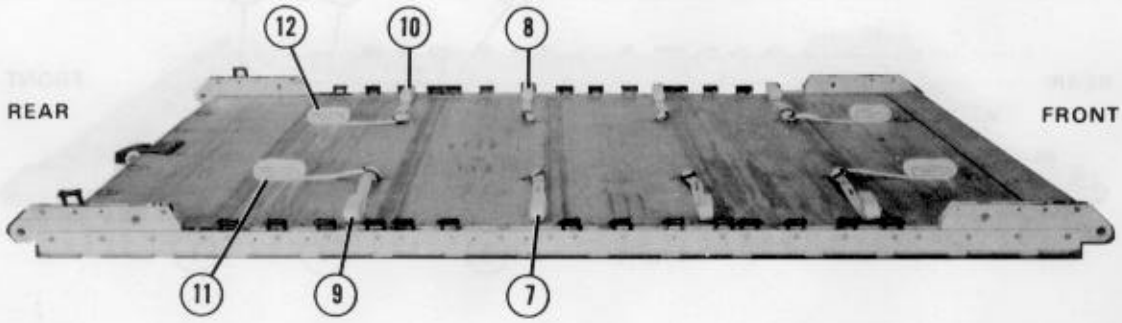
(3) Pass the free end of a 15-foot tiedown strap through tiedown ring A2 and through its own D-ring. Pull the free end of the strap toward the right side of the platform.

(4) Pass the free end of a 15-foot tiedown strap through tiedown ring B2 and through its own D-ring. Pull the free end of the strap toward the left side of the platform.

(5) Pass the free end of a 15-foot tiedown strap through tiedown ring A3 and through its own D-ring. Pull the free end of the strap toward the right side of the platform.

(6) Pass the free end of a 15-foot tiedown strap through tiedown ring B3 and through its own D-ring. Pull the free end of the strap toward the left side of the platform.

Figure 13-2. Lashings positioned



(7) Pass the free end of a 15-foot tiedown strap through tiedown ring A4 and through its own D-ring. Pull the free end of the strap toward the right side of the platform.

(8) Pass the free end of a 15-foot tiedown strap through tiedown ring B4 and through its own D-ring. Pull the free end of the strap toward the left side of the platform.

(9) Pass the free end of a 15-foot tiedown strap through tiedown ring A5 and through its own D-ring. Pull the free end of the strap toward the right side of the platform.

(10) Pass the free end of a 15-foot tiedown strap through tiedown ring B5 and through its own D-ring. Pull the free end of the strap toward the left side of the platform.

(11) Pass the free end of a 15-foot tiedown strap through tiedown ring A5 and through its own D-ring. Pull the free end of the strap toward the rear of the platform.

(12) Pass the free end of a 15-foot tiedown strap through tiedown ring B5 and through its own D-ring. Pull the free end of the strap toward the rear of the platform.

Figure 13-2. Lashings positioned (continued)

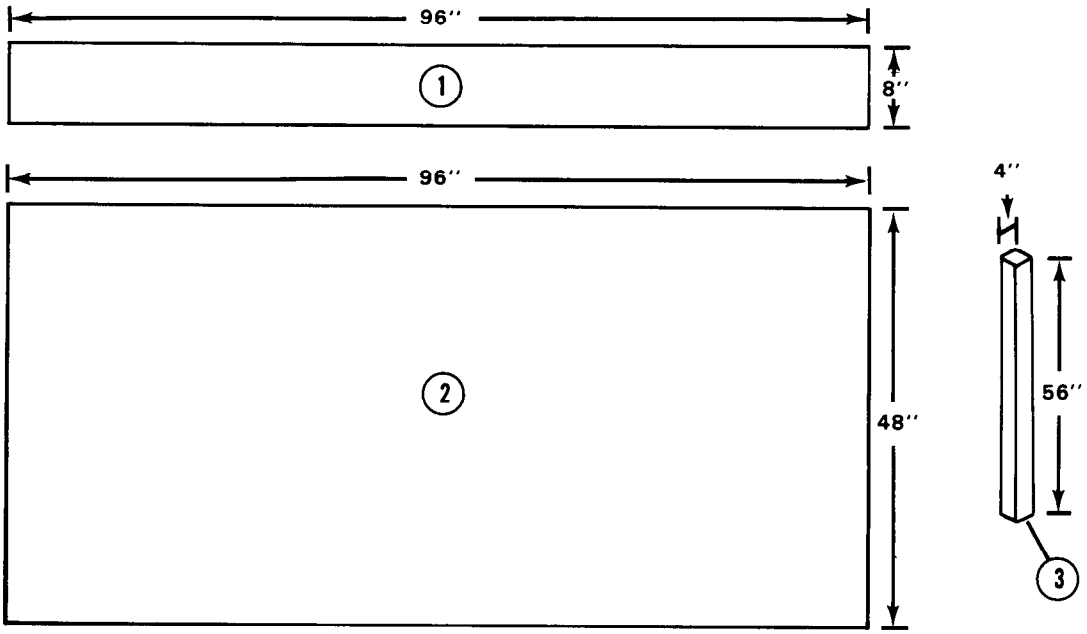
13-4. Constructing and Forming Storage Box Components

Construct the individual components of a storage box as shown in Figures 13-3 through 13-5. Assemble the individual components of the front and rear of the box and the sides of the box as shown in Figure 13-6 for later assembly on the platform.

Notes:

a. These drawings are not drawn to scale.

b. Circled numbers refer to item numbers.



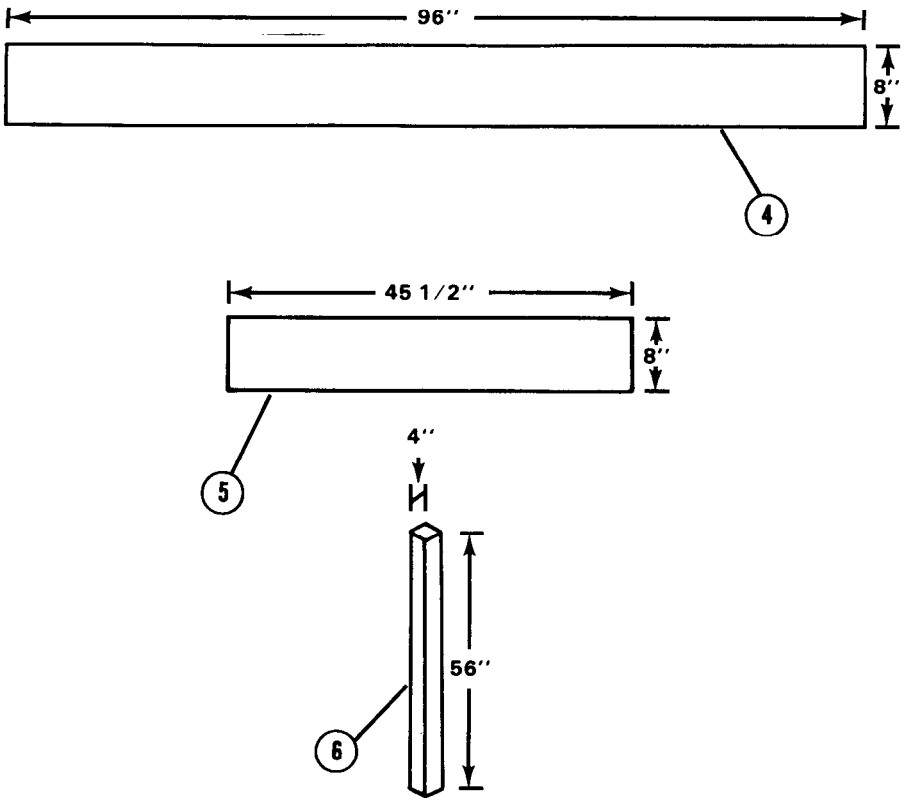
Item Number	Pieces	Width (Inches)	Length (Inches)	Material
(1)	2	8	96	3/4-inch plywood
(2)	2	48	96	3/4-inch plywood
(3)	6	4	56	2- by 4-inch lumber

Figure 13-3. Front and rear components of storage box constructed

Notes:

a. These drawings are not drawn to scale.

b. Circled numbers refer to item numbers.



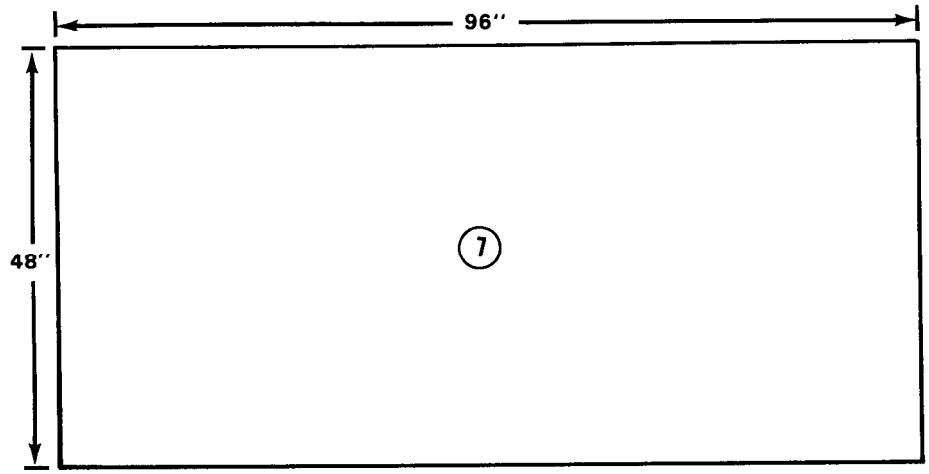
Item Number	Pieces	Width (Inches)	Length (Inches)	Material
(4)	2	8	96	3/4-inch plywood
(5)	2	8	45 1/2	3/4-inch plywood
(6)	8	4	56	2- by 4-inch lumber

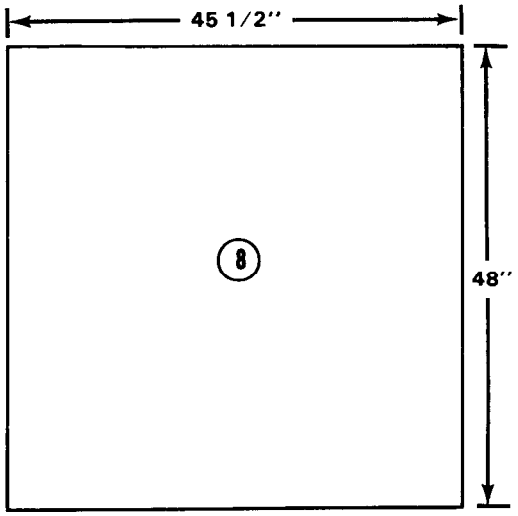
Figure 13-4. Side components of storage box constructed

Notes:

a. These drawings are not drawn to scale.

b. Circled numbers refer to item numbers.





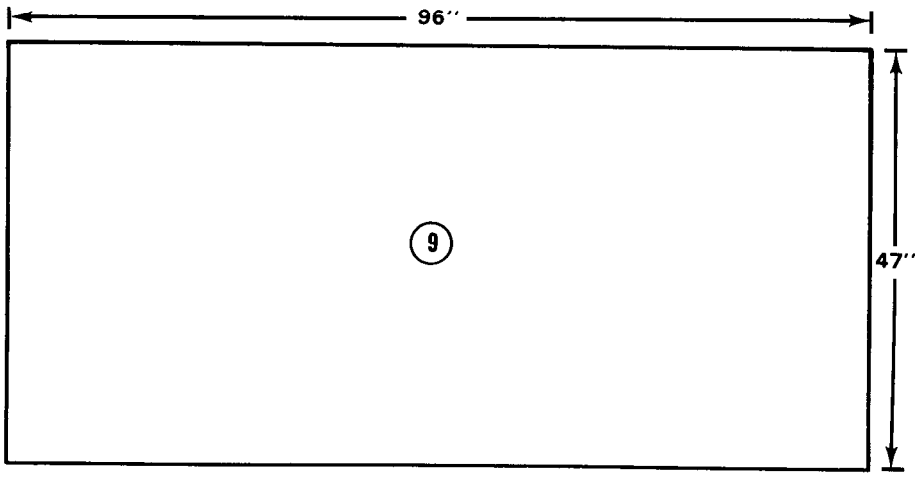
Item Number	Pieces	Width (Inches)	Length (Inches)	Material
(7)	2	48	96	3/4-inch plywood
(8)	2	48	45 1/2	3/4-inch plywood

Figure 13-4. Side components of storage box constructed (continued)

Notes:

a. This drawing is not drawn to scale.

b. Circled numbers refer to item numbers.



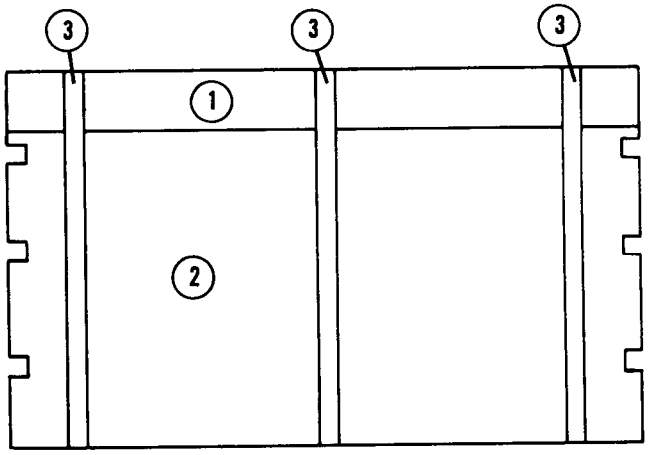
Item Number	Pieces	Width (Inches)	Length (Inches)	Material
(9)	3	47	96	3/4-inch plywood

Figure 13-5. Top components of storage box constructed

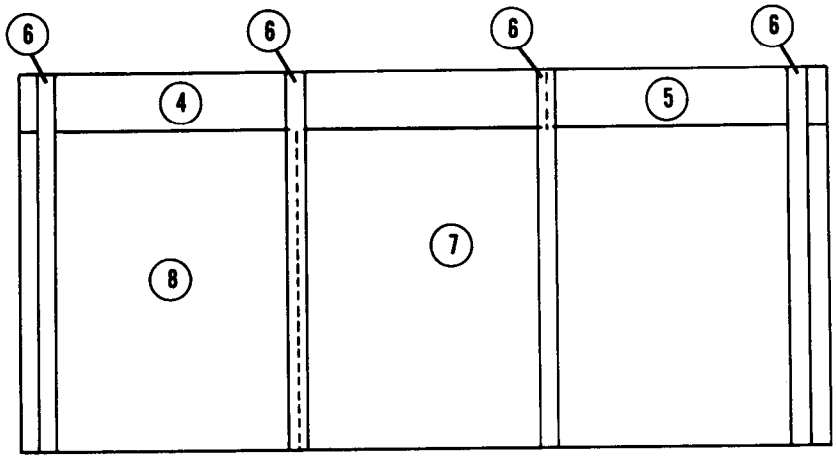
Notes:

a. These drawings are not drawn to scale.

b. Make three evenly spaced 2-inch cutouts on each 48-inch side of the plywood used for the front and rear components before assembling the box.



FRONT AND REAR OF STORAGE BOX



SIDES OF STORAGE BOX

Step:

1. Nail the components of the storage box together with sixteen-penny nails to form the sides, front, and rear.
2. Bend the ends of the nails to hold the components in place securely.

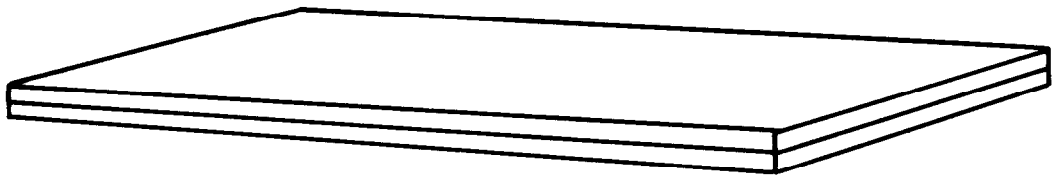
Figure 13-6. Front, rear, and sides of storage box constructed

13-5. Preparing Honeycomb Stacks

Prepare the honeycomb stacks as shown in Figure 13-7.

Note:

This drawing is not drawn to scale.

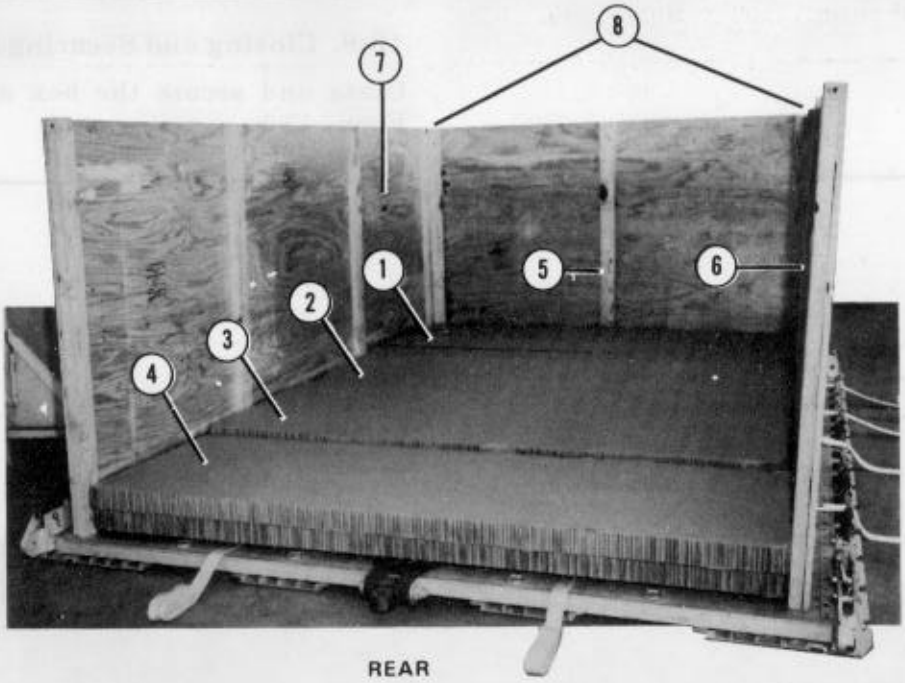


Stack Number	Pieces	Width (Inches)	Length (Inches)	Material	Instructions
1	2	96	36	Honeycomb	Place one piece on top of the other.
2	2	96	36	Honeycomb	Same as stack 1.
3	2	96	36	Honeycomb	Same as stack 1.
4	2	96	36	Honeycomb	Same as stack 1.

Figure 13-7. Honeycomb stacks prepared

13-6. Positioning Honeycomb Stacks and Assembling Sides of Storage Box

Position and assemble the front and sides of the storage box on the platform as shown in Figure 13-8.



(1) Center stack 1 on the platform with the 96-inch edge of the honeycomb 1 1/2 inches from the front edge of the platform.

(2) Center stack 2 on the platform with one 96-inch edge of the honeycomb against stack 1.

(3) Center stack 3 on the platform with one 96-inch edge of the honeycomb against stack 2.

(4) Center stack 4 on the platform with one 96-inch edge of the honeycomb against stack 3.

(5) Center the front of the storage box on the platform against the front of stack 1.

(6) Place the right side of the storage box on the platform even with the honeycomb stacks and the front of the storage box.

(7) Place the left side of the storage box on the platform even with the honeycomb stacks and the front of the storage box.

(8) Nail the sides of the storage box to the front of the storage box with sixteen-penny nails.

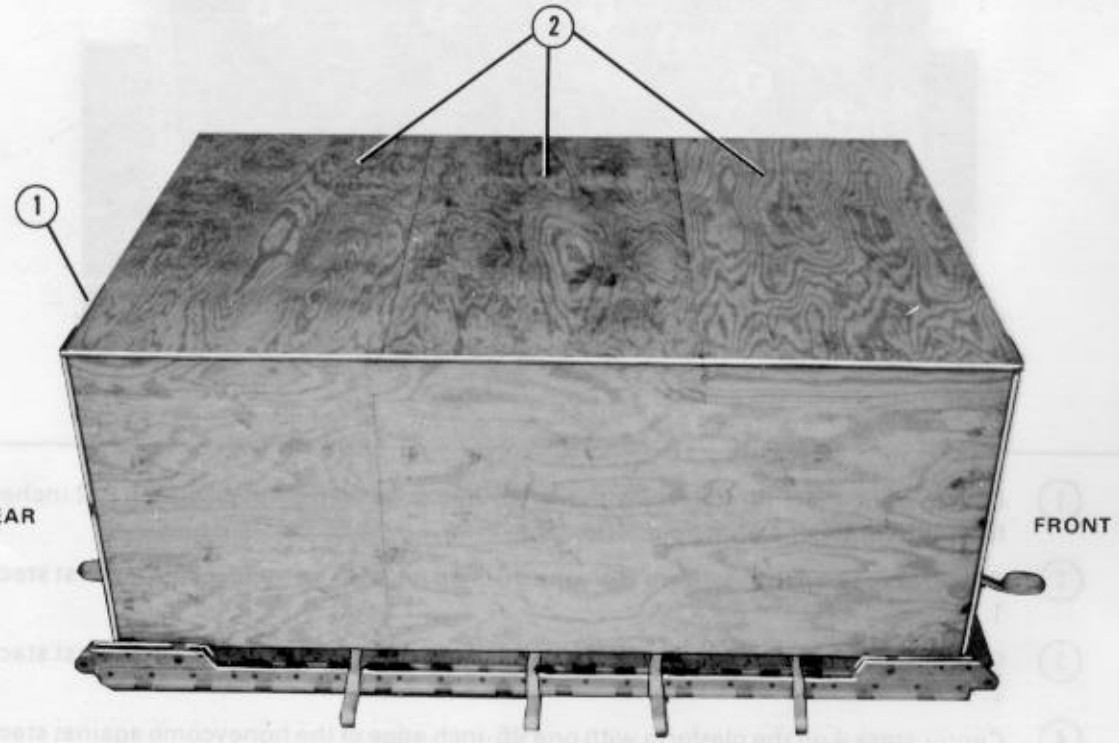
Figure 13-8. Honeycomb stacks positioned and front and sides of the storage box assembled

13-7. Positioning Drop Items

Position the drop items in the storage box on the honeycomb stacks. Distribute the weight of the drop items evenly on the honeycomb stacks. Pad the drop items as necessary, with honeycomb and cellulose wadding.

13-8. Closing and Securing the Box

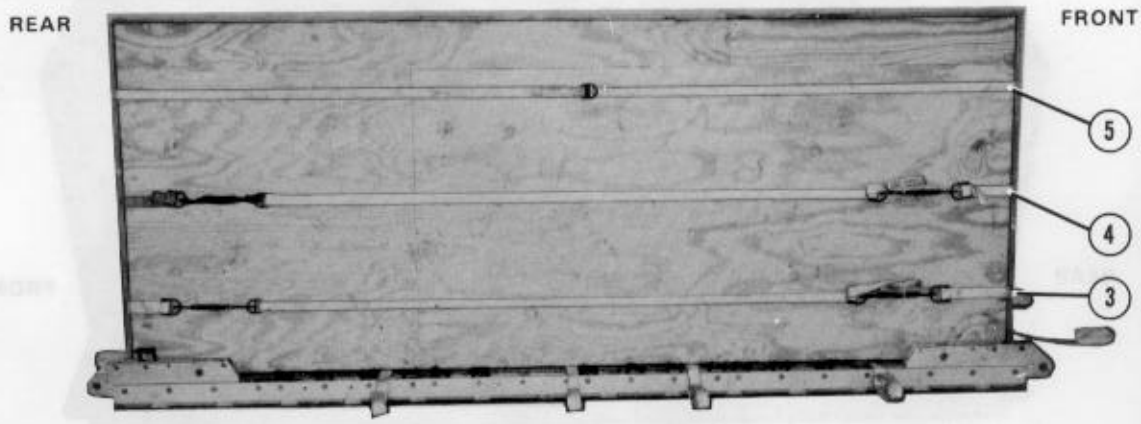
Close and secure the box as shown in Figure 13-9.



(1) Center the rear of the storage box on the platform against the rear of stack 4. Nail the sides of the box to the rear of the box with sixteen-penny nails.

(2) Place three 3/4- by 47- by 96-inch pieces of plywood side by side on top of the box. Nail each 47- by 96-inch piece of plywood to the sides of the box.

Figure 13-9. Box closed and secured

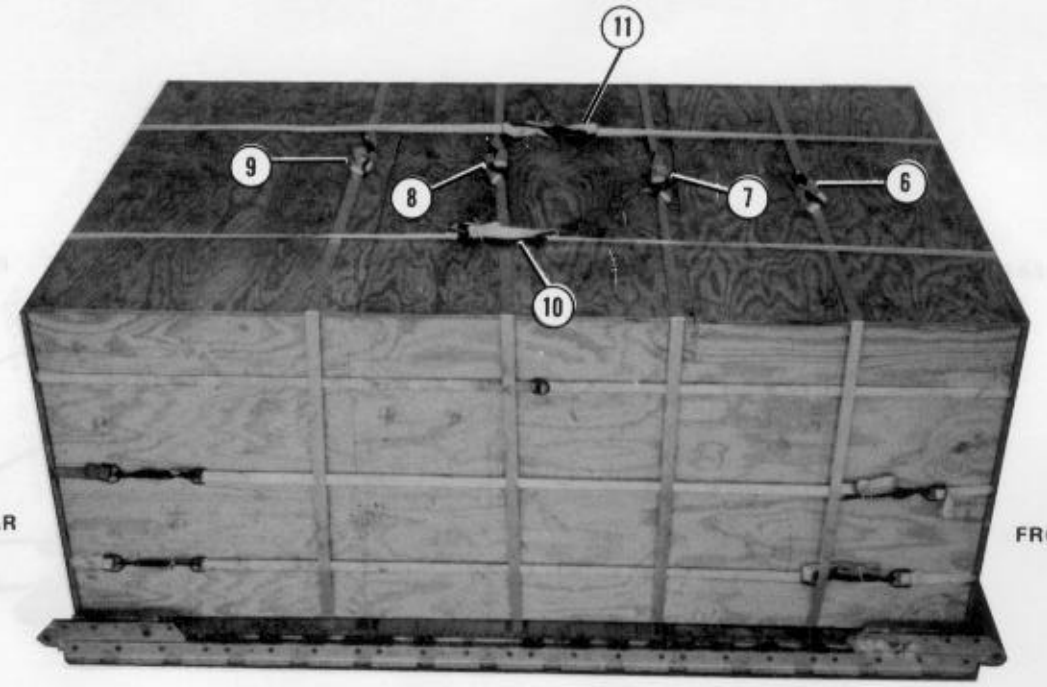


(3) Form a 30-foot tiedown strap according to FM 10-500/TO 13C7-1-5. Fit a D-ring on each end of the strap. Pass the strap around the load and through the bottom cutouts. Fit a D-ring on the free end of a 15-foot tiedown strap. Place the 15-foot strap against the storage box between the ends of the 30-foot strap. Hook each end of the 15-foot tiedown strap to the 30-foot tiedown strap with a load binder.

(4) Install a 30-foot tiedown strap and a 15-foot tiedown strap around the load and through the center cutouts as in step 3.

(5) Install a 30-foot tiedown strap and a 15-foot tiedown strap around the load and through the top cutouts as in step 3.

Figure 13-9. Box closed and secured (continued)



(6) Pass the ends of the straps attached to tiedown rings A2 and B2 to the top of the load. Hook the ends of the straps together with two D-rings and a load binder.

(7) Pass the ends of the straps attached to tiedown rings A3 and B3 to the top of the load. Hook the ends of the straps together with two D-rings and a load binder.

(8) Pass the ends of the straps attached to tiedown rings A4 and B4 to the top of the load. Hook the ends of the straps together with two D-rings and a load binder.

(9) Pass the ends of the straps attached to tiedown rings A5 and B5 to the top of the load. Hook the ends of the straps together with two D-rings and a load binder.

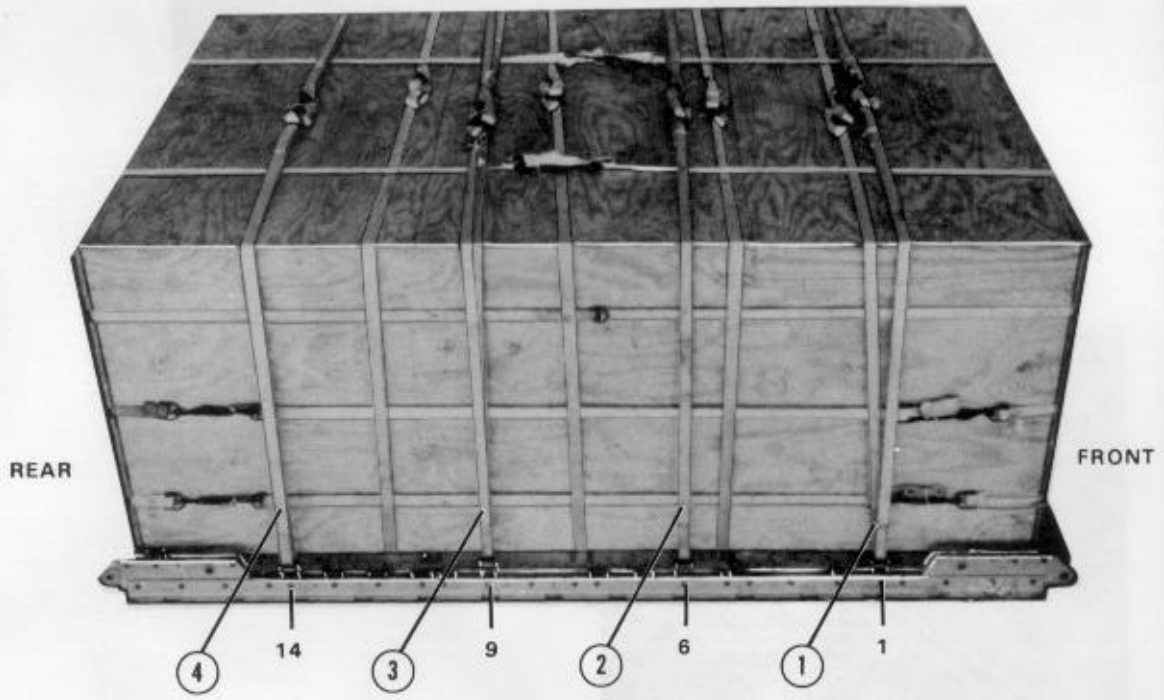
(10) Pass the ends of the straps attached to tiedown rings A2 and A5 to the top of the load. Hook the ends of the straps together with two D-rings and a load binder.

(11) Pass the ends of the straps attached to tiedown rings B2 and B5 to the top of the load. Hook the ends of the straps together with two D-rings and a load binder.

Figure 13-9. Box closed and secured (continued)

13-9. Installing Lashings

Install the lashings as shown in Figure 13-10.



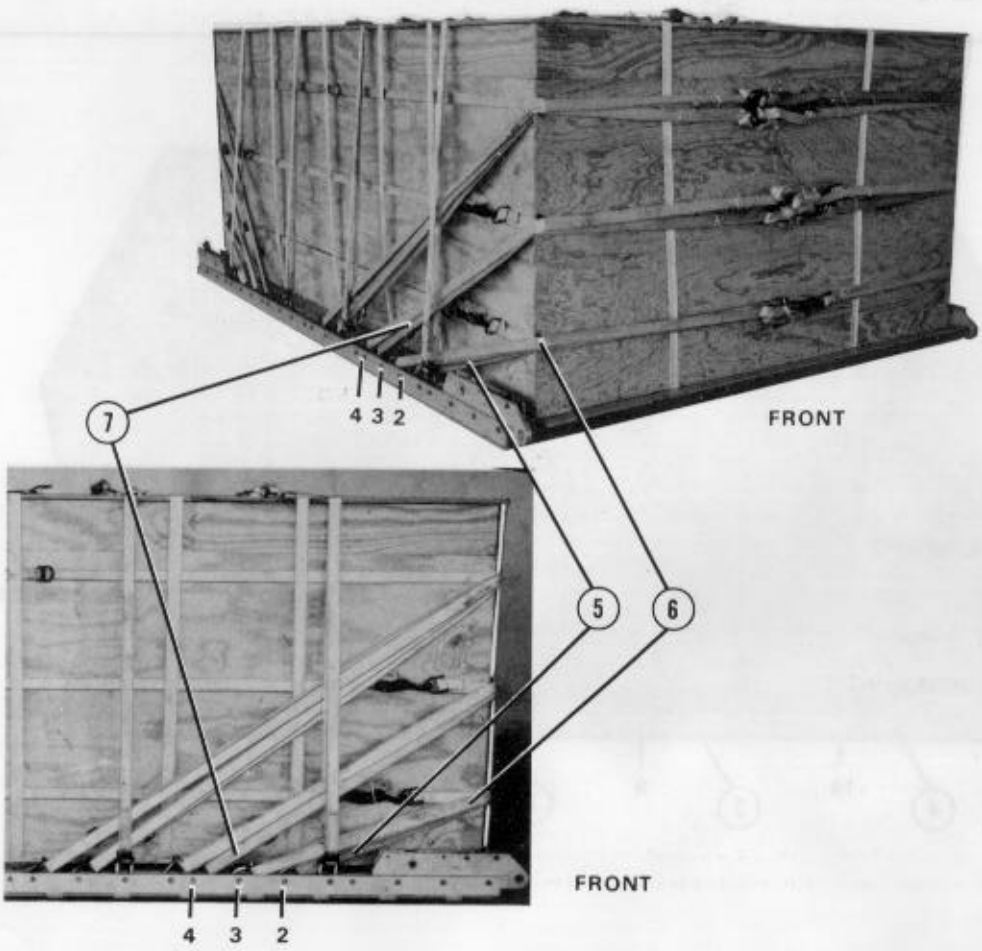
(1) Pass the free end of a 15-foot tiedown strap through clevis 1. Even the ends of the strap and place them on top of the load. Pass the free end of a 15-foot tiedown strap through clevis 1A. Even the ends of the strap and place them on top of the load. Secure the ends of the 15-foot tiedown straps with two D-rings and two load binders.

(2) Pass a 15-foot tiedown strap through clevises 6 and 6A and secure the straps as in step 1.

(3) Pass a 15-foot tiedown strap through clevises 9 and 9A and secure the straps as in step 1.

(4) Pass a 15-foot tiedown strap through clevises 14 and 14A and secure the straps as in step 1.

Figure 13-10. Lashings installed

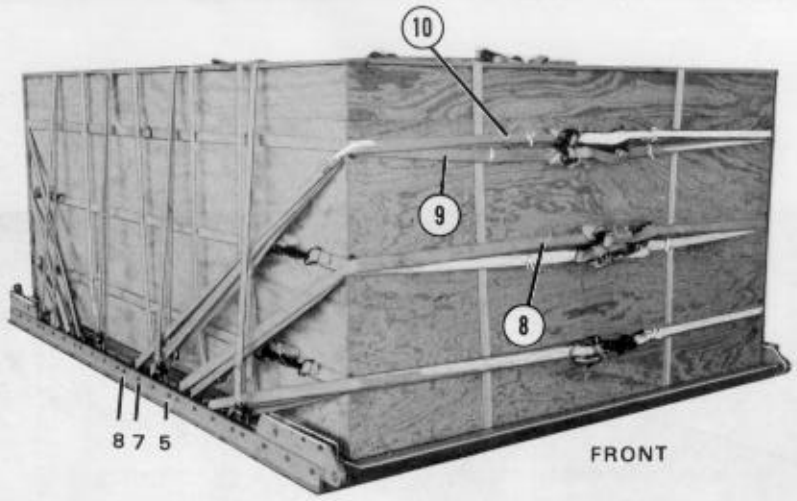


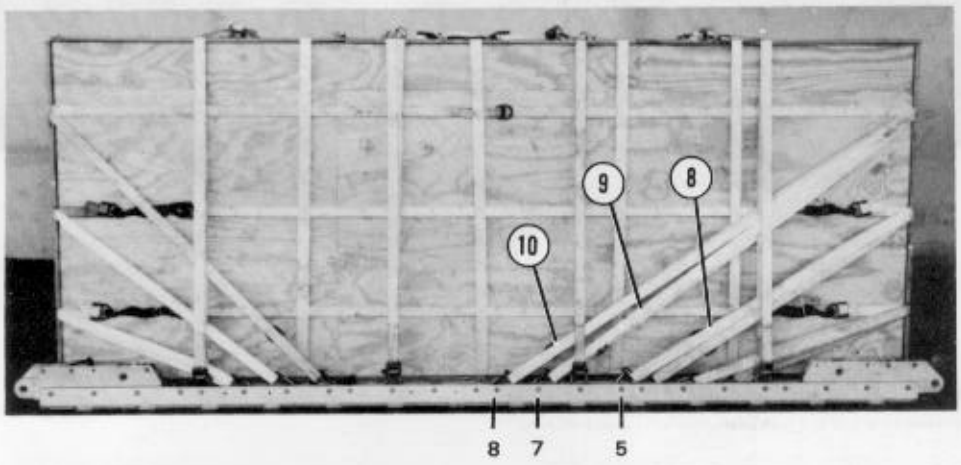
(5) Form a 30-foot tiedown strap. Pass the free ends of the strap through the lower cutouts in the front of the storage box, through clevises 2 and 2A, and back through the lower cutouts to the front of the storage box. Secure the free ends of the strap with two D-rings and a load binder.

(6) Form a 30-foot tiedown strap. Pass the free ends of the strap through the lower cutouts in the front of the storage box, through clevises 3 and 3A, and back through the lower cutouts to the front of the storage box. Secure the free ends of the strap with two D-rings and a load binder.

(7) Form a 30-foot tiedown strap. Pass the free ends of the strap through the center cutouts in the front of the storage box, through clevises 4 and 4A, and back through the center cutouts to the front of the storage box. Secure the free ends of the strap with two D-rings and a load binder.

Figure 13-10. Lashings installed (continued)



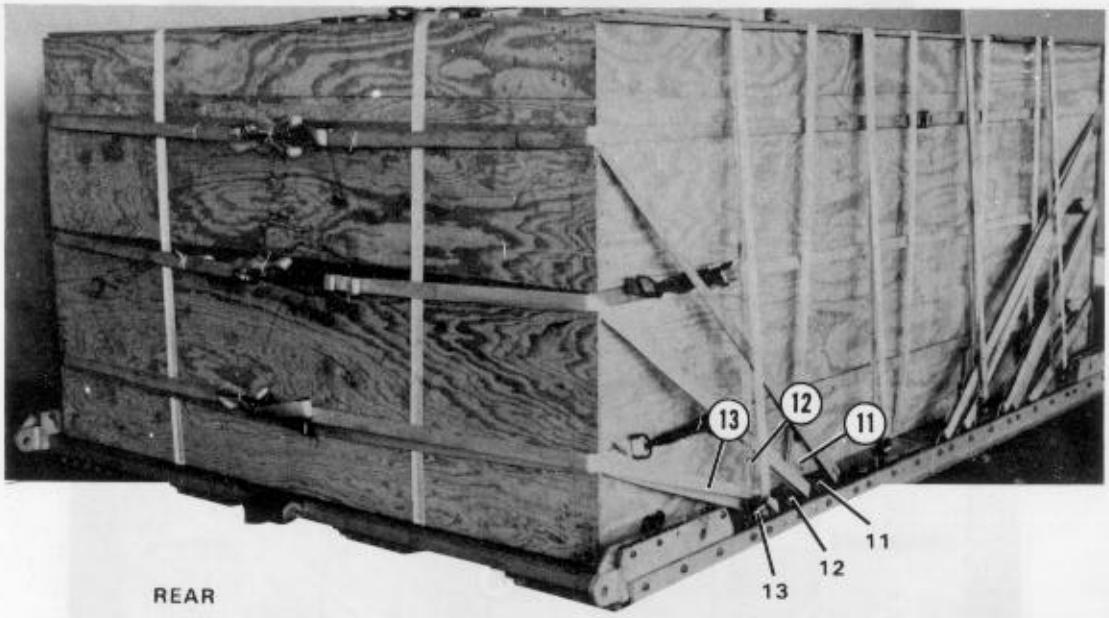


(8) Form a 30-foot tiedown strap. Pass the free ends of the strap through the center cutouts in the front of the storage box, through clevises 5 and 5A, and back through the center cutouts to the front of the storage box. Secure the free ends of the strap with two D-rings and a load binder.

(9) Form a 30-foot tiedown strap. Pass the free ends of the strap through the top cutouts in the front of the storage box, through clevises 7 and 7A, and back through the top cutouts to the front of the storage box. Secure the free ends of the strap with two D-rings and a load binder.

(10) Form a 30-foot tiedown strap. Pass the free ends of the strap through the top cutouts in the front of the storage box, through clevises 8 and 8A, and back through the top cutouts to the front of the storage box. Secure the free ends of the strap with two D-rings and a load binder.

Figure 13-10. Lashings installed (continued)



(11) Form a 30-foot tiedown strap. Pass the free ends of the strap through the top cutouts in the rear of the storage box, through clevises 11 and 11A, and back through the top cutouts to the rear of the storage box. Secure the free ends of the strap with two D-rings and a load binder.

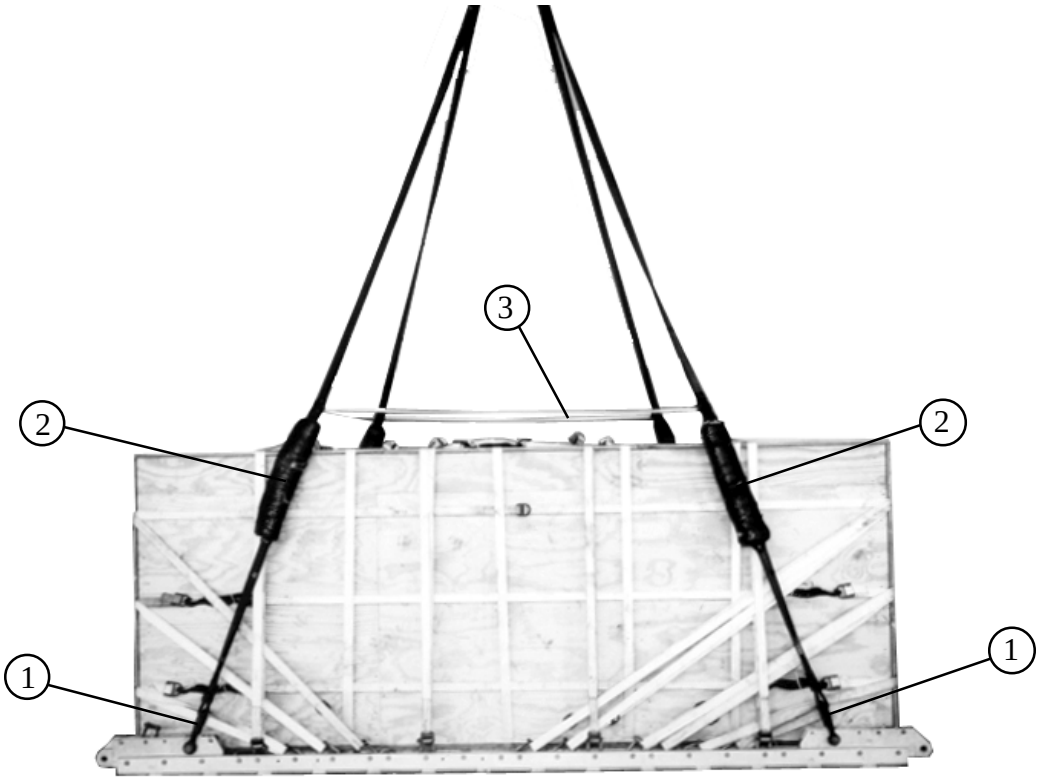
(12) Form a 30-foot tiedown strap. Pass the free ends of the strap through the center cutouts in the rear of the storage box, through clevises 12 and 12A, and back through the center cutouts to the rear of the storage box. Secure the free ends of the strap with two D-rings and a load binder.

(13) Form a 30-foot tiedown strap. Pass the free ends of the strap through the lower cutouts in the rear of the storage box, through clevises 13 and 13A, and back through the lower cutouts to the rear of the storage box. Secure the free ends of the strap with two D-rings and a load binder.

Figure 13-10. Lashings installed (continued)

13-10. Installing Suspension Slings and Deadman's Tie

Install the suspension slings and deadman's tie according to FM 10-500-2/TO 13C7-1-5, and as shown in Figure 13-11.



1. Attach a 16-foot (2-loop), type XXVI nylon webbing sling to each tandem link with a large clevis assembly. Raise the slings.

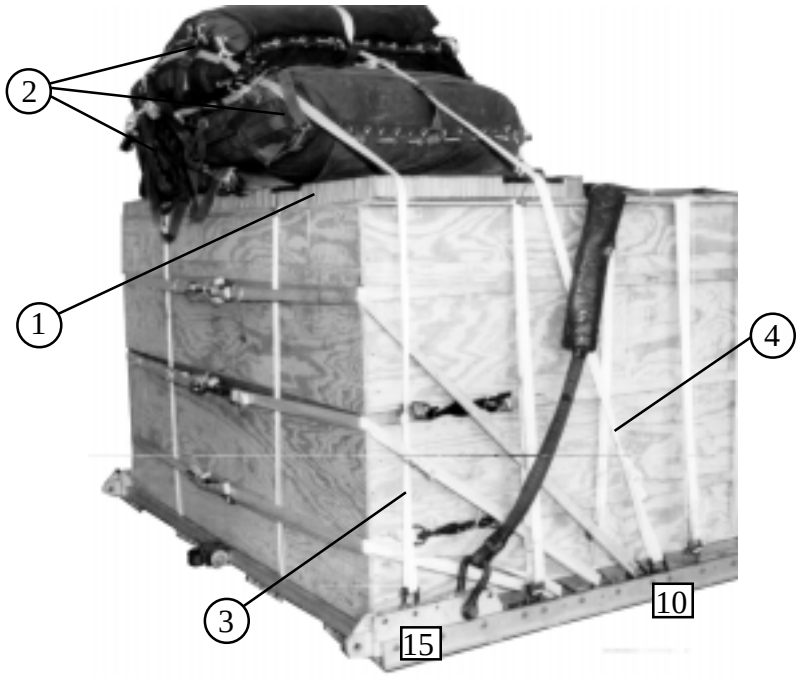
2. Pad each suspension sling with a 9- by 24-inch piece of felt from a point 44 inches above the suspension clevis. Tape the felt 2 inches above and below the padding.

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

Figure 13-11. Suspension slings installed and safetied

13-11. Installing Parachutes

Compute the parachute requirements for the load being rigged. Select the correct number of G-11 cargo parachutes. The load in Figure 13-12 shows three G-11B cargo parachutes. Install the parachutes according to FM 10-500-2/TO 13C7-1-5 and as shown in Figure 13-12.

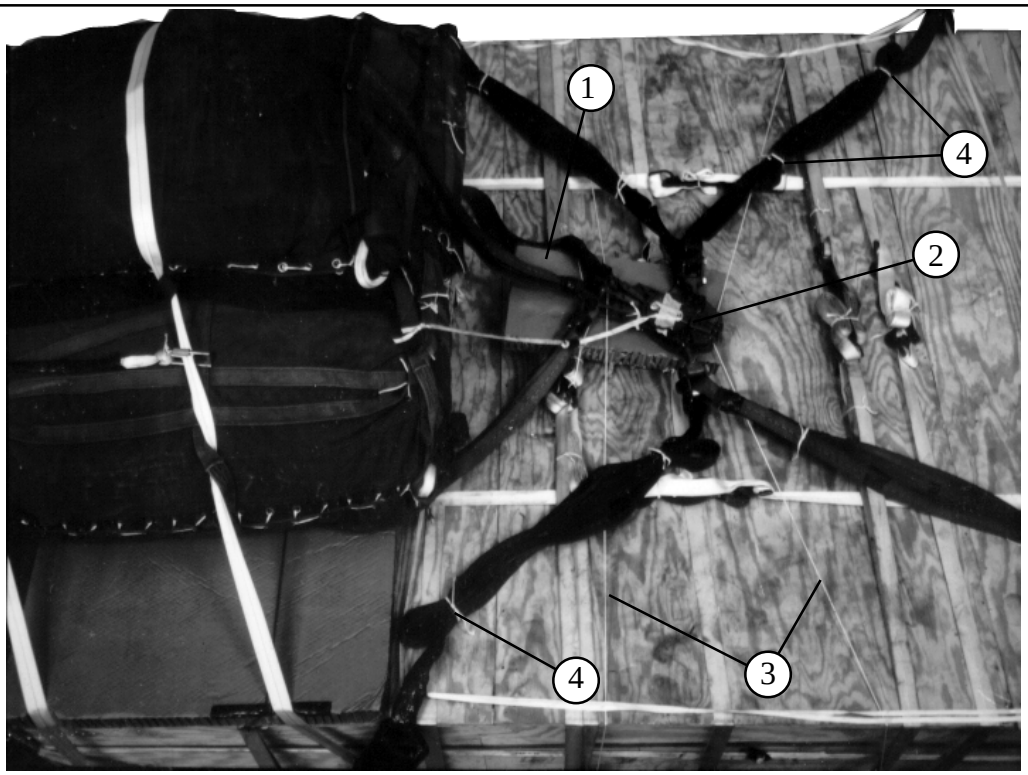


1. Place a 96- by 36-inch piece of honeycomb at the rear of the load. Tie the honeycomb in place with type III nylon cord. Tape the honeycomb where the cord passes.
2. Install three G-11B cargo parachutes on the honeycomb.
3. Tie the rear parachute restraint strap to clevises 15 and 15A.
4. Tie the front parachute restraint strap to clevises 10 and 10A.

Figure 13-12. Parachutes installed

13-12. Installing Release System

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



(1) Center a 12- by 24-inch piece of honeycomb 12 inches in front of the parachutes. Tie the honeycomb in place with a length of type III nylon cord.

(2) Place the M-1 release assembly on the honeycomb and attach the suspension slings and riser extensions.

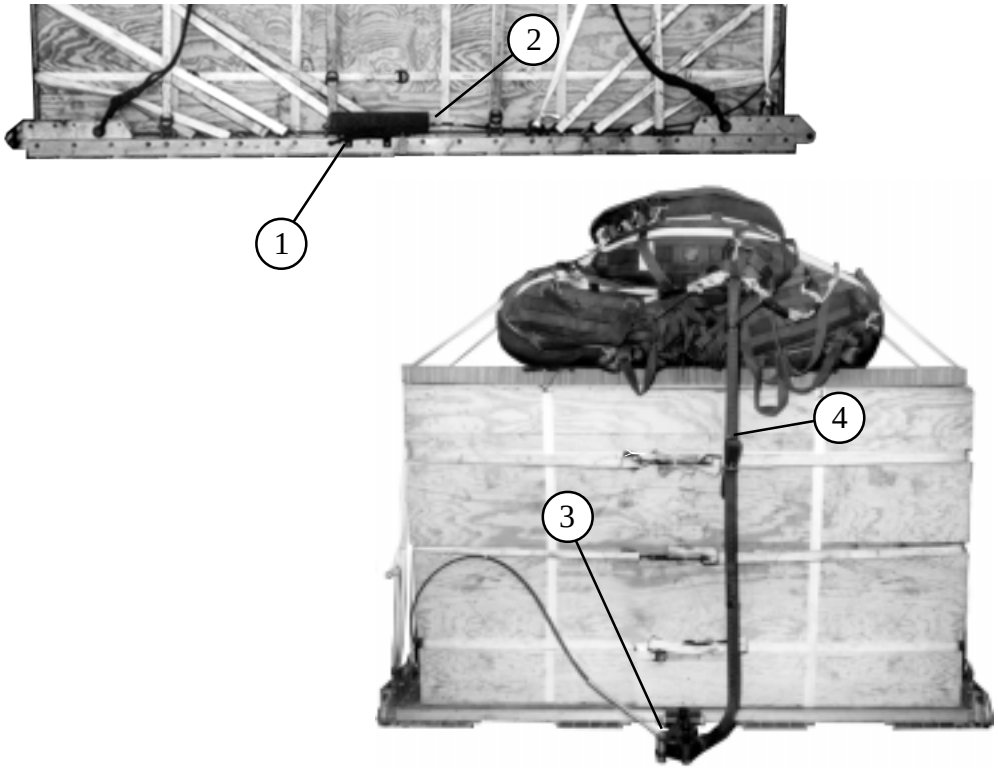
(3) Safety the top and bottom of the release to convenient points on the load with type III nylon cord.

(4) S-fold the suspension slings and tie the folds with type I, 1/4-inch cotton webbing.

Figure 13-13. Release system installed

13-13. Installing Extraction System

Install the EFTC extraction system according to FM 10-500-2/TO 13C7-1-5, and as shown in Figure 13-14.



1. Install the actuator brackets to the rear mounting holes on the left platform side rail.
2. Attach a 12-foot release cable to the actuator. Install the actuator to the brackets and run the cable to the rear.
3. Install the latch assembly to the extraction bracket. Attach the release cable to the extraction bracket.
4. Install a 9-foot (2-loop), type XXVI nylon webbing sling as the deployment line. S-fold the slack and tie the folds with Type I, 1/4-inch cotton webbing.

Figure 13-14. Extraction system installed

13-14. Installing Provisions for Emergency Restraints

Select and install provisions for emergency restraints according to the emergency restraint requirements table in FM 10-500-2/TO 13C7-1-5.

13-15. Positioning Extraction Parachute

Select the extraction parachute and extraction line needed using the extraction line requirements table in FM 10-500-2/TO 13C7-1-5. Place the extraction parachute and extraction line on the load for installation in the aircraft.

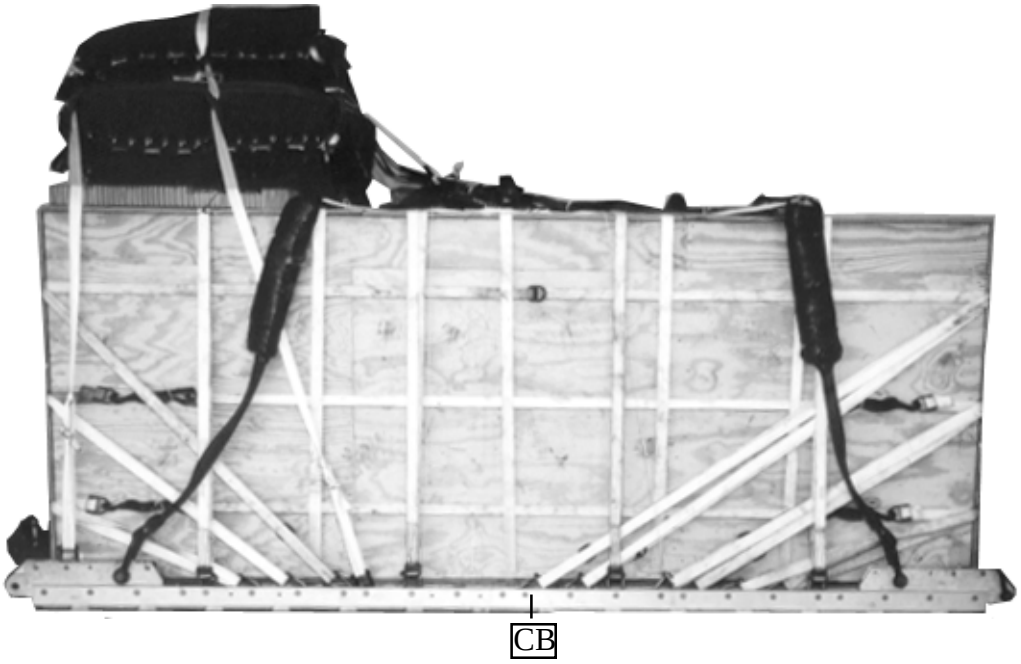
13-16. Marking Rigged Load

Mark the rigged load according to FM 10-500-2/TO 13C7-1-5 and as shown in Figure 13-15.

13-17. Equipment Required

Use the equipment listed in Table 13-1 to rig this load.

CAUTION
Make the final rigger inspection required by FM 10-500-2/TO 13C7-1-5 before the load leaves the rigging site.



Rigged Load Data

Weight:	Load shown	12,000 pounds
	Maximum allowable	12,750 pounds
Height		92 inches
Width		108 inches
Length		168 inches
Overhang:	Front	0 inches
	Rear	0 inches
CB (from front edge of platform)		84 inches
Extraction System (adds 18 inches to length of platform)		EFTC

Figure 13-15. FAST equipment rigged on a 12-foot platform for low-velocity airdrop

Table 13-1. Equipment required for rigging FAST equipment on a 16-foot type V platform for low-velocity airdrop

National Stock Number	Item	Quantity
8040-00-273-8713	Adhesive paste, 1-gal	As required
4030-00-090-5354	Clevis, suspension, 1-in (large)	5
4020-00-240-2146	Cord, nylon, type III, 550-lb	As required
1670-00-434-5783	Coupling, airdrop, extraction force transfer with cable, 12-ft	1
	Cover:	
1670-00-360-0328	Clevis, large	1
1670-00-360-0329	Link, type IV	7
8305-00-958-3685	Felt, 1/2-in thick	As required
1670-01-183-2678	Leaf, extraction line (line bag)	2
	Line, drogue (for C-17)	
1670-01-064-4452	60-ft (1-loop), type XXVI	1
	Line, extraction	
1670-01-062-6313	For C-130: 60-ft (3-loop), type XXVI	1
1670-01-107-7651	For C-141: 140-ft (3-loop), type XXVI	1
1670-01-107-7652	For C-5: 160-ft (1-loop), type XXVI	1
1670-01-107-7651	For C-17: 140-ft (3-loop), type XXVI	1
	Link assembly:	
1670-00-783-5988	Type IV	7
	Two-point, 3 3/4-in	
5306-00-435-8994	Bolt, 1-in diam, 4 in long	2
5310-00-232-5165	Nut, 1-in, hexagonal	2
1670-00-003-1953	Plate, side, 3 3/4-in	2
5365-00-007-3414	Spacer, large	2
5510-00-220-6146	Lumber, 2- by 4- by 60-in	14
5315-00-010-4659	Nail, steel wire, common, 8d	As required

Table 13-1. Equipment required for rigging FAST equipment on a 16-foot type V platform for low-velocity airdrop (continued)

National Stock Number	Item	Quantity
1670-00-753-3928	Pad, energy-dissipating, honeycomb, 3- by 36- by 96-in	10 sheets
	Parachute:	
1670-01-016-7841	Cargo, G-11B	3
1670-01-063-3716	Cargo extraction, 22-ft	1
1670-01-063-3715	Drogue, 15-ft (for C-17)	1
	Platform, airdrop, type V, 12-foot	
1670-01-353-8425	Bracket assembly, coupling	(1)
1670-01-162-2372	Clevis assembly, type V	(30)
1670-01-353-8424	Extraction bracket assembly	(1)
1670-01-162-2381	Link, tandem, suspension link assembly	(4)
5530-00-128-4981	Plywood, 3/4- by 48- by 96-in	8 sheets
1670-01-097-8816	Release, cargo parachute, M-1	1
	Sling, cargo airdrop	
	For suspension:	
1670-01-063-7761	16-ft (2-loop), type XXVI nylon webbing	4
	For deployment:	
1670-01-062-6304	9-ft (2-loop), type XXVI nylon webbing	1
	For riser extension:	
1670-01-062-6302	20-ft (2-loop), type XXVI nylon webbing	6
5340-00-040-8219	Strap, parachute release, multicut	2
7510-00-266-5016	Tape, adhesive, 2-in	As required
1670-00-937-0271	Tie-down assembly, 15-ft	69
	Webbing:	
8305-00-268-2411	Cotton, 1/4-in, type	As required
8305-00-082-5752	Nylon, tubular, 1/2-in	As required
8305-00-261-8585	Type VIII	As required