

CHAPTER 12

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

12-1. Description of Load

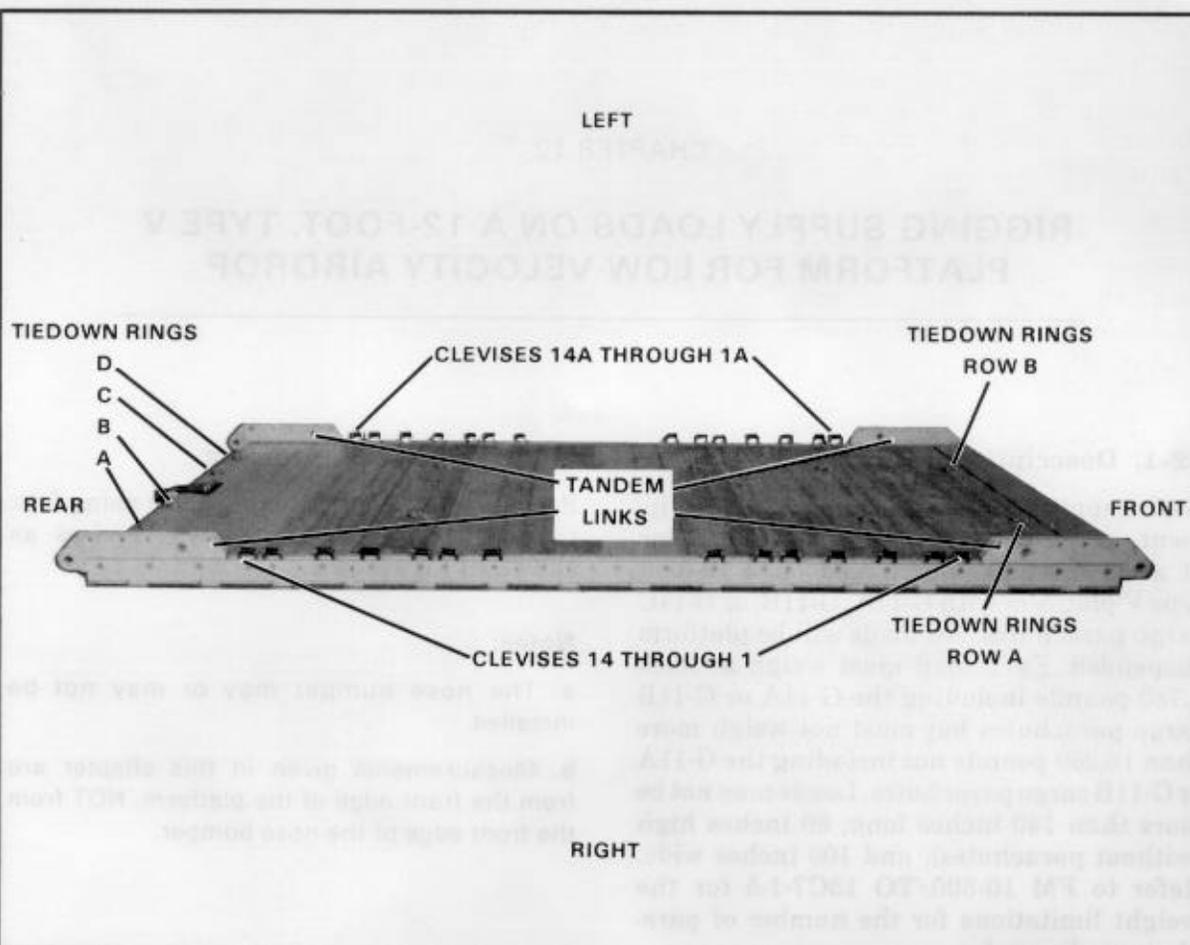
Bulk supplies consisting of rations, equipment, gasoline, ammunition, or other items of general supply are rigged on a 12-foot, type V platform with G-11A, G-11B, or G-11C cargo parachutes. All loads will be platform suspended. Each load must weigh at least 3,780 pounds including the G-11A or G-11B cargo parachutes but must not weigh more than 16,250 pounds not including the G-11A or G-11B cargo parachutes. Loads may not be more than 140 inches long, 60 inches high (without parachutes), and 100 inches wide. Refer to FM 10-500/TO 13C7-1-5 for the weight limitations for the number of parachutes to be used.

12-2. Preparing Platform

Prepare a 12-foot, type V platform using four tandem links and 28 tiedown clevises as shown in Figure 12-1.

Notes:

- a. The nose bumper may or may not be installed.
- b. Measurements given in this chapter are from the front edge of the platform, NOT from the front edge of the nose bumper.



Step:

1. Inspect, or assemble and inspect, the platform as outlined in TM 10-1670-268-20&P/ TO 13C7-52-22.
2. Install a tandem link on the front of each platform side rail using holes 1, 2, and 3.
3. Install a tandem link on the rear of each platform side rail using holes 22, 23, and 24.
4. Starting at the front of each platform side rail, 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.
5. Starting at the front of the platform, number the clevises bolted to the right side from 1 through 14.
6. Starting at the front of the platform, number the clevises bolted to the left side from 1A through 14A.
7. Starting at the front of the platform, number the tie-down rings from 1 through 6.
8. Label the rows of tie-down rings on the first five panels A and B from right to left. Label the tie-down rings on the last panel A, B, C, and D from right to left.

Figure 12-1. Platform prepared

12-3. Building and Placing Honeycomb Stacks

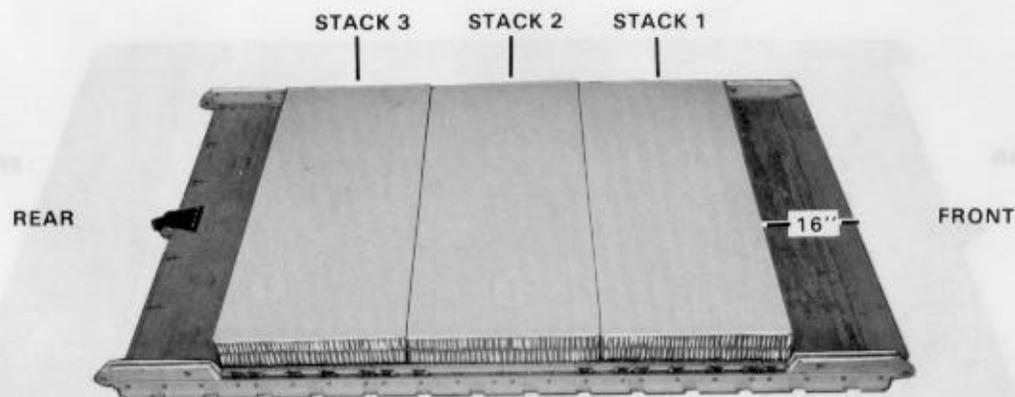
Build three honeycomb stacks and place them on the platform as shown in Figure 12-2.

Note:

When rigging this load for airdrop on a drop zone with a ground elevation of 6,000 to 10,000 feet, add another layer of honeycomb to each stack.

Notes:

- Glue the layers of each honeycomb stack together.
- When ammunition is dropped, two layers of honeycomb are required.



Stack Number	Pieces	Width (Inches)	Length (Inches)	Material	Instructions
1	2	96	36	Honeycomb	Center the stack between the side rails with the 96-inch edge 16 inches from the front edge of the platform.
2	2	96	36	Honeycomb	Center the stack between the side rails with the 96-inch edge 2 inches from stack 1.
3	2	96	36	Honeycomb	Center the stack between the side rails with the 96-inch edge 2 inches from stack 2.

Figure 12-2. Honeycomb stacks prepared and positioned

12-4. Positioning and Securing Load

CAUTION

Only ammunition listed in FM 10-553/TO 13C7-18-41 may be airdropped. Hazardous material must be packaged, marked, and labeled as required by AFR 71-4/TM 38-250.

Position and secure the load as described below.

a. Form six 30-foot tiedown straps. Lay two 30-foot straps across each honeycomb stack as shown in Figure 12-3.

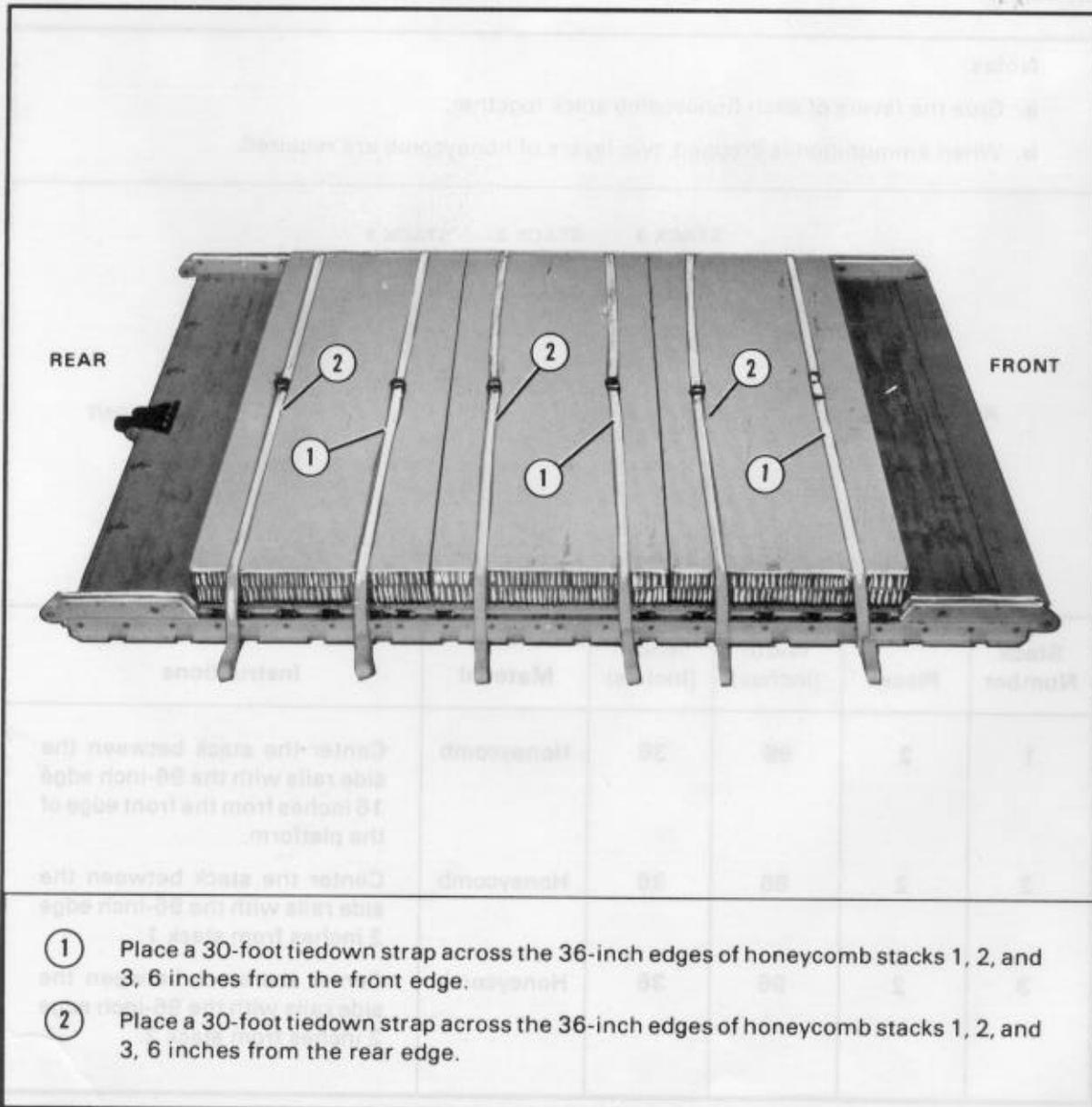
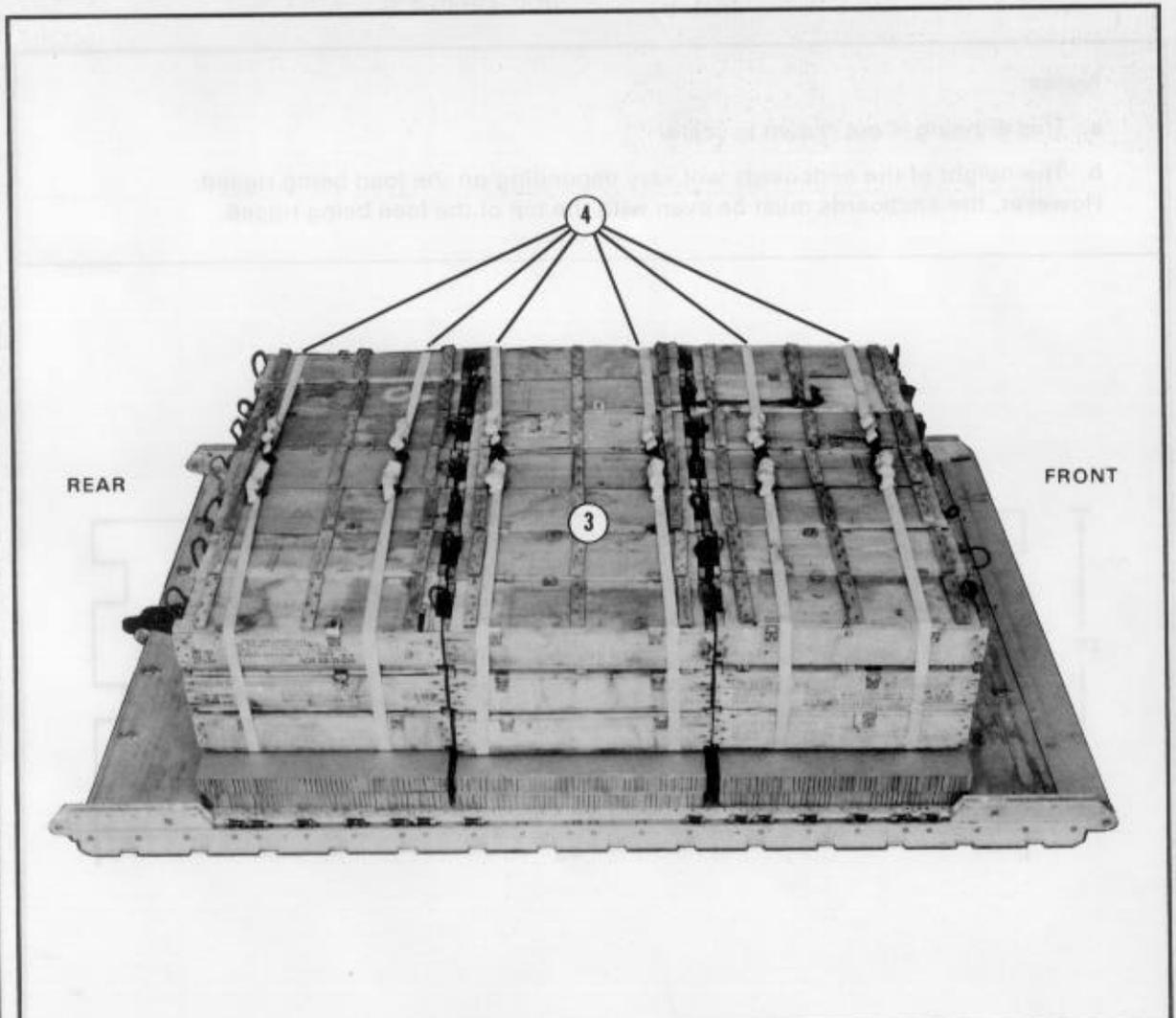


Figure 12-3. Load positioned and secured

b. Position the load on the honeycomb with the weight of the load evenly distributed as shown in Figure 12-3.

c. Secure the load as shown in Figure 12-3.



③ Position the load on the honeycomb as shown.

Note:

If the load differs from the one shown, adapt the procedures shown and position the load.

④ Pass both ends of each 30-foot tiedown strap to the top of the load. Secure the ends of each strap with two D-rings and a load binder.

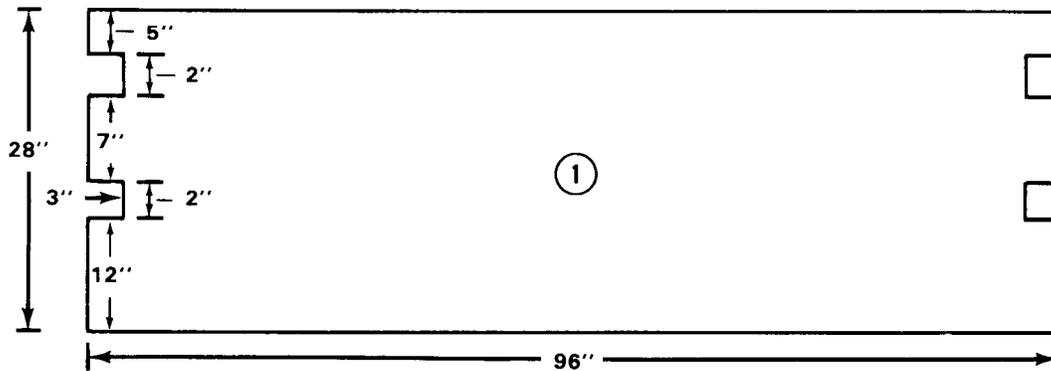
Figure 12-3. Load positioned and secured (continued)

12-5. Constructing and Installing Endboards

Construct the endboards as shown in Figure 12-4. Install the endboards as shown in Figure 12-4.

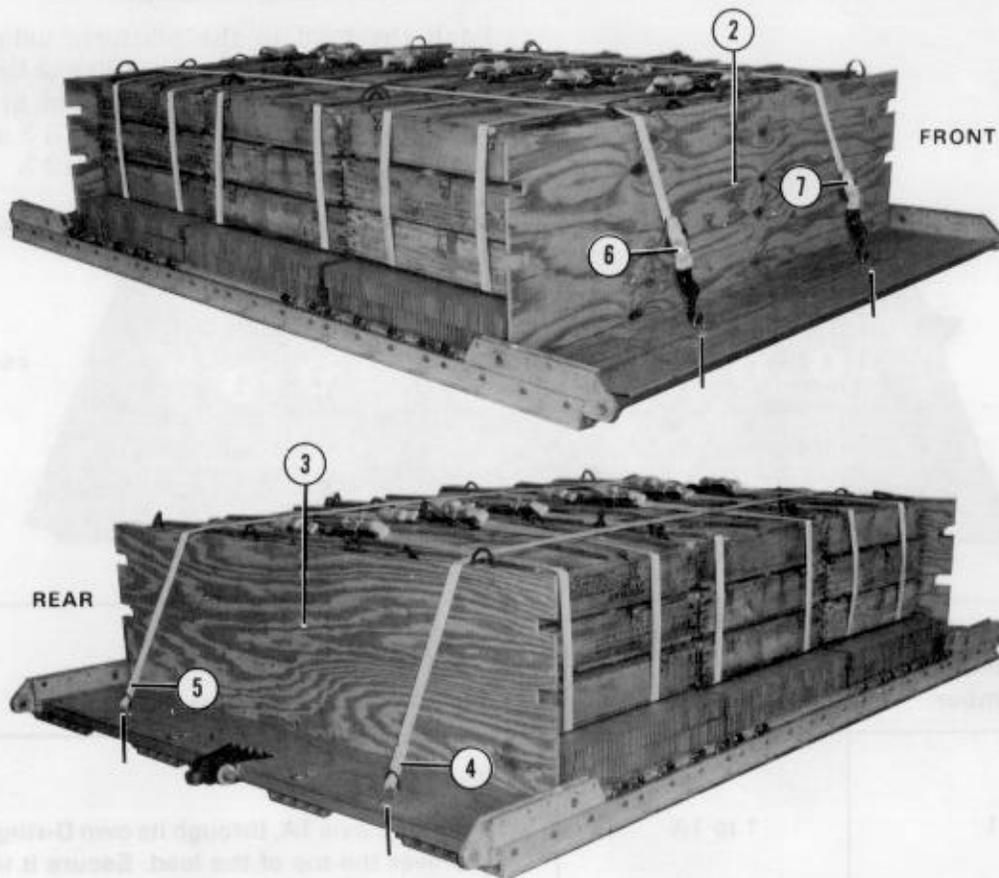
Notes:

- a. This drawing is not drawn to scale.
- b. The height of the endboards will vary depending on the load being rigged. However, the endboards must be even with the top of the load being rigged.



- ① Construct endboards using two 3/4- by 28- by 96-inch pieces of plywood. Make cutouts as shown above.

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 tiedown strap through tiedown ring A6 and through its own D-ring. Pass the free end of the strap over the top of the load.

Note:

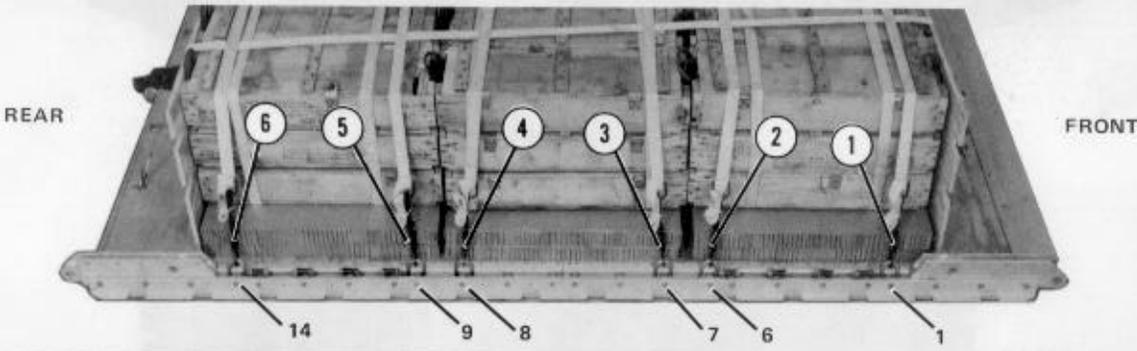
A 30-foot tiedown strap may be required in steps 4 and 5. If so, form the 30-foot tiedown strap according to FM 10-500/TO 13C7-1-5. Secure each end of the strap with a D-ring and a load binder.

- ⑤ Pass the free end of a 15-foot tiedown strap through tiedown ring D6 and through its own D-ring. Pass the free end of the strap over the top of the load.
- ⑥ Secure the end of the tiedown strap positioned in step 4 to tiedown ring A1 with a D-ring and a load binder.
- ⑦ Secure the end of the tiedown strap positioned in step 5 to tiedown ring B1 with a D-ring and a load binder.

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

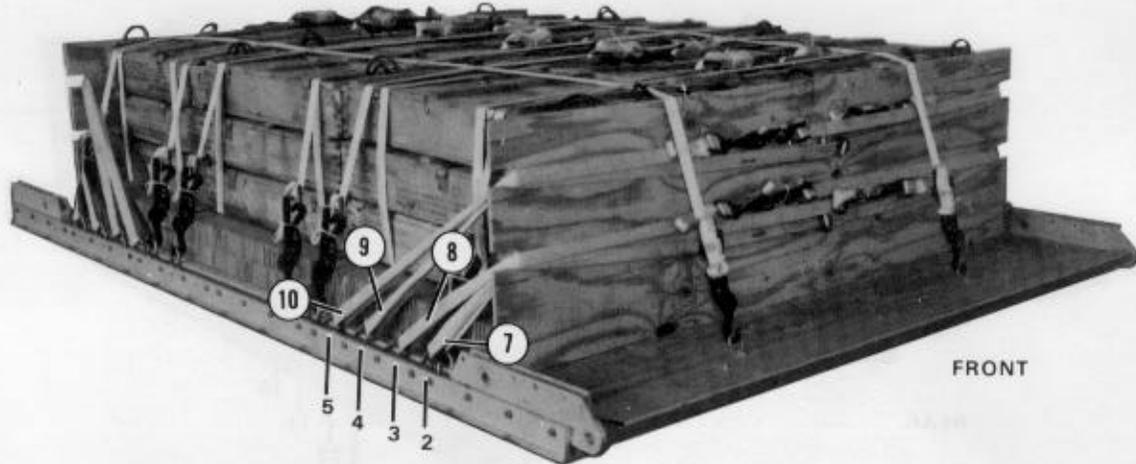
12-6. Installing Lashings

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



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

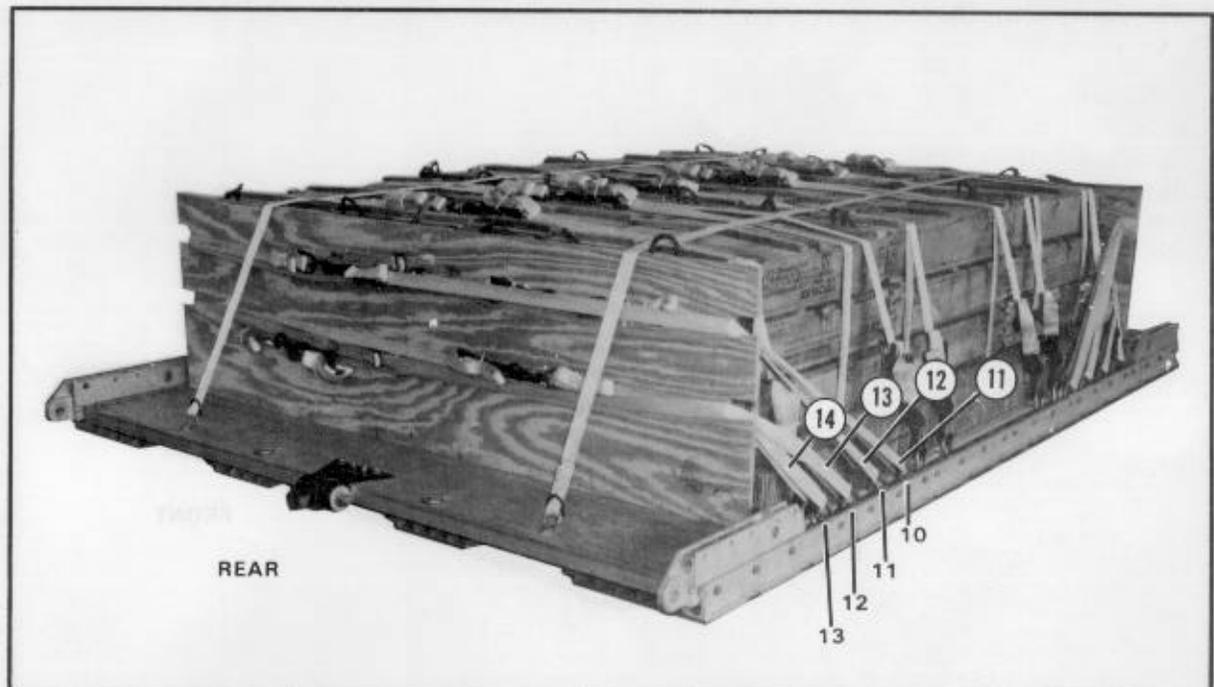
Figure 12-5. Lashings 1 through 6 installed



Lashing Number	Tiedown Clevis Number	Instructions
*7	2 to 2A	Pass lashing: Through clevis 2, around the front endboard (through the lower cutouts), and through clevis 2A.
*8	3 to 3A	Through clevis 3, around the front endboard (through the lower cutouts), and through clevis 3A.
*9	4 to 4A	Through clevis 4, around the front endboard (through the upper cutouts), and through clevis 4A.
*10	5 to 5A	Through clevis 5, around the front endboard (through the upper cutouts), and through clevis 5A.

* Denotes a 30-foot lashing. Form the lashing according to FM 10-500/TO 13C7-1-5. Run lashing as stated above. Fit a D-ring on each free end of the lashing and secure the ends at the front of the load with a load binder.

Figure 12-6. Lashings 7 through 10 installed



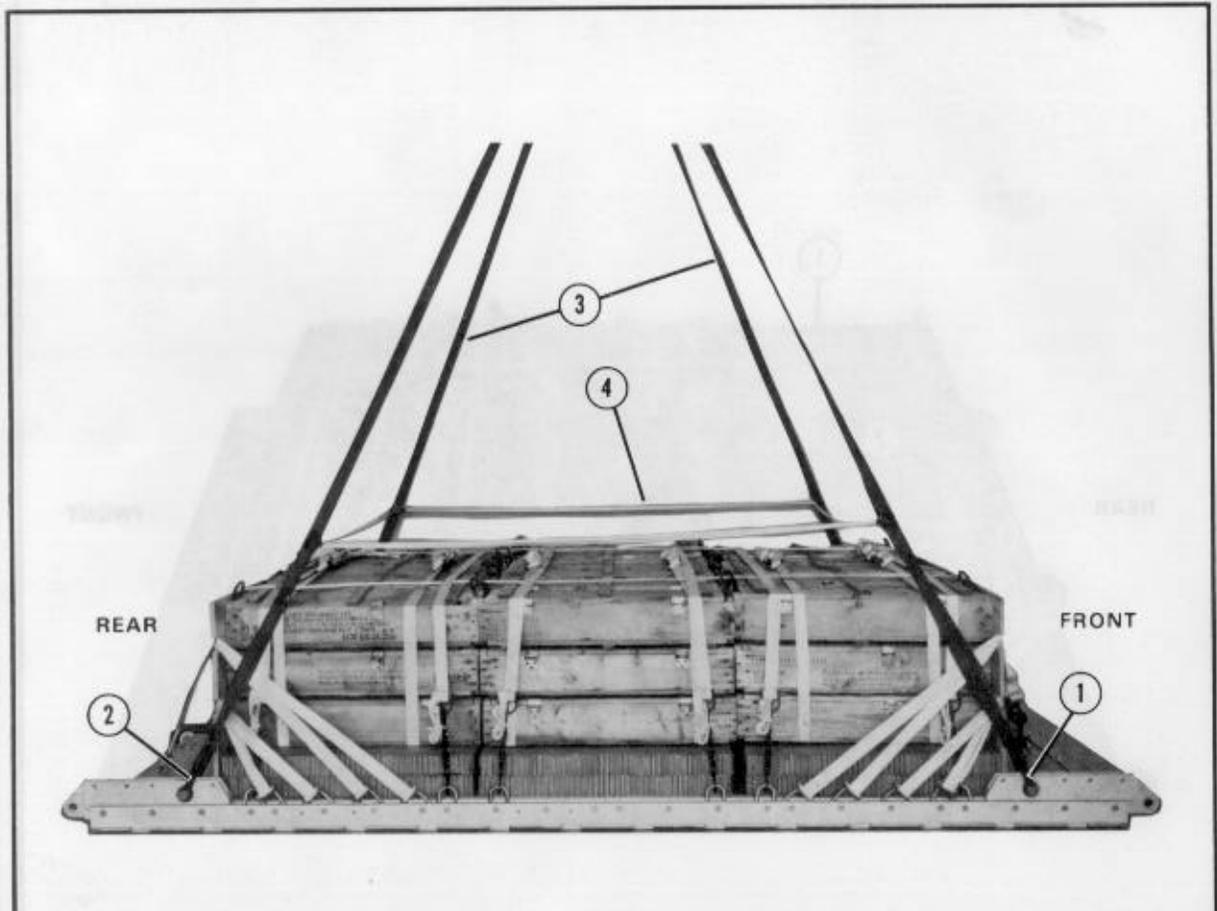
Lashing Number	Tiedown Clevis Number	Instructions
*11	10 to 10A	Pass lashing: Through clevis 10, around the rear endboard (through the upper cutouts), and through clevis 10A.
*12	11 to 11A	Through clevis 11, around the rear endboard (through the upper cutouts), and through clevis 11A.
*13	12 to 12A	Through clevis 12, around the rear endboard (through the lower cutouts), and through clevis 12A.
*14	13 to 13A	Through clevis 13, around the rear endboard (through the lower cutouts), and through clevis 13A.

* Denotes a 30-foot lashing. Form the lashing according to FM 10-500/TO 13C7-1-5. Run lashing as stated above. Fit a D-ring on each free end of the lashing and secure the ends at the front of the load with 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 (3-loop), type X or 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.

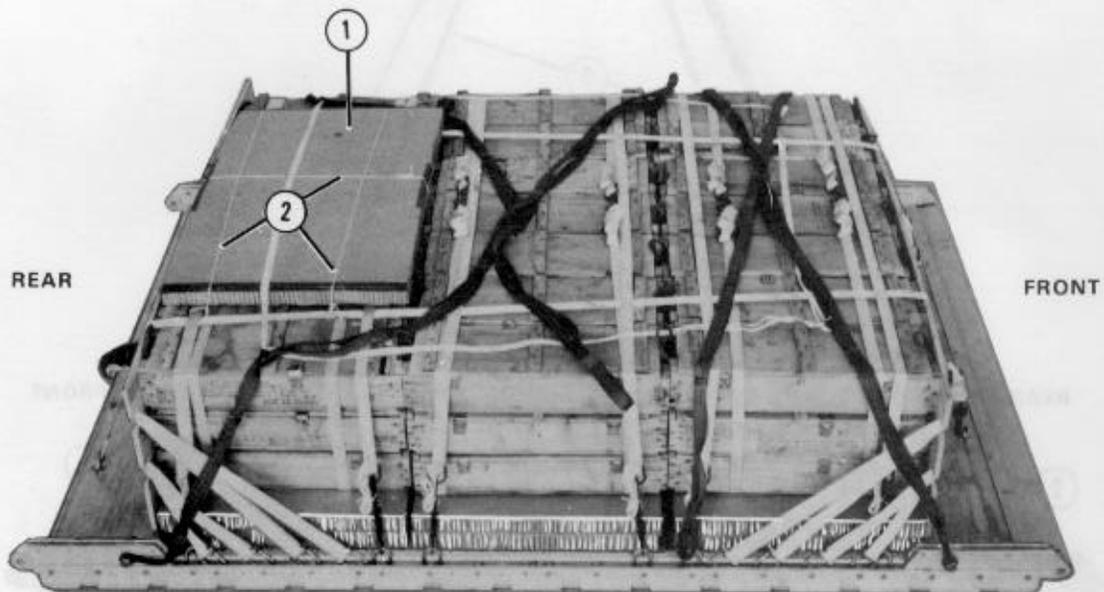


- ① Pass one end of a 12-foot suspension sling through the bell portion of a large suspension clevis. Bolt the clevis to the suspension holes of the right front tandem link.
- ② Attach a suspension sling to the right rear tandem link as described in 1.
- ③ Attach a suspension sling to each tandem link on the left rail as described above.
- ④ Make the deadman's tie according to FM 10-500/TO 13C7-1-5.

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.

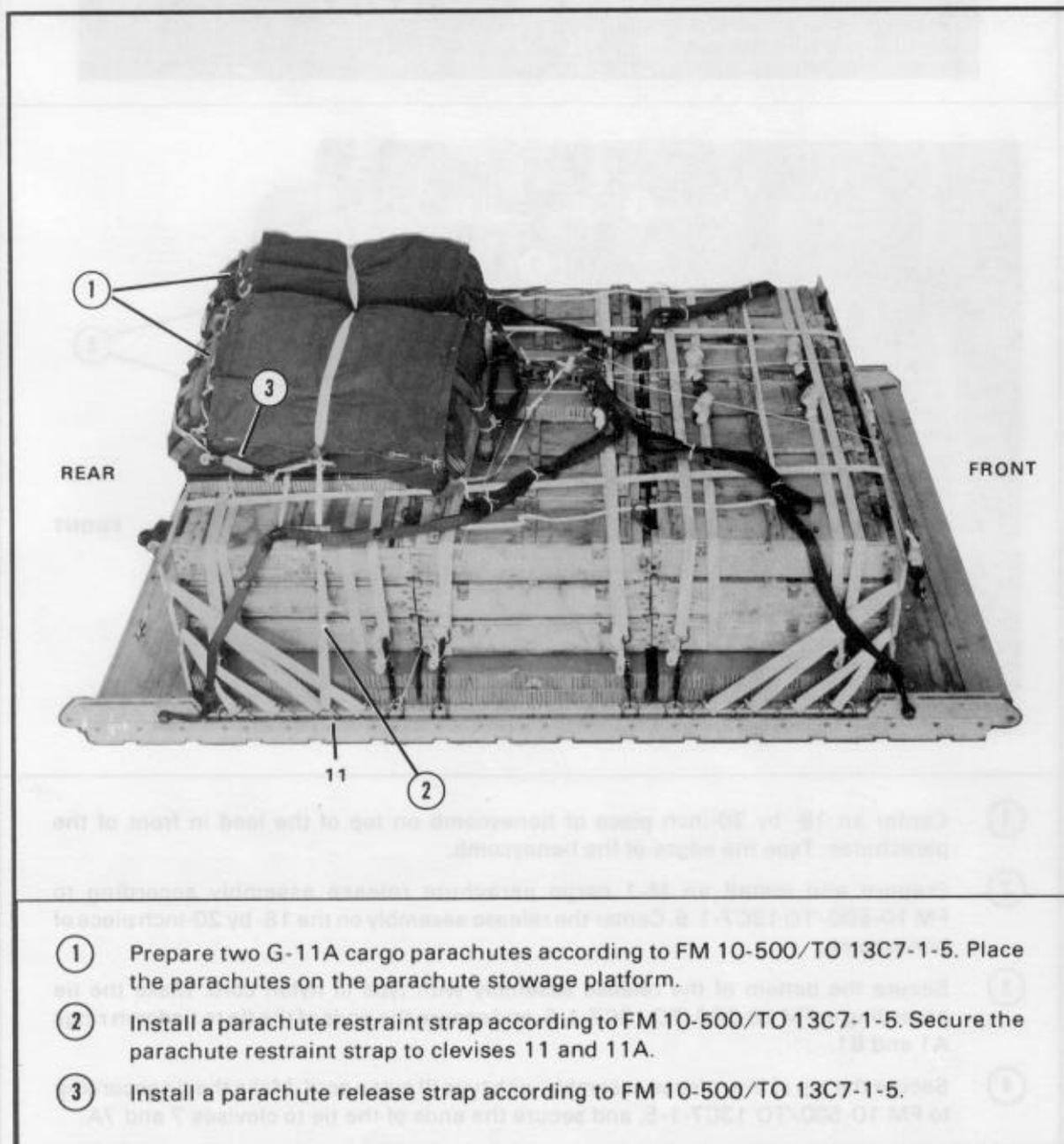


- ① Center a 36- by 60-inch piece of honeycomb on the rear of the load with one 60-inch edge of the honeycomb even with the rear endboard. Tape the edges of the honeycomb.
- ② Secure the honeycomb in place with three lengths of type III nylon cord.

Figure 12-9. Parachute stowage platform installed

12-9. Installing Parachutes

Compute parachute requirements for the load being rigged. Select the correct number of G-11A, G-11B, or G-11C cargo parachutes. The load in Figure 12-10 shows two G-11A cargo parachutes. Install the parachutes as shown in Figure 12-10.



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

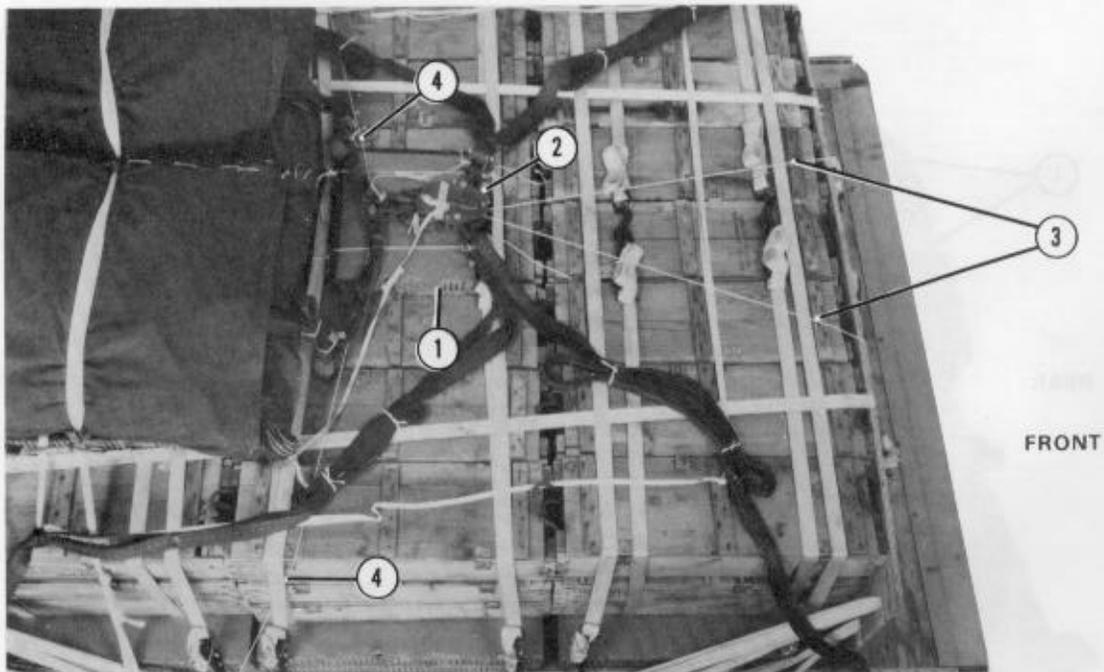
Figure 12-10. Parachutes installed

12-10. Installing Release System

Install and safety an M-1 cargo parachute release assembly as shown in Figure 12-11.

CAUTION

When three or more G-11B or G-11C cargo parachutes are used, an M-2 cargo parachute release assembly is required.

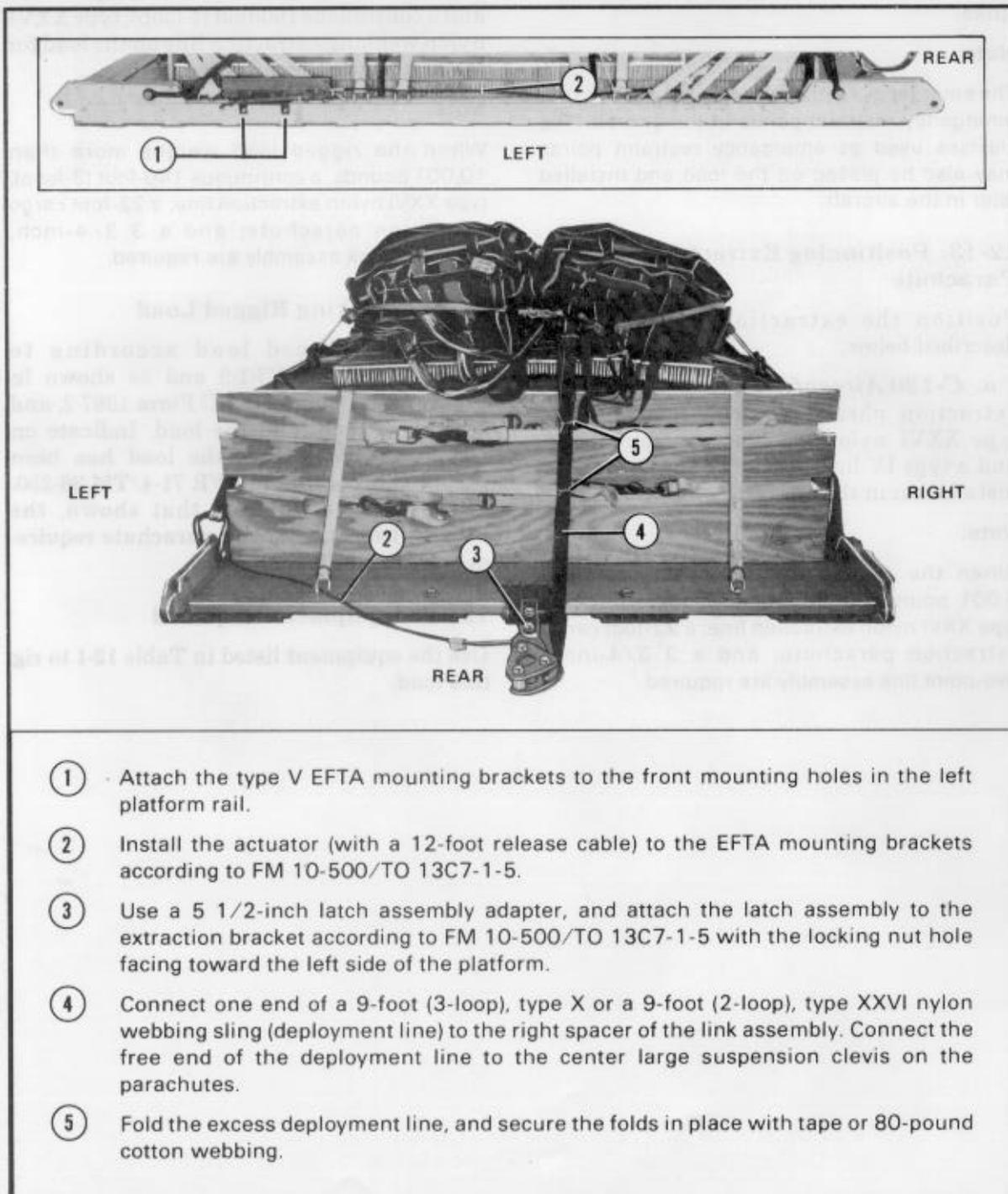


- ① Center an 18- by 20-inch piece of honeycomb on top of the load in front of the parachutes. Tape the edges of the honeycomb.
- ② Prepare and install an M-1 cargo parachute release assembly according to FM 10-500/TO 13C7-1-5. Center the release assembly on the 18- by 20-inch piece of honeycomb.
- ③ Secure the bottom of the release assembly with type III nylon cord. Make the tie according to FM 10-500/TO 13C7-1-5, and secure the ends of the tie to tiedown rings A1 and B1.
- ④ Secure the top of the release assembly with type III nylon cord. Make the tie according to FM 10-500/TO 13C7-1-5, and secure the ends of the tie to clevises 7 and 7A.

Figure 12-11. Release assembly installed

12-11. Installing Extraction System

Install the EFTC extraction system as shown in Figure 12-12.



- ① Attach the type V EFTA mounting brackets to the front mounting holes in the left platform rail.
- ② Install the actuator (with a 12-foot release cable) to the EFTA mounting brackets according to FM 10-500/TO 13C7-1-5.
- ③ Use a 5 1/2-inch latch assembly adapter, and attach the latch assembly to the extraction bracket according to FM 10-500/TO 13C7-1-5 with the locking nut hole facing toward the left side of the platform.
- ④ Connect one end of a 9-foot (3-loop), type X or a 9-foot (2-loop), type XXVI nylon webbing sling (deployment line) to the right spacer of the link assembly. Connect the free end of the deployment line to the center large suspension clevis on the parachutes.
- ⑤ Fold the excess deployment line, and secure the folds in place with tape or 80-pound cotton webbing.

Figure 12-12. Extraction system installed

12-12. Installing Provisions for Emergency Restraints

Attach a medium (3/4-inch) suspension clevis to the front hole on the front tandem links.

Note:

The emergency restraints will be installed to the emergency restraint points in the aircraft. The clevises used as emergency restraint points may also be placed on the load and installed later in the aircraft.

12-13. Positioning Extraction Parachute

Position the extraction parachute as described below.

a. C-130 Aircraft. Place a 15-foot cargo extraction parachute; a 60-foot (1-loop), type XXVI nylon webbing extraction line; and a type IV link assembly on the load for installation in the aircraft.

Note:

When the rigged load weighs more than 8,001 pounds, a 60-foot (3-loop), type X or type XXVI nylon extraction line; a 22-foot cargo extraction parachute; and a 3 3/4-inch, two-point link assembly are required.

b. C-141 Aircraft. Place a 15-foot cargo extraction parachute with an adapter web and a continuous 160-foot (1-loop), type XXVI nylon webbing extraction line on the load for installation in the aircraft.

Note:

When the rigged load weighs more than 10,001 pounds, a continuous 140-foot (3-loop), type XXVI nylon extraction line; a 22-foot cargo extraction parachute; and a 3 3/4-inch, two-point link assembly are required.

12-14. Marking Rigged Load

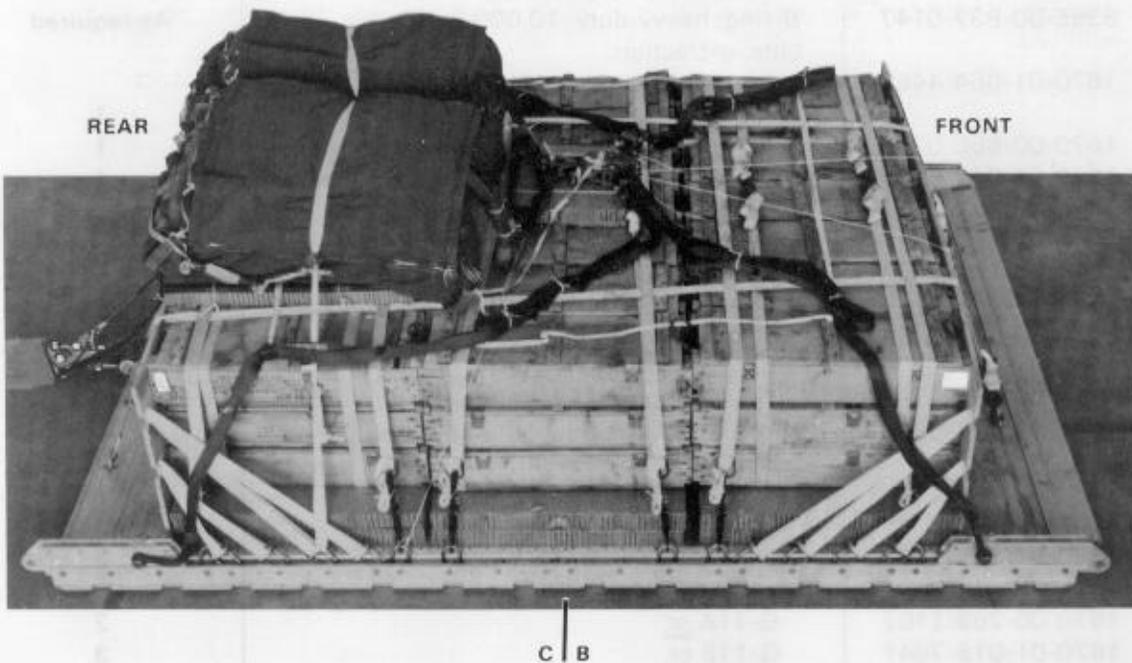
Mark the rigged load according to FM 10-500/TO 13C7-1-5 and as shown in Figure 12-13. Complete DD Form 1387-2, and securely attach it to the load. Indicate on DD Form 1387-2 that the load has been prepared according to AFR 71-4/TM 38-250. If the load varies from that shown, the weight, height, CB, and parachute requirements 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/TO 13C7-1-5 before the load leaves the rigging site.



RIGGED LOAD DATA

Weight:	Load shown	8,904 pounds
	Maximum allowable	16,250 pounds
Height		56 inches
Width		208 inches
Length		152 inches
Overhang:	Front	4 1/2 inches
	Rear	18 inches
CB (from front edge of platform)		74 inches
Extraction system (shown)		EFTC

Figure 12-13. Supply loads rigged on a 12-foot type V platform for low-velocity airdrop

Table 12-1. Equipment required for rigging typical supply loads 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
	Clevis, suspension:	
4030-00-678-8562	3/4-in (medium)	2
4030-00-090-5354	1-in (large)	4
4020-00-240-2146	Cord, nylon, type III, 550-lb	As required
1670-00-434-5783	Coupling, airdrop, extraction force transfer, w 12-foot cable	1
5365-00-937-0147	D-ring, heavy-duty, 10,000-lb	As required
	Line, extraction:	
1670-01-064-4452	60-ft (1-loop), type XXVI nylon webbing (for C-130) <u>or</u>	1
1670-00-856-0266	60-ft (3-loop), type X nylon webbing <u>or</u>	1
1670-01-062-6313	60-ft (3-loop), type XXVI nylon webbing	1
1670-01-107-7651	140-ft (3-loop), type XXVI nylon webbing (for C-141) <u>or</u>	1
1670-01-107-7652	160-ft (1-loop), type XXVI nylon webbing	1
	Link assembly:	
1670-00-003-1953	Two-point, plate side, 3 3/4-inch (for extraction line)	2
1670-00-783-5988	Type IV (for extraction line)	1
1670-00-753-3928	Pad, energy-dissipating, honeycomb, 3- by 36- by 96-in:	7 sheets
	18- by 20-in	(1)
	36- by 96-in	(6)
1670-01-183-2678	Leaf, extraction line (line bag)	2
	Parachute, cargo:	
1670-00-269-1107	G-11A <u>or</u>	2
1670-01-016-7841	G-11B <u>or</u>	3
1670-01-016-7841	G-11C	3
	Parachute, cargo extraction:	
1670-00-052-1548	15-ft <u>or</u>	1
1670-01-063-3715	15-ft (new)	1
1670-00-687-5458	22-ft <u>or</u>	1
1670-01-063-3716	22-ft (new)	1
	Platform, AD, type V, 12-ft:	
	Bracket:	
1670-01-162-2375	Inside EFTA	1
1670-01-162-2374	Outside EFTA	1
1670-01-162-2385	Bumper, nose	1
1670-01-162-2372	Clevis, load tiedown	28
1670-01-162-2381	Tandem link	4
5530-00-128-4981	Plywood, 3/4-in	2 sheets

Table 12-1. Equipment required for rigging typical supply loads on a 12-foot type V platform for low-velocity airdrop (continued)

National Stock Number	Item	Quantity
	Release, cargo parachute:	
1670-01-097-8816	M-1 <u>or</u>	1
1670-01-097-8817	M-2	1
	Sling, cargo, airdrop:	
1670-01-062-6304	9-ft (2-loop), type XXVI nylon webbing <u>or</u>	1
1670-00-753-3631	9-ft (3-loop), type X nylon webbing (deployment line)	1
1670-00-823-5041	12-ft (3-loop), type X nylon webbing <u>or</u>	4
1670-01-062-6303	12-ft (2-loop), type XXVI nylon webbing	4
1670-00-753-3794	20-ft (2-loop), type X nylon webbing (riser extensions) <u>or</u>	2
1670-01-062-6302	20-ft (2-loop), type XXVI nylon webbing	2
7510-00-266-5016	Tape, adhesive, 2-in	As required
1670-00-937-0271	Tiedown assembly, 15-ft	18
	Webbing:	
8305-00-268-2411	Cotton, 80-lb	As required
8305-00-082-5752	Nylon, tubular, 1/2-in, 1,000-lb, natural	As required
8305-00-263-3591	Nylon, type VIII, 3,600-lb	As required