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ARMY FM 10-536
AIR FORCE TO 13C7-16-81

AIRDROP OF SUPPLIES AND EQUIPMENT

**RIGGING
1/2-TON
PLATFORM TRUCKS**

DEPARTMENTS OF THE ARMY AND THE AIR FORCE
DECEMBER 1973

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CHAPTER 1

INTRODUCTION

1-1. Scope

This manual specifies and illustrates the equipment and procedures necessary to prepare and rig two M274, ½-ton platform trucks for airdrop from the C-130 and C-141 aircraft.

1-2. Special Considerations

Caution: Only ammunition authorized by TM 10-500-53/TO 13C7-18-41 may be airdropped.

a. This load may include a dangerous material. When included, it must be packaged, marked, and labeled in compliance with AFM 71-4/TM 38-250.

b. When this load is dropped from the C-141 aircraft it must weigh at least 3,500 pounds.

c. The platform retainer strap is not required for loads dropped from a C-141 aircraft.

d. Additional honeycomb is required on all

loads delivered on drop zones with ground elevations of 6,000 to 10,000 feet.

e. A copy of this manual should accompany the rigged load to the aircraft.

1-3. Recommended Changes

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CHAPTER 2

RIGGING TWO ½-TON PLATFORM TRUCKS

2-1. Description of Load

Two M274, ½-ton platform trucks, with an accompanying load are rigged on an 8-foot modular platform with one or two G-11A cargo parachutes. Each unriggered truck weighs 900 pounds. It is 118 inches long, reducible to 101 inches, 49 inches wide, and 49 inches high, reducible to 31 inches. The center of gravity of each truck is 48 inches from the rear edge of the cargo bed.

2-2. Preparing Trucks

Make certain that the fuel tank is not more than

three-fourths full. Disconnect brake, clutch, and accelerator cables from connectors. Remove and stow footrest under the right side of the truck. Safety the footrest in place with type III nylon cord as shown in figure 2-1. Remove the steering wheel with the column and brace attached and stow it under the right side of the truck next to the footrest. Safety the steering wheel with type III nylon cord. Remove and stow the driver's seat as shown in figure 2-1. Secure the engine access covers with type III nylon cord.

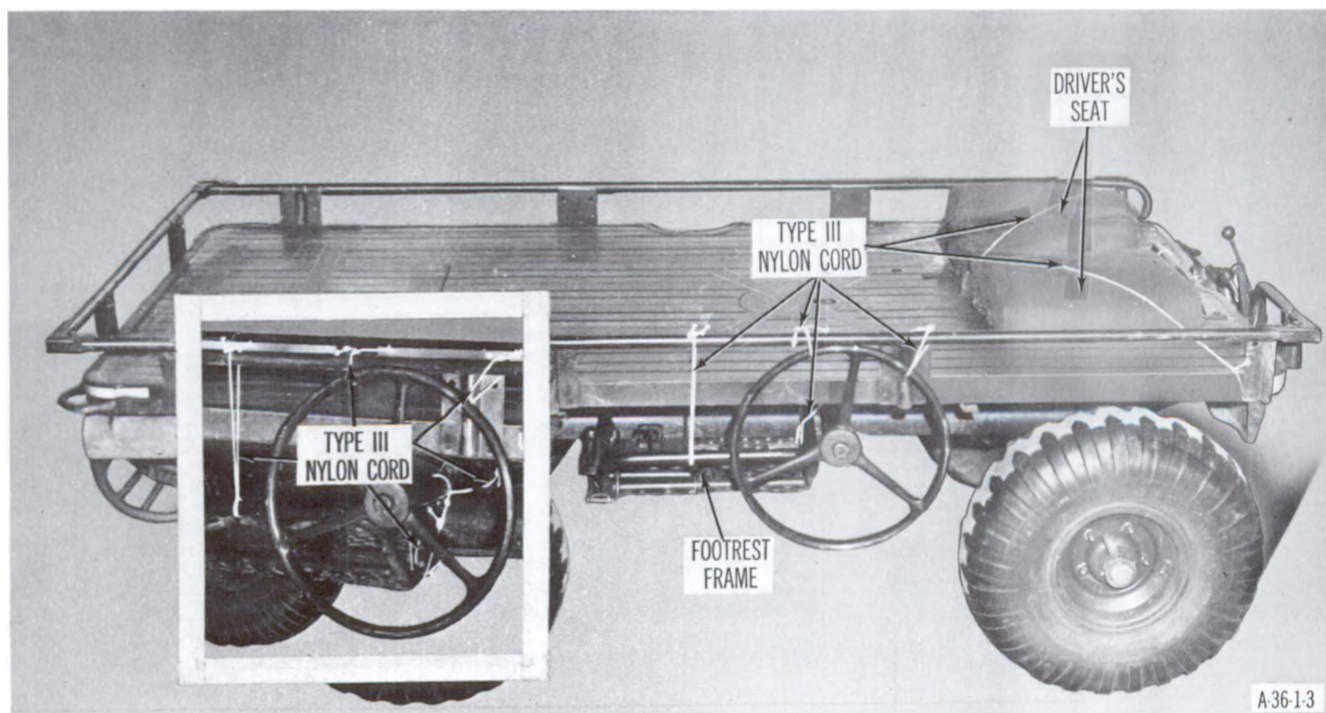


Figure 2-1. Truck prepared.

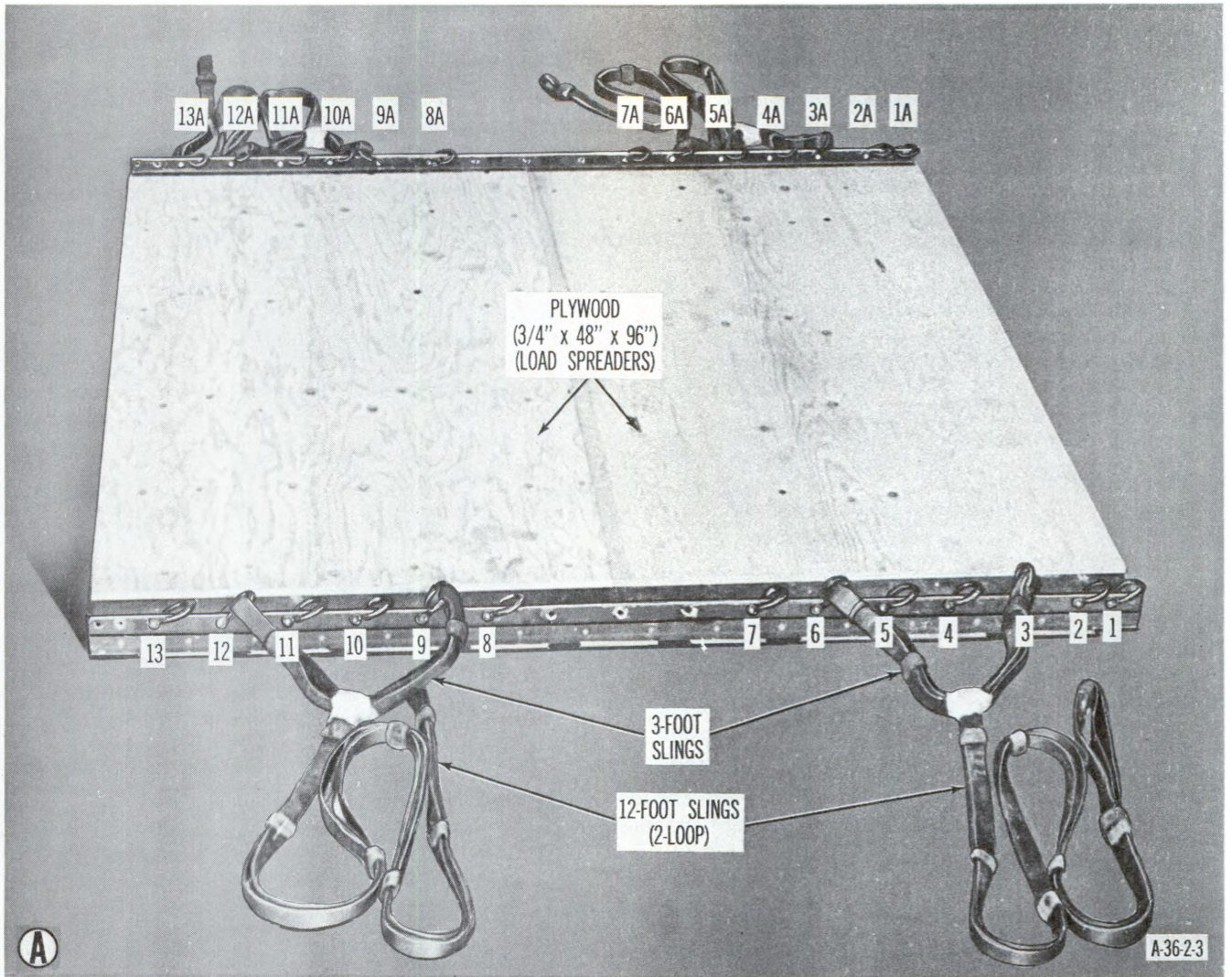
2-3. Preparing Platform, Installing Suspension Slings, and Load Spreader

Prepare an 8-foot modular (type II) platform (fig. 2-2) and install the suspension slings, and load spreader as follows:

a. Inspecting Platform. Inspect, or assemble and inspect the modular platform according to procedures in TM 10-1670-208-23/TO 13C3-4-12.

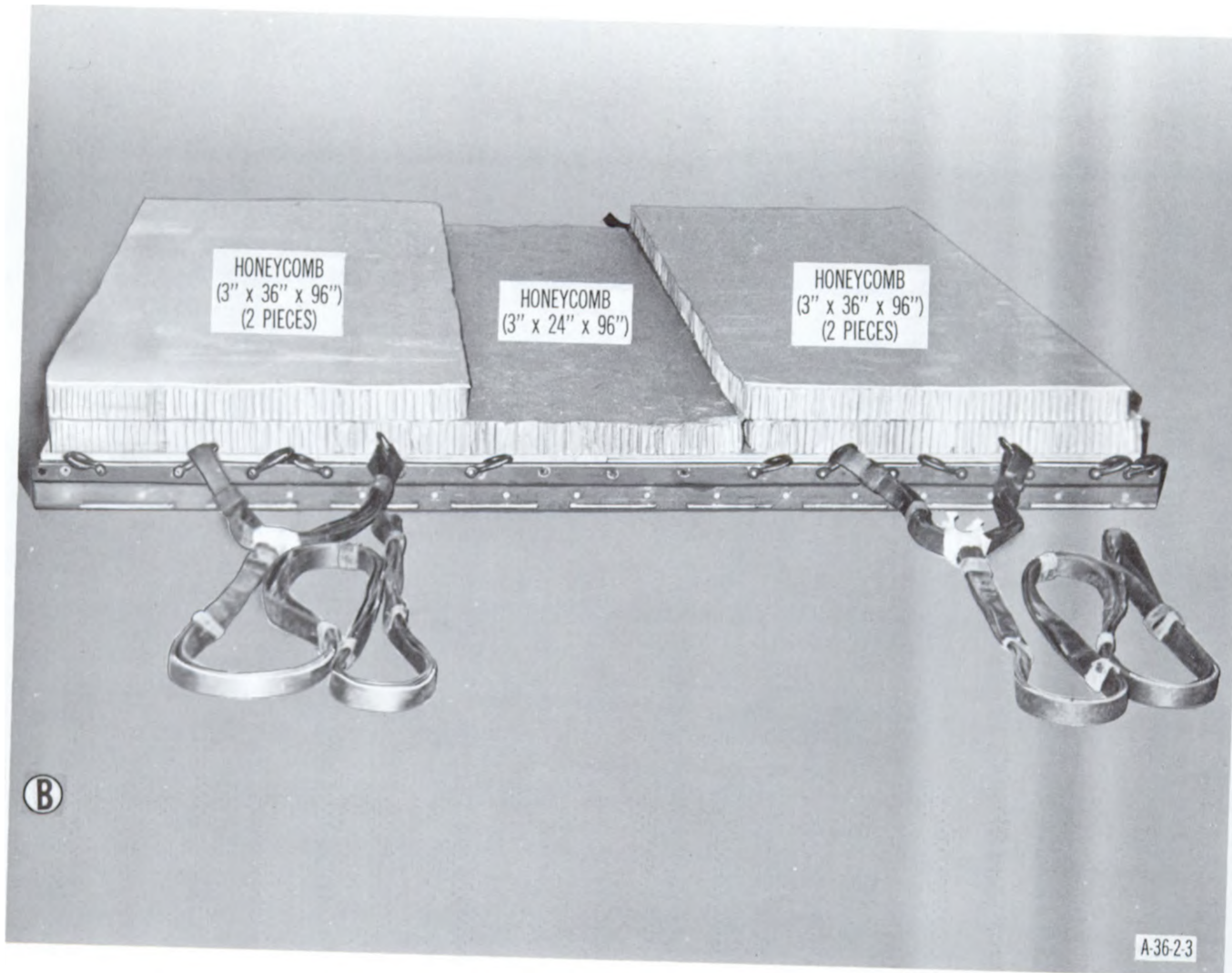
b. Installing Suspension Slings. Form the

suspension slings with four 3-foot slings and four 12-foot (2-loop) sling. Place a tiedown clevis in each end of the 3-foot sling and attach the clevises to the platform. Repeat this procedure for the other three slings. Starting at the front of each rail, attach a clevis to the 3d and the 6th clevis holes for the front slings and to the 12th and 15th clevis holes for the rear slings. Tape the loop of each 12-foot (2-loop) sling to the center of each 3-foot sling as shown in A, figure 2-2.



A. Platform prepared

Figure 2-2. Platform prepared and honeycomb positioned.



B. Honeycomb positioned

Figure 2-2—Continued

c. Attaching Tiedown Clevises. Starting at the front of each rail, attach tiedown clevises to the 1st, 2d, 4th, 5th, 7th, 11th, 13th, 14th, and 16th clevis holes. Again starting at the front of each rail, number the clevises attached to the right rail from 1 through 13 and those attached to the left rail 1A through 13A as shown in A, figure 2-2.

d. Positioning Plywood Load Spreader. Use two pieces of $\frac{3}{4}$ - by 48- by 96-inch plywood for the load spreader. Place one piece on each panel of the platform as shown in A, figure 2-2.

e. Positioning Honeycomb. Prepare and position the honeycomb on the platform as shown in B, figure 2-2.

2-4. Stowing Accompanying Load

Caution: Only ammunition listed in TM 10-500-53/TO 13C7-18-41 may be dropped. When the load is dropped from the C-141 aircraft the minimum weight must be 3,500 pounds.

a. General. The accompanying load must meet the requirements and restrictions as outlined in TM 10-500/TO 13C7-1-5. Dangerous material must be packaged, marked, and labeled in compliance with AFM 71-4/TM 38-250. The accompanying load may consist of rations, spare parts, ammunition, or similar items and they must be evenly distributed on the platform.

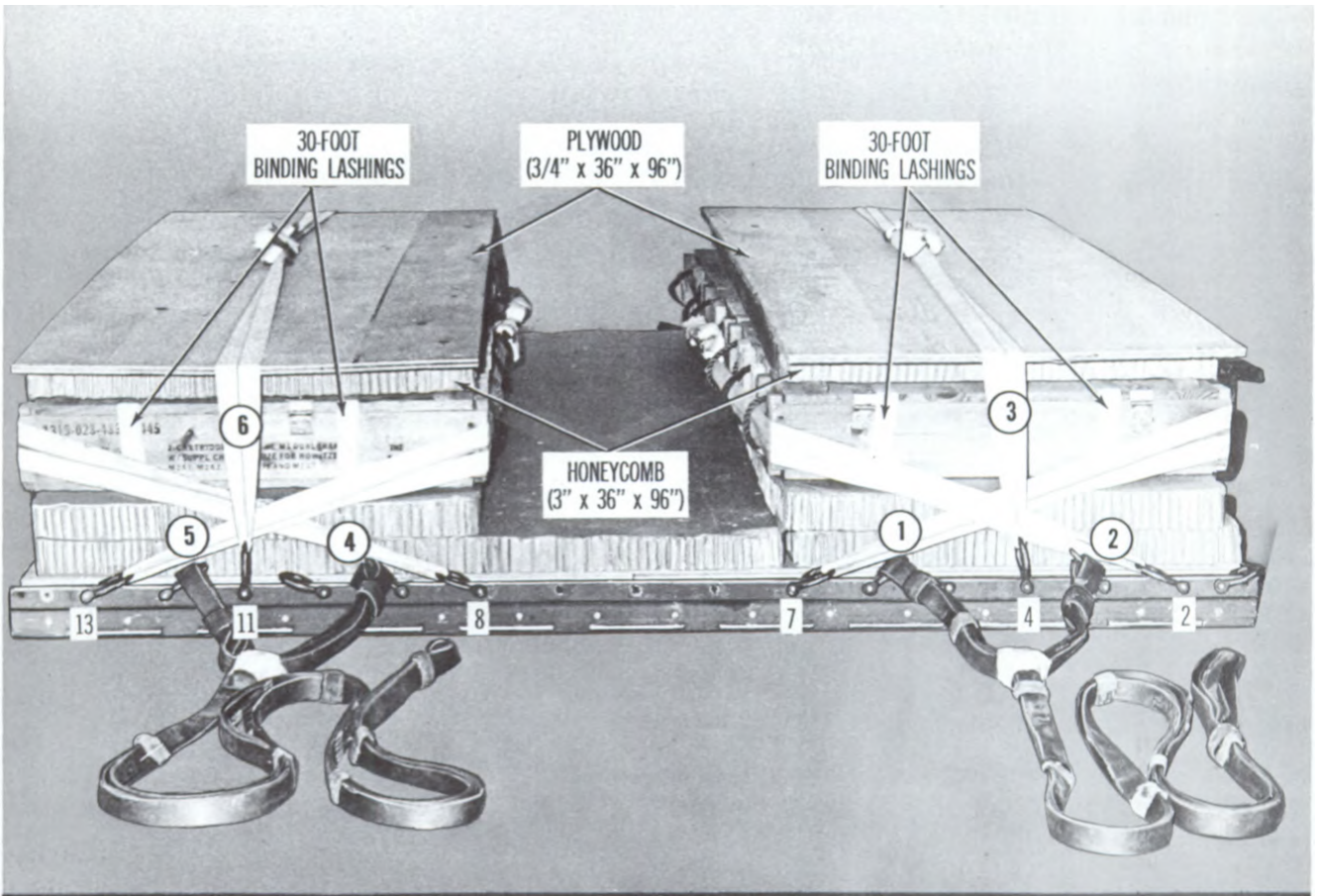
b. C-130 Aircraft. This load may be rigged with or without an accompanying load when dropped from the C-130 aircraft. When there is an accompanying load, it must not weigh more than 1,700 pounds.

c. C-141 Aircraft. This load must have a minimum accompanying load of 700 pounds when dropped from the C-141 aircraft. The accompanying load must not weigh more than 1,700 pounds.

d. Positioning Binding Lashings. Make four 30-foot lashings (tiedown straps) as outlined in TM 10-500/TO 13C7-1-5 and use them for binding lashings. Place two lashings on the front and two on the rear pieces of honeycomb.

e. Positioning and Binding Ammunition. Position seven boxes of ammunition on the front and seven boxes on the rear of the platform as shown in figure 2-3. Join each binding lashing with two heavy-duty D-rings and a load binder.

f. Lashing Ammunition To The Platform. Position one piece of 3- by 36- by 96-inch honeycomb and one piece of $\frac{3}{4}$ - by 36- by 96-inch plywood on top of the front ammunition boxes as shown in figure 2-3. Repeat the above procedure on the rear ammunition boxes. Using six 30-foot lashings, 12 heavy-duty D-rings, and 6 load binders, lash the ammunition boxes as shown in figure 2-3.



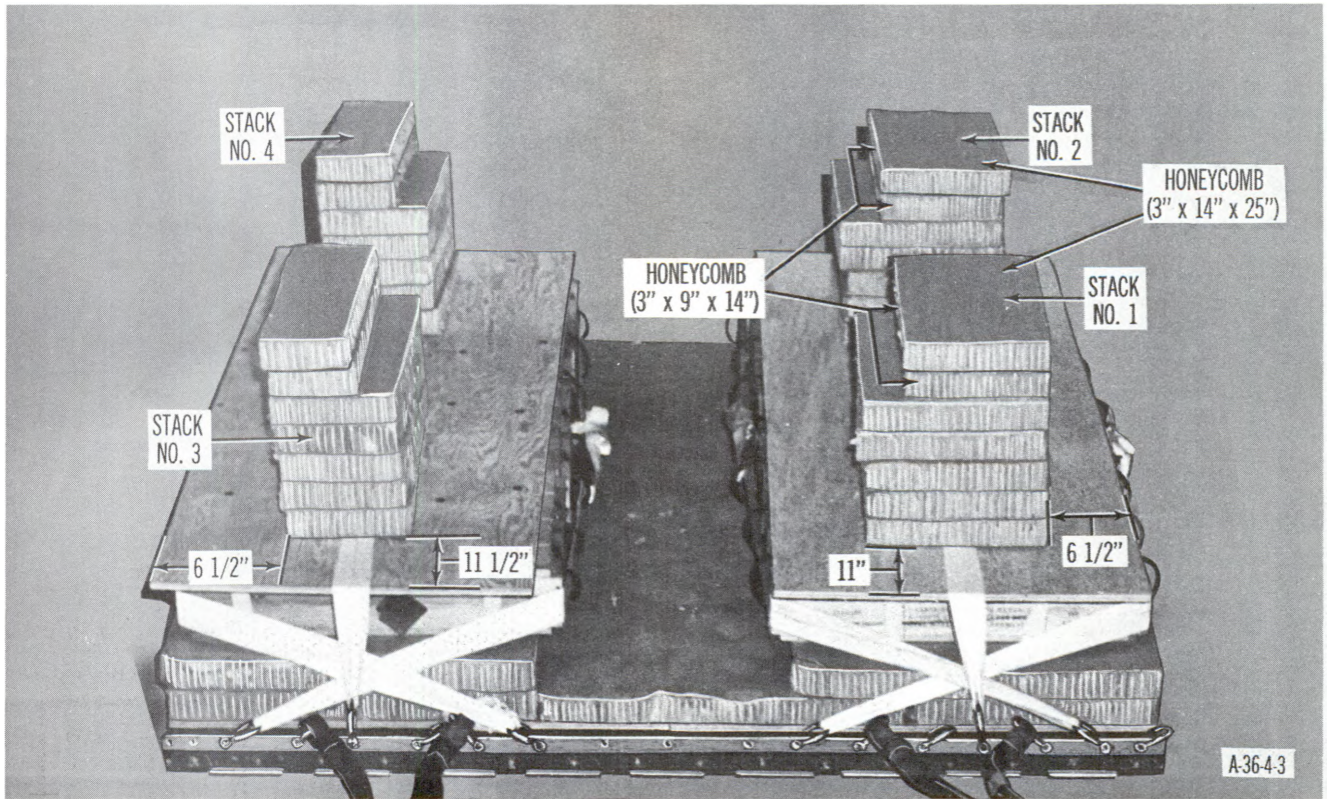
Lashing No.	Tiedown Clevis No.	Instructions	Lashing No.	Tiedown Clevis No.	Instructions	A-36-3-3
1	7 to 7A	Around front of boxes, through carrying handles	4	8 to 8A	Around rear of boxes, through carrying handles	
2	2 to 2A	Around rear of boxes, through carrying handles	5	13 to 13A	Around front of boxes, through carrying handles	
3	4 to 4A	Over top of boxes	6	11 to 11A	Over top of boxes	

Figure 2-3. Ammunition stowed.

2-5. Preparing and Positioning Honeycomb

Prepare and position the honeycomb stacks as illustrated and described in figure 2-4. Paste honeycomb layers together.

Note. If the load is to be dropped on a drop zone with ground elevation between 6,000 and 10,000 feet, add an additional layer of honeycomb to all of the stacks.



STACK NO.	PIECES	WIDTH (INCHES)	LENGTH (INCHES)
1	*5	18	25
	2	14	9
	1	14	25
2	Same as stack No. 1		
3	*5	12	25
	2	8	25
4	Same as stack No. 3		
*Add one additional piece of honeycomb when load is dropped on a drop zone with ground elevation between 6,000 and 10,000 feet.			

Figure 2-4. Honeycomb stacks positioned.

2-6. Positioning Trucks

Position the trucks on the honeycomb stacks. The trucks overhang the front and rear of the platform 3 inches.

2-7. Installing Lashings

Caution: Make sure that the lashings are

not so tight that they cause the platform to bow.

Lash the trucks to the platform with single Dacron lashings as shown in figures 2-5, 2-6, and 2-7. Pad all sharp edges that may come in contact with the lashings.

Note. If Dacron lashings are not available, use double cotton lashings. DO NOT mix Dacron and cotton lashings.

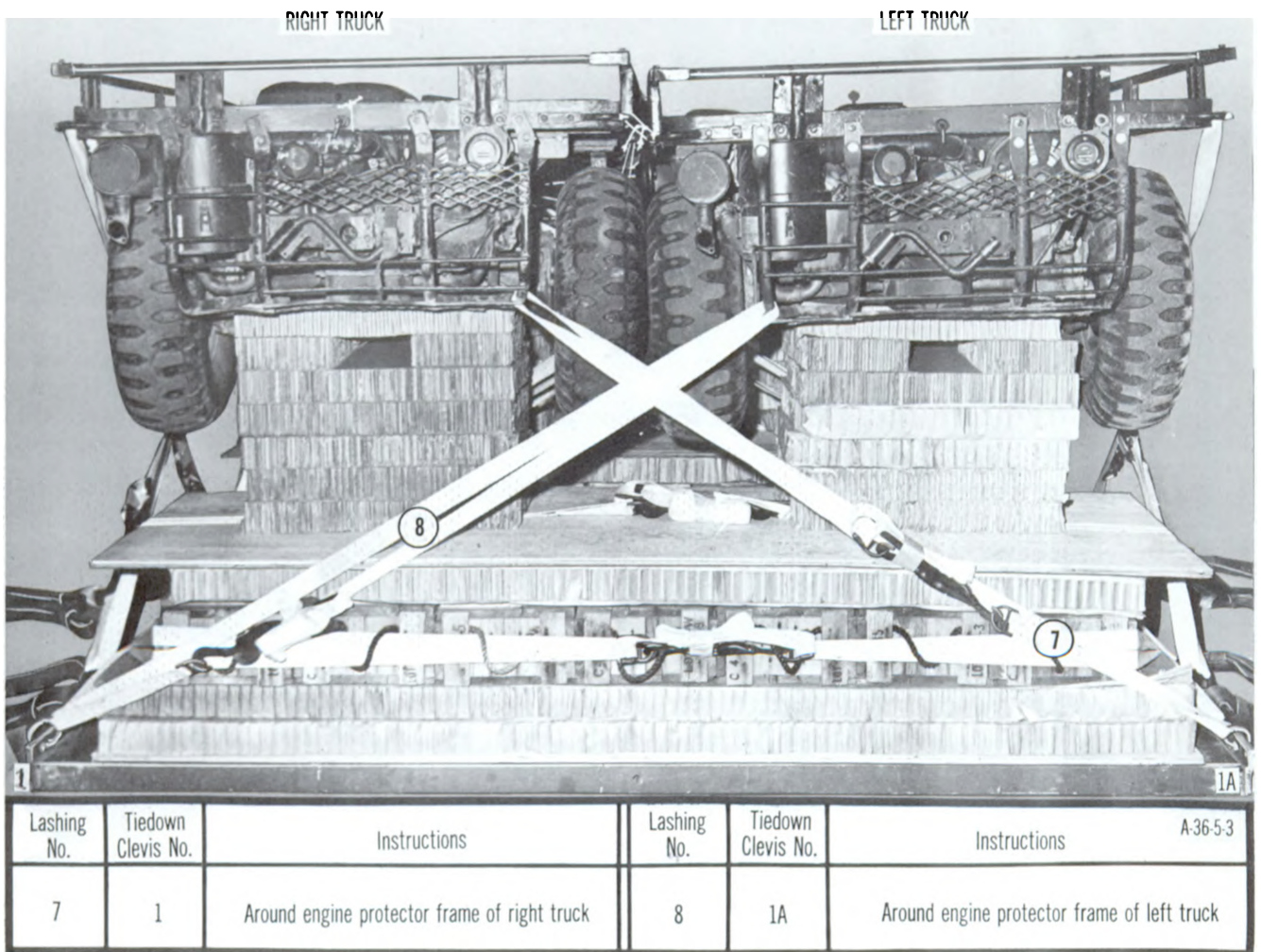
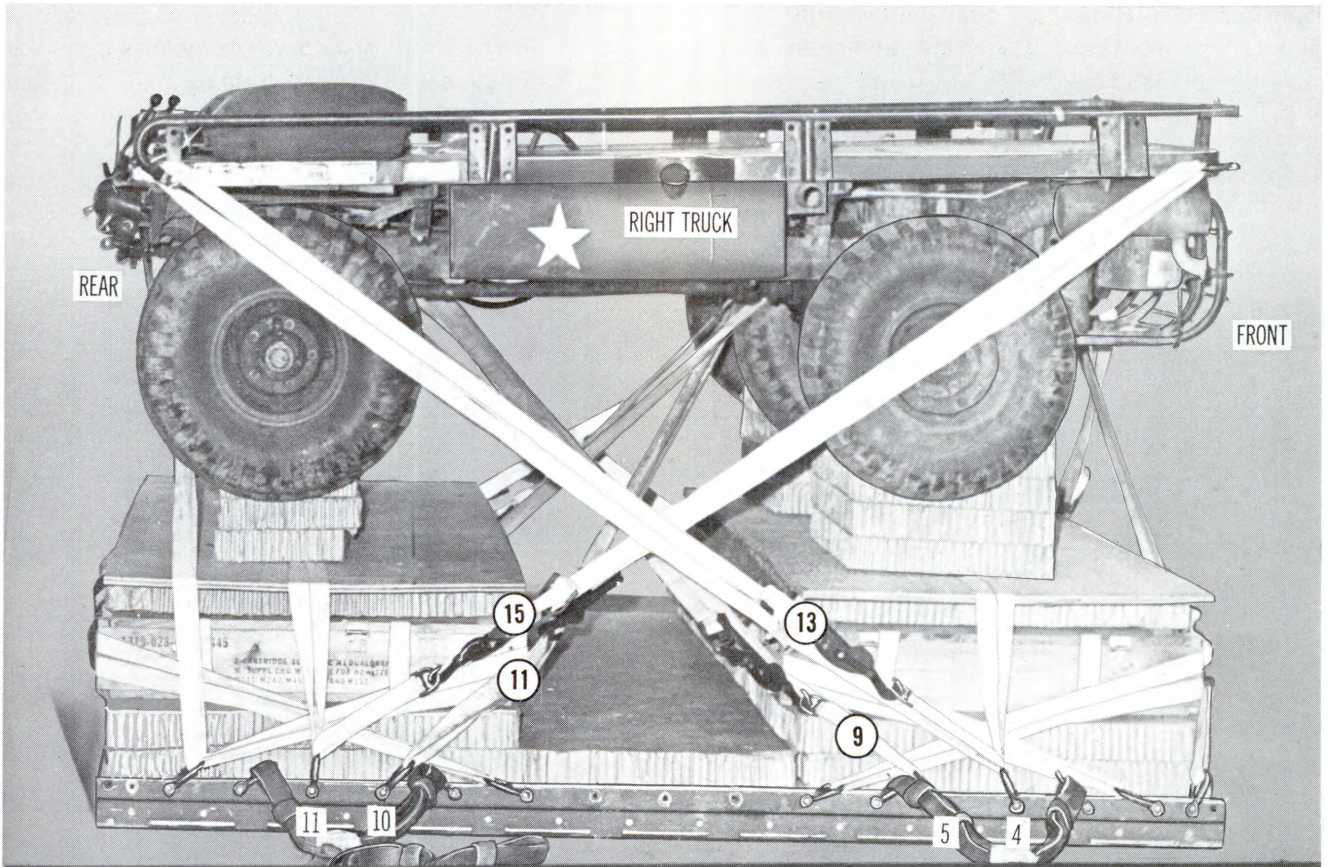
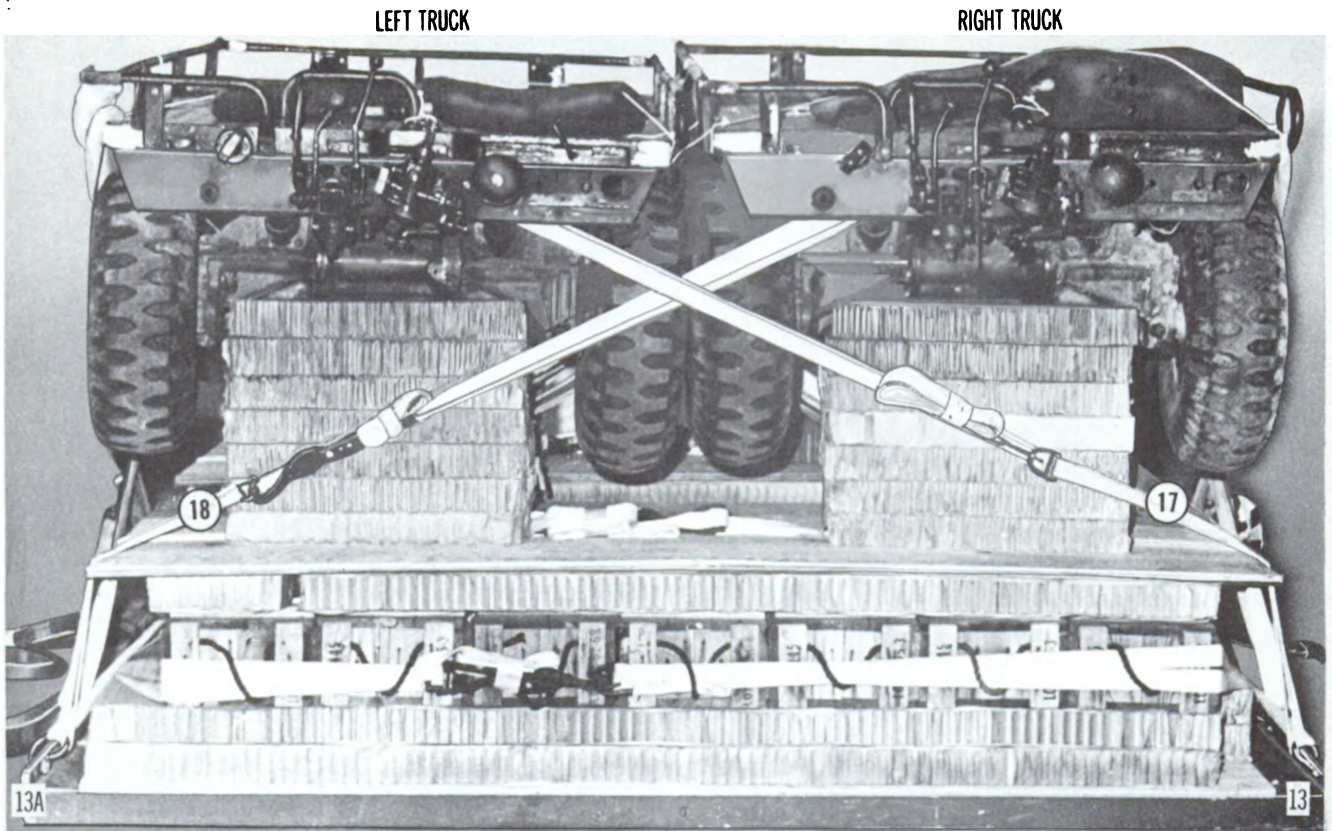


Figure 2-5. Front lashings installed.



Lashing No.	Tiedown Clevis No.	Instructions	Lashing No.	Tiedown Clevis No.	Instructions	A-36-6-3
9	5	Around inside frame of left truck at rear of frame bed support.	13	4	Through rear lifting handle, right truck	
10	5A	Around inside frame of right truck at rear of frame bed support	14	4A	Through rear lifting handle, left truck	
11	10	Around inside frame of left truck at front of frame bed support	15	11	Through front lifting handle, right truck	
12	10A	Around inside frame of right truck at front of frame bed support	16	11A	Through front lifting handle, left truck	

Figure 2-6. Side lashings installed.



Lashing No.	Tiedown Clevis No.	Instructions	Lashing No.	Tiedown Clevis No.	Instructions	A-36-7-3
17	13	Around inside frame, left truck	18	13A	Around inside frame, right truck	

Figure 2-7. Rear lashings installed.

2-8. Installing Load Cover

Place a 3-year piece of cotton duck cloth over the front of the trucks and tie it with type III nylon cord.

2-9. Stowing Cargo Parachutes

Prepare two G-11A cargo parachutes as outlined

in TM 10-500/TO 13C7-1-5 and place them on top of the load as shown in figure 2-8. Use a 12-foot (2-loop) sling as a deployment line. Install a 6-yard restraint strap according to TM 10-500/TO 13C7-1-5. Secure the ends of the strap to the wheel clevises.

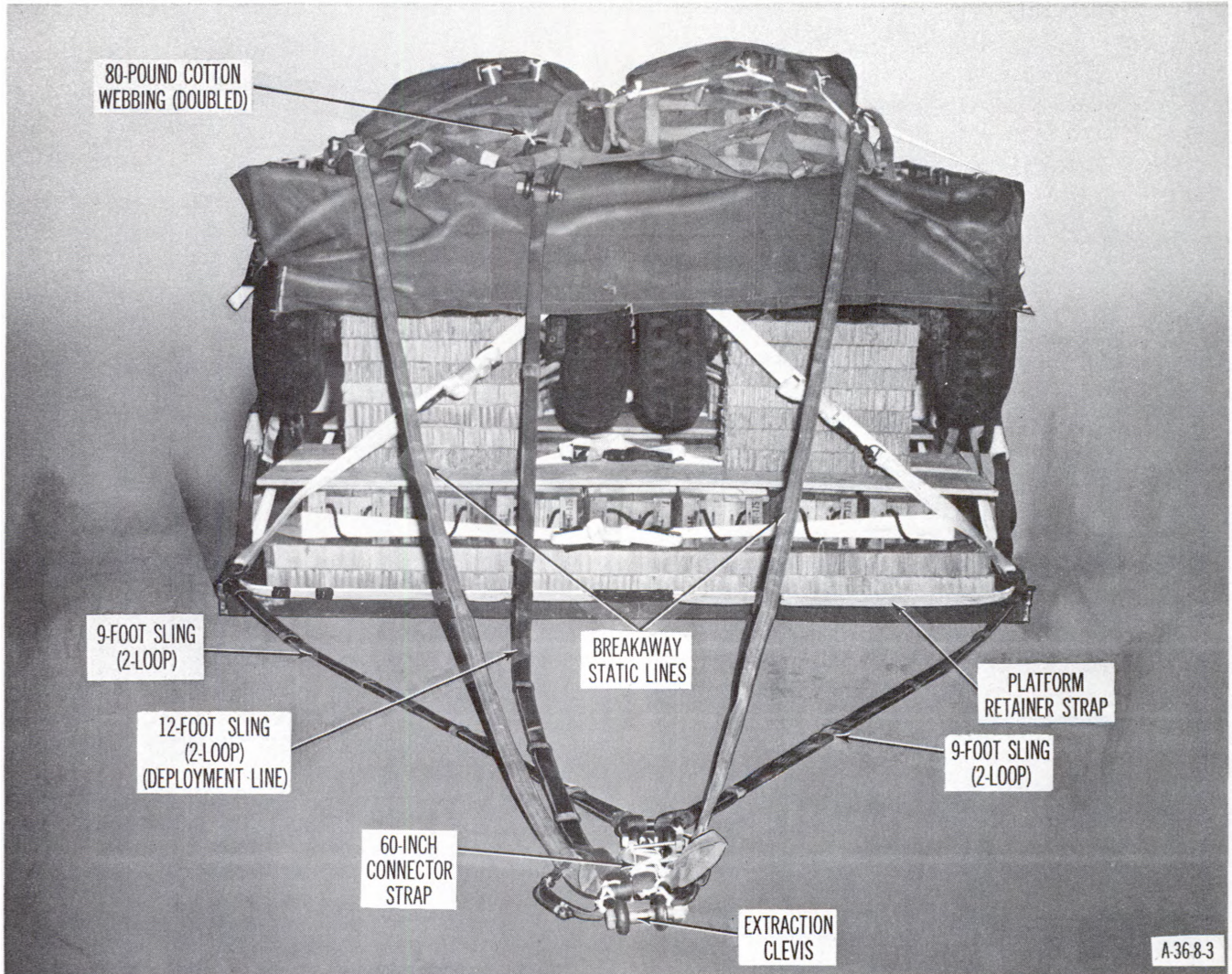


Figure 2-8. Extraction system installed.

2-10. Installing Extraction System

a. Forming Extraction Attaching Point. Use a load tiedown clevis, two 9-foot (2-loop) slings, and a large clevis assembly to form the extraction attaching point. Place one end of a 9-foot (2-loop) sling on a load tiedown clevis and attach the clevis to the 17th clevis hole in the right platform rail. Attach the second 9-foot (2-loop) sling to the 17th clevis hole in the left rail in the

same manner. Place the free ends of the slings on the large clevis assembly as shown in figure 2-8.

b. Installing Extraction Components. Using a 60-inch connector strap, install the extraction system components to the extraction attaching point according to procedures in TM 10-500/TO 13C7-1-5 and as shown in figure 2-8.

2-11. Installing Release System

Attach two 5,000-pound cargo parachute releases to the suspension system according to procedures in TM 10-500/TO 13C7-1-5 and place them on top of the load. Fold the slack in the suspension slings and tape or tie the folds with 80-pound cotton webbing.

2-12. Installing Platform Retainer Strap

When the C-130 aircraft is used for airdrop, install a platform retainer strap according to procedures in TM 10-500/TO 13C7-1-5 and as shown in figure 2-8.

Note. The platform retainer strap IS NOT used on loads dropped from the C-141 aircraft.

2-13. Positioning Extraction Parachute

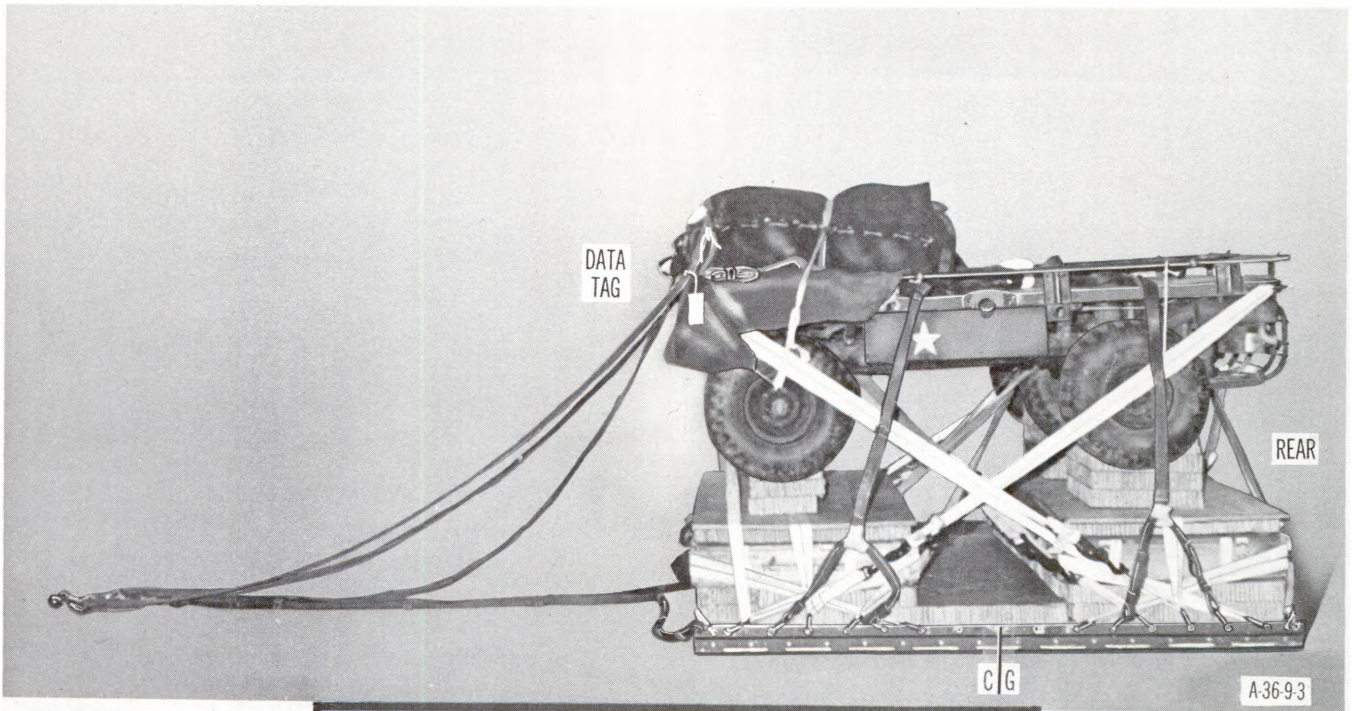
a. C-130 Aircraft. Place a 15-foot cargo extraction parachute (reefed with a 260-inch reefing line) and a 60-inch nylon webbing strap (shear strap) on the load for installation in the aircraft.

b. C-141 Aircraft. Place a 15-foot cargo extraction parachute (reefed with a 260-inch reefing line) on the load for installation in the aircraft. The extraction parachute must be equipped with an 85-inch pendulum line. In addition, a type IV link assembly and a 60-foot (2-ply) type X nylon extraction line must be used to form a 120-foot extraction line. Form the 120-foot extraction line as outlined in TM 10-500/TO 13C7-1-5.

2-14. Marking Rigged Load

Mark the rigged load according to TM 10-500/TO 13C7-1-5 and as shown in figure 2-9. The rigged load without an accompanying load weighs 2,800 pounds. The illustrated accompanying load weighs 1,700 pounds. If the accompanying load is varied, the weight, center of gravity, and parachute requirements must be computed.

Note. When rigged for airdrop on a drop zone with ground elevation of 6,000 to 10,000 feet, add 6 inches to the height reflected on figure 2-9.



RIGGED LOAD DATA			
Weight:	*4,500 pounds	**Height:	74 inches
Width:	108 inches	Length:	102 inches
	Overhang:	Front:	3 inches
		Rear:	3 inches
Center of Gravity: 48 inches from the front edge of platform			
*Includes weight of illustrated accompanying load			
**77 inches when load is rigged for drop on drop zone with ground elevation between 6,000 and 10,000 feet.			

Figure 2-9. Completely rigged load.

2-15. Equipment Required

The equipment required for rigging this load is listed in table 2-1. This table includes the

equipment required to rig the illustrated accompanying load.

Table 2-1. Equipment Required

Federal Stock No.	Item	Quantity
8040-273-8713	Adhesive, paste, 1-gal	As required
1377-958-1048	Cartridge, time-delay, 20-sec.	2
1670-090-5354	Clevis Assembly, suspension, large	5
8305-242-3593	Cloth, cotton duck, 60-in.	3 yd
4020-240-2146	Card, nylon, type III, 550-lb.	As required
1670-360-0328	Cover, clevis, large	2
8135-664-6958	Cushioning material, packaging, cellulose wadding	As required
1670-217-2421	Link Assembly, connector, removeable (For C-141 aircraft)	2
1670-783-5988	Link Assembly, single, type IV (Add 1 for C-141 aircraft)	1
1670-799-8596	Load Coupler, 8-spool	1
1670-753-3928	*Pad, energy dissipating, honeycomb, 3- by 36- by 96-in.:	11 sheets
	3- by 9- by 14-in.	(4)
	3- by 8- by 25-in.	(4)
	*3- by 12- 25-in (add 2 for high elevation DX)	(10)
	3- by 14- by 25-in	(2)
	*3- by 18- by 25-in (add 2 for high elevation DZ)	(10)
	3- by 24- by 93-in	(1)
	3- by 36- by 96-in	(6)
1670-269-1107	Parachute, cargo, 100-ft., G-11A	2
1670-052-1548	Parachute, cargo extraction, 15-ft (reefed with 260-in reefing line) (C-141 aircraft require a 120-ft extraction line and an 85-in pendulum line.)	1
	Platform, airdrop, modular, dual-rail system, 8-ft.:	
1670-893-1631	Clevis, load tiedown	28
1670-893-1625	Rail, platform side, 8-ft	2
5320-893-1632	Rivet, blind-drive type, ¼-in. dia	32
NSN	Plywood:	
	¾- by 36- by 96-in	2
	¾- by 48- by 96-in (load spreaders)	2
1670-799-8494	Release, cargo parachute, 5,000-lb capacity	2
	Sling, cargo, A/D: (3-loop slings may be substituted for 2-loop slings in accordance with TM 10-500/TO 13C7-1-5.)	
1670-753-3788	3-ft	4
1670-753-3790	9-ft (2-loop)	2
1670-753-3792	12-ft (2-loop)	5
1670-753-3794	20-ft (2-loop) (riser extensions)	2
1670-473-5115	Static Line, cargo parachute, breakaway type w/release knife and clevis	2
1670-738-5879	Strap, connector, 60-in.	1
1670-998-0116	Strap, parachute release, w/fastener and release knife	1
5340-181-1383	Strap, platform retainer (use with C-130 aircraft only)	1
1670-368-7486	Strap, webbing, nylon, 60-in. (shear strap) (use with C-130 aircraft only)	1
7510-266-5016	Tape, adhesive, 2-in	As required
1670-937-0271	**Tiedown Assembly, 15-ft (Dacron)	30
NSN	Web, adapter (required w/120-ft extraction line, see TM 10-500/TO 13C7-1-5)	1
8035-268-2411	Webbing, cotton, 80-lb	As required
8305-263-3591	Webbing, nylon, type VIII (parachute restraint strap)	6 yd
8305-082-5752	Webbing, nylon, tubular, ½-in	As required

*When rigged for drop on drop zone with ground elevation between 6,000 and 10,000 feet, additional honeycomb is required.

**When this item is not available, the following items are required as replacements:

3990-360-0248	Binder, load	60
1670-360-0340	Fastener, strap, cargo tiedown, quick-fit	60
1670-360-0540	Strap, tiedown, 15-ft	60

APPENDIX

REFERENCES

- | | |
|---|---|
| AFM 71-4/TM 38-250 | Packaging and Handling of Dangerous Materials for Transportation by Military Aircraft |
| TM 9-2320-213-10 | Operator's Manual: Truck, Platform Utility, ½-Ton, 4 × 4, M274 (2320-049-4804); M274A1 (2320-064-6363); M274A2 (2320-074-1167); M274A3 (2320-782-5792); M274A4 (2320-782-5793) |
| TM 10-500/TO 13C7-1-5 | Airdrop of Supplies and Equipment: General Information for Rigging Airdrop Platforms |
| TM 10-500-53/TO 13C7-18-41 | Airdrop of Supplies and Equipment: Rigging Ammunition for Low and High Velocity Airdrop |
| TM 10-1670-208-23/
TO 13C3-4-12 | Organizational and DS Maintenance Manual Including Repair Parts and Special Tools List for Platforms, Airdrop: Type II and III Modular, 6,000-Pound Load (FSN 1670-260-0442), and Combat-Expendable |
| TM 55-450-15 | Air Movement of Troops and Equipment (Administrative) |
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