

CHAPTER 12

**RIGGING SUPPLY LOADS ON A 12-FOOT, TYPE V
PLATFORM FOR LOW-VELOCITY AIRDROP**

12-1. Description of Load

Bulk supplies consisting of rations, equipment, fuel, ammunition, or other items of general supply are rigged on a 12-foot type V airdrop platform with G-11 cargo parachutes. Items packaged or configured so that they can be restrained by endboards and lashings can be airdropped using these procedures. Modifications to the honeycomb, endboards, and lashings may be necessary to allow for items of different size and shape from those shown. For extraction purposes, the rigged load must weigh at least 3,780 pounds, but no more than 16,250 pounds.

12-2. Preparing Platform

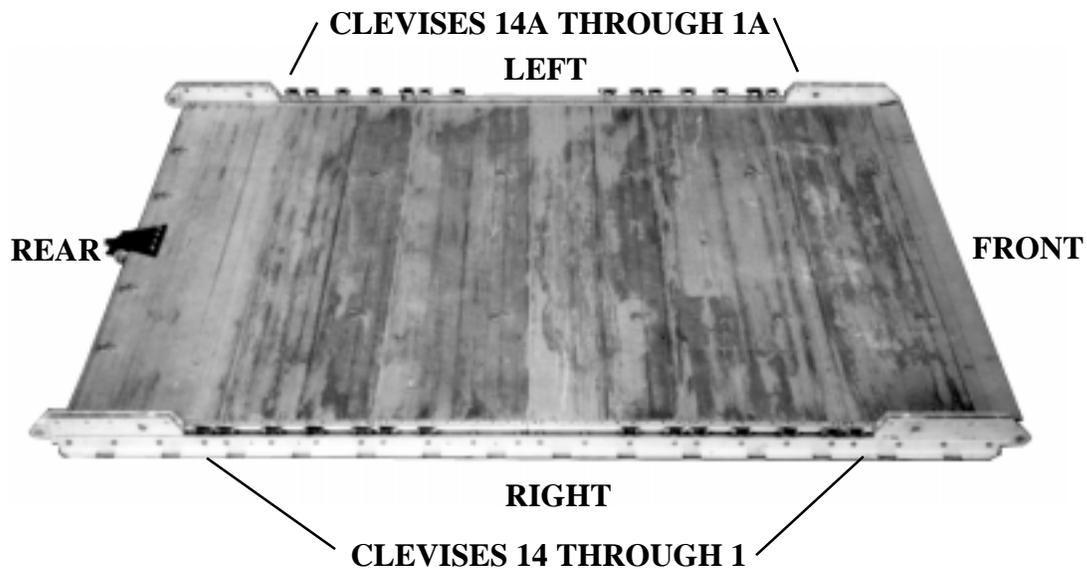
Prepare a 12-foot, type V airdrop platform as given below:

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 12-1.

c. *Attaching and Numbering Clevises.* Attach and number 28 clevis assemblies as shown in Figure 12-1.

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. Starting at the front of the platform, install clevises on each platform side rail using the bushings bolted on holes 4, 5, 6, 7, 8, 9, 10, 15, 16, 17, 18, 19, 20 and 21.
4. Starting at the front of the platform, number the clevises bolted to the right side of the platform from 1 through 14, and those bolted to the left side from 1A through 14A.
5. Label the tie-down rings according to FM 10-500-2/TO 13C7-1-5.

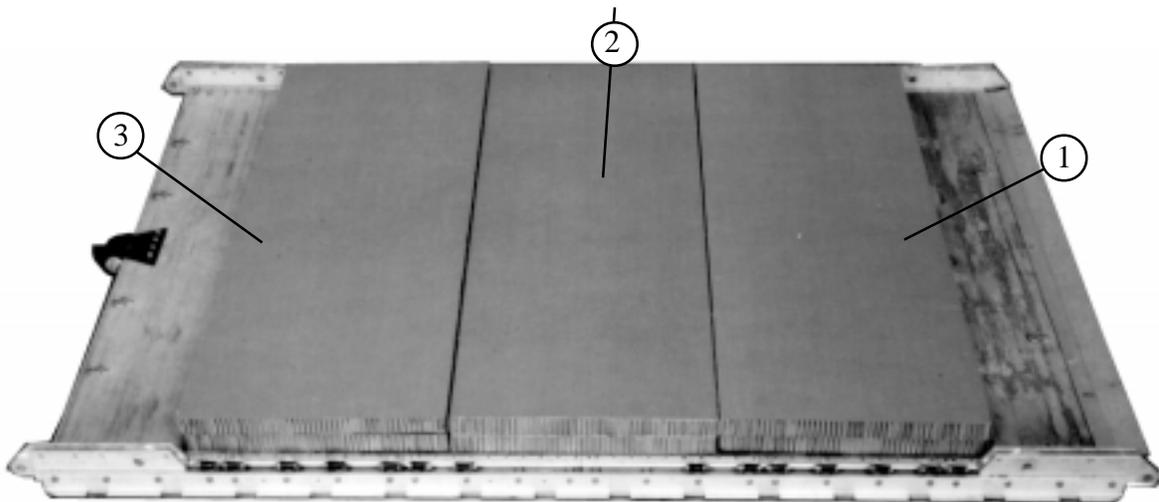
Figure 12-1. Platform prepared

12-3. Placing Honeycomb

Place the honeycomb on the platform as shown in Figure 12-2.

Notes:

- 1. When ammunition is dropped, two layers of honeycomb are required.**
- 2. When rigging this load for airdrop on a drop zone with ground elevation of 6,000 to 10,000 feet, add an additional layer of honeycomb.**
- 3. Adjust the dimensions of the honeycomb to fit the items being dropped.**
- 4. Do not cover the extraction bracket with honeycomb.**



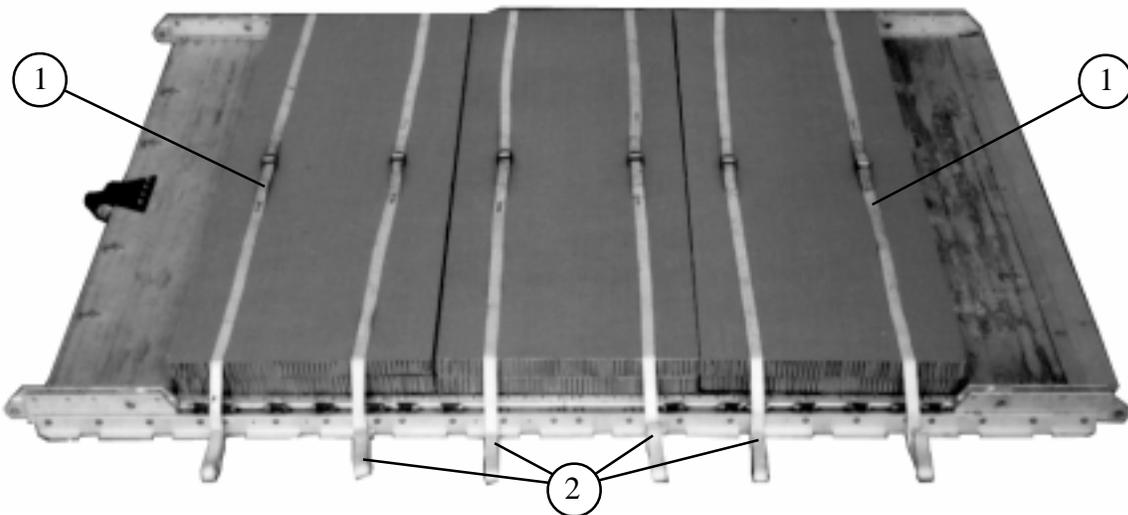
- ① Glue two full 36- by 96-inch sheets of honeycomb together. Center them 16 inches from the front edge of the platform.
- ② Make a stack as in step 1 above and place it flush against the stack placed in step 1.
- ③ Make a stack as in step 1 above and place it flush against the stack placed in step 2.

Figure 12-2. Honeycomb placed

12-4. Positioning and Securing Load

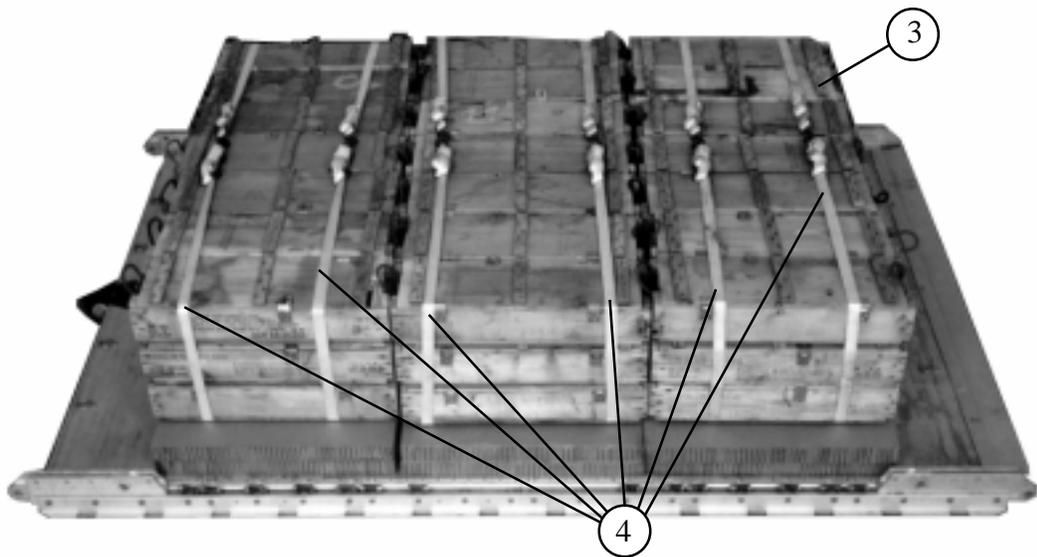
Place six 30-foot lashings on the honeycomb, place the load on the honeycomb, and secure the lashings as shown in Figure 12-3. Adapt the procedures shown for loads configured differently.

CAUTION
Only ammunition listed in FM 10-500-53/
MCRP No 4-3.8/TO 13C7-18-41 may be
airdropped. Hazardous material must be
packaged, marked, and labeled as required
by AFJMAN 24-204/TM 38-250.



- ① Form six 30-foot lashings according to FM 10-500-2/TO 13C7-1-5. Center a lashing across the honeycomb 6 inches from each end.
- ② Center two lashings on each joint in the honeycomb, 12 inches apart.

Figure 12-3. Load positioned and secured



- ③ Position the load centered on the honeycomb.
- ④ Pass both ends of each lashing to the top of the load. Secure each lashing with two D-rings and a load binder.

Note: Position the load binders so that they will be accessible for retightening and inspection when the load is fully rigged.

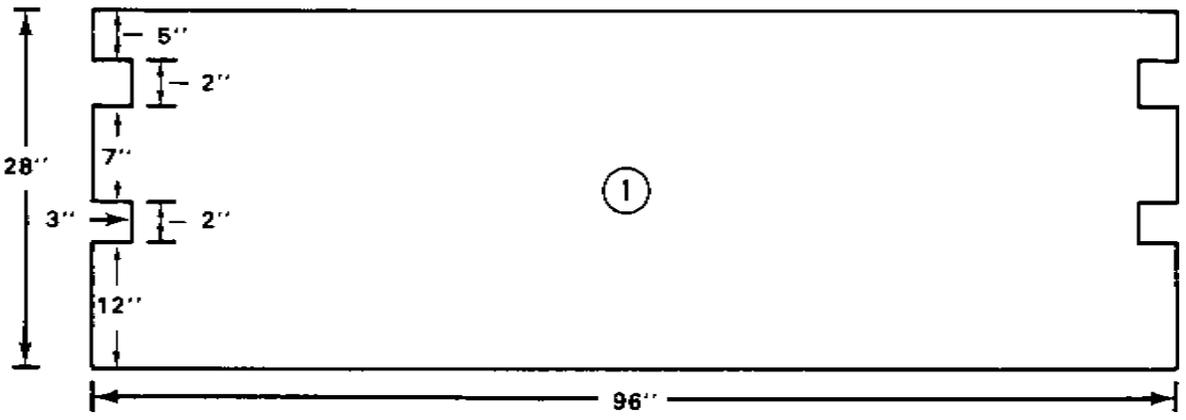
Figure 12-3. Load positioned and secured (continued)

12-5. Constructing and Installing Endboards

Construct the endboards and install them on the load as shown in Figure 12-4.

Notes:

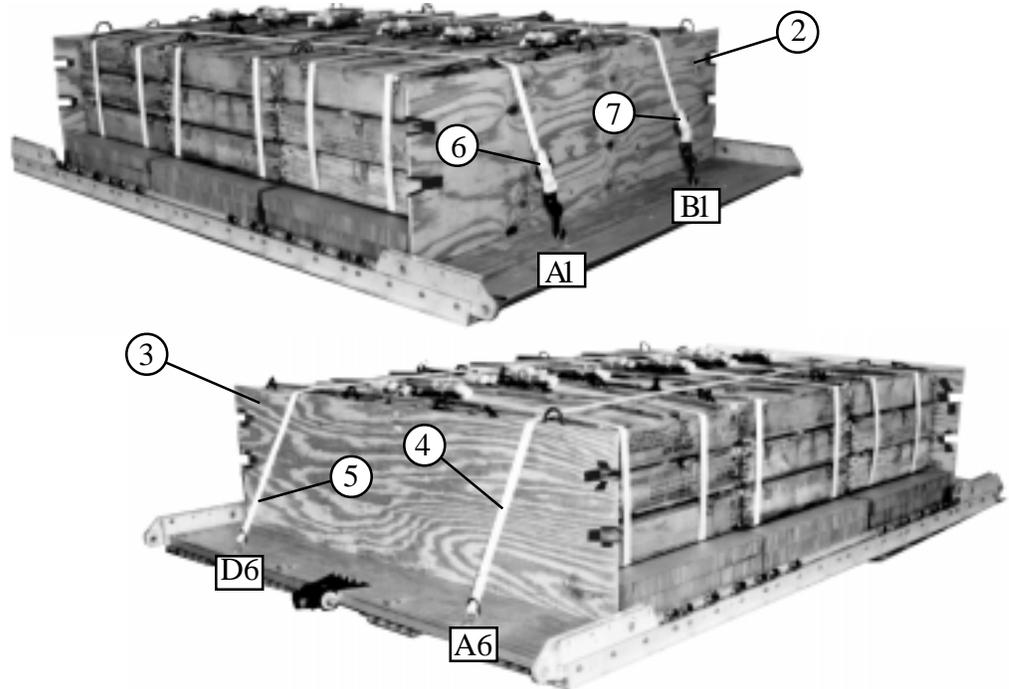
1. This drawing is not to scale.
2. The dimensions of the endboards will vary, depending on the load being rigged. The endboards must be even with the top of the load.



The diagram shows a rectangular endboard with a total height of 28 inches and a total width of 96 inches. On the left side, there are three cutouts. The top cutout is 5 inches wide and 2 inches high. The middle cutout is 7 inches wide and 2 inches high. The bottom cutout is 3 inches wide and 2 inches high. The bottom edge of the board is 12 inches from the bottom cutout. A circled number 1 is located in the center of the board.

- ① Construct two endboards using one 3/4- by 28- by 96-inch piece of plywood for each endboard. Make cutouts as shown.
- ② Tape the cutouts in the endboards to protect the lashings from sharp edges.

Figure 12-4. Endboards constructed and installed



- ② Place one endboard against the front of the load.
- ③ Place one endboard against the rear of the load.
- ④ Pass the free end of a 15-foot lashing through tie-down ring A6 and through its own D-ring. Pull the free end of the lashing over the top of the load.
- ⑤ Pass the free end of a 15-foot lashing through tie-down ring D6 and through its own D-ring. Pull the free end of the lashing over the top of the load.

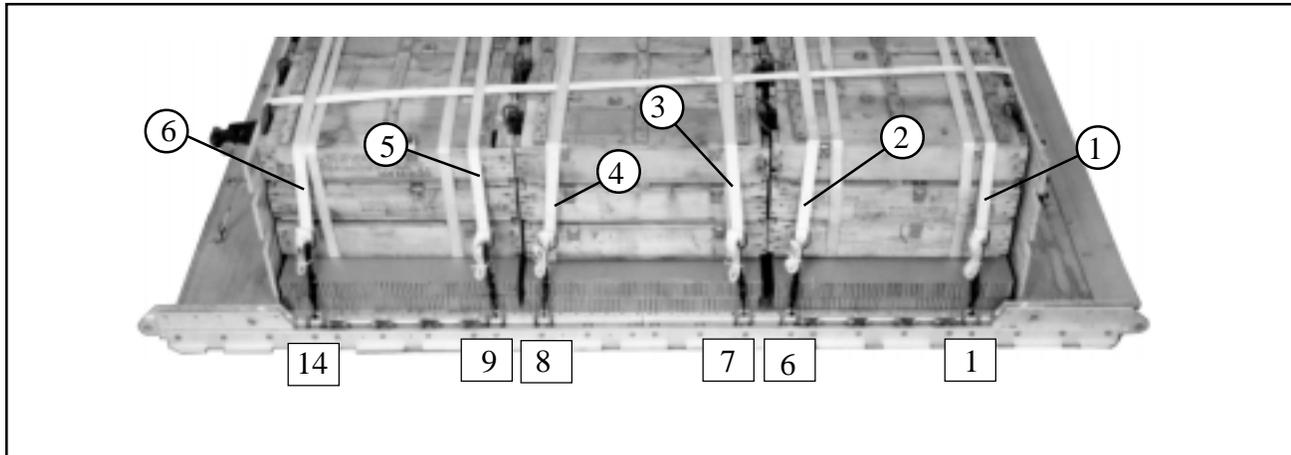
Note: If steps 4 and 5 require 30-foot lashings, secure each end to the tie-down rings with D-rings and load binders.

- ⑥ Secure the end of the lashing positioned in step 4 to tie-down ring A1 with a D-ring and a load binder.
- ⑦ Secure the end of the lashing positioned in step 5 to tie-down ring B1 with a D-ring and a load binder.

Figure 12-4. Endboards constructed and installed (continued)

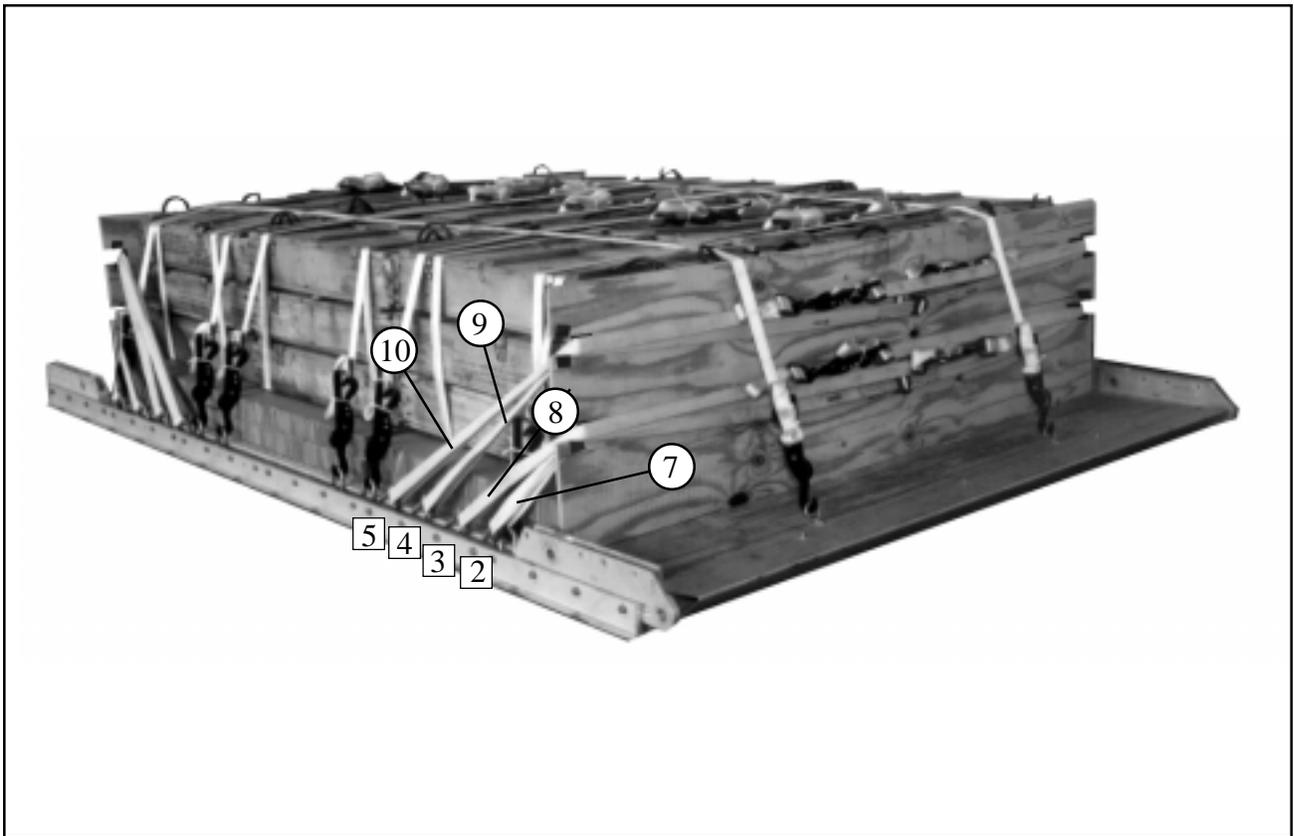
12-6. Installing Lashings

Lash the load to the platform using six 15-foot lashings, eight 30-foot lashings, 22 D-rings, and 14 load binders according to FM 10-500-2/TO 13C7-1-5, and as shown in Figures 12-5, 12-6, and 12-7.



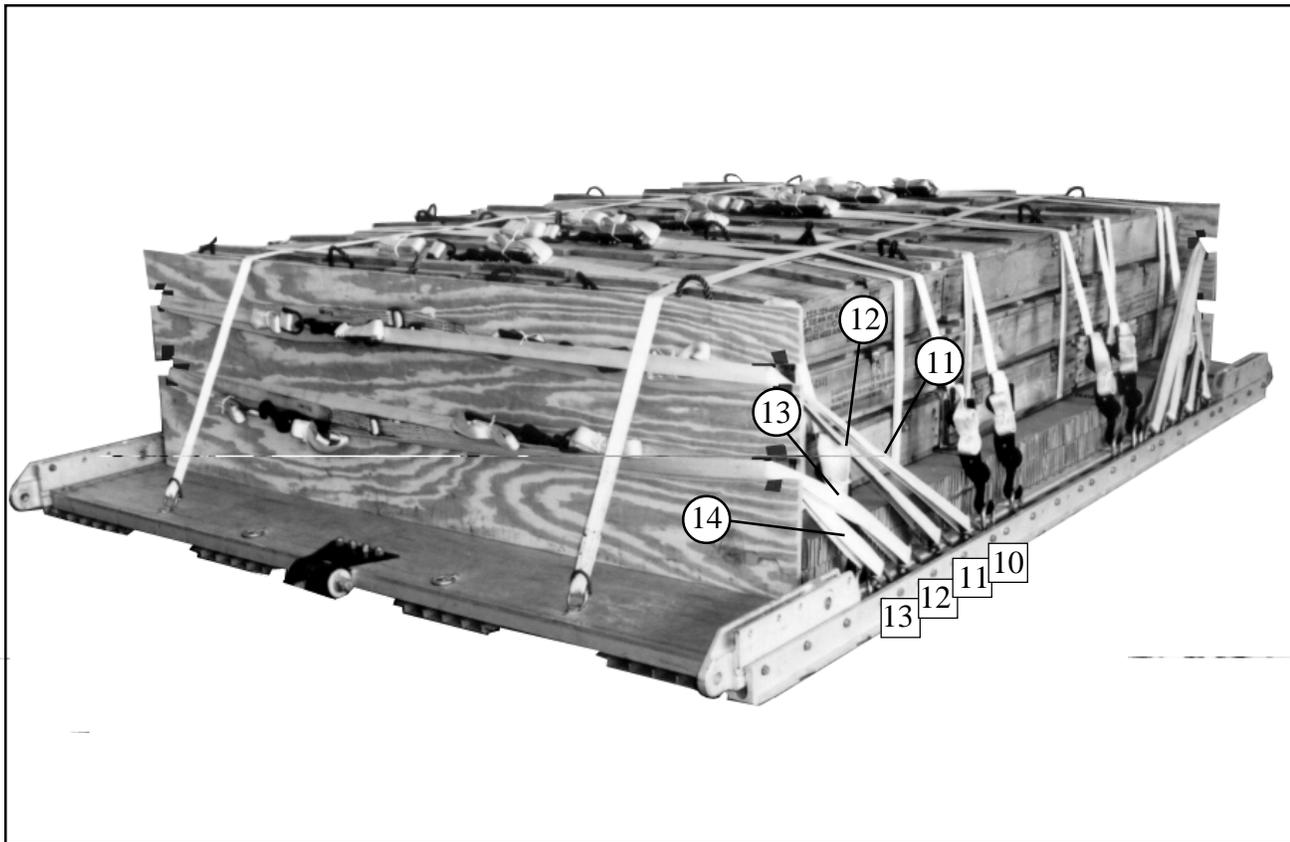
Lashing Number	Tie-down Clevis Numbers	Instructions
1	1 and 1A	Pass lashing:
2	6 and 6A	Through clevis 1A and through its own D-ring, over the top of the load, and to clevis 1. Secure the lashing to clevis 1 with a D-ring and a load binder.
3	7 and 7A	Through clevis 6A and through its own D-ring, over the top of the load, and to clevis 6. Secure the lashing to clevis 6 with a D-ring and a load binder.
4	8 and 8A	Through clevis 7A and through its own D-ring, over the top of the load, and to clevis 7. Secure the lashing to clevis 7 with a D-ring and a load binder.
5	9 and 9A	Through clevis 8A and through its own D-ring, over the top of the load, and to clevis 8. Secure the lashing to clevis 8 with a D-ring and a load binder.
6	14 and 14A	Through clevis 9A and through its own D-ring, over the top of the load, and to clevis 9. Secure the lashing to clevis 9 with a D-ring and a load binder.
6	14 and 14A	Through clevis 14A and through its own D-ring, over the top of the load, and to clevis 14. Secure the lashing to clevis 14 with a D-ring and a load binder.

Figure 12-5. Lashings 1 through 6 installed



Lashing Number	Tie-down Clevis Numbers	Instructions
7	2 and 2A	Pass a 30-foot lashing: Through clevis 2 and around the front endboard (through the lower cutouts), and through clevis 2A. Secure with two D-rings and a load binder.
8	3 and 3A	Through clevis 3 and around the front endboard (through the lower cutouts), and through clevis 3A. Secure with two D-rings and a load binder.
9	4 and 4A	Through clevis 4 and around the front endboard (through the upper cutouts), and through clevis 4A. Secure with two D-rings and a load binder.
10	5 and 5A	Through clevis 5 and around the front endboard (through the upper cutouts), and through clevis 5A. Secure with two D-rings and a load binder.

Figure 12-6. Lashings 7 through 10 installed



Lashing Number	Tie-down Clevis Numbers	Instructions
11	10 and 10A	Pass a 30-foot lashing: Through clevis 10, around the rear endboard (through the upper cutouts), and through clevis 10A. Secure with two D-rings and a load binder.
12	11 and 11A	Through clevis 11, around the rear endboard (through the upper cutouts), and through clevis 11A. Secure with two D-rings and a load binder.
13	12 and 12A	Through clevis 12, around the rear endboard (through the lower cutouts), and through clevis 12A. Secure with two D-rings and a load binder.
14	13 and 13A	Through clevis 13, around the rear endboard (through the lower cutouts), and through clevis 13A. Secure with two D-rings and a load binder.

Figure 12-7. Lashings 11 through 14 installed

12-7. Installing Suspension Slings and Deadman's Tie

Install the suspension slings as shown in Figure 12-8 using four 12-foot (2-loop), type XXVI nylon webbing slings and four large suspension clevis assemblies. Install the deadman's tie as shown in Figure 12-8.

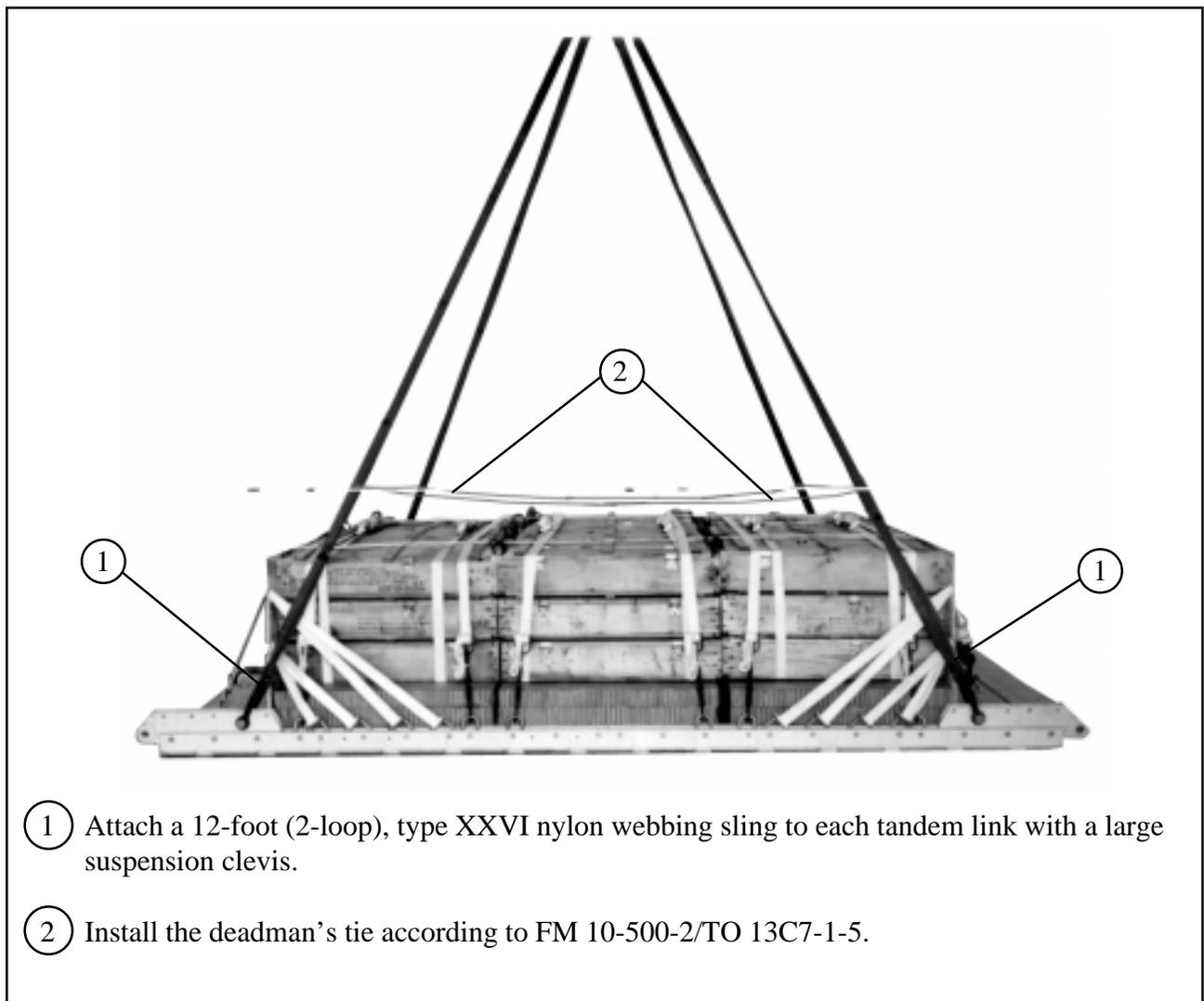
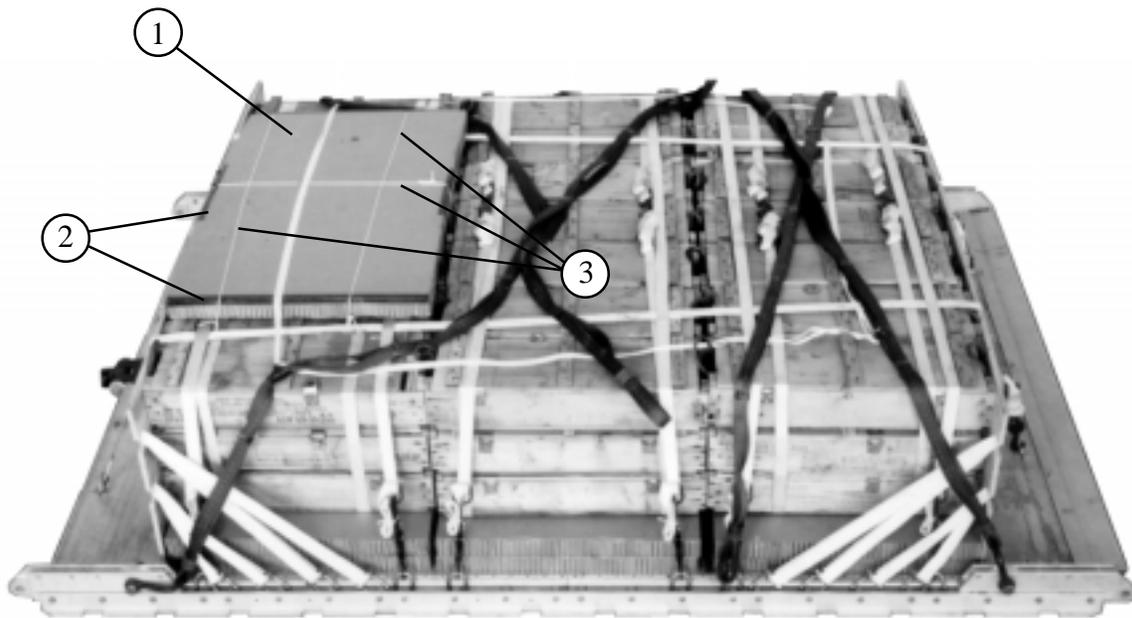


Figure 12-8. Suspension slings and deadman's tie installed

12-8. Installing Parachute Stowage Platform

Install the parachute stowage platform as shown in Figure 12-9.

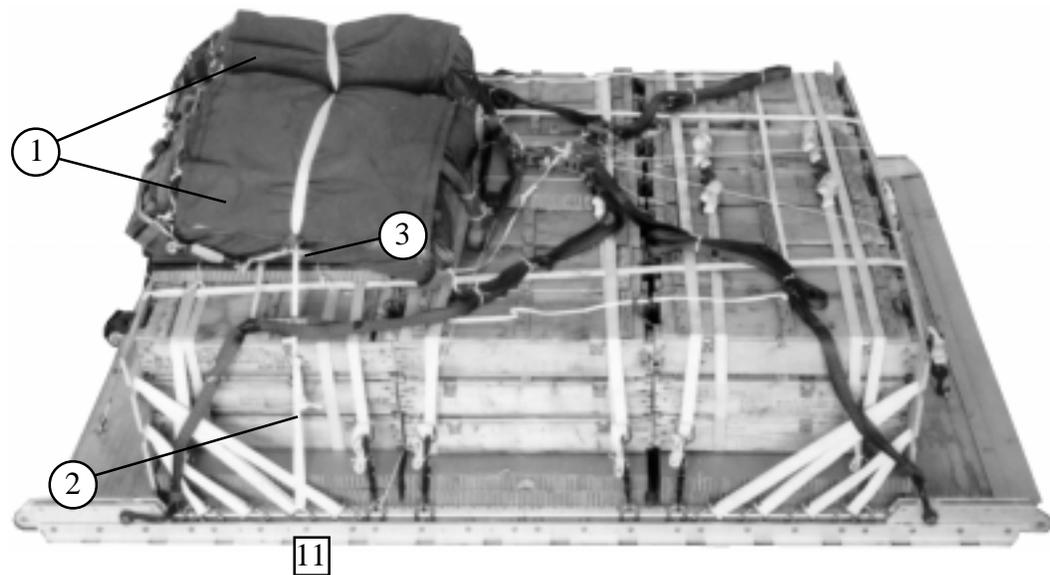


- ① Position a 60- by 36-inch piece of honeycomb so that it is centered across the load and even with the rear endboard. Place the deadman's tie over the honeycomb as shown.
- ② Tape the edges of the honeycomb.
- ③ Tie the honeycomb to the nearest lashings with three lengths of type III nylon cord.

Figure 12-9. Parachute stowage platform installed

12-9. Installing Parachutes

Compute the parachute requirements for the load being rigged. The load shown requires two G-11 cargo parachutes. Install the parachutes as shown in Figure 12-10.



- ① Prepare two G-11 cargo parachutes according to FM 10-500-2/TO 13C7-1-5. Place the parachutes on the parachute stowage platform.
- ② Restrain the parachutes according to FM 10-500-2/TO 13C7-1-5. Tie the type VIII nylon restraint strap to clevises 11 and 11A.
- ③ Install the parachute release strap according to FM 10-500-2/TO 13C7-1-5.

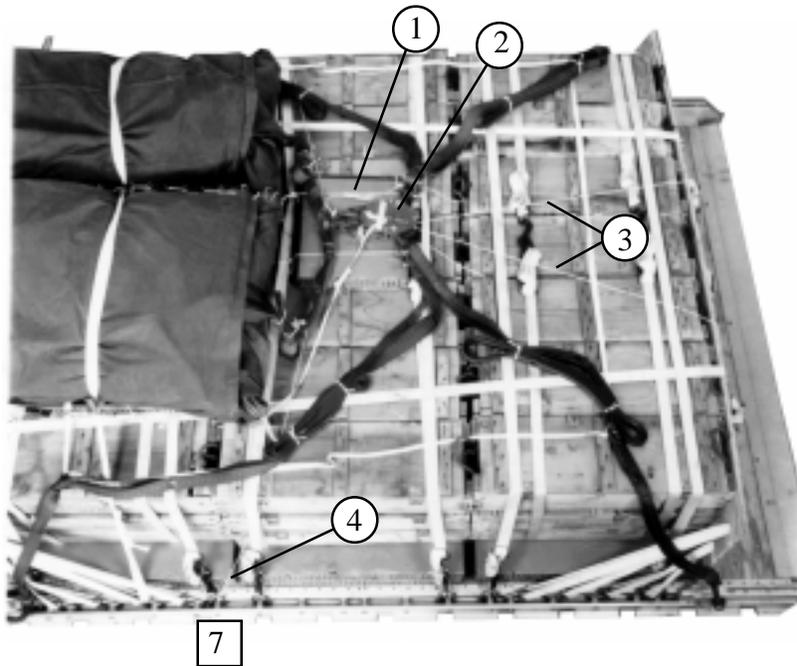
Note: The multicut release strap shown here is authorized by FM 10-500-2/TO 13C7-1-5. However, the single V-knife release strap may also be used.

Figure 12-10. Cargo parachutes installed

12-10. Installing Release System

Prepare, install, and safety an M-1 cargo parachute release according to FM 10-500-2/TO 13C7-1-5, and as shown in Figure 12-11.

Note: If the load requires four G-11B cargo parachutes, the M-2 cargo parachute release assembly is required.

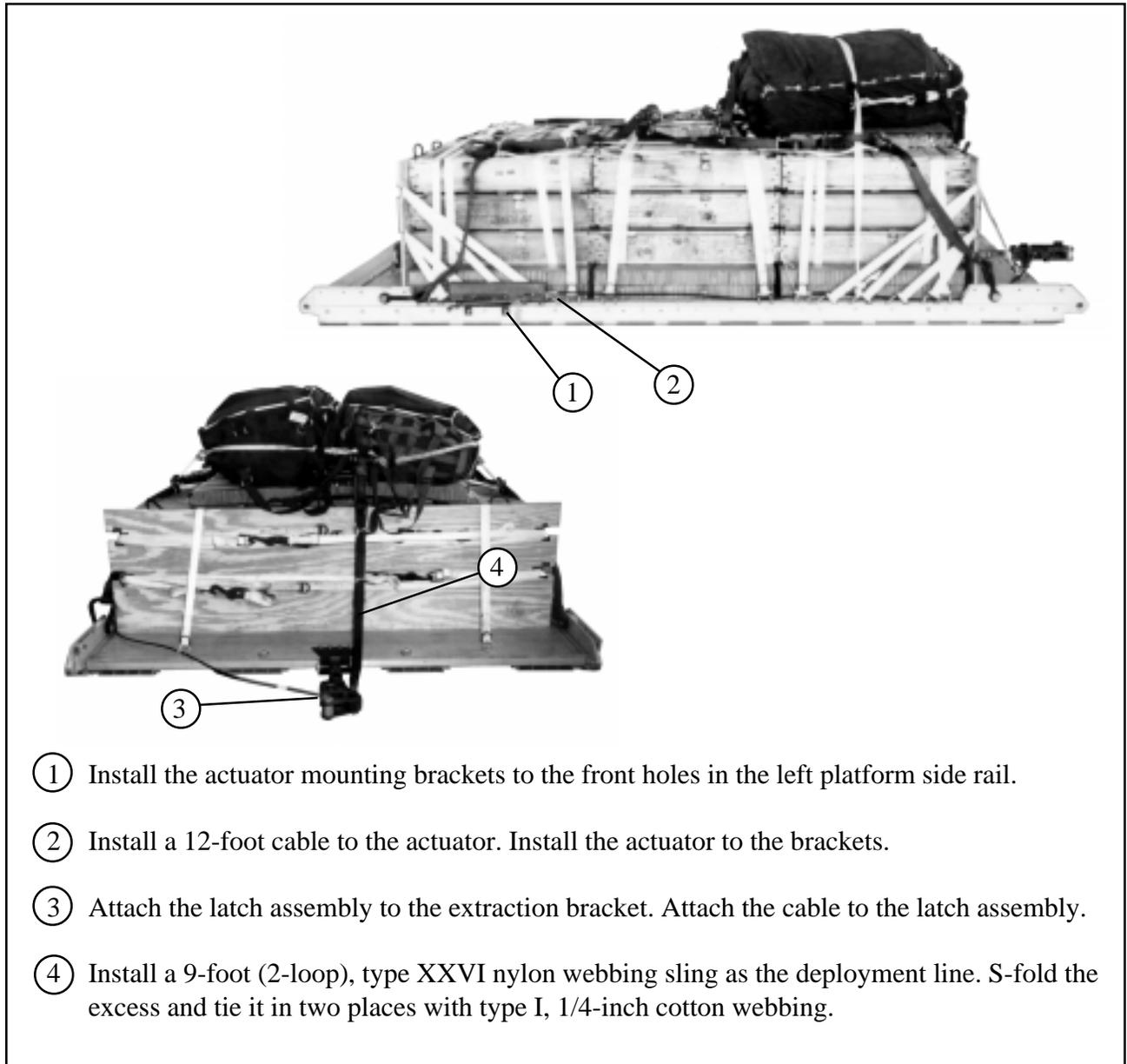


- ① Center an 18-by 20-inch piece of honeycomb in front of the parachutes. Tape the edges of the honeycomb and secure it to the load with two lengths of type III nylon cord.
- ② Center the M-1 release on the honeycomb.
- ③ Secure the bottom of the release assembly to tie-down rings A1 and B1 with a length of type III nylon cord.
- ④ Secure the top of the release assembly to clevises 7 and 7A with a length of type III nylon cord.

Figure 12-11. Release assembly installed

12-11. Installing Extraction System

Install the EFTC extraction system according to FM 10-500-2/TO 13C7-1-5, and as shown in Figure 12-12.



- ① Install the actuator mounting brackets to the front holes in the left platform side rail.
- ② Install a 12-foot cable to the actuator. Install the actuator to the brackets.
- ③ Attach the latch assembly to the extraction bracket. Attach the cable to the latch assembly.
- ④ Install a 9-foot (2-loop), type XXVI nylon webbing sling as the deployment line. S-fold the excess and tie it in two places with type I, 1/4-inch cotton webbing.

Figure 12-12. EFTC installed

12-12. Installing Provisions for Emergency Restraints

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

12-13. 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.

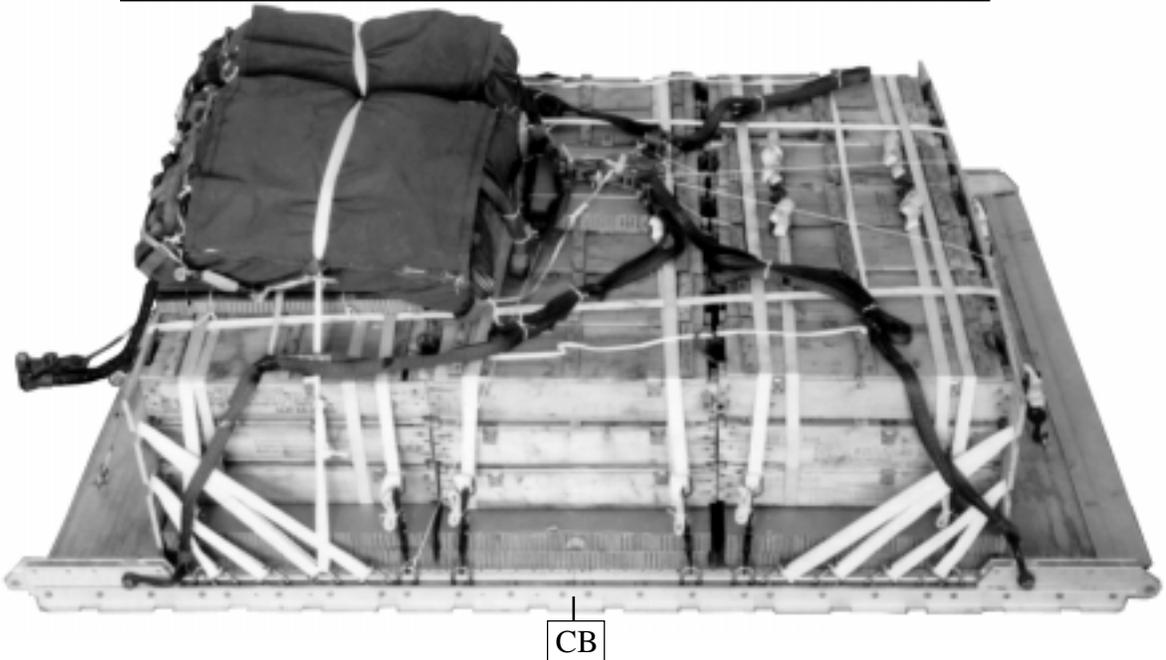
12-14. Marking Rigged Load

Mark the rigged load according to FM 10-500-2/TO 13C7-1-5, and as shown in Figure 12-13. Complete the Shipper's Declaration for Dangerous Goods, and attach it to the load. If the load differs from the one shown, the weight, parachute requirements, CB, and tip-off curve must be recomputed.

12-15. Equipment Required

Use the equipment listed in Table 12-1 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	8,904 pounds
	Maximum	16,250 pounds
Height		56 inches
Width		108 inches
Length		152 inches
Overhang:	Front	0 inches
	Rear	0 inches
	CB (from front edge of platform)	74 inches
	Extraction System (adds 18 inches to length of platform)	EFTC

Figure 12-13. Bulk supply load rigged on a 12-foot platform for low-velocity airdrop

Table 12-1. Equipment required for rigging bulk supply load on a 12-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
1670-00-360-0328	Cover: Clevis, large	1
1670-00-360-0329	Link, type IV	3
1670-01-183-2678	Leaf, extraction line (line bag)	2
1670-01-064-4452	Line, drogue (for C-17) 60-ft (1-loop), type XXVI	1
1670-01-062-6316	Line, extraction 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
1670-00-783-5988	Link assembly: Type IV	3
5306-00-435-8994	Two-point, 3 3/4-in 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

Table 12-1. Equipment required for rigging bulk supply load on a 12-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	7 sheets
	Parachute:	
1670-01-016-7841	Cargo, G-11B	2
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	(28)
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	2 sheets
1670-01-097-8816	Release, cargo parachute, M-1	1
	Sling, cargo airdrop	
	For suspension:	
1670-01-062-6303	12-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	2
1670-00-998-0116	Strap, parachute release, single	1
7510-00-266-5016	Tape, adhesive, 2-in	As required
1670-00-937-0271	Tie-down assembly, 15-ft	36
	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