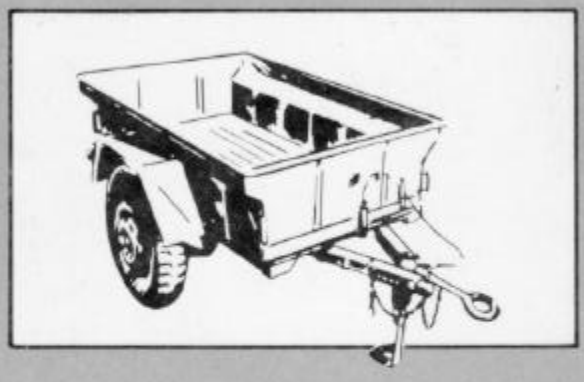
ARMY FM 10-543
AIR FORCE TO 13C7-2-1011

AIRDROP OF SUPPLIES AND EQUIPMENT:

RIGGING 1/4-TON TRUCK WITH 1/4-TON TRAILER AND COMMUNICATIONS EQUIPMENT AND TACTICAL DEFENSE ALERT RADAR SYSTEM (TDARS)



DEPARTMENTS OF THE ARMY AND THE AIR FORCE

C2, FM 10-543/TO 13C7-2-1011
*FM 10-543/TO 13C7-2-1011

FIELD MANUAL
NO 10-543
TECHNICAL ORDER
NO 13C7-2-1011

HEADQUARTERS
DEPARTMENTS OF THE ARMY
AND THE AIR FORCE
Washington, DC, 3 November 1983

AIRDROP OF SUPPLIES AND EQUIPMENT: RIGGING 1/4-TON TRUCK WITH 1/4-TON TRAILER AND COMMUNICATIONS EQUIPMENT AND TACTICAL DEFENSE ALERT RADAR SYSTEM (TDARS)

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DISTRIBUTION UNLIMITED

*This publication supersedes FM 10-543/TO 13C7-2-1011, 30 September 1981.

PREFACE

SCOPE

This manual shows and tells how to prepare and rig the M151, 1/4-ton truck and the M416, 1/4-ton trailer for low-velocity airdrop from the C-130 or the C-141 aircraft and for delivery by low-altitude parachute-extraction (LAPE) from the C-130 aircraft. The manual also covers procedures for rigging the truck and trailer with the mounted AN/VSC-2 radio set. Procedures for rigging the AN/MTC-10 telephone control office group or the AN/MGC-34 teletypewriter mounted in the truck and trailer are included for LAPE airdrop. In addition, procedures for rigging the tactical defense alert radar system (TDARS) with or without the M151, 1/4-ton truck and the M416, 1/4-ton trailer, and rigging the TDARS in the M1025 or M1026 armament carriers are included for low-velocity airdrop.

USER INFORMATION

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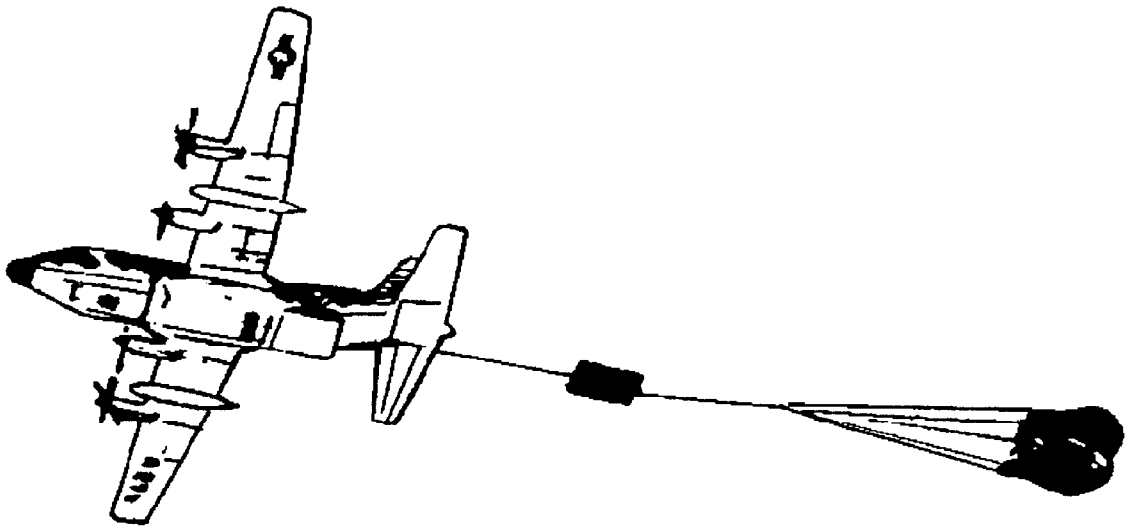


CHAPTER 1
INTRODUCTION

1-1. Description of Items

The unrigged data for the items covered in this manual are as described below.

a. Truck and Trailer for Low-Velocity Airdrop.

(1) The M151 truck weighs 2,400 pounds. It is 133 inches long and 64 inches wide. The height of the M151 is 71 inches (reducible to 60 inches).

(2) The M416 trailer weighs 570 pounds. It is 109 inches long, 61 inches wide, and 44 inches high.

(3) The accompanying load shown on the platform is ammunition. It must weigh not more than 690 pounds nor less than 500 pounds.

b. Truck and Trailer for LAPE Airdrop.

(1) The M151 truck is the same as in a(1) above.

(2) The M416 trailer is the same as in a(2) above.

c. Truck and Trailer with AN/VSC-2 Radio Set for Low-Velocity Airdrop.

(1) The M151 truck with radio set weighs 3,230 pounds. It is 133 inches long, 64 inches wide, and 71 inches high (reducible to 58 inches).

(2) The M416 trailer weighs 570 pounds. It is 109 inches long, 61 inches wide, and 44 inches high.

(3) The accompanying load is the same as in a(3) above.

d. Truck and Trailer with AN/VSC-2 Radio Set for LAPE Airdrop.

(1) The M151 truck is the same as in c(1) above.

(2) The M416 trailer is the same as in c(2) above.

(3) The accompanying load is the same as in a(3) above.

e. Truck and Trailer with AN/MGC-34 Teletypewriter for LAPE Airdrop.

(1) The M151 truck weighs 2,410 pounds. It is 133 inches long and 64 inches wide. The height of the M151 is 71 inches (reducible to 52 inches).

(2) The M416 trailer with teletypewriter weighs 1,660 pounds. It is 111 inches long and 59 inches wide. The height of the M416 is 80 inches (reducible to 68 inches).

f. Truck and Trailer with AN/MTC-10 Telephone Control Office Group for LAPE Airdrop.

(1) The M151 truck weighs 2,690 pounds. It is 133 inches long and 64 inches wide. The height of the M151 is 71 inches (reducible to 52 inches).

(2) The M416 trailer with AN/MTC-10 weighs 1,755 pounds. It is 110 inches long, 61 inches wide, and 80 inches high.

g. Truck and Trailer with TDARS for Low-Velocity Airdrop.

(1) The M151 truck is the same as in a(1) above.

(2) The M416 trailer with TDARS is the same as in a(2) above.

(3) The TDARS components weigh 1,710 pounds.

h. TDARS Rigged in a Double A-22 Cargo Bag. TDARS components weigh 1,710 pounds.

i. TDARS with Stinger Missiles in a Double A-22 Cargo Bag. TDARS components with six stinger missiles weigh 1,177 pounds.

j. M1025 and M1026 Armament Carriers with TDARS for Low-Velocity Airdrop.

(1) The M1025 and M1026 Armament Carriers are the same as in Chapter 1 of FM 10-517/TO 13C7-1-111.

(2) The TDARS components weigh 735 pounds. One box of 105-mm ammunition or its equivalent, weighing 110 pounds, is added to meet weight requirements.

1-2. Special Considerations

Special considerations for this manual are given below.

a. This manual covers the information necessary for rigging the M151, 1/4-ton truck and the M416, 1/4-ton trailer together for low-velocity airdrop. Separate low-velocity airdrop rigging procedures for the 1/4-ton trailer with the AN/VSC-2 can be found in FM 10-510/TO 13C7-2-451. Separate procedures for rigging the 1/4-ton trailer with either the AN/MGC-34 or the AN/MTC-10 can be found in FM 10-518/TO 13C7-3-371.

b. Loads covered in this manual may include hazardous material as defined in AFR 71-4/TM 38-250. If hazardous material is included, it must be packed, marked, and labeled as required by AFR 71-4/TM 38-250.

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

CAUTION

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

Section II

RIGGING TDARS IN A DOUBLE A-22 CARGO BAG

3-17. Description of Load

The TDARS is rigged in a double A-22 cargo bag for low-velocity airdrop. The TDARS load consists of two 5-gallon cans of fuel, two 5-gallon cans of water, a 1.5-kilowatt DC generator, three cases of MREs, two cases of 5.56-millimeter SAW, and three cases of 5.56-millimeter M-16 ammunition. Also included are four 12-volt batteries; camouflage poles and nets; a transceiver and a display container; a quadropod container; and a screen container. This load can be airdropped from a C-130 or a C-141 aircraft.

3-18. Preparing Skid Board

Cut a 3/4- by 48- by 96-inch piece of plywood as the skid board. Cut two pieces of 2- by 6- by 85-inch lumber and two pieces of 2- by 6- by 48-inch lumber as the supports. Prepare the skid board according to FM 10-501/TO 13C7-1-11 and as shown in figures 3-8 and 3-9.

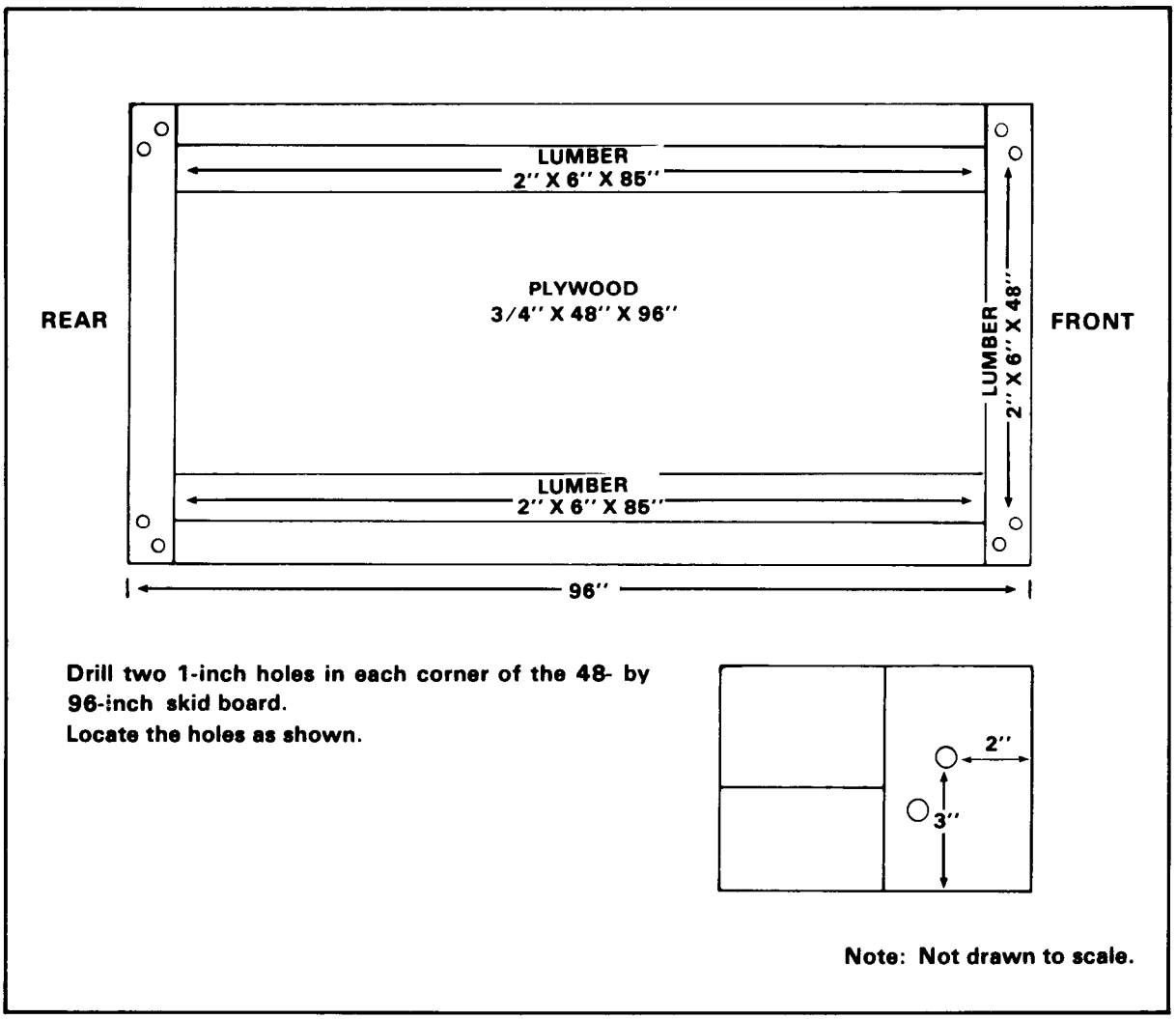
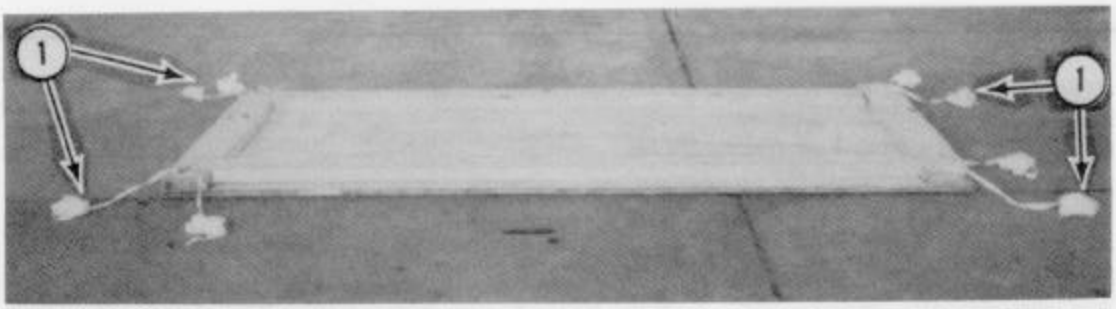


Figure 3-8. Construction details for skid board.



(1) Pass a 15-foot length of 1/2-inch tubular nylon webbing through each set of 1-inch holes.

Figure 3-9. Skid board prepared.

3-19. Preparing and Positioning Honeycomb

Place a 46- by 96-inch layer of honeycomb on top of the skid as shown in figure 3-10.

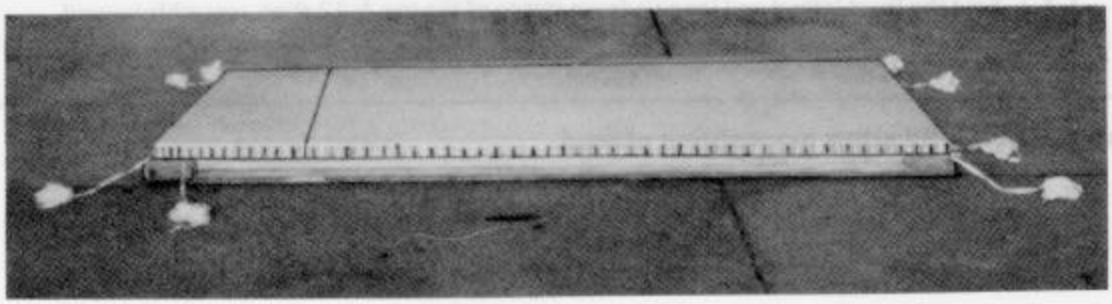
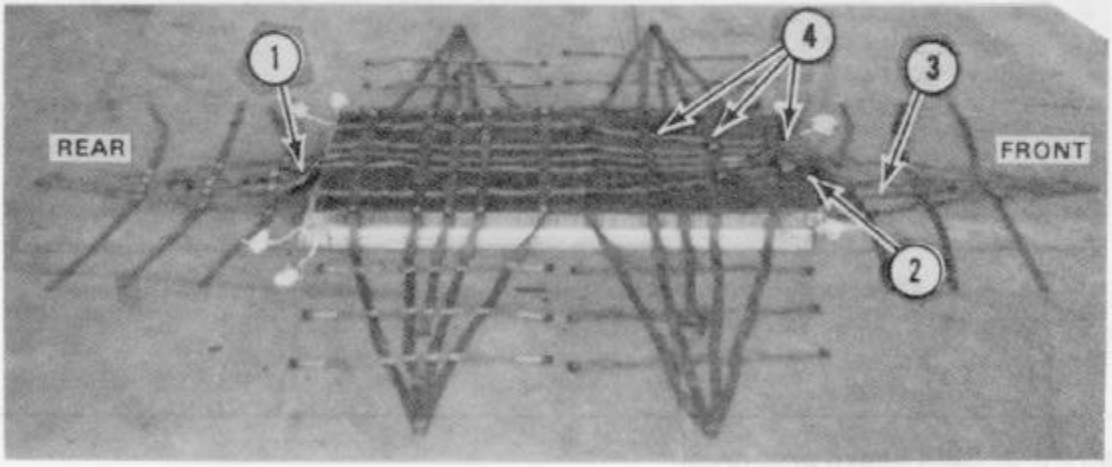


Figure 3-10. Honeycomb placed.

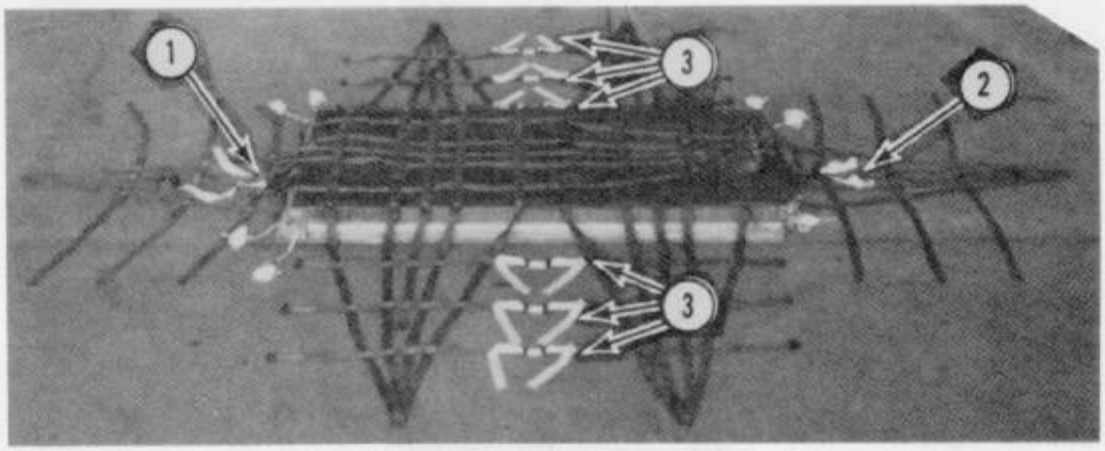
3-20. Positioning and Connecting Two A-22 Sling Assemblies

Position two A-22 sling assemblies on top of the honeycomb as shown in figures 3-11 and 3-12 and according to FM 10-501/ TO 13C7-1-11.



1. Place the bottom A-22 sling assembly on the front end of the platform with the support web D-ring placed over the rear end of the platform.
2. Fold the rear lateral and long straps inward on top of the sling assembly.
3. Place the top A-22 sling assembly on the rear of the platform with the support web D-ring hanging over the front edge of the platform. Make the sling assemblies parallel.
4. Fold the front lateral and long tiedown straps of the top A-22 sling assembly inward.

Figure 3-11. A-22 sling assemblies placed.



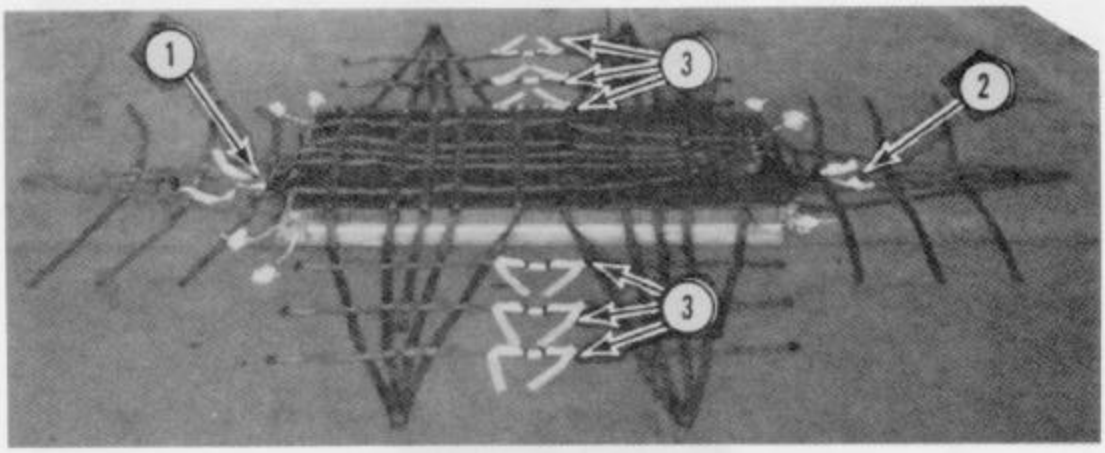
(1) Pass a length of type VIII nylon webbing through the bottom support web D-ring and around the webbing of the top sling assembly. Tie the ends of the webbing together.

Note: Do not tighten the webbing ends in steps 1, 2, and 3 at this time. Tighten them later when the sling assemblies are closed.

(2) Pass a length of type VIII nylon webbing through the top support web D-ring and around the webbing of the bottom assembly. Tie the ends of the webbing together.

(3) Pass a length of type VIII nylon webbing through each pair of inside friction adapters.

Figure 3-12. Bottom and top webbing D-rings secured.



(1) Pass a length of type VIII nylon webbing through the bottom support web D-ring and around the webbing of the top sling assembly. Tie the ends of the webbing together.

Note: Do not tighten the webbing ends in steps 1, 2, and 3 at this time. Tighten them later when the sling assemblies are closed.

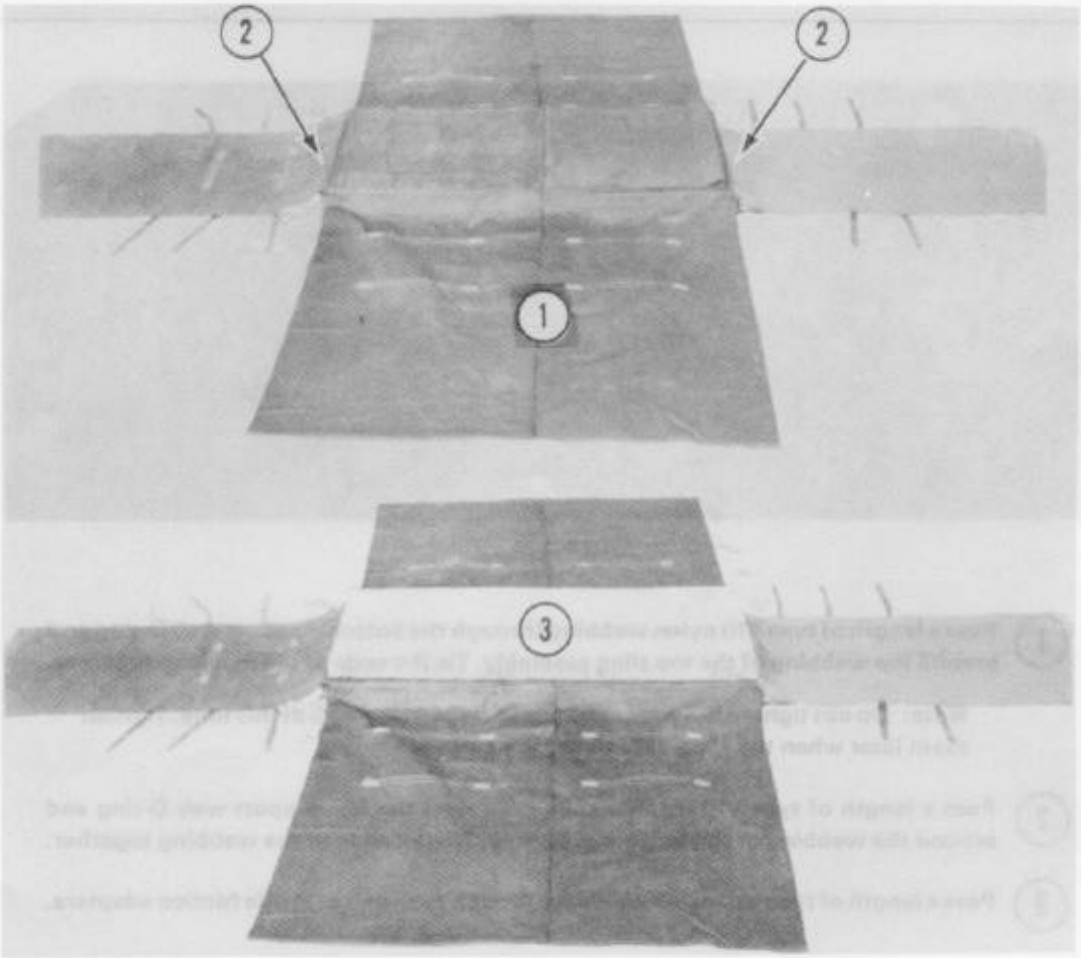
(2) Pass a length of type VIII nylon webbing through the top support web D-ring and around the webbing of the bottom assembly. Tie the ends of the webbing together.

(3) Pass a length of type VIII nylon webbing through each pair of inside friction adapters.

Figure 3-12. Bottom and top webbing D-rings secured.

3-21. Positioning A-22 Cargo Bag Covers and Honeycomb

Position the A-22 cargo bag covers and the honeycomb according to figure 3-13 and FM 10-501/TO 13C7-1-11.

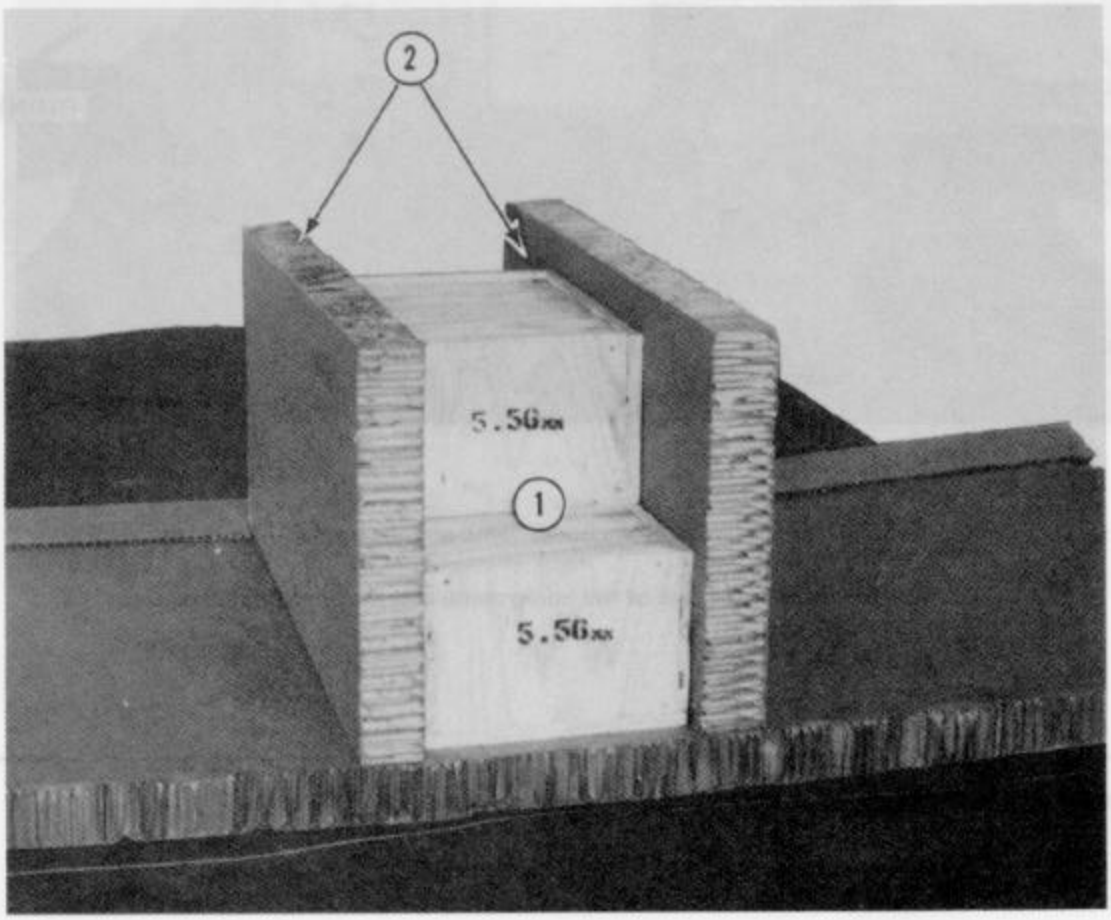


1. Place two A-22 cargo bag covers on the platform.
2. Fold the front end flap toward the center of the platform so that the fold is even with the front of the platform. Fold the rear end flap toward the center of the platform so that the fold is even with the rear of the platform.
3. Place a 48- by 96-inch layer of honeycomb in the center of the cargo bags.

Figure 3-13. Cargo bag covers and honeycomb placed.

3-22. Preparing and Positioning Load

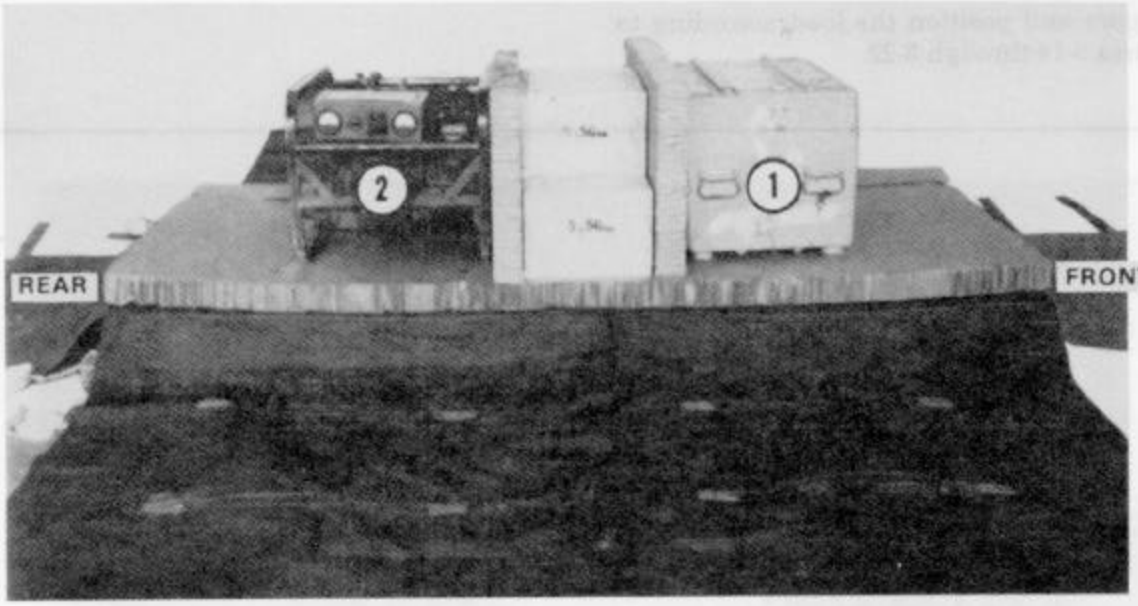
Prepare and position the load according to figures 3-14 through 3-22.



(1) Place two ammunition boxes side by side in the center of the honeycomb. Center another ammunition box on top of the other two ammunition boxes.

(2) Place a piece of 19- by 36-inch honeycomb at the front and rear of the ammunition boxes.

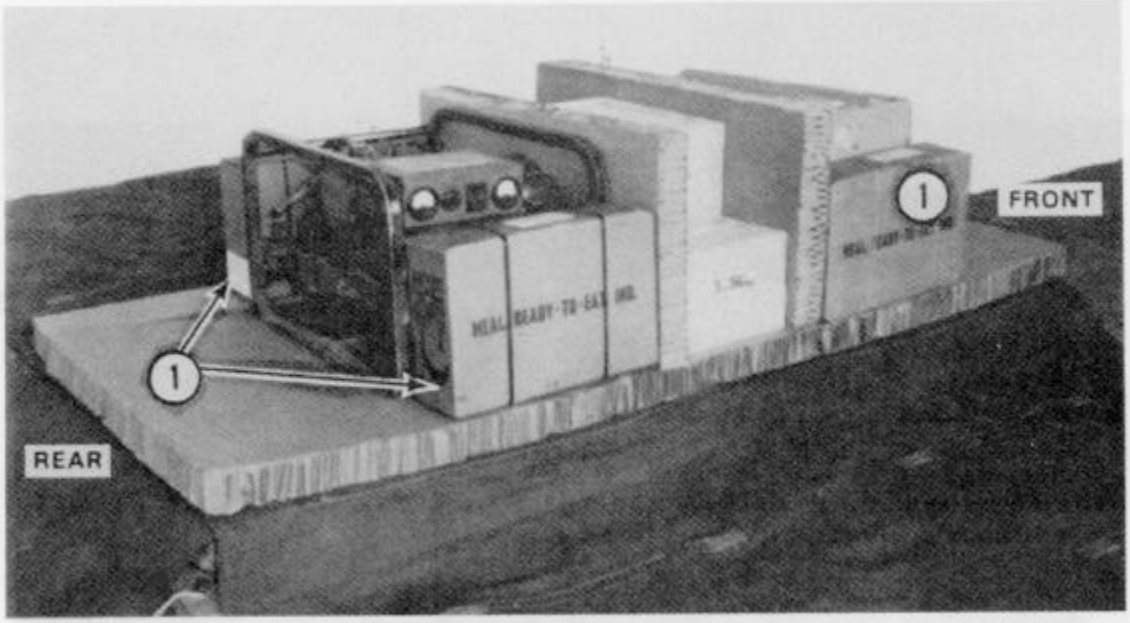
Figure 3-14. Ammunition boxes positioned.



(1) Center the transceiver in front of the honeycomb and the ammunition boxes.

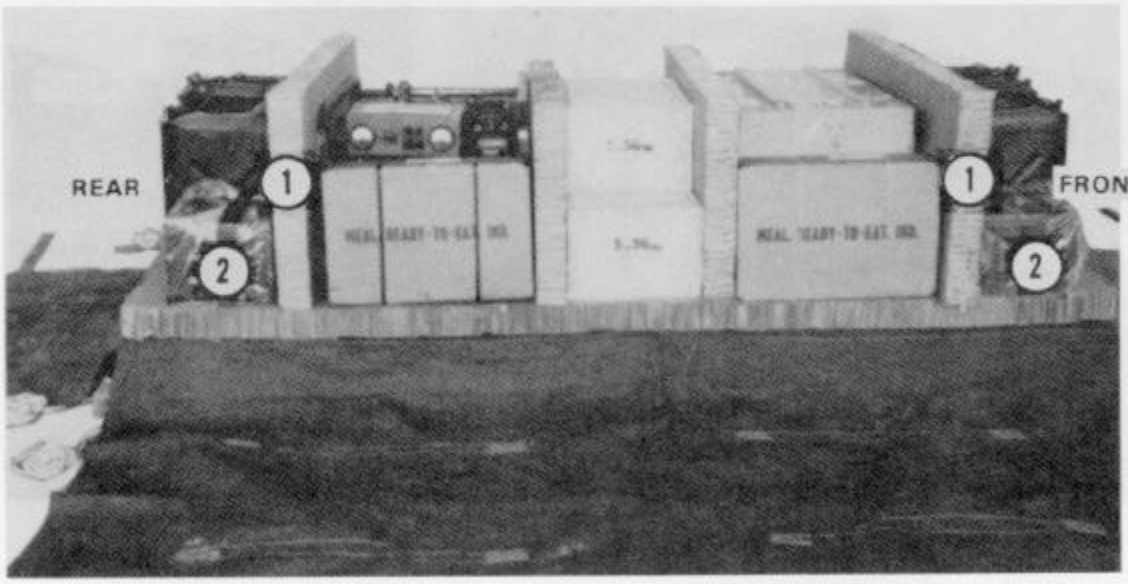
(2) Center the generator to the rear of the honeycomb and the ammunition boxes.

Figure 3-15. Transceiver and generator centered on honeycomb.



(1) Place a box of MREs on both sides of the generator. Place one box of MREs to the right of the transceiver.

Figure 3-16. MREs placed.

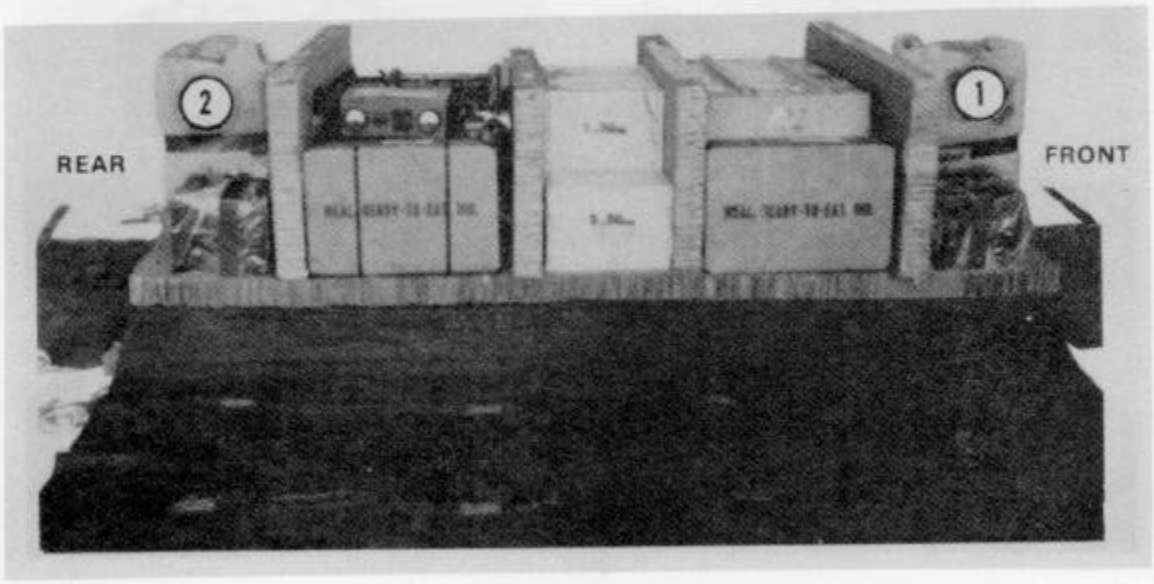


(1) Place one piece of 16- by 39-inch honeycomb to the rear of the generator and one piece at the front of the transceiver.

(2) Place one 12-volt battery on each corner of the 48- by 96-inch piece of honeycomb. Place the batteries next to the 16- by 39-inch pieces of honeycomb.

Figure 3-17. Honeycomb and batteries placed.

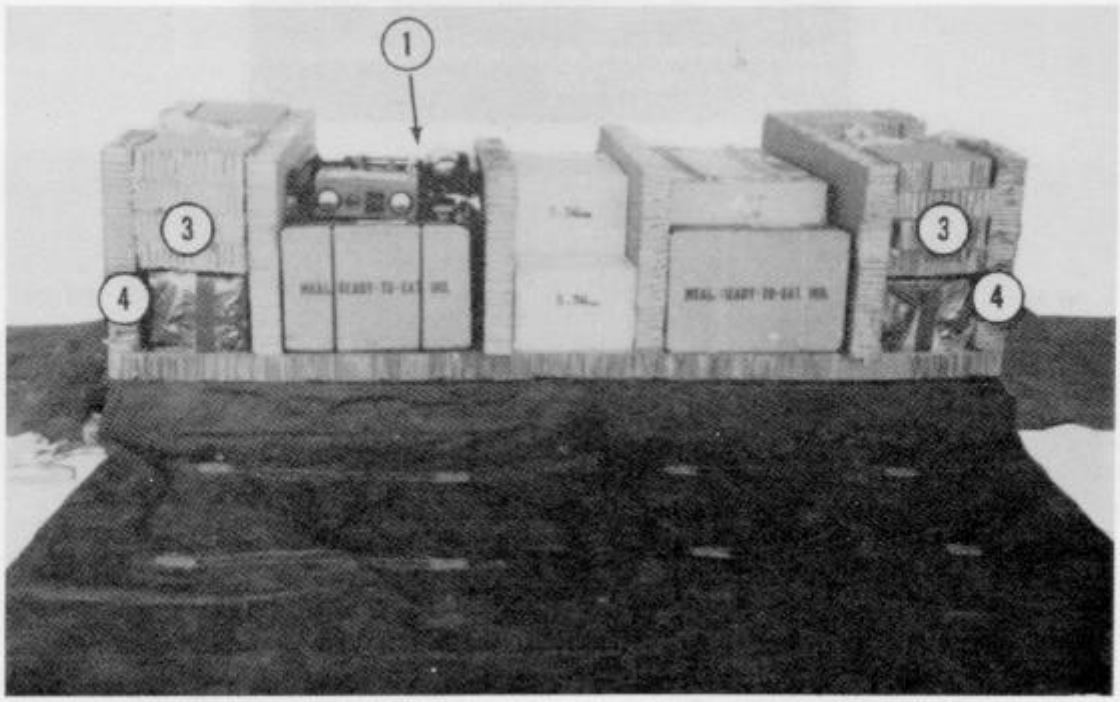
CAUTION
Hazardous items must be packed according to AFR 71-4/TM 38-250.



(1) Fill the two fuel cans, and pad them according to FM 10-500/TO 13C7-1-5. Place them between the batteries on the front of the load.

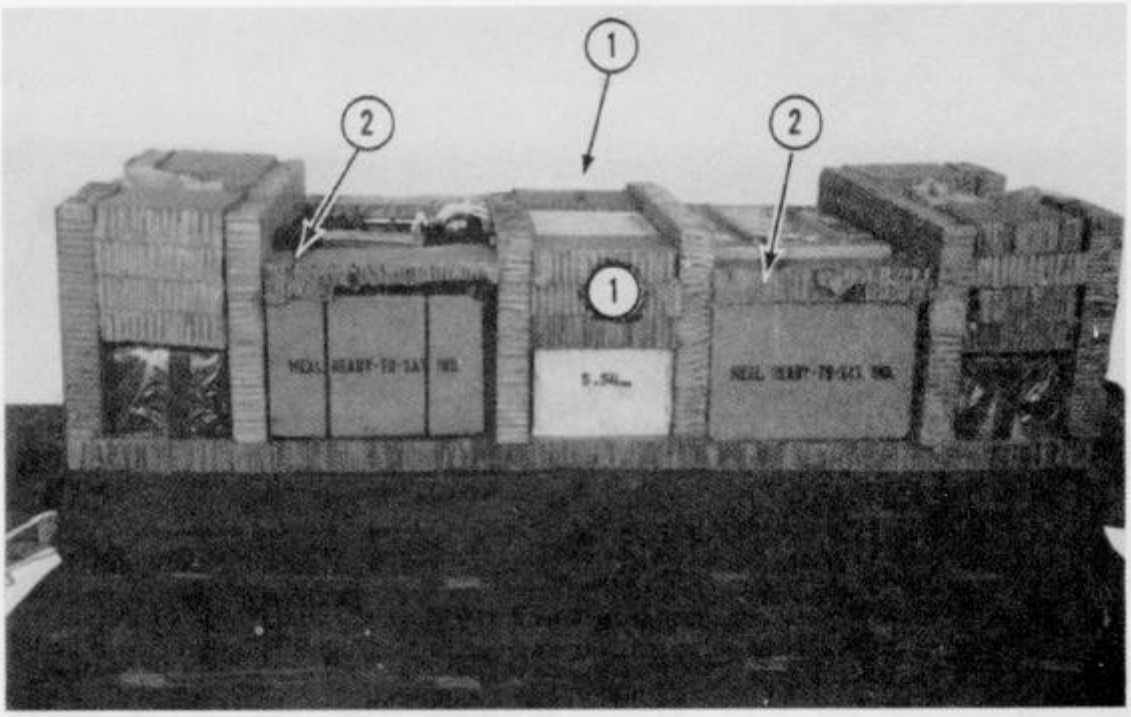
(2) Fill the two water cans, and wrap them with cellulose wadding. Place them between the batteries on the rear of the load.

Figure 3-18. Fuel cans and water cans placed.



1. Place the ground rods and fire extinguisher on top of the generator. Secure them with 1/2-inch tubular nylon webbing.
2. Place the fuel line under the generator (not shown).
3. Place four 12- by 12-inch pieces of honeycomb on top of each battery.
4. Place a piece of 12- by 21-inch honeycomb on each front and rear corner of the load.

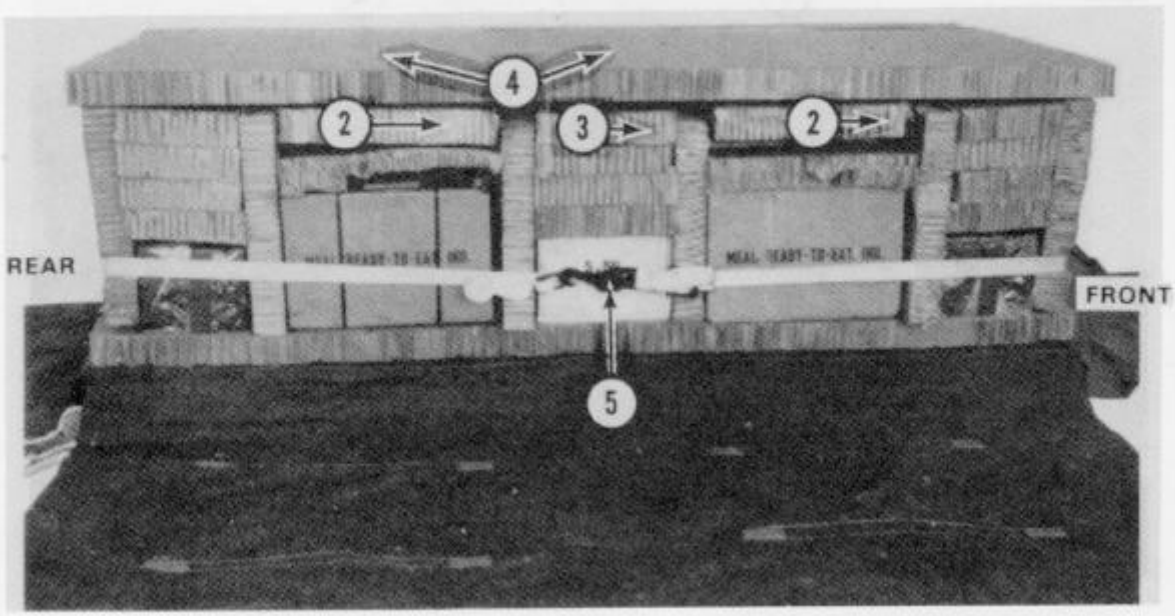
Figure 3-19. Ground rods, fire extinguisher, fuel line, and honeycomb placed.



(1) Place three pieces of 11- by 13-inch honeycomb on top of the bottom ammunition boxes to each side of the top box.

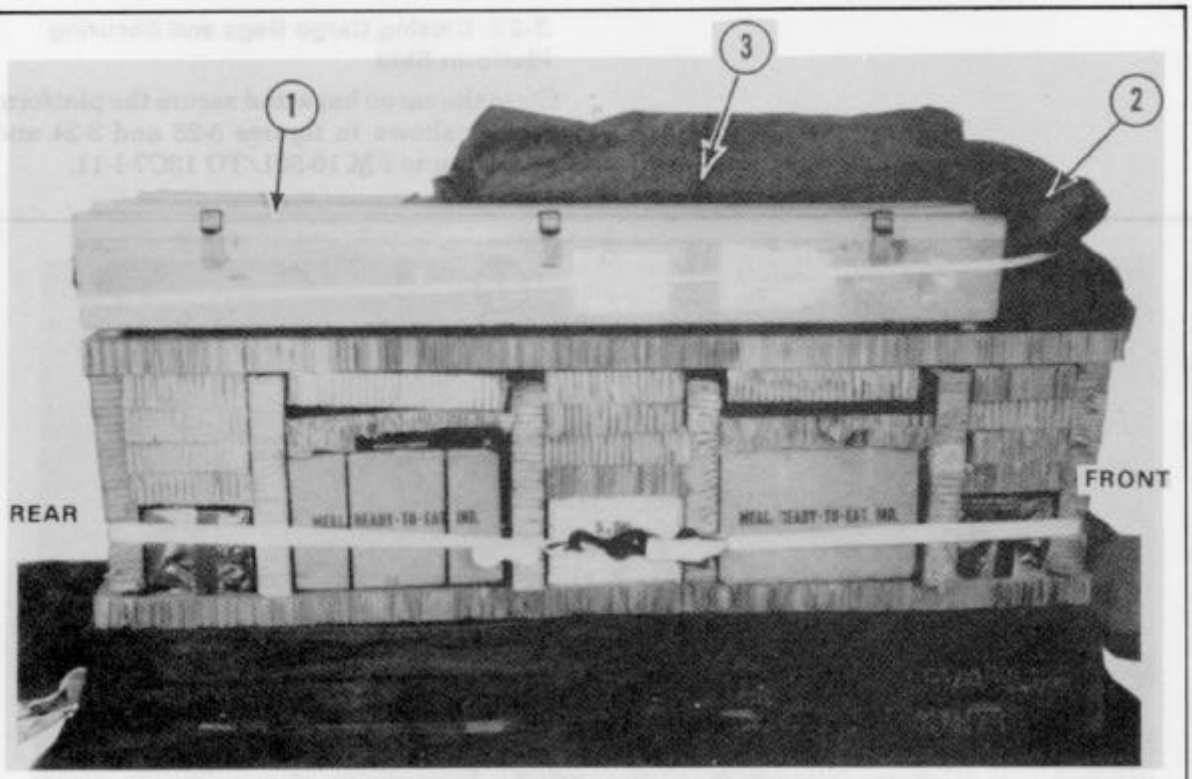
(2) Place one piece of 8- by 21-inch honeycomb on top of each box of MREs.

Figure 3-20. Honeycomb placed.



1. Place five pieces of 5- by 19-inch honeycomb to the left of the transceiver or fill in with another case of MREs (not shown).
2. Place a piece of 19- by 44-inch honeycomb on top of the transceiver and one piece on top of the generator.
3. Place a piece of 13- by 44-inch honeycomb on top of the ammunition boxes.
4. Place a layer of 44- by 96-inch honeycomb on top of the load.
5. Pass a 30-foot lashing around the bottom of the load. Secure it with a D-ring and a load binder according to FM 10-500/TO 13C7-1-5.

Figure 3-21. Honeycomb and lashing placed.



(1) Place the two containers on top of the 44-by 96-inch layer of honeycomb with their ends even with the rear end of the load.

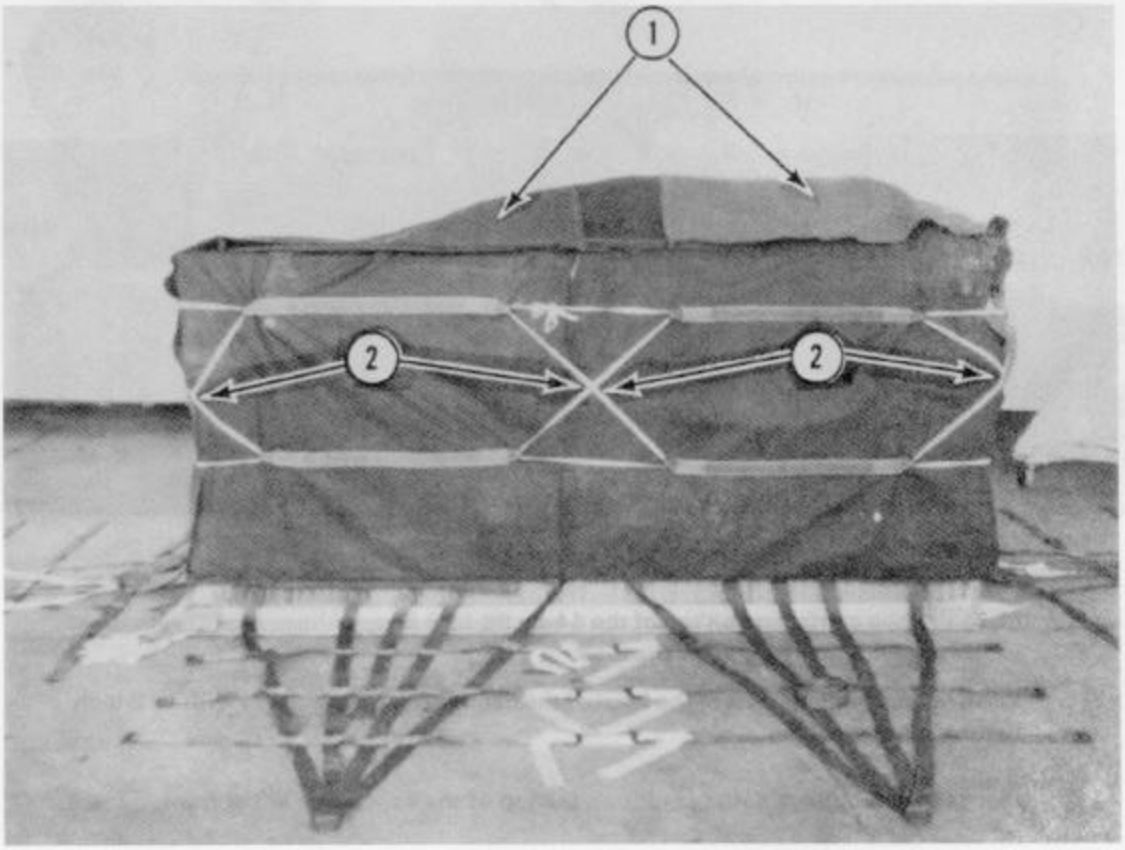
(2) Place the camouflage nets at the front of the containers. Secure them with 1/2-inch tubular nylon webbing.

(3) Place the camouflage netting poles on the top of the containers at the front.

Figure 3-22. Containers, camouflage nets, and camouflage poles placed.

3-23. Closing Cargo Bags and Securing Platform Skid

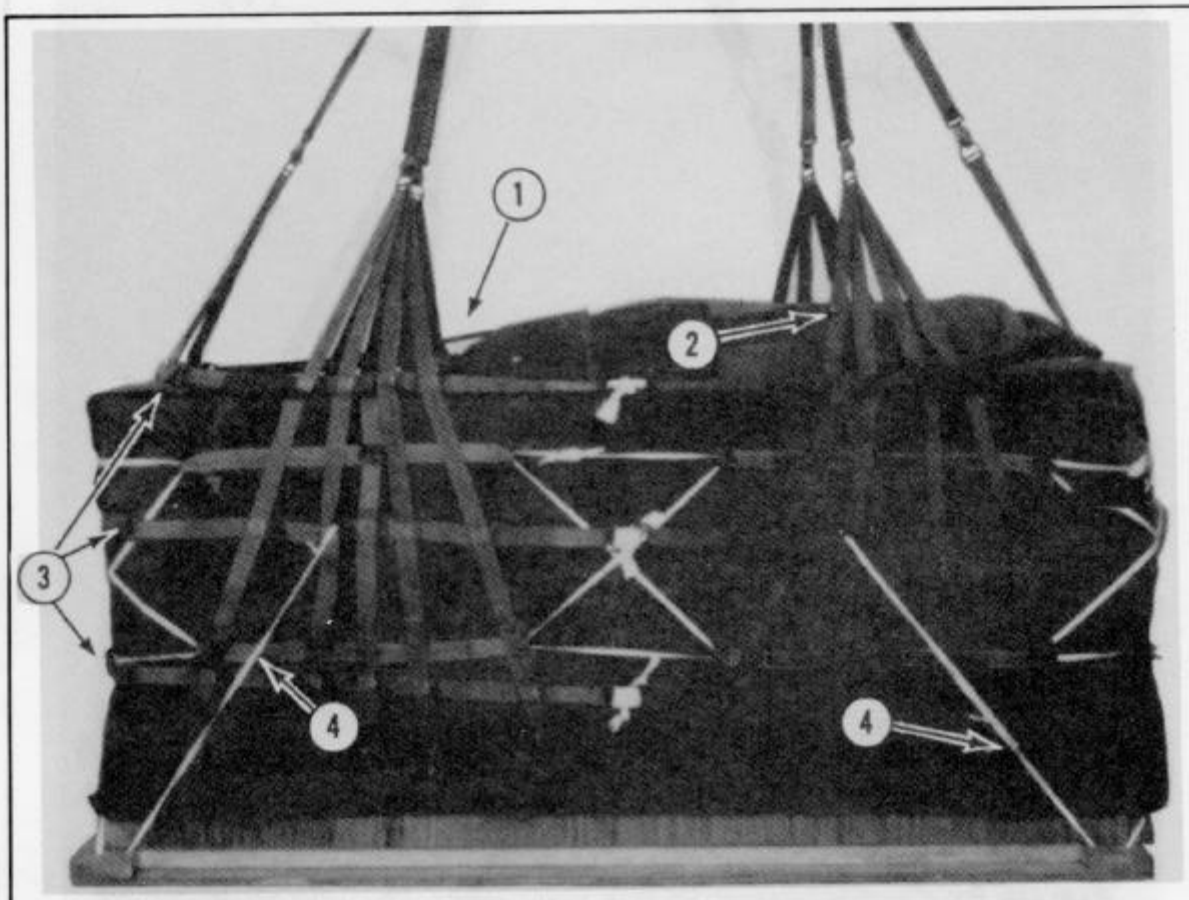
Close the cargo bags and secure the platform skid as shown in figures 3-23 and 3-24 and according to FM 10-501/TO 13C7-1-11.



(1) Fold the side and end panels of the cargo bag covers over the top of the load, and fold under any excess cover.

(2) Use either the rope provided with the cargo bags or 1/2-inch tubular nylon webbing, and tie the covers with figure eight ties. Make the ties with bowknots, and tape the knots.

Figure 3-23. Side and end panels folded and secured.

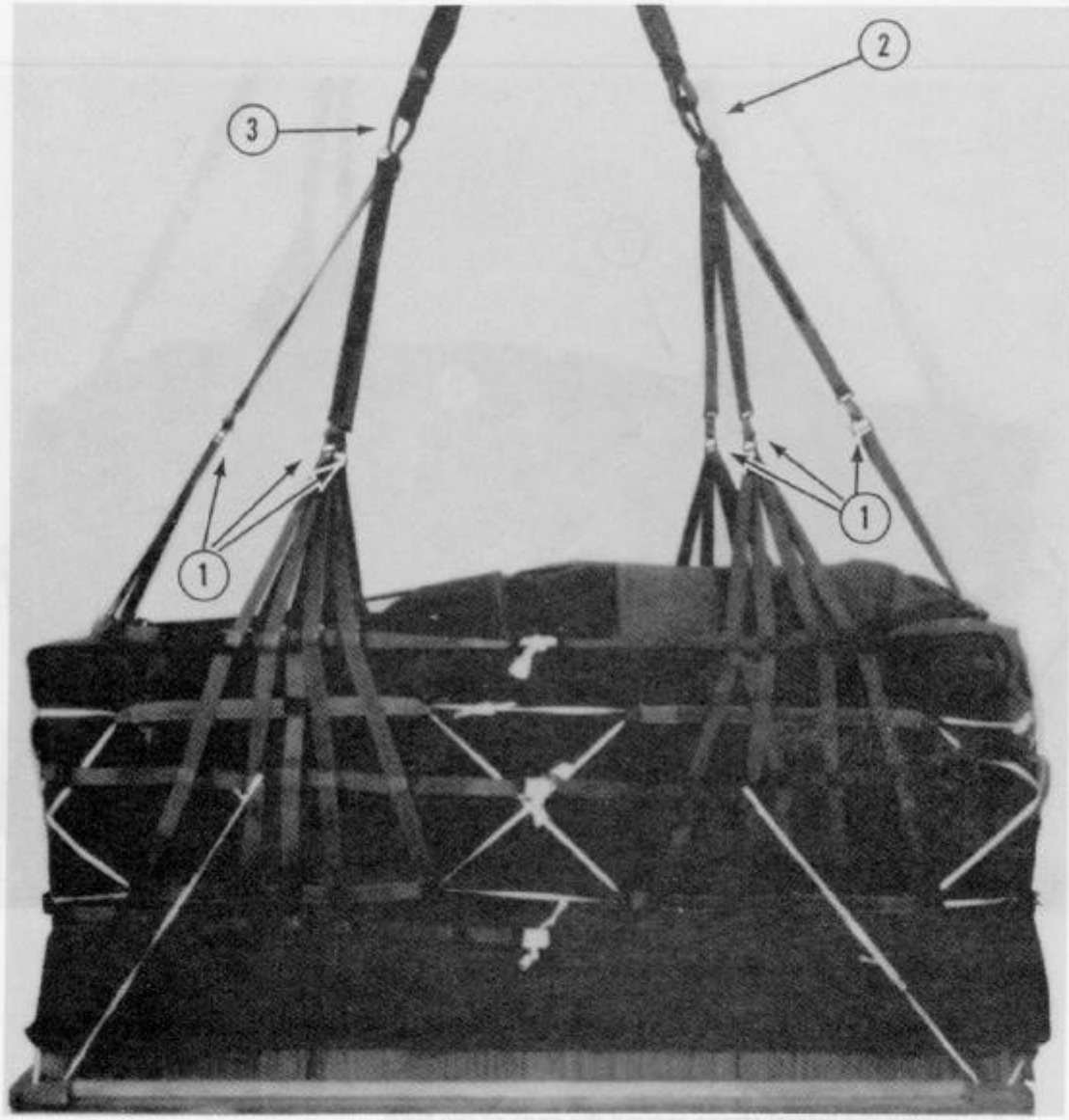


1. Fasten the short tiedown straps over the load.
2. Fasten the long tiedown strap of the left assembly to the friction adapter of the right assembly.
3. Fasten the lateral straps around the ends of the load.
4. Secure the skid platform to the sling assembly with the pre-positioned, 1/2-inch tubular nylon webbing.

Figure 3-24. Cargo bags closed.

3-24. Installing Suspension Slings

Attach six suspension webs and two 3-foot (3-loop), type X nylon slings to the A-22 cargo bag sling assemblies as shown in figure 3-25 and according to FM 10-501/TO 13C7-1-11.



(1) Fit one suspension web connector snap to each of the six support web D-rings, and wrap tape around the slings.

(2) Bolt the front three suspension web D-rings to a 3-foot sling with a cargo suspension clevis.

(3) Bolt the rear three suspension web D-rings to a 3-foot sling with a cargo suspension clevis.

Figure 3-25. Suspension slings installed.

3-25. Stowing Cargo Parachute

Prepare and stow the G-12D cargo parachute on the TDARS load as shown in figure 3-26 and according to FM 10-501/TO 13C7-1-11.

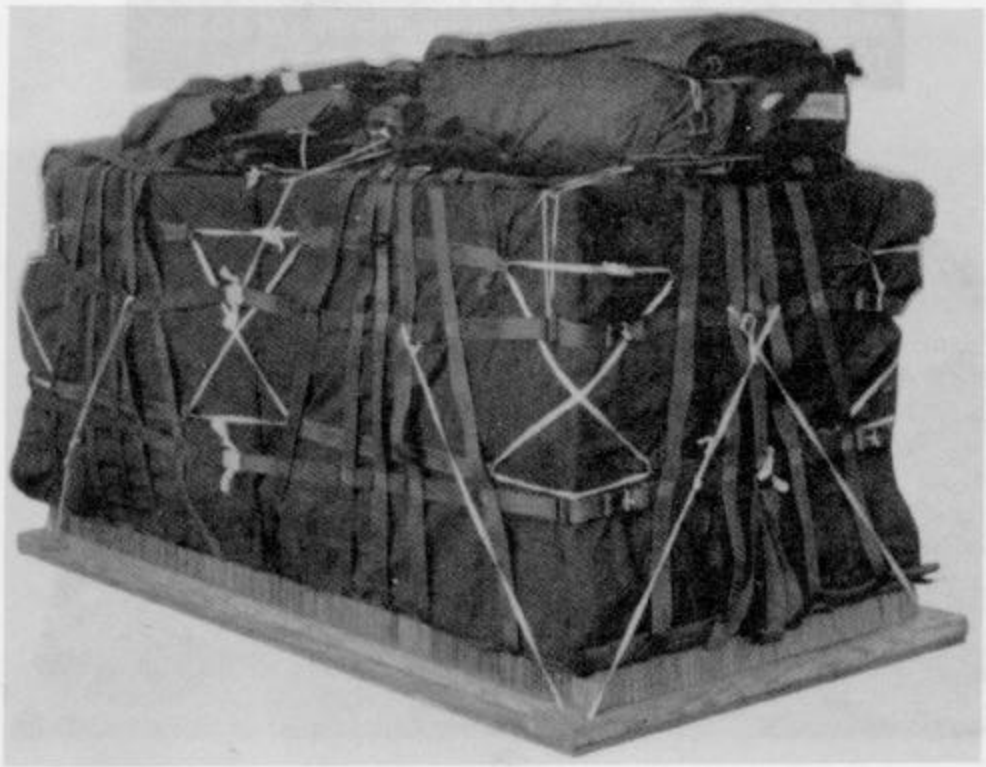
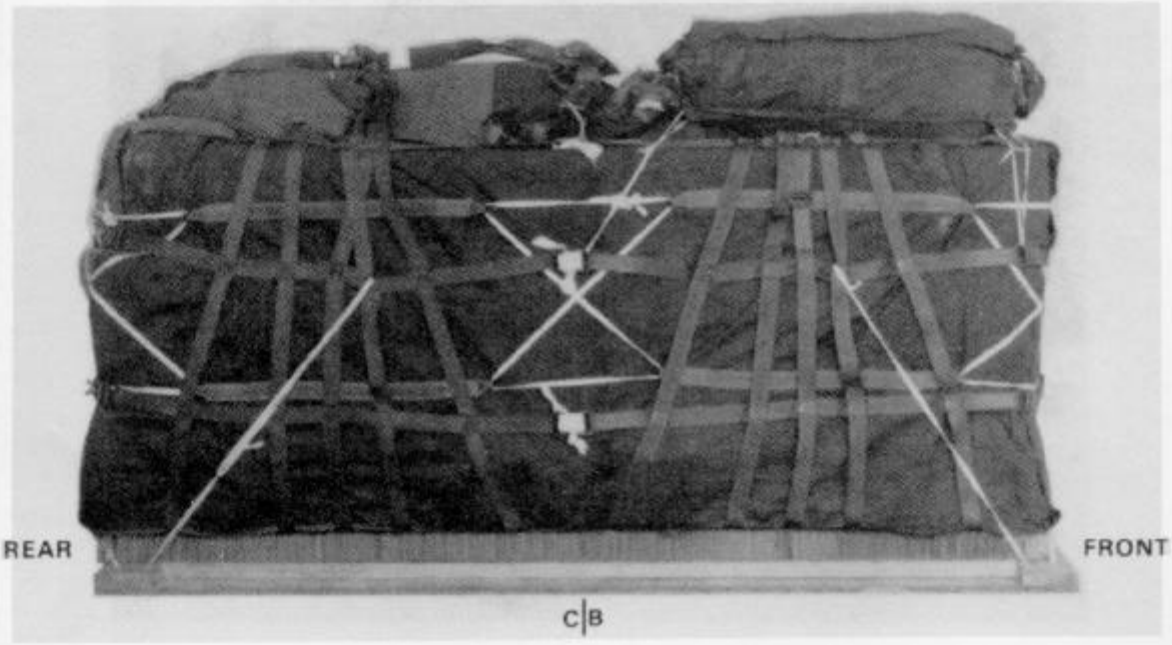


Figure 3-26. Cargo parachute stowed.

3-26. Marking Rigged Load

Use data shown in figure 3-27, and mark the rigged load according to FM 10-500/ TO 13C7-1-5.

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	1,820 pounds
Height	54 inches
Width	48 inches
Length	96 inches
Center of Balance (from the front edge of the platform)	50 inches

Figure 3-27. Load rigged for low-velocity airdrop.

3-27. Equipment Required

The equipment required to rig this load is listed in Table 3-2.

Table 3-2. Equipment required for rigging TDARS in a double A-22 cargo bag for low-velocity airdrop

National Stock Number	Item	Quantity
1670-00-587-3421	Bag, cargo, A-22	2
4030-00-678-8562	Clevis assembly, suspension, cargo	3
4030-00-432-2516	Clevis, suspension, cargo	3
4020-00-240-2146	Cord, nylon, type III, 550-lb	As required
8135-00-664-6958	Cushioning material, packaging, cellulose wadding	As required
5510-00-220-6448	Lumber, 2- by 6-in:	
	48-in	2
	85-in	2
5315-00-010-4657	Nail, steel wire, common, 6d	As required
1670-00-753-3928	Pad, energy-dissipating, honeycomb, 3-by 36- by 96-in:	6 sheets
	5- by 19-in	(5)
	8- by 21-in	(2)
	11- by 13-in	(6)
	12- by 12-in	(16)
	12- by 21-in	(4)
	13- by 44-in	(1)
	16- by 39-in	(2)
	19- by 36-in	(2)
	19- by 44-in	(2)
	44- by 96-in	(1)
	46- by 96-in	(1)
	48- by 96-in	(3)
1670-00-893-2371	Parachute, cargo, G-12D	1
5530-00-128-4981	Plywood, 3/4- by 48- by 96-in	1 sheet
1670-00-753-3788	Sling, 3-ft (3-loop), type X	3
7510-00-266-5016	Tape, adhesive, 2-in	As required
8310-00-917-3945	Thread, ticket number 5, cotton	As required
1670-00-937-0271	Tie-down assembly, 15-ft, nylon	2
	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

Section III

RIGGING TDARS AND SIX STINGER MISSILES IN A DOUBLE A-22 CARGO BAG

3-28. Description of Load

The TDARS with six stinger missiles is rigged in a double A-22 cargo bag for low-velocity airdrop. The TDARS load components are a quadropod container, an antenna container, a transceiver container, a generator, five 5-gallon fuel cans, and six stinger missile containers. This load may be airdropped from C-130 or C-141 aircraft.

3-29. Building Skid Board

Build a skid board for a double A-22 cargo bag using a 3/4- by 48- by 96-inch piece of plywood as shown in FM 10-501/TO 13C7-1-11.

3-30. Preparing Skid Board

Prepare the skid board using a 8- by 96-inch and a 36- by 96-inch piece of honeycomb as shown in FM 10-501/TO 13C7-1-11.

3-31. Positioning A-22 Sling Assemblies

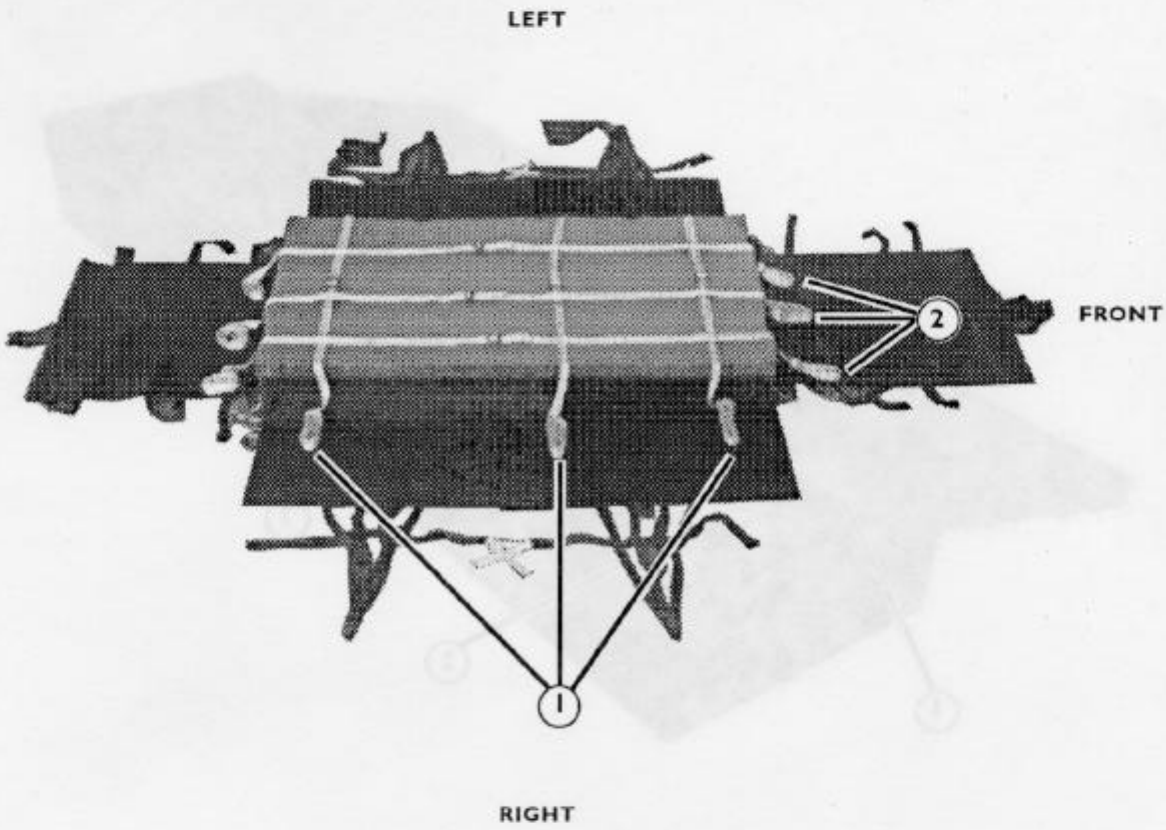
Position two A-22 cargo bag sling assemblies on the skid board as shown in FM 10-501/TO 13C7-1-11.

3-32. Positioning Covers and Honeycomb

Place the A-22 cargo bag covers and a 8- by 96-inch and a 36- by 96-inch piece of honeycomb on the skid board as shown in FM 10-501/TO 13C7-1-11.

3-33. Pre-positioning Tie-Down Lashings

Form six 30-foot tie-down lashings according to FM 10-500-2/TO 13C7-1-5 and place them on top of the honeycomb as shown in Figure 3-28.



(1) Starting at the right front of the skid board, run three 30-foot tie-down lashings the width of the honeycomb at intervals of 11 inches, 18 inches, and 35 inches from the right side of the platform.

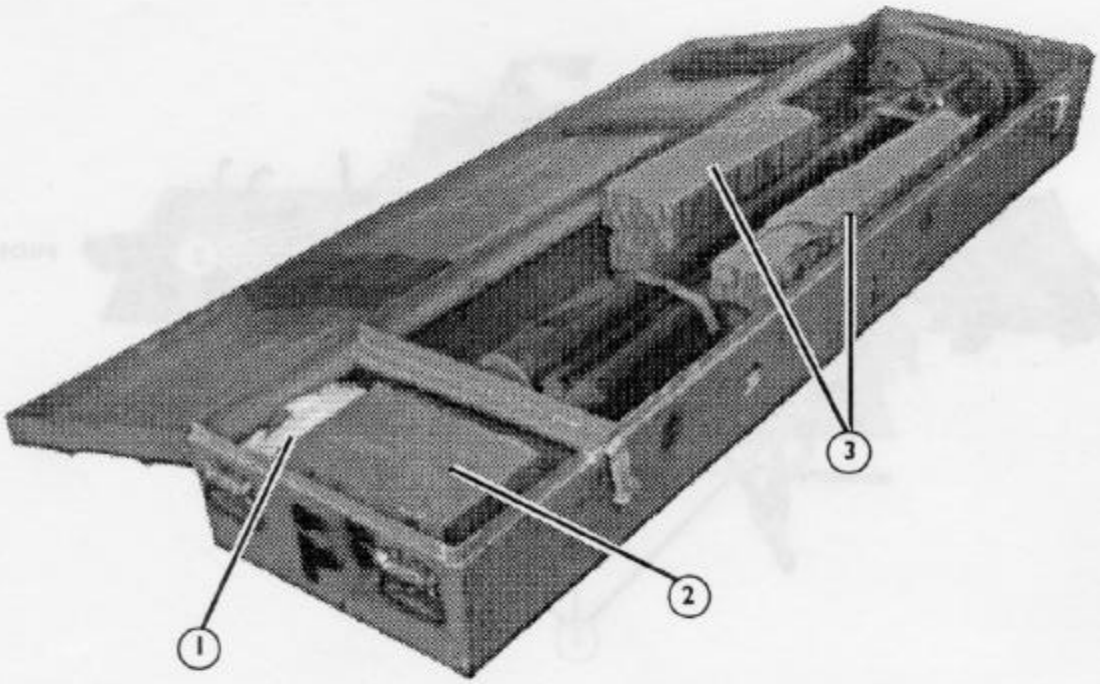
(2) Starting at the front of the skid board, run three 30-foot tie-down lashings the length of the honeycomb at intervals of 11 inches, 18 inches, and 85 inches from the front edge of the platform.

Figure 3-28. Pre-positioned tie-down lashings installed

3-34. Preparing TDARS Components

Prepare the TDARS components as shown below.

a. Quadropod Container. Prepare the items in the quadropod container as shown in Figure 3-29.



(1) Wrap the converter with cellulose wadding.

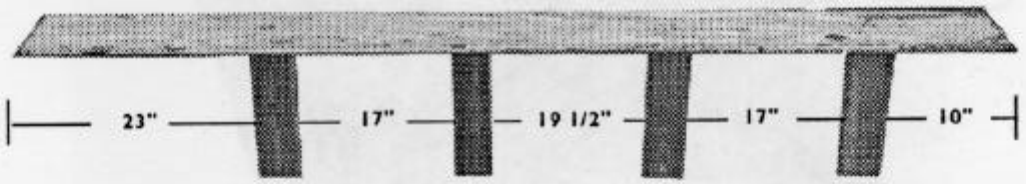
(2) Pad around the converter with honeycomb filler.

(3) Pad around the quadropod and pedestal with honeycomb filler.

(4) Close and latch the container lid (not shown).

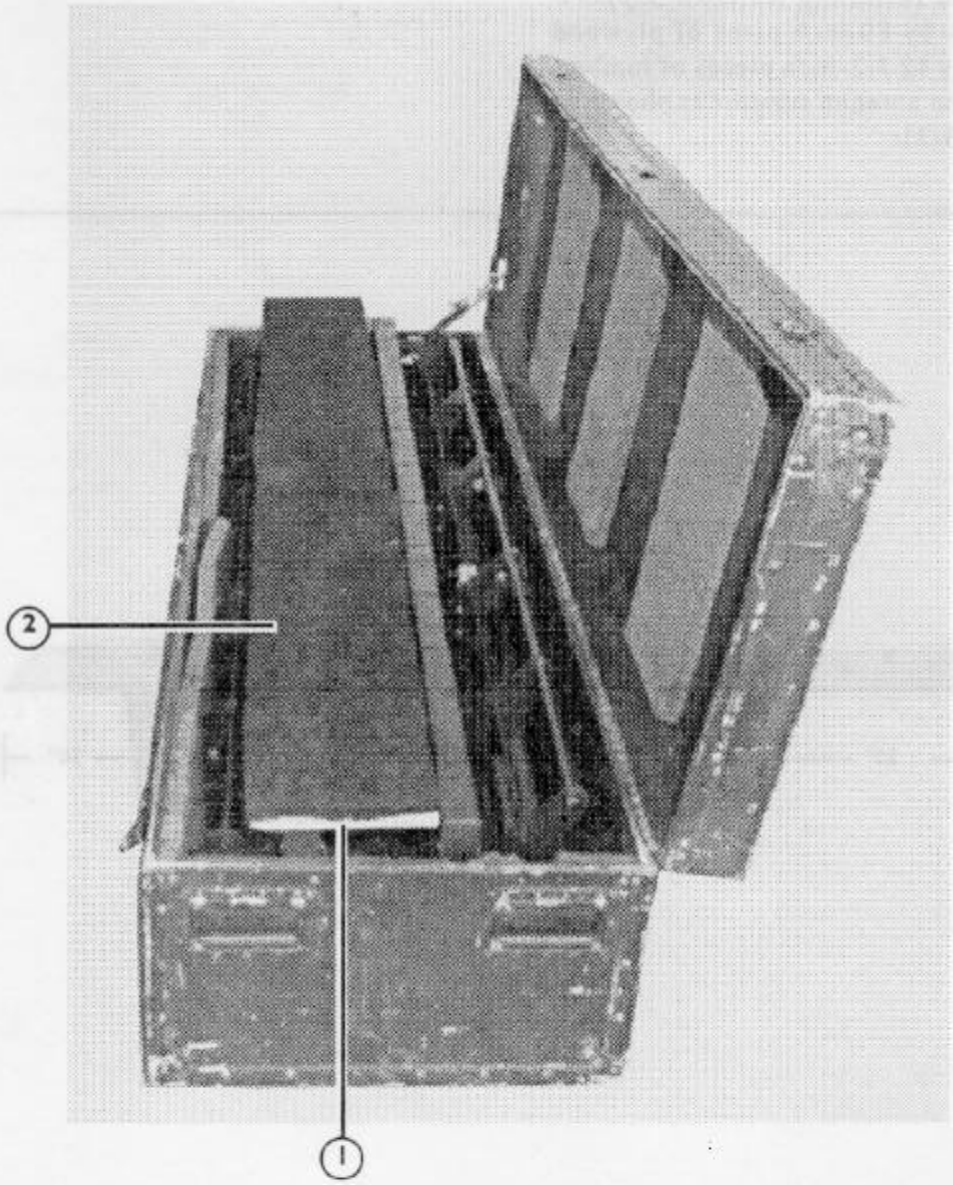
Figure 3-29. Quadropod container items prepared

b. Building and Installing Antenna Support. Using a 3/4- by 8- by 80-inch piece of plywood and four 2- by 4- by 12 1/2-inch pieces of lumber, build and install the antenna support as shown in Figures 3-30 and 3-31.



(1) **Nail the four pieces of lumber to the center of the plywood at the intervals shown. Make sure the 4-inch side of the lumber is facing the side of the plywood piece.**

Figure 3-30. Antenna support built



(1) Place the antenna support in the middle slot of the antenna container.

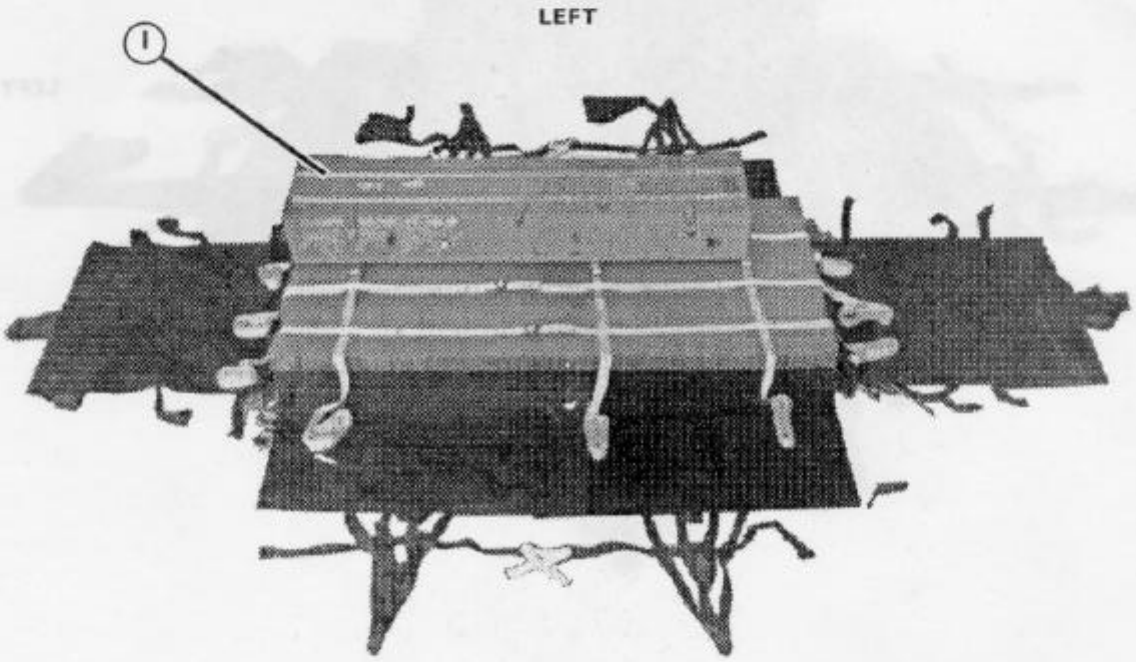
(2) Cut a piece of 1/2- by 8- by 80-inch felt and place it on top of the plywood.

(3) Close and latch the antenna container lid (not shown).

Figure 3-31. Antenna support installed

3-35. Positioning Load

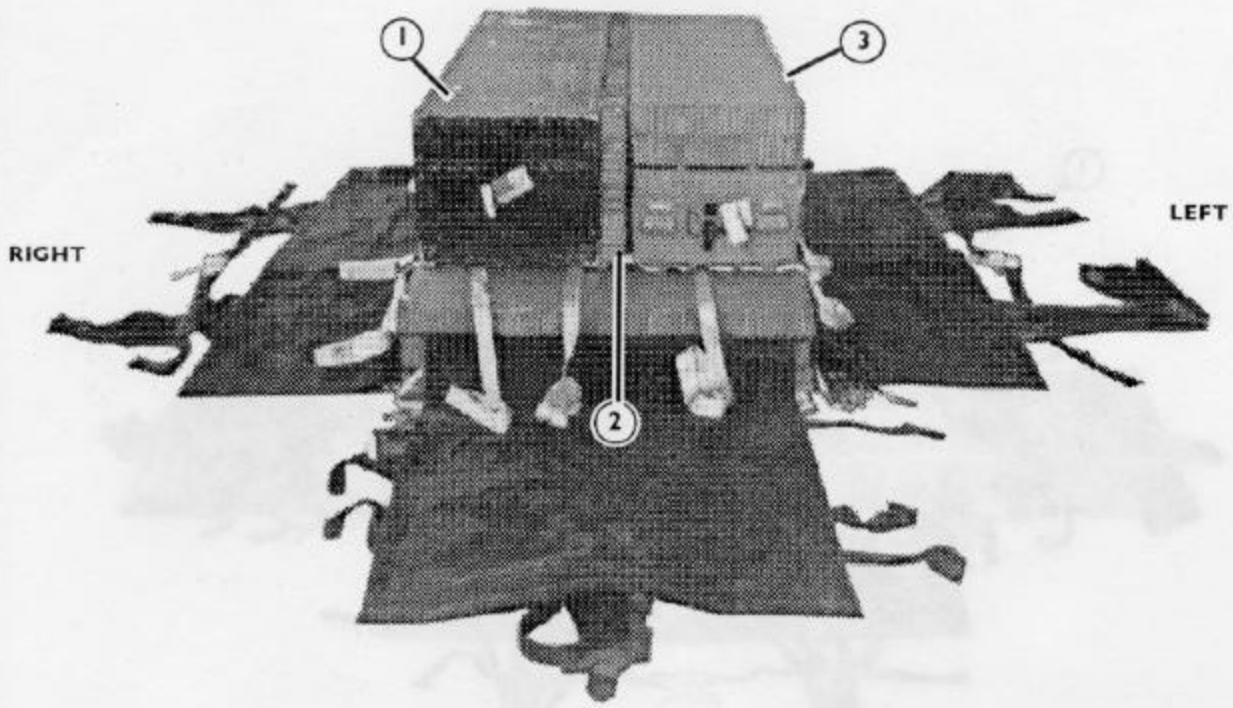
Place the items on the platform as shown in Figures 3-32 through 3-38.



(1) **Place the quadropod container on the left side of the platform, flush with the rear edge of the platform.**

NOTE: Make sure the latches on the container are to the inside of the platform.

Figure 3-32. Quadropod container positioned on platform



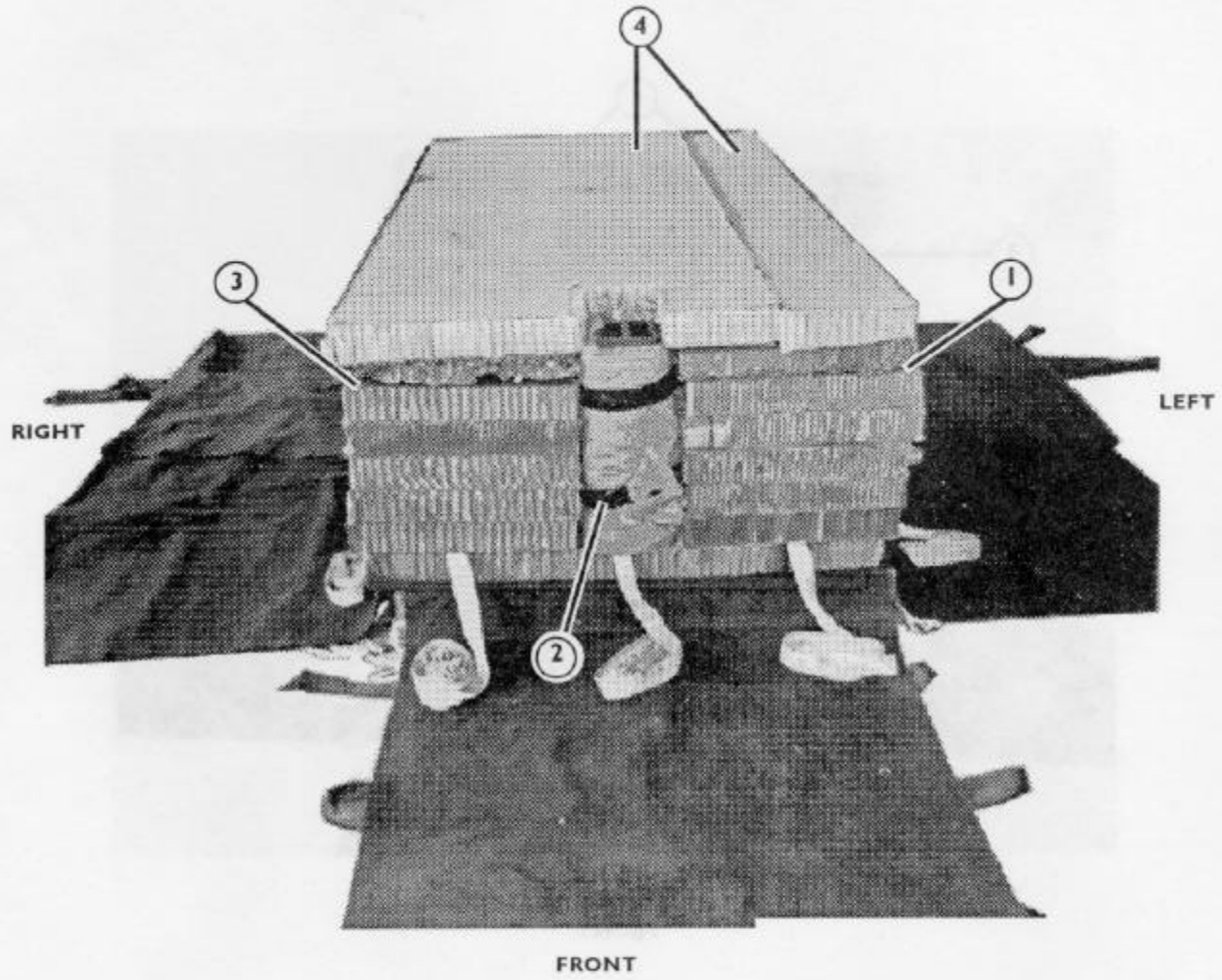
(1) Place the antenna container on the right side of the platform and flush with the rear edge of the platform.

NOTE: Make sure the latches on the container are to the inside of the platform.

(2) Place a 16- by 83 1/2-inch piece of honeycomb between the quadropod container and the antenna container.

(3) Place two 20- by 83 1/2-inch pieces of honeycomb on top of the quadropod container.

Figure 3-33. Antenna container and honeycomb positioned on platform



(1) Place six 13- by 19-inch pieces of honeycomb on the left front edge of the platform. Crush the top pieces of honeycomb to a height of 2 inches.

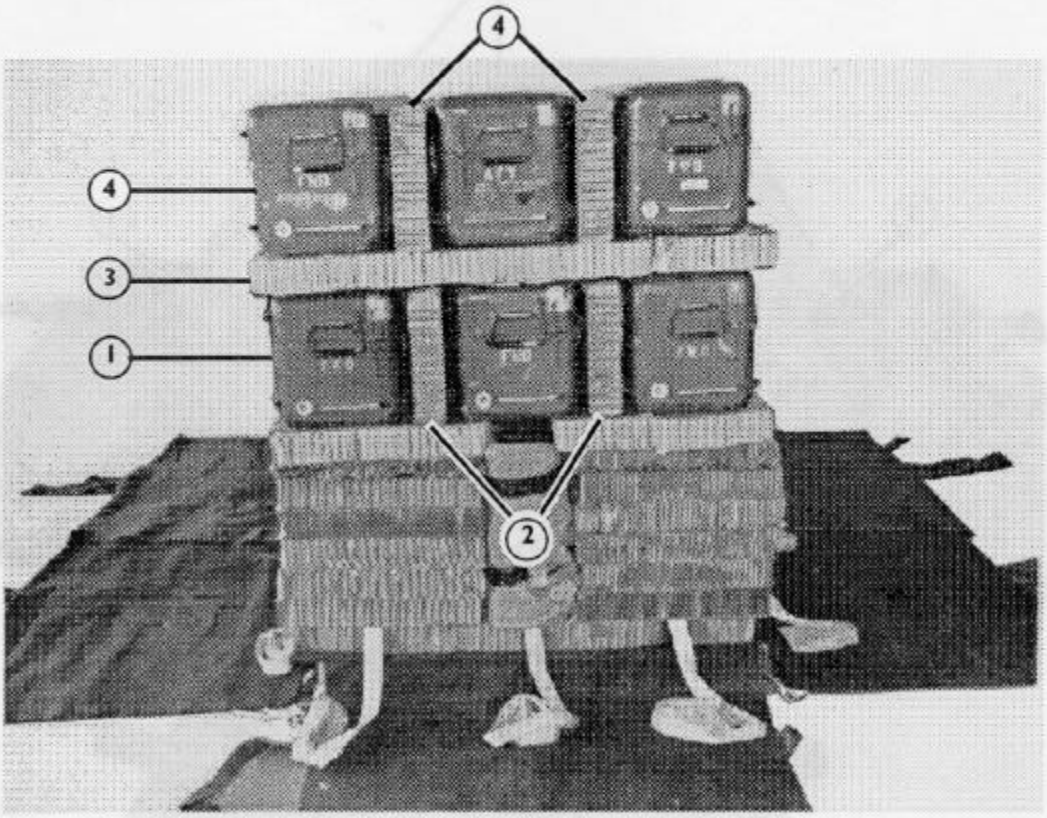
NOTE: Make sure there is gasoline in the 5-gallon fuel can.

(2) Wrap a 5-gallon fuel can with cellulose wadding and tape. Place the can next to the honeycomb stack placed in step 1.

(3) Repeat step 1, except place the stack on the right front edge of the platform.

(4) Place a 36- by 96-inch and a 10 1/2- by 96-inch piece of honeycomb on top of the load. Make a cutout for the fuel can.

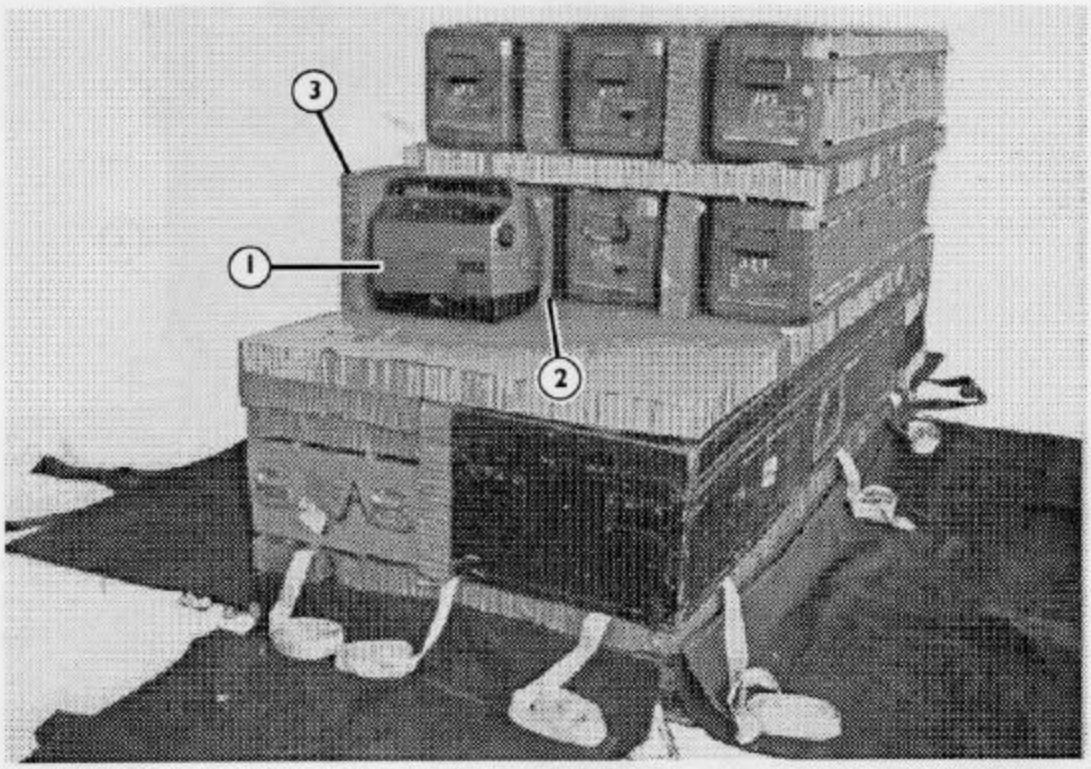
Figure 3-34. Honeycomb and fuel can positioned on platform



FRONT

1. Place three stinger missile containers on top of the load, flush with the front edge.
2. Place a 12- by 66-inch piece of honeycomb on each side of the middle container.
3. Place a 36- by 66-inch and a 10 1/2- by 66-inch piece of honeycomb on top of the stinger missile containers.
4. Repeat steps 1 and 2.

Figure 3-35. Stinger missile containers and honeycomb positioned on platform



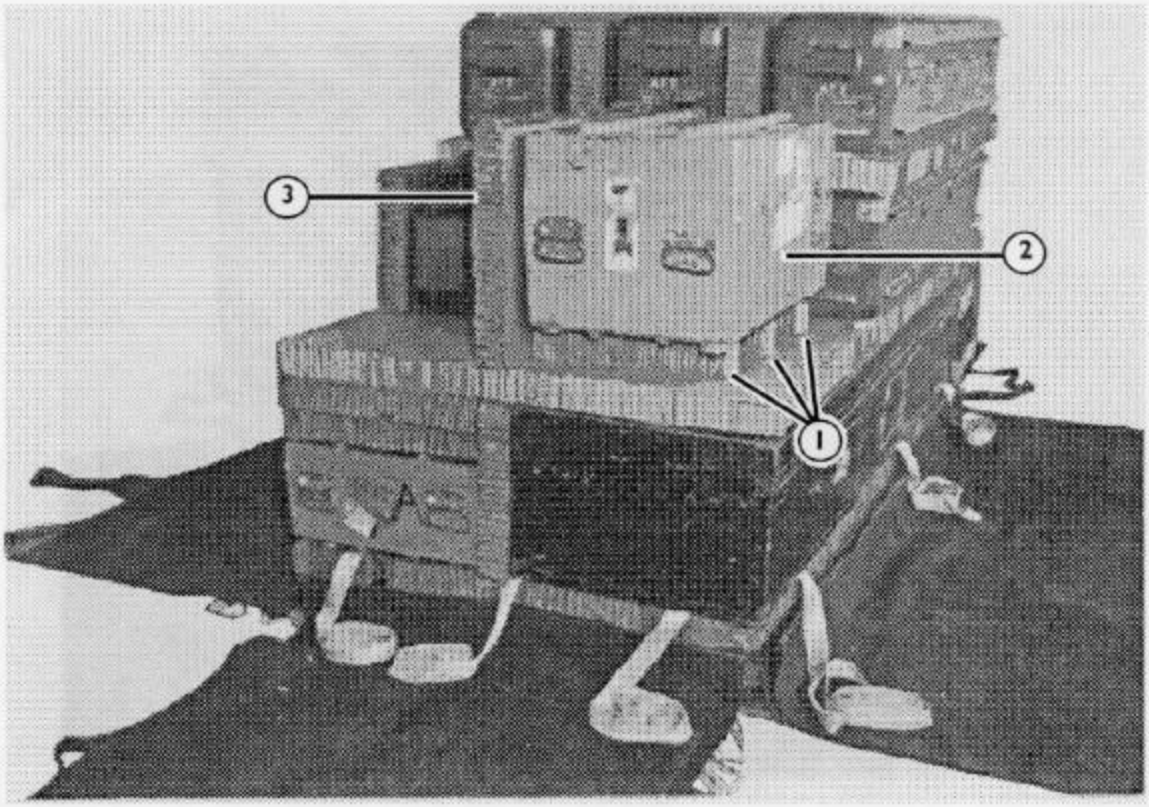
NOTE: Make sure the generator has been drained.

(1) Place the generator behind the stinger missile on the left side.

(2) Place an 11 1/2- by 15-inch piece of honeycomb between the generator and missile.

(3) Place an 11 1/2- by 15-inch piece of honeycomb on the left side of the generator.

Figure 3-36. Generator and honeycomb positioned on platform

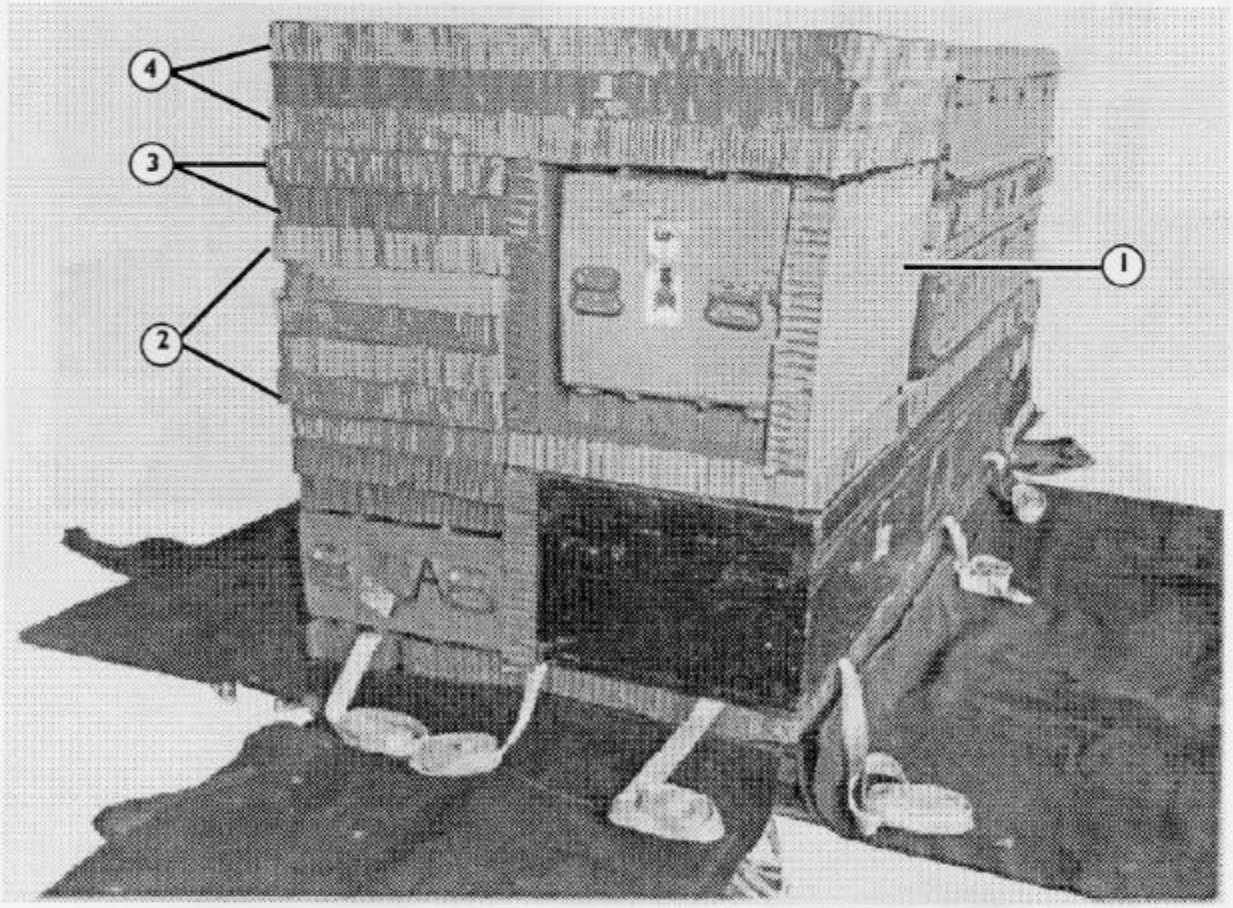


(1) Evenly space 3- by 17-inch pieces of honeycomb behind the stinger missiles on the right side.

(2) Place the transceiver on top of the honeycomb pieces placed in step 1.

(3) Place a 20- by 31-inch piece of honeycomb between the transceiver and the generator.

Figure 3-37. Transceiver and honeycomb positioned on platform



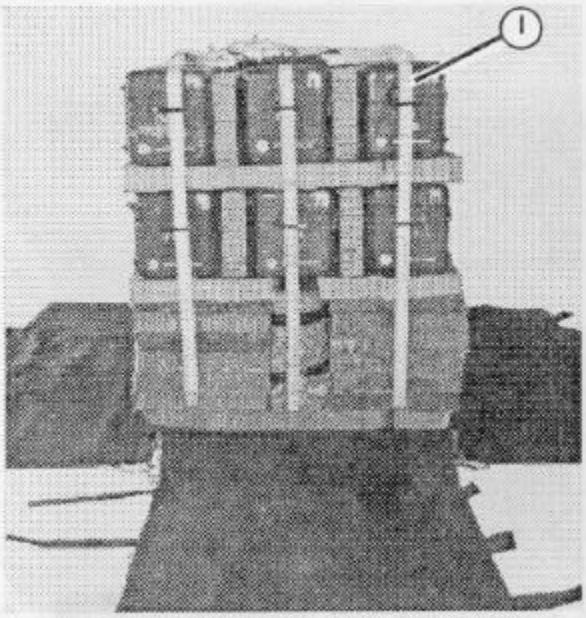
(1) Place a 21- by 31-inch piece of honeycomb on the right side of the transceiver.

(2) Place five 18- by 21-inch pieces of honeycomb against the rear of the generator.

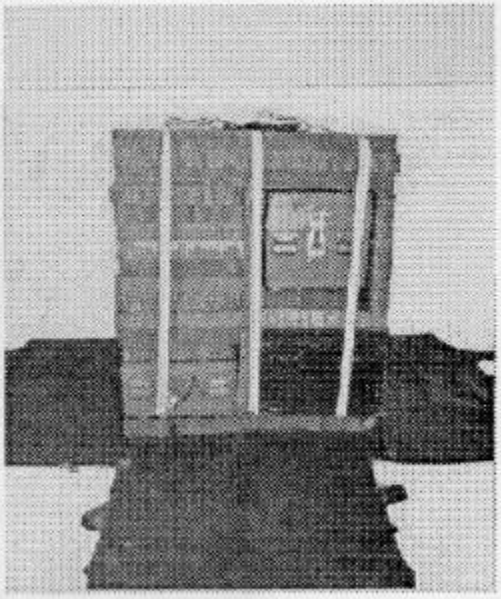
(3) Place two 21- by 30-inch pieces of honeycomb across the generator and on top of the honeycomb placed in step 2.

(4) Place three 30- by 47-inch pieces of honeycomb on top of the load.

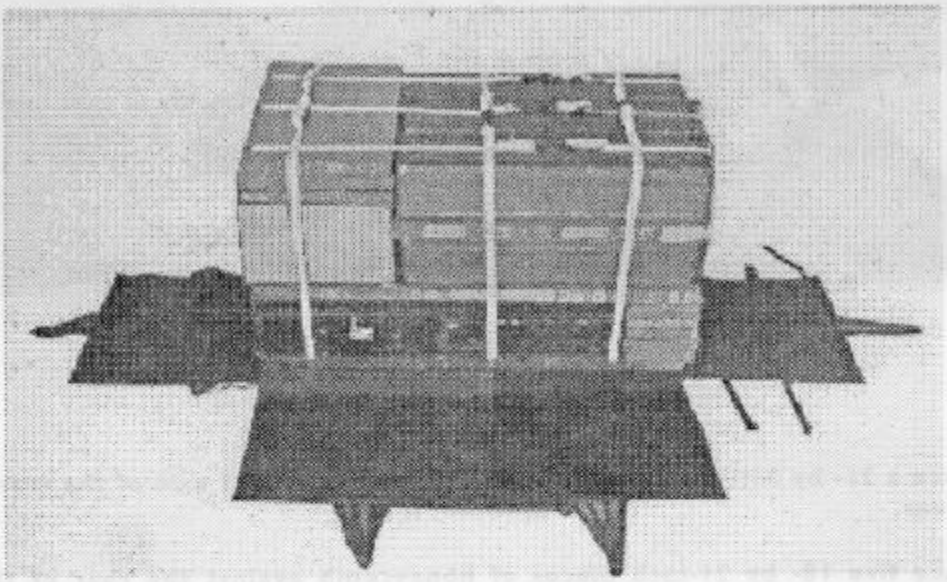
Figure 3-38. Honeycomb positioned on platform



FRONT



REAR



RIGHT

(1) Pass the pre-positioned lashings over the load and fasten each with two D-rings and a load binder. Make sure the lashings at the front are routed through the lifting handles of the stinger missile containers.

Figure 3-39. Lashings fastened

3-36. Closing Cargo Bags and Securing Platform

Close the bag covers, fasten the sling assemblies, and secure the cargo bags to the platform according to FM 10-501/TO 13C7-1-11.

3-37. Installing Suspension Slings

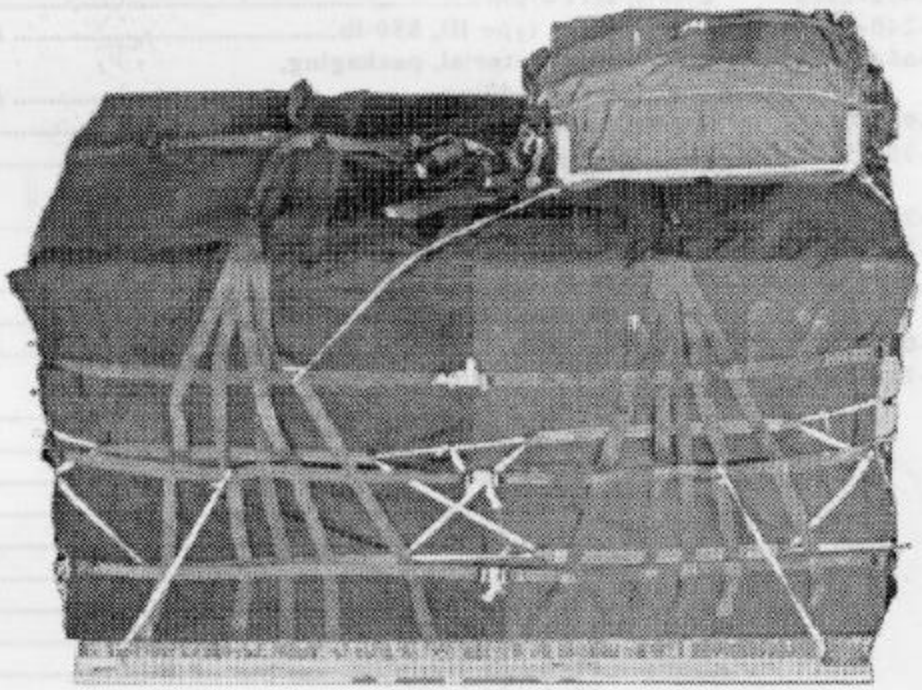
Install the suspension slings according to FM 10-501/TO 13C7-1-11.

3-38. Stowing Cargo Parachute

Stow a G-12D or G-12E cargo parachute according to FM 10-501/TO 13C7-1-11.

3-39. Marking Rigged Load

Mark the rigged load according to FM 10-500-2/TO 13C7-1-5 and as shown in Figure 3-40. Complete DD Form 1387-2 according to AFR 71-4/TM 38-250 and securely attach it to the load.



RIGGED LOAD DATA

Weight (with parachute)	1,558 pounds
Height (with parachute)	75 inches
Width	48 inches
Length	96 inches

Figure 3-40. TDARS with stinger missiles rigged

3-40. Equipment Required

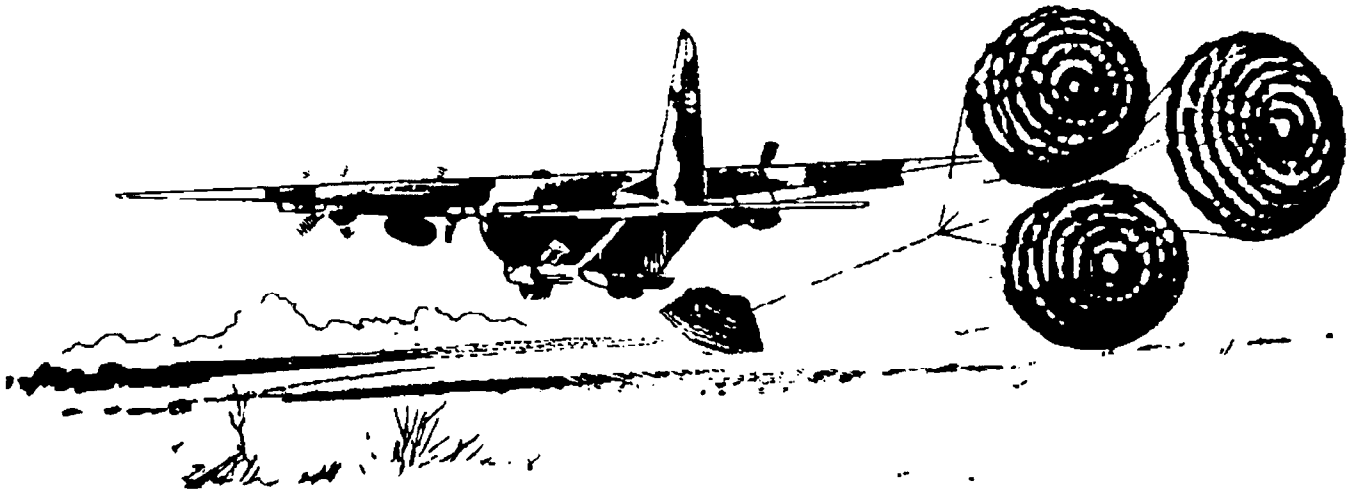
Use the equipment listed in Table 3-3 to rig this load.

Table 3-3. Equipment required for rigging TDARS and stinger missiles in a double A-22 cargo bag for low-velocity airdrop

National Stock Number	Item	Quantity
1670-00-587-3421	Bag, cargo, A-22	2
3990-00-937-0272	Binder, load, 10,000-lb	3
4030-00-678-8562	Clevis assembly, suspension, cargo	3
4030-00-432-2516	Clevis, screw-pin	13
4020-00-240-2146	Cord, nylon, type III, 550-lb	As required
8135-00-664-6958	Cushioning material, packaging, cellulose wadding	As required
5365-00-937-0147	D-ring, heavy-duty, 10,000-lb	(6)
8305-00-958-3685	Felt, 1/2- by 8- by 80-in	(1)
	Lumber:	
5510-00-220-6146	2- by 4- by 12 1/2-in	4
5510-00-220-6148	2- by 6-in:	
	48-in	2
	85-in	2
5315-00-010-4657	Nail, steel wire, common, 6d	As required
1670-00-753-3928	Pad, energy-dissipating, honeycomb,	
	3- by 36- by 96-in:	2 sheets
	3- by 17-in	(3)
	8- by 96-in	(2)
	10 1/2- by 66-in	(2)
	10 1/2- by 96-in	(2)
	11 1/2- by 15-in	(2)
	12- by 66-in	(4)
	13- by 19-in	(6)
	16- by 83 1/2-in	(1)
	18- by 21-in	(5)
	20- by 31-in	(4)
	20- by 83 1/2-in	(2)
	21- by 30-in	(2)
	21- by 31-in	(1)
	30- by 47-in	(3)
	36- by 66-in	(2)
	36- by 96-in	(3)
	Parachute:	
1670-00-893-2371	G-12D *or*	1
1670-01-065-3755	G-12E (HAARS)	1

Table 3-3. Equipment required for rigging TDARS and stinger missiles in a double A-22 cargo bag for low-velocity airdrop

National Stock Number	Item	Quantity
5530-00-128-4981	Plywood:	
	3/4- by 48- by 96-in	(1)
	3/4- by 8- by 80-in	(1)
1670-01-753-3788	Sling, 3-ft (2-loop)	(2)
8305-00-074-5124	Tape, adhesive, 2-in	As required
1670-00-937-0271	Tie-down assembly, 15-ft	12
	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



CHAPTER 4
RIGGING TDARS IN THE M1025 OR M1026 ARMANENT CARRIERS FOR LOW-VELOCITY AIRDROP

4-1. Description of Load

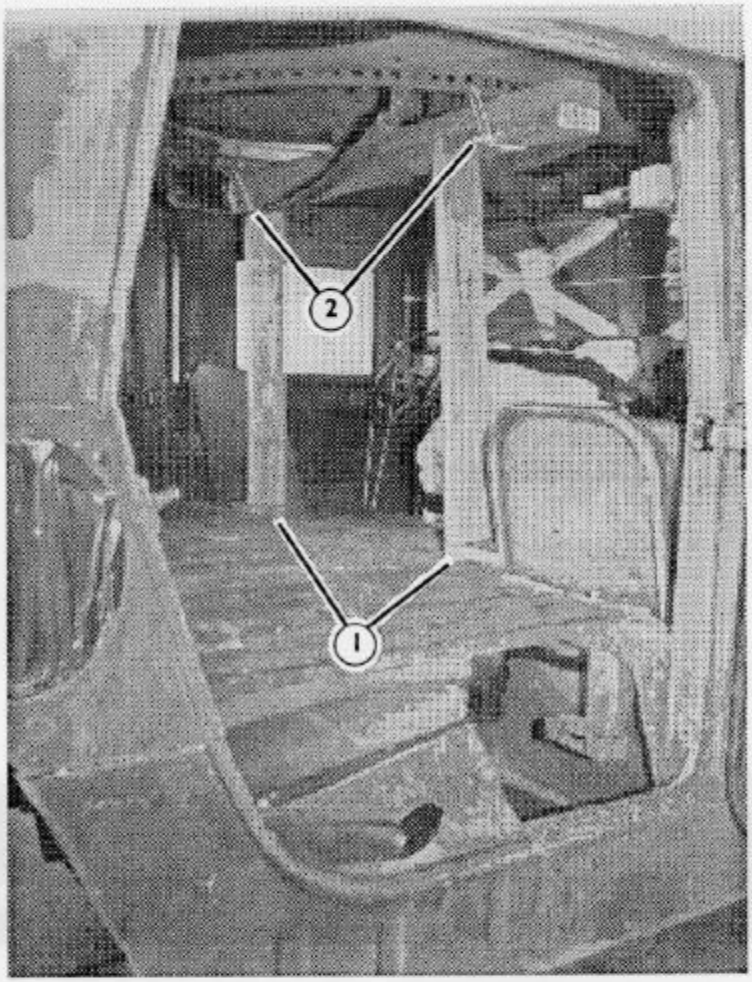
The TDARS is rigged as an accompanying load in the 1 1/4-ton utility truck (HMMWV), M1025 or M1026 Armament Carriers. The TDARS consists of a quadropod antenna, an antenna mast, a transceiver, a generator, two 5-gallon fuel cans, two 5-gallon water cans, a camouflage net, and poles. The TDARS weighs 735 pounds. One box of 105-mm ammunition, or its equivalent in weight, is added in order to meet the minimum weight requirements. The total weight of this accompanying load is 845 pounds. This load is rigged as shown in FM 10-517/TO 13C7-1-111, Chapter 3, Section I, except for the building and placing of the turret support and the accompanying load which is rigged as shown here.

4-2. Building and Placing Turret Support

Build and place the turret support as shown in Figure 4-1.

4-3. Stowing Accompanying Load

Stow the TDARS in the truck as shown in Figures 4-2 through 4-10. The TDARS load must meet the weight requirements for an accompanying load as shown in paragraph 3-5 of FM 10-517/TO 13C7-1-111.

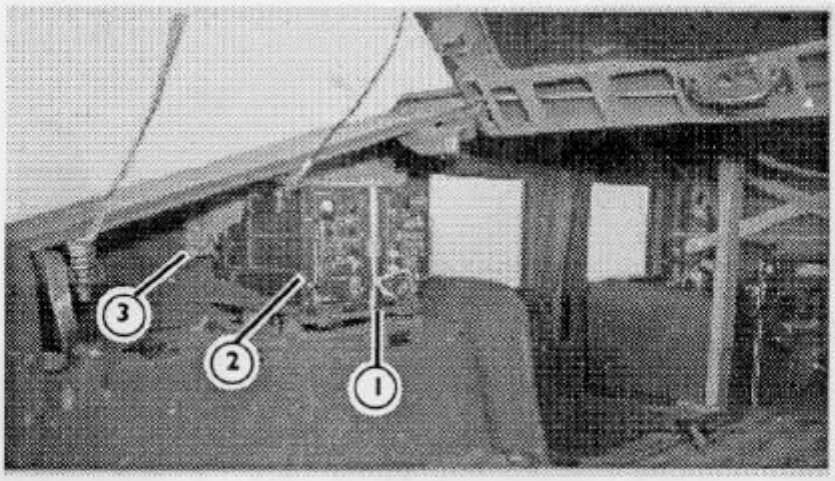


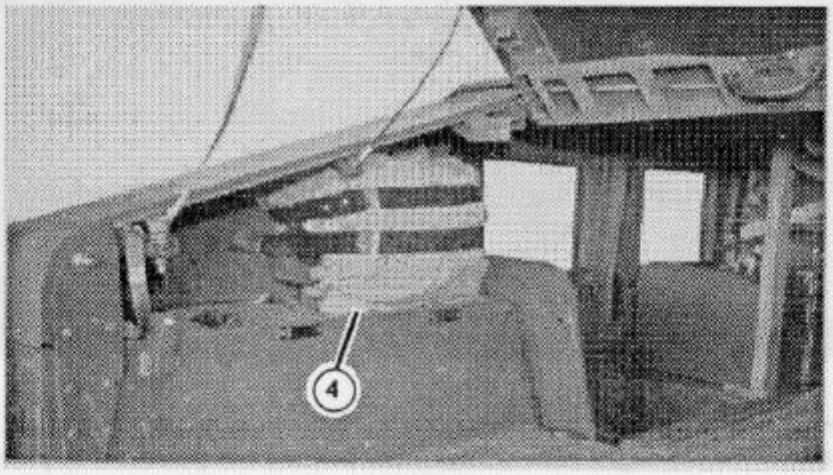
(1) Build the turret support as shown in Figure 3-2 of FM 10-517/TO 13C7-1-111, except replace the two pieces of 1- by 6- by 12-inch lumber with two pieces of 2- by 4- by 4-inch lumber.

NOTE: The 2- by 4- by 4-inch lumber should be nailed in place after positioning the support under the turret.

(2) Center the support under the turret with the front towards the passenger's compartment. Tie the support in place with two lengths of type III nylon cord.

Figure 4-1. Turret support built and placed





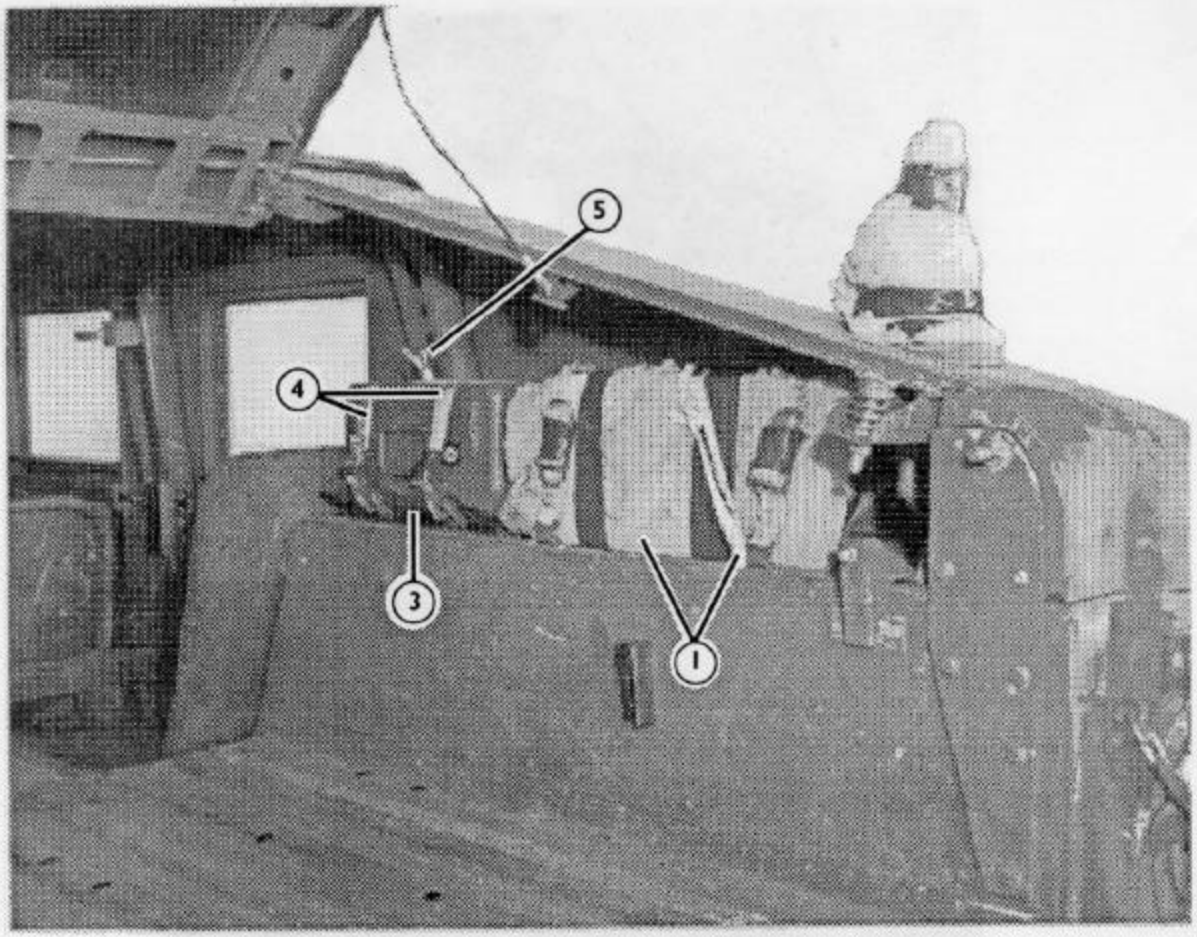
(1) Place a length of 1/2-inch tubular nylon webbing under the radio mount on the left rear wheel well.

(2) Place the transceiver in the radio mount and lock in place with the locking nuts. Safety the transceiver in place with the 1/2-inch tubular nylon webbing placed in step 1.

(3) Place cellulose wadding between the rear of the transceiver and the side of the truck.

(4) Pad the front of the transceiver with cellulose wadding and tape.

Figure 4-2. Transceiver stowed



(1) Wrap the antenna pedestal with cellulose wadding and tape. Place the pedestal on the right rear wheel well. Secure the pedestal in place using the retainer straps, and safety it with a length of 1/2-inch tubular nylon webbing tied to the retainer strap support.

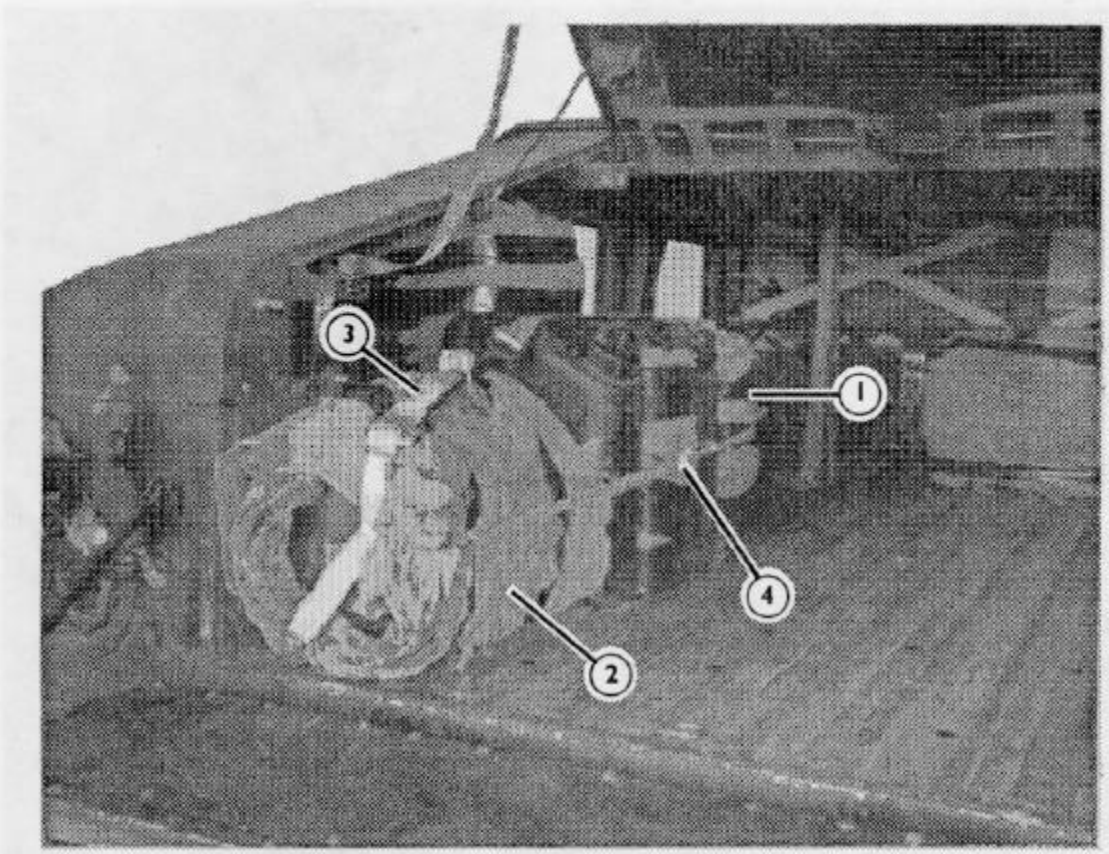
(2) Run a length of 1/2-inch tubular nylon webbing from front to rear under the display unit's support bracket (not shown).

(3) Place two 12- by 12-inch pieces of felt on the support bracket.

(4) Place the display unit on top of the felt and secure it in place with the retainer straps.

(5) Safety the display unit in place with the 1/2-inch tubular nylon webbing positioned in step 2.

Figure 4-3. Antenna pedestal and display unit stowed



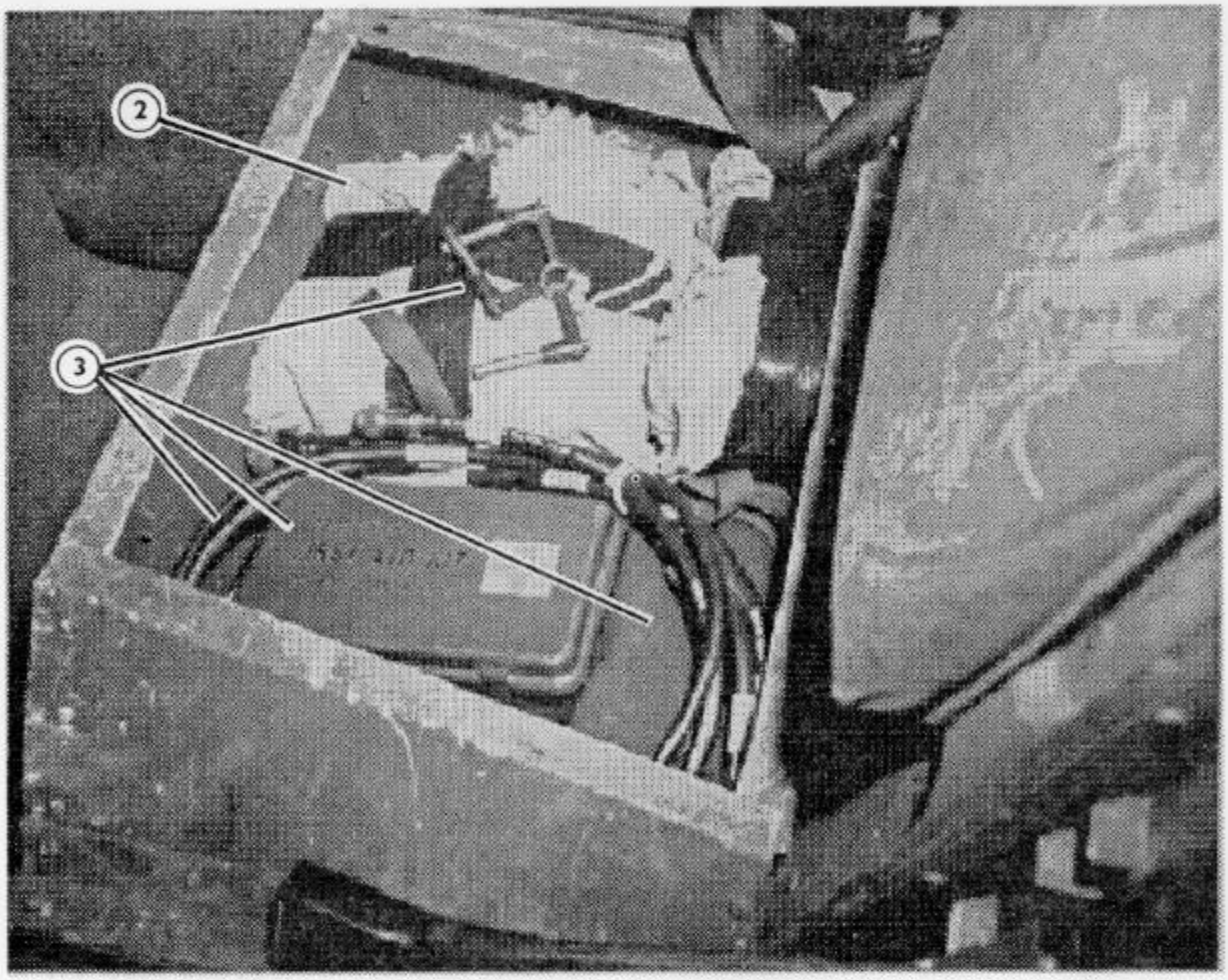
(1) Wrap the sides and bottom of the two fuel cans with cellulose wadding and tape. Place the two fuel cans and the two water cans on the cargo bed next to the left wheel well. Make sure a water can is placed between the two fuel cans.

(2) Wrap the generator with cellulose wadding and tape. Place the generator next to the fuel and water cans.

(3) Secure the cans in place using a 15-foot tie-down assembly. Pass the strap through the rear tie-down ring, through the handles of the cans, and through the center tie-down ring. Fasten the strap with a load binder and D-ring.

(4) Safety the 15-foot tie-down strap in place using a length of 1/2-inch tubular nylon webbing. Tie the 1/2-inch tubular nylon webbing to the strap near the rear tie-down ring, pass it around the front of the cans, and tie it off to the strap near the center tie-down ring.

Figure 4-4. Generator, fuel cans, and water cans stowed



(1) Place the right rear seat back in the down position (not shown).

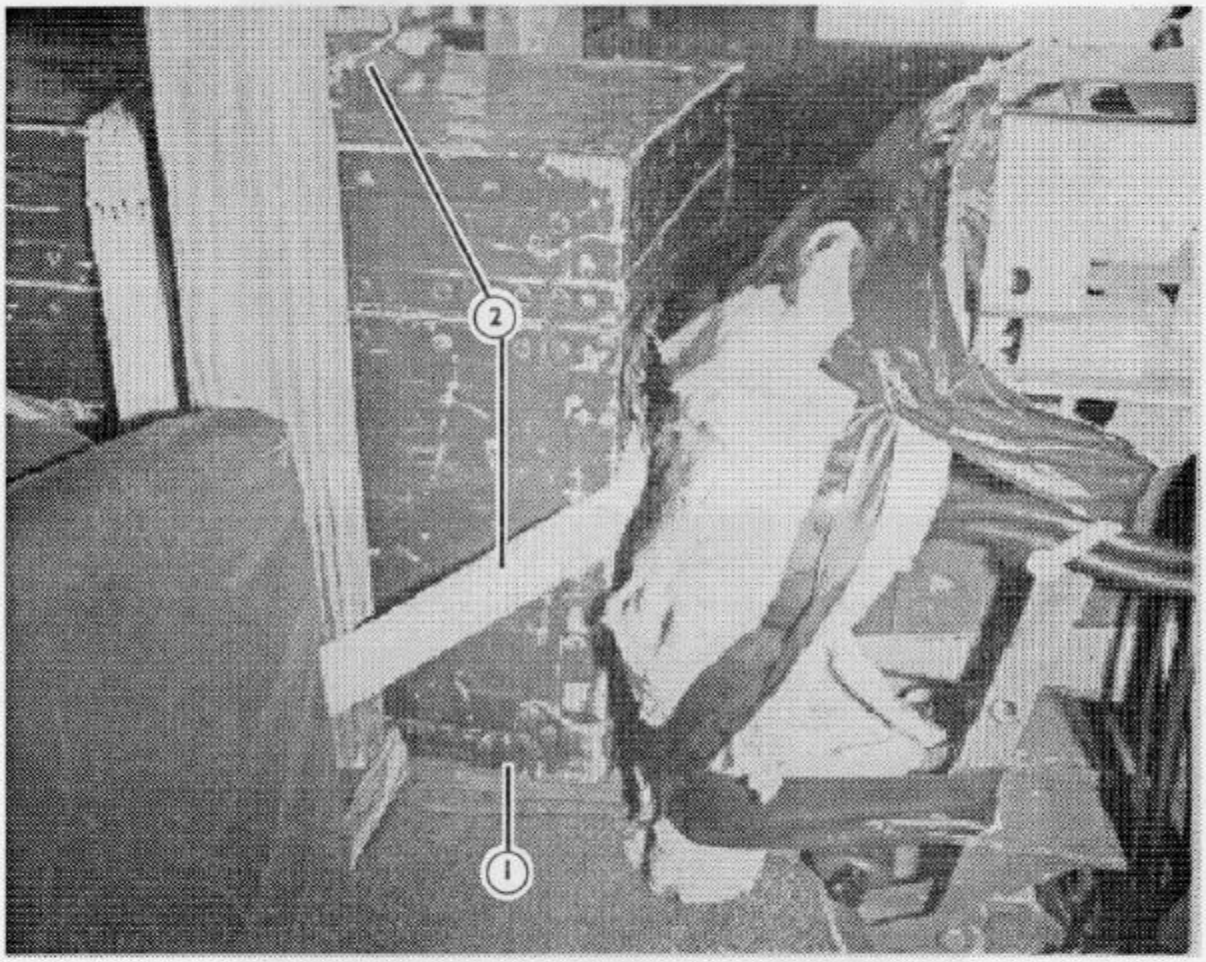
(2) Wrap the antenna mast baseplate, power converter, and remote control with cellulose wadding and tape. Place these items in the compartment under the left rear seat cushion.

NOTE: The antenna mast baseplate cannot be seen in this photograph.

(3) Place the power cables, OVM tools, first aid kit, and locking pins in the compartment.

(4) Fill the empty space of the compartment with cellulose wadding and replace the seat cushion (not shown).

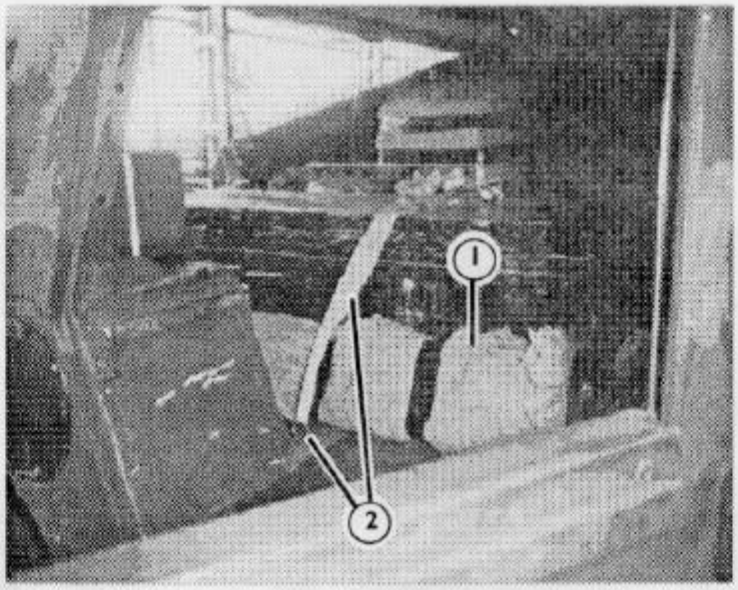
Figure 4-5. Rear seat and various small items stowed

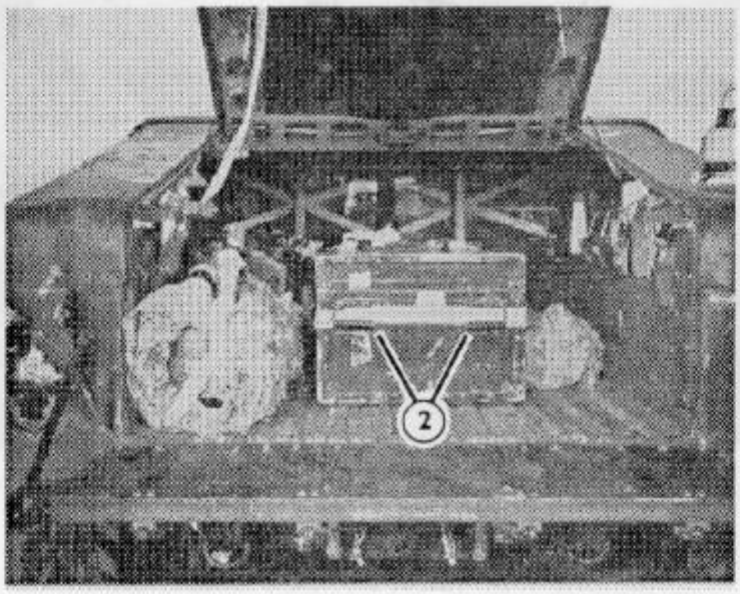


(1) Place the antenna container in the middle of the cargo bed with the forward end between the legs of the turret support.

(2) Pass a 15-foot tie-down lashing through the forward cargo tie-down rings and through the forward handles of the container. Fasten the lashing on top of the container using a D-ring and load binder.

Figure 4-6. Antenna container stowed

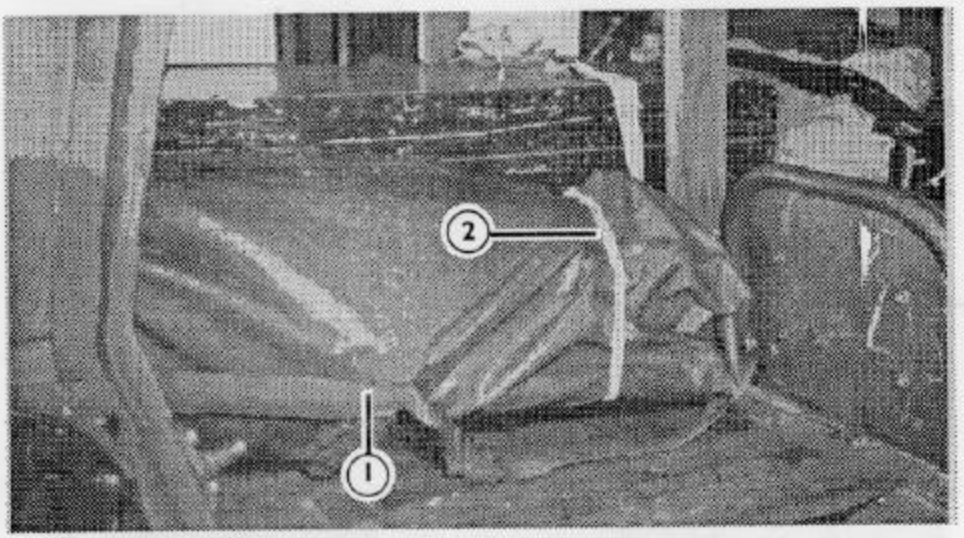


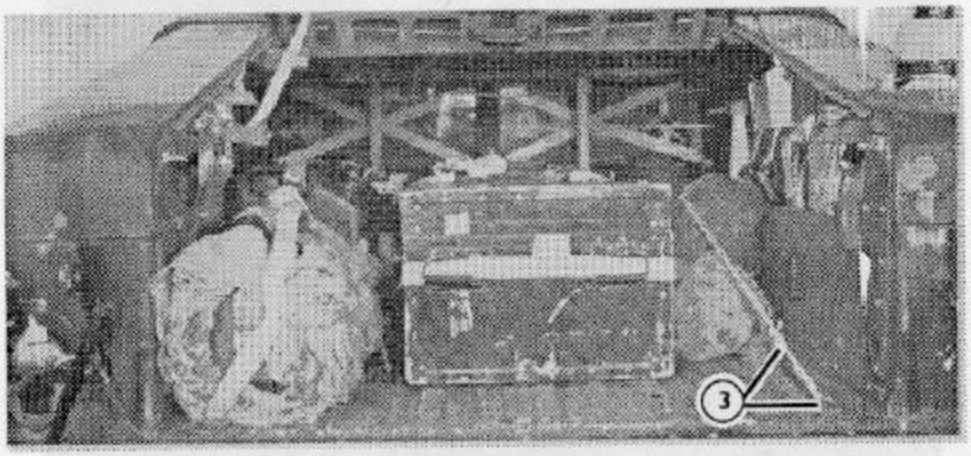


(1) **Wrap the quadropod with cellulose wadding and tape. Place the quadropod along the right side of the antenna container.**

(2) **Pass a 15-foot tie-down lashing through the center cargo tie-down rings and through the rear handles of the container. Fasten the tie-down lashing on top of the container using a D-ring and load binder.**

Figure 4-7. Quadropod stowed



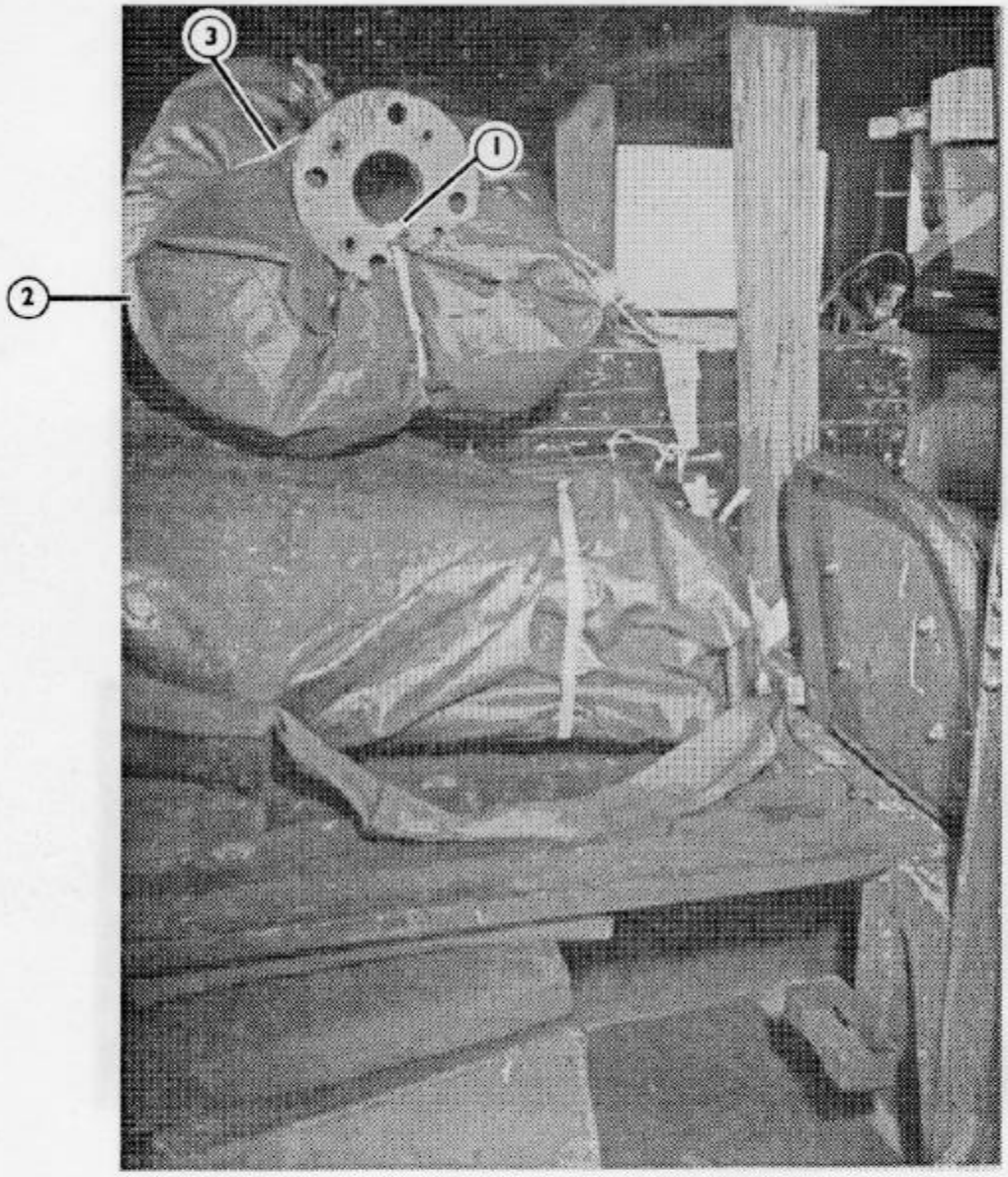


(1) Place the bag of camouflage poles on top of the quadropod.

(2) Using a length of 1/2-inch tubular nylon webbing, tie the forward end of the bag of poles to the quadropod.

(3) Using a length of 1/2-inch tubular nylon webbing, tie the rear end of the bag of poles to the right rear cargo tie-down ring.

Figure 4-8. Camouflage poles stowed

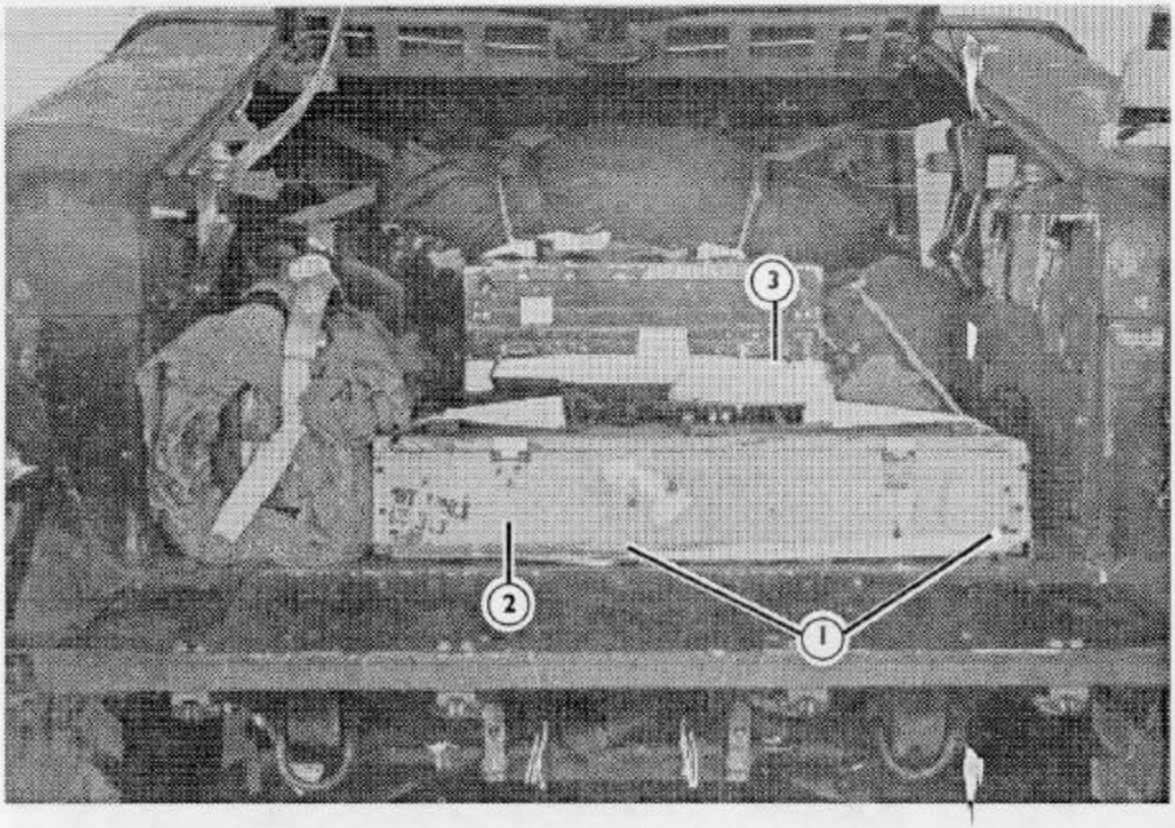


(1) Using 1/2-inch tubular nylon webbing, tie the antenna mast to the camouflage net.

(2) Place the camouflage net with antenna mast on top of the antenna container.

(3) Using type III nylon cord, tie the camouflage net to the 15-foot tie-down lashings that are holding the antenna container in place.

Figure 4-9. Antenna mast and camouflage net stowed



(1) Pass a 15-foot tie-down lashing through the rear center and rear right side tie-down rings.

(2) Place a box of 105-mm ammunition, or a box of similar size and weight, at the rear of the cargo bed.

(3) Pass the pre-positioned tie-down lashing under the box of ammunition and through the handles of the box. Fasten the tie-down lashing on top of the box using a D-ring and load binder.

(4) Close and latch the tailgate (not shown).

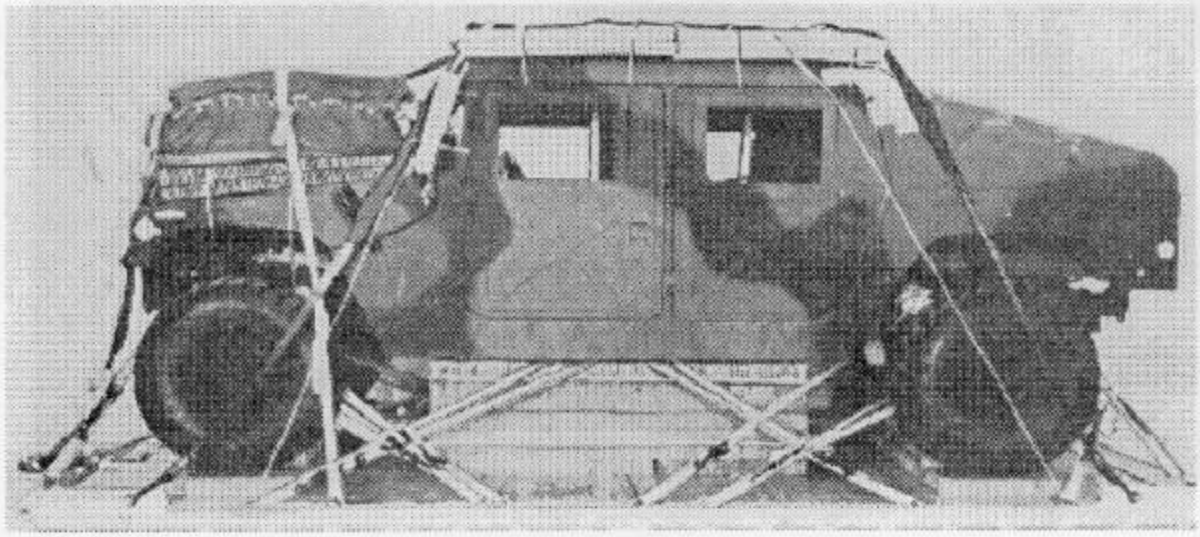
Figure 4-10. Ammunition box stowed

4-4. Marking Rigged Load

Mark the rigged load according to FM 10-500-2/TO 13C7-1-5 and as shown in Figure 4-11. Complete DD Form 1387-2, and securely attach it to the load. Indicate on DD Form 1387-2 that the truck fuel tank and the batteries have 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.

CAUTION

Make the final rigger inspection required by FM 10-500-2/TO 13C7-1-5 before the load leaves the rigging site.



CB

RIGGED LOAD DATA

Weight:	Load shown	9,650 pounds
	Maximum load allowed	10,500 pounds
Height	(with two G-11B parachutes)	91 inches
	(with three G-11A parachutes)	97 inches
Width		108 inches
Length		215 inches
Overhang:	Front	4 1/2 inches
	Rear	19 inches
CB (from front edge of the platform)		93 inches

Figure 4-11. M1025 or M1026 armanent carrier with TDARS rigged for low-velocity airdrop

4-5. Equipment Required

Use the equipment listed in Table 3-1 of FM 10-517/ TO 13C7-1-111, except for the additions or deletion shown in Table 4-1.

Table 4-1. Equipment required for rigging the M1025 or M1026 armanent carriers with TDARS for low-velocity airdrop

National Stock Number	Item	Quantity
	Lumber:	
5510-00-220-6080	1- by 6- by 12-in	2
	Lumber:	
5510-00-220-6146	2- by 4- by 4-in	2
1670-00-937-0271	Tie-down assembly, 15-ft	4

GLOSSARY

AC alternating current
ACB attitude control bar
AFB Air Force base
AFR Air Force regulation
AFTO Air Force technical order
attn attention
CB center of balance
d penny
DA Department of the Army
DC District of Columbia
DD Department of Defense
FM field manual
ft foot/feet
gal gallon
HMMWV high-mobility, multipurpose wheeled vehicle
HQ headquarters
in inch
LAPE low-altitude parachute extraction
lb pound
mm millimeter
no number
NSN national stock number
OVM operator vehicle maintenance
PEFTC extraction force transfer coupling (platform)
Qty quantity
rqr requirement
SL/CS static line/connector strap
TDARS technical defense alert radar system
TM technical manual
TO technical order
TRADOC United States Army Training and Doctrine Command
TSEC telecommunications security
US United States
VA Virginia

REFERENCES

These documents must be available to the intended users of this publication.

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FM 10-517/TO 13C7-1-111. *Airdrop of Supplies and Equipment: Rigging 1 1/4-Ton Utility Truck (HMMWV).* 14 November 1989.

FM 10-518/TO 13C7-3-371. *Airdrop of Supplies and Equipment: Rigging 1/4-Ton Cargo Trailers.* 29 January 1982.

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AFTO Form 22. *Technical Order Publication Improvement Report.* April 1973.

DA Form 2028. *Recommended Changes to Publications and Blank Forms.* February 1974.

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*U.S. Government Printing Office: 1992 — 627-027/60036