Section II

RIGGING THE RAPID RUNWAY REPAIR KIT ON A 20-FOOT, TYPE V PLATFORM

3-19. Description of Load

The rapid runway repair kit consists of fiberglass sheets, plastic supports, metal fittings and the tools to erect the structure. The load consists of two factory built wooden shipping boxes measuring 22 inches in height, 89 inches in width, 222 inches in length and weighing approximately 5,380 pounds. The kit contains no materials requiring special handling and is not fragile. The rapid runway repair kit is rigged with three G-11 cargo parachutes on a 20-foot, type V platform for low-velocity airdrop. It has a total rigged weight of 14,080 pounds, an 18 inch rear overhang and a center of balance of 124 inches from the front edge of the platform.

Note: The wooden shipping boxes can be locally farbricated as outlined in *Figure 3-4.*

3-20. Preparing Platform

Prepare a 20-foot, type V 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.

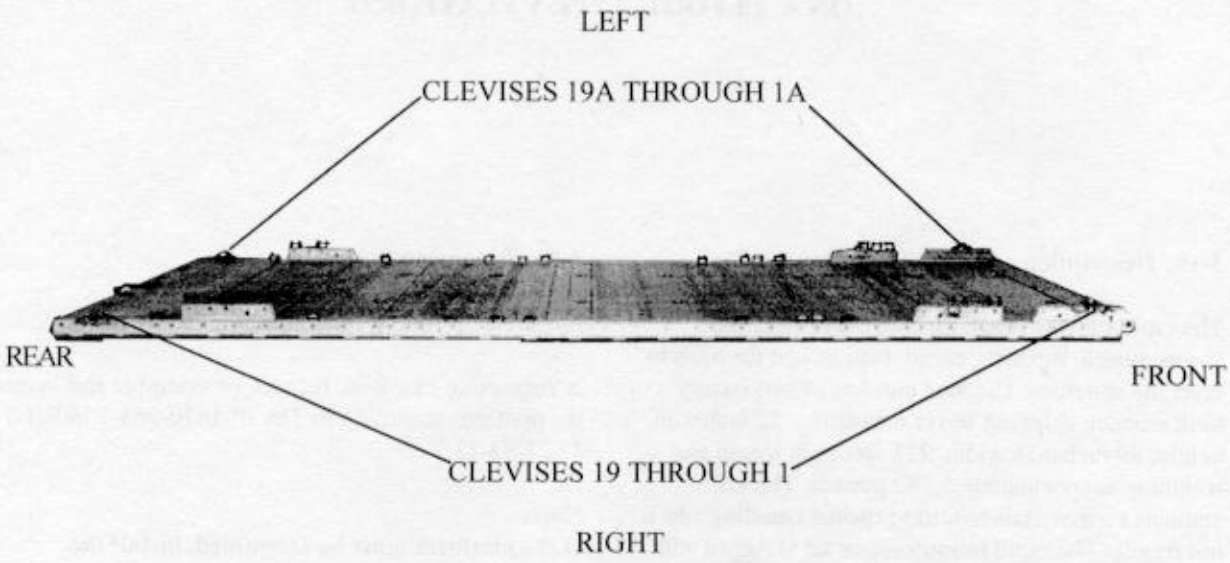
Note:
If the platform must be assembled, install the suspension links when assembling the platform. See *Figure 3-20* for the location of the suspension links.

b. Installing Suspension Links. Install four suspension links on the assembled platform according to FM 10-500-2/TO 13C7-1-5 and as shown in *Figure 3-20.*

c. Installing Tandem Links. Install two tandem links as shown in *Figure 3-20.*

d. Attaching and Numbering Clevises. Attach and number 38 clevis assemblies as shown in *Figure 3-20.*

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



Step:

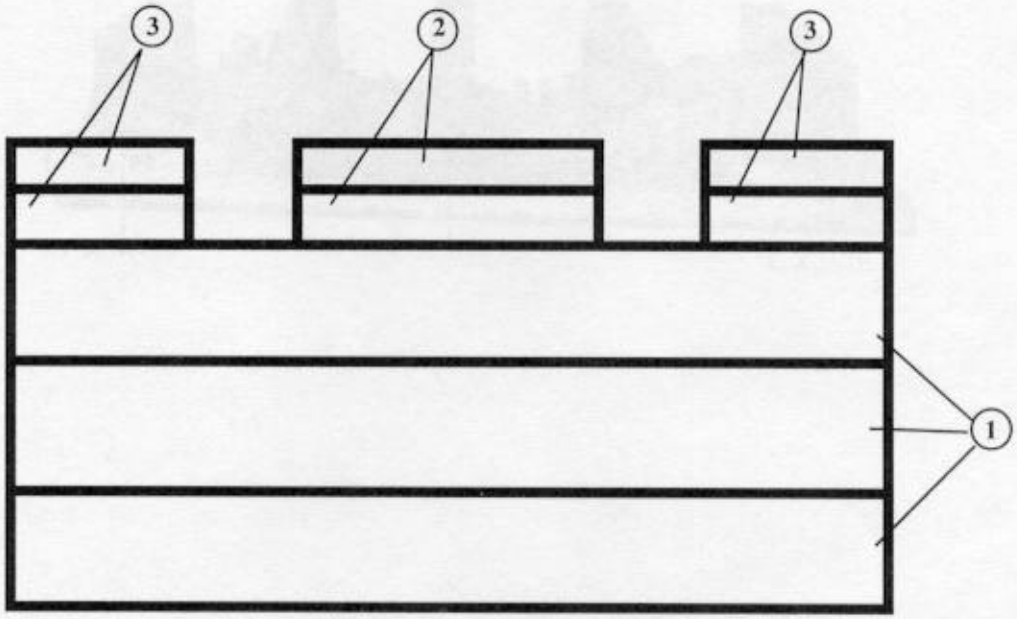
1. Inspect, or assemble and inspect, the platform according to TM 10-1670-268-20&P/TO 13C7-52-22.
2. Install a tandem link to the front of each platform side rail using holes 1A, 2A, and 3A.
3. Install a suspension link to the right and left platform side rails using holes 6, 7, 8 and 6A, 7A, 8A.
4. Install a second suspension link to the right and left platform side rails using holes 33, 34, 35 and 33A, 34A, 35A.
5. Install platform clevises on bushing 2, doubled on the tandem links.
6. Install platform clevises on the first suspension links on bushings 1, 2, 3 (add an extra clevis to the clevis on bushing 3).
7. Install platform clevises on the second suspension links on bushings 2 and 4.
8. Starting at the front of each platform side rail, install clevises on the bushings bolted on holes 11, 12, 13, 15, 23, 24, 26, 31, 37, and double 38.
9. Starting at the front of the platform, number the clevises bolted on the right side 1 through 19 and those bolted on the left side from 1A through 19A.
10. Label the tie-down rings according to FM 10-500-2/TO 13C7-1-5.

Figure 3-20. Platform prepared

3-21. Building and Positioning Honeycomb Stacks and Secure Load

Build 10 honeycomb stacks according to FM 10-500-2/TO 13C7-1-5 and as shown in *Figure 3-21.* Position the honeycomb stacks on the platform as shown in *Figure 3-22.* Position the boxes on the platform and secure the boxes closed as shown in *Figure 3-23.*

Note: This drawing is not drawn to scale.



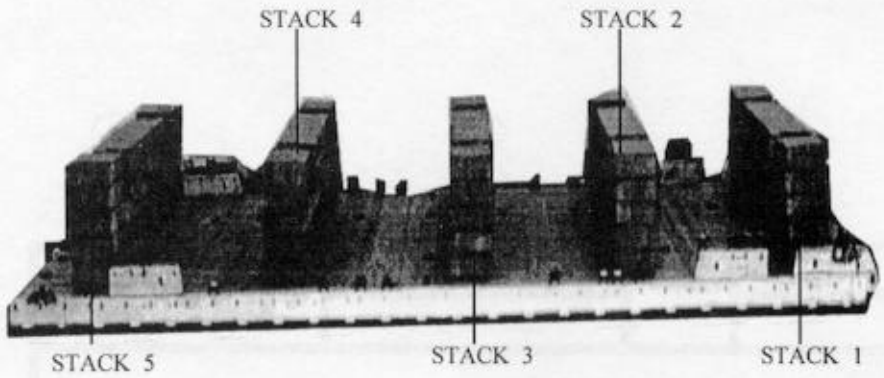
(1) Glue three 12- by 89-inch pieces of honeycomb together to form stacks 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10.

(2) Glue two 12- by 45-inch pieces of honeycomb centered and glued to base of stacks 1, 2, 3, 4, 5, 6, 7, 8, 9 and 10.

(3) Using four 12- by 15-inch pieces of honeycomb, glue two pieces flush with each outside edge of base of stacks 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10.

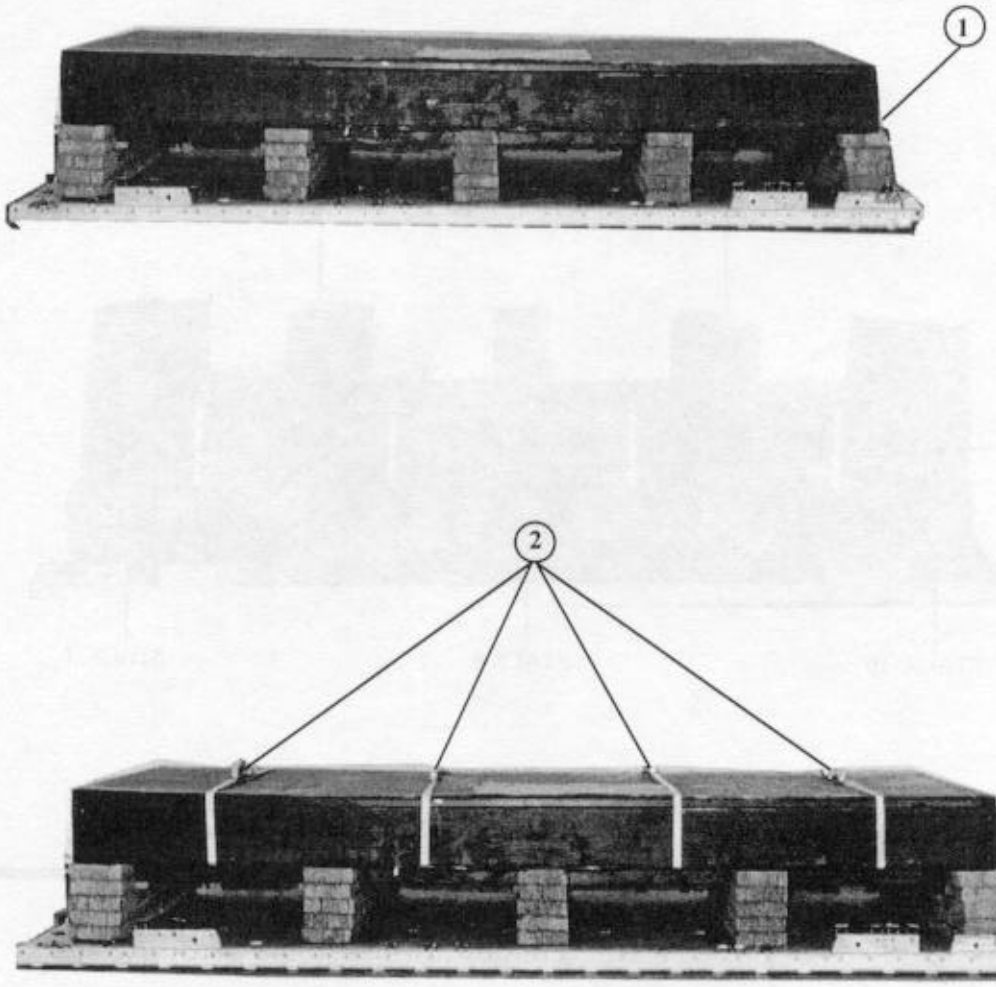
Figure 3-21. Honeycomb stacks built

Note: Boxes may vary in size and honeycomb stacks may have to be shifted.



Stack Number	Position of Honeycomb Stacks on Platform
1	Position Stack 1, centered and 5 inches from front edge of platform.
2	Position Stack 2, centered and 42 1/2 inches from the rear of Stack 1.
3	Position Stack 3, centered and 41 inches from the rear of Stack 2.
4	Position Stack 4, centered and 41 inches from the rear of Stack 3.
5	Position Stack 5, centered and 44 inches from the rear of Stack 4.

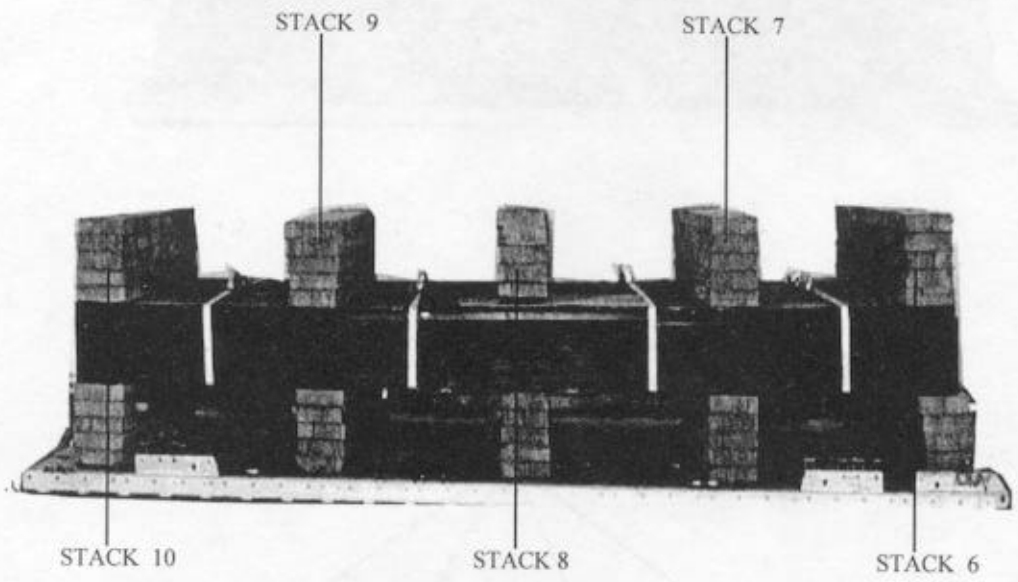
Figure 3-22. Honeycomb stacks positioned



(1) Position the box centered on the five honeycomb stacks with the front edge of the box 2 inches from the front edge of Stack 1. The rear stack should be adjusted to allow 2 inches of the stack to extend past the end of the box.

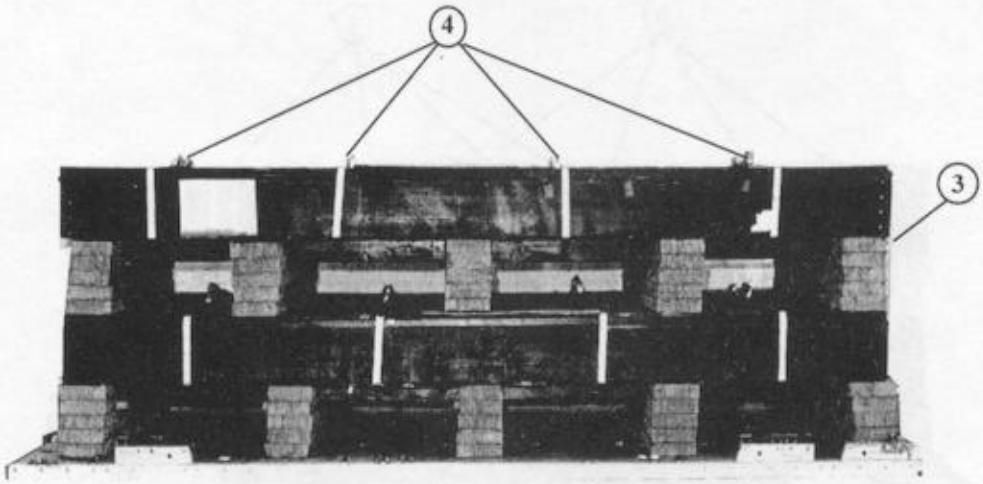
(2) Secure the box closed with four 15-foot lashings. Run each lashing around the box, one at each point centered between the honeycomb stacks. Secure the load binders on top of the box.

Figure 3-23. Honeycomb stacks and load positioned



Stack Number	Position of Honeycomb Stacks on Box
6	Position Stack 6, even with the front edge of the box.
7	Position Stack 7, 40 1/2 inches from the rear of Stack 6.
8	Position Stack 8, 41 inches from the rear of Stack 7.
9	Position Stack 9, 41 inches from the rear of Stack 8.
10	Position Stack 10, even with the rear edge of the box.

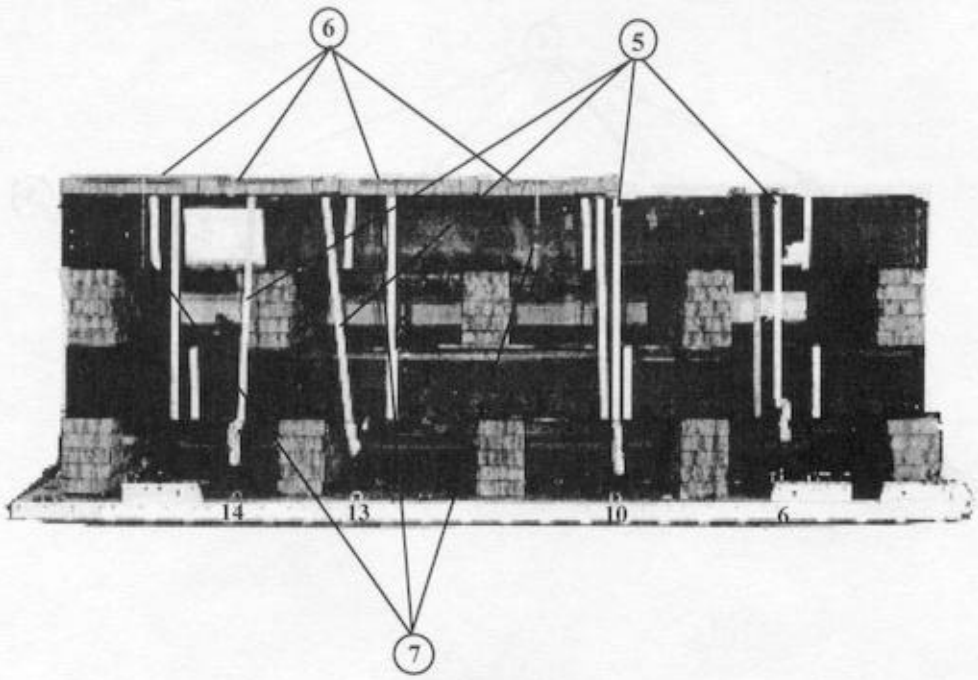
Figure 3-23. Honeycomb stacks and load positioned (continued)



(3) Position the second box centered on the honeycomb with the front of the box even with the front of stack 6.

(4) Secure the box closed as outlined in step 2.

Figure 3-23. Honeycomb stacks and load positioned (continued)



(5) Form four 30-foot lashings and secure the boxes to the platform by centering the lashings on the top box and securing the running ends starting from the front of the load to clevises 6 and 6A, 10 and 10A, 13 and 13A, 14 and 14A.

(6) Cut four pieces of honeycomb 36 inches by 89 inches and position the honeycomb side by side with the first piece even with the rear edge of the box.

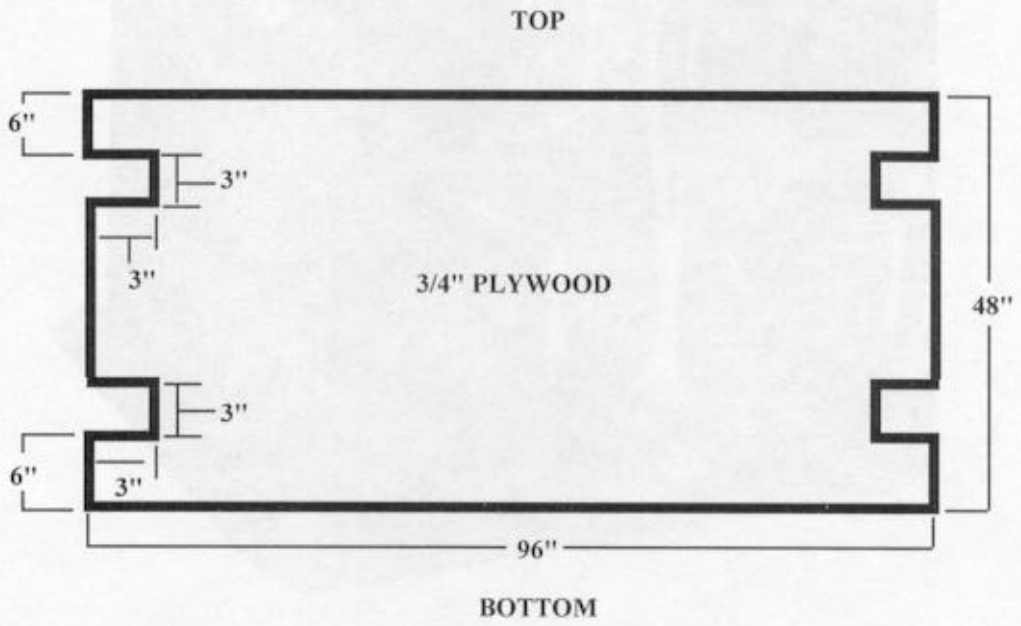
(7) Secure in place with lengths of type III nylon cord.

Figure 3-23. Honeycomb stacks and load positioned(continued)

3-22. Building, Positioning and Securing Front and Rear Endboards

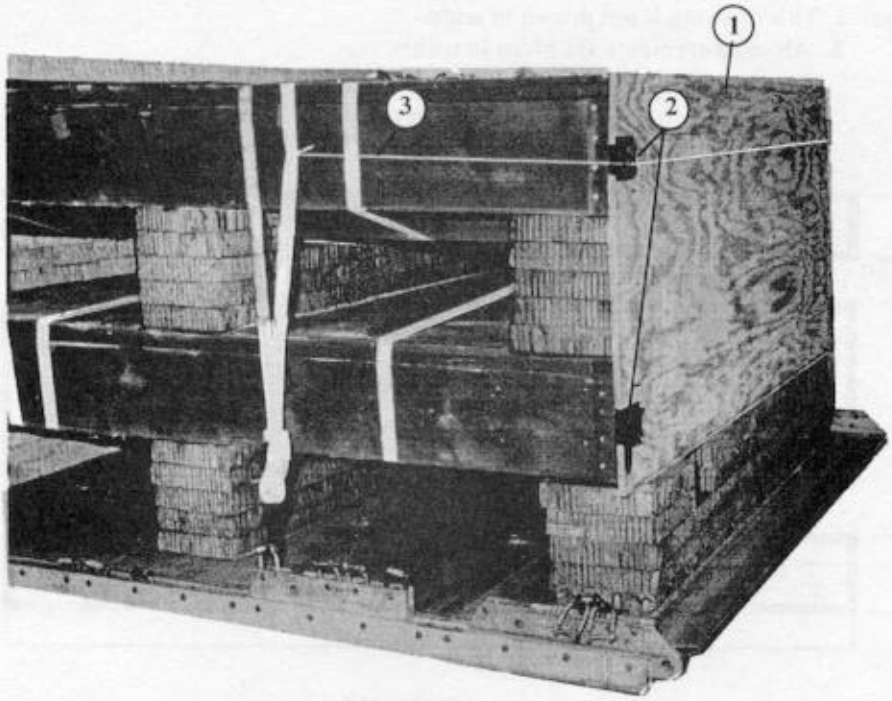
Build the front and rear endboards as shown in *Figure 3-24*. Position and secure the endboards as shown in *Figure 3-25*.

Notes: 1. This drawing is not drawn to scale.
2. All measurements are given in inches.



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

Figure 3-24. Materials required to build endboards



(1) Position one endboard on each end of the load centered and flush with boxes.

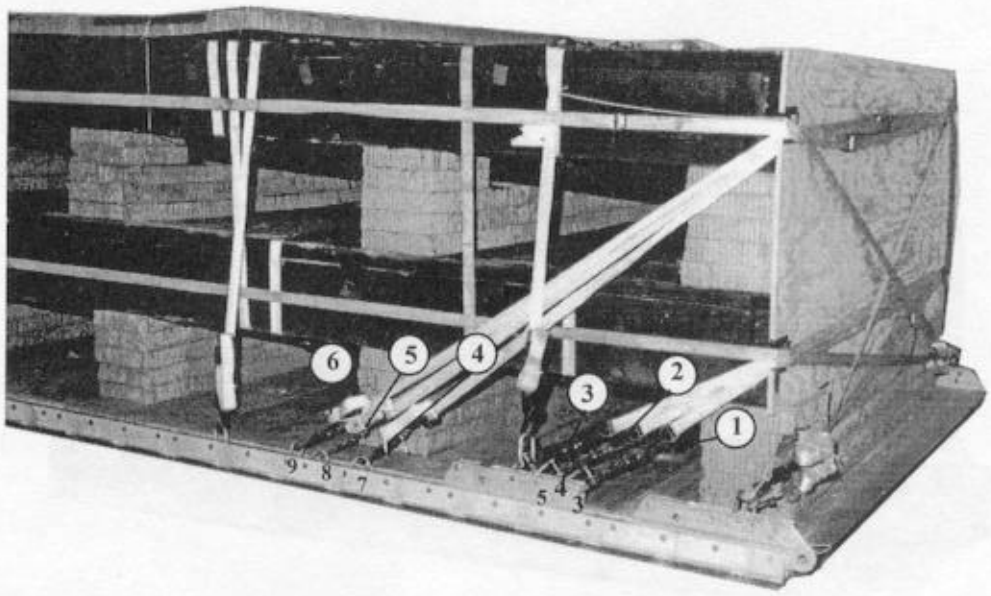
(2) Tape the notches of each endboard.

(3) Safety the endboards with type III nylon cord.

Figure 3-25. Endboards positioned

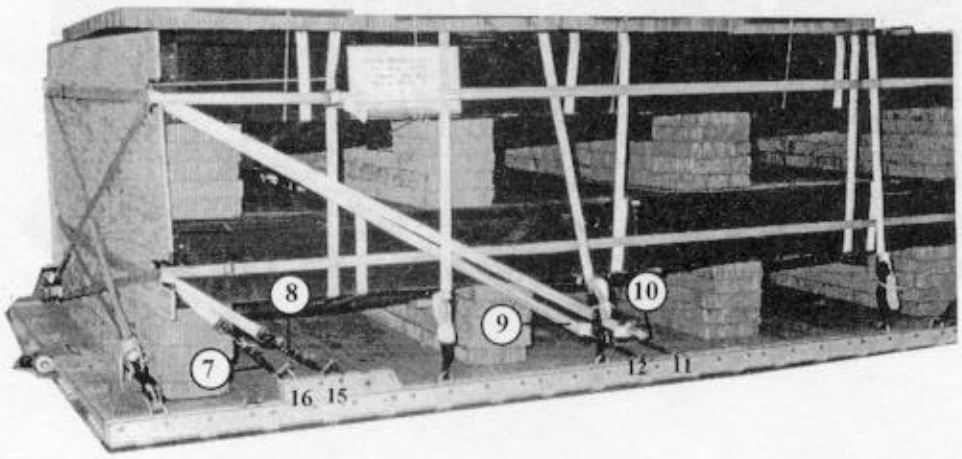
3-23. Installing Lashings

Lash the load to the platform as shown in *Figures 3-26 through 3-28* and form 30 foot through 45 foot lashings according to FM 10-500-2/TO 13C7-1-5.



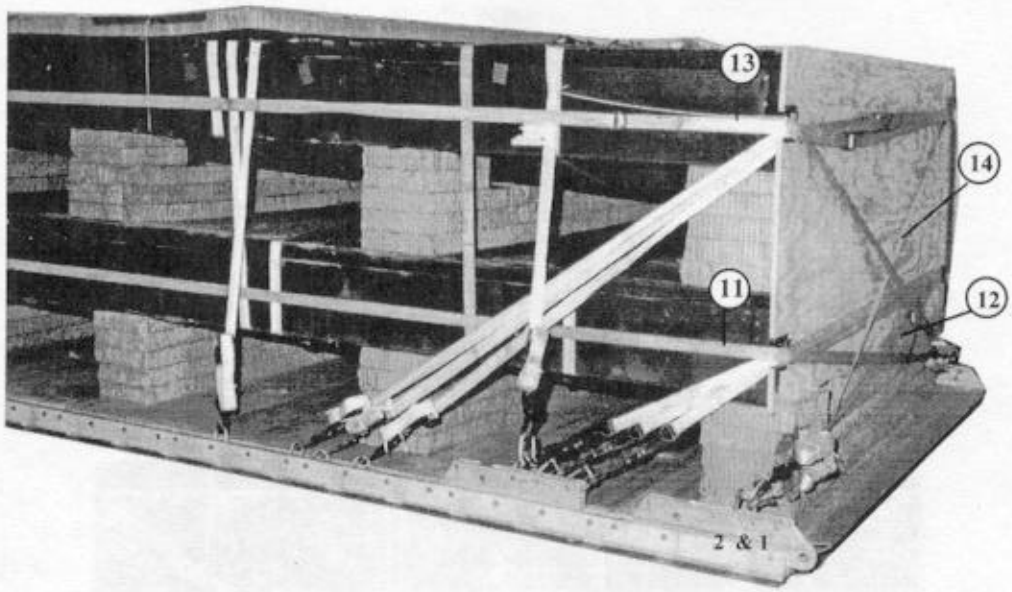
Lashing Number	Tie-down Clevis Number	Instructions
		Pass lashings through:
		Note: *30-foot lashings
*1	3 to 3A	Bottom notch front endboard.
*2	4 to 4A	Bottom notch front endboard.
*3	5 to 5A	Bottom notch front endboard.
*4	7 to 7A	Top notch front endboard.
*5	8 to 8A	Top notch front endboard.
*6	9 to 9A	Top notch front endboard.

Figure 3-26. Lashings 1 through 6 installed



Lashing Number	Tie-down Clevis Number	Instructions
		Pass lashings through:
		Note: *30-foot lashings
*7	16 to 16A	Bottom notch rear endboard.
*8	15 to 15A	Bottom notch rear endboard.
*9	12 to 12A	Top notch rear endboard.
*10	11 to 11A	Top notch rear endboard.

Figure 3-27. Lashings 7 through 10 installed

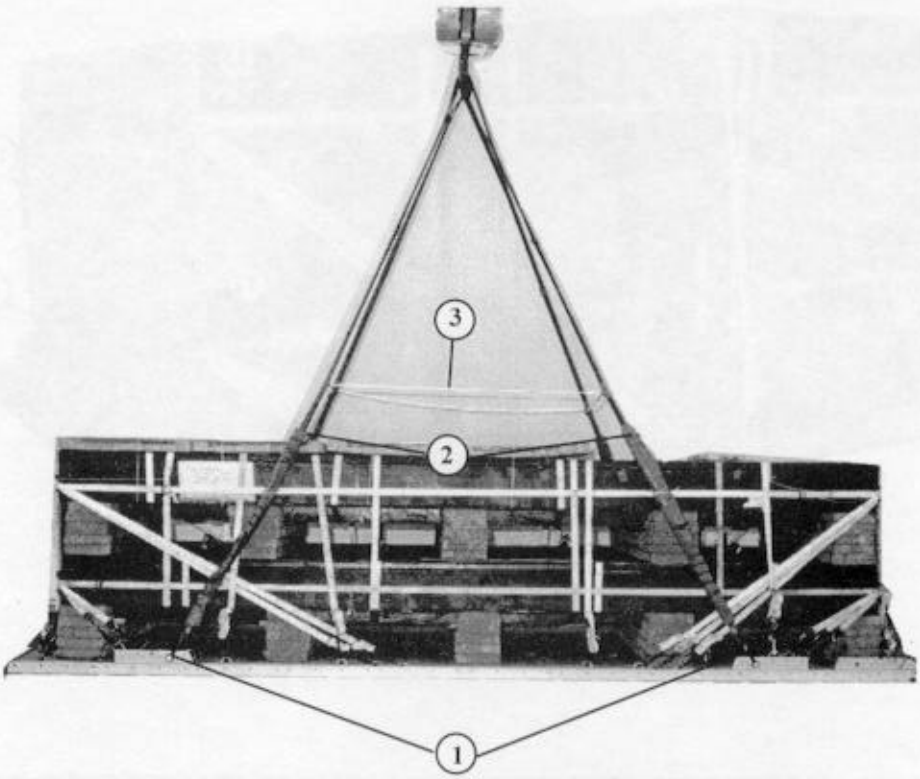


Lashing Number	Tie-down Clevis Number	Instructions
		Pass lashing through:
		Note: **45-foot lashings
**11	2 to 18	Bottom notch left side front and rear.
**12	2A to 18A	Bottom notch right side front and rear.
**13	1 to 19	Top notch left side front and rear.
**14	1A to 19A	Top notch right side front and rear.

Figure 3-28. Lashings 11 through 14 installed

3-24. Installing Suspension Slings and Deadman's Tie

Install the suspension slings and Deadman's tie as shown in *Figure 3-29.*



(1) Place a large clevis in one end of the four 16-foot (4-loop), type XXVI nylon suspension slings. Attach the large clevises to each suspension link.

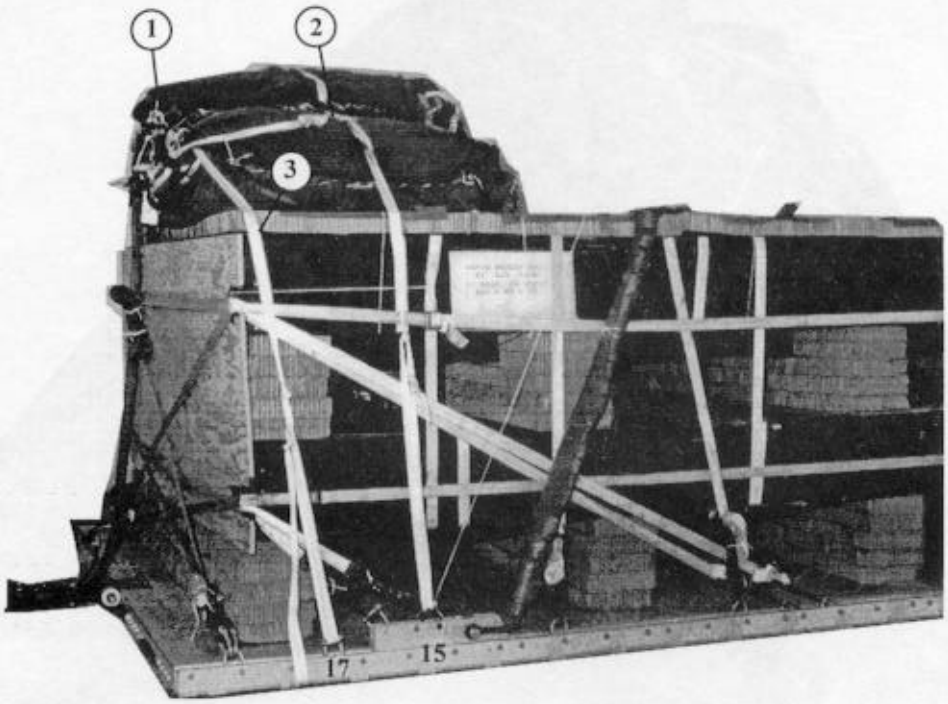
(2) Pad the slings with felt and pressure sensitive tape from the large clevis to 6-inches above the top of the load.

(3) Raise the slings and install the Deadman's tie according to FM 10-500-2/TO 13C7-1-5.

Figure 3-29. Suspension slings installed

3-25. Stowing Cargo Parachutes

Prepare, stow and restrain three G-11 cargo parachutes on top of the honeycomb according to FM 10-500-2/TO 13C7-1-5 and as shown in *Figure 3-30.* Restrain the parachutes using clevises 15 and 15A, and 17 and 17A.



(1) Stow three G-11 cargo parachutes on the load according to FM 10-500-2/TO 13C7-1-5.

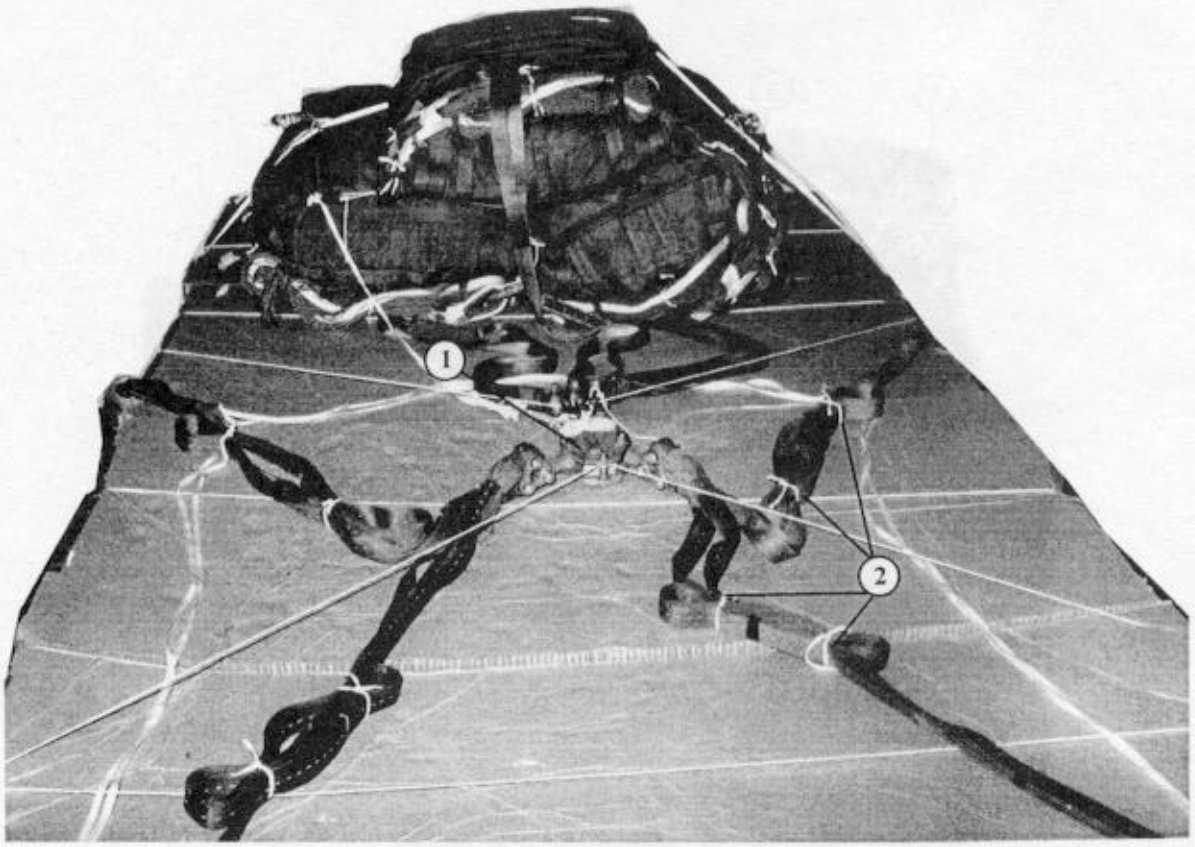
(2) Run one length of type VIII nylon webbing from platform clevis 15, through the center carrying handles, to platform clevis 15A, and secure.

(3) Run one length of type VIII nylon webbing from platform clevis 17, through the rear carrying handles, to platform clevis 17A, and secure.

Figure 3-30. Cargo parachutes positioned

3-26. Installing Release System

Prepare and install the M-1 release system according to FM 10-500-2/TO 13C7-1-5 and as shown in *Figure 3-31.*



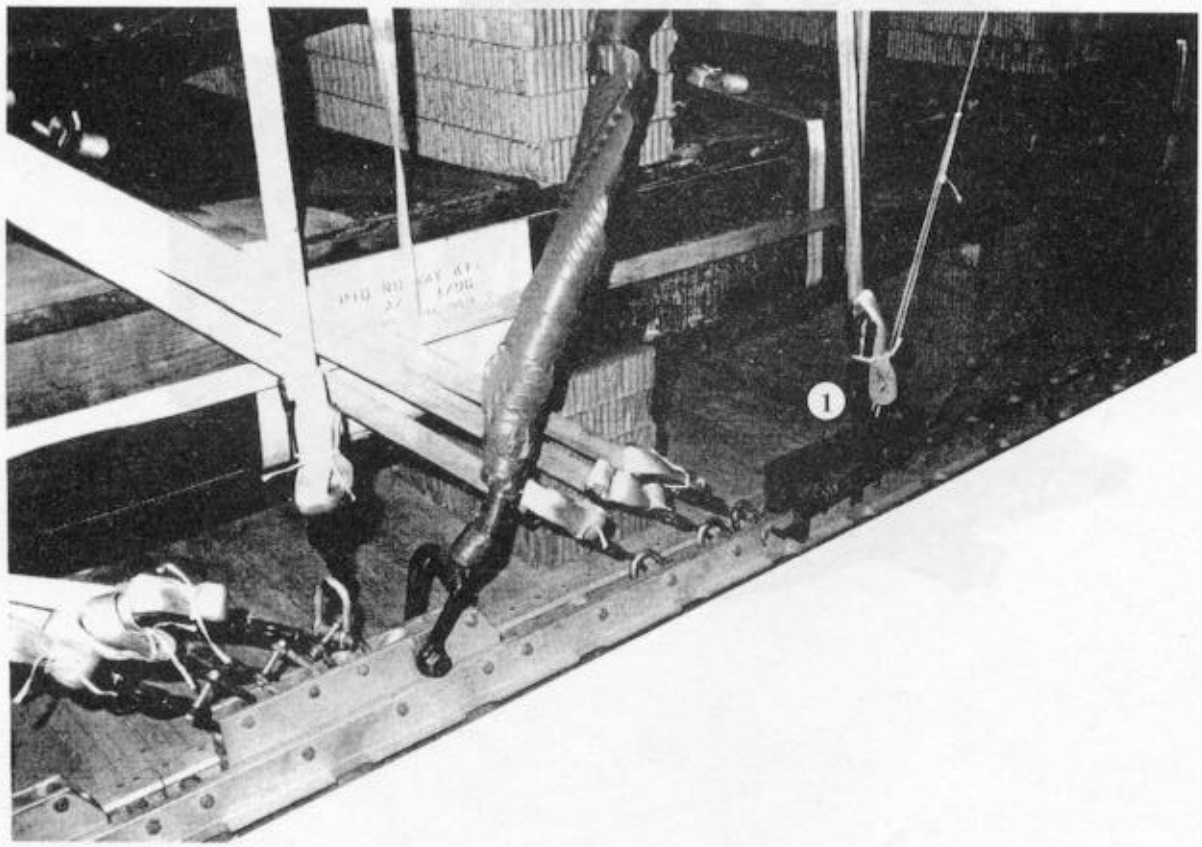
(1) Position and install the M-1 release assembly on top of the honeycomb on top of the load. Safety it to the load in accordance with FM 10-500-2/TO 13C7-1-5.

(2) Safety suspension slings according to FM 10-500-2/TO 13C7-1-5.

Figure 3-31. Release assembly installed

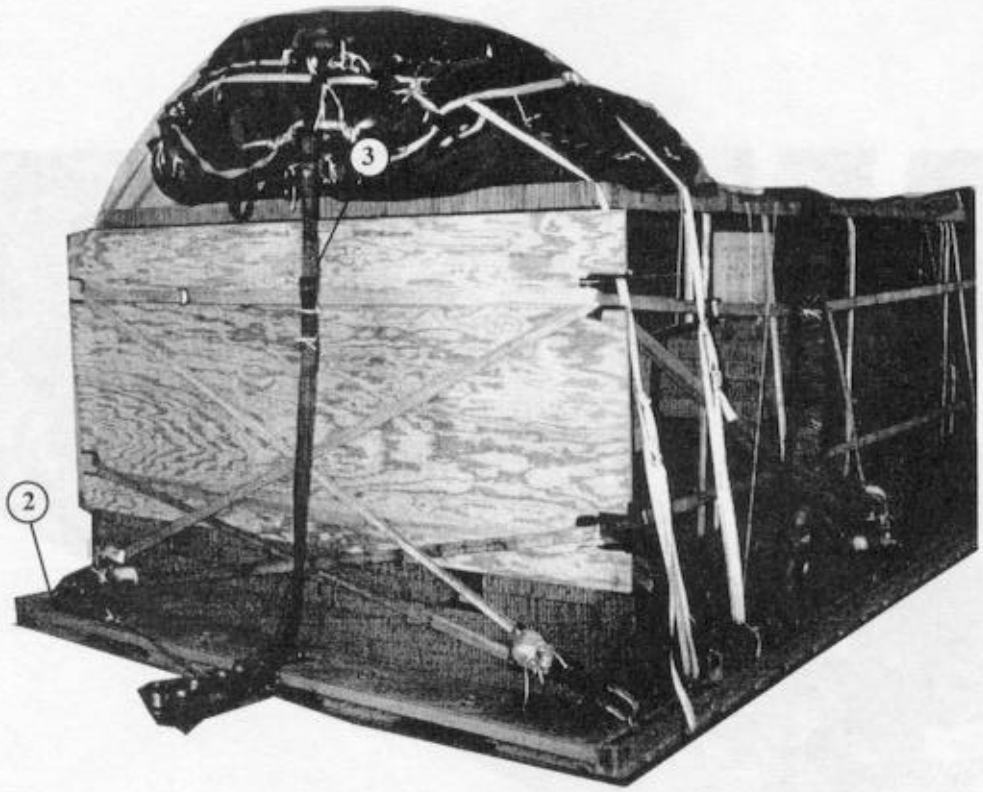
3-27. Installing Extraction System

Prepare and install the extraction force transfer coupling (EFTC) system according to FM 10-500-2/TO 13C7-1-5 and as shown in *Figure 3-32.*



(1) Install the components of the EFTC in accordance with FM 10-500-2/TO 13C7-1-5. Use the forward mounting holes for the EFTC bracket.

Figure 3-32. Extraction system installed



(2) Attach a 20-foot EFTC cable and safety the cable to tiedown ring D10 using one turn Type I, 1/4-inch cotton webbing.

(3) Attach a 9-foot (2-loop), type XXVI nylon sling to be used as a deployment line.

Figure 3-32. Extraction system installed (continued)

3-28. Installing Provisions for Emergency Restraints

Install provisions for emergency restraints according to FM 10-500-2/TO 13C7-1-5.

3-29. Placing Cargo 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.

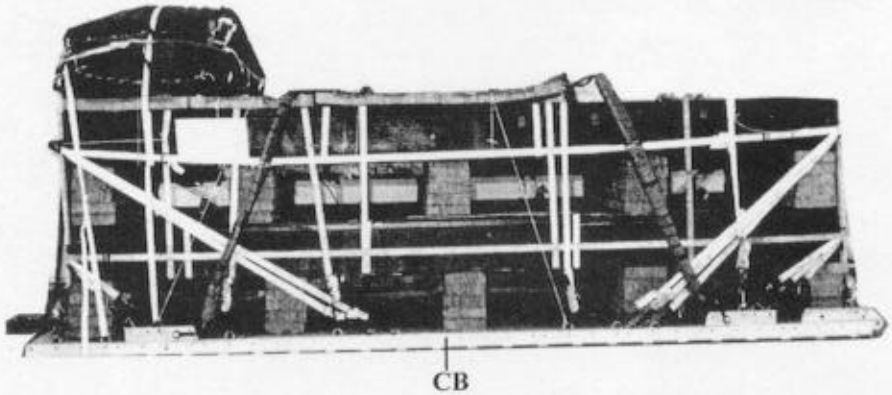
3-30. Marking Rigged Load

Mark the rigged load according to FM 10-500-2/TO 13C7-1-5 and as shown in *Figure 3-32*. If the load varies from the one shown, the weight, height, tip-off curve, CB, and parachute requirements must be recomputed.

3-31. Equipment Required

Use the equipment listed in *Table 3-3* 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

Weight: Load shown	14,080 pounds
Maximum rigged weight	15,750 pounds
Height:	67 inches
Width:	108 inches
Length:	258 inches
Overhang: Front	0 inches
Rear (from extraction bracket)	18 inches
Center of Balance (CB): (from front edge of platform)	124 inches
Extraction System: (add 18 inches to length of platform)	EFTC

Figure 3-32. Rapid runway repair kit rigged for low-velocity airdrop on a 20-foot, type V platform

Table 3-3. Equipment required for rigging the rapid runway repair kit for low-velocity airdrop on a 20-foot, type V platform

National Stock Number	Item	Quantity
8040-00-273-8713	Adhesive, paste, 1-gal	As required
4030-00-090-5354	Clevis, suspension, 1-in (large)	8
4020-00-240-2146	Cord, nylon, type III, 550-lb	As required
1670-00-434-5787	Coupling, airdrop, extraction force transfer with 20-foot cable	1
8135-00-664-6958	Cushioning material, packing, cellulose wadding	As required
8305-00-958-3685	Felt, 1/2-in thick	As required
1670-01-183-2678	Leaf, extraction line	2
	Line, extraction:	
1670-01-062-6313	60-ft (3-loop), type XXVI nylon webbing (C-130)	1
1670-01-107-7615	140-ft (3-loop), type XXVI nylon webbing (C-141,C-5, and C-17)	1
1670-00-753-3928	Pad, energy-dissipating, honeycomb, 3- by 36- by 96-in	19 sheets
	Parachute:	
1670-01-016-7841	Cargo, G-11B	3
	Cargo extraction:	
1670-01-063-3716	22-ft	1
	Platform, AD, type V 20-ft:	1
1670-01-353-8425	Bracket assembly, coupling	(1)
1670-01-162-2372	Clevis assembly (type V)	(42)
1670-01-162-2376	Extraction bracket assembly	(1)
1670-01-247-2389	Suspension link	(4)
1670-01-162-2381	Tandem link (Multi-purpose)	(2)
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 deployment:	
1670-01-062-6304	9-foot (2-loop), type XXVI nylon webbing	1
	For riser extensions:	
1670-01-062-6302	20-foot (2-loop), type XXVI nylon webbing	6
	For suspension slings:	
1670-01-062-6308	16-foot (4-loop), type XXVI nylon webbing	4
1670-00-040-5340	Strap, parachute release, multicut comes with 3 knives	2
	Tape:	
8305-00-074-5124	Adhesive, 2-in	As required
	Masking, 2-in	As required
1670-00-937-0271	Tie-down assembly, 15-ft	46
	Webbing:	
8305-00-268-2411	Cotton, 1/4-in, type I	As required
	Nylon:	
	Tubular:	
8305-00-082-5752	1/2-in or	As required
8305-00-268-2453	1/2-in	As required
8305-00-263-3591	Type VIII	As required