
Section IV

RIGGING MASS SUPPLY BOX

15-49. Description of Load

Two mass supply boxes are rigged for low-velocity airdrop on a 16-foot, type V airdrop platform. Loads may include any bulk items of general supply that can be packed into the box without shifting of the load. FM 10-500-2/TO 13C7-1-5 shows weight limitations and parachute requirements.

15-50. Preparing Platform

Prepare a 16-foot, type V airdrop platform as described below.

a. *Inspecting Platform.* Inspect, or assemble and inspect, the 16-foot, type V airdrop platform

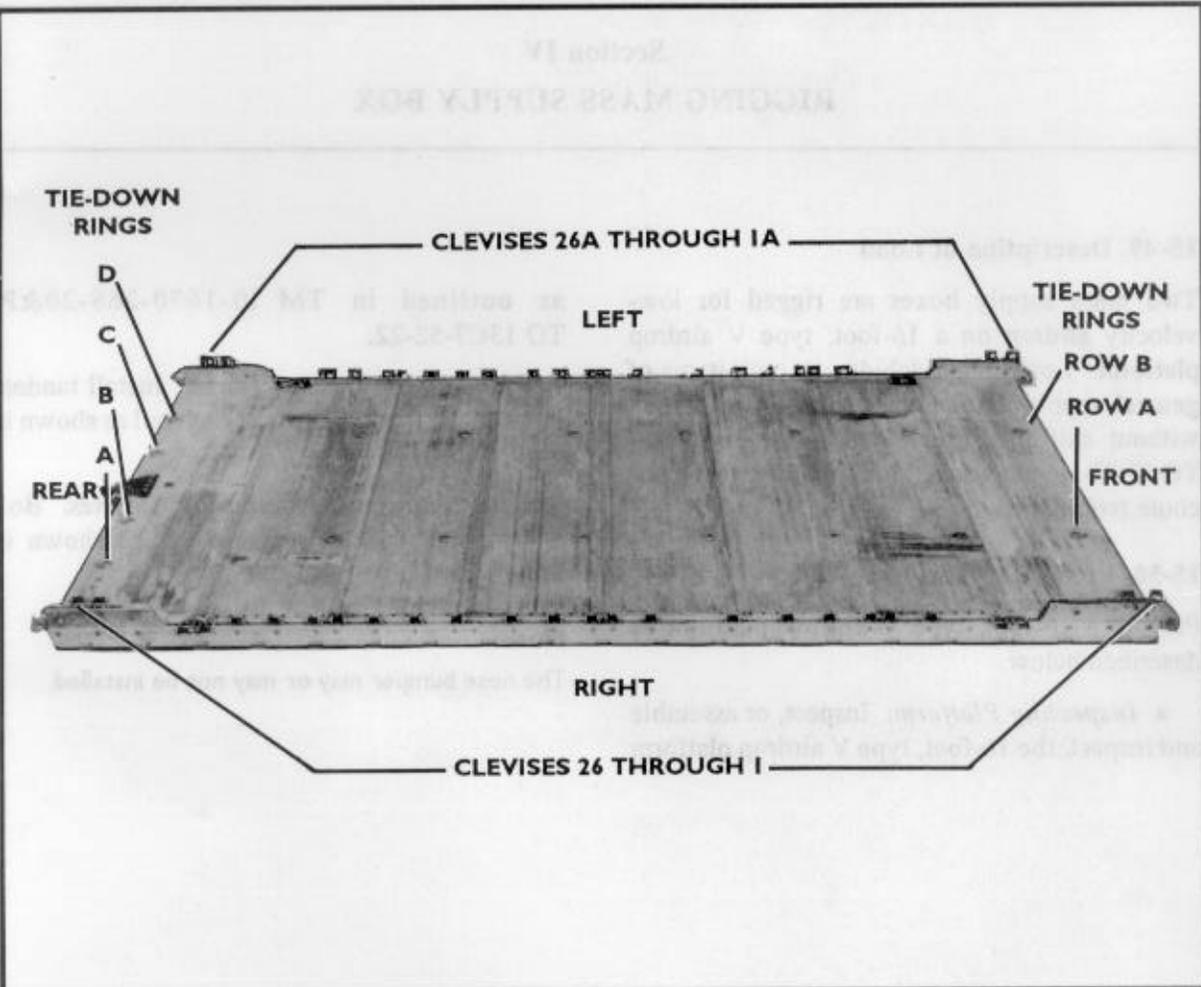
as outlined in TM 10-1670-268-20&P/TO 13C7-52-22.

b. *Installing Tandem Links.* Install tandem links on the front and rear of each rail as shown in Figure 15-41.

c. *Installing and Numbering Clevises.* Bolt and number 56 clevis assemblies as shown in Figure 15-41.

Note:

The nose bumper may or may not be installed.



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 30, 31, and 32.
3. Install clevises on bushings 1 and 2 of each front tandem link.
4. Install clevises on bushings 2 and 3 of each rear tandem link.
5. Starting at the front of each platform side rail, install clevises on each platform side rail using the bushings bolted on holes 5, 7, 8, 9, 10, 11, 13, 15, 16, 17, 18, 19, 21, 22, 23, 24, 25, 26, 27, and 28. Reverse the clevises on holes 5 and 28. Install two clevises on each of the reversed clevises.
6. Starting at the front of the platform, number the clevises bolted to the right side from I through 26, and those bolted to the left side from 1A through 26A.
7. Label the tie-down rings according to FM 10-500-2/TO 13C7-1-5.

Figure 15-41. Platform prepared

15-51. Placing Lashings on Platform

Pre-position twelve 15-foot lashings through the tie-down rings on the platform as shown in Figure 15-42.

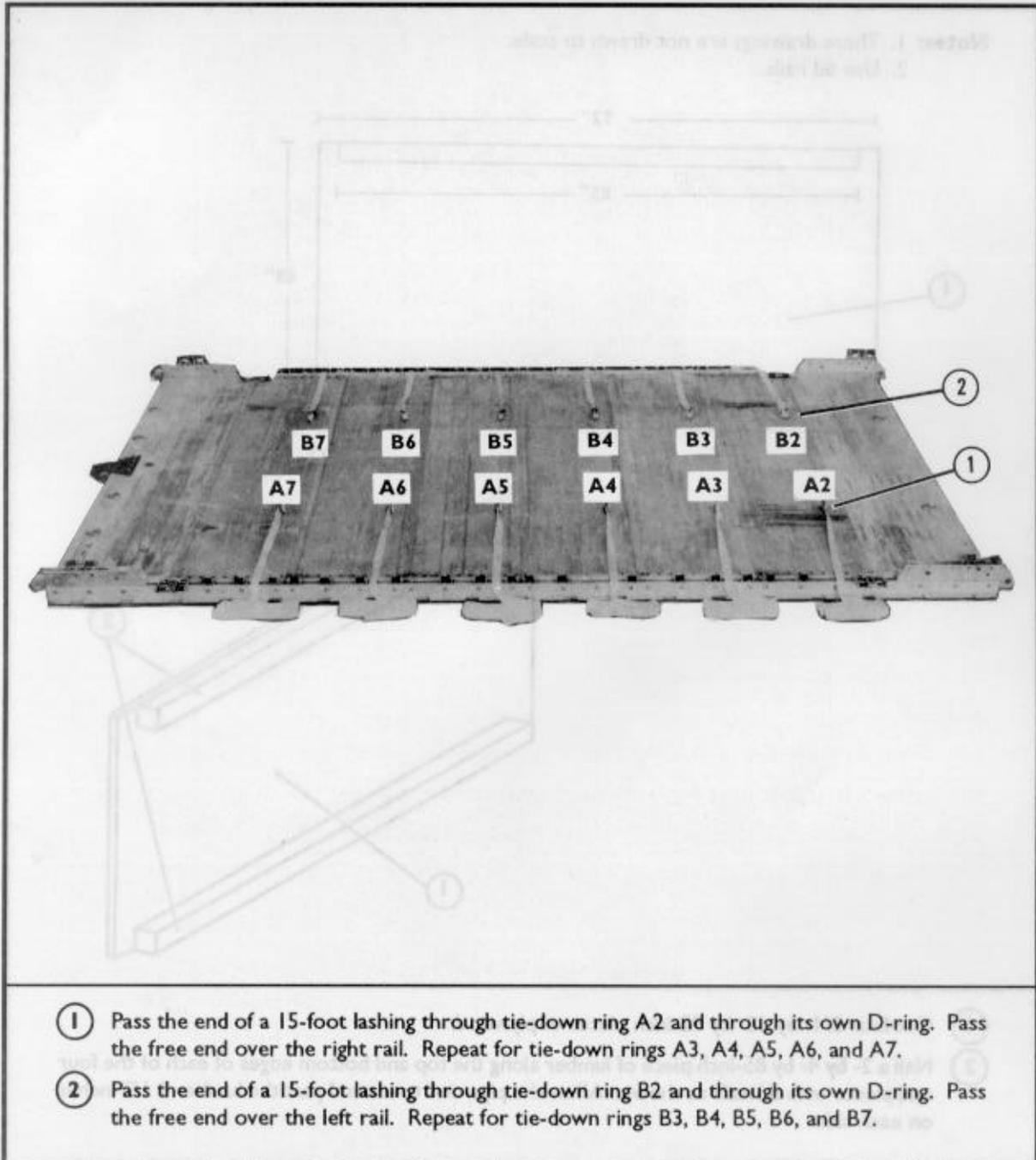


Figure 15-42. Lashings pre-positioned on platform

15-52. Constructing and Forming Storage Box Components

Construct the components of the storage boxes as shown in Figures 15-43, 15-44, and 15-45.

Partially assemble the first box for loading as shown in Figure 15-46.

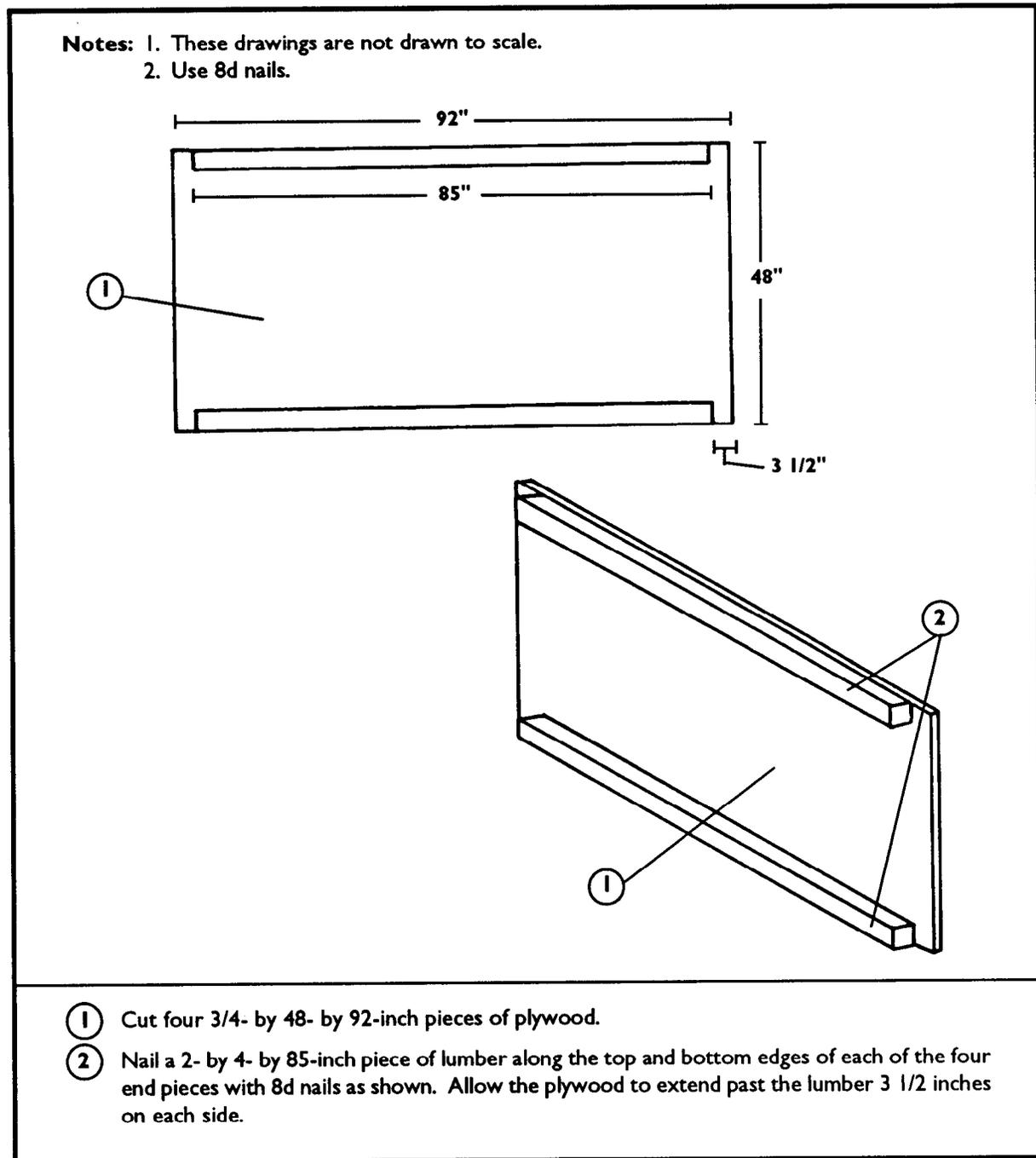
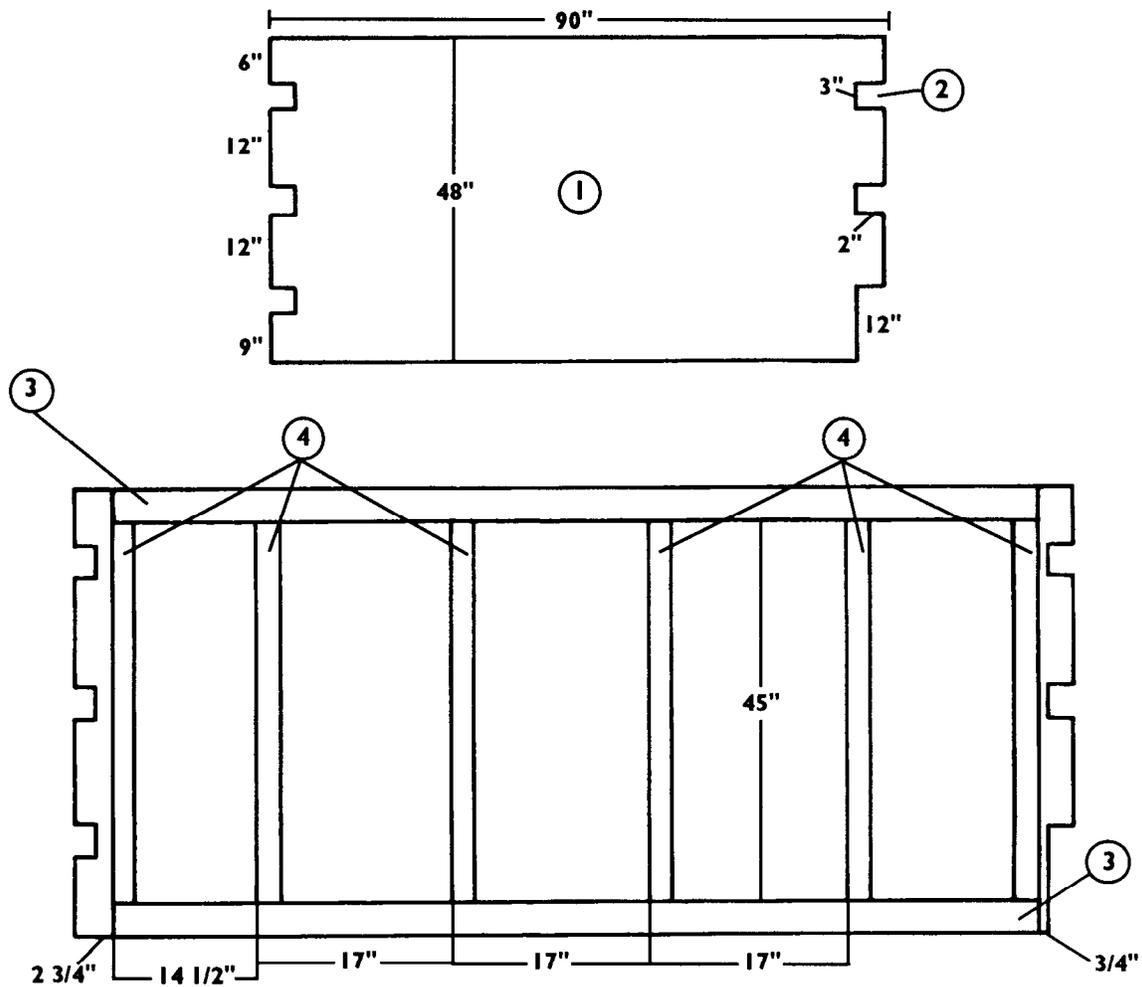


Figure 15-43. Box ends constructed

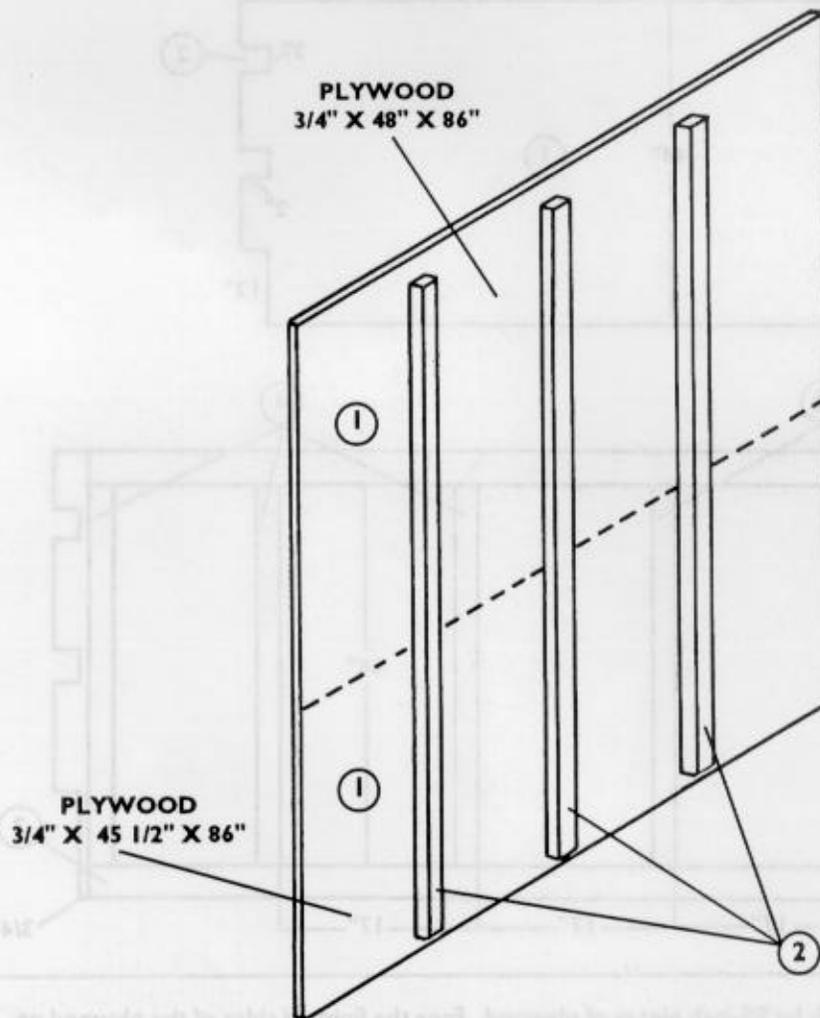
- Notes:** 1. These drawings are not drawn to scale.
2. Use 8d nails.



- ① Cut four 3/4- by 48- by 90-inch pieces of plywood. Face the finished sides of the plywood up.
- ② Make 2- by 3-inch cutouts as shown in each of the four sides. Face the 12-inch cutout to the right on two pieces, and to the left on the other two.
- ③ Nail a 2- by 4- by 84 1/2-inch piece of lumber on edge along the top and bottom interior edges of each of the four sides with 8d nails. Allow the plywood to extend past the lumber 2 3/4 inches on each end at the top. Overhang at the bottom is 2 3/4 inches at the small-notched end and 3/4 inches at the larger notched end.
- ④ Cut six pieces of 2- by 4- by 45-inch lumber for each of the four sides. Nail a piece of this lumber between each of the pieces of lumber placed in step 3 flush with the ends. Space the four remaining pieces as shown and nail them in place.

Figure 15-44. Box sides constructed

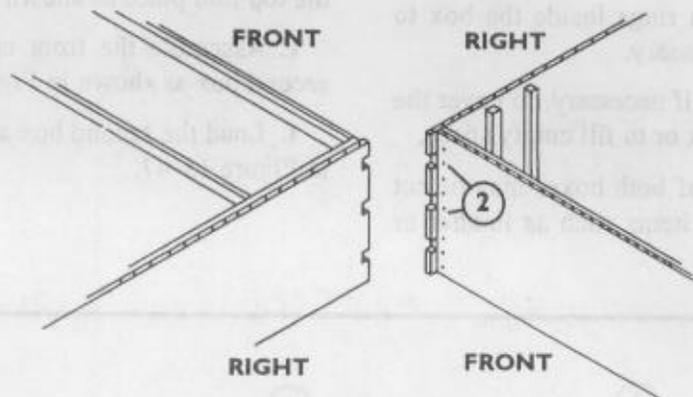
- Notes:** 1. This drawing is not drawn to scale.
2. Use 8d nails.



- ① Cut a full sheet of 3/4-inch plywood to 48 by 86 inches. Cut a second sheet to 45 1/2 by 86 inches. Lay them side-by-side to make a piece 86 by 93 1/2 inches.
- ② Space three 2- by 4- by 85-inch pieces of lumber evenly across the two pieces of plywood. Allow 4 1/4 inches of plywood to overhang on each end of the lumber. Nail the lumber and the plywood together.
- ③ Repeat steps 1 and 2 above to make the top for the second box (not shown).

Figure 15-45. Tops of boxes constructed

- Notes:** 1. These drawings are not drawn to scale.
2. Use 8d nails.



- ① Assemble the box on the platform. Fit each end of the box between the sides with the left and right of each end flush against the inside vertical lumber uprights on the sides.
- ② Nail the pieces together with 8d nails through the front side of the box end.
- ③ Be sure that the front box is centered on the platform and that the front edges of the sides of the box are even with the front edge of the platform (not shown).

Figure 15-46. Box partially assembled for loading

15-53. Loading and Closing the Boxes

Load and close the boxes as described below.

a. Use the tie-down rings inside the box to secure the load, if necessary.

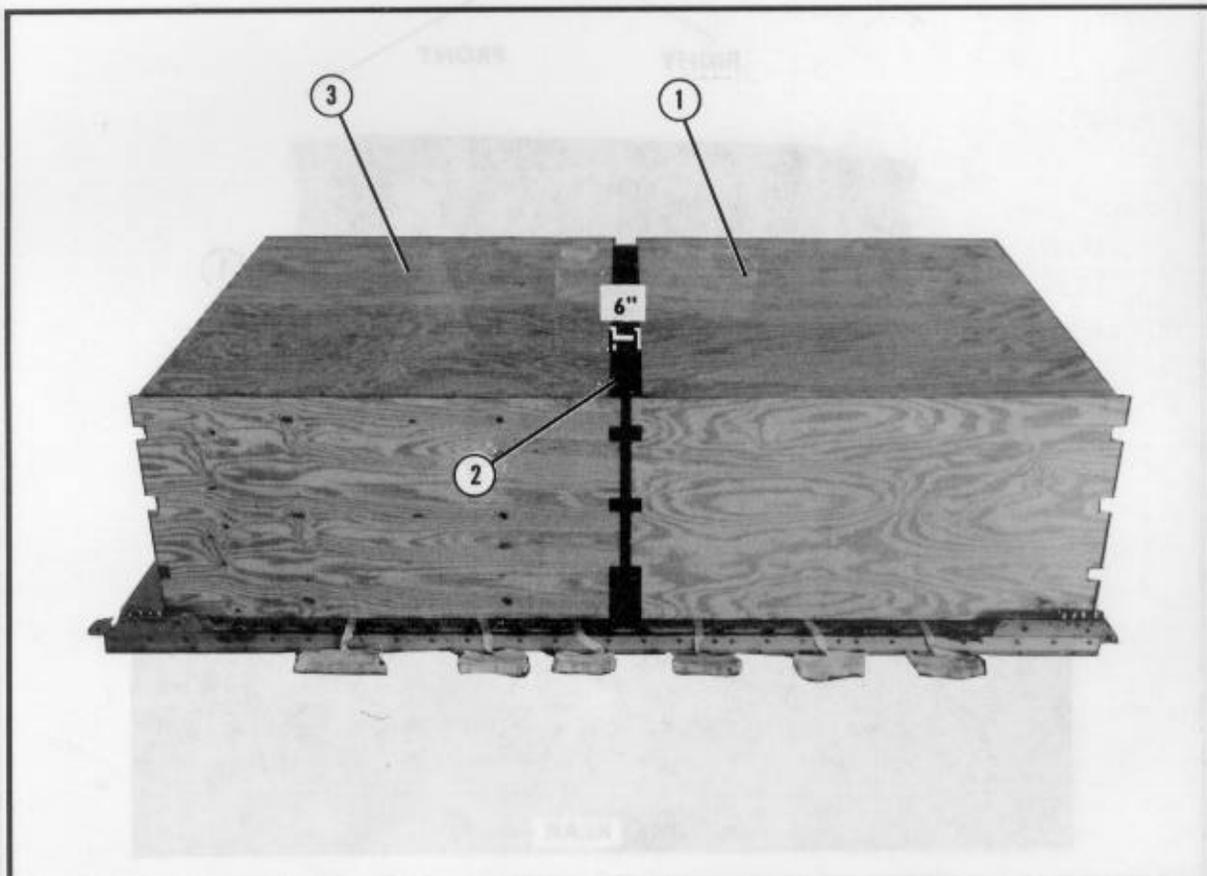
b. Use honeycomb, if necessary, to cover the platform inside the box or to fill empty space.

c. The inside ends of both boxes may be cut out to allow for long items such as lumber or tent poles.

d. Load the front box. Nail the inside end and the top into place as shown in Figure 15-47.

e. Assemble the front end and sides of the second box as shown in Figure 15-46.

f. Load the second box and close it as shown in Figure 15-47.



- ① After loading the front box, nail the rear end of the box in place. Align the top with the lumber facing down. Nail the top in place along the edges.
- ② Partially assemble the rear box for loading. Place the front end of the box 6 inches from the rear end of the front box.
- ③ Close the rear box as in step 1.

Figure 15-47. Boxes closed

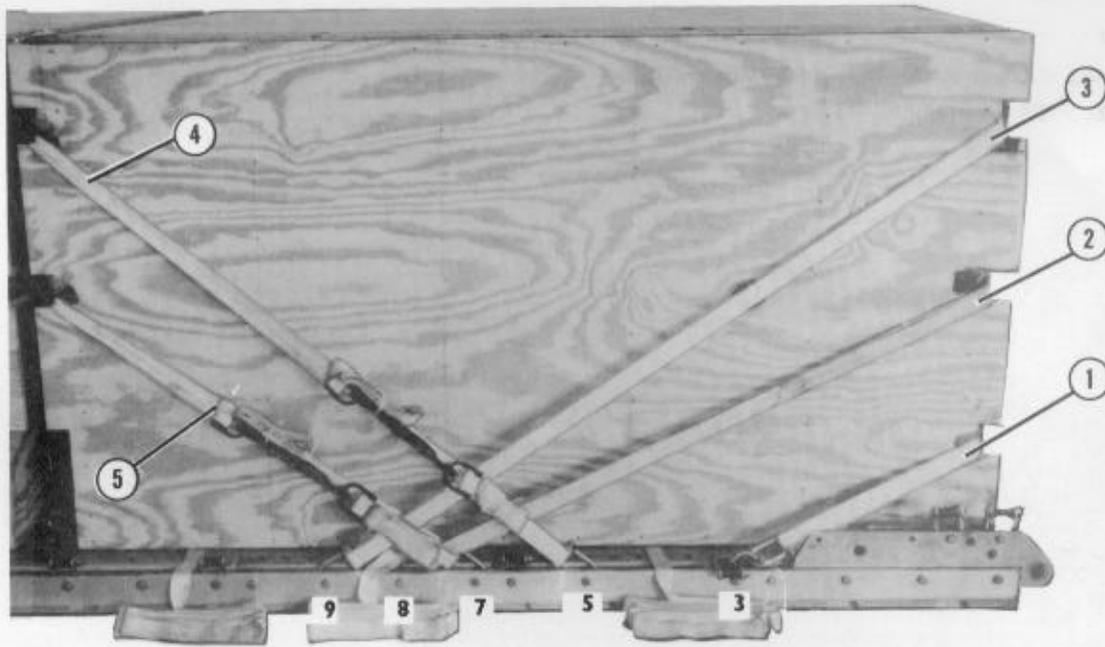
15-54. Installing Lashings

Install the lashings and secure pre-positioned lashings for the boxes as shown in Figures 15-48 through 15-57.

Notes:

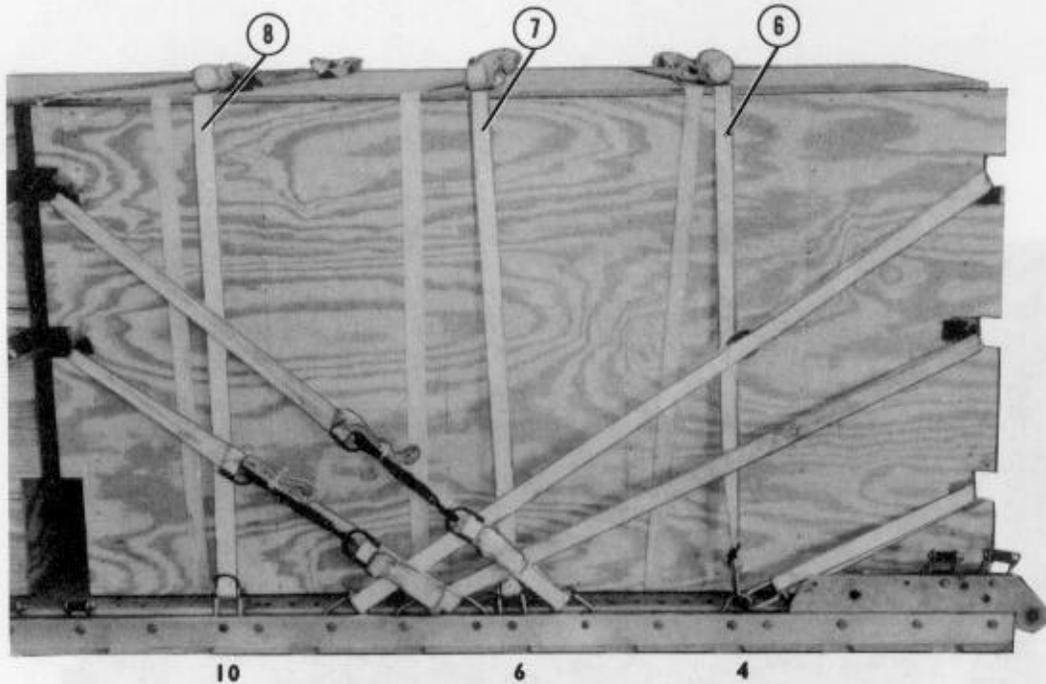
1. Pad the cutouts in the box sides with cellulose wadding. Tape the wadding in place.

2. This load requires lashings over 30 feet in length. Lashings must be positioned through clevises before sections are joined together.



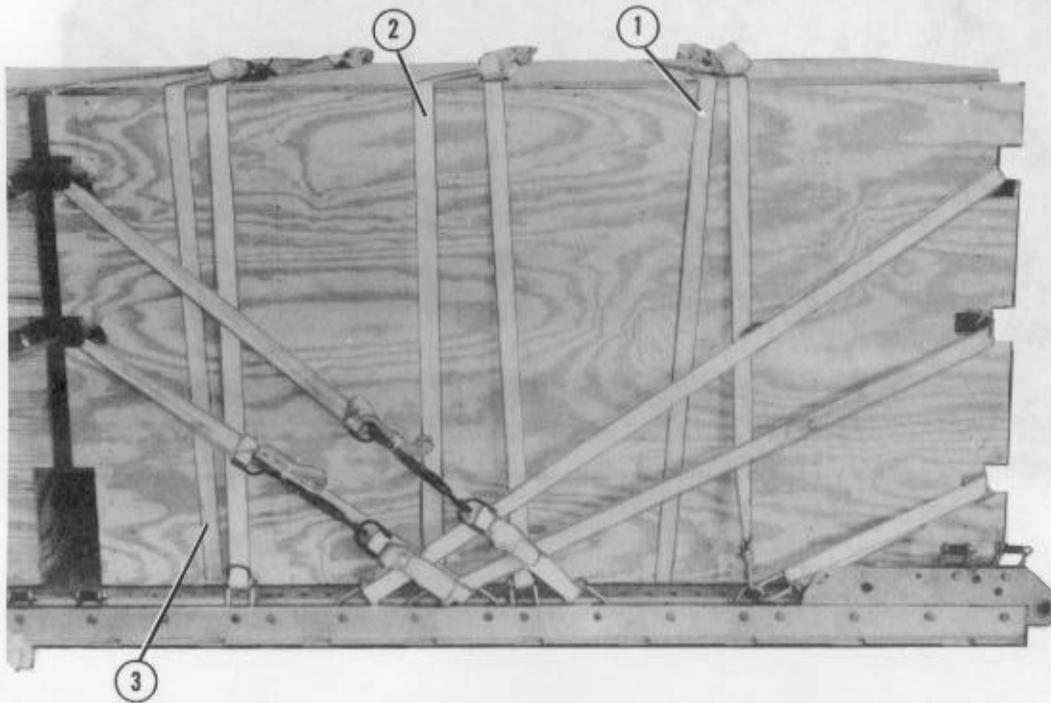
Lashing Number	Tie-Down Clevis Number	Instructions
1	3 and 3A	Pass a 30-foot lashing through both clevises and through the bottom front cutouts. Secure the lashing in the front.
2	8 and 8A	Pass a 45-foot lashing through both clevises and through the middle front cutouts. Secure the lashing in the front.
3	9 and 9A	Pass a 45-foot lashing through both clevises and through the upper front cutouts. Secure the lashing in the front.
4	5 and 5A	Pass a 45-foot lashing through both clevises and through the top rear cutouts. Secure the lashing on the side.
5	7 and 7A	Pass a 45-foot lashing through both clevises and through the bottom rear cutouts. Secure the lashing on the side.

Figure 15-48. Lashings 1 through 5 installed



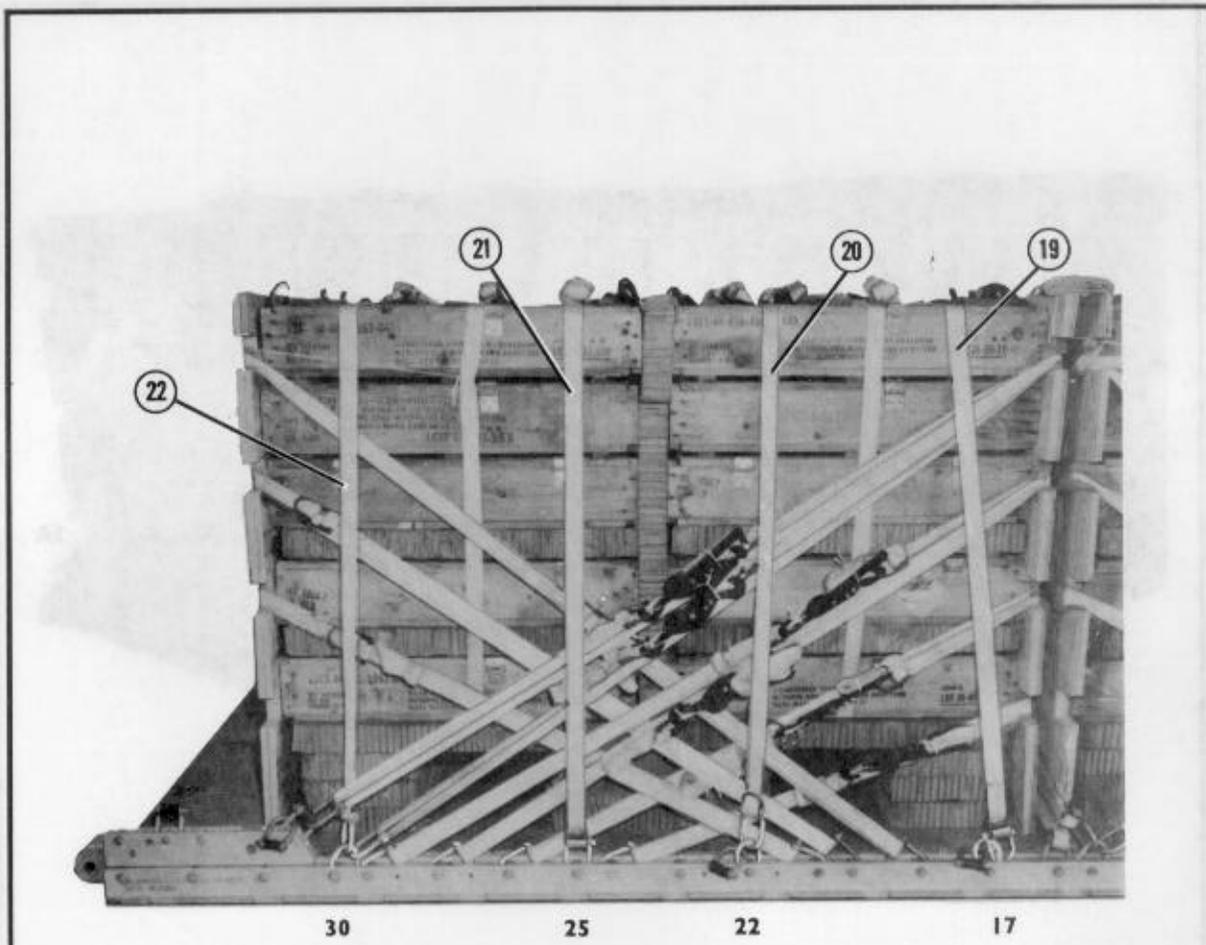
Lashing Number	Tie-Down Clevis Number	Instructions
6	4 and 4A	Pass a 15-foot lashing through each clevis and through its own D-ring. Secure the lashings on top of the box.
7	6 and 6A	Pass a 15-foot lashing through each clevis and through its own D-ring. Secure the lashings on top of the box.
8	10 and 10A	Pass a 15-foot lashing through each clevis and through its own D-ring. Secure the lashings on top of the box.

Figure 15-49. Lashings 6 through 8 installed



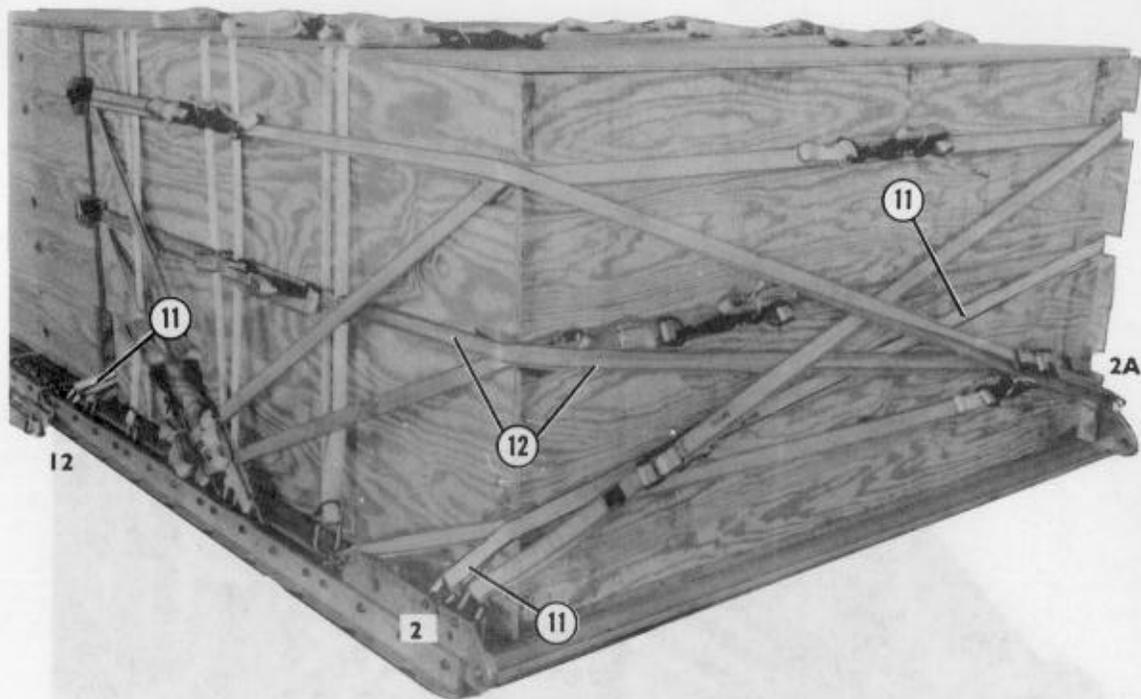
- ① Pass the ends of the pre-positioned lashings in tie-down rings A2 and B2 to the top of the load. Secure the lashings on top of the load.
- ② Secure the pre-positioned lashings in tie-down rings A3 and B3 in the same way.
- ③ Secure the pre-positioned lashings in tie-down rings A4 and B4 in the same way.

Figure 15-50. Pre-positioned lashings secured



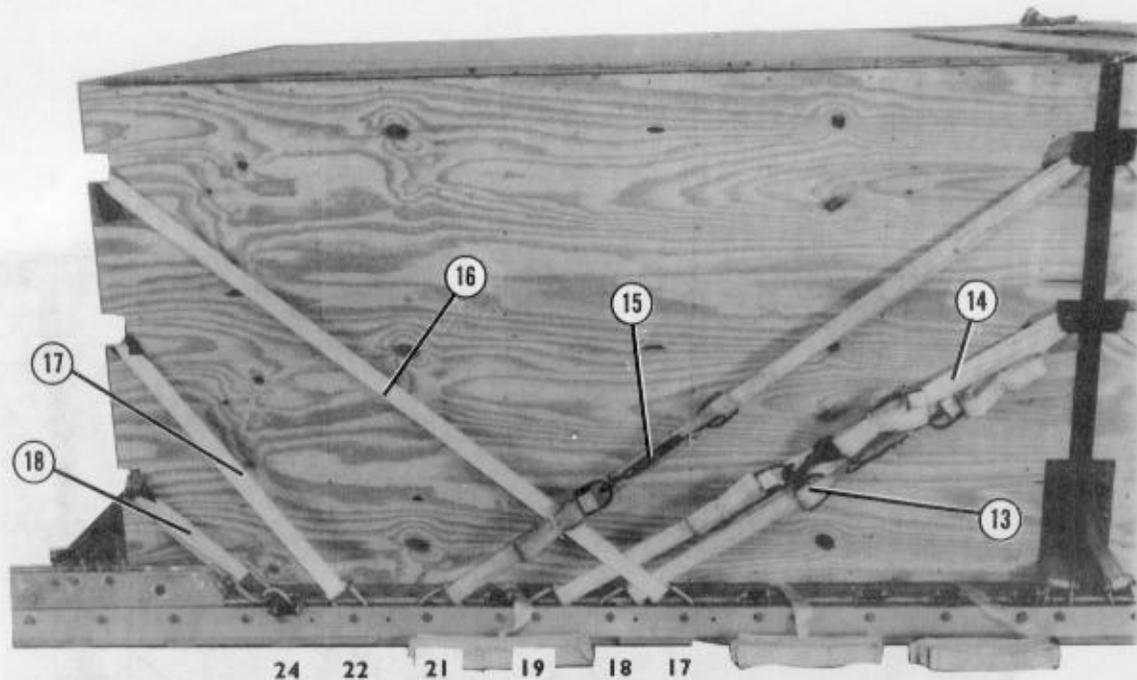
Lashing Number	Tie-Down Clevis Number	Instructions
9	I and II	Pass a 60-foot lashing through clevis I, through the top cutout in the left side of the first box, and around the left side of the box. Pass the lashing through the top left cutout on the rear end of the first box and through clevis II. Secure the lashing on the left side.
10	IA and IIA	Pass a 60-foot lashing through clevis IA, through the top cutout in the right side of the first box, and around the right side of the box. Pass the lashing through the top right cutout on the rear end of the first box and through clevis IIA. Secure the lashing on the right side.

Figure 15-51. Lashings 9 and 10 installed



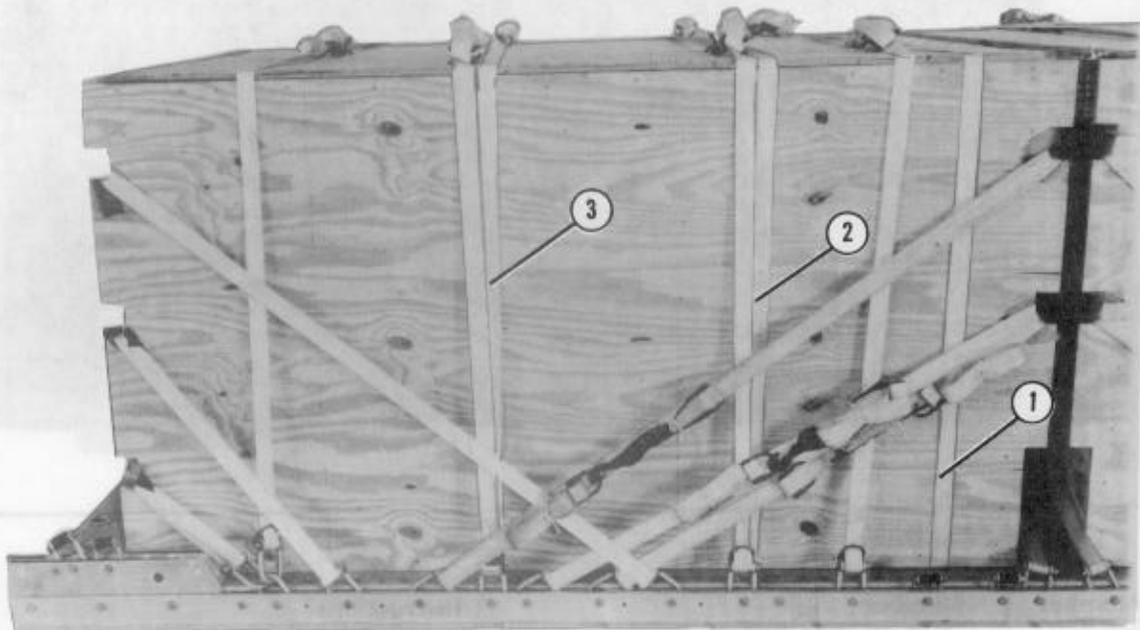
Lashing Number	Tie-Down Clevis Number	Instructions
11	2 and 12	Pass a 60-foot lashing through clevis 2, through the bottom right and middle left cutouts in the front of the first box, and around the left side of the box. Pass the lashing through the middle left cutout on the rear end of the first box and through clevis 12. Secure the lashing on the left side.
12	2A and 12A	Pass a 60-foot lashing through clevis 2A, through the bottom left and middle right cutouts in the front of the first box, and around the right side of the box. Pass the lashing through the middle right cutout on the rear end of the first box and through clevis 12A. Secure the lashing on the right side.

Figure 15-52. Lashings 11 and 12 installed



Lashing Number	Tie-Down Clevis Number	Instructions
13	18 and 18A	Pass a 30-foot lashing through both clevises and through the middle cutouts on the front of the second box. Secure the lashing on the side.
14	19 and 19A	Pass a 30-foot lashing through both clevises. Route it and secure it as in lashing 13.
15	21 and 21A	Pass a 45-foot lashing through both clevises and through the top cutouts on the front of the second box. Secure the lashing on the side.
16	17 and 17A	Pass a 45-foot lashing through both clevises and through the top rear cutouts. Secure the lashing in the rear.
17	22 and 22A	Pass a 30-foot lashing through both clevises and through the middle rear cutouts. Secure the lashing in the rear.
18	24 and 24A	Pass a 30-foot lashing through both clevises and through the bottom rear cutouts. Secure the lashing in the rear.

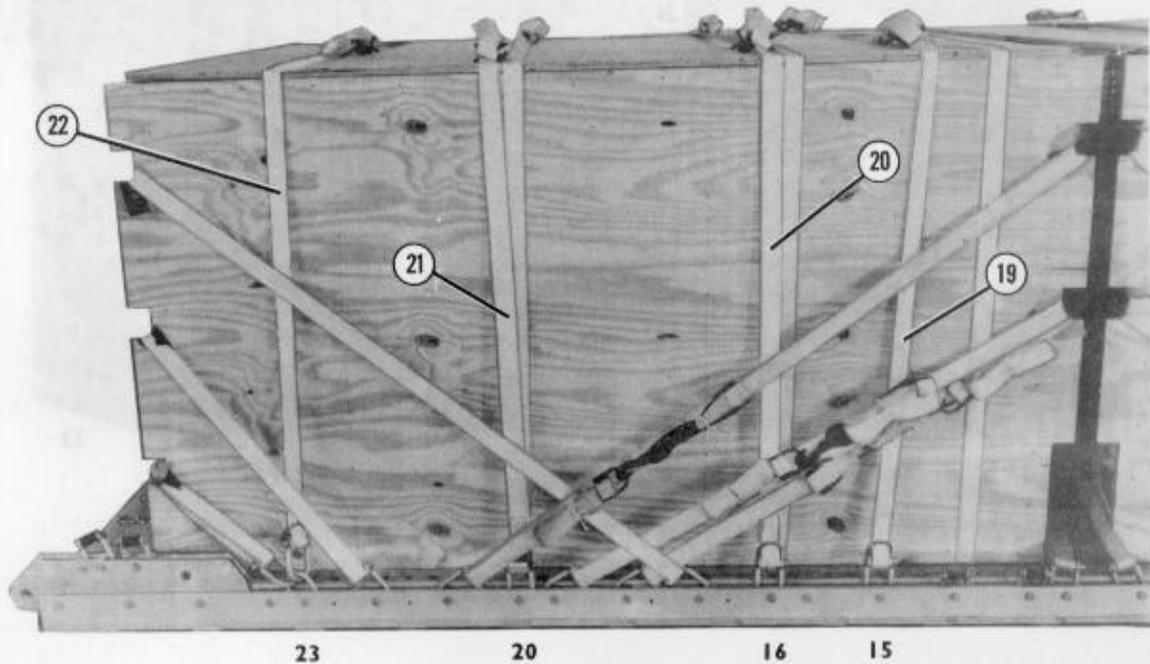
Figure 15-53. Lashings 13 through 18 installed



Pass a 30-foot lashing through both cleaves and through the middle cleave on the front of the second box. Secure the lashing on the side as in figure 13.	18 in 18A	13
Pass a 30-foot lashing through both cleaves. Route it and secure it as in figure 13.	18 in 18A	14
Pass a 45-foot lashing through both cleaves and through the top cleave on the front of the second box. Secure the lashing on the side as in figure 13.	18 in 21A	21
Pass a 45-foot lashing through both cleaves and through the top cleave on the front of the second box. Secure the lashing on the side as in figure 13.	18 in 21A	22

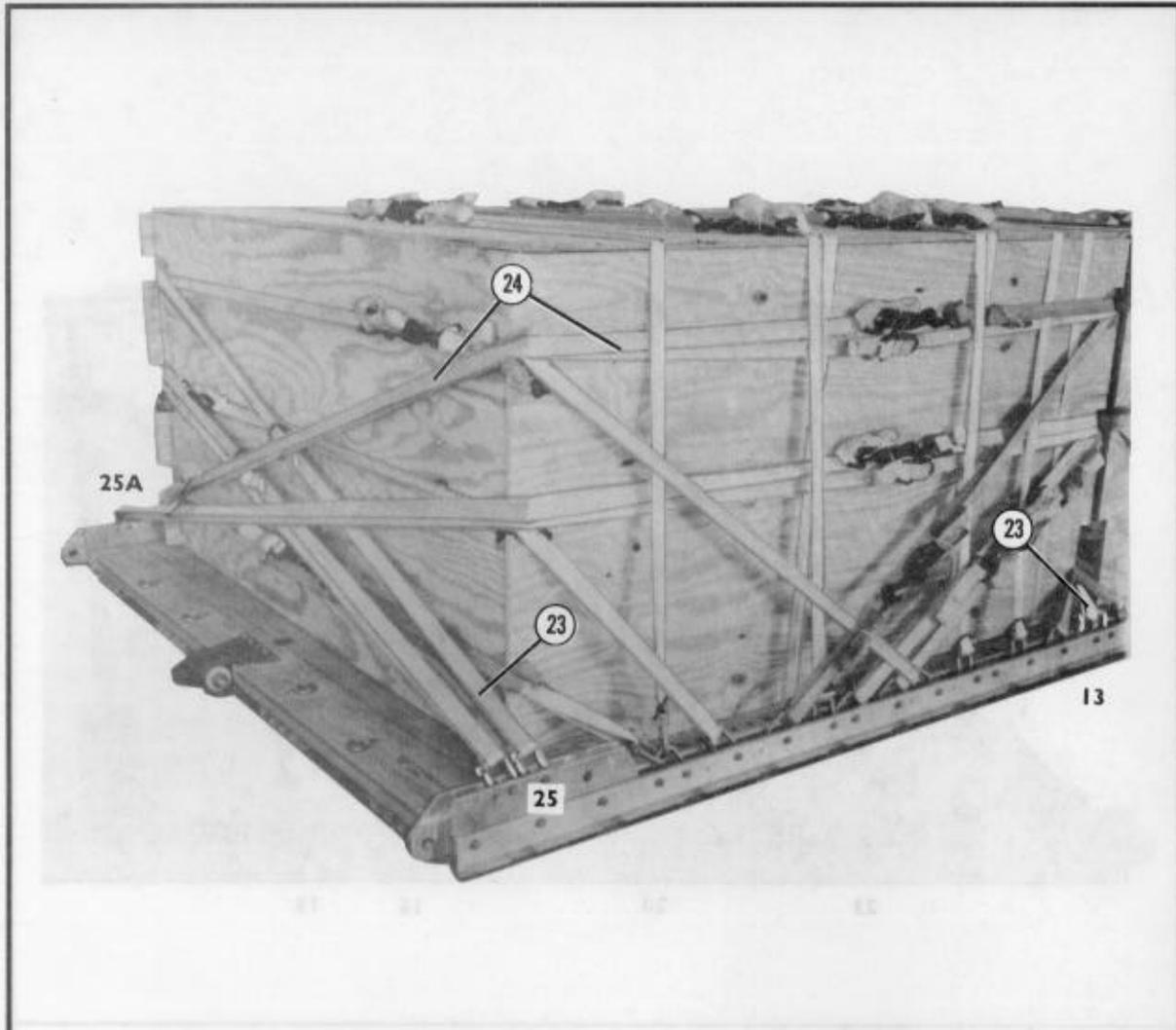
- ① Pass the ends of the pre-positioned lashings in tie-down rings A5 and B5 to the top of the load. Secure the lashings on top of the load.
- ② Secure the pre-positioned lashings in tie-down rings A6 and B6 in the same way.
- ③ Secure the pre-positioned lashings in tie-down rings A7 and B7 in the same way.

Figure 15-54. Pre-positioned lashings secured



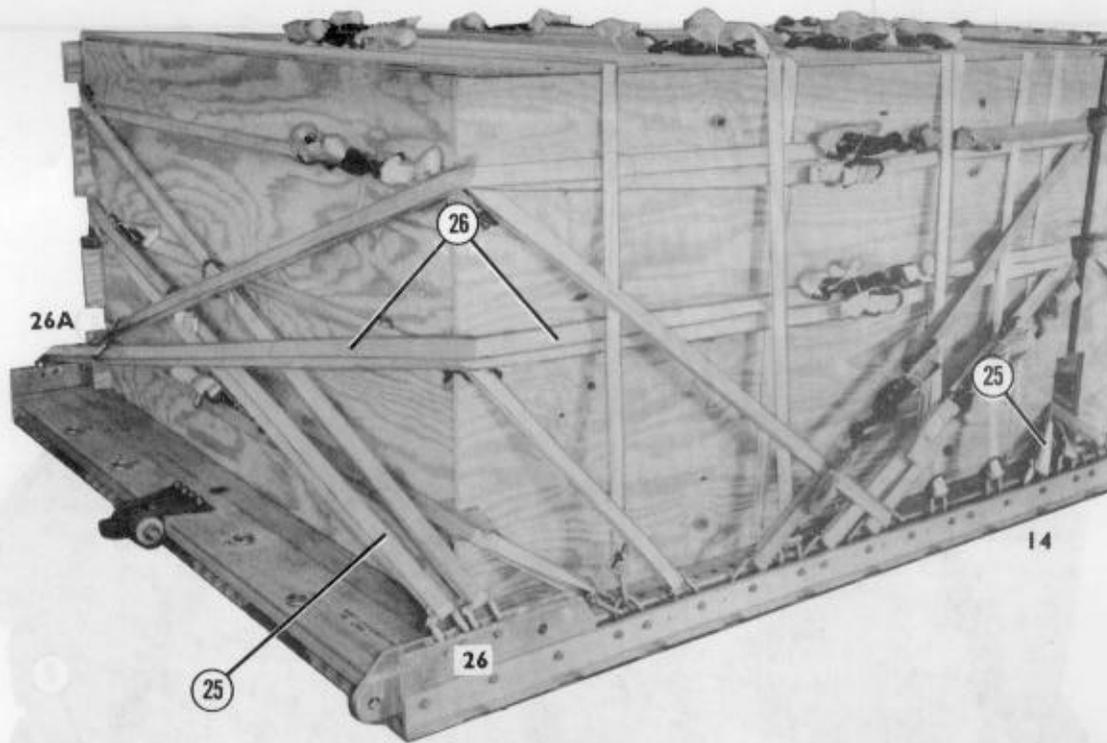
Lashing Number	Tie-Down Clevis Number	Instructions
19	15 and 15A	Pass a 15-foot lashing through each clevis and through its own D-ring. Secure the lashings on top of the box.
20	16 and 16A	Pass a 15-foot lashing through each clevis and through its own D-ring. Secure the lashings on top of the box.
21	20 and 20A	Pass a 15-foot lashing through each clevis and through its own D-ring. Secure the lashings on top of the box.
22	23 and 23A	Pass a 15-foot lashing through each clevis and through its own D-ring. Secure the lashing on top of the box.

Figure 15-55. Lashings 19 through 22 installed



Lashing Number	Tie-Down Clevis Number	Instructions
23	13 and 25	Pass a 60-foot lashing through clevis 13, through the top cutout in the left side of the second box, and around the left side of the box. Pass the lashing through the top left cutout on the rear side of the second box and through clevis 25. Secure the lashing on the left side.
24	13A and 25A	Pass a 60-foot lashing through clevis 13A, through the top cutout in the right side of the second box, and around the right side of the box. Pass the lashing through the top right cutout on the rear side of the second box and through clevis 25A. Secure the lashing on the right side.

Figure 15-56. Lashings 23 and 24 installed

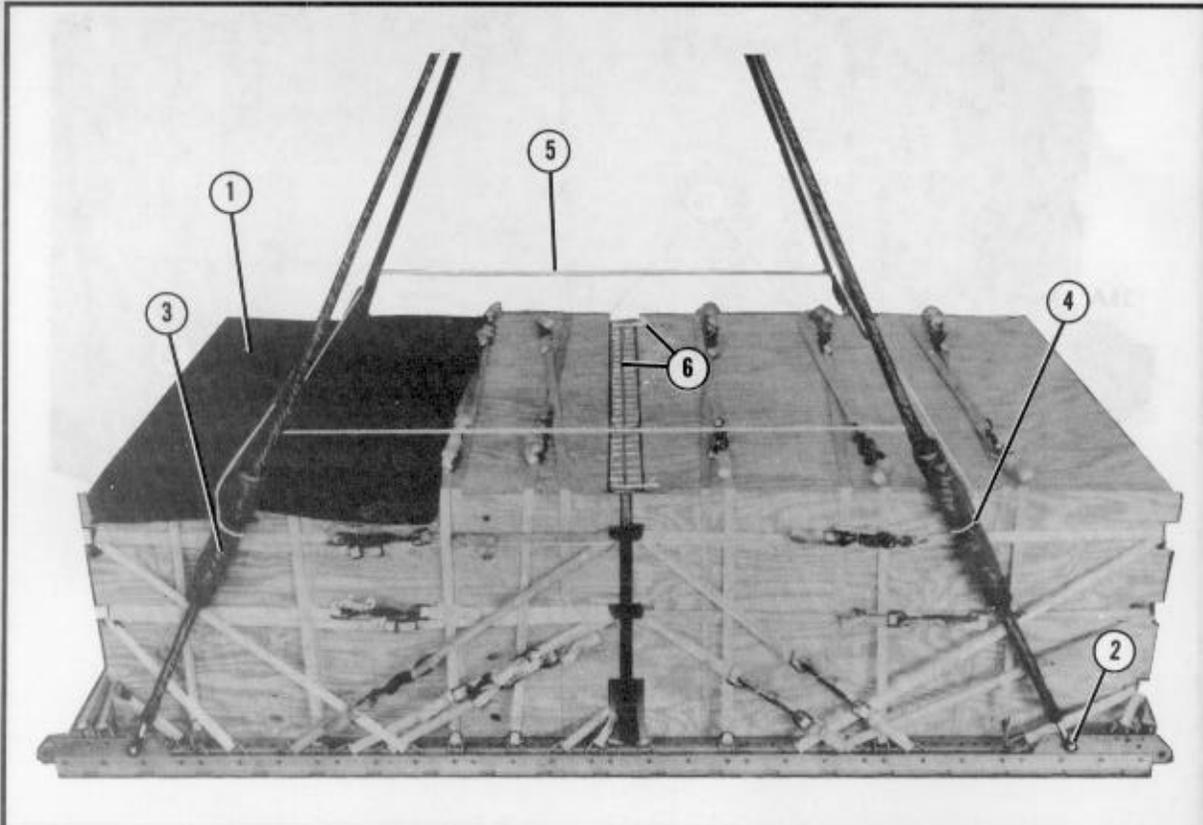


Lashing Number	Tie-Down Clevis Number	Instructions
25	14 and 26	Pass a 60-foot lashing through clevis 14, through the middle cutout in the left side of the second box, and around the left side of the box. Pass the lashing through the left middle cutout on the rear side of the second box and through clevis 26. Secure the lashing on the left side.
26	14A and 26A	Pass a 60-foot lashing through clevis 14A, through the middle cutout in the right side of the second box, and around the right side of the box. Pass the lashing through the right middle cutout on the rear side of the second box and through clevis 26A. Secure the lashing on the right side.

Figure 15-57. Lashings 25 and 26 installed

15-55. Installing Load Cover, Suspension Slings, and Deadman's Tie

Install the load cover, suspension slings, and deadman's tie as shown in Figure 15-58.



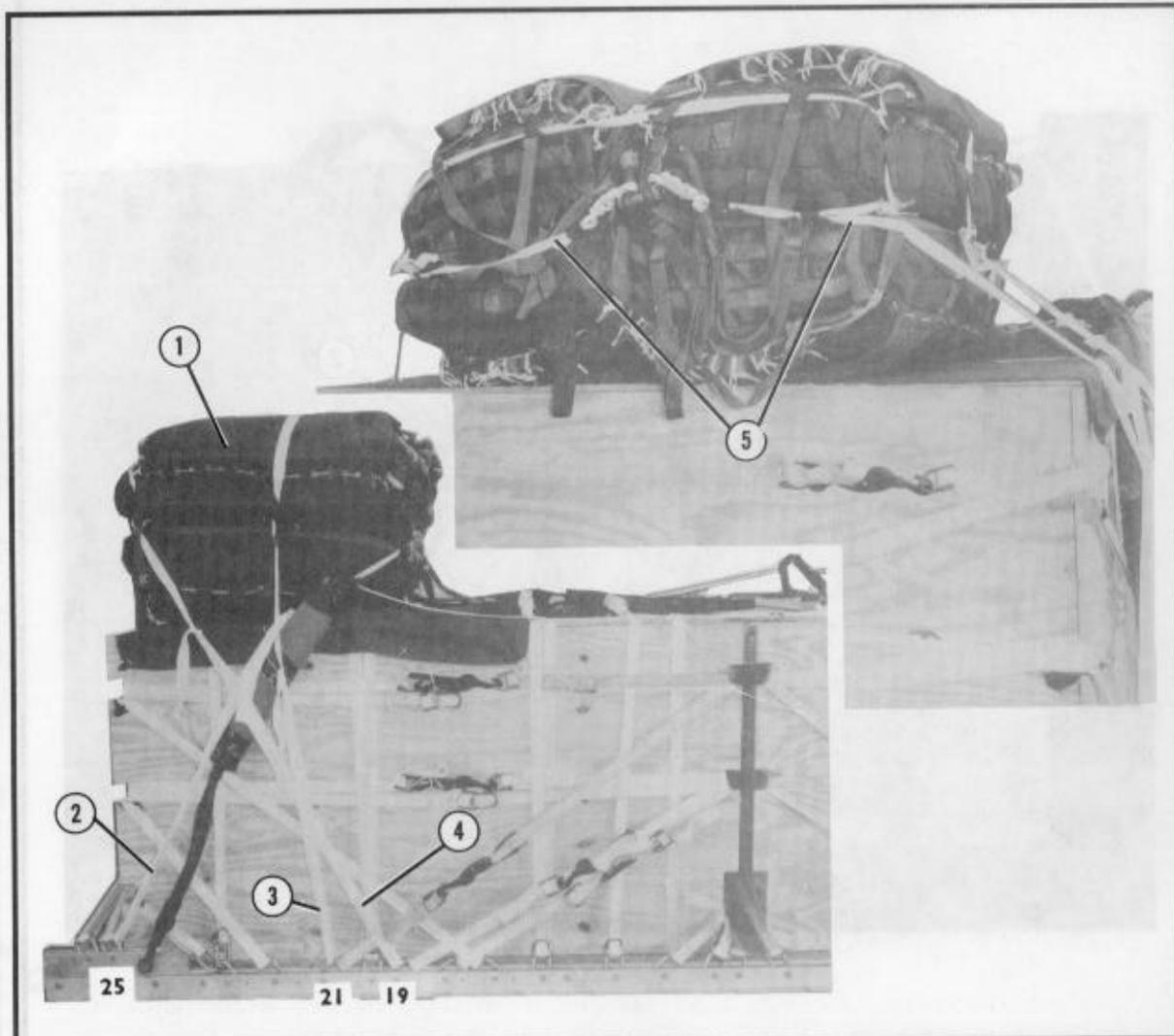
- ① Cover the rear third of the load with a 60- by 96-inch piece of cotton duck cloth. Secure the cloth to adjacent lashings with type III nylon cord.
- ② Attach a 16-foot (4-loop), type XXVI nylon webbing sling to each tandem link with a large suspension clevis.
- ③ Pull the suspension slings tight above the load. Pad each suspension sling 36 inches above the clevis with a 9- by 24-inch piece of felt. Tape the felt in place 2 inches past each end of the felt, and in the center.
- ④ Tie the front suspension slings together over the top of the load with a length of type III nylon cord. Tie the rear suspension slings in the same way.
- ⑤ Install the deadman's tie according to FM 10-500-2/TO 13C7-1-5.
- ⑥ Place two 92- by 5 1/2- inch pieces of honeycomb between the two boxes above the top cutouts. Tie the honeycomb in place using type III nylon cord and holes drilled in the plywood.

Figure 15-58. Load cover, suspension slings, and deadman's tie installed

15-56. Installing Parachutes

Consult FM 10-500-2/TO 13C7-1-5 for the number of cargo parachutes required for the weight of the load. Four G-11B cargo parachutes are shown

here. Install the cargo parachutes according to FM 10-500-2/TO 13C7-1-5 and as shown in Figure 15-59.

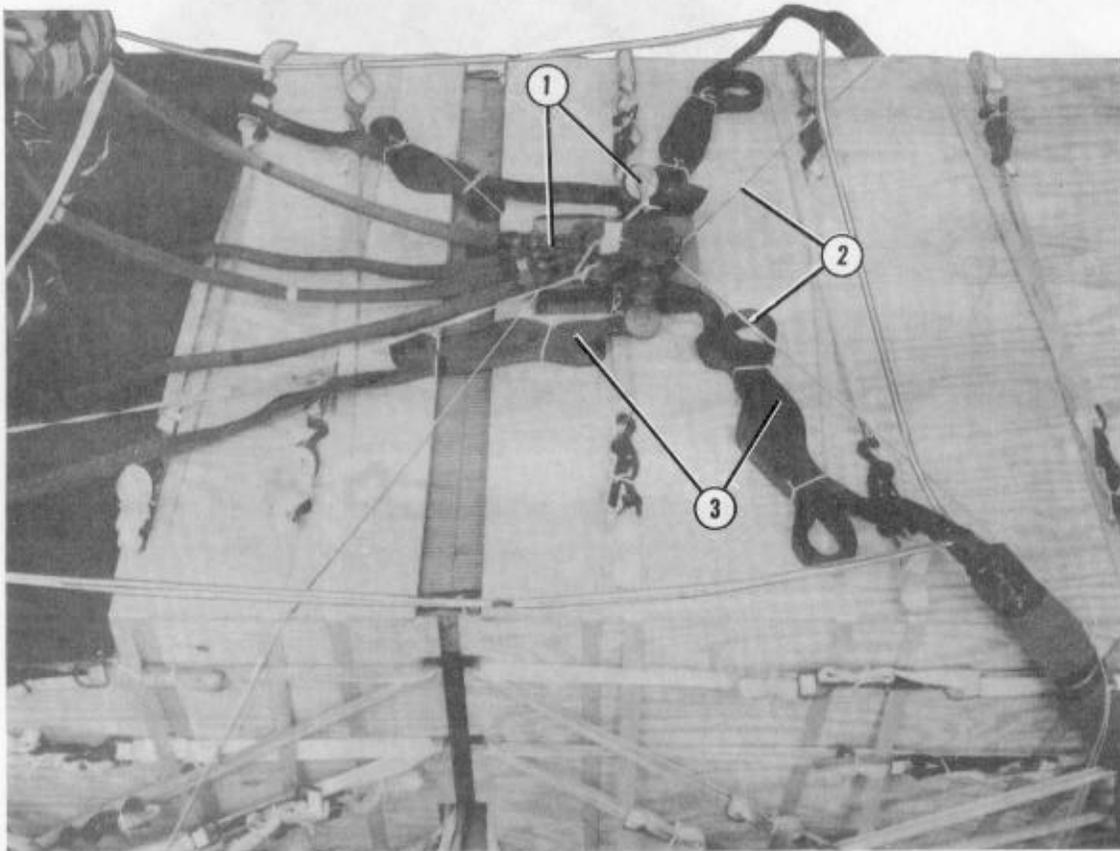


- ① Install the cargo parachutes at the rear of the load.
- ② Tie the front parachute restraint strap to clevises 25 and 25A.
- ③ Tie the center parachute restraint strap to clevises 21 and 21A.
- ④ Tie the rear parachute restraint strap to clevises 19 and 19A.
- ⑤ Install two multicut parachute release straps.

Figure 15-59. Four G-11B cargo parachutes installed

15-57. Installing Release System

Install and safety an M-2 cargo parachute release assembly as shown in Figure 15-60.

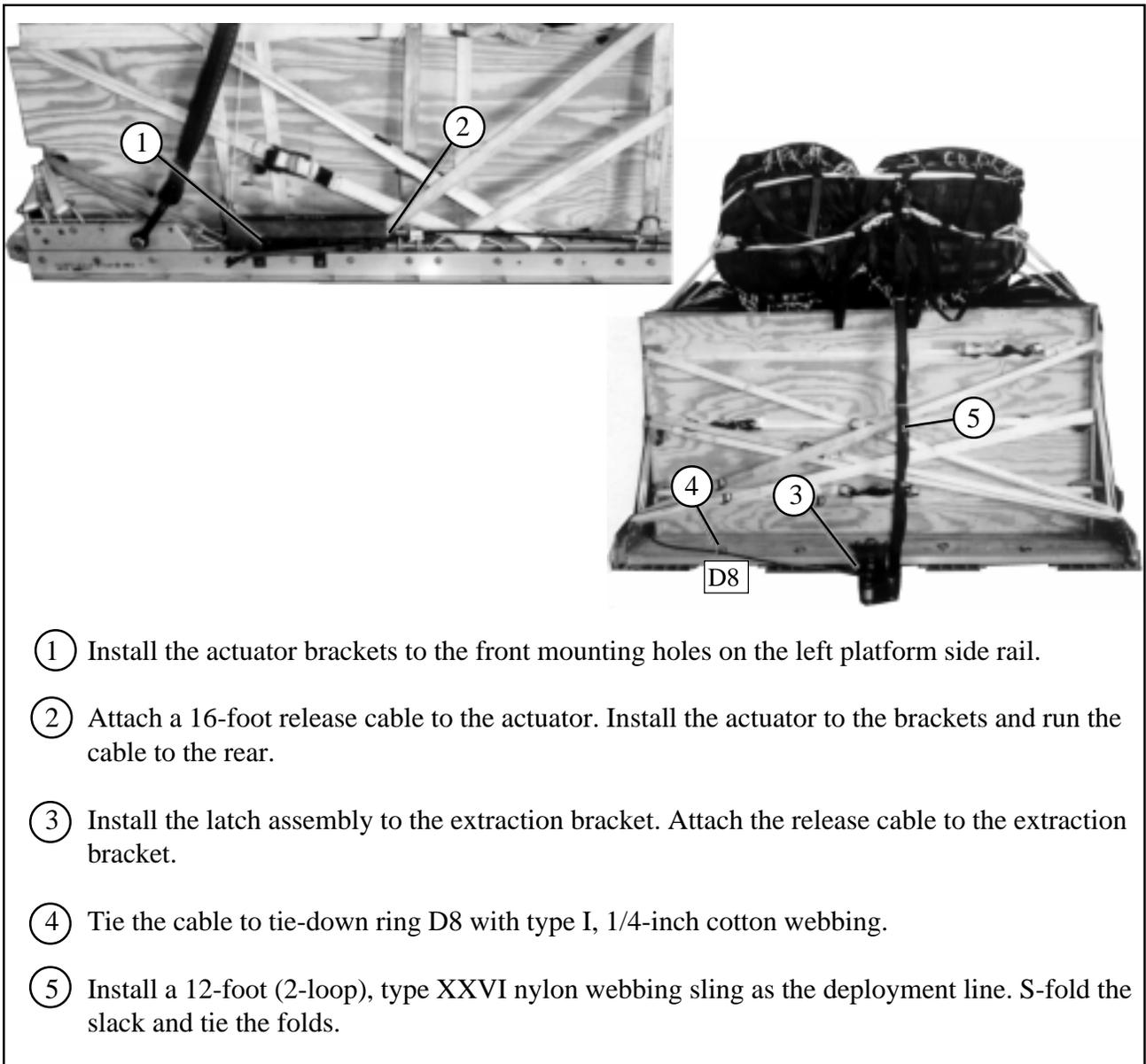


- ① Prepare and install an M-2 cargo parachute release assembly according to FM 10-500-2/TO 13C7-1-5. Place the release assembly on a 10- by 12-inch piece of honeycomb in front of the parachutes as shown.
- ② Safety the release to convenient points on the load with type III nylon cord.
- ③ S-fold and tie the slack in the suspension slings with type I, 1/4-inch cotton webbing.

Figure 15-60. Release assembly installed

15-58. Installing Extraction System

Install the EFTC extraction system according to FM 10-500-2/TO 13C7-1-5 and as shown in Figure 15-61.



- ① Install the actuator brackets to the front mounting holes on the left platform side rail.
- ② Attach a 16-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 Tie the cable to tie-down ring D8 with type I, 1/4-inch cotton webbing.
- ⑤ Install a 12-foot (2-loop), type XXVI nylon webbing sling as the deployment line. S-fold the slack and tie the folds.

Figure 15-61. Extraction system installed

15-59. 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.

15-60. Placing 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.

15-61. Marking Rigged Load

Mark the rigged load according to FM 10-500-2/TO 13C7-1-5 and as shown in Figure 15-62.

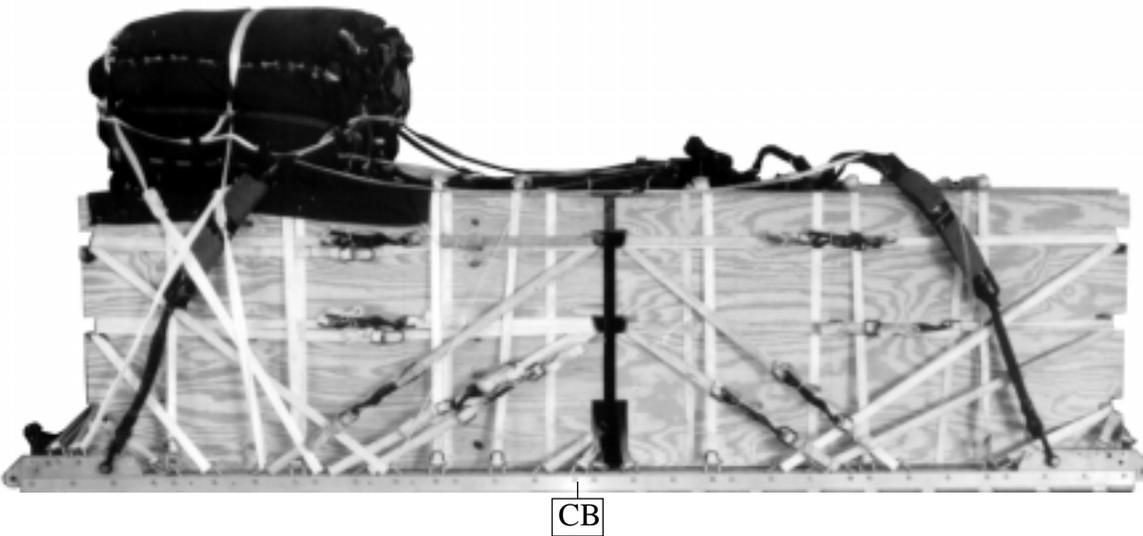
Note: If the load weight differs from the load shown, the parachute requirements, CB, and tip-off curve must be recomputed.

15-62. Equipment Required

Use the equipment listed in Table 15-4 to rig the load shown.

Note: Table does not include materials which may be needed to pad and restrain supplies inside the boxes.

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:	Minimum load allowed	5,040 pounds
	Maximum load allowed	21,000 pounds
Height		88 inches
Width		108 inches
Length		192 inches
Overhang:	Front	0 inches
	Rear	0 inches
CB (from front edge of platform)		97 inches
Extraction System (adds 18 inches to length of platform)		EFTC

Figure 15-62. Mass supply boxes rigged on a 16-foot platform for low-velocity airdrop

Table 15-4. Equipment required for rigging mass supply boxes 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)	7
8305-00-242-3593	Cloth, cotton duck, 60-in	As required
4020-00-240-2146	Cord, nylon, type III, 550-lb	As required
1670-00-434-5785	Coupling, airdrop, extraction force transfer with cable, 16-ft	1
	Cover:	
1670-00-360-0328		1
1670-00-360-0329	Link, type IV	12
8135-00-664-6958	Cushioning material, packaging, cellulose wadding	As required
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)	
1670-01-062-6313	60-ft (3-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
	For C-5:	
1670-01-107-7651	140-ft (3-loop), type XXVI and	1
1670-01-062-6313	60-ft (3-loop), type XXVI	1
1670-01-107-7651	For C-17: 140-ft (3-loop), type XXVI	1
	Link assembly:	
1670-00-006-2752	Four-point	1
1670-00-783-5988	Type IV	12
	Two-point, 5 1/2-in	
5306-00-435-8994	Bolt, 1-in diam, 4 in long	2
5310-00-232-5165	Nut, 1-in, hexagonal	2
1670-00-003-1954	Plate, side, 5 1/2-in	2
5365-00-007-3414	Spacer, large	2
5510-00-220-6146	Lumber, 2- by 4- by:	
	45-in	
	84 1/2-in	
	85-in	14
5315-00-010-4657	Nail, steel wire, common, 6d	As required

Table 15-4. Equipment required for rigging mass supply boxes 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	1 sheet
	Parachute:	
1670-01-016-7841	Cargo, G-11B	4
1670-00-040-8135	Cargo extraction, 28-ft	1
1670-01-063-3715	Drogue, 15-ft (for C-17)	1
	Platform, airdrop, type V, 16-foot	
1670-01-353-8425	Bracket assembly, coupling	(1)
1670-01-162-2372	Clevis assembly, type V	(54)
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	12 sheets
1670-01-097-8817	Release, cargo parachute, M-2	1
	Sling, cargo airdrop	
	For suspension:	
1670-01-062-6308	16-ft(4-loop), type XXVI nylon webbing	4
	For deployment:	
1670-01-062-6303	12-ft (2-loop), type XXVI nylon webbing	1
	For riser extension:	
1670-01-062-6302	20-ft (2-loop), type XXVI nylon webbing	12
5340-00-040-8219	Strap, parachute release, multi-cut, comes w/ 3 knives	2
7510-00-266-5016	Tape, adhesive, 2-in	As required
1670-00-937-0271	Tie-down assembly, 15-ft	86
	Webbing:	
8305-00-268-2411	Cotton, 1/4-in, type	As required
8305-00-082-5752	Nylon, tubular, 1/2-in	As required
8305-00-263-3591	Type VIII	As required