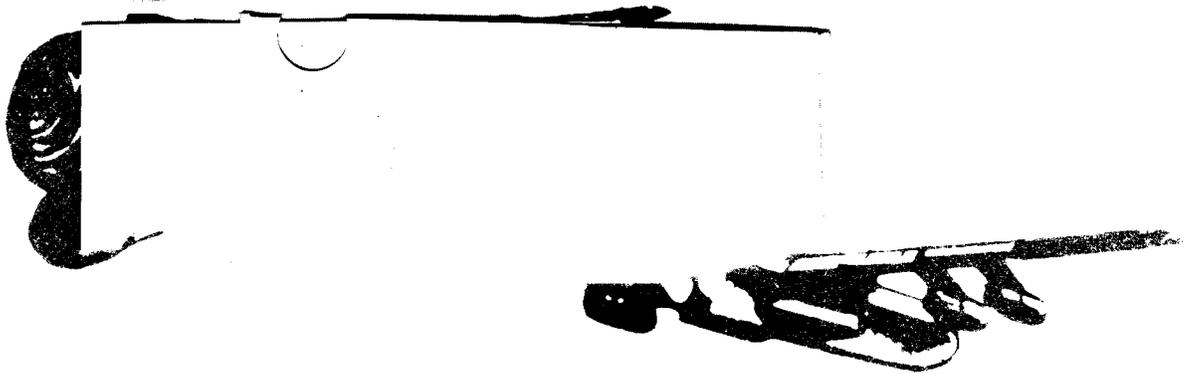
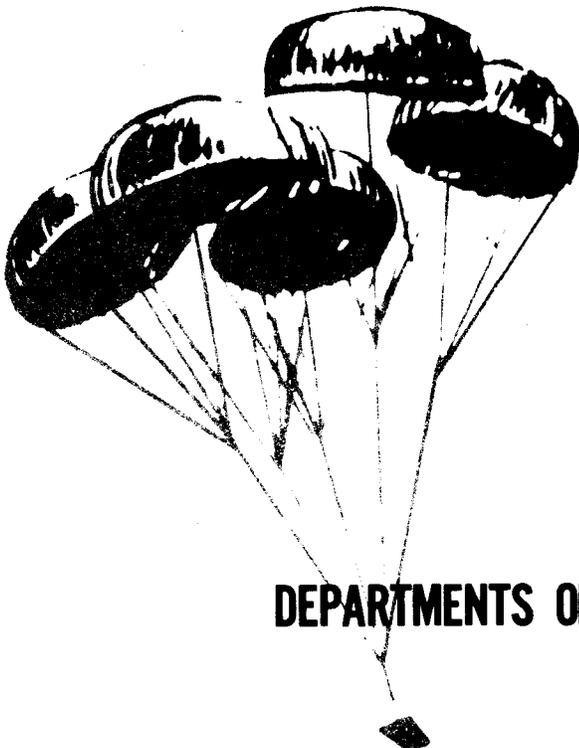
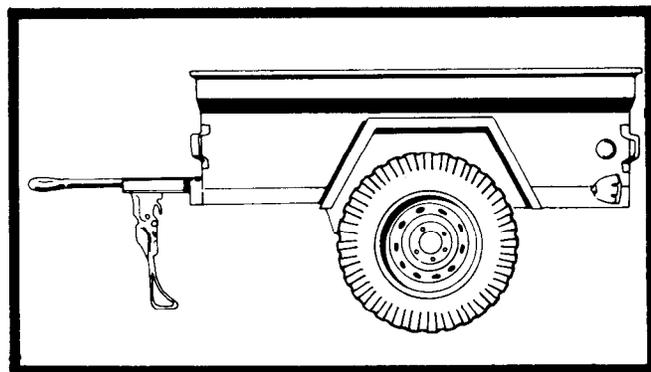
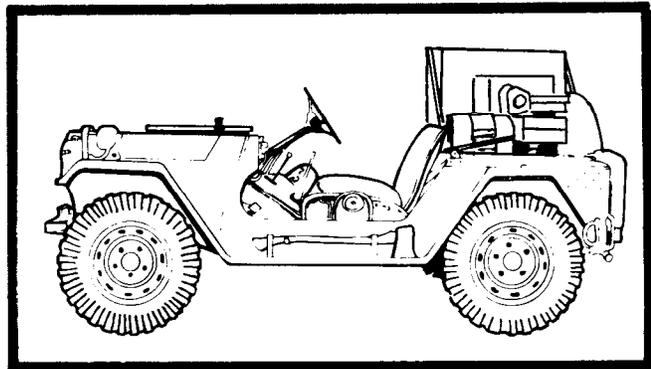


**ARMY FM 10-549
AIR FORCE TO 13C7-51-31**



AIRDROP OF SUPPLIES AND EQUIPMENT RIGGING MAINTENANCE CONTACT SET

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DEPARTMENTS OF THE ARMY AND THE AIR FORCE

FIELD MANUAL
 NO 10-549
 TECHNICAL ORDER
 NO 13C7-51-31

DEPARTMENTS OF THE ARMY
 AND THE AIR FORCE
 Washington, DC, 31 May 1983

**AIRDROP OF SUPPLIES AND EQUIPMENT:
 RIGGING MAINTENANCE CONTACT SET
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CHAPTER 1 INTRODUCTION

1-1. Scope

This manual tells and shows how to rig the maintenance contact set mounted in the M151A2, 1/4-ton truck with accompanying load on a 12-foot platform for low-velocity airdrop. The set in the 1/4-ton truck and the M416, 1/4-ton trailer with accompanying load are rigged on a 16-foot platform for low velocity. Both low-velocity loads may be airdropped from the C-130 or C-141 aircraft. The manual also covers rigging the set in the 1/4-ton truck, with the 1/4-ton trailer and accompanying load, for delivery by low-altitude, parachute-extraction (LAPE) airdrop from the C-130 aircraft.

1-2. Special Considerations

a. The loads covered in this manual may include hazardous material as defined in AFR 71-4/TM 38-250. If included, the hazardous material must be packaged, marked, and labeled as required by AFR 71-4/TM 38-250.

b. A copy of this manual must be available to the joint airdrop inspectors during the before- and after-loading inspections.

1-3. Recommended Changes

You are encouraged to report any errors or omissions and suggest ways for making this a better manual. Army personnel, send your com-

ments on DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to:

Commandant
US Army Quartermaster School
ATTN: ATSM-TDT
Fort Lee, Virginia 23801

Air Force personnel, send your reports on AFTO Form 22 (Technical Order Publication Improvement Report) through:

Headquarters
Military Airlift Command (MAC/DOXT)
Scott AFB, Illinois 62225

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CHAPTER 2 RIGGING MAINTENANCE CONTACT SET ON A 12-FOOT PLATFORM FOR LOW-VELOCITY AIRDROP

2-1. Description of Load

The M151A2, 1/4-ton truck, with the maintenance contact set, is rigged on a 12-foot, type II, modular platform with two G-11A or one G-11B cargo parachute for low-velocity airdrop from a C-130 or C-141 aircraft. The M151A2, 1/4-ton truck with the set weighs 3,230 pounds. It is 133 inches long, 64 inches wide, and 71 inches high (reducible to 60 inches). An accompanying load weighing at least 500 pounds but not over 700 pounds must be stowed on the platform.

2-2. Preparing Platform

a. Inspecting Platform. Inspect, or assemble and inspect, the 12-foot modular platform as outlined in TM 10-1670-208-20&P/TO 13C3-4-12.

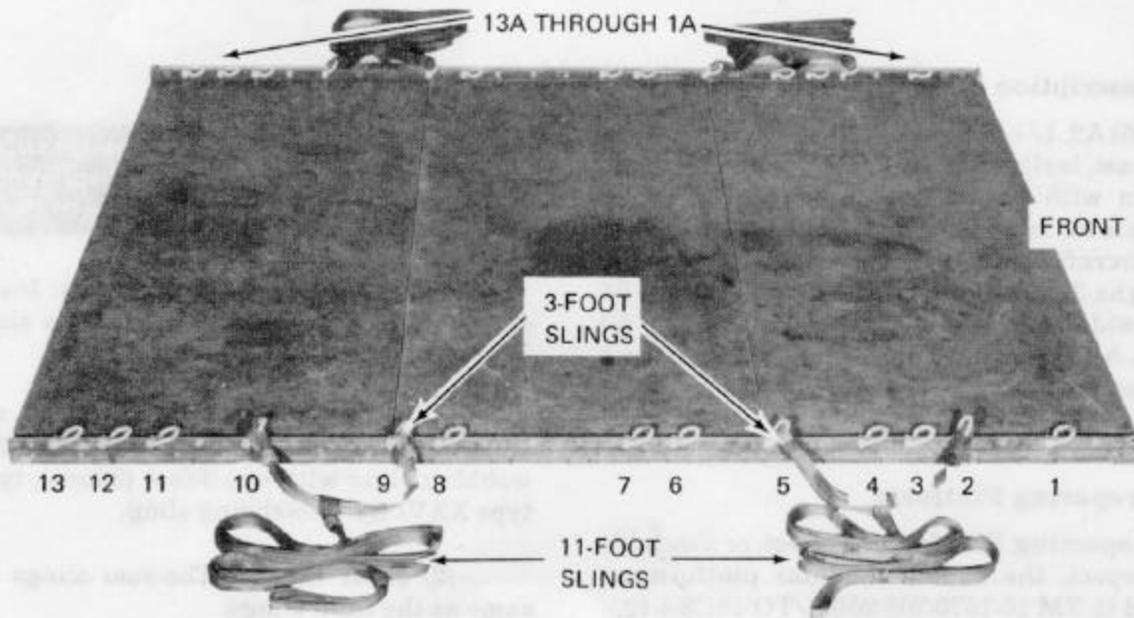
CAUTION: DO NOT mix the types of suspension slings used on this load. **ALL** suspension slings **MUST** be made from the same type of material.

b. Installing Suspension Slings. Install the suspension slings as follows and as shown in figure 2-1.

(1) **Front Slings.** On each rail use one 11-foot (3-loop), type X or type XXVI nylon webbing sling with one 3-foot (3-loop), type X or type XXVI nylon webbing sling.

(2) **Rear Slings.** The rear slings are the same as the front slings.

Note: The load tiedown clevises have been painted white to show contrast in the photographs.

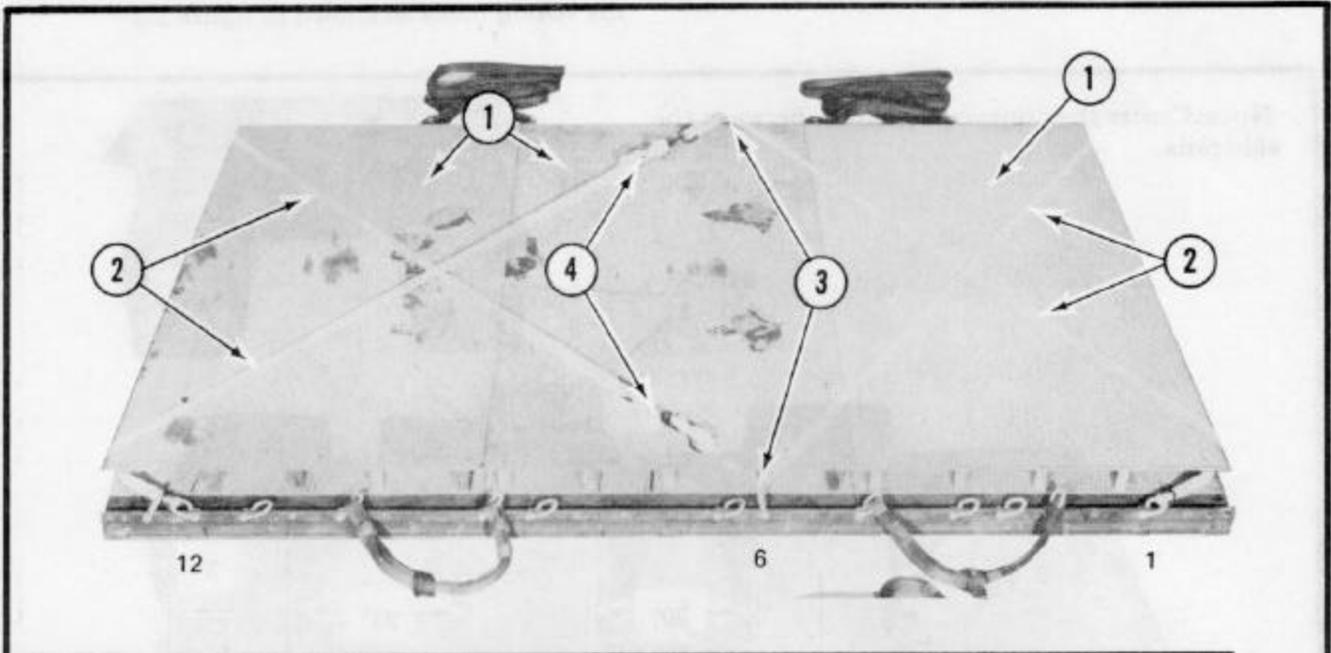


- ① Form the suspension slings with four 3-foot and four 11-foot slings. Pass each 3-foot sling through a loop of an 11-foot sling. Pass a load tiedown clevis through the ends of each 3-foot sling. Bolt the clevises on a sling to the 5th and 9th clevis holes (counting from the front of the platform) in each rail. Bolt the remaining slings to the 17th and 20th clevis holes in each rail.
- ② Start at the front of each rail and bolt a load tiedown clevis to the 3d, 6th, 7th, 11th, 12th, 16th, 22d, 23d, and 24th clevis holes. Start at the front of the platform and number the clevises bolted to the right rail from 1 through 13 and those bolted to the left rail from 1A through 13A.

Figure 2-1. Platform prepared and suspension slings installed.

c. **Building and Installing Strongbacks.**
Build three strongbacks as described in

TM 10-1670-208-20&P/TO 13C3-4-12, and lash them to the platform as shown in figure 2-2.



CAUTION:

Place the load binders so they will not touch the honeycomb stacks when the stacks are placed on the strongbacks.

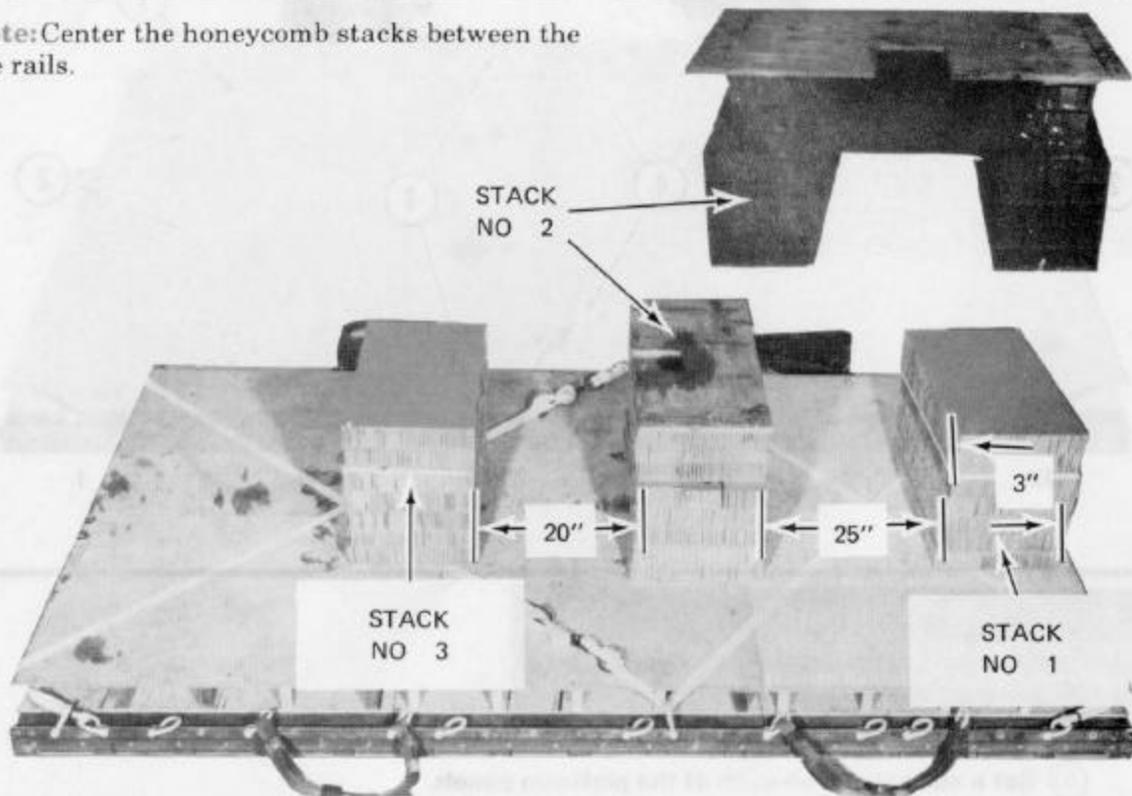
- ① Set a strongback on each of the platform panels.
- ② Fit one 15-foot tiedown strap to each of clevises 1, 1A, 12, and 12A. Pass the free end of the strap through the indicated clevis and through its D-ring. Pull strap tight.
- ③ Run the clevis 1 strap around and over the front edge of the strongback and through clevis 6A, and lay the end on the strongback. Run the clevis 1A strap through clevis 6 the same way.
- ④ Run the clevis 12 and 12A straps around and over the rear corners of the strongback and hook them to the straps from the front with four D-rings and two load binders. Fold excess strap and tape the strap to the load binder.

Figure 2-2. Strongbacks lashed to platform.

2-3. Building and Placing Honeycomb Stacks

Build three honeycomb stacks and glue them to the strongbacks as shown in figure 2-3.

Note: Center the honeycomb stacks between the side rails.



Note: Glue the layers of honeycomb together and the stacks to the strongbacks.

STACK NO	PIECES	WIDTH (INCHES)	LENGTH (INCHES)	INSTRUCTIONS
1	7	18	36	3 inches from front of platform.
	1	18	36	3/4-inch plywood under two top layers.
2	8	12	18	Four on each side of platform, 25 inches from stack 1.
	1	6	44	Bridge on left and right honeycomb.
	4	6	12	Beside bridge to level stack.
	6	6	18	Three pieces centered on each end of stack.
	1	18	44	3/4-inch plywood with 7- by 7- inch cutout on top of honeycomb.
3	Same as stack 1.		20 inches from stack 2.	

Figure 2-3. Honeycomb stacks placed on strongbacks.

2-4. Stowing Accompanying Load

An accompanying load must be rigged on the platform. The accompanying load may consist of ammunition, rations, or other supply items. The accompanying load must meet the requirements and restrictions given in FM 10-500/TO 13C7-1-5.

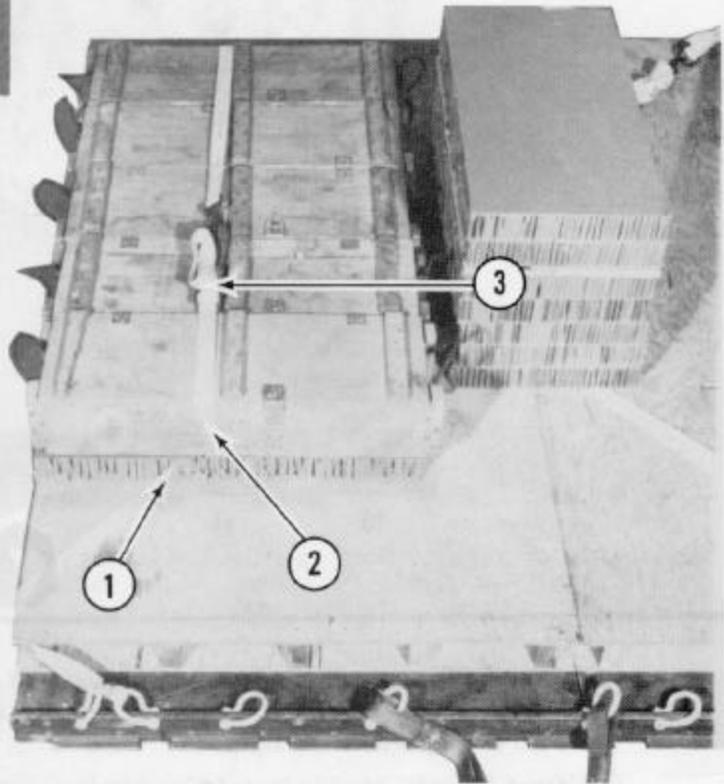
It must weigh at least 500 pounds but no more than 700 pounds. The accompanying load shown with this load is five boxes of ammunition weighing 550 pounds. Stow the accompanying load on the platform as shown in figures 2-4 and 2-5.

CAUTION:

Only ammunition listed in FM 10-553/TO 13C7-18-41 may be airdropped.

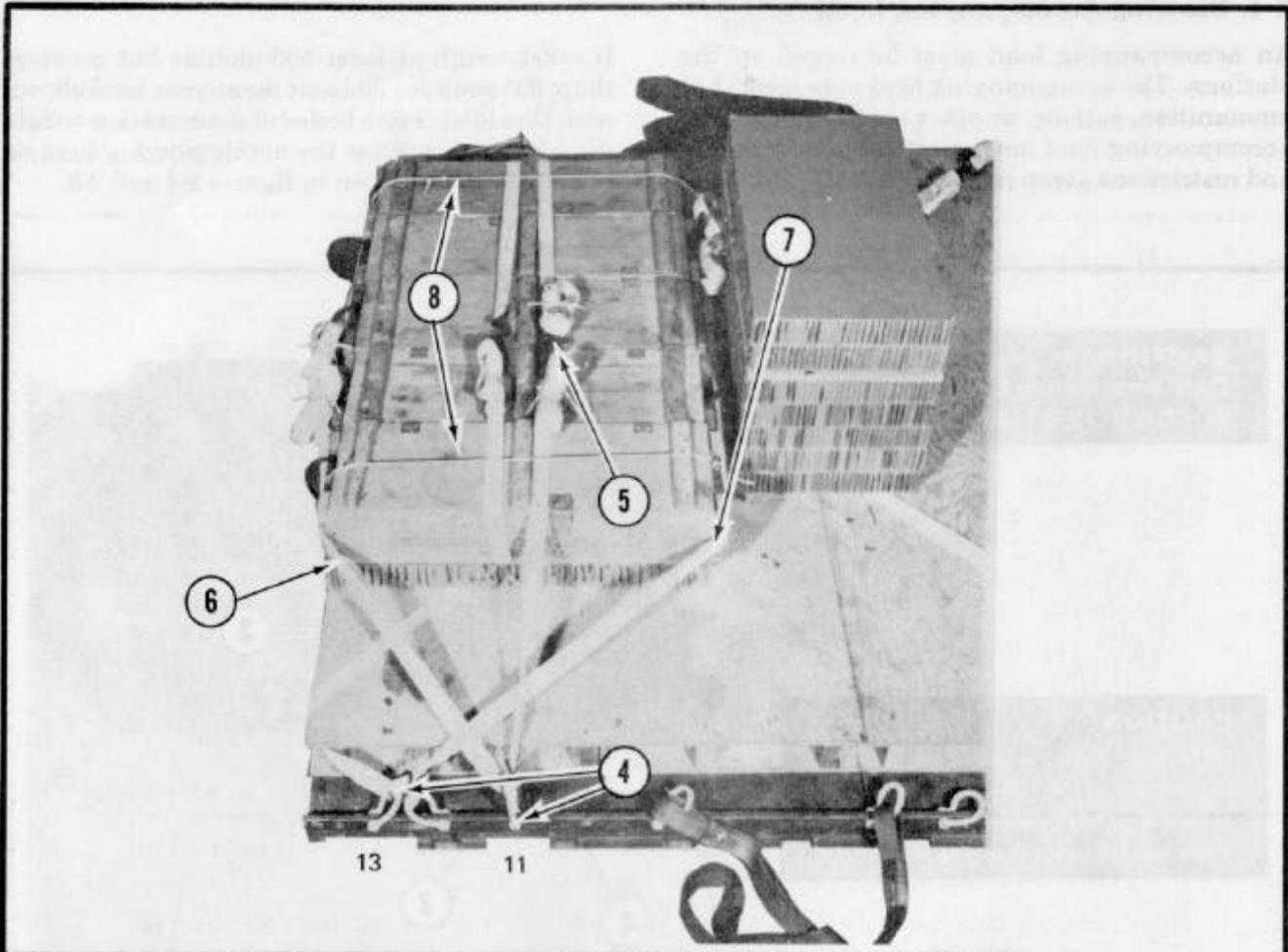
CAUTION:

If the accompanying load extends under the bumper of the truck, there **MUST** be at least 6 inches clearance between the truck and the accompanying load.



- ① Center a 36- by 60-inch piece of honeycomb even with the rear edge of the platform.
- ② Lay a 15-foot tiedown strap across the honeycomb.
- ③ Set five boxes of ammunition on the honeycomb. Bind the boxes together with the strap placed in step 2.

Figure 2-4. Accompanying load set on rear of platform.



- ④ Fit two 15-foot tiedown straps on clevises 11 and 11A and one on clevises 13 and 13A. Pass the free end of the strap through the indicated clevis and through its own D-ring. Pull strap tight.
- ⑤ Hook one strap from clevis 11 and one from clevis 11A together over the top of the accompanying load with two D-rings and a load binder.
- ⑥ Pass the other straps from clevises 11 and 11A around the rear of the boxes and through the box handles. Hook the straps together with two D-rings and a load binder.
- ⑦ Pass the straps from clevises 13 and 13A around the front of the boxes and through the box handles. Hook the straps together with two D-rings and a load binder.
- ⑧ Tie the forward and rearward tiedown straps together in two places with type III nylon cord.

Figure 2-5. Accompanying load lashed to platform.

2-5. Preparing Maintenance Contact Set and Truck.

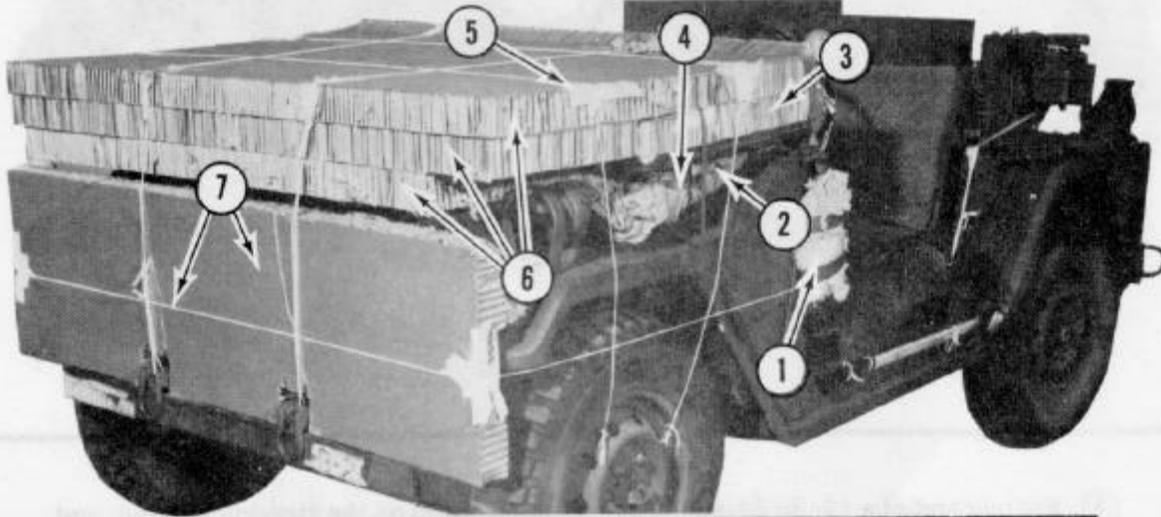
a. Remove the doors, side curtains, top cover, and bows. These items will not be dropped with the load.

b. Make certain that the fuel tank is no less than

one-half and no more than three-fourths full.

c. Finish preparing the maintenance contact set and the truck as shown in figures 2-6 through 2-11.

Note: Tape the edges of the honeycomb that will touch the cord when tying the honeycomb in place.

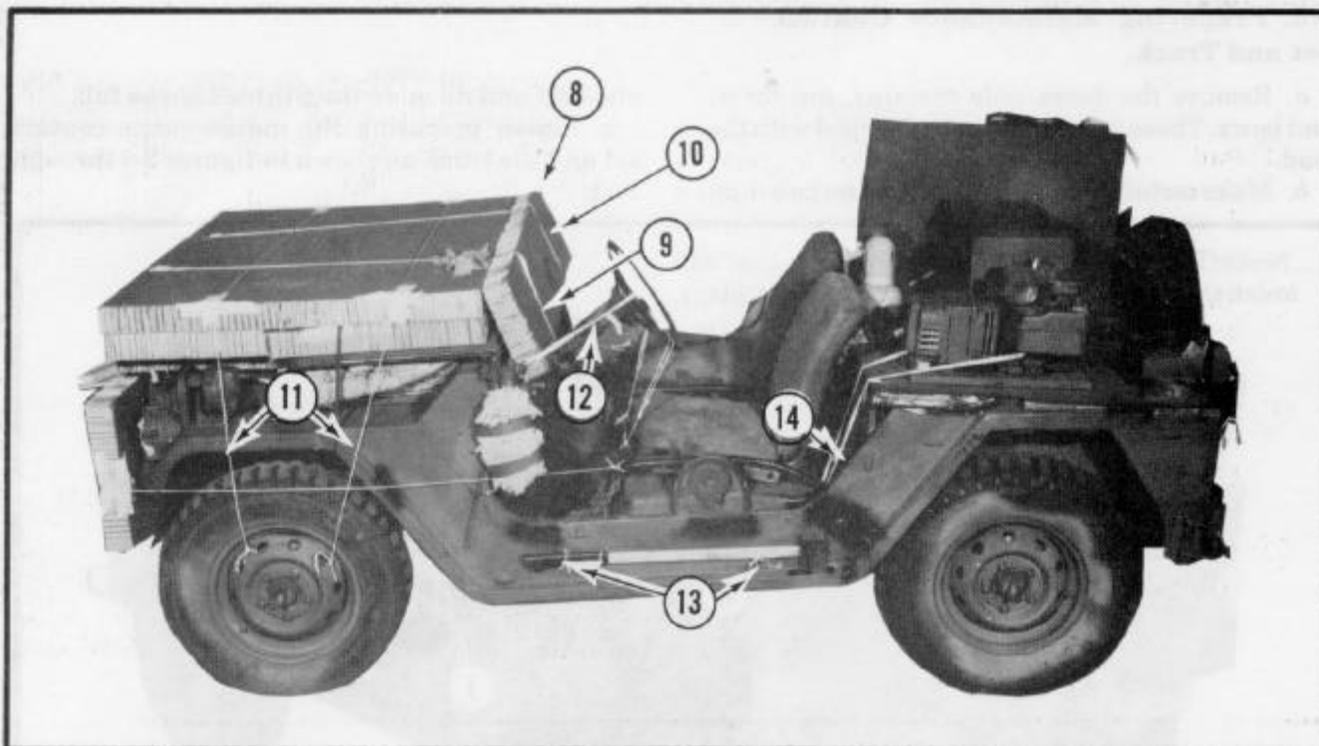


- ① Pad the side rearview mirror with cellulose wadding and tape the wadding in place. Lower the mirror down against the truck body.
- ② Fold the windshield down onto two layers of cellulose wadding. Secure the windshield with its retaining strap to the bracket on the hood.
- ③ Lay a 24- by 61-inch piece of honeycomb (with a 6- by 9-inch cutout for the wiper motor) on top of the windshield.
- ④ Tie a length of 1/2-inch tubular nylon webbing over the windshield honeycomb to the truck main frame on each side.
- ⑤ Place an 18- by 61-inch piece of honeycomb, with a 6- by 9-inch cutout for the wiper motor, on top of the 24- by 61-inch piece of honeycomb.

Note: If a mirror is on the windshield, pad it with cellulose wadding and tape the wadding in place. Also, cut a 6- by 6-inch notch in the first layer of honeycomb for the mirror.

- ⑥ Lay one 18- by 54-inch, one 18- by 61-inch, and one 24- by 61-inch pieces of honeycomb on the front of the truck hood.
- ⑦ Place an 18- by 61-inch piece of honeycomb, with two 4- by 7-inch cutouts for the lifting shackles, on the front bumper. Tie type III nylon cord around the honeycomb to both front seat frames.

Figure 2-6. Front of truck prepared.



- ⑧ Set one end of a 12- by 61-inch piece of honeycomb on the steering column, and lay it against the dash. Tie the honeycomb with type III nylon cord to the mirror bracket on the left and the windshield hinge on the right.
- ⑨ Make a type III nylon cord tie over the honeycomb to the lifting shackle bolt and to the steering column.
- ⑩ Tie type III nylon cord over the honeycomb to the handle on the passenger side and to the lifting shackle bolt.
- ⑪ Pass two lengths of type III nylon cord across the hood and tie the ends to the front wheels.
- ⑫ Tie the steering wheel to the windshield hinge bracket with 1/2-inch tubular nylon webbing and to the seat frame with type III nylon cord.
- ⑬ Tie the ax and shovel in place with type III nylon cord.
- ⑭ Make sure the seat hold-down pins are secured. If hold-down pins are not available, secure the seats with type III nylon cord.

Figure 2-7. Truck completely prepared.

- ⑮ Pad the acetylene and oxygen tanks with cellulose wadding. Set each tank on a 6- by 6-inch piece of honeycomb in the front compartment.
- ⑯ Pass a length of 1/2-inch tubular nylon around both tanks and through the slots in the front compartment.
- ⑰ Pass a second length of 1/2-inch tubular nylon around the tops of both tanks. Tie one end to the passenger's seat frame and one end to the driver's seat frame.
- ⑱ If the fire extinguisher is in its bracket, safety it in place with type III nylon cord.

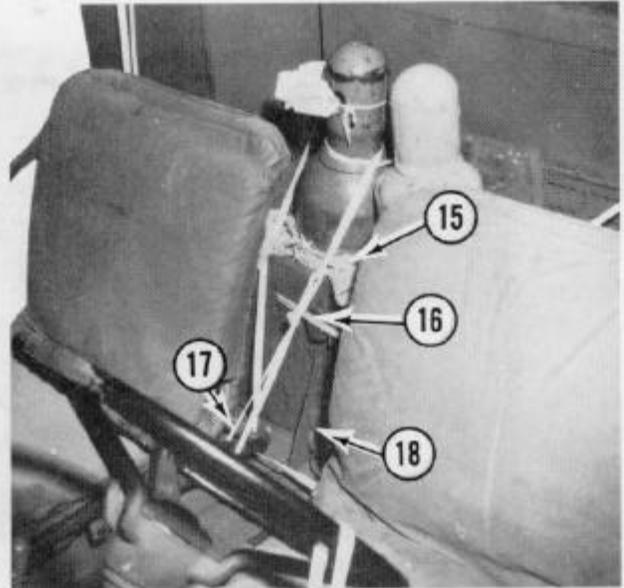
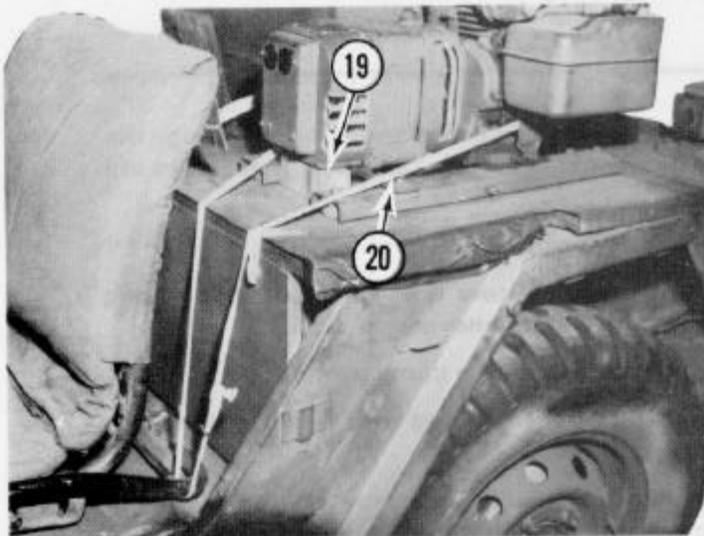
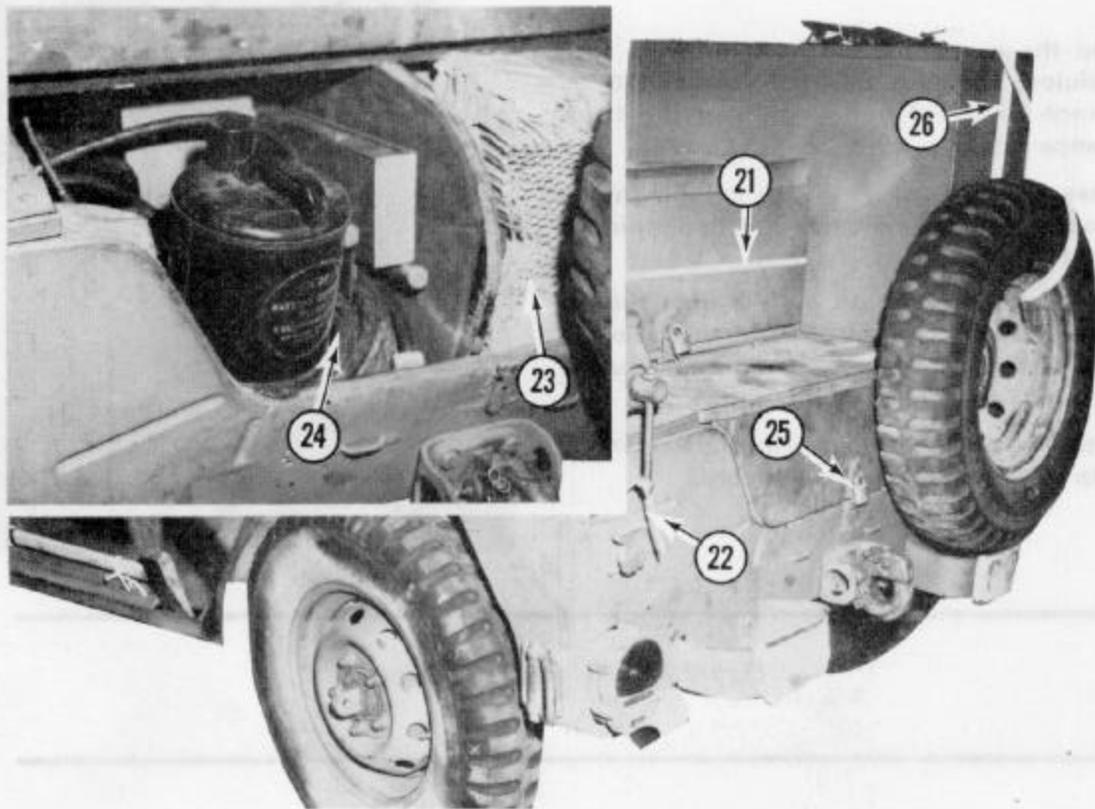


Figure 2-8. Welding tanks stowed.



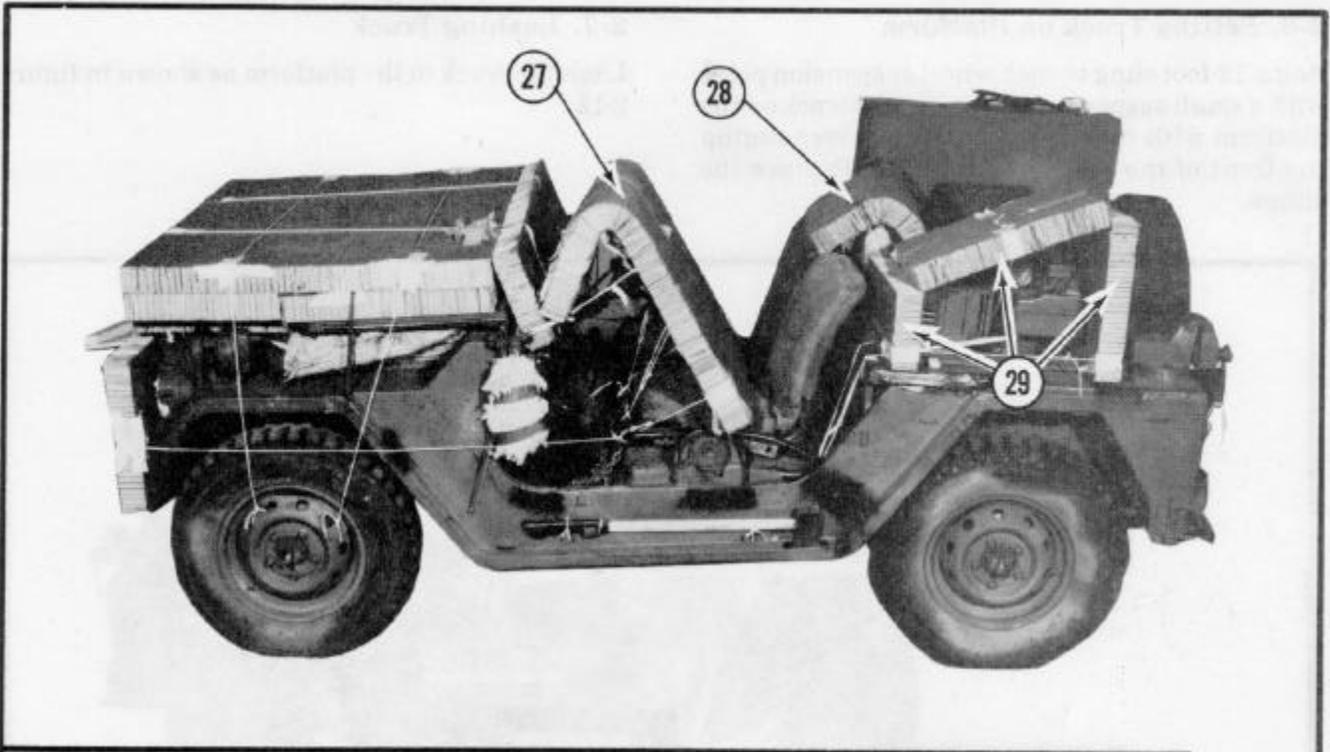
- ⑲ Loosen the two front generator mounting bolts. Set a 2- by 6- by 1 3/4-inch wood block under the generator and tighten the bolts.
- ⑳ Pass a length of 1/2-inch tubular nylon webbing around the generator and behind the recoil starter rope; then tie it to the driver's seat brace.

Figure 2-9. Generator safetied.



- ②1 Pass a length of 1/2-inch tubular nylon around the center toolbox and through the lifting handles. Tie one end to the passenger seat frame and the other end to the driver's seat frame.
- ②2 Tie the vice handle to a paulin hook with type III nylon cord.
- ②3 Place all fragile equipment in its container. Stow it in the right side of the compartment. Fill the compartment with scrap honeycomb.
- ②4 Stow the remaining equipment in the left side of the compartment.
- ②5 Close the compartment and tool chests. Tie them closed with type III nylon cord, or use a lock to secure them.
- ②6 Secure the side chest with a tiedown assembly. Pass the strap around the passenger seat brace, over the chest, and through the spare wheel.

Figure 2-10. Maintenance contact set and toolboxes stowed.



- ②7 Make knife cuts on one side of a 36- by 47-inch piece of honeycomb. Bend the honeycomb over the steering wheel and tie it in place with type III nylon cord.
- ②8 Bend a 14- by 20-inch piece of honeycomb over the top of the tanks and tie it in place with type III nylon cord.
- ②9 Cover the generator with honeycomb. Set a 9- by 18-inch piece of honeycomb at the front of the generator, an 18- by 18-inch piece at the rear of the generator, and an 18- by 22-inch piece on top. Tie the honeycomb in place with type III nylon cord.

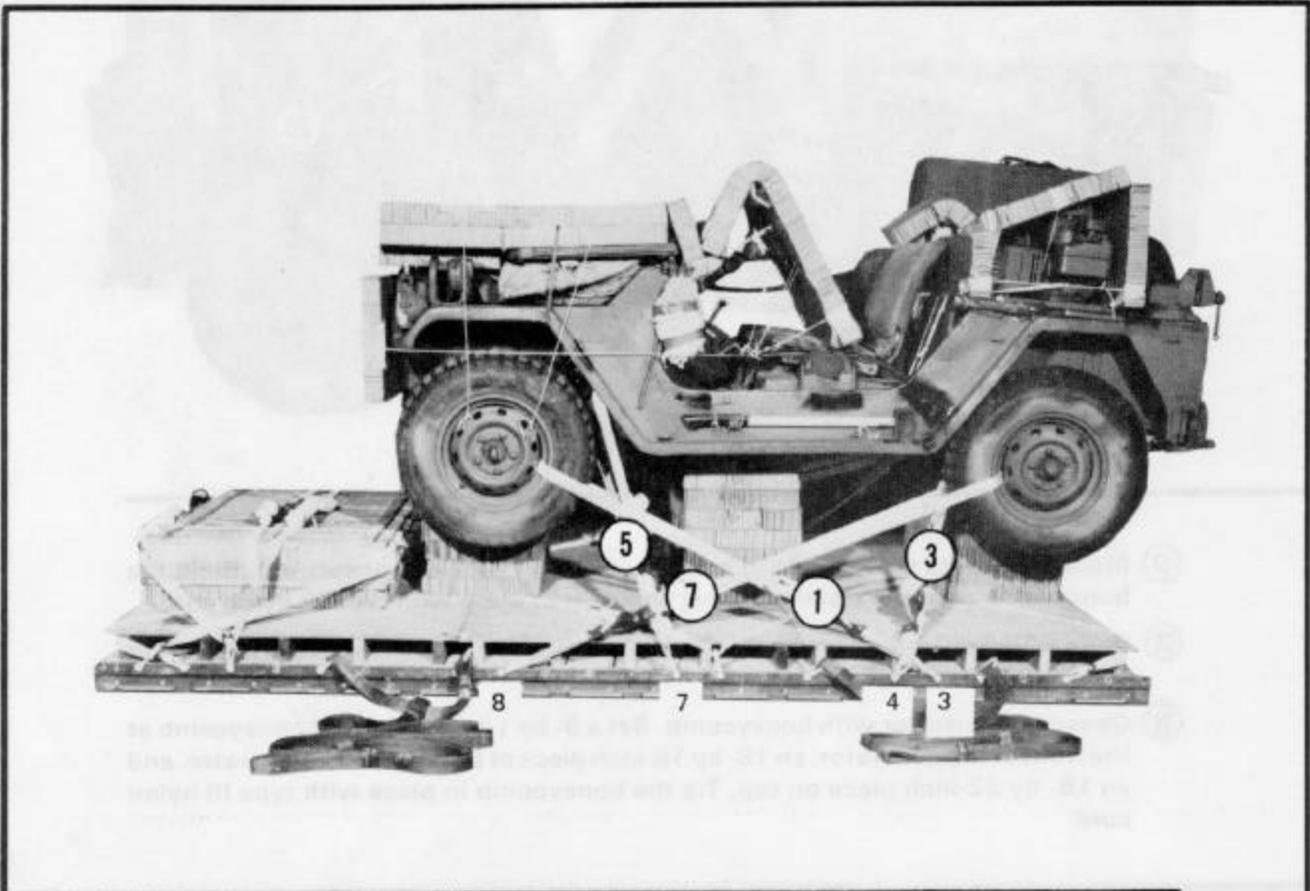
Figure 2-11. Honeycomb placed over steering wheel and equipment.

2-6. Setting Truck on Platform

Bolt a 12-foot sling to each wheel suspension point with a small suspension clevis. Set the truck on the platform with the rear of the truck overhanging the front of the platform 22 inches. Remove the slings.

2-7. Lashing Truck

Lash the truck to the platform as shown in figure 2-12.



Lashing Number	Clevis Number	Instructions
1	3	Through left front wheel
2	3A	Through right front wheel
3	4	Around left inside suspension arm
4	4A	Around right inside suspension arm
5	7	Around left main frame
6	7A	Around right main frame
7	8	Through left rear wheel
8	8A	Through right rear wheel

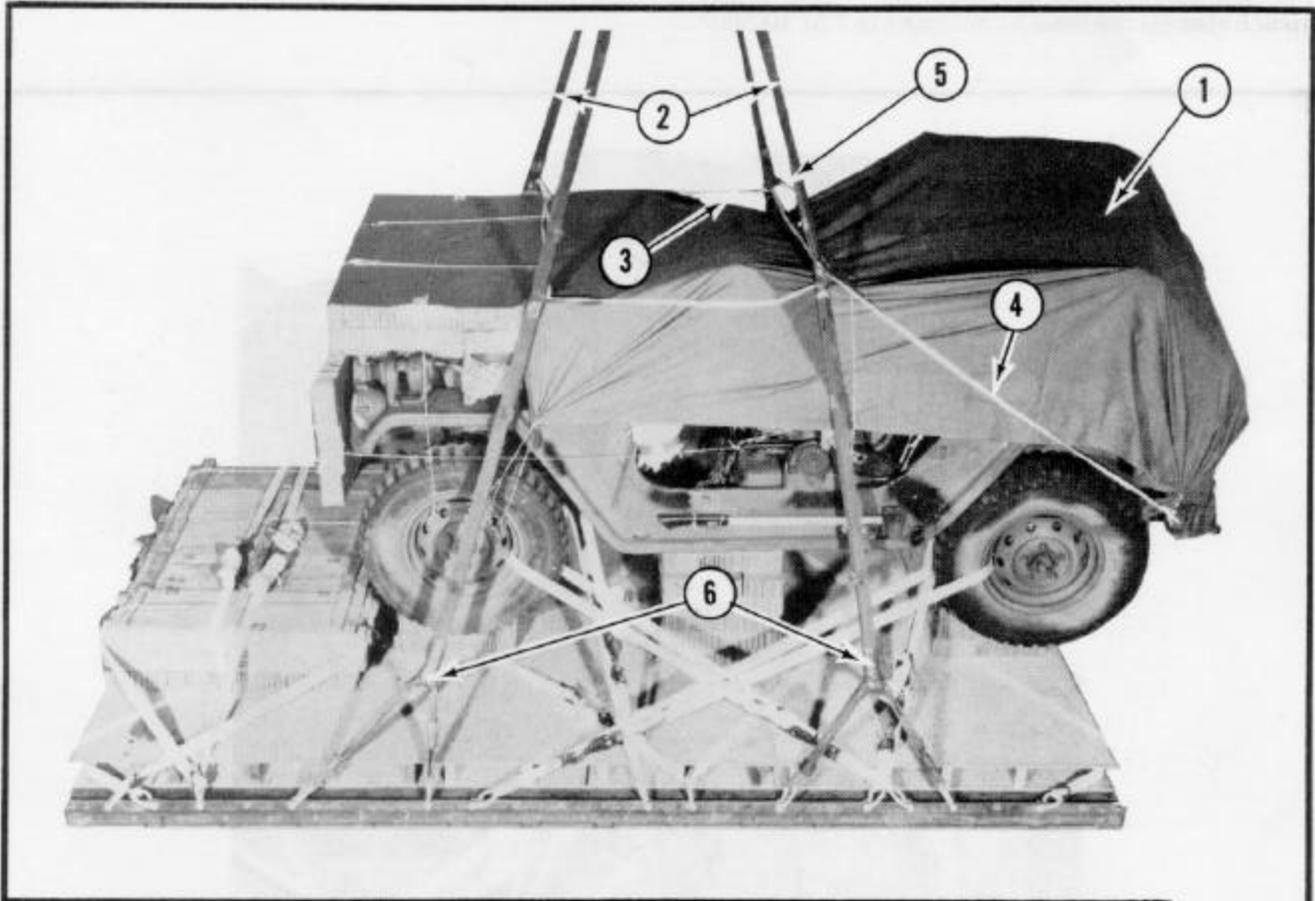
Figure 2-12. Truck set on and lashed to the platform.

2-8. Covering Load

Cover the truck with an 8- by 9-foot piece of cotton duck cloth as shown in figure 2-13.

2-9. Safeying Suspension Slings

Safety the suspension slings as shown in figure 2-13.



- ① Tie an 8- by 9-foot piece of cotton duck cloth on the truck with type III nylon cord.
- ② Raise the suspension slings to their full height.
- ③ Make the deadman's safety tie at the top of the load as described in FM 10-500/TO 13C7-1-5.
- ④ Tie two lengths of 1/2-inch tubular nylon webbing to the right front sling and the left rear lifting point.
- ⑤ Tie two lengths of 1/2-inch tubular nylon webbing to the left front sling and the right rear lifting point.
- ⑥ Tape each 11-foot suspension sling to the 3-foot sling.

Figure 2-13. Suspension slings safetied.

2-10. Stowing Cargo Parachutes

Either the G-11A or the G-11B cargo parachute may be used on this load. Stow either the G-11A or G-11B parachute as follows:

a. **G-11A.** Prepare and stow two G-11A cargo parachutes on the load as outlined in FM 10-500/

TO 13C7-1-5 and as shown in figure 2-14.

b. **G-11B.** Prepare and stow one G-11B cargo parachute on the load as outlined in FM 10-500/TO 13C7-1-5.



- ① Place one or more parachutes on the front of the truck.
- ② Tie the 10-yard, type VIII, nylon webbing restraint strap to clevises 7 and 7A, or tie the type III, nylon cord to the lifting shackles and the windshield brackets.

Figure 2-14. Parachute stowed.

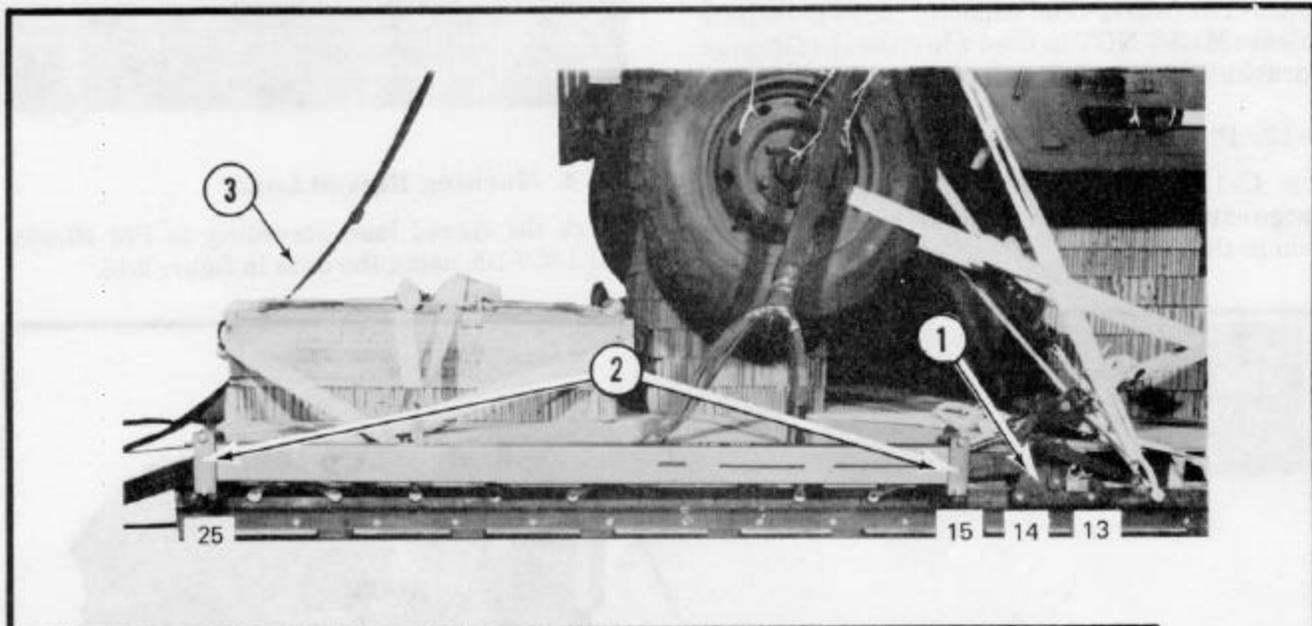
2-11. Installing Extraction System

Either the platform extraction force transfer coupling (PEFTC) or the static-line/connector-strap (SL/CS) extraction system may be used on this load.

a. **PEFTC.** Install the components of the PEFTC as outlined in FM 10-500/TO 13C7-1-5 and

as shown in figure 2-15.

b. **SL/CS.** Use a 16-foot deployment line and a 60-inch connector strap to install the components of the SL/CS. Bolt a 9-foot (3-loop) sling to the rear hole in each rail for the attaching point as outlined in FM 10-500/TO 13C7-1-5.



- ① Bolt an actuator through its B mounting holes to the 13th and 14th clevis holes in each rail.
- ② Bolt a guidance tube bracket to the 15th and 25th clevis holes in each rail. Bolt the guidance tubes to these brackets.
- ③ Use a 16-foot (3-loop) sling as the deployment line. Fold any excess deployment line and tape the folds with two turns of adhesive tape, or tie the folds with one turn 80-pound cotton webbing.

Figure 2-15. PEFTC installed.

2-12. Installing Parachute Release System

Prepare, install, and safety an M-1 cargo parachute release as outlined in FM 10-500/TO 13C7-1-5. If the M-1 release is not available, prepare, attach, and safety two 5,000-pound-capacity cargo parachute releases as outlined in FM 10-500/TO 13C7-1-5.

Note: The 5,000-pound-capacity cargo parachute release **MUST NOT** be used when the G-11B cargo parachute is rigged as part of this load.

2-13. Placing Extraction Parachute

a. C-130 Aircraft. Place an unreefed 15-foot cargo extraction parachute on the load for installation in the aircraft.

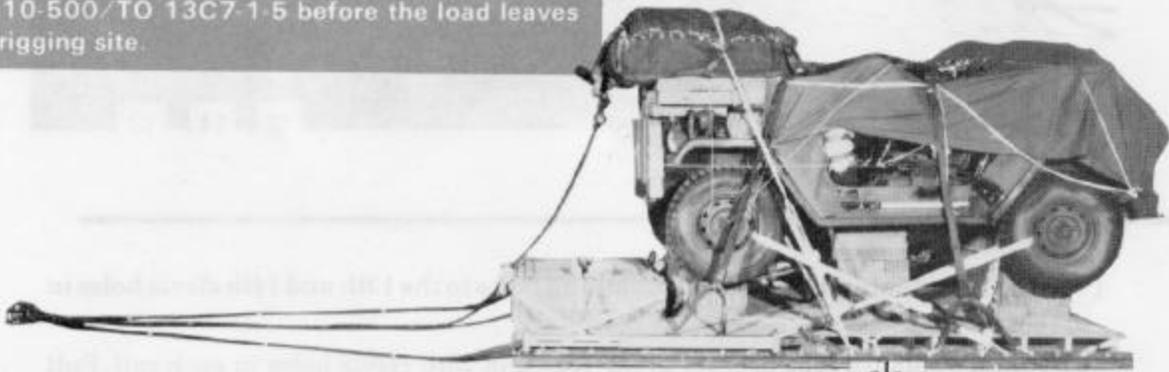
b. C-141 Aircraft. Place an unreefed 15-foot cargo extraction parachute with a 36-inch adapter web on the load for installation in the aircraft. A 160-foot (1-loop), type XXVI, nylon extraction line will also be placed on the load.

CAUTION: The extraction line must be a continuous 160-foot extraction line.

2-14. Marking Rigged Load

Mark the rigged load according to FM 10-500/TO 13C7-1-5, using the data in figure 2-16.

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	5,410 pounds
Width	108 inches
Height	84 inches
Length	166 inches
Overhang: Front	22 inches
Center of Balance (CB) (from front edge of platform)	62 inches
Extraction System (shown)	PEFTC

Figure 2-16. Maintenance contact set in truck rigged for low-velocity airdrop.

2-15. Equipment Required

The equipment needed to rig the maintenance contact set on a 1/4-ton truck for low-velocity airdrop is listed in table 2-1.

Table 2-1. Equipment required for rigging the maintenance contact set for low-velocity airdrop.

National Stock No	Item	Quantity
1670-00-040-8215	Adapter web, 36-in (for C-141)	1
8040-00-273-8713	Adhesive, paste, 1 gal	As required
1377-00-958-1048	Cartridge, time-delay, 20-second (use w 5,000-lb rel)	2
1670-00-090-5354	Clevis assembly, suspension, large (use w 5,000-lb rel)	3
8305-00-242-3593	Cloth, cotton-duck, 60-in	6
4020-00-240-2146	Cord, nylon, type III, 550-lb	As required
1670-00-799-8596	Load coupler, 8-spool (use w 5,000-lb rel)	1
1670-00-168-6068	*Coupling, extraction force transfer (platform)	1
8135-00-664-6958	Cushioning material, packaging, cellulose wadding	As required
1670-01-107-7652	Line, extraction, type XXVI, 160-ft (1-loop) (for C-141)	1
1670-00-783-5988	Link assembly, type IV (for C-141)	1
1670-00-753-3928	Pad, energy-dissipating, honeycomb, 3- by 36- by 96-in:	7 sheets
	6- by 12-in	(4)
	6- by 18-in	(6)
	6- by 44-in	(1)
	9- by 18-in	(1)
	12- by 18-in	(8)
	12- by 61-in	(1)
	18- by 18-in	(1)
	18- by 22-in	(1)
	18- by 36-in	(16)
	18- by 54-in	(1)
	18- by 61-in	(3)
	24- by 61-in	(2)
	36- by 47-in	(1)
	36- by 60-in	(1)
	Parachute:	
1670-00-269-1107	Cargo, G-11A	2
	or	
1670-01-016-7841	Cargo, G-11B	1
1670-00-052-1548	Cargo, extraction, 15-ft (See note at end of table.)	1
	Platform, airdrop, modular, 8-ft:	
1670-00-893-1631	Clevis, load tiedown	26
1670-00-893-1624	Panel	3
1670-00-893-1626	Rail, platform, side, 12-ft	2
5320-00-893-1632	Rivet, blind-drive type, 1/4-in diam	48
5530-00-128-4981	Plywood, 3/4-in:	
	18- by 44-in	1
	18- by 36-in	2
1670-00-168-6070	Release, cargo parachute, M-1 (One 5,000-lb release, NSN 1377-00-799-8494 may be used w G-11A cargo parachute.)	1
	Slings, cargo, airdrop:	
	For 5,000-lb releases:	
1670-00-753-3788	3-ft (3-loop), type X	1
	or	

Table 2-1. (Continued)

National Stock No	Item	Quantity
1670-01-062-6301	3-ft (2-loop), type XXVI	1
	For platform suspension:	
1670-00-753-3788	3-ft (3-loop), type X	4
	or	
1670-01-062-6301	3-ft (2-loop), type XXVI	4
1670-00-823-5040	11-ft (3-loop), type X	4
	or	
1670-01-063-7760	11-ft (2-loop), type XXVI	4
	For lifting truck:	
1670-00-823-5041	12-ft (3-loop), type X	4
	or	
1670-01-062-6303	12-ft (2-loop), type XXVI	4
	For deployment line:	
1670-00-823-5042	16-ft (3-loop), type X	1
	or	
1670-01-063-7761	16-ft (2-loop), type XXVI	1
7510-00-266-5016	Tape, adhesive, 2-in	As required
1670-00-937-0271	Tiedown assembly, 10,000-lb	20
	Webbing:	
8305-00-268-2411	Cotton, 80-lb	As required
8305-00-082-5752	Nylon, tubular, 1/2-in	As required
8305-00-263-3591	Nylon, type VIII	10 yd
1670-00-090-5354	Clevis assembly, suspension, large	2
1670-00-893-1631	Clevis, load tiedown	2
1670-00-783-5988	Link assembly, type IV	1
1670-00-753-3631	Sling, cargo, airdrop, 9-ft (3-loop).....	2
1670-00-998-0117	Static line cargo parachute, breakaway type with release knife and clevis	2
1670-00-738-5878	Strap, connector, 60-in	1

1. C-130. The unreefed 15-foot cargo extraction parachute is used on loads rigged for airdrop from a C-130 aircraft.

2. C-141. The unreefed 15-foot cargo extraction parachute is used on loads rigged for drop from the

C-141 aircraft. In addition, the parachute needs a 36-inch adapter web and a continuous 160-foot (1-loop), type XXVI, nylon webbing extraction line. Do not use shorter lines to form the 160-foot line.

RIGGING MAINTENANCE CONTACT SET WITH TRAILER AND ACCOMPANYING LOAD

Section I

RIGGING LOAD FOR LOW-VELOCITY AIRDROP

3-1. Description of Load

The M151A2, 1/4-ton truck, with the maintenance contact set, is rigged on a 16-foot, type II, modular platform with two G-11A or two G-11B cargo parachutes for low-velocity airdrop. The M151A2, 1/4-ton truck with the set weighs 3,230 pounds. It is 133 inches long, 64 inches wide, and 71 inches high (reducible to 60 inches). The M416, 1/4-ton cargo trailer weighs 570 pounds. It is 109 inches long, 61 inches wide, and 44 inches high. An accompanying load of 550 pounds stowed in the trailer and 660 pounds on the platform is shown in this chapter.

3-2. Preparing Platform

a. Inspecting Platform. Inspect, or assemble and inspect, the 12-foot modular platform as outlined in TM 10-1670-208-20&P/TO 13C3-4-12.

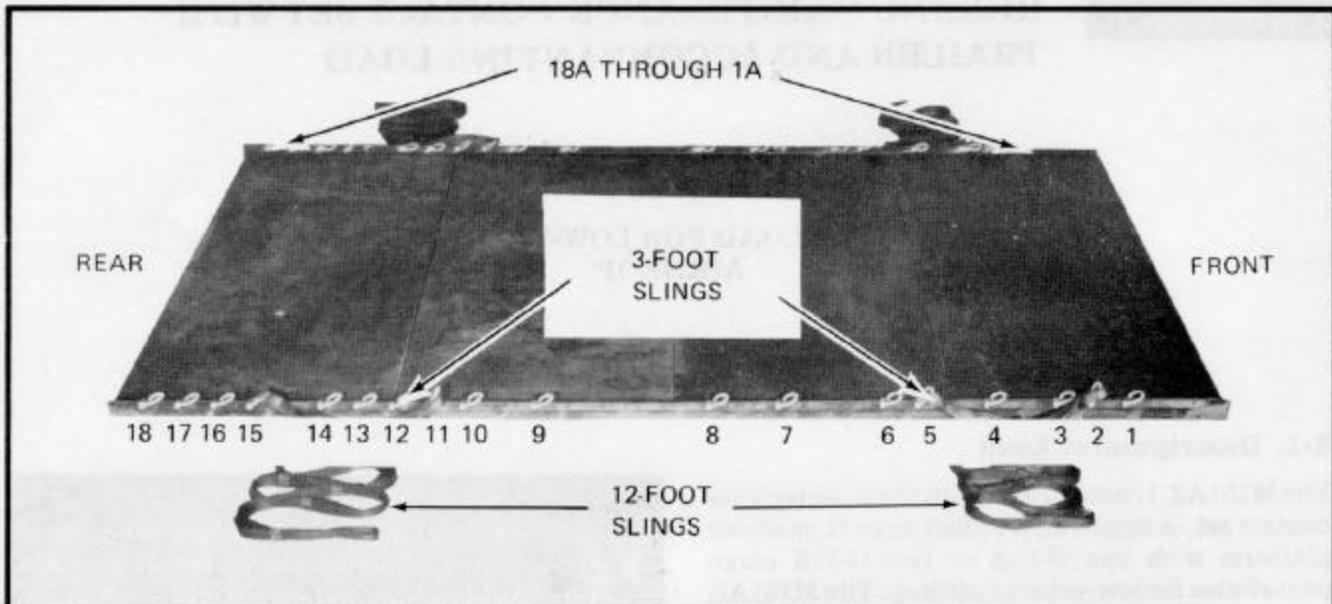
CAUTION:

DO NOT mix the types of suspension slings used on this load. **ALL** suspension slings **MUST** be made from the same type of materials.

b. Installing Suspension Slings. Install the suspension slings as follows and as shown in figure 3-1.

(1) **Front Slings.** On each rail use one 12-foot (3-loop), type X nylon webbing sling with one 3-foot (3-loop), type X nylon webbing sling. When available, (2-loop) type XXVI nylon webbing slings may be used instead of (3-loop) type X nylon webbing slings.

(2) **Rear Slings.** The rear slings are the same as the front slings.



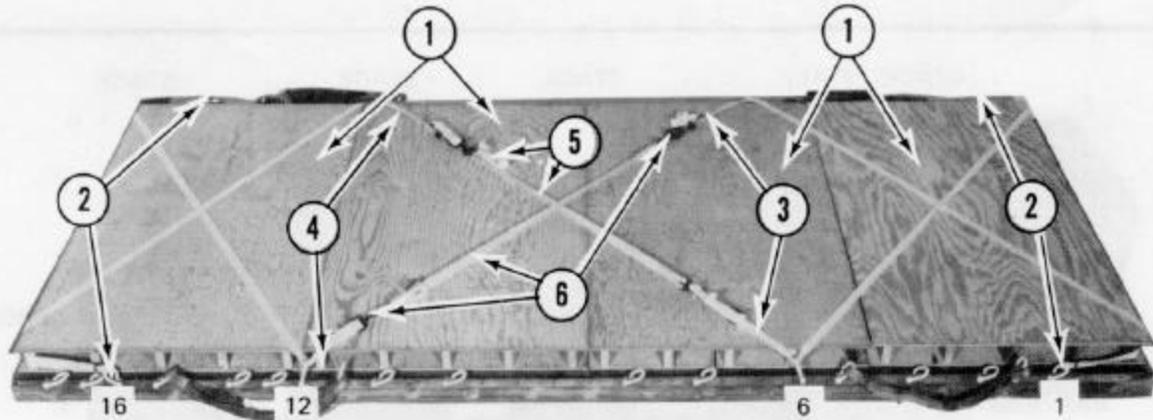
- ① Form the suspension slings with four 3-foot and four 11-foot slings. Pass each 3-foot sling through a loop of a 12-foot sling. Pass a load tiedown clevis through the ends of the 3-foot slings. Bolt the clevises on a sling to the 5th and 10th clevis holes (counting from the front of the platform) in each rail. Bolt the remaining slings to the 24th and 29th clevis holes in each rail.
- ② Start at the front of each rail and bolt a load tiedown clevis to the 4th, 6th, 8th, 11th, 14th, 16th, 21st, 23d, 25th, 26th, 27th, 30th, 31st, and 32d clevis holes. Start at the front of the platform and number the clevises bolted to the right rail from 1 through 18 and those bolted to the left rail from 1A through 18A.

Figure 3-1. Platform prepared.

c. **Building, Placing, and Lashing Strong-back.** Build four strongbacks according to details given in TM 10-1670-208-20&P/TO 13C3-4-12, and lash them to the platform as shown in figure 3-2.

CAUTION!

Place the load binders so they will not touch the honeycomb stacks when the stacks are placed on the strongbacks.

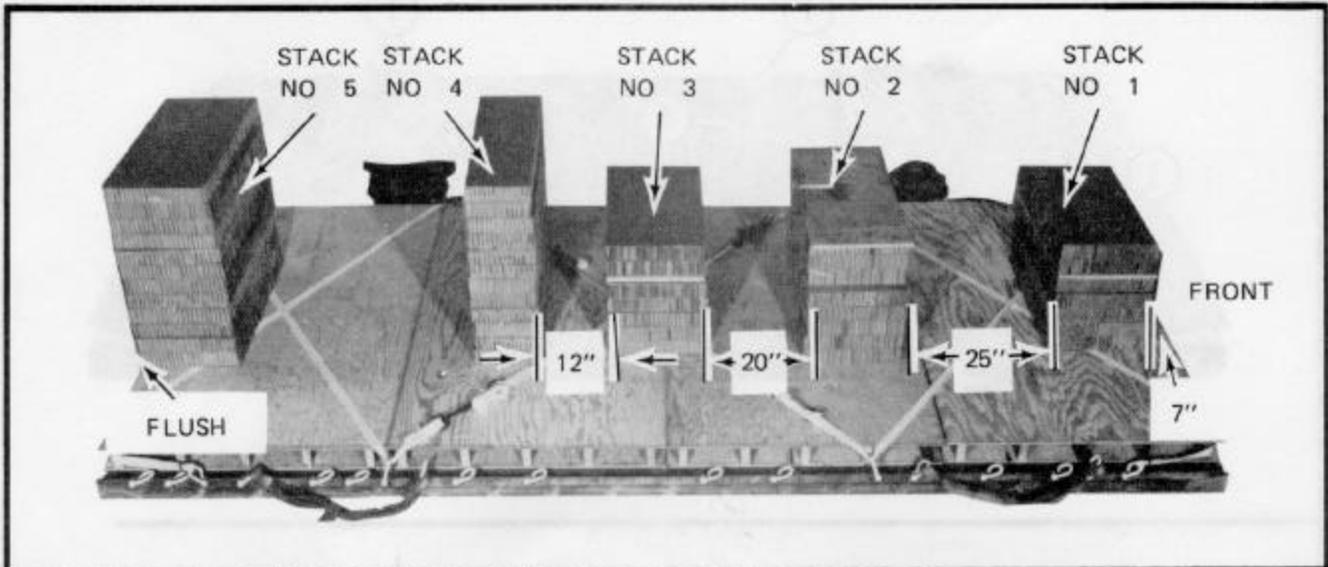


- ① Set a strongback on each platform panel.
- ② Fit a tiedown strap to each of clevises 1, 1A, 16, and 16A. Pass the end of a strap through the indicated clevis and through its D-ring. Pull strap tight.
- ③ Run clevis 1 strap around and over the front edge of the strongback and through clevis 6A. Lay the end of clevis 1 strap on the strongback. Run clevis 1A strap through clevis 6 the same way.
- ④ Adapt procedures in step 3 to run clevis 16 strap through clevis 12A and clevis 16A strap through clevis 12.
- ⑤ Use a 15-foot tiedown strap, three D-rings, and two load binders. Hook one end of the strap to the strap passing through clevis 6. Hook the other end of the strap to the strap passing through clevis 12A.
- ⑥ Use a 15-foot tiedown strap, three D-rings, and two load binders. Hook one end of the strap to the strap passing through clevis 6A. Hook the other end of the strap passing through clevis 12.

Figure 3-2. Strongbacks lashed on platform.

3-3. Building and Placing Honeycomb Stacks

Build five honeycomb stacks and place them on the strongbacks as shown in figure 3-3. Glue the honeycomb layers together and glue the stacks in place.



STACK NO	PIECES	WIDTH (INCHES)	LENGTH (INCHES)	INSTRUCTIONS
1	7	18	36	3/4-inch plywood under top two layers. Four on each side of platform. Bridge between honeycomb. Fillers on each side of bridge. Three centered on each end of stack. 3/4-inch plywood with a 7- by 7-inch cutout centered on rear edge of plywood.
	1	18	36	
2	8	12	18	
	1	6	44	
	4	6	12	
	6	6	18	
	1	18	44	
3	Same as stack 1			
4	12	12	42	
5	12	18	42	

Figure 3-3. Honeycomb stacks set on strongbacks.

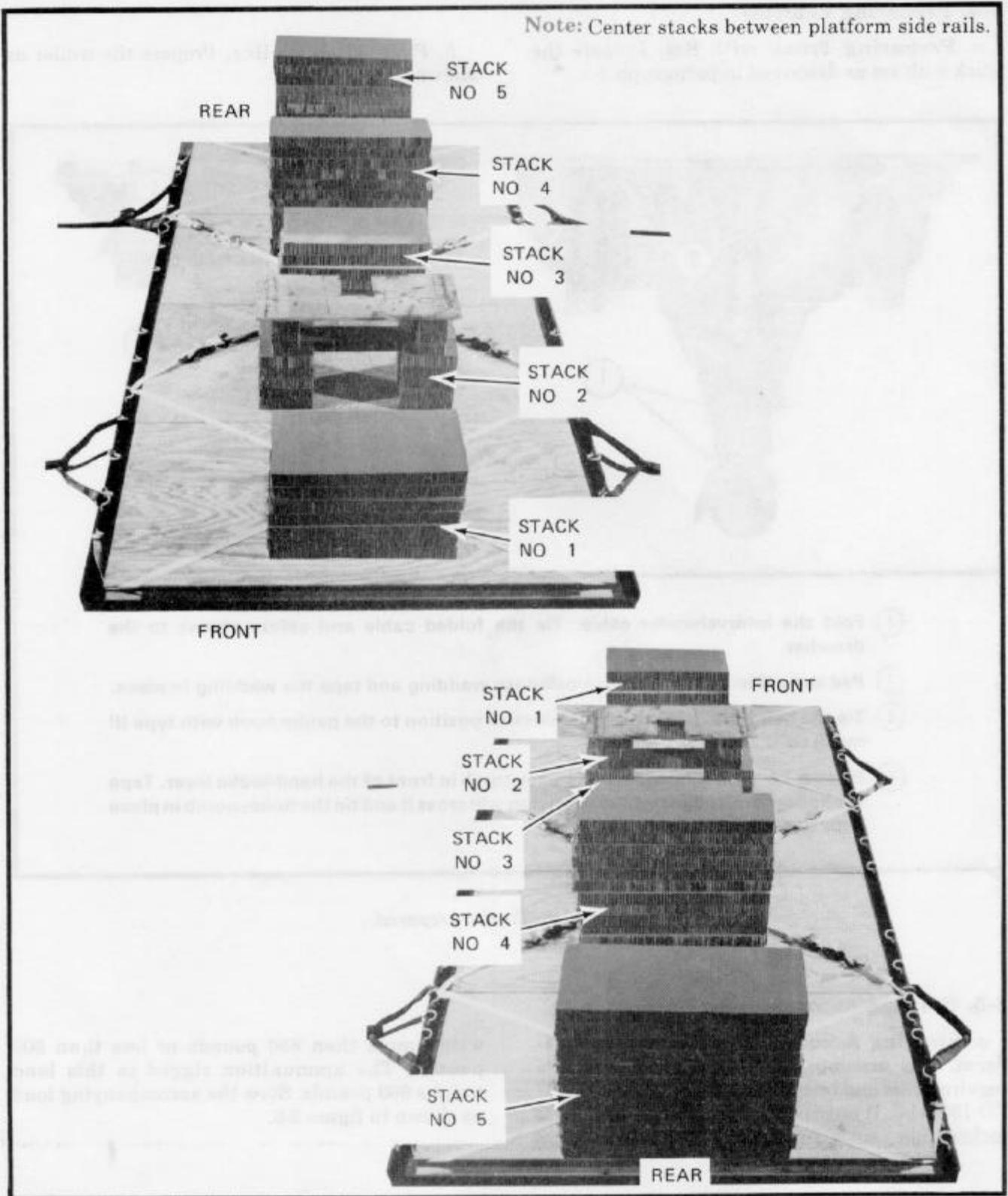
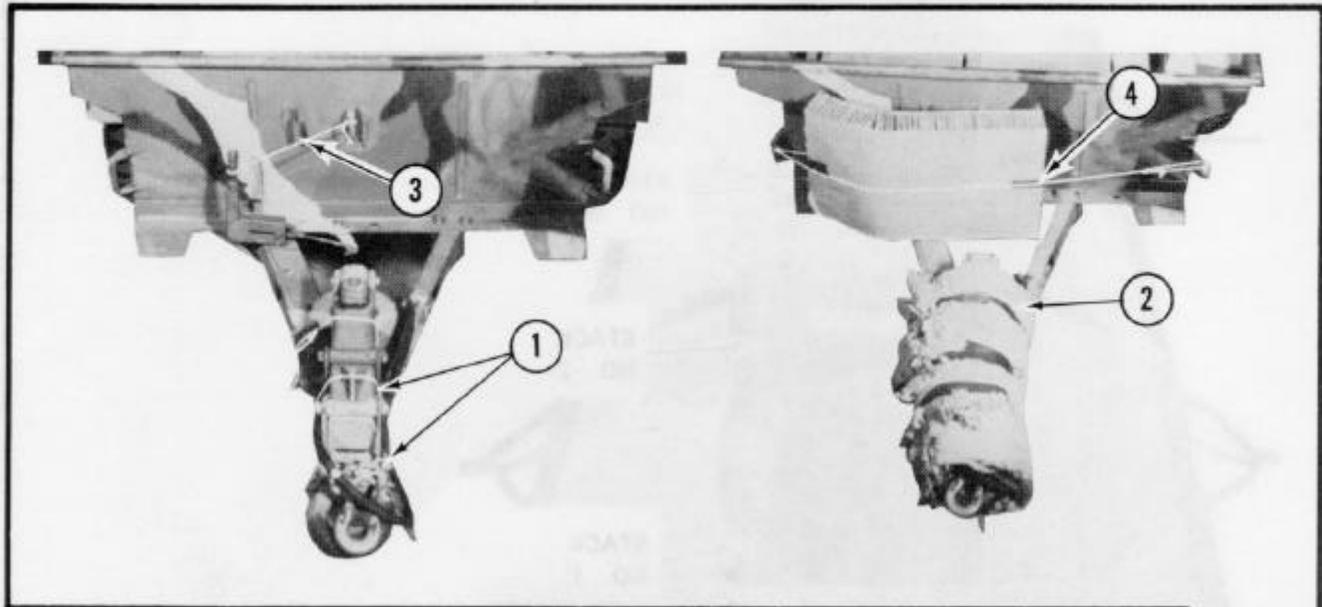


Figure 3-3. (continued).

3-4. Preparing Vehicles

a. Preparing Truck with Set. Prepare the truck with set as described in paragraph 2-5.

b. Preparing Trailer. Prepare the trailer as shown in figure 3-4.



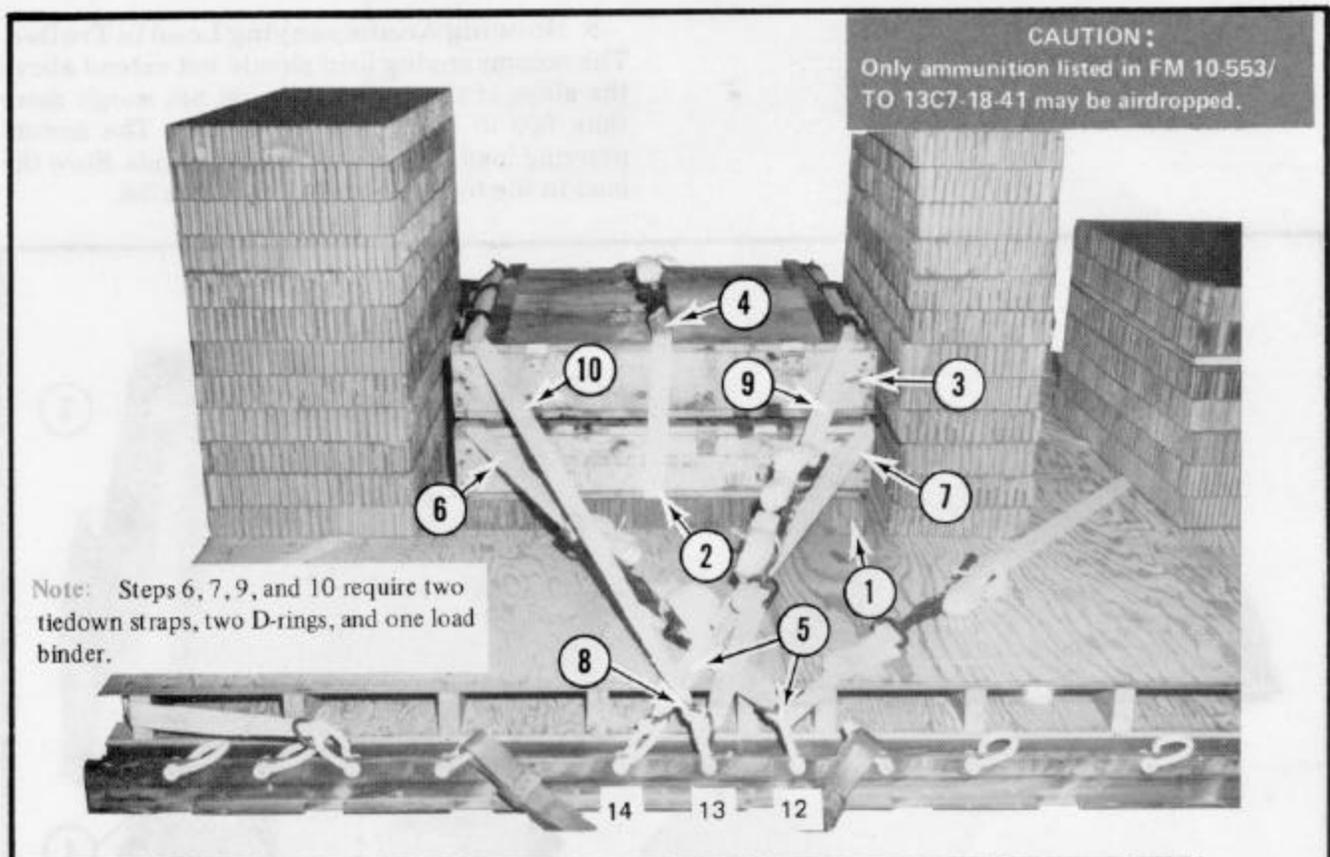
- ① Fold the intervehicular cable. Tie the folded cable and safety chains to the drawbar.
- ② Pad the cable and chains with cellulose wadding and tape the wadding in place.
- ③ Tie the hand-brake lever in the unlocked position to the paulin hook with type III nylon cord.
- ④ Place a 14- by 24-inch piece of honeycomb in front of the hand-brake lever. Tape the honeycomb edges where the nylon will cross it and tie the honeycomb in place with type III nylon cord.

Figure 3-4. Trailer prepared.

3-5. Stowing Accompanying Load

a. Stowing Accompanying Load on Platform. The accompanying load must meet the requirements and restrictions given in FM 10-500/TO 13C7-1-5. It may not be over 36 inches wide, 18 inches high, and 40 inches long. The load may not

weigh more than 690 pounds or less than 500 pounds. The ammunition rigged in this load weighs 660 pounds. Stow the accompanying load as shown in figure 3-5.



- ① Center a 36- by 36-inch piece of honeycomb between honeycomb stacks 4 and 5.
- ② Lay a 15-foot tiedown strap across the honeycomb.
- ③ Lay six boxes of ammunition on the honeycomb and tiedown strap.
- ④ Use the tiedown strap in step 2 with a D-ring and load binder to bind the ammunition boxes together.
- ⑤ Fit a tiedown strap on clevises 12, 12A, 14, and 14A. Pass the free end of a strap through the indicated clevis and through its D-ring. Pull the strap tight.
- ⑥ Pass the strap from clevis 12A around the rear of the bottom boxes and hook it to the strap from clevis 12 with two D-rings and a load binder.
- ⑦ Hook the straps from clevises 14 and 14A together around the front of the bottom boxes with two D-rings and a load binder.
- ⑧ Fit two tiedown straps on clevis 13 and two on clevis 13A as described in step 5.
- ⑨ Hook one strap from clevis 13 and one from 13A together around the front of the top boxes with two D-rings and a load binder.
- ⑩ Hook the remaining straps from clevises 13 and 13A together around the rear of the top boxes with two D-rings and a load binder.

Figure 3-5. Accompanying load stowed on platform.

b. Stowing Accompanying Load in Trailer.
The accompanying load should not extend above the sides of the trailer. It must not weigh more than 600 or less than 300 pounds. The accompanying load shown weighs 550 pounds. Stow the load in the trailer as shown in figure 3-6.

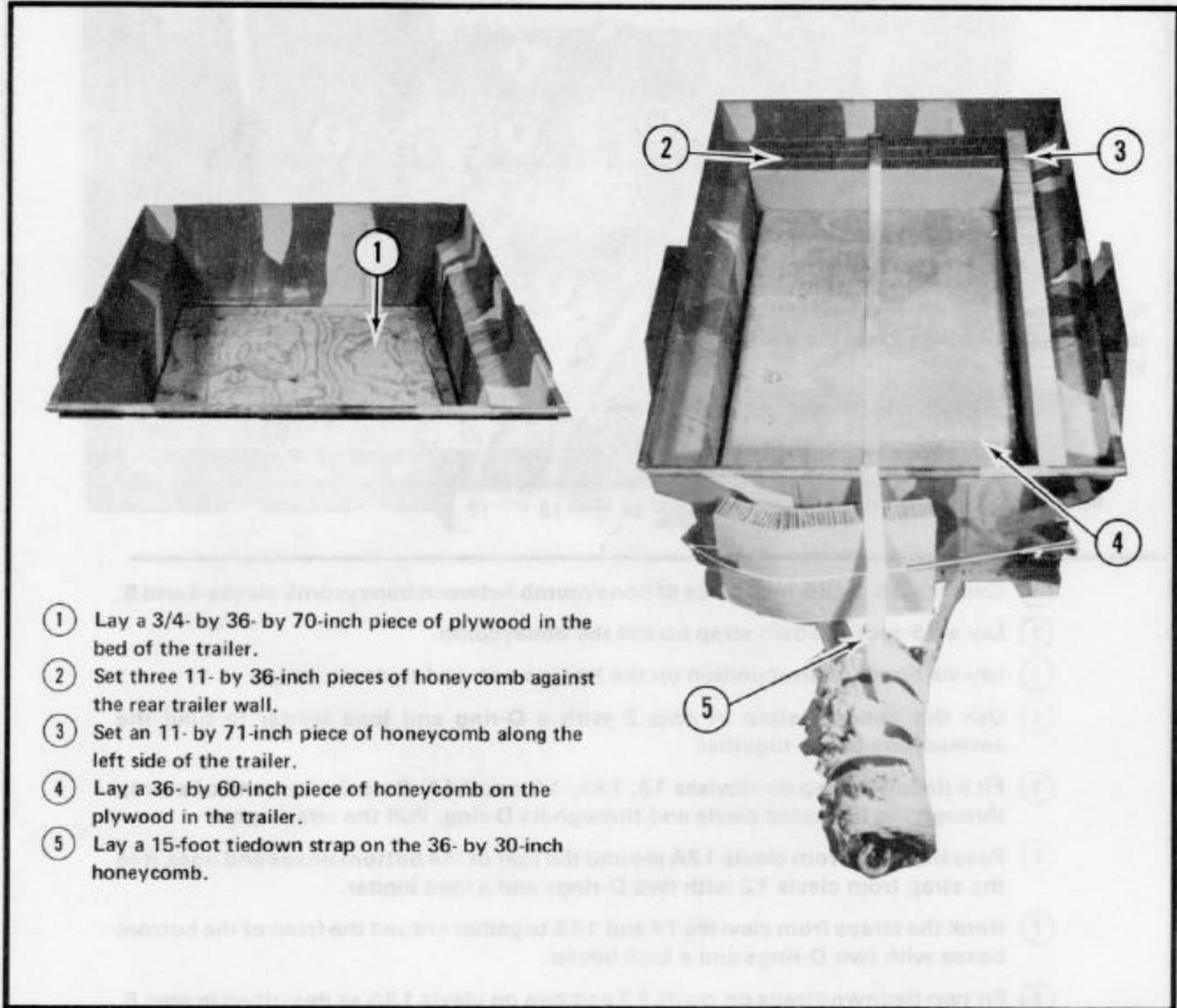


Figure 3-6. Accompanying load stowed in trailer

- ⑥ Set five boxes of ammunition on the tiedown strap.
- ⑦ Hook the ends of the tiedown strap together with one D-ring and a load binder.
- ⑧ If possible, force scrap honeycomb between the load and the front trailer wall. Lay a 36- by 60-inch piece of honeycomb on the load.
- ⑨ Lash the load in the trailer with two tiedown assemblies. Place them around the trailer body, one in front of and one to the rear of the spring brackets. Position the load binders on the side of the trailer.

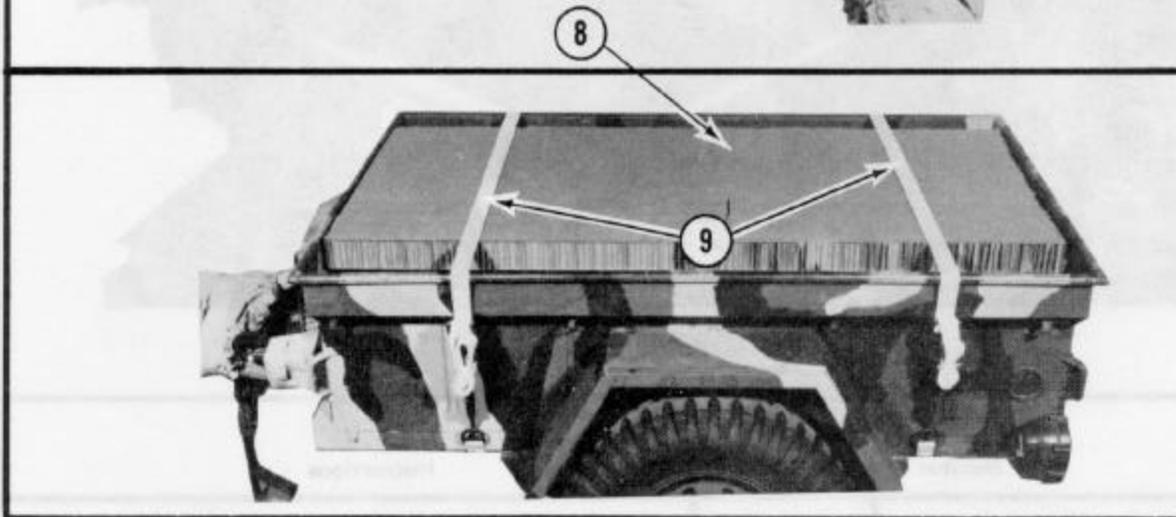
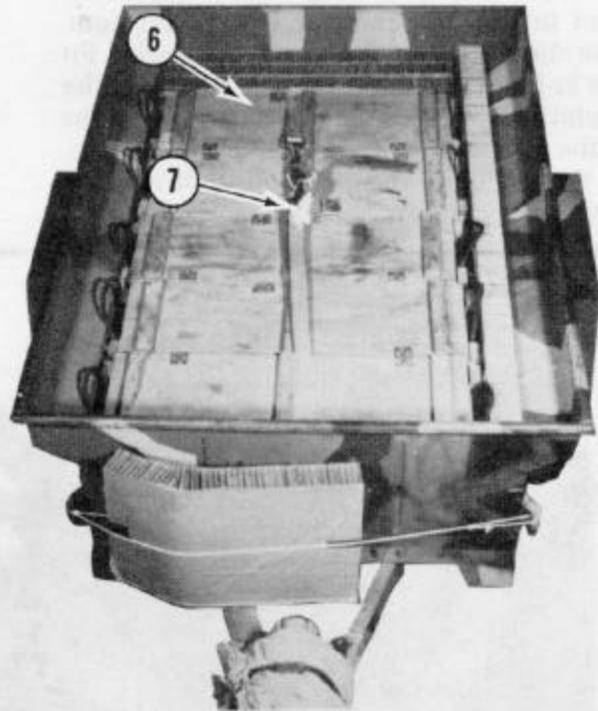


Figure 3-6. Accompanying load stowed in trailer (continued).

3-6. Setting Truck and Trailer on Platform

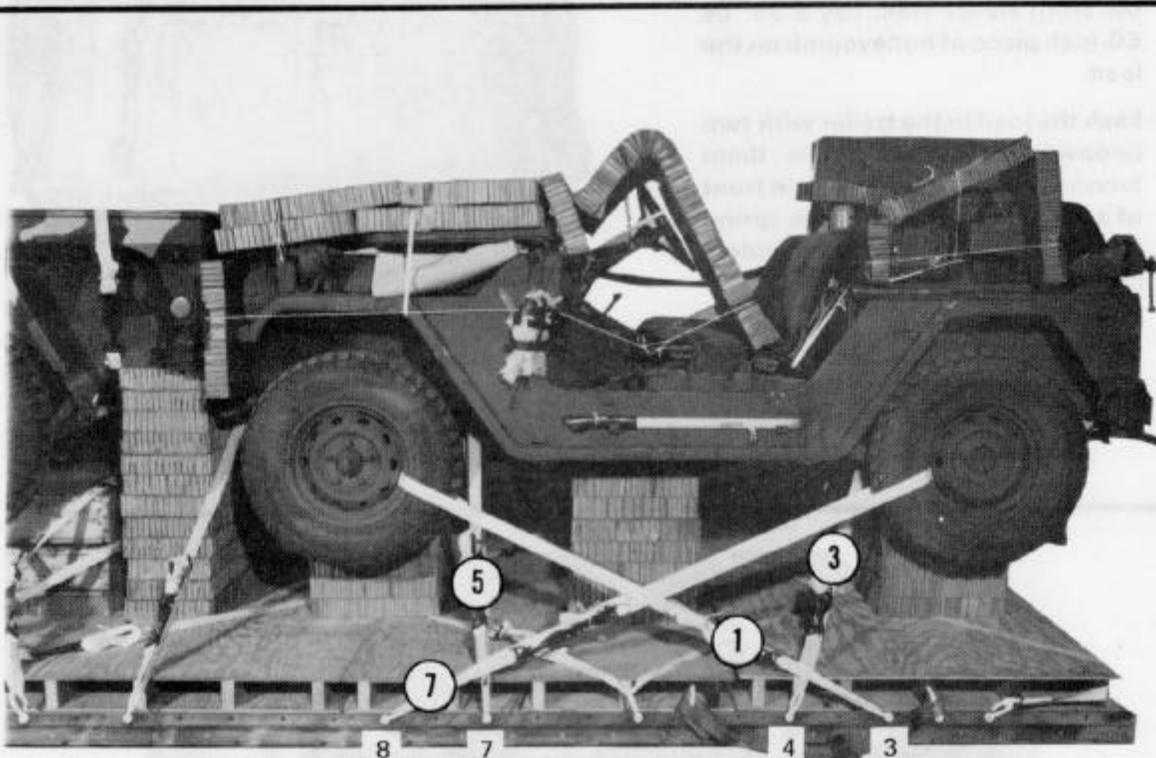
a. Truck. Bolt a 12-foot sling to each wheel suspension point with a small suspension clevis. Set the truck on the platform with the rear of the truck overhanging the front of the platform 14 inches. Remove the slings.

b. **Trailer.** Fit a 12-foot sling on the axle at each spring. Pass one end of the sling around the axle and through its end loop, and pull it tight. Pass the slings up over the rear of the trailer. Fit another 12-foot sling on the lunette. Set the trailer on the platform with the lunette overhanging the rear of the platform 33 inches. Remove the slings. Rotate the leg stand forward and tie it in place with type III nylon cord.

3-7. Lashing Load

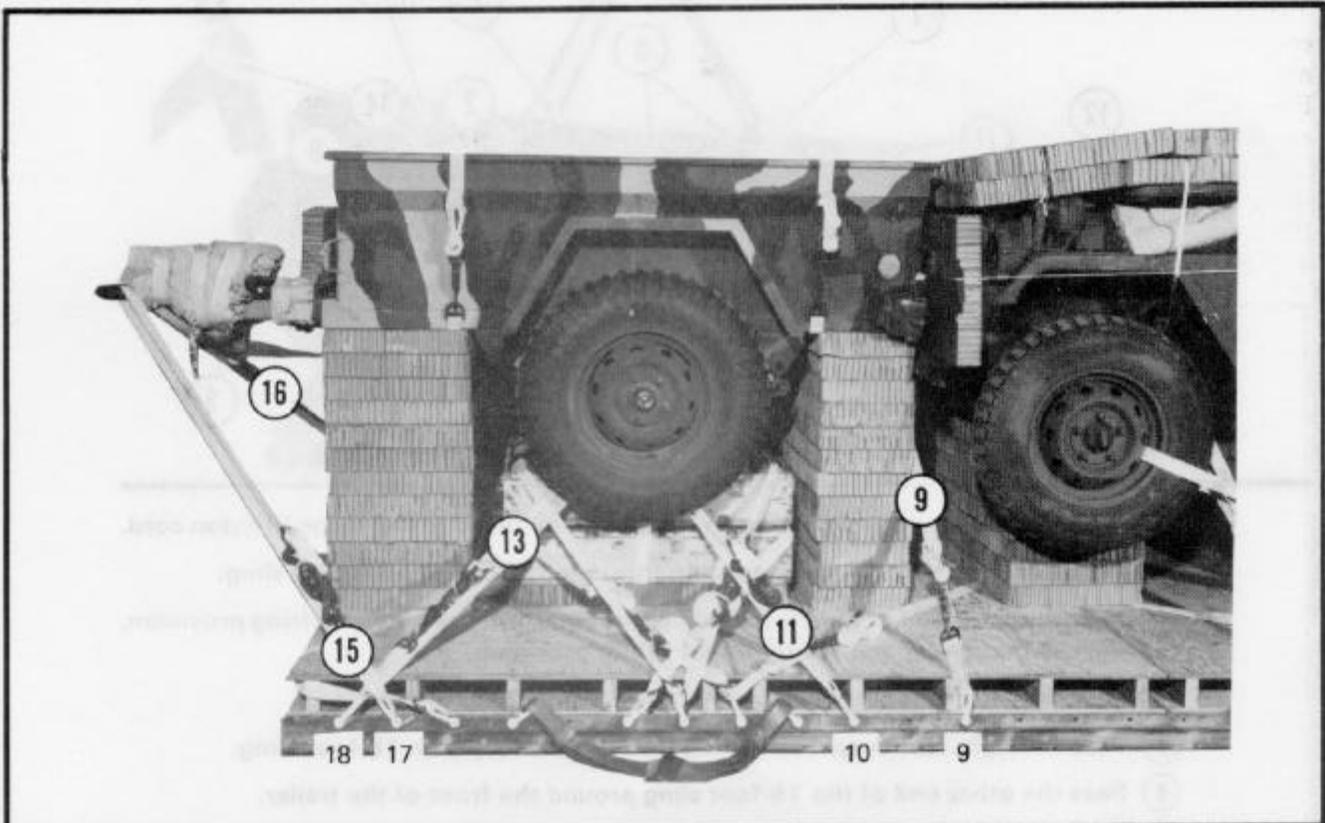
Lash the truck and trailer to the platform as shown in figures 3-7 and 3-8.

Note: Use cellulose wadding between the lashing and sharp edges.



Lashing Number	Tiedown Number	Instructions
1	3	Through front wheel
2	3A	Through rear wheel
3	4	Around inside suspension arm
4	4A	Around inside suspension arm
5	7	Around main frame
6	7A	Around main frame
7	8	Through rear wheel
8	8A	Through rear wheel

Figure 3-7. Truck lashed to platform.



Lashing Number	Tiedown Number	Instructions
9	9	Through right rear handle
10	9A	Through left rear handle
11	10	Through right front spring bracket
12	10A	Through left front spring bracket
13	17	Through lunette
14	17A	Through lunette
15	18	Through right rear spring bracket
16	18A	Through left rear spring bracket

Figure 3-8. Trailer lashed to platform.

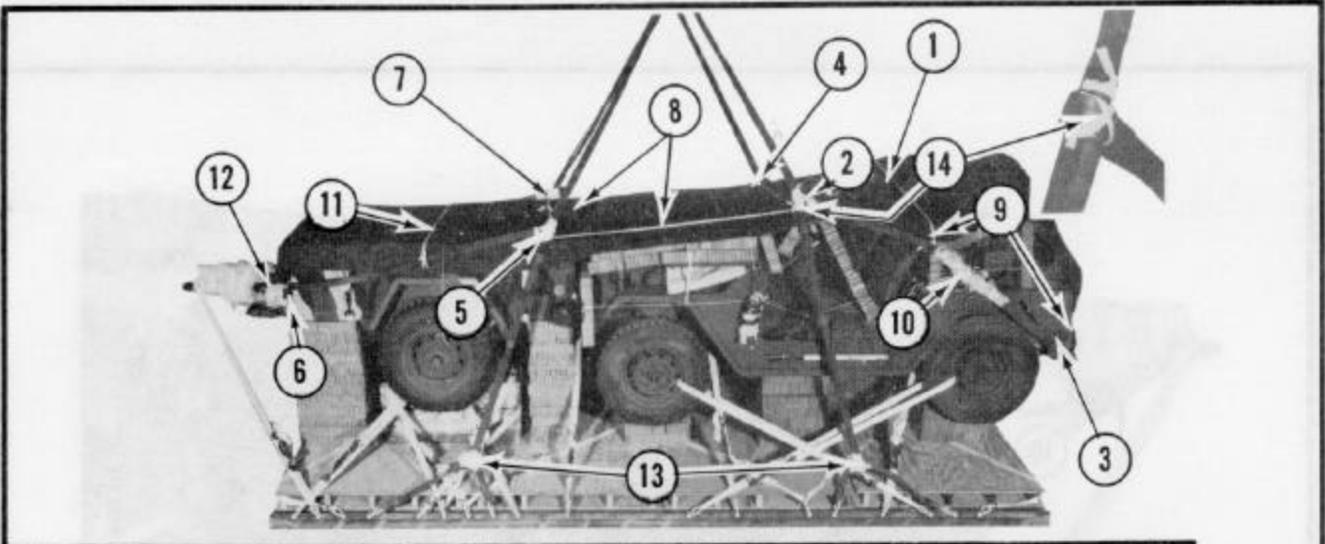
3-8. Covering Load

Cover the load as shown in figure 3-9.

3-9. Installing Antitumble Slings and Safetying Slings

Install a 20-foot (3-loop), type X, or 20-foot (2-loop),

type XXVI, nylon front antitumble sling. Install a 16-foot (3-loop), type X, or a 16-foot (2-loop), type XXVI, nylon rear antitumble sling. Install the slings, tie them in place, and safety them as shown in figure 3-9. Safety the suspension slings as shown in figure 3-9.

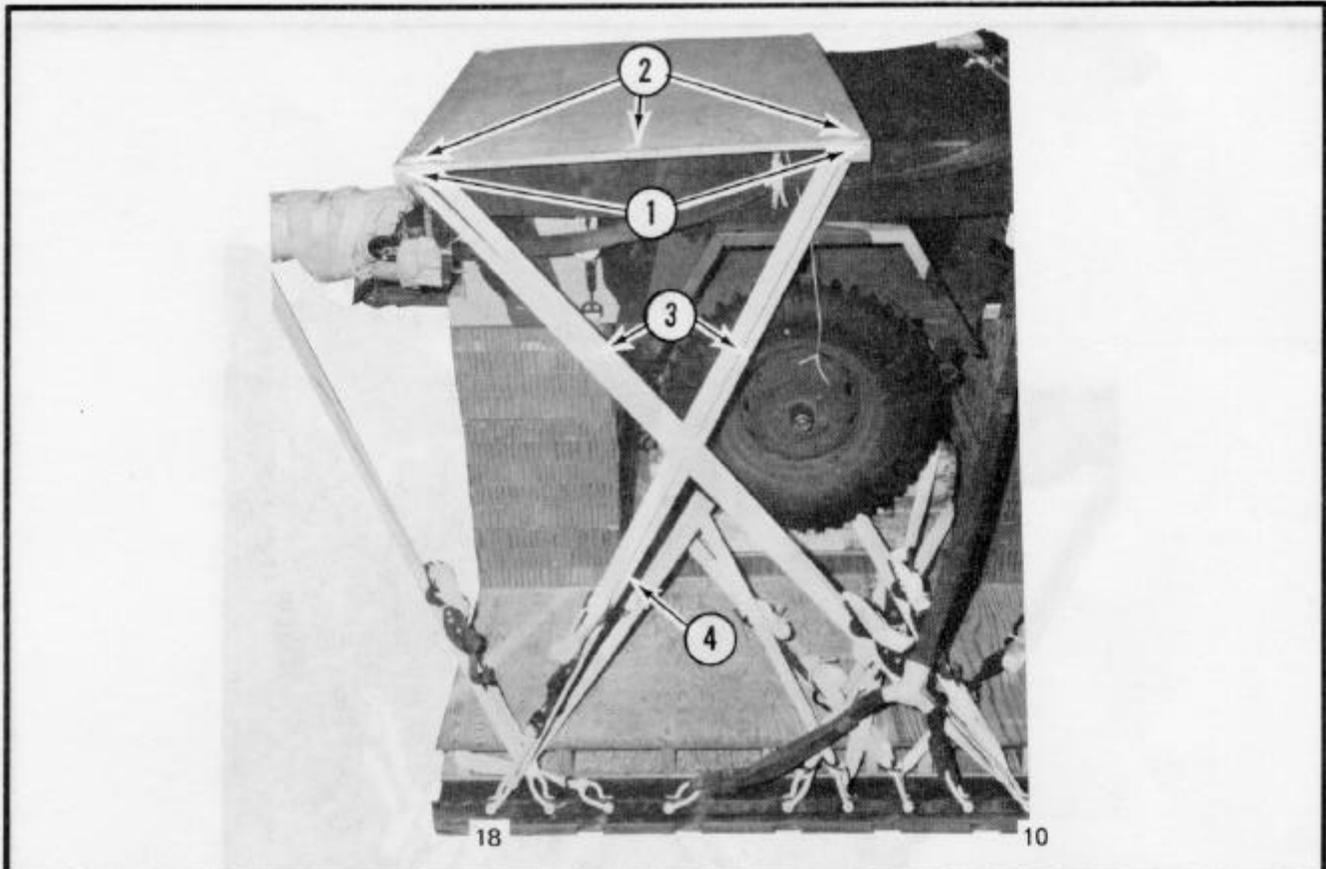


- ① Tie a 6- by 16-foot piece of cotton duck cloth on the load with type III nylon cord.
- ② Pass the right front suspension sling through the loop of a 20-foot sling.
- ③ Pass the other end of the 20-foot sling through the truck left rear lifting provision, the towing pintle, and the right rear lifting provision.
- ④ Pass the left front suspension sling through the 20-foot sling loop.
- ⑤ Pass the right rear suspension sling through the loop of a 16-foot sling.
- ⑥ Pass the other end of the 16-foot sling around the front of the trailer.
- ⑦ Pass the left rear suspension sling through the 16-foot sling loop.
- ⑧ Raise the suspension slings and center the antitumble slings. Make the deadman's safety tie below the antitumble sling loops. Make the tie as described in FM 10-500/TO 13C7-1-5.
- ⑨ Lay a double length of 1/2-inch tubular nylon across the truck. Tie each end to the 20-foot sling. Tie the 20-foot sling to each bumperette with 1/2-inch tubular nylon.
- ⑩ Pad the 20-foot sling with cellulose wadding where it may touch the generator and tape the wadding in place.
- ⑪ Lay a double length of 1/2-inch tubular nylon across the trailer. Tie each end to the 16-foot sling.
- ⑫ Tie the 16-foot sling to each side of the drawbar with 1/2-inch tubular nylon.
- ⑬ Tape all 3-foot slings to the suspension slings while in the raised position.
- ⑭ Tie each antitumble sling at the point where the suspension sling passes through it. Pass a length of 1/2-inch tubular nylon between the plies of the suspension sling below the antitumble sling. Pass both free ends of the tie behind the suspension sling, then back to the front of the sling. Cross the free ends over the antitumble sling, forming an X on the sling. Pass the free ends around the suspension sling above the antitumble sling, and tie them on top of the sling with a surgeon's knot and an overhand knot in the free ends. Tape the tie and antitumble sling.

Figure 3-9. Load cover tied to load, antitumble slings installed, and suspension slings safetied.

3-10. Stowing Cargo Parachute

a. Build a parachute stowage platform and lash it in place as shown in figure 3-10.



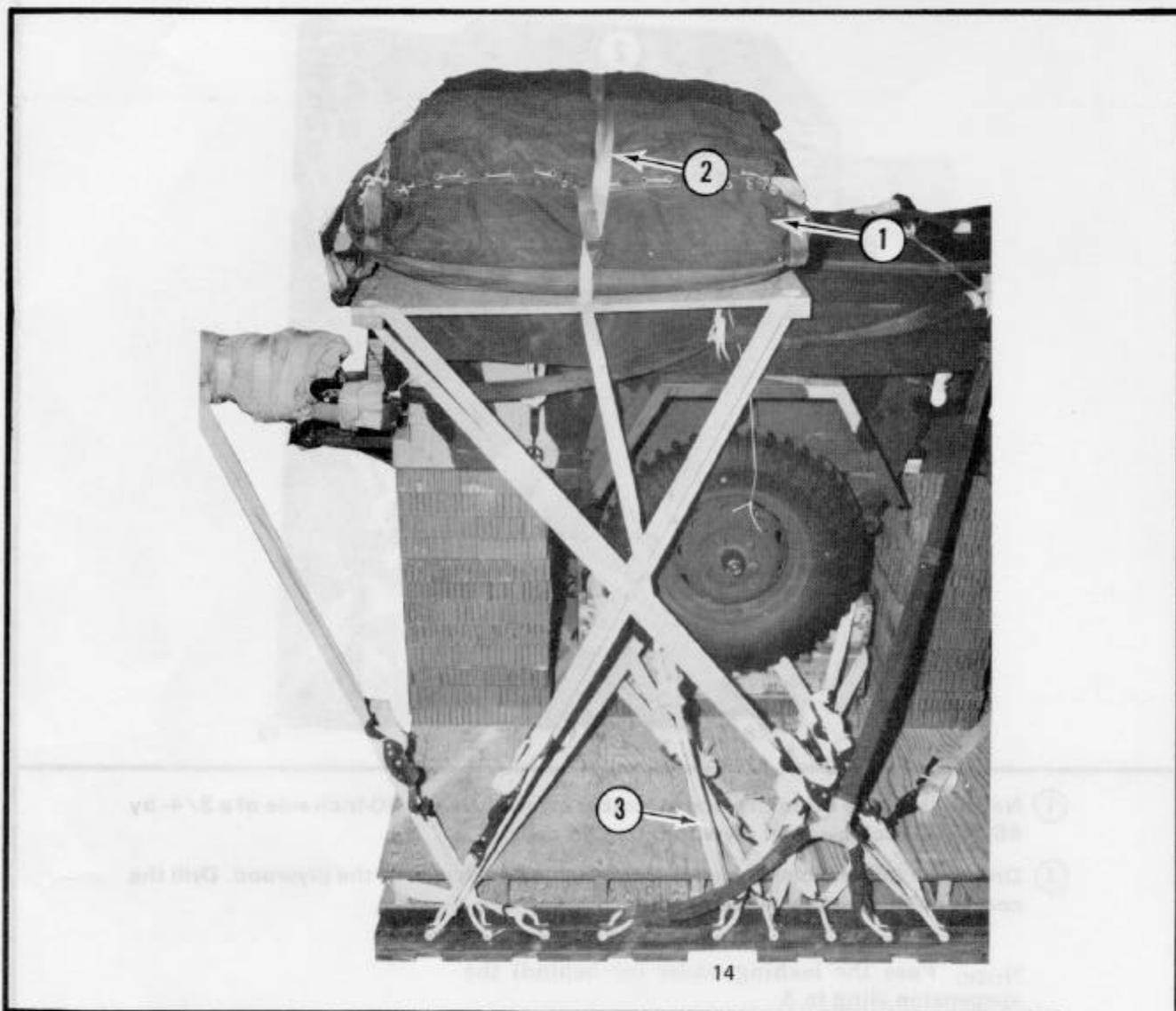
- ① Nail a 2- by 4- by 60-inch piece of lumber even with each 60-inch side of a 3/4- by 48- by 60-inch piece of plywood. Use 8d nails.
- ② Drill three 2-inch holes 3 inches from each 48-inch side of the plywood. Drill the corner holes through the lumber.

Note: Pass the lashing under (or behind) the suspension sling in 3.

- ③ Lash the stowage platform with a tiedown assembly from the right rear hole to clevis 10 and one from the left rear hole to clevis 10A.
- ④ Install a tiedown assembly from the right front hole to clevis 18 and one from the left front hole to clevis 18A.

Figure 3-10. Parachute stowage platform secured in place.

b. Prepare two G-11A or two G-11B cargo parachutes and stow them on the stowage platform as outlined in FM 10-500/TO 13C7-1-5 and as shown in figure 3-11.



- ① Lay two G-11A or G-11B cargo parachutes on the stowage platform and cluster them as described in FM 10-500/TO 13C7-1-5.
- ② Install a 10-yard length of type VIII nylon as a parachute restraint strap as described in FM 10-500/TO 13C7-1-5.
- ③ Tie the ends of the parachute restraint strap to clevises 14 and 14A.

Figure 3-11. Cargo parachutes stowed.

3-11. Installing Extraction System

This load may be dropped, using either the PEFTC or the SL/CS extraction system.

a. **PEFTC.** Install the components of the PEFTC as described in FM 10-500/TO 13C7-1-5 and as shown in figure 3-12

b. **SL/CS.** Use a 16-foot (3-loop), type X, or a

16-foot (2-loop), type XXVI, nylon deployment line and a 60-inch connector strap and install the components of the SL/CS extraction system. Bolt a 9-foot (3-loop), type X, nylon sling to the rear hole in each rail for the attaching point as outlined in FM 10-500/TO 13C7-1-5.

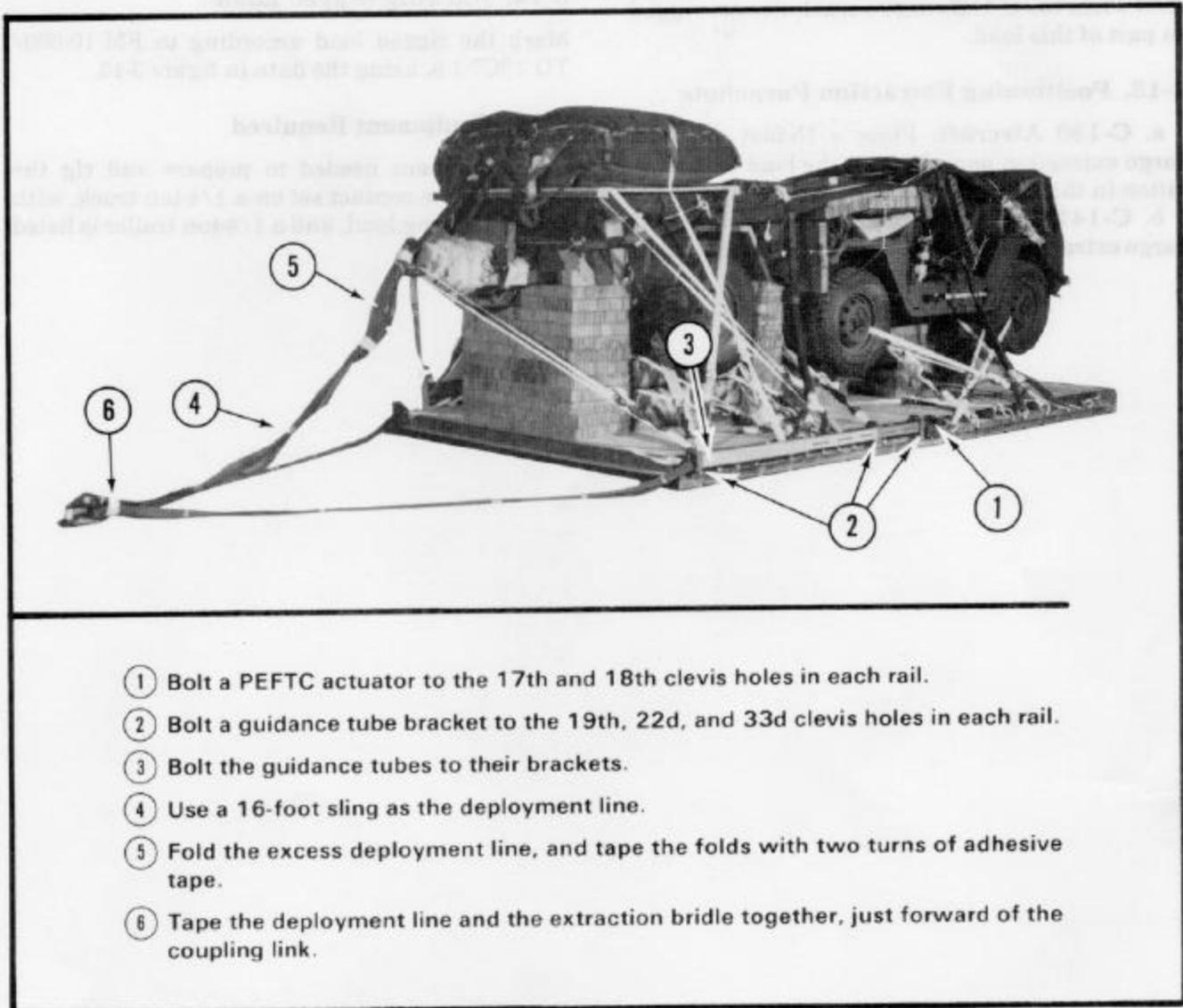


Figure 3-12. PEFTC installed.

3-12. Installing Release System

Install and safety an M-1 cargo parachute release as outlined in FM 10-500/TO 13C7-1-5. If the M-1 release is not available, prepare, attach, and safety two 5,000-pound-capacity cargo parachute releases as described in FM 10-500/TO 13C7-1-5.

The 5,000-pound release MUST NOT be used when the G-11B cargo parachutes are rigged as part of this load.

3-13. Positioning Extraction Parachute

a. C-130 Aircraft. Place a 15-foot unreefed cargo extraction parachute on the load for installation in the aircraft.

b. C-141 Aircraft. Place a 15-foot unreefed cargo extraction parachute with a 36-inch adapter

web and a 160-foot continuous (1-loop), type XXVI, nylon extraction line on the load for installation in the aircraft.

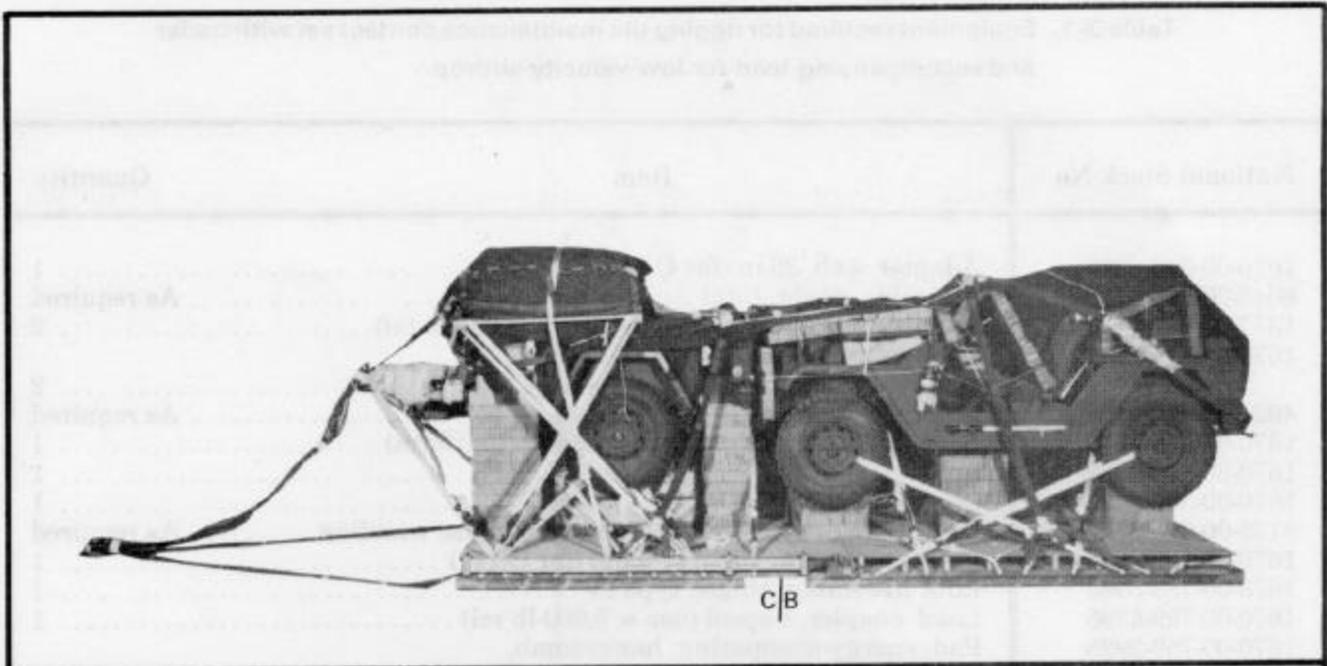
The extraction line MUST BE a continuous 160-foot line.

3-14. Marking Rigged Load

Mark the rigged load according to FM 10-500/TO 13C7-1-5, using the data in figure 3-13.

3-15. Equipment Required

The equipment needed to prepare and rig the maintenance contact set on a 1/4-ton truck, with accompanying load, and a 1/4-ton trailer is listed in table 3-1.



RIGGED LOAD DATA

Weight	7,450 pounds
Width	108 inches
Height	95 inches
Length	240 inches
Overhang: Front	14 inches
Rear	34 inches
Center of Balance (CB) (from front edge of platform)	114 inches
Extraction System	PEFTC

Figure 3-13. Maintenance contact set rigged with 1/4-ton trailer and accompanying load.

Table 3-1. Equipment required for rigging the maintenance contact set with trailer and accompanying load for low-velocity airdrop.

National Stock No	Item	Quantity
1670-00-040-8215	Adapter web, 36-in (for C-141)	1
8040-00-273-8713	Adhesive, paste, 1 gal	As required
1377-00-958-1048	Cartridge, time-delay. 20-sec (use w 5,000-lb rel)	2
1670-00-090-5354	Clevis assembly, suspension, large	
	(Add one ea w 5,000-lb release)	2
4020-00-240-2146	Cord, nylon, type III, 550-lb	As required
1670-00-168-6068	*Coupling, extraction force transfer (platform)	1
1670-00-360-0328	Cover, clevis	1
1670-00-360-0329	Cover, link	1
8135-00-664-6958	Cushioning material, packaging, cellulose wadding	As required
1670-01-107-7652	Line, extraction, 160-ft (1-loop) (for C-141)	1
1670-00-783-5988	Link assembly, single, type IV	1
1670-00-799-8596	Load coupler, 8-spool (use w 5,000-lb rel)	1
1670-00-753-3928	Pad, energy-dissipating, honeycomb,	
	3- by 36- by 96-in:	16 sheets
	6- by 6-in	(2)
	6- by 12-in	(4)
	6- by 18-in	(6)
	6- by 44-in	(1)
	9- by 18-in	(1)
	10- by 33-in	(3)
	10- by 71-in	(1)
	12- by 18-in	(8)
	12- by 42-in	(12)
	12- by 61-in	(1)
	14- by 20-in	(1)
	14- by 24-in	(1)
	18- by 18-in	(1)
	18- by 22-in	(1)
	18- by 36-in	(14)
	18- by 42-in	(12)
	18- by 54-in	(1)
	18- by 61-in	(2)
	24- by 61-in	(2)
	36- by 36-in	(2)
	36- by 47-in	(1)
	36- by 63-in	(1)
	36- by 71-in	(2)
1670-00-269-1107	Parachute, cargo, 100-ft, G-11A	2
	or	
1670-01-016-7841	Parachute, cargo, G-11B	2
1670-00-052-1548	Parachute, cargo extraction, 15-ft	
	(See note at end of table.)	1
1670-00-893-1631	Platform, airdrop, modular type II, 16-ft:	
	Clevis, load tiedown	(36)

National Stock No	Item	Quantity
1670-00-937-0271	Tiedown assembly, 15-ft, (Dacron)	37
	Webbing:	
8305-00-268-2411	Cotton, 80-lb	As required
8305-00-082-5752	Nylon, tubular, 1/2-in	As required
8305-00-263-3591	Nylon, type VIII	As required
The following items are required for the S1-C8 extraction system.		
1670-00-090-5354	Clevis assembly, suspension, large	1
1670-00-893-1631	Clevis, load tiedown	2
1670-00-783-5988	Link assembly, type IV	1
1670-00-753-3790	Sling, cargo, airdrop, 9-ft (3-loop)	2
1670-00-998-0117	Static line, cargo parachute, breakaway type with release knife and clevis	2
1670-00-738-5878	Strap, connector, 60-in	1

1. C-130. The unreefed 15-foot cargo extraction parachute is used on loads rigged for drop from a C-130 aircraft.
2. C-141. The unreefed 15-foot cargo extraction parachute is used on loads rigged for drop from the

C-141 aircraft. In addition, the parachute needs a 36-inch adapter web and a continuous 160-foot (1-loop), type XXVI, nylon webbing extraction line. Do not use shorter lines to form the 160-foot line.

National Stock No	Item	Quantity
1670-00-937-0271	Tiedown assembly, 15-ft, (Dacron)	37
8305-00-268-2411	Webbing:	
8305-00-082-5752	Cotton, 80-lb	As required
8305-00-263-3591	Nylon, tubular, 1/2-in	As required
	Nylon, type VIII	As required
	C-130 and C-141 aircraft.	
1670-00-090-5354	Clevis assembly, suspension, large	1
1670-00-893-1631	Clevis, load tiedown	2
1670-00-783-5988	Link assembly, type IV	1
1670-00-753-3790	Sling, cargo, airdrop, 9-ft (3-loop).....	2
1670-00-998-0117	Static line, cargo parachute, breakaway type	
	with release knife and clevis	2
1670-00-738-5878	Strap, connector, 60-in	1

1. **C-130.** The unreefed 15-foot cargo extraction parachute is used on loads rigged for drop from a C-130 aircraft.

2. **C-141.** The unreefed 15-foot cargo extraction parachute is used on loads rigged for drop from the

C-141 aircraft. In addition, the parachute needs a 36-inch adapter web and a continuous 160-foot (1-loop), type XXVI, nylon webbing extraction line. Do not use shorter lines to form the 160-foot line.

**APPENDIX A
REFERENCES**

AFR 71-4/TM 38-250	Packaging and Materials Handling: Preparation of Hazardous Materials for Military Air Shipment
FM 10-500/TO 13C7-1-5	Airdrop of Supplies and Equipment: General Information for Rigging Airdrop Platforms
FM 10-553/TO 13C7-18-41	Airdrop of Supplies and Equipment: Rigging Ammunition
TM 10-1670-208-20&P/ TO 13C3-4-12	Organizational Maintenance Manual (Including Repair Parts and Special Tools List) for Platforms, Type II Modular and LAPES/Airdrop Modular

GLOSSARY

AD	airdrop
ACB	attitude control bar
d	penny
diam	diameter
EFTC	extraction force transfer coupling
ft	feet/foot
gal	gallon
in	inch
LAPE	low-altitude parachute-extraction
lb	pound
NSN	national stock number
rel	release
SL/CS	static line/connector strap

FM 10-549/TO 13C7-51-31

31 MAY 1983

By Order of the Secretaries of the Army and the Air Force:

E. C. MEYER
General, United States Army
Chief of Staff

Official:

ROBERT M. JOYCE
Major General, United States Army
The Adjutant General

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