

TM 4-48.17  
MCRP 4-11.3M  
TO 13C7-1-111



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## Airdrop of Supplies and Equipment: Rigging High-Mobility Multipurpose Wheeled Vehicles (HMMWV)

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# **Airdrop of Supplies and Equipment: Rigging High-Mobility Multipurpose Wheeled Vehicles (HMMWV)**

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## Preface

TM 4-48.17/MCRP 4-11.3M/TO 13C7-1-111 provides doctrinal guidance and direction for United States Army, United States Marine Corps, and United States Air Force units conducting aerial delivery operations. This manual provides information on how to prepare and rig Forward Area Refueling Equipment (FARE) and Advanced Aviation Forward Area Refueling Systems (AAFARS), and fuel drums. They are rigged for airdrop from a C-130 or C-17 aircraft.

The principal audience for TM 4-48.17/MCRP 4-11.3M/TO 13C7-1-111 is all members of the profession of arms. Commanders and staffs of Army, Marine Corps, and Air Force headquarters serving as joint task force or multinational headquarters should also refer to applicable joint or multinational doctrine concerning the range of military operations and joint or multinational forces. Trainers and educators throughout the Army, Marine Corps, and Air Force will also use this publication.

Commanders, staffs, and subordinates ensure that their decisions and actions comply with applicable United States, international, and in some cases host-nation laws and regulations. Commanders at all levels ensure that their Soldiers, Marines, and Airmen operate in accordance with the law of war and the rules of engagement. (See FM 27-10).

TM 4-48.17/MCRP 4-11.3M/TO 13C7-1-111 does not implement any STANAGs.

TM 4-48.17/MCRP 4-11.3M/TO 13C7-1-111 uses joint terms where applicable. Selected joint and Army terms and definitions appear in both the glossary and the text. Terms for which TM 4-48.17/MCRP 4-11.3M/TO 13C7-1-111 is the proponent publication (the authority) are italicized in the text and marked with an asterisk (\*) in the glossary. Terms and definitions for which TM 4-48.17/MCRP 4-11.3M/TO 13C7-1-111 is the proponent publication are boldfaced in the text. For other definitions shown in the text, the term is italicized and the number of the proponent publication follows the definition.

TM 4-48.17/MCRP 4-11.3M/TO 13C7-1-111 applies to the Active Army, Army National Guard/Army National Guard of the United States, United States Army Reserve, the total force Marine Corps and Air Force unless otherwise stated.

The proponent of TM 4-48.17/MCRP 4-11.3M/TO 13C7-1-111 is the United States Army Quartermaster School. The preparing agency is the G-3 Doctrine Division, USACASCOM. Send comments and recommendations on DA Form 2028 (Recommended Changes to Publications and Blank Forms) to Commander, United States Army Combined Arms Support Command and Fort Lee, ATTN: ATCL-TS, 2221 A Avenue, Fort Lee, Virginia 23801 or submit an electronic DA Form 2028 by e-mail to: [usarmy.lee.tradoc.mbx.lee-cascom-doctrine@mail.mil](mailto:usarmy.lee.tradoc.mbx.lee-cascom-doctrine@mail.mil). In addition to submission of DA Form 2028, provide same comments and recommendations in MilWiki for rapid dissemination to doctrine authors and for universal review at <https://www.milsuite.mil>.

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# Introduction

Publication of TM 4-48.17/MCRP 4-11.3M/TO 13C7-1-111 (FM 10-500-23/TO 13C7-14-461; FM 4-20.117(FM 10-517)/MCRP 4-11.3M/TO 13C7-1-111; FM 4-20.166 (FM 10-500-66)/TO 13C7-25-71) *Airdrop of Supplies and Equipment: Rigging High-Mobility Multipurpose Wheeled Vehicles (HMMWV)* supersedes FM 10-500-23/TO 13C7-14-461 *Airdrop of Supplies and Equipment: Rigging Communication Vehicles* 31 Aug 1999 and FM 4-20.117(FM 10-517)/MCRP 4-11.3M/TO 13C7-1-111 *Airdrop of Supplies and Equipment: Rigging High-Mobility Multipurpose Wheeled Vehicles (HMMWV)* 1 October 2001 (RAR Change 1, 22 July 2005) and FM 4-20.166 (FM 10-500-66)/TO 13C7-25-71 *Airdrop of Supplies and Equipment: Rigging 2- and 4-Litter Ambulance* 30 May 2006. The grouping of the manuals has produced excess multi-service publication numbers. A single multi-service publication number will be retained on the new manual and the following remainder multi-service publication numbers will not be required/used: (TO 13C7-14-461; TO 13C7-25-71).

This revision to the TM publishing medium/nomenclature has been accomplished to comply with U.S. Army TRADOC doctrine restructuring requirements. The title is slightly changed and the content of the manual(s) is not identical to that of the superseded manual(s). There has been some change to procedural content in the main body. This special revision does not integrate any changes in Army doctrine since 31 Aug 1999/1 October 2001 (RAR Change 1, 22 July 2005)/30 May 2006 and does alter the publication's original references. For the status of official Department of the Army (DA) publications, consult DA Pam 25-30, Consolidated Index of Army Publications and Blank Forms, at <http://armypubs.army.mil/2530.html>. DA Pam 25-30 is updated as new and revised publications, as well as changes to publications are published. For the content/availability of specific subject matter, contact the appropriate proponent.

## DESCRIPTION OF ITEMS

- The HMMWV-series trucks that can be rigged using the procedures in the manual are listed below.
- **M996 Ambulance:** The M996, 2-litter, armored ambulance weighs 7,180 pounds with the fuel tank no more than  $\frac{3}{4}$  full. The vehicle is 203 inches long, 87 inches high, and 86 inches wide. The body configuration makes other uses of this vehicle possible, such as specialized communication or command and control functions.
- **M966 Tube Launched Optically Tracked Wire To Command Linked Guided Missile Set (TOW) Carriers, Armored.** The M966 truck weighs 6,051 pounds. Its length is 180 inches and its width is 85 inches. Its reduced height is 74 inches.
- The M966A1 truck weighs 6,231 pounds. Its length is 180 inches and its width is 86 inches. Its reduced height is 74 inches.
- **M997 Ambulance:** The M997 4-litter ambulance weighs 7,880 pounds with the fuel tank no more than  $\frac{3}{4}$  full. The vehicle is 204 inches long, 99 inches high and 85 inches wide. The height restricts this load to the C-17 aircraft only.
- **M998 Cargo/Troop Carriers.** The M998 truck weighs 5,200 pounds. It is 180 inches long and 85 inches wide. The reduced height of the truck is 54 inches.
- The M998A1 truck weighs 5,380 pounds. Its length is 180 inches and its width is 86 inches. The reduced height is 56 inches.
- **M998 Cargo/Troop Carrier (Two Seater) with GRC/206 Air Force Pallet.** The M998 two seater is rigged with radio equipment GRC/206 Air Force pallet.
- **M998 Cargo/Troop Carrier (Four Seater) with GRC/206 (Air Force Pallet.** The M998 four seater is rigged with radio equipment GRC/206 Air Force pallet
- **M1121 TOW Carrier, Armored.** The M1121 truck weighs 7,900 pounds. Its length is 180 inches and its width is 85 inches. Its reduced height is 74 inches.

- **M1025 Armament Carriers, Armored.** The M1025 truck weighs 5,960 pounds. Its 180 inches long and 85 inches wide. The reduced height of the truck is 74 inches.
- The M1025A1 truck weighs 6,140 pounds. Its length is 180 inches and its width is 86 inches. Its reduced height is 74 inches.
- The M1025A2 truck weighs 6,780 pounds. Its length is 191 inches and its width is 86 inches. Its reduced height is 74 inches.
- **The M1025A2 Armament Carrier (Modified), With Winch.** This is NOT the same carrier as the M1025A2. External and internal modifications have been made to support special operations. The M1025A2 (modified) carrier weighs 7,020 pounds. Its length is 191 inches and its width is 86 inches.
- The Ground Mobility Vehicle is a modified M1025. It has a winch, a rigid roof, and a turret to support weapons. It is rigged the same as the M998 truck except as noted. The truck is configured to carry a special operations load.
- **The M1026 Armament Carriers, With Winch.** The M1026 truck weighs 6,087 pounds. Its length is 186 inches and its width is 85 inches. Its reduced height is 74 inches.
- The M1026A1 truck weighs 6,267 pounds. Its length is 186 inches and its width is 86 inches. Its reduced height is 74 inches.
- **The M1026 Armament Carrier (Modified).** This is NOT the same carrier as the M1026. External and internal modifications have been made to support special operations. The M1026 (modified) carrier weighs 6,087 pounds. Its length is 185 inches and its width is 85 inches. The reduced height is 69 inches.
- **M1036 TOW Carrier, Armored With Winch.** The M1036 truck weighs 6,178 pounds. Its length is 186 inches and its width is 85 inches. Its reduced height is 74 inches.
- **M1037 S250 Shelter Carrier.** The M1037 truck weighs 5,425 pounds. Its 191 inches long and 85 inches wide. The reduced height, without the shelter, is 74 inches.
- **M1037 S250 Cargo/Troop Carrier (Modified), With Winch.** . This is NOT the same carrier as the M1037. External and internal modifications have been made to support artillery operations. The M1037 (modified) is 185 inches long and is 85 inches long. The reduced height of the truck is 70 inches.
- **M1038 Cargo/Troop Carriers With Winch.** The M1038 truck weighs 5,327 pounds. It is 186 inches long and 85 inches wide. The reduced height of the truck is 54 inches.
- The M1038A2 truck weighs 5,507 pounds. Its length is 186 inches and its width is 86 inches. The reduced height is 56 inches.
- **M1042 S250 Shelter Carrier, With Winch.** The M1042 truck weighs 5,521 pounds. Its 197 inches long and 85 inches wide. The reduced height, without the shelter, is 54 inches.
- **M1043 Armament Carriers, With Supplemental Armor.** The M1043 truck weighs 6,411 pounds. Its 180 inches long and 85 inches wide. The reduced height of the truck is 74 inches.
- The M1043A1 truck weighs 6,591 pounds. Its 180 inches long and 86 inches wide. The reduced height of the truck is 74 inches.
- The M1043A2 truck weighs 7,320 pounds. Its 191 inches long and 86 inches wide. The reduced height of the truck is 74 inches.
- **M1044 Armament Carriers, With Supplemental Armor and Winch.** The M1044 truck weighs 6,411 pounds. Its 186 inches long and 85 inches wide. The reduced height of the truck is 74 inches.
- The M1044A1 truck weighs 6,718 pounds. Its 186 inches long and 86 inches wide. The reduced height of the truck is 74 inches.
- **M1045 Armament Carriers, With Supplemental Armor.** The M1045 truck weighs 6,438 pounds. Its 180 inches long and 85 inches wide. The reduced height of the truck is 74 inches.
- The M1045A1 truck weighs 6,618 pounds. Its 180 inches long and 86 inches wide. The reduced height of the truck is 74 inches.

- The M1045A2 truck weighs 7,258 pounds. Its 191 inches long and 86 inches wide. The reduced height of the truck is 74 inches.
- **M1046 TOW Carriers, With Supplemental Armor and Winch.** The M1046 truck weighs 6,565 pounds. Its 186 inches long and 85 inches wide. The reduced height of the truck is 74 inches.
- The M1046A1 truck weighs 6,745 pounds. Its 186 inches long and 86 inches wide. The reduced height of the truck is 74 inches.
- **M1097 Truck, Utility, Heavy Variant.** The M1097 truck weighs 5,600 pounds. Its 191 inches long and 86 inches wide. The reduced height of the truck is 54 inches.
- M1097A1 truck weighs 5,600 pounds. Its 191 inches long and 86 inches wide. The reduced height of the truck is 56 inches.
- M1097A2 truck weighs 5,900 pounds. Its 191 inches long and 86 inches wide. The reduced height of the truck is 56 inches. This truck may have a winch.
- **M1113 Truck, Utility, Expanded Capacity.** The M1113 truck weighs 6,190 pounds. It is 197 inches long and 86 inches wide. The reduced height of the truck is 56 inches. This truck may have a winch.
- **M1114 Armament Carrier Expanded Capacity, Up-Armored, With Winch.** The M1114 truck weighs 9,800 pounds. It is 197 inches long and 86 inches wide. The reduced height of the truck is 74 inches.
- **M1151 Armament Carrier Expanded Capacity.** The M1151 truck weighs 7,300 pounds. It is 193½ inches long and 86 inches wide. The reduced height of the truck is 77 inches.
- **M1151A1 Armament Carrier Expanded Capacity.** The M1151A1 is fitted with B2 armor kit, long range advanced scout surveillance system (LRAS3) and new doors.
- **M1165A1 General Purpose Vehicle.** The M1165A1 is fitted B3 Armor Kit, and is used as a Armored Command and Control.
- **M1167 Expanded Capacity Vehicle for the Tube Launched, Optically Tracked, Wire Command Data Link Guided TOW Missile Carrier.** The vehicle has a improved target acquisition system (ITAS) and an integrated armor package (IAP) , which includes underbody and rocker armor, lower windscreen deflective armor and a TOW gunner's protection kit (TGPK).

## SPECIAL CONSIDERATIONS

- Special considerations for this manual are given below.
- The loads covered in this manual may include hazardous materials as defined in AFMAN 24-204(I)/TM 38-250/NAVSUP PUB 505/MCO P403019J/DLAI 4145.3.. If included, the hazardous materials must be packaged, marked, and labeled as required by AFMAN 24-204(I) INTERSERVICE TM 38-250/NAVSUP PUB 505/MCO P403019J/DLAI 4145.3, *Preparing Hazardous Materials for Military Shipments*.

### CAUTION

Only ammunition listed in TM 4-48.16 (FM 4-20.153)/MCRP 4-11.3B/TO 13C7-18-41 may be airdropped.

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

**CAUTION**

The load weight may vary from the loads shown. Be sure that each load weight, parachute requirements, center of balance (CB), lashing effectiveness, and tip-off curve computed according to TM 4-48.02 (FM 4-20.102))/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO13C7-1-5

## Chapter 1

# Rigging 1 1/4-Ton HMMWV Soft-Top Trucks For Low-Velocity Airdrop

## DESCRIPTION OF LOAD

1-1. The unrigged M998 cargo/troop carrier (Figure 1-1) is described in Introduction. The HMMWV truck is rigged on a 16-foot type V platform for low-velocity airdrop. An accompanying load weighing a minimum of 800 pounds and a maximum of 2,000 pounds (2,500 pounds for the M1037 modified HMMWV, M1042, M1097, M1097A1, and M1097A2) must be rigged in the truck. The load requires two G-11 cargo parachutes. The following trucks can be rigged using the procedures given in this chapter: M998A1, M1038 and M1038A1, M1037 and M1037 modified, M1042, M1097, M1097A1, and M1097A2.

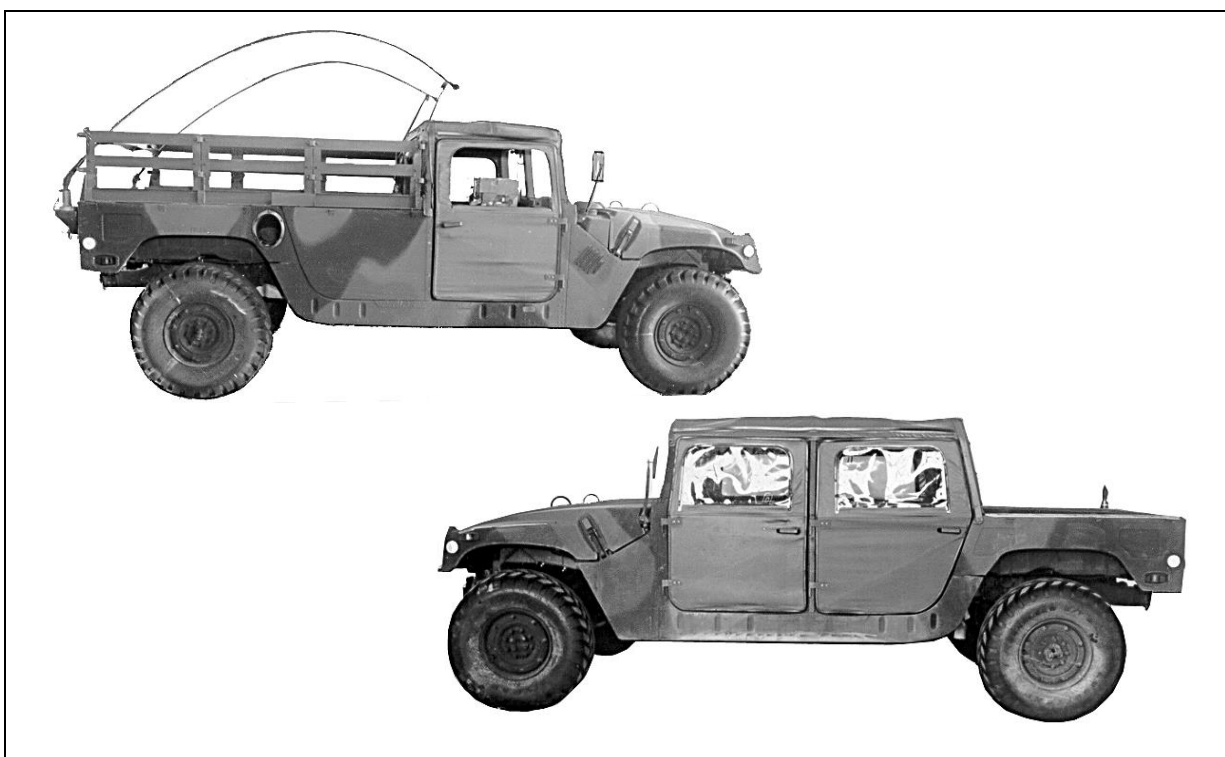
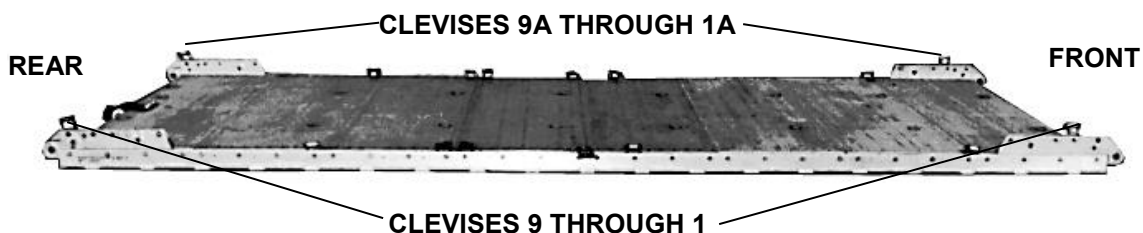


Figure 1-1. M998 Cargo Troop Carrier

## PREPARING PLATFORM

1-2. Prepare a 16-foot, type V airdrop platform according to TM 10-1670-268-20&P/TO 13C7-52-22. Install tandem links and platform clevises according to TM 4-48.02 (FM 4-20.102))/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figure 1-2.



### Step:

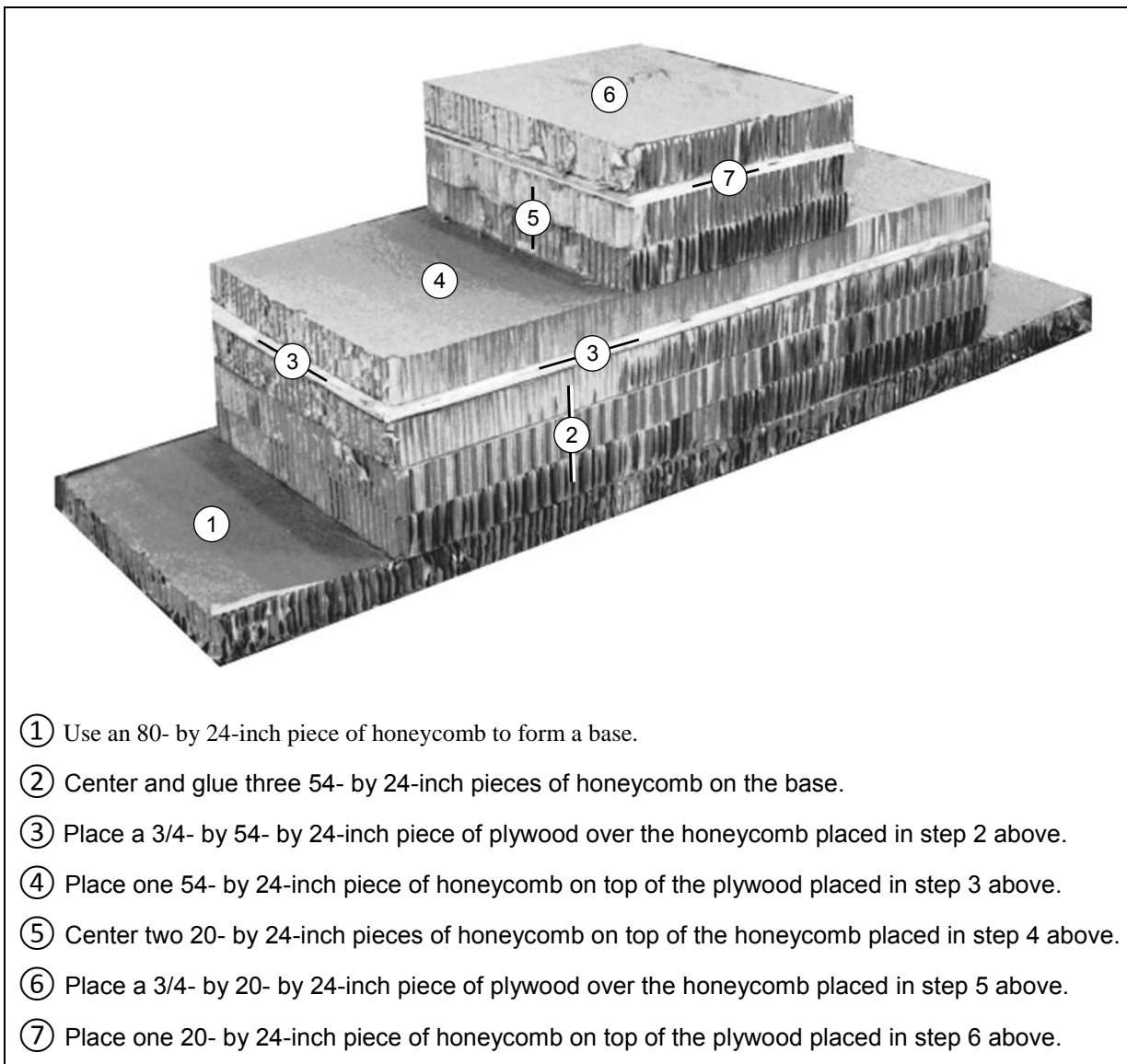
1. Inspect, or assemble and inspect, a 16-foot, type V platform as outlined in TM 10-1670-268-20&P/TO 13C7-52-22.
2. Install a tandem link assembly to the front of each platform side rail using holes 1, 2, and 3.
3. Install a tandem link assembly on the rear of each platform side rail using holes 30, 31, and 32.
4. Install a clevis on bushing 2 of each front tandem link.
5. Install a clevis on bushing 4 of each rear tandem link.
6. Starting at the front of each platform side rail, install clevises on the bushings bolted to holes 5, 15, 17(double) 17A(triple), 20, 21, and 25.
7. Starting at the front of the platform, number the clevises bolted to the right side of the platform from 1 through 9, and those bolted to the left side from 1A through 9A. Number the clevises bolted to the 17<sup>th</sup> bushing 4 and 5. Number the triple clevises bolted to the 17A bushing 4A and 5A.
8. Label the tiedown rings according to TM 4-48.02 (FM 4-20.102))/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.

**Figure 1-2. Platform Prepared**



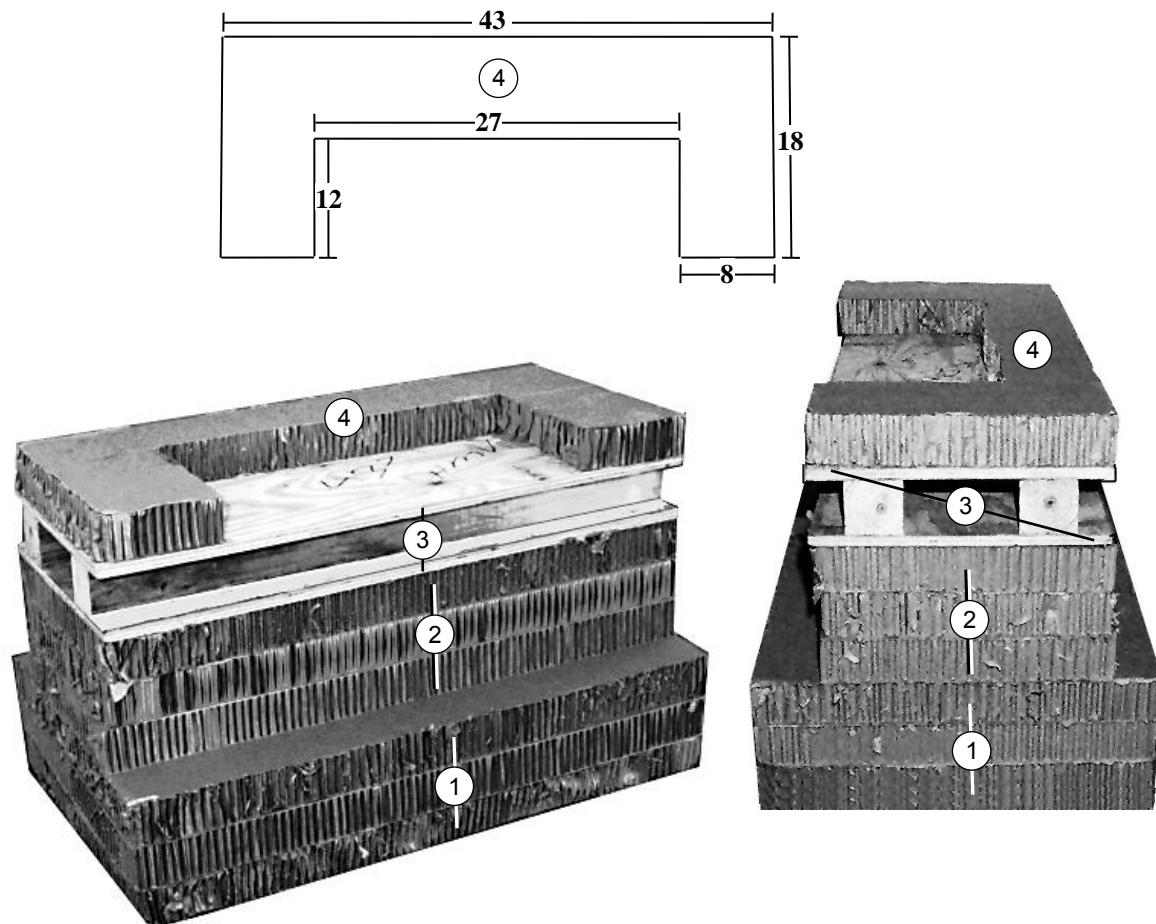
## PREPARING AND POSITIONING HONEYCOMB STACKS

1-3. Build the honeycomb stacks as shown in Figures 1-3 and 1-4. Position the stacks on the platform as shown in Figure 1-5.



**Figure 1-3. Stack 1 and 3 Prepared**

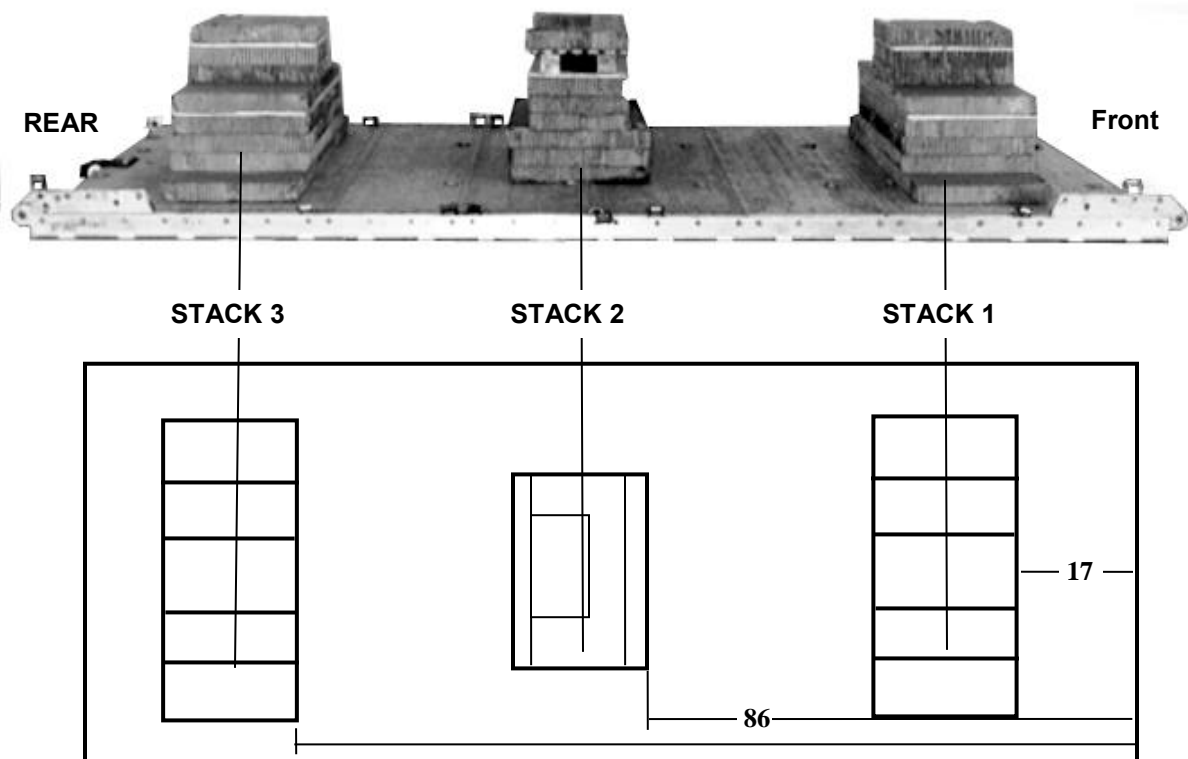
- Notes.** 1. All measurements are given in inches.  
2. This drawing is not drawn to scale.



- ① Glue three 43- by 26-inch pieces of honeycomb flush together to form a base.
- ② Center and glue three 43- by 18-inch pieces of honeycomb flush on the base.
- ③ Nail a 43-inch piece of 4- by 4-inch lumber parallel to each long side and 1 ½ inches from each long edge of a ¾- by 43- by 18 inch piece of plywood. Nail a second ¾- by 43- by 18-inch piece of plywood to the lumber and flush with the bottom piece of plywood. Glue the wooden section of the stack flush on the honeycomb placed in step 2 above.
- ④ Make the cutout as shown in a 43- by 18-inch piece of honeycomb. Glue the honeycomb flush over the plywood.

**Figure 1-4. Stack 2 Prepared**

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

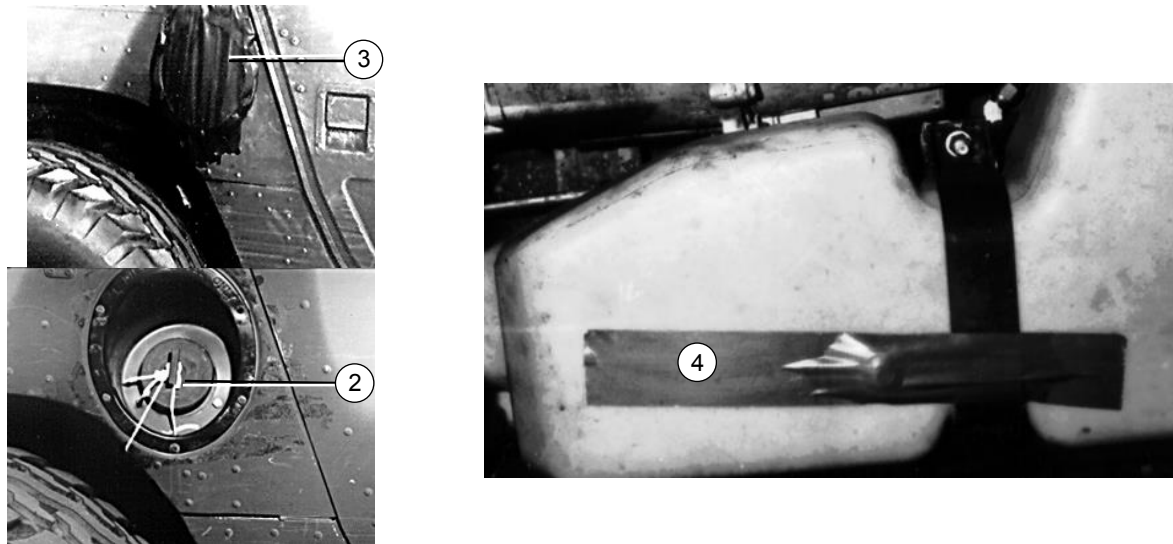


<i>Stack Number</i>	<i>Position on Platform</i>
1	Place stack: Centered 17 inches from the front edge of the platform.
2	Centered 86 inches from the front edge of the platform.
3	Centered 147 inches from the front edge of the platform.

**Figure 1-5. Honeycomb Stacks Positioned on Platform**

## PREPARING THE TRUCK

1-4. Prepare the vehicle as shown in Figure 1-6 through Figure 1-12.



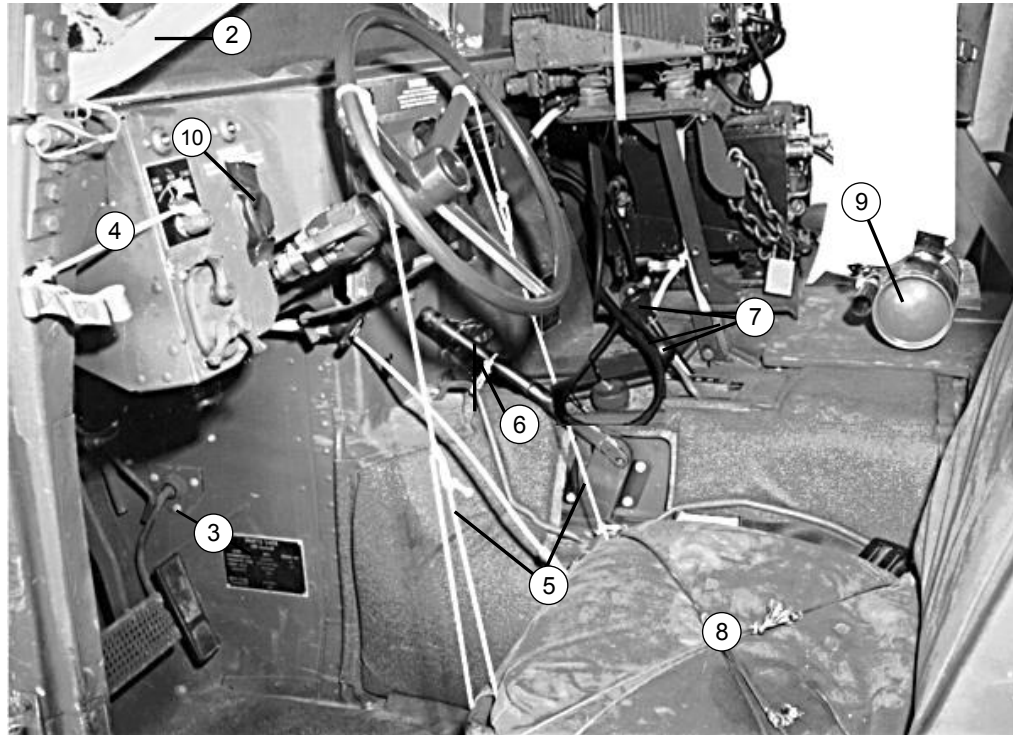
① Prepare the fuel tank IAW AFMAN INTERSERVICE 24-204(I)/TM 38-250/NAVSUP PUB 505/MCO P4030.19I/DLAI 4145.3.

### CAUTION

A full fuel tank does not allow for fuel expansion, and is a danger to aircraft and crew.

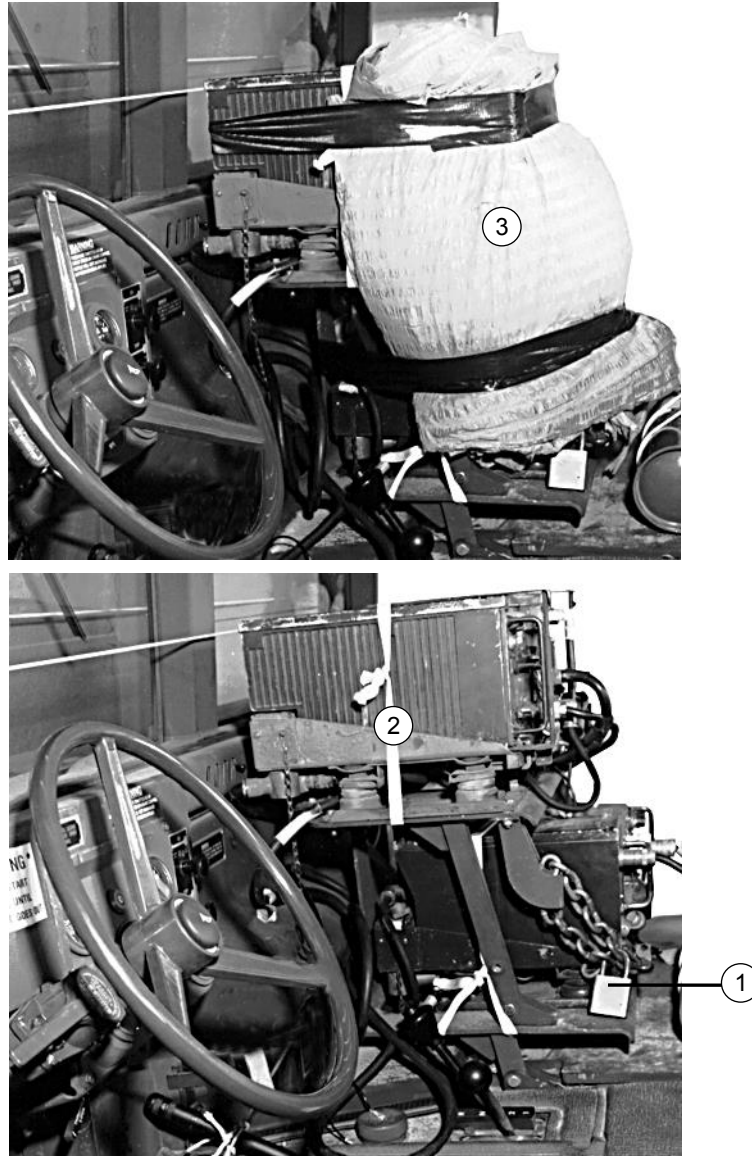
- ② Tie the fuel filler cap to the body of the truck with type III nylon cord.
- ③ Tape the fuel filler opening.
- ④ Place a piece of 12 inch cloth-backed tape over the fuel tank drain plug.
- ⑤ Make sure the batteries and battery compartment comply with AFMAN 24-204(I)/TM 38-250/NAVSUP PUB 505/MCO P4030.19I/DLAI 4145.3. (not shown)
- ⑥ Stow the truck on-vehicular equipment according to TM 9-2320-280-10/TO 36A12-1A-2091-1/TM 2320-10/6. (not shown)

**Figure 1-6. Fuel, Fuel Tank Filler Cap and Opening and Batteries Prepared**



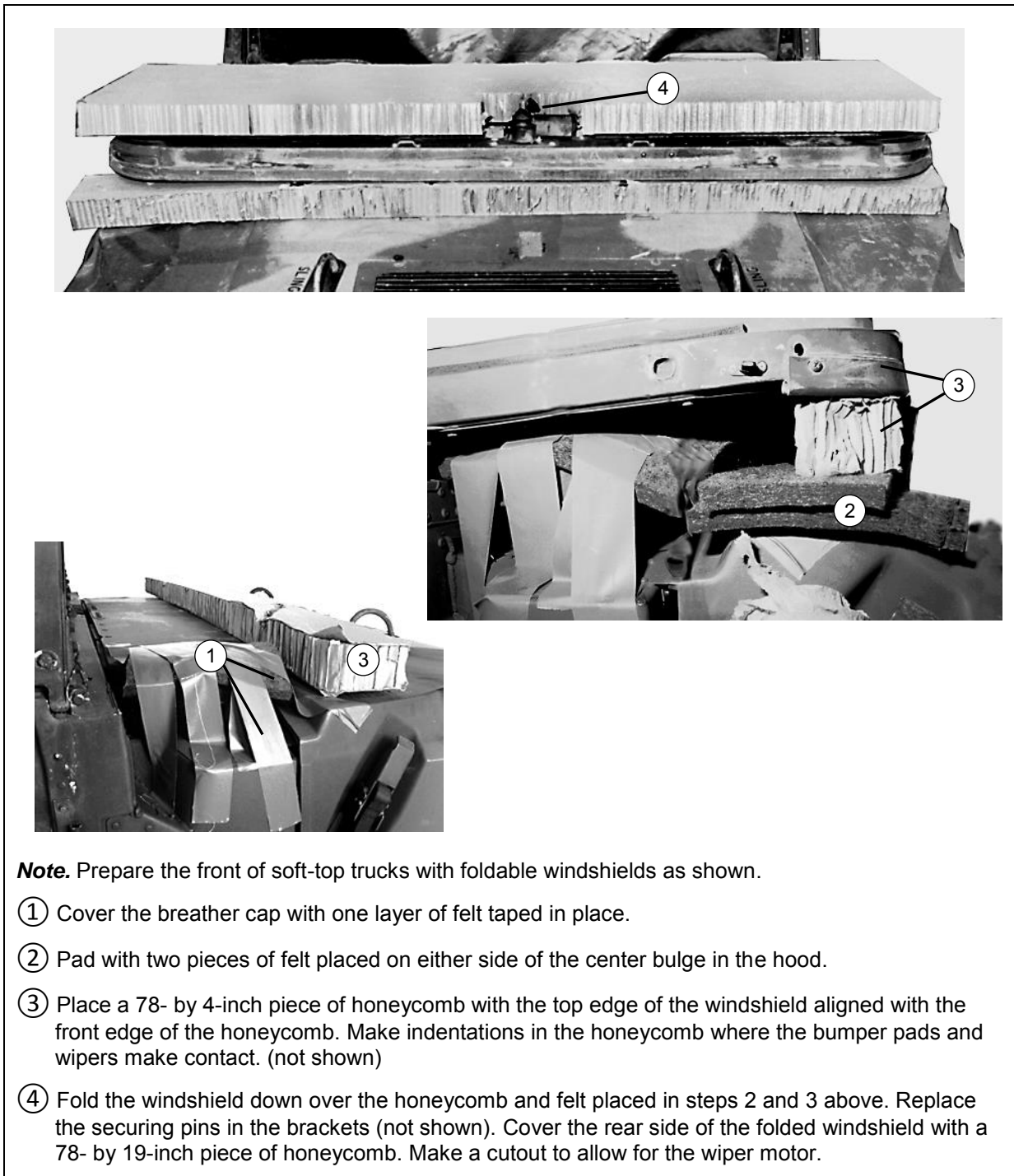
- ① Remove all doors, covers, and supporting bows. (not shown)
- ② Tape the windshield glass on both sides in an X.
- ③ Remove and pad the mirrors. Secure them under the driver's seat with type III nylon cord. (not shown)
- ④ Tie the engine start switch in the engine stop position with type I, 1/4-inch cotton webbing.
- ⑤ Tie the steering wheel to the seat frame in two places with type III nylon cord, or use the retractable steering wheel locking cable. If the locking cable is used, secure it to the steering wheel with type III nylon cord, not a padlock. (not shown)
- ⑥ Tie the emergency brake handle in the off position with type III nylon cord.
- ⑦ Place the transmission and four-wheel drive levers in the neutral position.
- ⑧ Tie the seat cushions to the seat frames with type III nylon cord. Fold the passenger seats in four-door trucks and secure them with the pins provided.
- ⑨ Tie the fire extinguisher in place with two lengths of type III nylon cord.
- ⑩ Tape all instrument panel gauges.

**Figure 1-7. Cab Prepared**



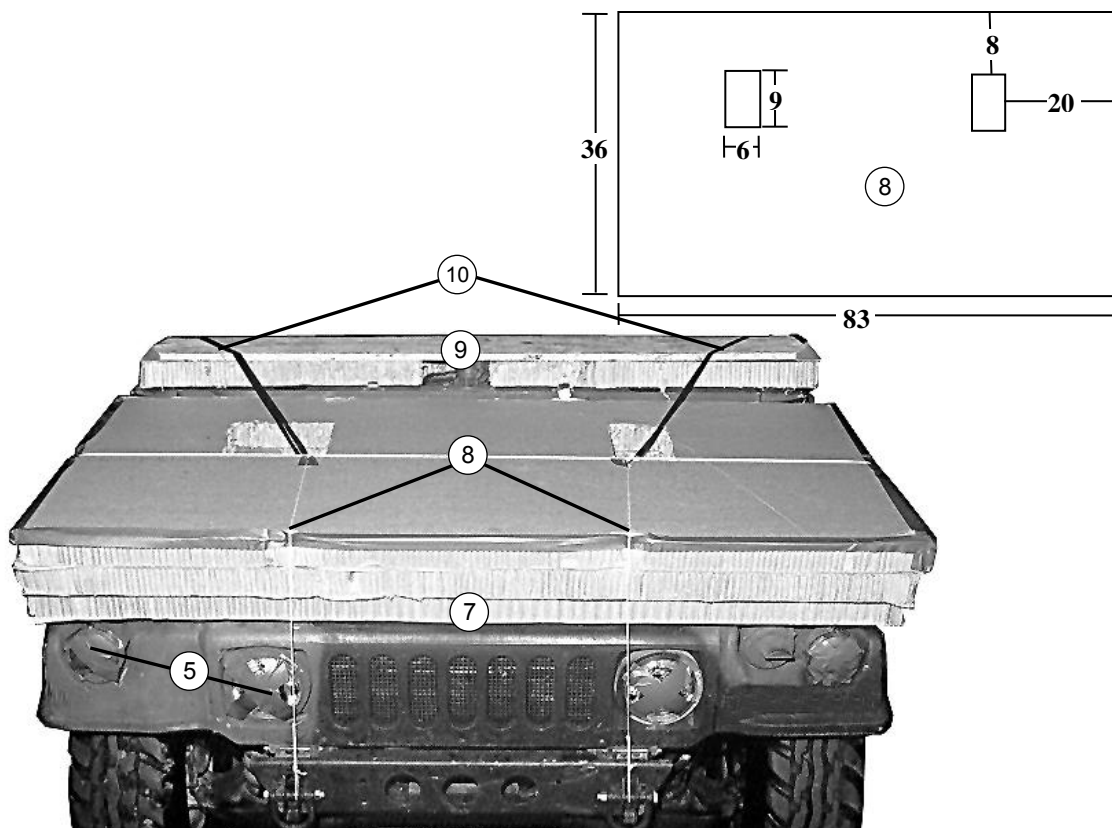
- ① Secure communications equipment in its mount with chains and padlocks.
- ② Tie the equipment to its mount with 1-inch tubular nylon webbing. Pad the radio handset with cellulose wadding and tie the handset to the mount with type III nylon cord (not shown).
- ③ Remove antennas, pad and tape the ends and secure the antennas to the roofs interior above the interior cab doors with type III nylon cord. (not shown)

**Figure 1-8. Communications Equipment Secured and Prepared**



**Figure 1-9. Front of the Truck Prepared**

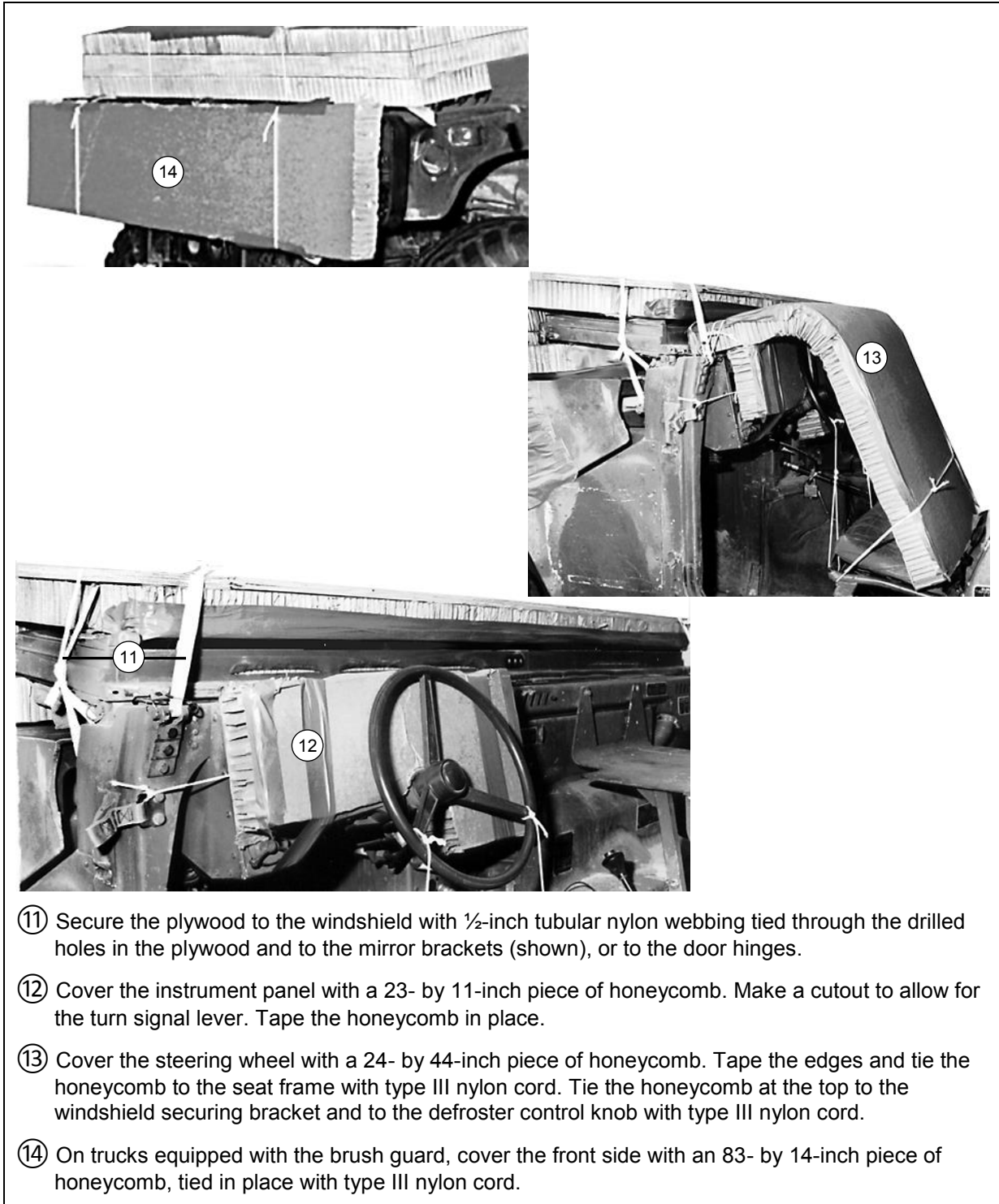
- Notes.** 1. All measurements are given in inches.  
2. This drawing is not drawn to scale.



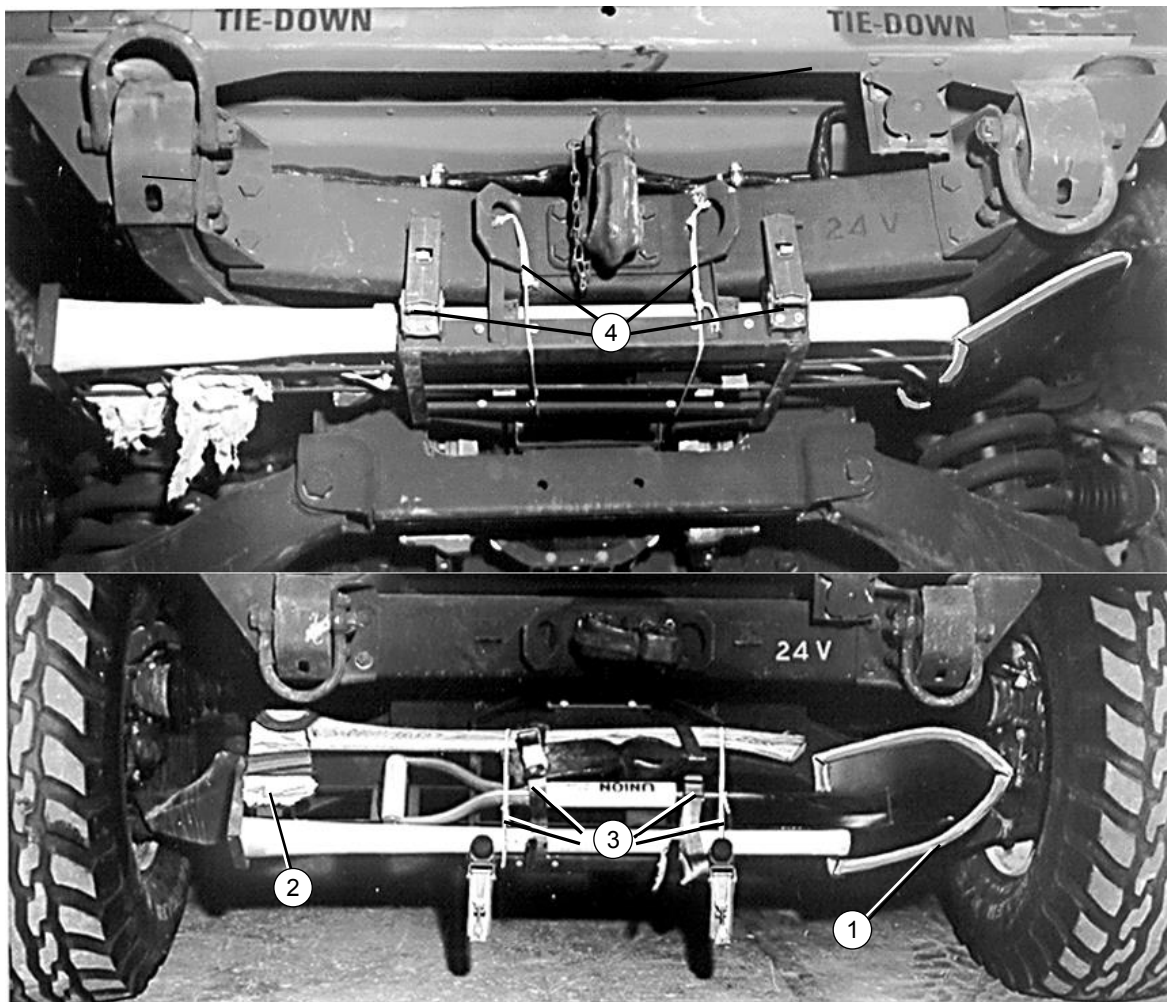
- ⑤ Tape all lights and reflectors. Tape the hood latches.
- ⑥ On trucks with a brush guard, place a 83- by 14-inch piece of honeycomb in front of the brush guard and secure it in place with type III nylon cord. (not shown)
- ⑦ Center a 78- by 4-inch piece of honeycomb along the front edge of the hood.
- ⑧ Place two 83- by 36-inch pieces of honeycomb, with cutouts as shown, on the hood. Tie one length of type III nylon cord over the honeycomb to the front coil springs on each side. Tie two lengths of type III nylon cord from the airlift bracket to the front tie-down bracket on each side. Tape the honeycomb where the cord passes over the edges.
- ⑨ Drill a  $\frac{1}{2}$ -inch hole 6 inches from the bottom and 1 inch from each end of a  $\frac{3}{4}$ - by 78- by 19-inch piece of plywood, round the front corners and place over the honeycomb in step 4.
- ⑩ Secure the plywood with two lengths of  $\frac{1}{2}$ -inch tubular nylon webbing tied from the airlift bracket to the windshield secure pin on each side.

**Figure 1-9. Front of the Truck Prepared (continued)**



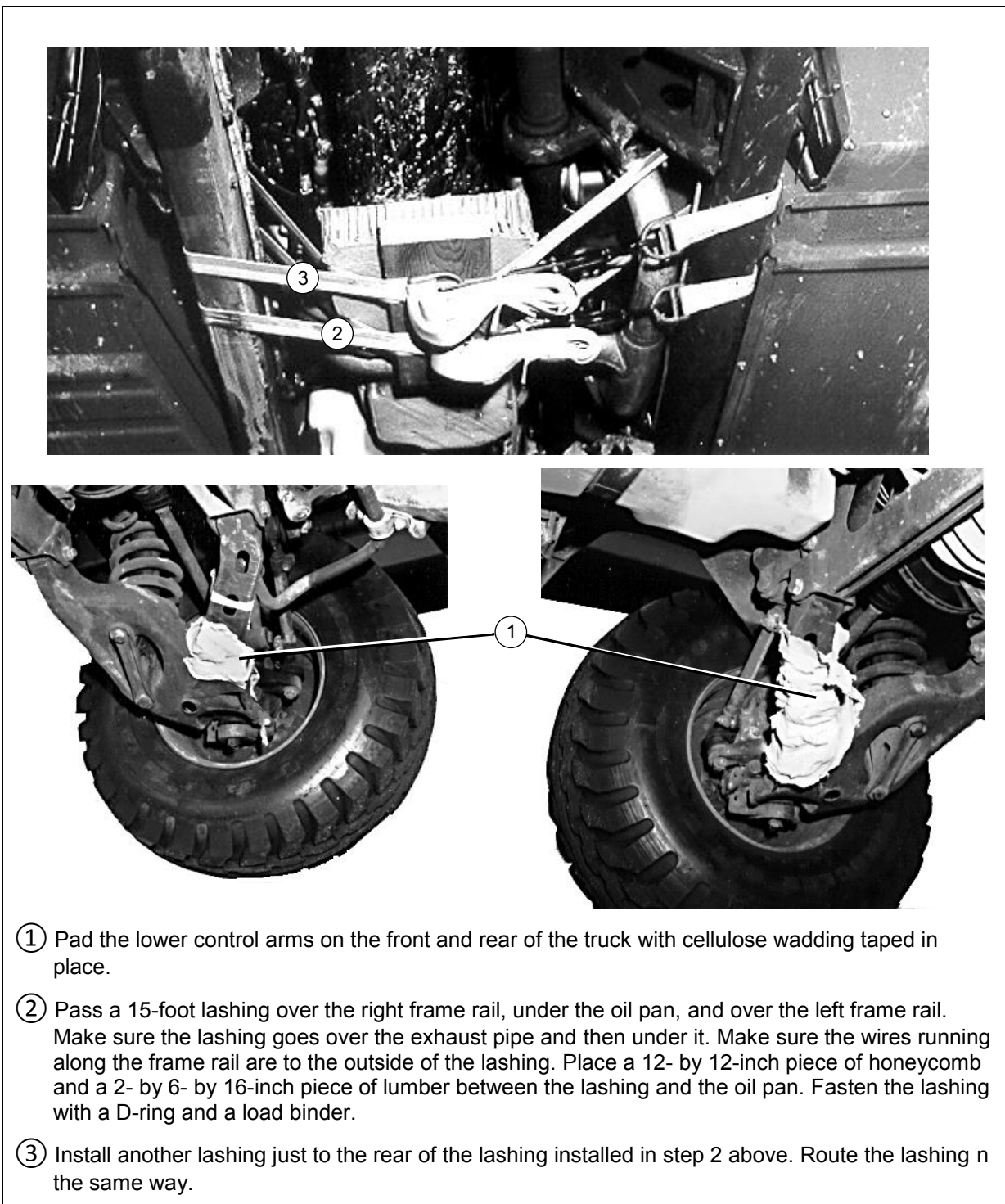


**Figure 1-9. Front of the Truck Prepared. (continued)**



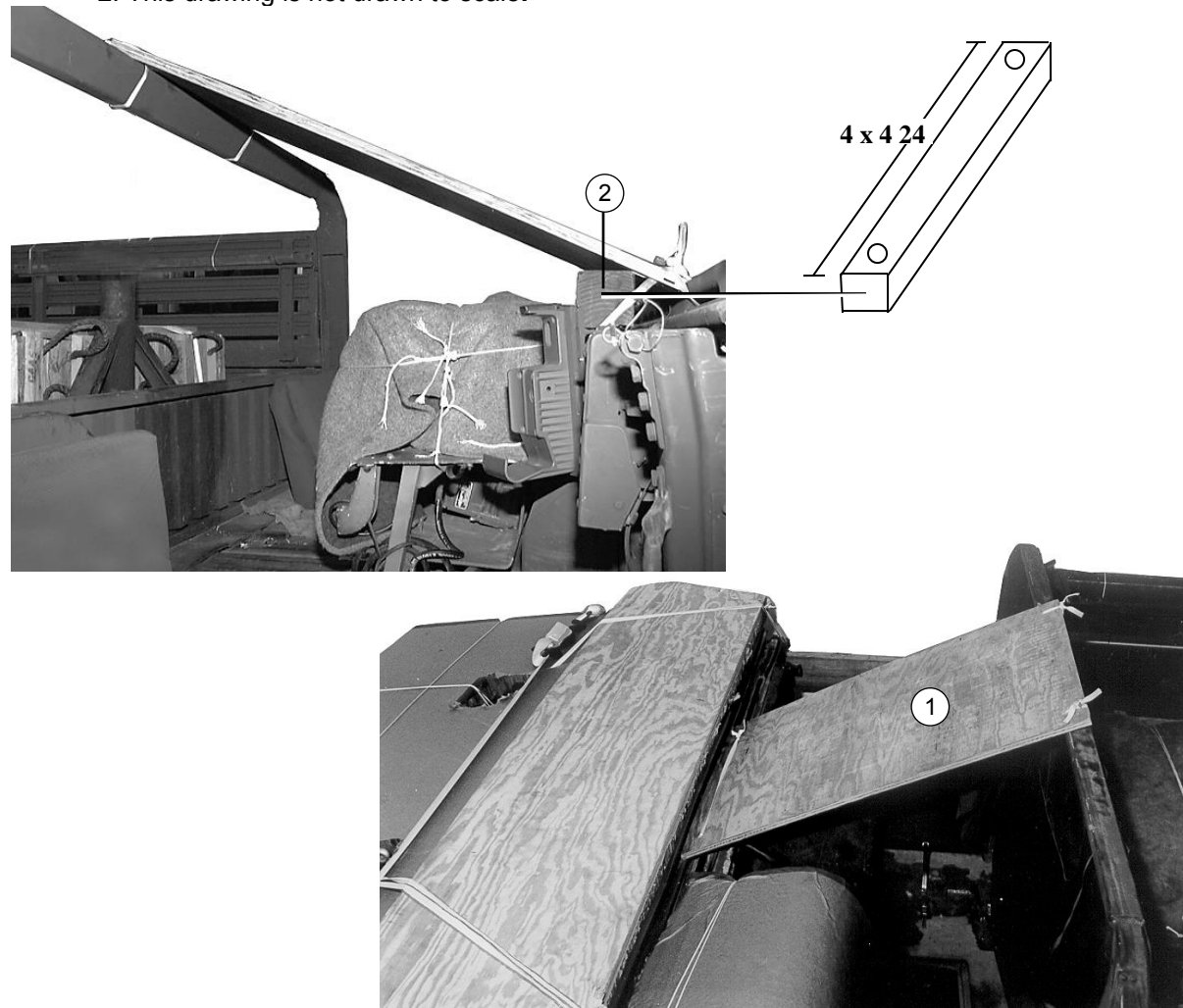
- ① Tape all sharp edges of the pioneer tools.
- ② Pad the ax head with cellulose wadding.
- ③ Open the tool rack. Place the tools in the rack, and secure them with the straps provided and with type III nylon cord. For the M1037 (modified) truck, secure the tools with 1/2-inch tubular nylon webbing. (not shown)
- ④ Close and latch the tool rack. Tie the rack in place with type III nylon cord.

**Figure 1-10. Pioneer Tool Kit Secured**



**Figure 1-11. Underside of Truck Prepared**

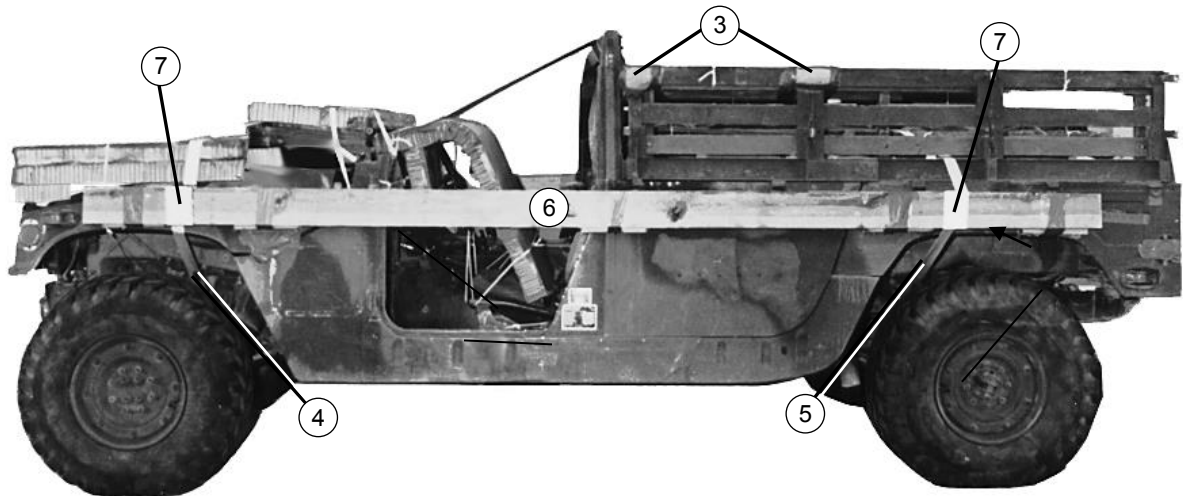
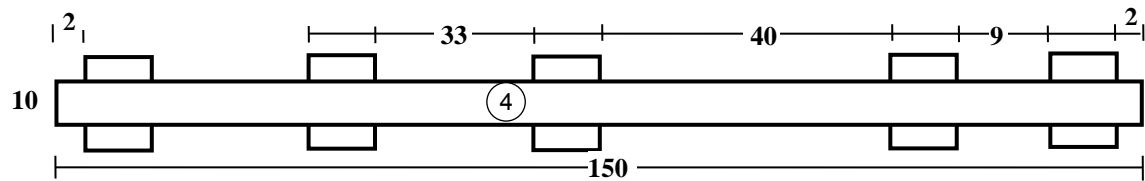
**Notes.** 1. All measurements are given in inches.  
2. This drawing is not drawn to scale.



- ① Drill 1/2-inch holes 2 inches in from each corner of a 3/4- by 24- by 42-inch piece of plywood. Center the plywood over the cab with one 24-inch edge resting on the bottom ledge of the windshield frame and the other end on the B-pillar. Secure the plywood to the B-pillar and to convenient points in the cab with 1/2-inch tubular nylon webbing. This plywood will be used as a platform for the release.
- ② For trucks with radios that extend higher than the top of the instrument panel, drill 1/2-inch holes 2 inches from each end of a 24-inch piece of 4- by 4-inch lumber. Place this lumber between the plywood and the top of the instrument panel, the holes facing vertically. Tie the lumber to the radio mounts and the plywood with 1/2-inch tubular nylon webbing.

**Figure 1-12. Truck Body Prepared**

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



- ③ If the wood cargo body sides are installed, pad all sharp edges with cellulose wadding taped in place.
- ④ Pass a 15-foot lashing around the upper control arm behind a front wheel and through its own D-ring. Repeat for the other side of the truck (not shown).
- ⑤ Pass a 15-foot lashing around the upper control arm behind a rear wheel and through its own D-ring. Repeat for the other side of the truck (not shown).
- ⑥ Tape five 6- by 10-inch pieces of honeycomb to a 2- by 6- by 150-inch piece of lumber spaced as shown and place on vehicle. Repeat for the second side board (not shown).
- ⑦ Bring the lashings positioned in steps 3 and 4 around the boards two turns. Secure the lashings from the left and right sides of the truck together with D-rings and load binders (not shown).

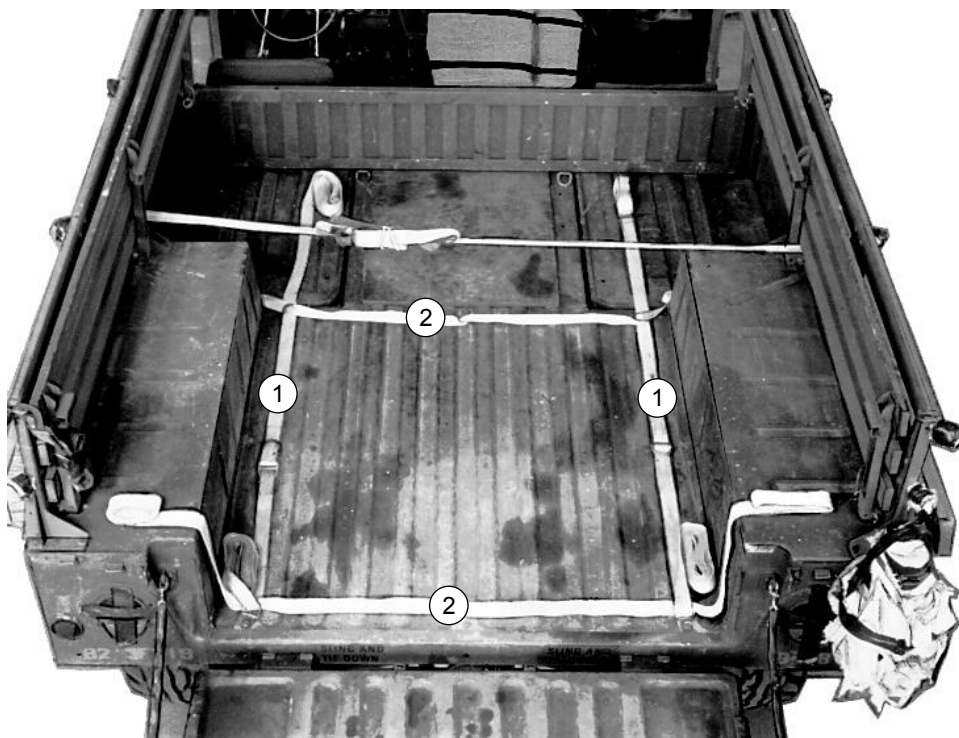
**Figure 1-12. Truck Body Prepared (continued)**

## STOWING ACCOMPANYING LOAD

1-5. Stow the accompanying load as shown in Figure 1-13. The accompanying load shown consists of 16 boxes of ammunition and truck equipment weighing 1,800 pound.

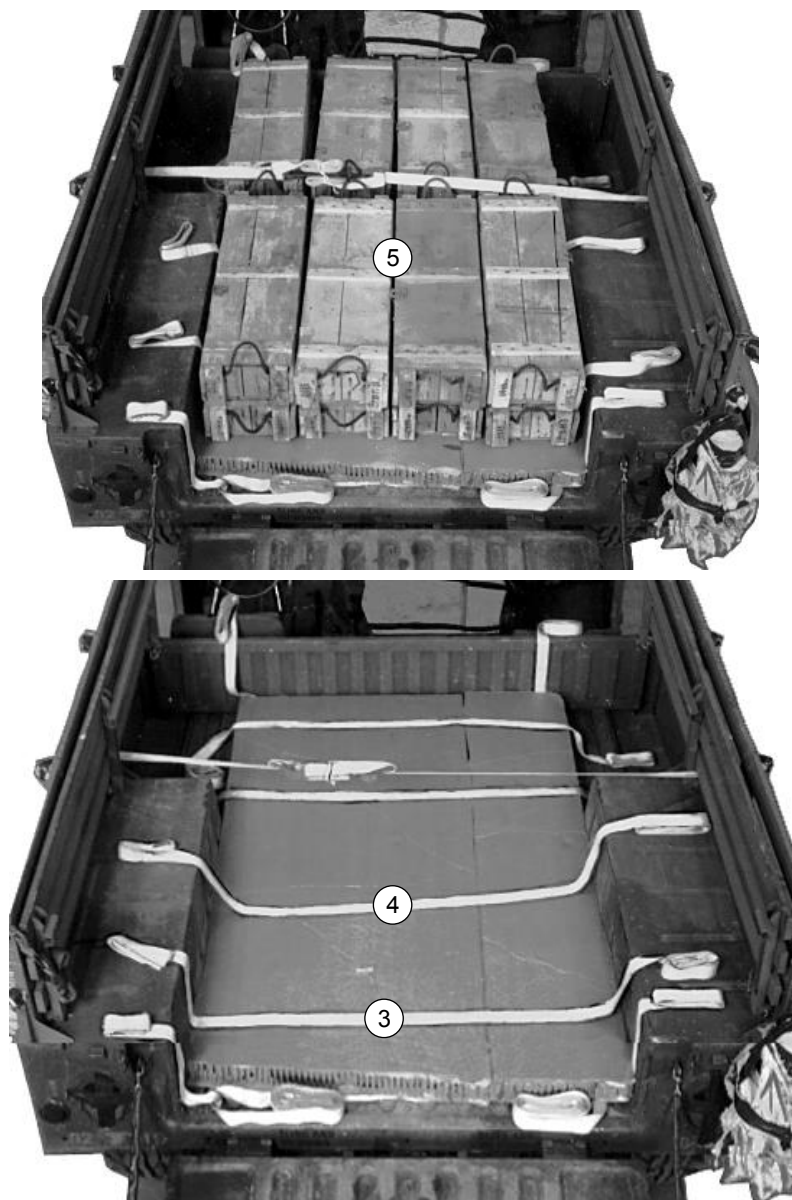
### CAUTION

Only ammunition listed in TM 4-48.16 (FM 4-20.153)/MCRP 4-11.3B/TO 137-18-41 may be airdropped. Package, mark, and label hazardous material according to AFMAN 24-204(I)/INTERSERVICE TM 38-250/NAVSUP PUB 505/MCO P403019J/DLAI 4145.3..



- ① Form two 30-foot lashing according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5. Lay the lashings lengthwise across the cargo bed, passing them through the left and right tie-down rings in the cargo floor.
- ② Lay two 15-foot lashings widthwise across the cargo bed passing them through the center and rear tie-down rings in the cargo bed floor.

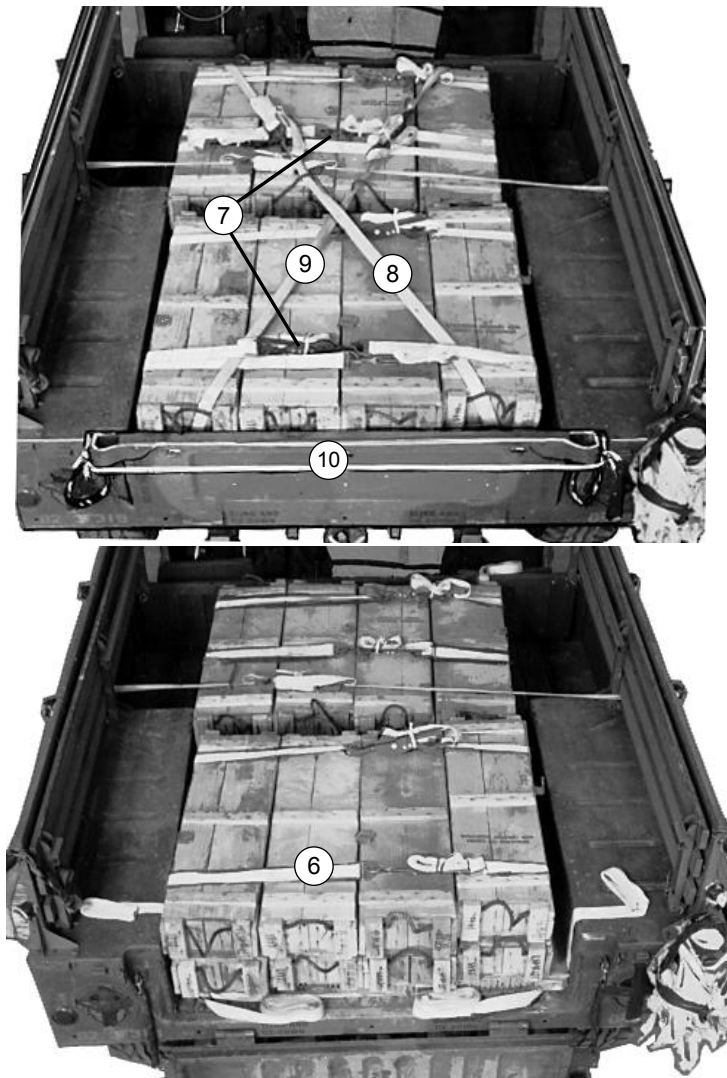
**Figure 1-13. Accompanying Load Stowed and Secured**



- ③ Cover the cargo floor using two pieces of honeycomb to make a 40- by 80-inch layer.
- ④ Space four 15-foot lashings evenly across the width of the cargo bed.
- ⑤ Place 16 boxes of ammunition on the honeycomb as shown.

**Note:** Leave 3 inches of space between any accompanying load and the tailgate to prevent damage to the truck.

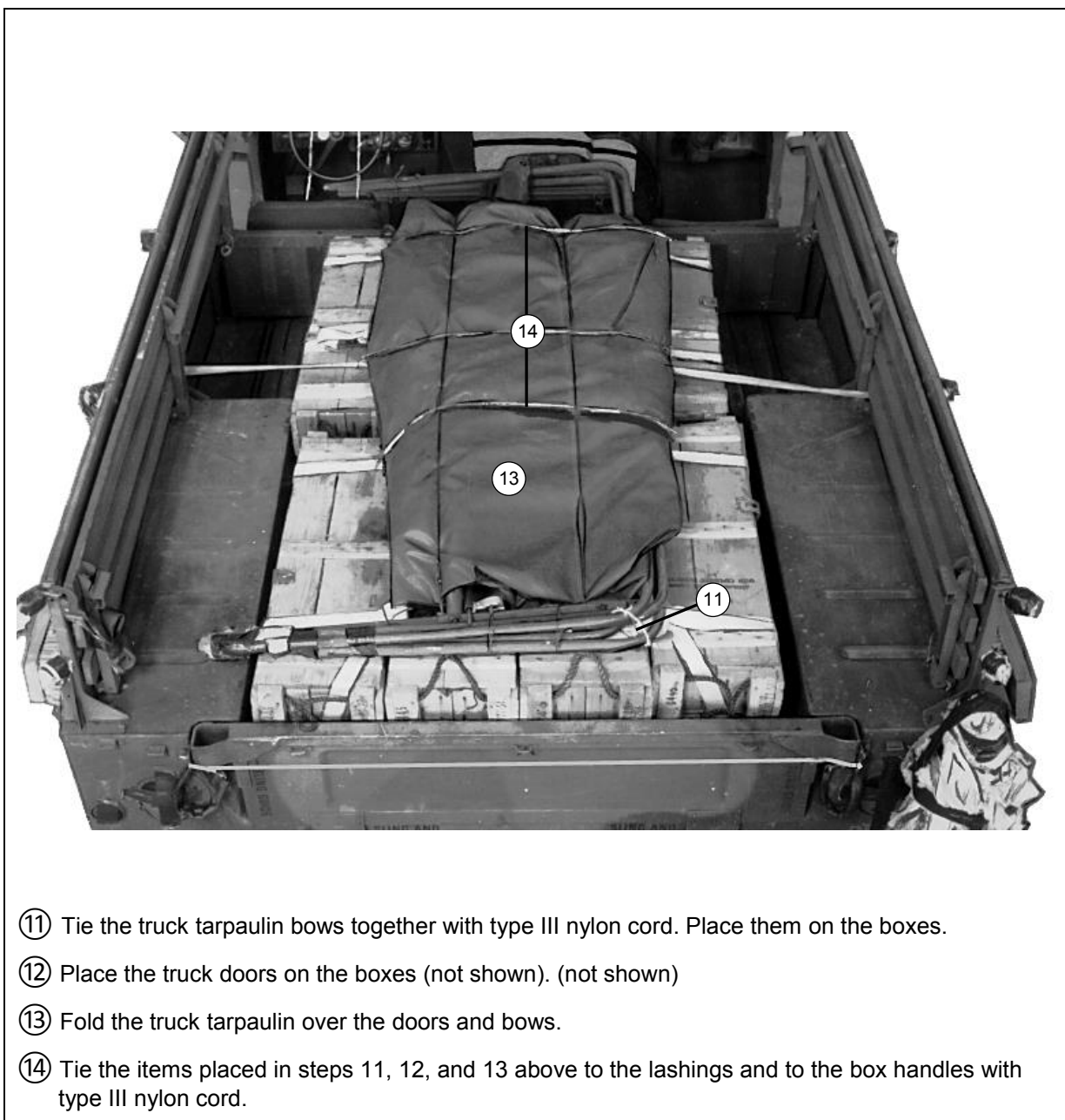
**Figure 1-13. Accompanying Load Stowed and Secured (Continued)**



- ⑥ Bind the boxes together with the four side-to-side lashings placed in step 4. Secure each lashing with a D-ring and a load binder.
- ⑦ Secure the lashings placed in step 2 with D-rings and load binders.
- ⑧ Join the left front and right rear 30-foot lashings placed in step 1 with two D-rings and a load binder. Pass the lashings through the box handles wherever possible.
- ⑨ Join the left rear and right front 30-foot lashings placed in step 1 in the same way as step 8 above.
- ⑩ Close the tailgate. Secure it to the chain hook brackets with a single length of 1/2-inch tubular nylon webbing.

**Figure 1-13. Accompanying Load Stowed and Secured (Continued)**

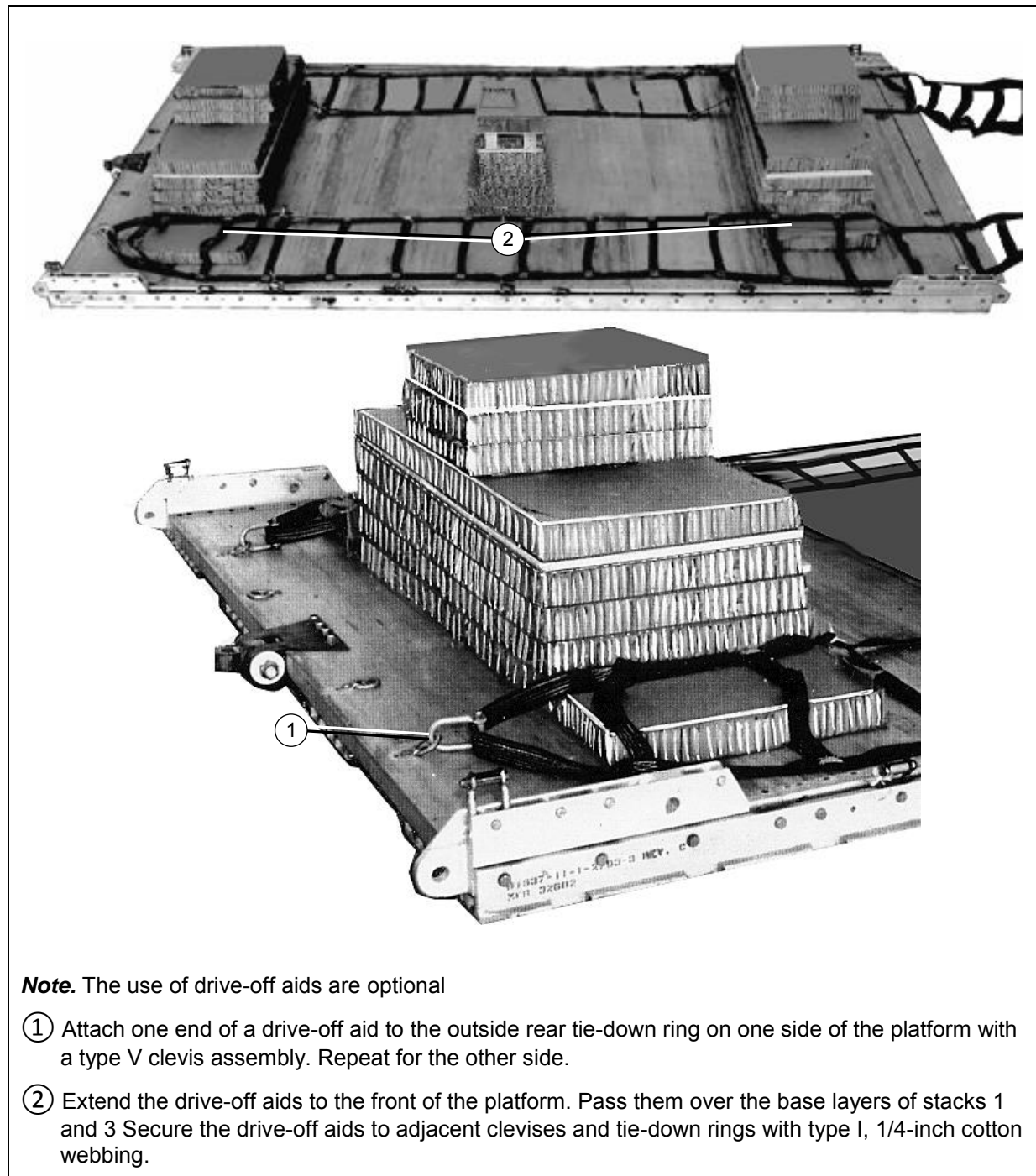




**Figure 1-13. Accompanying Load Stowed and Secured (Continued)**

## INSTALLING OPTIONAL DRIVE-OFF AIDS ON PLATFORM

1-6. Install the optional drive-off aids on the platform as shown in Figure 1-14.



**Note.** The use of drive-off aids are optional

- ① Attach one end of a drive-off aid to the outside rear tie-down ring on one side of the platform with a type V clevis assembly. Repeat for the other side.
- ② Extend the drive-off aids to the front of the platform. Pass them over the base layers of stacks 1 and 3. Secure the drive-off aids to adjacent clevises and tie-down rings with type I, 1/4-inch cotton webbing.

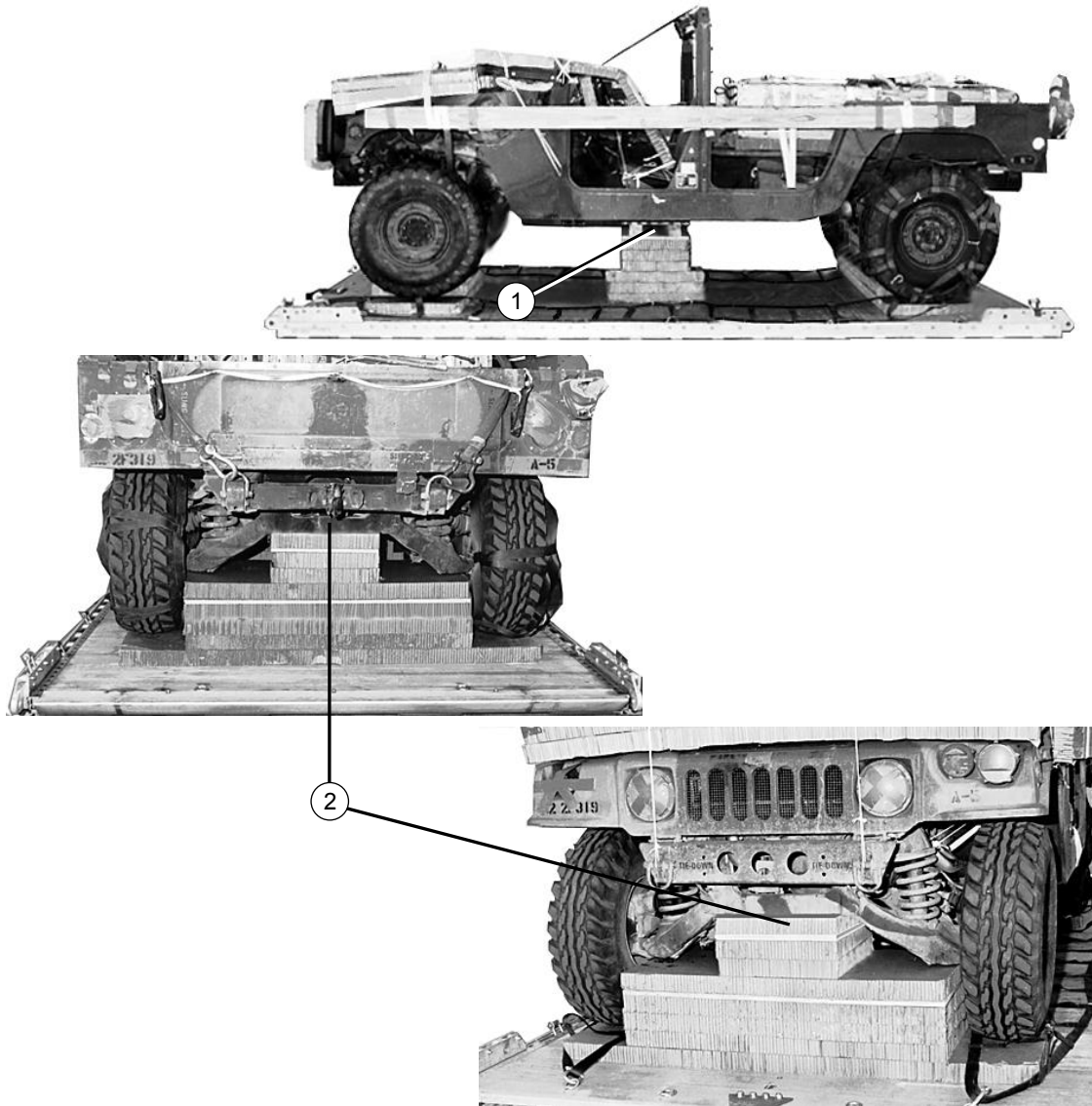
**Figure 1-14. Drive-off**

## LIFTING AND POSITIONING TRUCK AND INSTALLING OPTIONAL DRIVE-OFF AIDS

1-7. Install the lifting slings as shown in Figure 1-15. Position the truck on the honeycomb stacks as shown in Figure 1-16. Attach the drive-off aids to the wheels of the truck as shown in Figure 1-17, and according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.



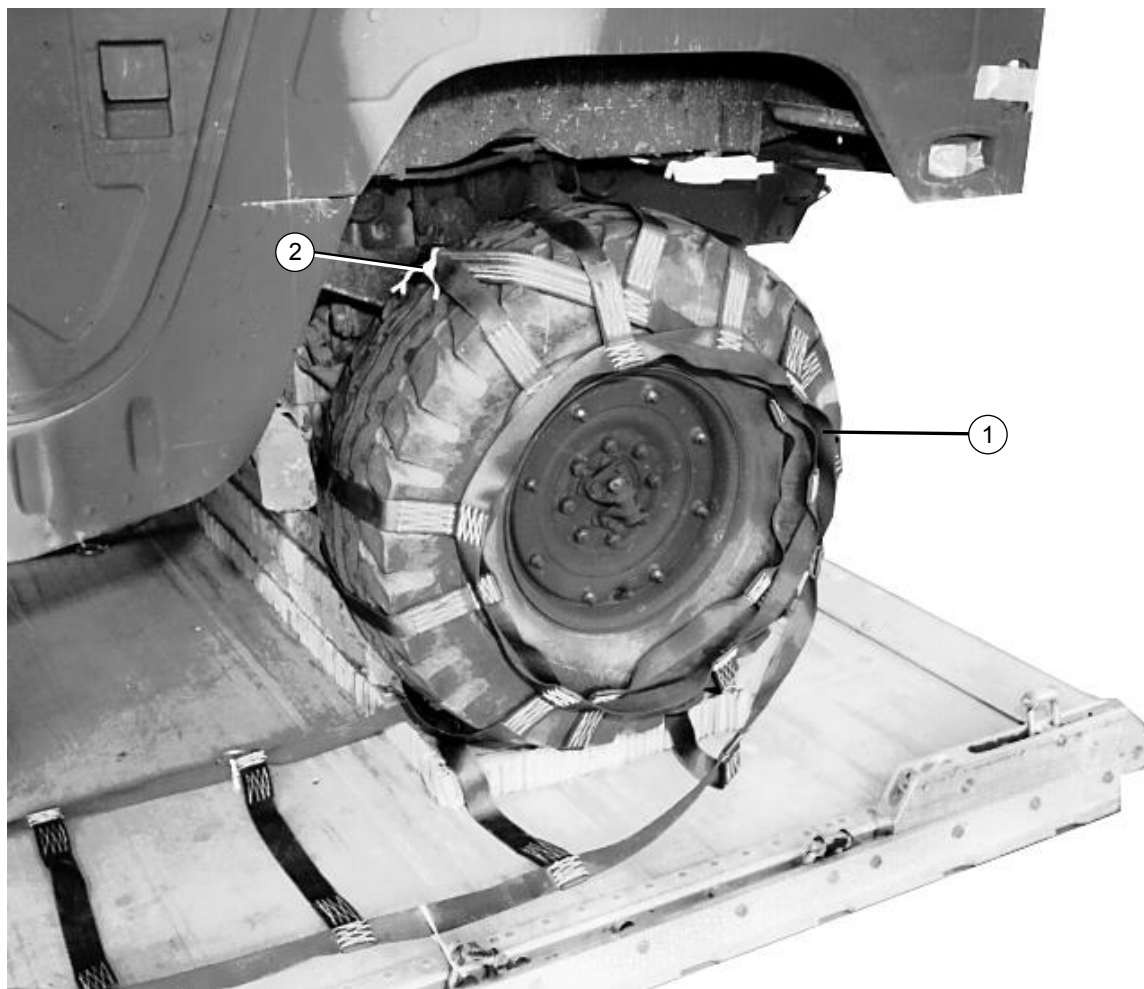
**Figure 1-15. Lifting Slings Installed and Truck Positioned**



- ① Position the truck on the honeycomb stacks with the suspension cross-members of the truck resting squarely on stacks 1 and 3.
- ② Be sure that the frame cross member rests squarely on the 6-inch part of the honeycomb at the front of stack.

**Note:** If the rear wheels of the truck cannot be turned when the truck is resting on the honeycomb stacks, lift the truck slightly to allow the drive-off aids to be installed.

**Figure 1-16. Truck Positioned on Honeycomb Stacks**

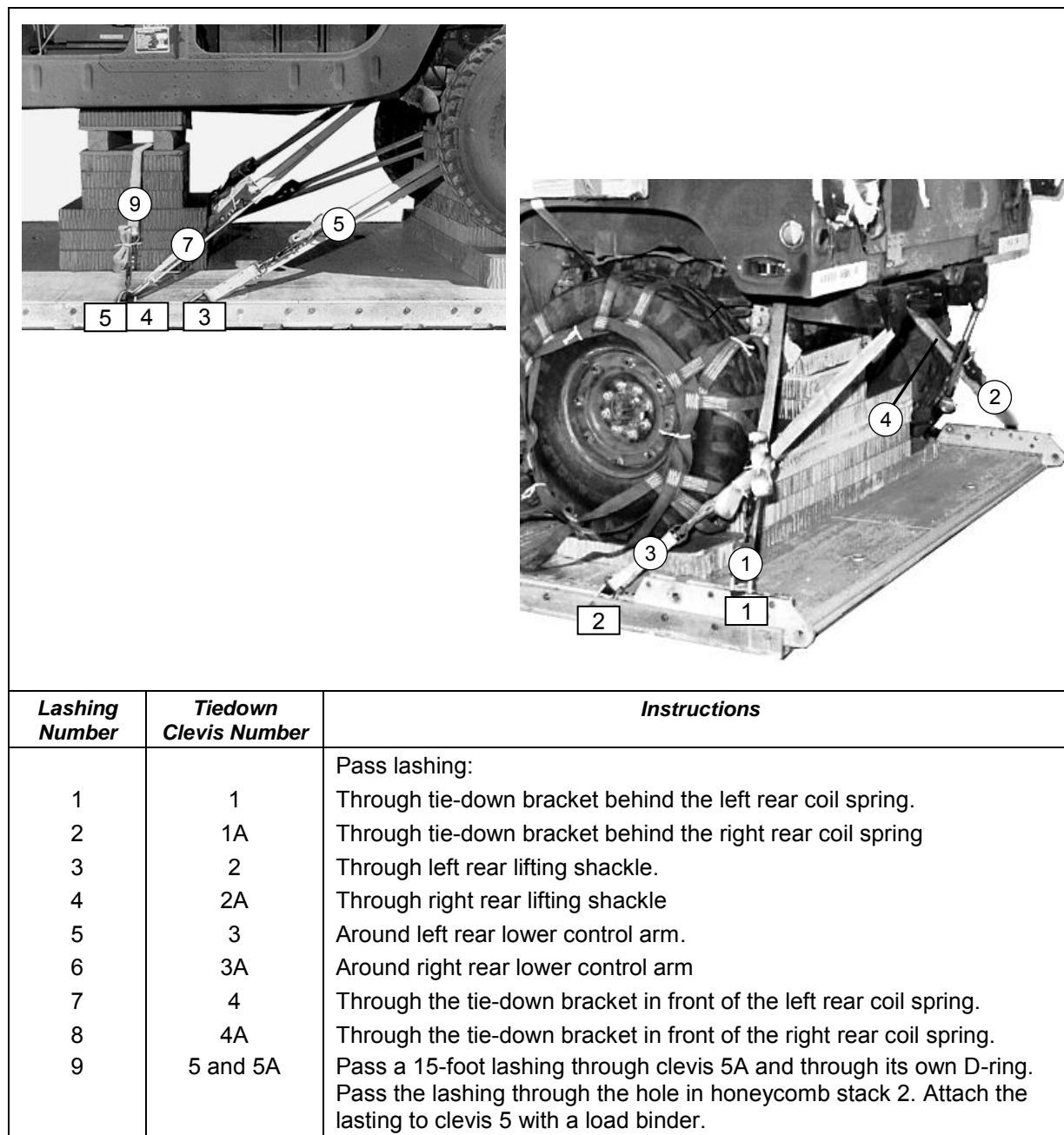


- ① Place a drive-off aid under the right wheel. Holding the drive-off aid against the wheel, turn the wheel counter-clockwise until the drive-off aid is under slight tension. Repeat for the other side, but turn the wheel clockwise.
- ② Tie the end loop of each drive-off aid to the nearest cross-piece with a double length of type I, 1/4-inch cotton webbing.
- ③ Remove the lifting slings. (not shown)

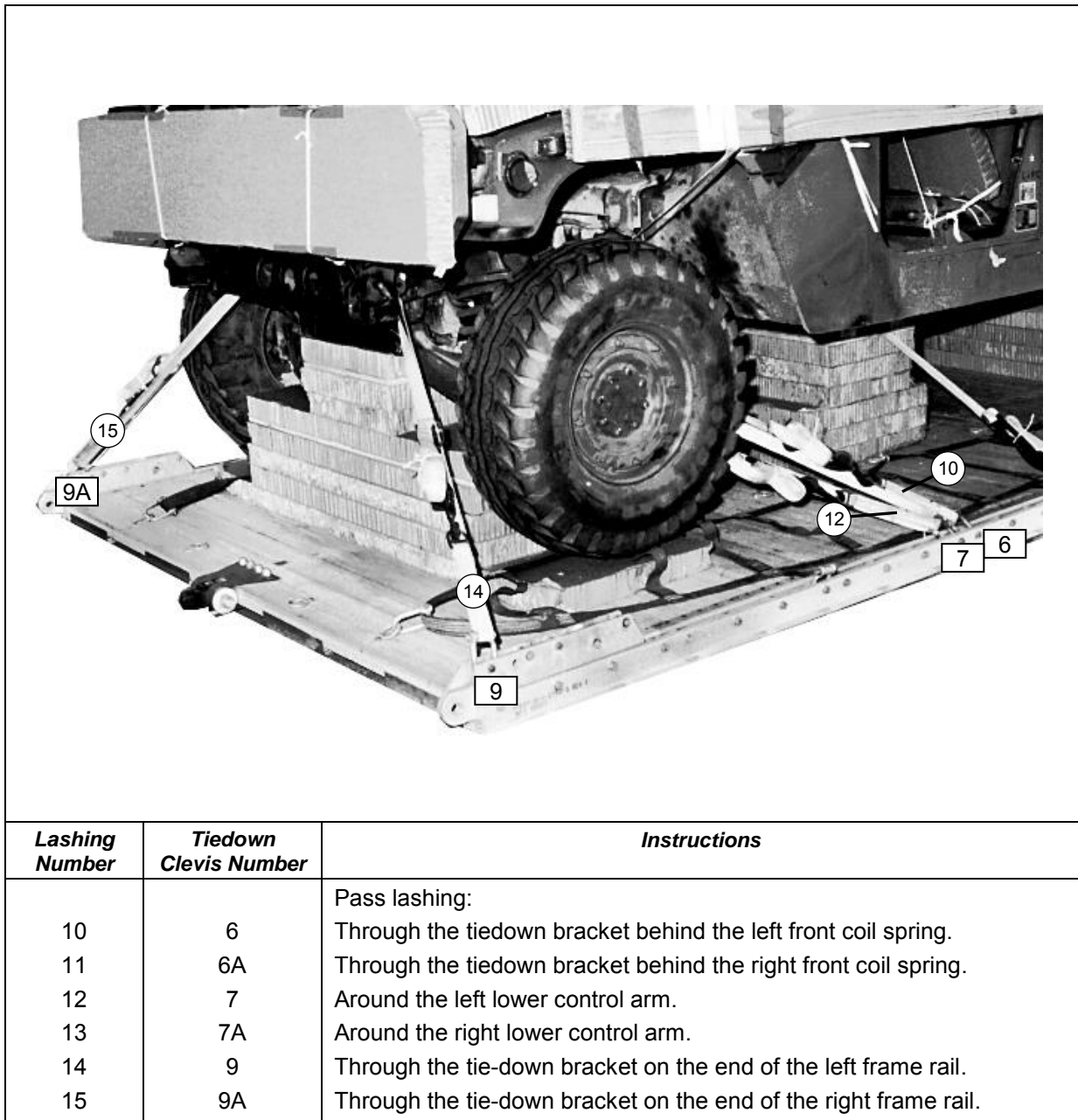
**Figure 1-17. Drive-off Aids Attached to Wheels**

## LASHING THE TRUCK

1-8. Lash the truck to the platform according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figures 1-18 and 1-19.



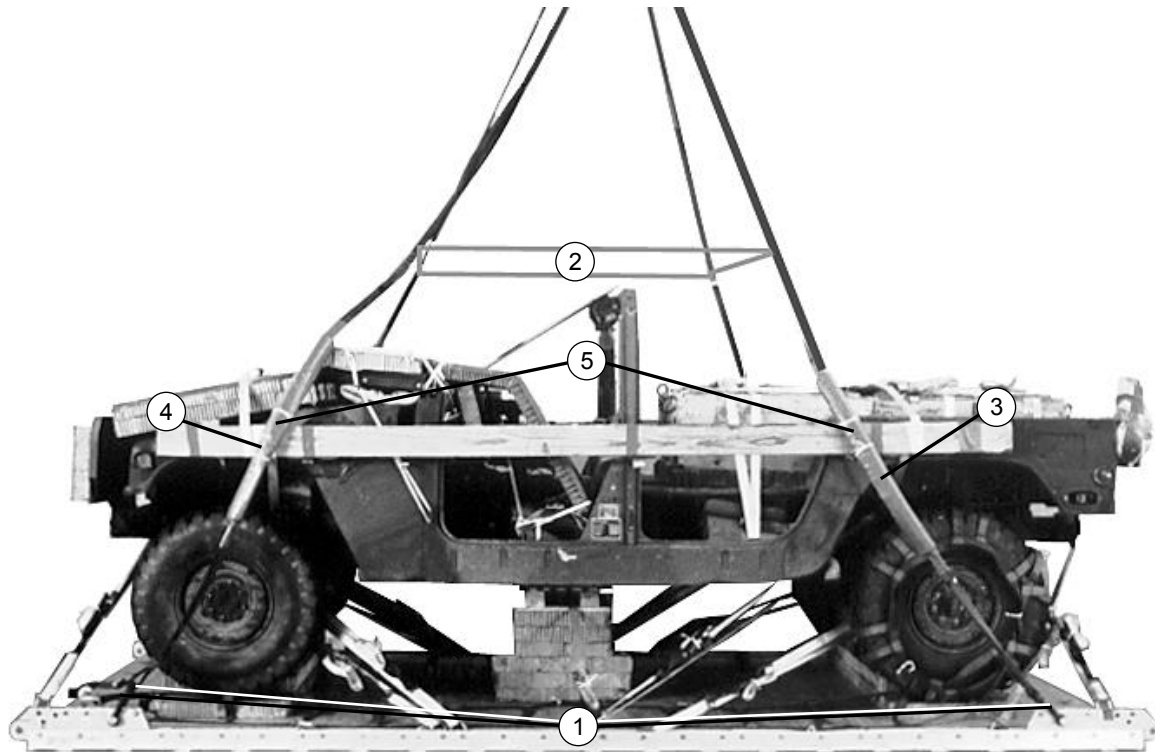
**Figure 1-18. Lashings 1 through 9 Installed**



**Figure 1-19. Lashings 10 through 15 Installed**

## INSTALLING AND SAFETY TIEING THE SUSPENSION SLINGS

1-9. Install and safety tie the suspension slings according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figure 1-20.



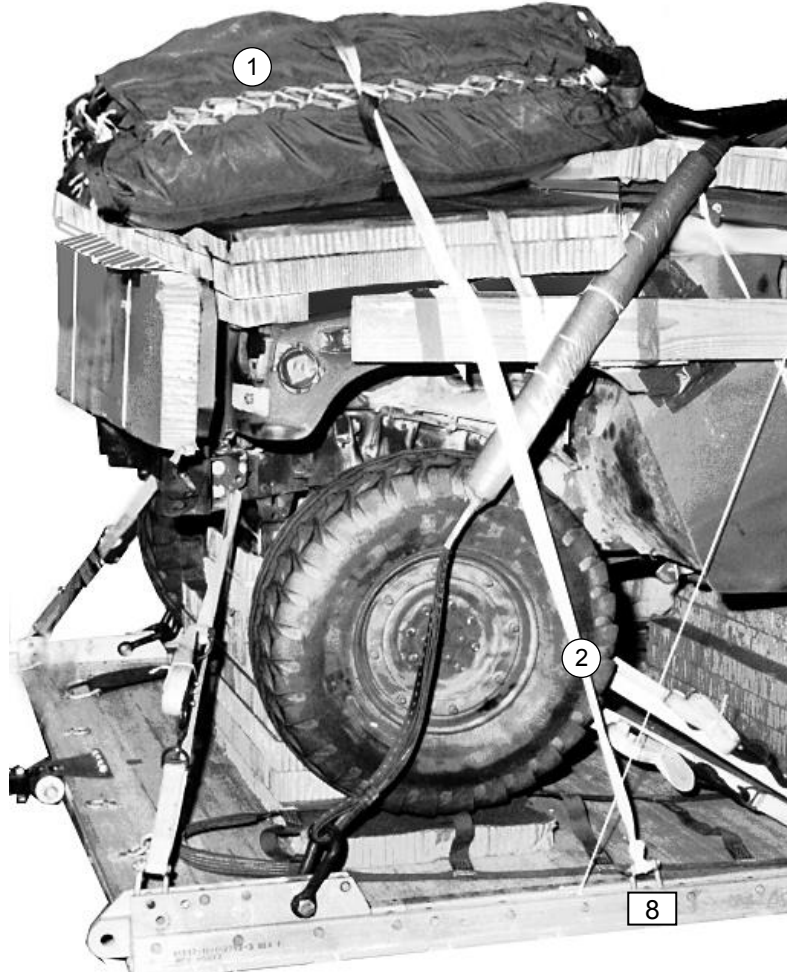
- ① Attach a 16-foot (2-loop), type XXVI nylon suspension sling to each tandem link with a large clevis.
- ② Raise the slings and install the deadman's tie 6 to 8 inches above the load.
- ③ Position a 6- by 36-inch piece of felt around each front suspension sling 40 inches from the suspension clevis. Cover the padding completely with tape, extending the tape 6 inches above and below the padding.
- ④ Position a 6- by 36-inch piece of felt around each rear suspension sling 36 inches from the suspension clevis. Secure the padding as described in step 3 above.
- ⑤ Safety-tie each sling to the body side boards with a length of type III nylon cord.

**Figure 1-20. Suspension Slings Installed**



## STOWING CARGO PARACHUTES

1-10. Stow the parachutes according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figure 1-21.

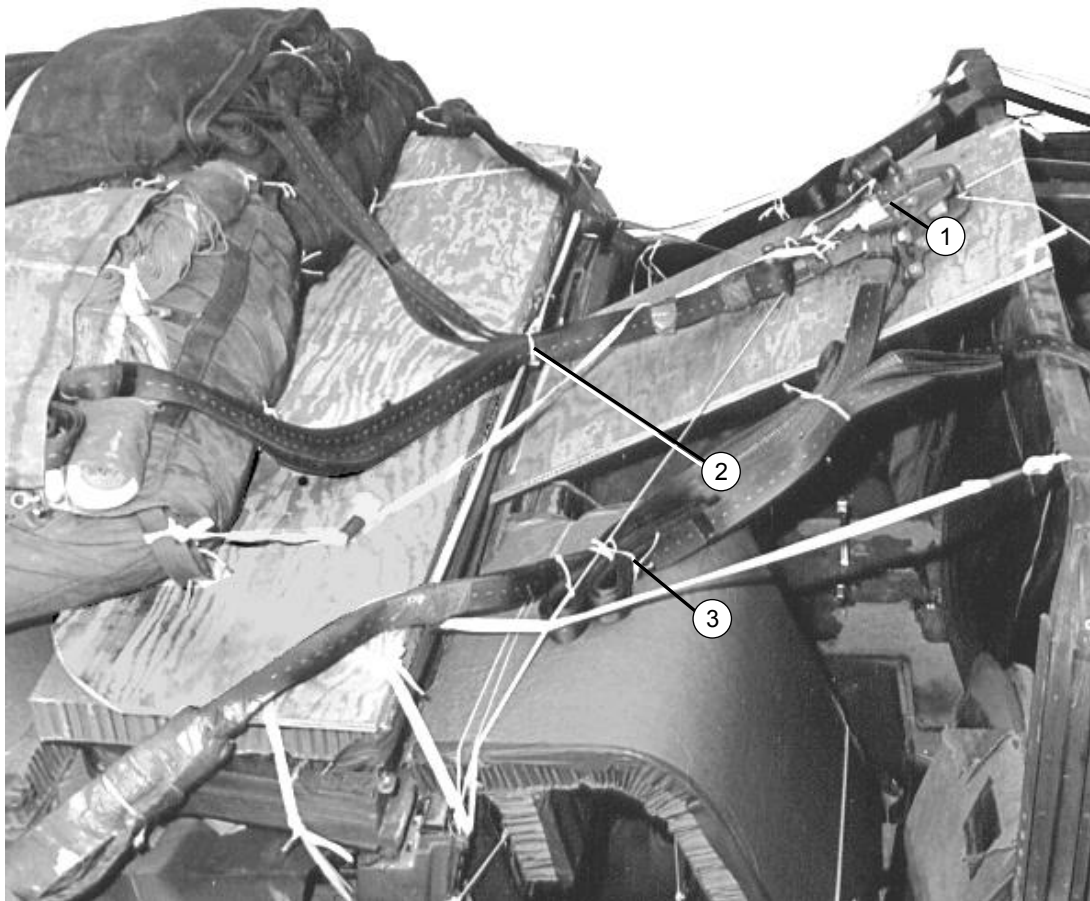


- ① Prepare, position, and stow two G-11B cargo parachutes according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.
- ② Install the front cargo parachute restraint strap according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5. Use tiedown clevises 8 and 8A.
- ③ Install a single-knife parachute release strap on the restraint straps on each side according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5. (not shown)

**Figure 1-21. Parachutes Stowed**

## INSTALLING THE RELEASE SYSTEM

1-11. Install the release assembly according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figure 1-22.

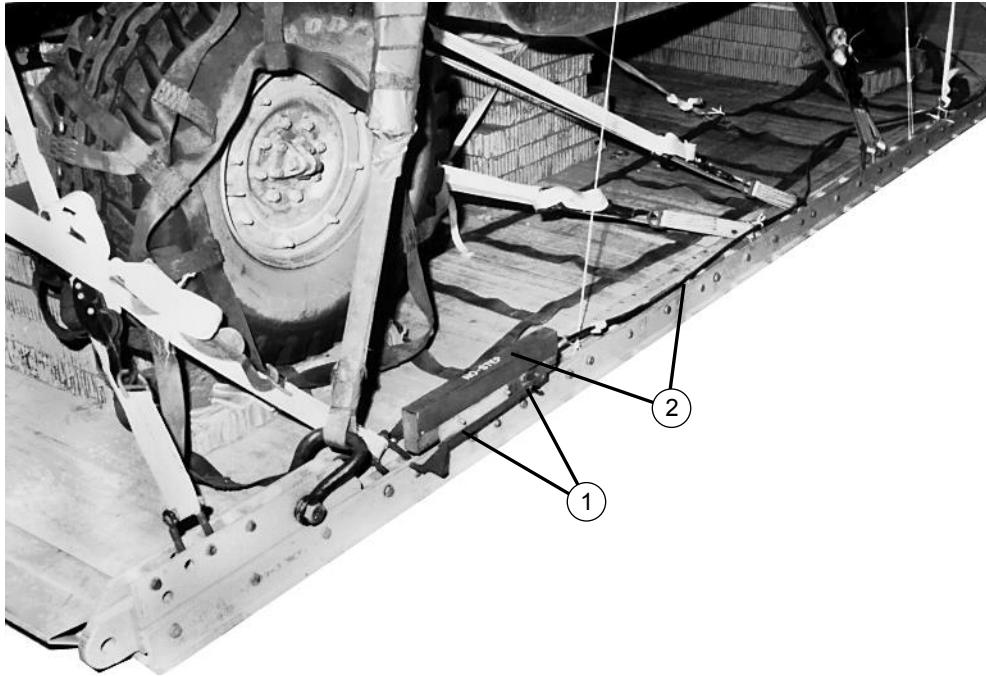


- ① Prepare and install the release assembly according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5. Place the release on a 24- by 42- by  $\frac{3}{4}$  piece of plywood placed over the driver compartment.
- ② Tie the parachute riser extensions together with a length of type 1,  $\frac{1}{4}$ -inch cotton webbing.
- ③ S-fold any slack in the suspension slings. Tie the folds in place with type 1,  $\frac{1}{4}$ -inch cotton webbing.

**Figure 1-22. M-1 Cargo Parachute Release Assembly Installed**

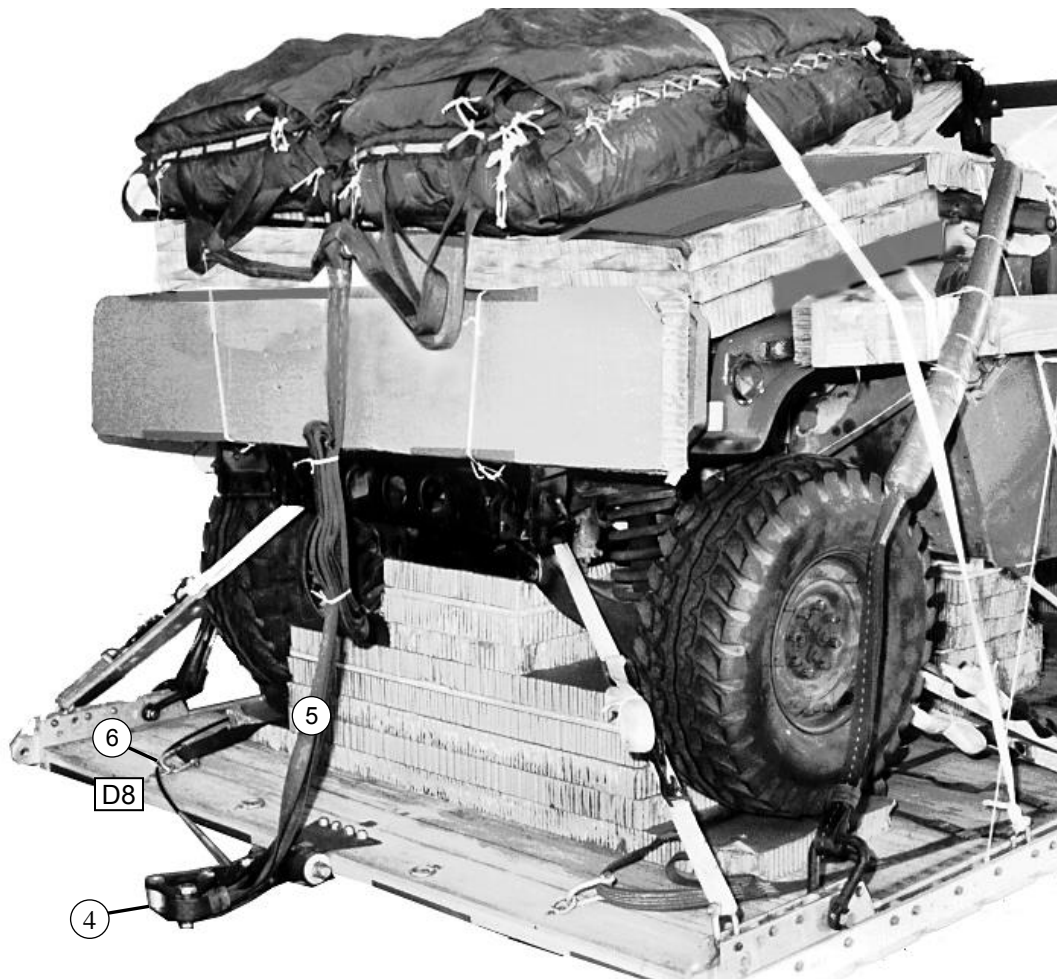
## INSTALLING THE EXTRACTION SYSTEM

1-12. Install the extraction force transfer coupling (EFTC) extraction system according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5. and as shown in Figure 1-23.



- ① Install the components of the extraction force transfer coupling according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5. Use the forward mounting holes for the extraction force transfer coupling actuator mounting brackets.
- ② Install an actuator, with a 16-foot cable, to the extraction force transfer coupling mounting brackets; route and safety tie the cable according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.
- ③ Install the extraction parachute jettison system according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 if applicable. (not shown)

**Figure 1-23. Extraction System Installed**



- ④ Install the latch assembly on the extraction parachute jettison system or the platform extraction bracket and connect the cable according TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.
- ⑤ Attach a 9-foot (2-loop), type XXVI nylon sling to be used as a deployment line, fold the excess and secure the folds in place according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.
- ⑥ Safety tie the cable to tiedown ring D8 with type I, 1/4-inch cotton webbing.

**Figure 1-23. Extraction System Installed (Continued)**

## **INSTALLING PROVISIONS FOR EMERGENCY RESTRAINTS**

1-13. Install the provisions for emergency restraints on the load according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.

## **PLACING EXTRACTION PARACHUTE**

1-14. Select the extraction parachute and extraction line needed using the requirements in table in TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5. Rig the extraction line in an extraction line bag according to TM 10-1670-286-20/TO 13C5-2-41. Place the extraction parachute and extraction line on the load for installation in the aircraft. Select a drogue parachute and a drogue line if using C-17/C-130J and place them on the load as well.

## **MARKING RIGGED LOAD**

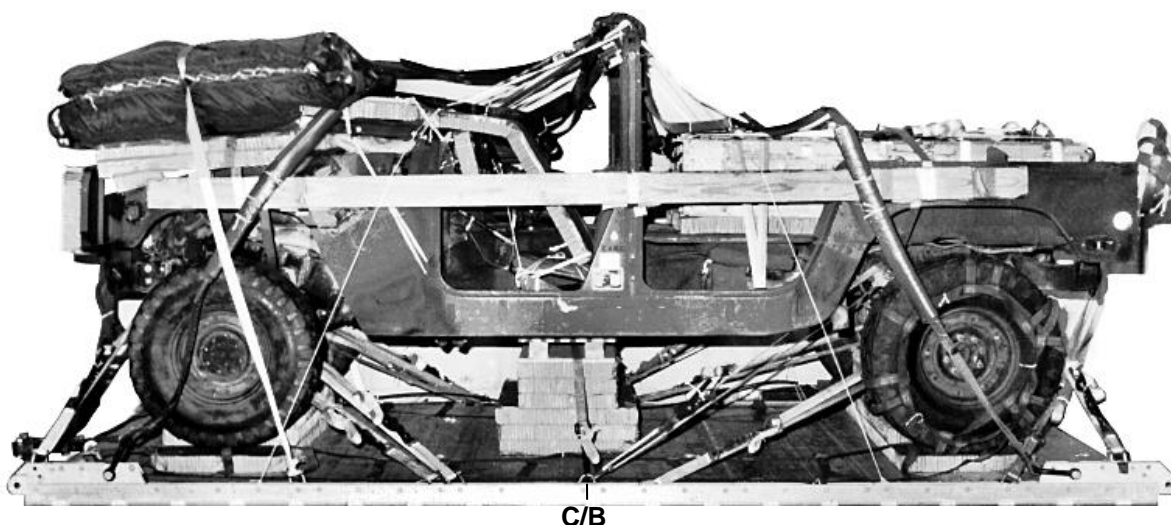
1-15. Mark the rigged load according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figure 1-24. Complete Shipper's Declaration for Dangerous Goods. If the load varies from the one shown, the weight, height, center of balance (CB), and parachute requirements must be recomputed.

## **EQUIPMENT REQUIRED**

1-16. Use the equipment listed in Table 1-1 on page 1-33 and continuing on page 1-34 to rig the load.

**CAUTION**

Make the final rigger inspection required by AR 59-4 and TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5. before the load leaves the rigging site.

**RIGGED LOAD DATA**

**Note:** This load includes a 1,800 pound accompanying load.

Weight .....	9,750 pounds
Maximum Weight .....	11,500 pounds
Height (with two G-11B parachutes).....	86 inches
Width .....	108 inches
Length .....	215 inches
Length with extraction parachute jettison system Light .....	226 inches
Overhang: Front (vehicle).....	0 inches
Rear extraction force transfer coupling.....	18 inches
Rear extraction parachute jettison system Light..	30 inches
Center of Balance (CB) (from front edge of platform) .....	95 inches

**Figure 1-24. M998 Cargo/Troop Carrier Rigged for Low-Velocity Airdrop**

**Table 1-1. Equipment Required for Rigging the M998 Cargo/Troop Carrier on a 16-Foot Platform for Low Velocity Airdrop**

<i>National Stock Number</i>	<i>Item</i>	<i>Quantity</i>
8040-00-273-8713	Adhesive paste, 1-gallon.	As required
4030-00-090-5354	Clevis, suspension, 1-inch (large)	5
4030-00-678-8562	Clevis, suspension, 3/4-inch (medium)	4
4020-00-240-2146	Cord, nylon, type III, 550-pound	As required
1670-00-434-5785	Coupling, Airdrop Extraction Force Transfer, with 16-foot cable	1
8135-00-664-6958	Cushioning material (Cellulose wadding)	As required
1670-01-475-1990	Extraction Parachute Jettison System Light	1
8305-00-958-3685	Felt	As required
1670-01-183-2678	Leaf, extraction line (line bag) (for C-130)	2
1670-01-183-2678	Leaf, extraction line (line bag) (for C-17/C130J)	4
	Line extraction:	
1670-01-062-6313	60-foot (3-loop), type XXVI (for C-130/J)	1
1670-01-107-7651	140-foot (3-loop), type XXVI (for C-17)	1
1670-01-064-4452	60-foot (1-loop), type XXVI (for C-17/C-130J), (drogue line)	1
1670-01-493-6418	Link assembly, two-point, 3 3/4-inch, small:	1
	Lumber:	
5510-00-220-6196	2- by 6- by 96-inch	2 (14' board)
5510-00-220-6274	4- by 4- by 96-inch	2
5315-00-010-4659	Nail, steel, common, 8D	As required
1670-00-753-3928	Pad, energy-dissipating (honeycomb)	10 sheets
1670-01-016-7841	Parachute, cargo, G-11B	2
	Parachute, cargo, extraction:	
1670-01-063-3716	22-foot	1
1670-01-063-3715	15-foot (C-17/C130J) (DES)	1
	Platform, airdrop, type V, 16-foot:	
1670-01-353-8424	Bracket, assembly, extraction	
1670-01-353-8425	Bracket, assembly, coupling	
1670-01-162-2372	Clevis assembly (type V)	20
1670-01-162-2381	Tandem link assembly (Multipurpose link)	6
5530-00-128-4981	Plywood, 3/4-inch	3 sheets

**Table 1-1. Equipment Required for Rigging the M998 Cargo/Troop Carrier on a 16-Foot Platform for Low Velocity Airdrop (continued)**

<i>National Stock Number</i>	<i>Item</i>	<i>Quantity</i>
1670-01-097-8816	Release, cargo parachute, M-1	1
	Sling, cargo, airdrop:	
	For Deployment	
1670-01-062-6304	9-foot (2-loop), type XXVI	1
	For Lifting	
1670-01-062-6304	9-foot (2-loop), type XXVI	2
1670-01-062-6303	12-foot (2-loop), type XXVI	2
	For Suspension	
1670-01-063-7761	16-foot (2-loop), type XXVI	4
	For Riser Extension	
1670-01-062-6302	20-foot (2-loop), type XXVI	1
1670-00-998-0116	Strap, parachute, release, single-knife	1
7501-00-266-5016	Tape, adhesive, 2-inch	As required
1670-00-937-0271	Tiedown assembly, 15-foot	31
	D-rings, heavy duty, 10,000-pound	29
	Binder, load, 10,000-pound	27
1670-01-483-8259	Towplate release mechanism (H-block) (for C-17)	1
	Towplate release mechanism (H-block) (for C-130J)	1
	Webbing:	
8305-00-268-2411	Cotton, 1/4-inch, type I	As required
8305-00-082-5752	Nylon, tubular, 1/2-inch	As required
8305-00-559-6871	Nylon, type VIII	As required



## Chapter 2

# Rigging Armament Carriers For Low-Velocity Airdrop

### SECTION I - RIGGING ARMAMENT CARRIERS ON A 16-FOOT PLATFORM

#### DESCRIPTION OF LOAD

2-1. The unrigged M1025 armament carrier (Figure 2-1) is described in Introduction. The truck is rigged on a 16-foot type V platform for low-velocity airdrop. An accompanying load weighing a minimum of 800 pounds and a maximum of 2,000 pounds. The load requires two G-11 cargo parachutes. The following trucks can be rigged using the procedures given in this chapter: M1025A1, M 2025A2, and m1025A2 modified, M1026, M1026 (modified and M1026A1, M966 and M966A1, M1036, M1043, M1043A1, and M1043A2, M1044, M1044A1, M1045, M1045A1, and M1045A2, M1046, M1046A1, M1121.

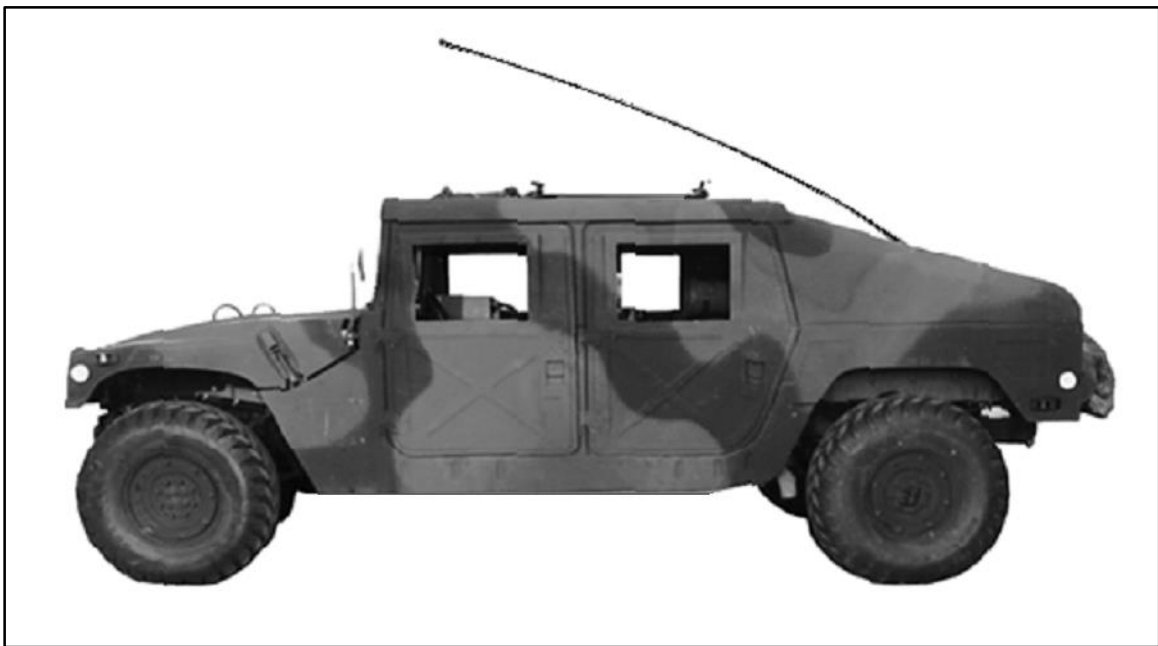


Figure 2-1. M1025 Armament Carrier

## PREPARING PLATFORM

2-2. Prepare a 16-foot, type V airdrop platform according to TM 10-1670-268-20&P/TO 13C7-52-22. Install tandem links and platform clevises according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figure 1-2.

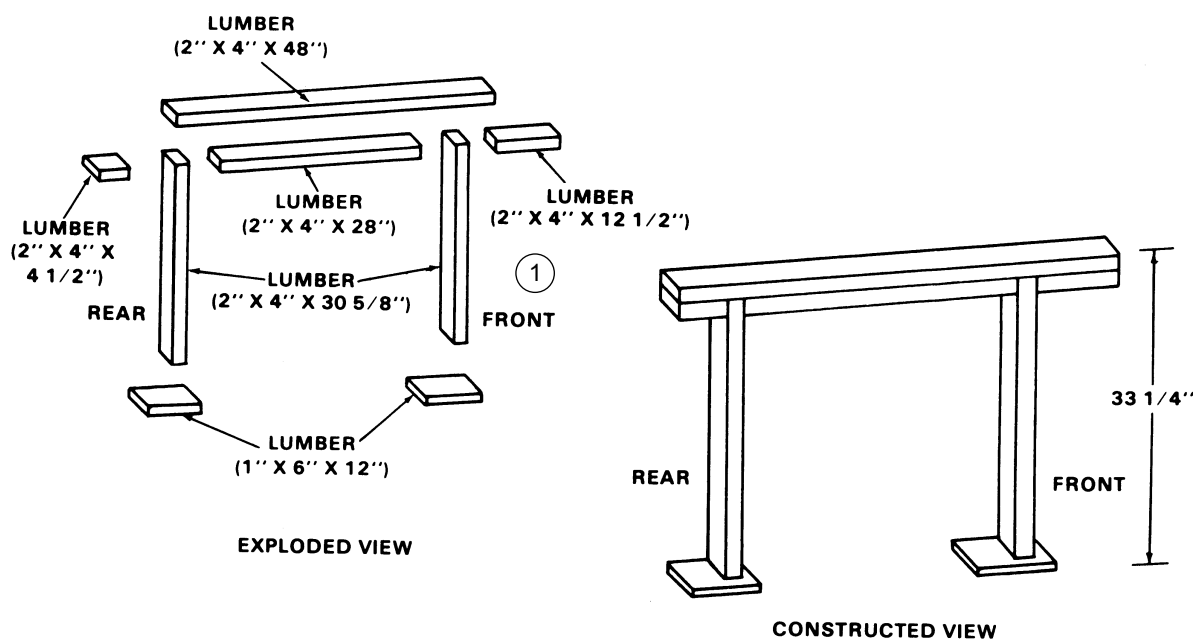
## PREPARING AND POSITIONING HONEYCOMB STACKS

2-3. Build the honeycomb stacks as shown in Figures 1-3 and 1-4. Position the stacks on the platform as shown in Figure 1-5 and according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.

## PREPARING THE TRUCK

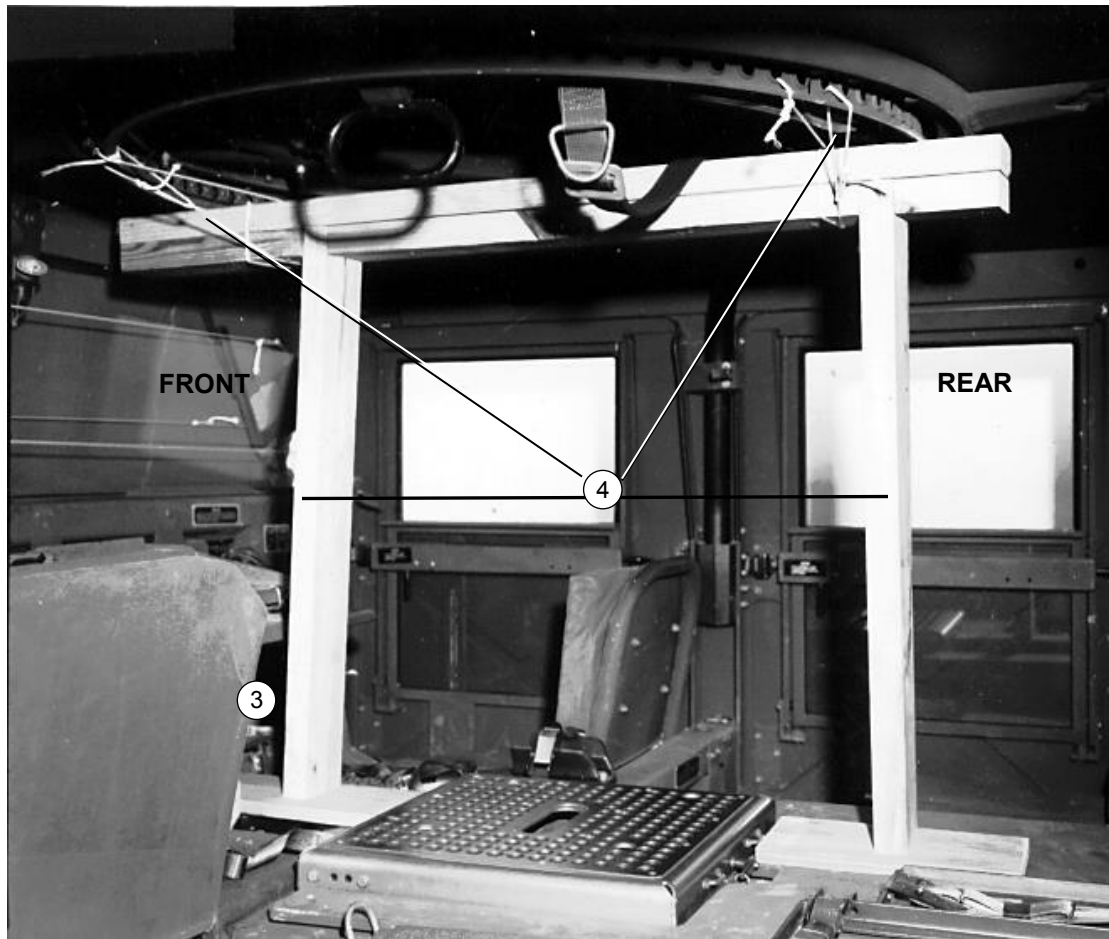
2-4. Prepare truck as described in Figures 1-6, 1-7 (do not do steps 1 and 3), Figure 1-8, Figure 1-9 does not apply to closed body vehicles. Continue preparing the vehicle as shown Figure 1-10 through 1-11. Finish preparing the closed-body HMMWV's as shown in Figures 2-2 and 2-3 omit step 3.

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



① Build the turret housing support as shown using 8d nails.

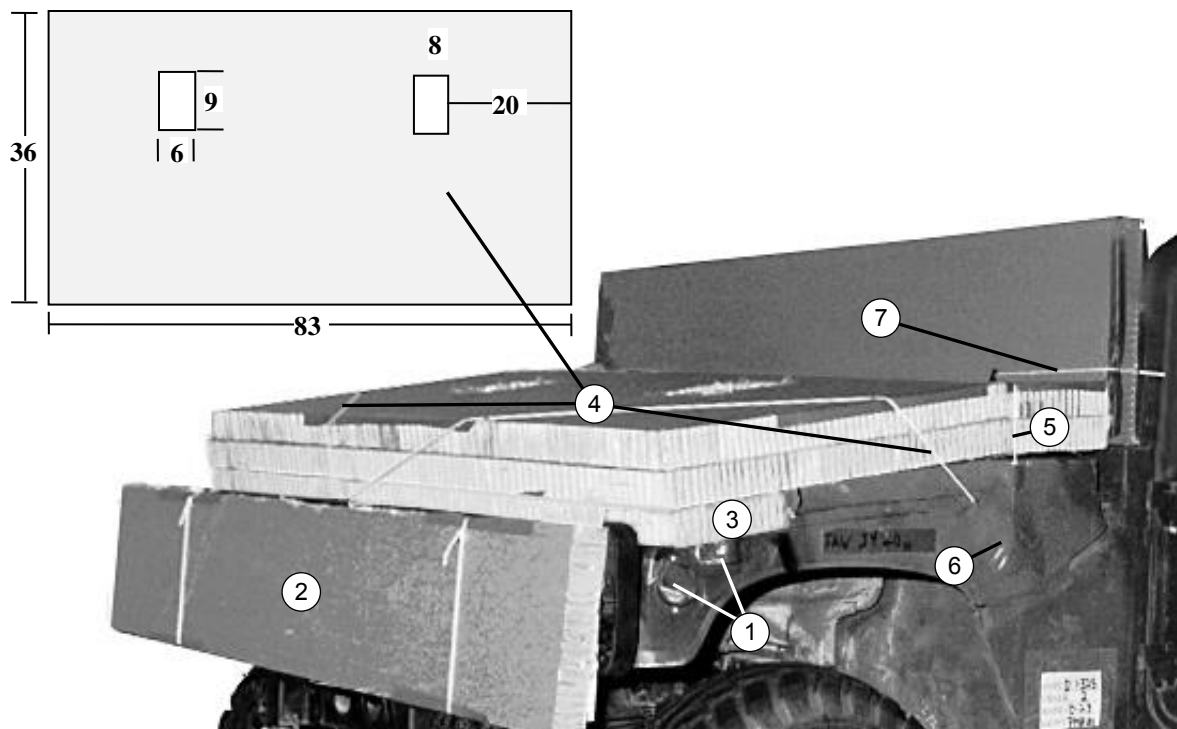
**Figure 2-2. Turret Support Built and Placed**



- ③ Close turret cover and secure it with the fasteners provided. (not shown)
- ④ Center the support under the turret housing with the front end of the support toward the front of end of the truck. Tie the support in place with two lengths of type III nylon cord.

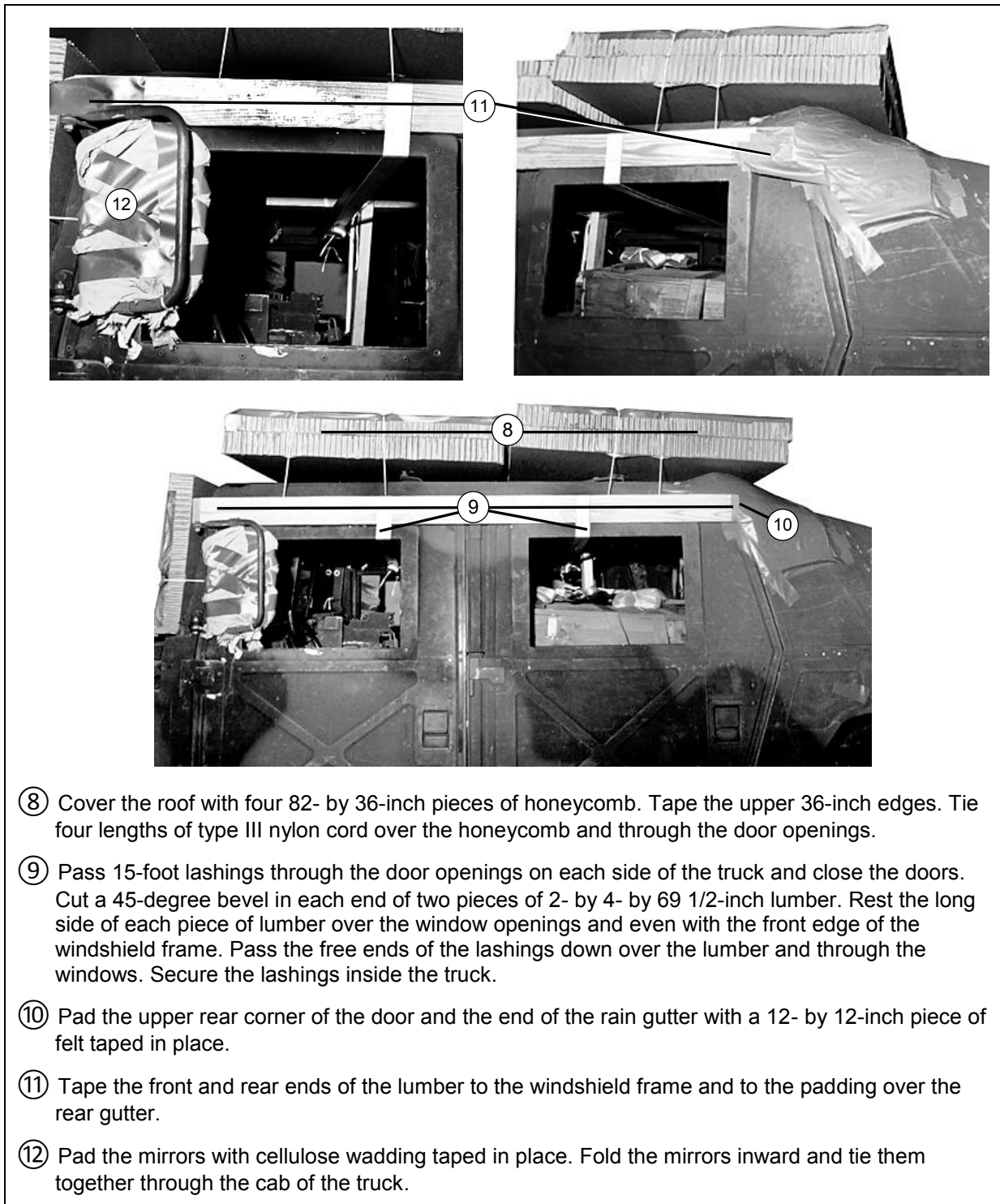
**Figure 2-2. Turret Support Built and Placed (continued)**

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



- ① Tape all lights and reflectors.
- ② On trucks with a brush guard, place an 83- by 14-inch piece of honeycomb in front of the brush guard and secure it in place with type III nylon cord.
- ③ Center a 78- by 4-inch piece of honeycomb along the front edge of the hood.
- ④ Place two 36- by 83-inch pieces of honeycomb, with cutouts as shown, on the hood. Tie the honeycomb in place with type III nylon cord to a hood latch, passed through the grille and tied to the other hood latch. Tape the honeycomb where the cord passes over the edges.
- ⑤ Place two 83- by 12-inch pieces of honeycomb just behind the honeycomb placed in step 2. Tape the top outside edges. Secure the honeycomb the hood latches with type III nylon cord.
- ⑥ Tape the hood latches.
- ⑦ Lower all side windows and open the truck doors (not shown). Place a 21- by 83-inch piece of honeycomb against the windshield. Tie a length of type III nylon cord around the honeycomb and the inside of the windshield frame.

**Figure 2-3. Truck Body Prepared**



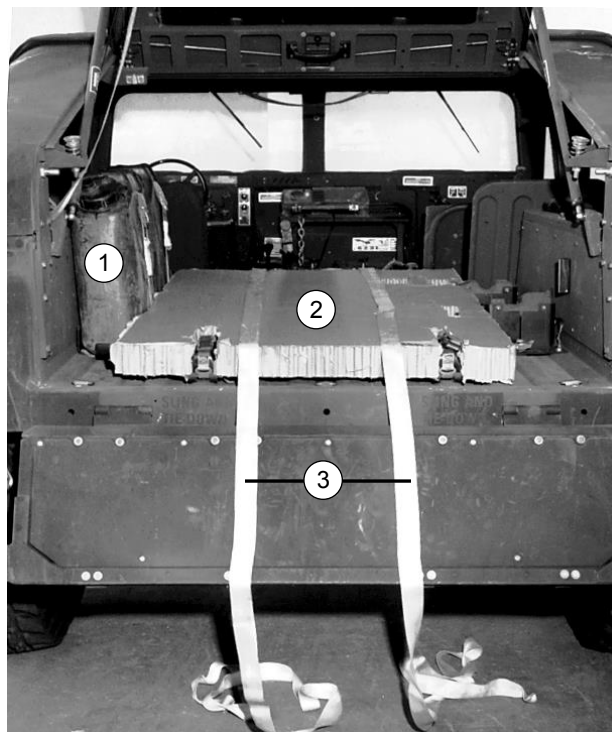
**Figure 2-3. Truck Body Prepared (continued)**

## STOWING ACCOMPANYING LOAD

2-5. Stow the accompanying load of 800 to 2,000 pounds as shown in Figure 2-4. Ensure the accompanying load complies with TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5. The maximum restraint capacity of each cargo area tie-down ring is 2,000 pounds. The accompanying load of ammunition shown weighs 930 pounds.

### CAUTION

Only ammunition listed in Tm 4-48.16 (FM 4-20.153)/MCRP 4-11.3B/TO 137-18-41 may be airdropped. Package, mark, and label hazardous material according to AFMAN 24-204/TM 38-250.



- ① Stow two water cans in their holders, and secure them with the straps provided.
- ② Lay a 36- by 50-inch piece of honeycomb in the cargo area. Make cutouts in the honeycomb for the fixtures on the floor.
- ③ Lay tow 15-foot lashings lengthwise on the honeycomb.

**Figure 2-4. Accompanying Load Stowed in Truck**



- ④ Place the accompanying load (20-millimeter ammunition shown) on the honeycomb.
- ⑤ Secure the pre-positioned lashings on the front side of the boxes with D-rings and load binders.
- ⑥ Run a 15-foot lashing around the boxes through their carrying handles. Secure the lashing with a D-ring and load binder.

**Figure 2-4. Accompanying Load Stowed in Truck (Continued)**

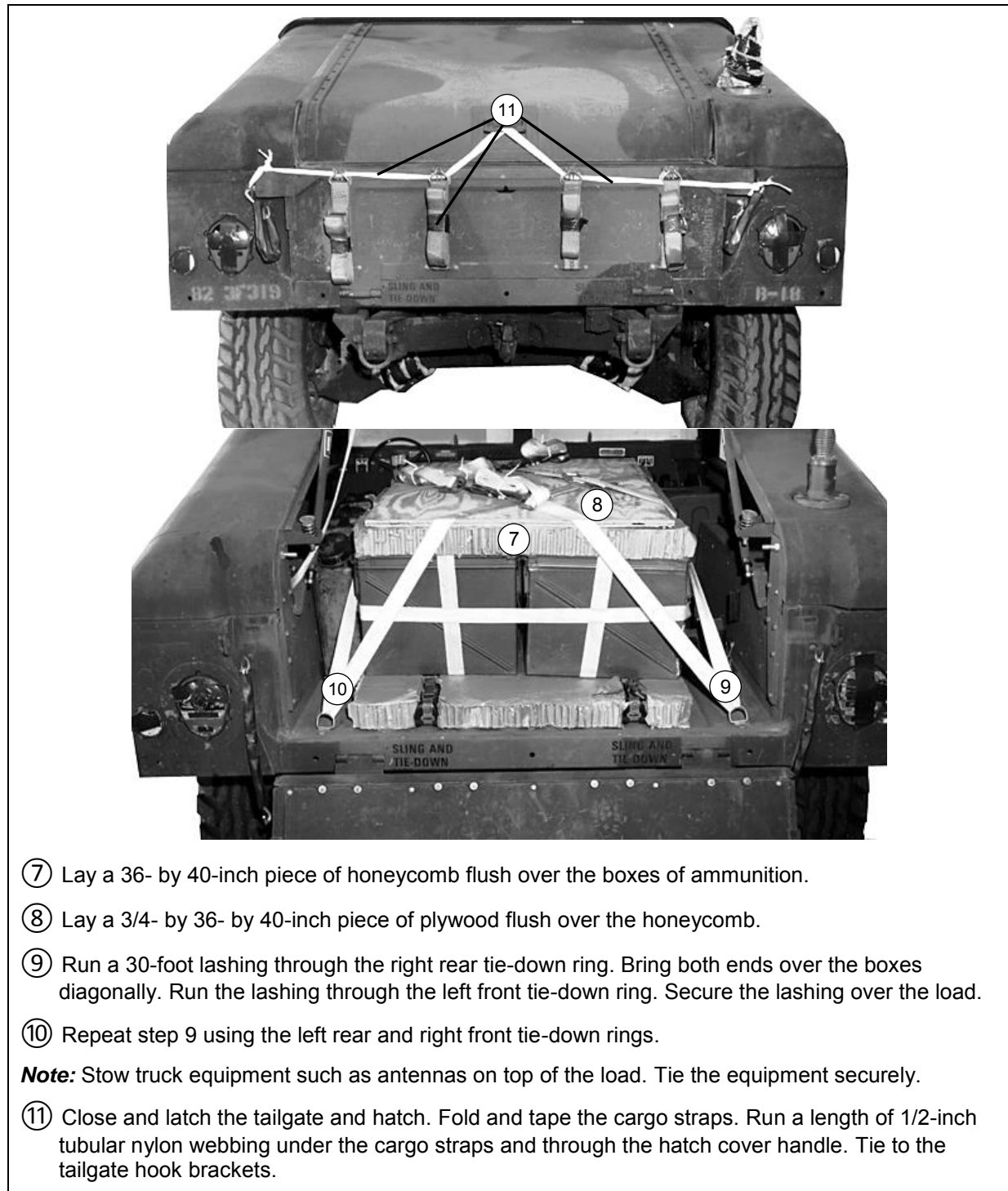


Figure 2-4. Accompanying Load Stowed in Truck (continued)



## LIFTING AND POSITIONING TRUCK AND INSTALLING OPTIONAL DRIVE-OFF AIDS

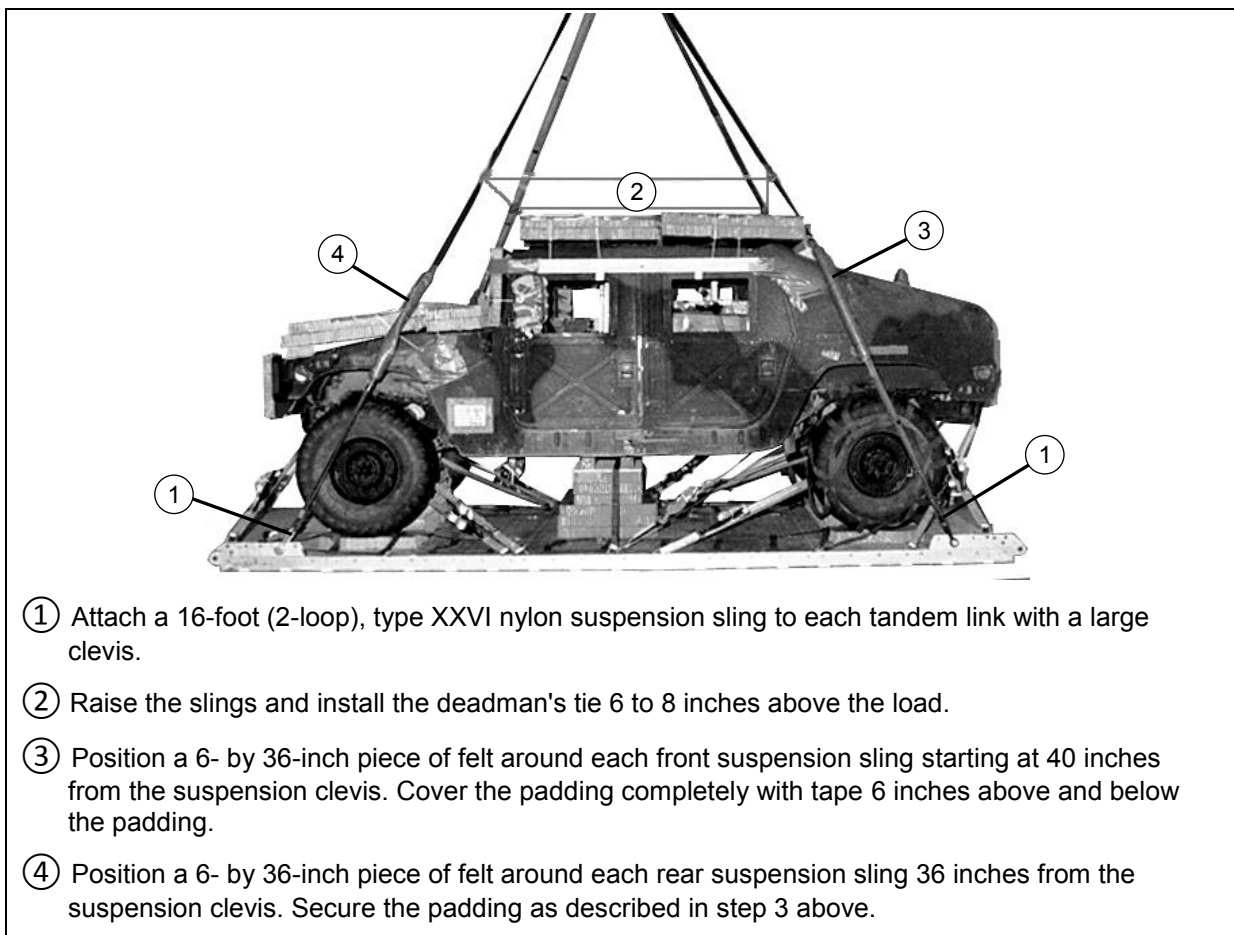
2-6. Install the lifting slings as shown in Figure 1-15. Position the truck on the honeycomb stacks as shown in Figure 1-16. Attach the drive-off aids to the wheels of the truck as shown in Figure 1-17, and according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.

## LASHING THE TRUCK

2-7. Lash the truck to the platform according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figures 1-18 and 1-19.

## INSTALLING AND SAFETY TIEING THE SUSPENSION SLINGS

2-8. Install and safety tie the suspension slings according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figure 2-5.



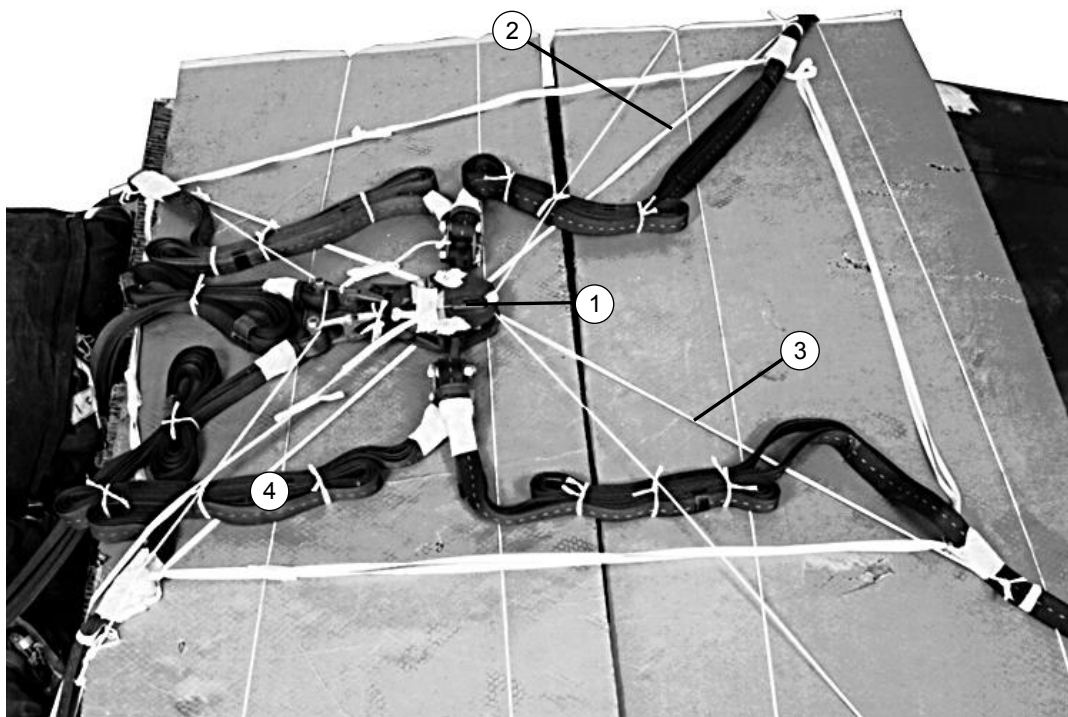
**Figure 2-5. Suspension Slings Installed**

## STOWING CARGO PARACHUTES

2-9. Stow the parachutes according to TM 4-20.102/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figure 1-21.

## INSTALLING THE RELEASE SYSTEM

2-10. Install the release assembly according to TM 4-20.102/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figure 2-6.



- ① Prepare and install the release assembly according to TM 4-20.102/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 on the honeycomb in front of the parachutes.
- ② Tie a length of type 1, 1/4-inch cotton webbing to the right rear suspension sling below the deadman's tie. Bring the webbing diagonally over the load to the left front. Pull it taut, and tie it to the left front sling below the deadman's tie.
- ③ Tie the left rear and right front suspension slings together in the same way as step 2.
- ④ S-fold any slack in the suspension slings. Tie the folds in place with type 1, 1/4-inch cotton webbing.

**Figure 2-6. M-1 Cargo Parachute Release Assembly Installed**

## **INSTALLING THE EXTRACTION SYSTEM**

2-11. Install the EFTC extraction system according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figure 1-23. Install the Extraction Parachute Jettison System (EPJS) light according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 if applicable.

## **INSTALLING PROVISIONS FOR EMERGENCY RESTRAINTS**

2-12. Install the provisions for emergency restraints on the load according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.

## **PLACING EXTRACTION PARACHUTE**

2-13. Select the extraction parachute and extraction line and using the requirements in table in TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5. Rig the extraction line in an extraction line bag according to TM 10-1670-286-20/TO 13C5-2-41. Place the extraction parachute and extraction line on the load for installation in the aircraft. Select a drogue parachute and a drogue line if using C-17/C-130J and place them on the load.

## **MARKING RIGGED LOAD**

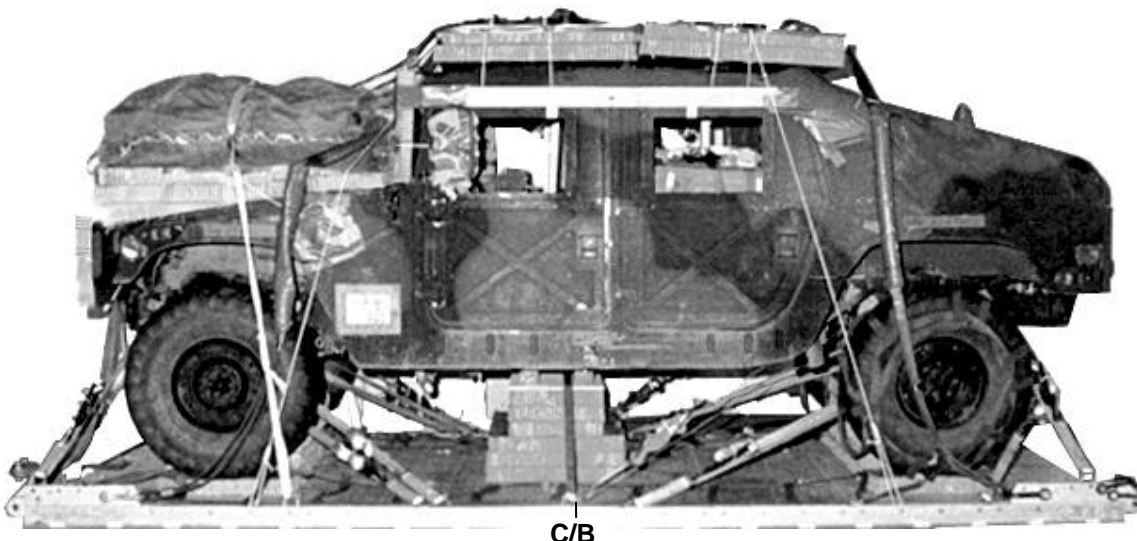
2-14. Mark the rigged load according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figure 2-7. Complete Shipper's Declaration for Dangerous Goods. If the load varies from the one shown, the weight, height, CB, and parachute requirements must be recomputed.

## **EQUIPMENT REQUIRED**

2-15. Use the equipment listed in Table 2-1 on page 2-13 and continuing on page 2-14 to rig this load.

**CAUTION**

Make the final rigger inspection required by AR 59-4 and TM 4-48.02 /MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 before the load leaves the rigging site.

**RIGGED LOAD DATA**

Weight: Load Shown .....	9,820 pounds
Maximum load allowed .....	10,500 pounds
Height (with two G-11B parachutes).....	91 inches
Width .....	108 inches
Length .....	215 inches
Length with extraction parachute jettison system (EPJS) Light	226 inches
Overhang: Front (vehicle).....	0 inches
Rear (extraction force transfer coupling) .....	18 inches
Rear (EPJS Light) .....	30 inches
Center of Balance (CB) (from front edge of platform) .....	96 inches

**Figure 2-7. M1025 Armament Carrier Rigged for Low-Velocity Airdrop**

**Table 2-1. Equipment Required for Rigging the M1025 Armament Carrier on a 16-Foot Platform for Low Velocity Airdrop**

<i>National Stock Number</i>	<i>Item</i>	<i>Quantity</i>
8040-00-273-8713	Adhesive paste, 1-gallon	As required
4030-00-090-5354	Clevis, suspension, 1-inch (large)	5
4030-00-678-8562	Clevis, suspension, 3/4-inch (medium)	4
4020-00-240-2146	Cord, nylon, type III, 550-pound	As required
1670-00-434-5785	Coupling, Airdrop Extraction Force Transfer, w/16-foot. cable	1
8135-00-664-6958	Cushioning material (Cellulose wadding)	As required
1670-01-475-1990	Extraction Parachute Jettison System Light	1
8305-00-958-3685	Felt	As required
1670-01-183-2678	Leaf, extraction line (line bag) (for C-130)	2
1670-01-183-2678	Leaf, extraction/drogue line (line bag) (for C-17/C130J)	4
	Line extraction:	
1670-01-062-6313	60-foot (3-loop), type XXVI (for C-130/J)	1
1670-01-107-7651	140-foot (3-loop), type XXVI (for C-17)	1
1670-01-064-4452	60-foot (1-loop), type XXVI (for C-17/C-130J), (drogue line)	1
1670-01-493-6418	Link assembly, two-point, 3 3/4-inch, small:	2
	Lumber:	
5510-00-550-6969	1- by 6- by 48-inch	1
5510-00-220-6146	2- by 4- by 96-inch	3
5510-00-220-6196	2- by 6- by 72-inch	1
5510-00-220-6274	4- by 4- by 96-inch	1
5315-00-010-4659	Nail, steel, common, 8D	As required
1670-00-753-3928	Pad, energy-dissipating (honeycomb)	10 sheets
1670-01-016-7841	Parachute, cargo, G-11B	2
	Parachute, cargo, extraction:	
1670-01-063-3716	22-foot	1
1670-01-063-3715	15-foot (for C-17/C130J) (DES)	1
	Platform, airdrop, type V, 16-foot:	
1670-01-353-8424	Bracket, assembly, extraction	1
1670-01-353-8425	Bracket, assembly, coupling	1
1670-01-162-2372	Clevis assembly (type V)	20
1670-01-162-2381	Tandem link assembly (Multipurpose link)	4
5530-00-128-4981	Plywood, 3/4-inch	2 sheets

**Table 2-1. Equipment Required for Rigging the M1025 Armament Carrier on a 16-Foot Platform for Low Velocity Airdrop (continued)**

<i>National Stock Number</i>	<i>Item</i>	<i>Quantity</i>
1670-01-097-8816	Release, cargo parachute, M-1	1
	Sling, cargo, airdrop:	
	For Deployment	
1670-01-062-6304	9-foot (2-loop), type XXVI	1
	For Lifting	
1670-01-062-6304	9-foot (2-loop), type XXVI	2
1670-01-062-6303	12-foot (2-loop), type XXVI	2
	For Suspension	
1670-01-063-7761	16-foot (2-loop), type XXVI	4
	For Riser Extension	
1670-01-062-6302	20-foot (2-loop), type XXVI	1
1670-00-998-0116	Strap, parachute, release, single-knife	1
7501-00-266-5016	Tape, adhesive, 2-inch	As required
1670-00-937-0271	Tiedown assembly, 15-foot	22
	D-rings, heavy duty, 10,000-pound	20
	Binder, load, 10,000-pound	20
1670-01-483-8259	Towplate release mechanism (H-block) (for C-17)	1
	Towplate release mechanism (H-block) (for C-130J)	1
	Webbing:	
8305-00-268-2411	Cotton, 1/4-inch, type I	As required
8305-00-082-5752	Nylon, tubular, 1/2-inch	As required
8305-00-559-6871	Nylon, type VIII	As required

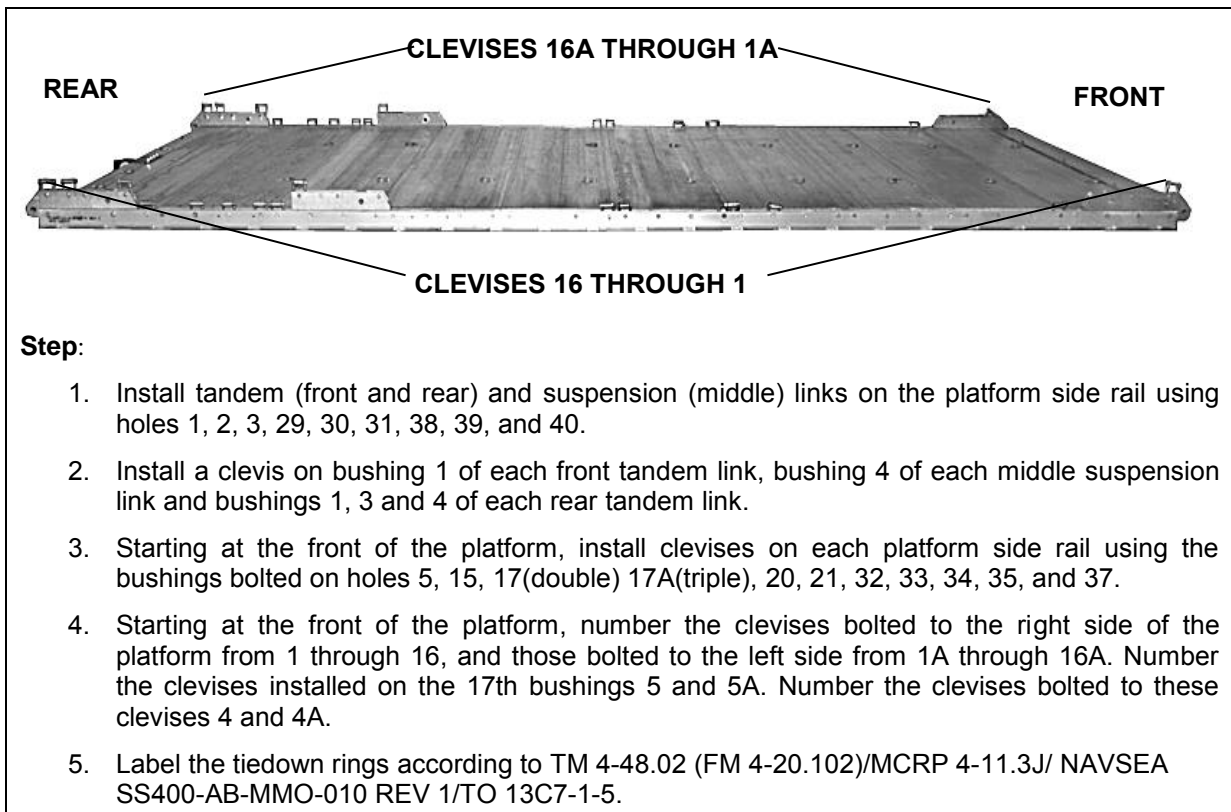
## SECTION II - RIGGING ARMAMENT CARRIERS ON A 20-FOOT PLATFORM WITH ADDITIONAL ACCOMPANYING AMMUNITION LOAD

### DESCRIPTION OF LOAD

2-16. The unrigged M1025 armament carrier is described in Chapter 1. The truck and an accompanying load are rigged on a 20-foot type V platform for low-velocity airdrop. A load weighing a minimum of 800 pounds and a maximum of 2,000 pounds must be rigged in the truck. The load requires three G-11 cargo parachutes. The armament carriers listed on paragraph 2-1 can be rigged using the procedures in this section.

### PREPARING PLATFORM

2-17. Prepare a 20-foot, type V airdrop platform according to TM 10-1670-268-20&P/TO 13C7-52-22. Install four tandem links, two suspension links and 32 load tie-down clevises according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figure 2-8.

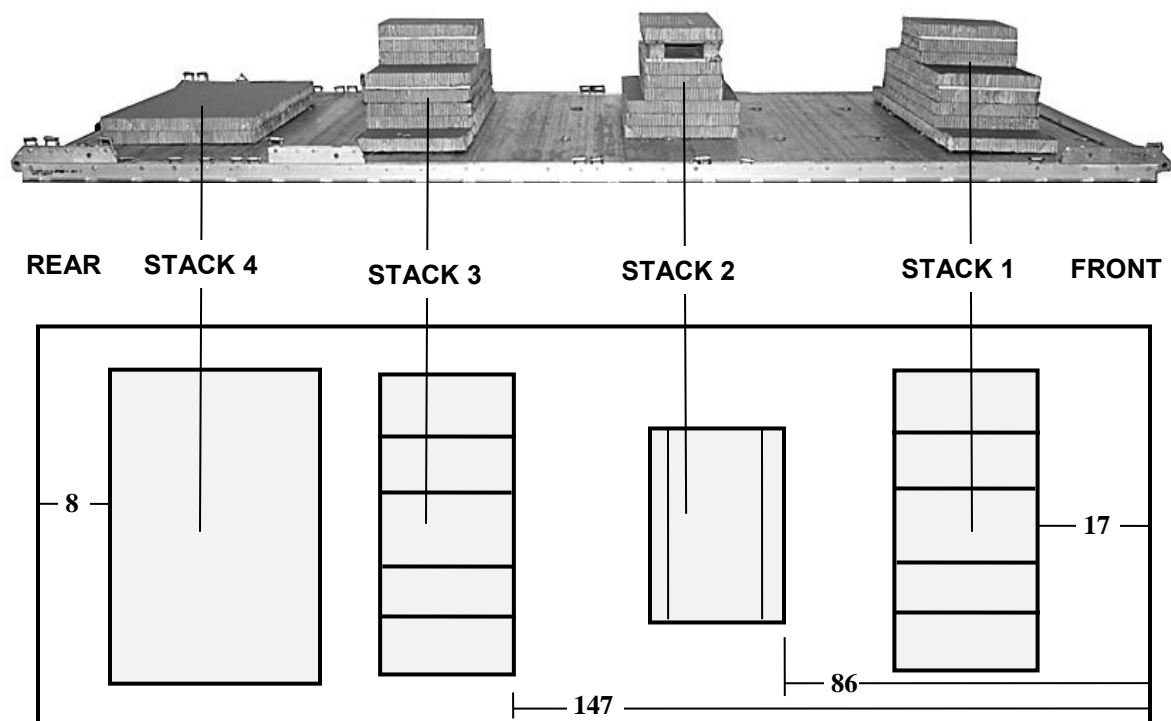


**Figure 2-8. Platform Prepared**

## PREPARING AND POSITIONING HONEYCOMB STACKS

2-18. Build honeycomb stacks 1 through 3 as shown in Figures 1-3 and 1-4. Glue two 36- by 60-inch pieces of honeycomb flush together to make stack 4. Position the stacks on the platform as shown in Figure 2-9 and according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.

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



Stack Number	Position on Platform
1	Place stack: Centered 17 inches from the front edge of the platform.
2	Centered 86 inches from the front edge of the platform.
3	Centered 147 inches from the front edge of the platform.
4	Centered 8 inches from the rear edge of the platform

**Figure 2-9. Honeycomb Stacks Positioned on Platform**

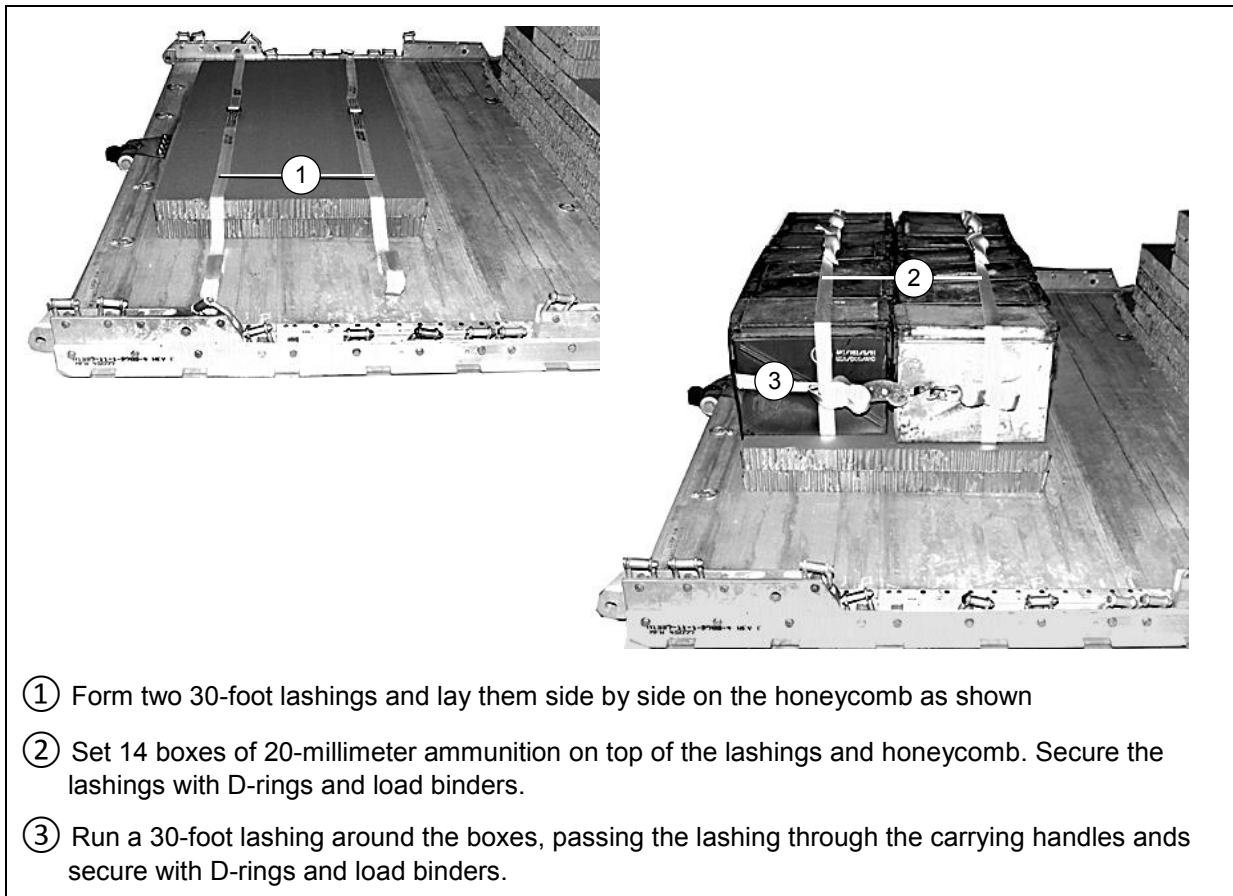


## RIGGING ACCOMPANYING LOADS ON THE PLATFORM AND IN THE TRUCK

2-19. The accompanying load shown is fourteen boxes of 20-millimeter ammunition. Any load of similar weight and configuration can be rigged on the platform. Rig this accompanying load on the platform as shown in Figure 2-10. Rig the accompanying load in the truck according as shown in Figure 2-4. Make sure any accompanying loads meet the restrictions and requirements as outlined in TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.

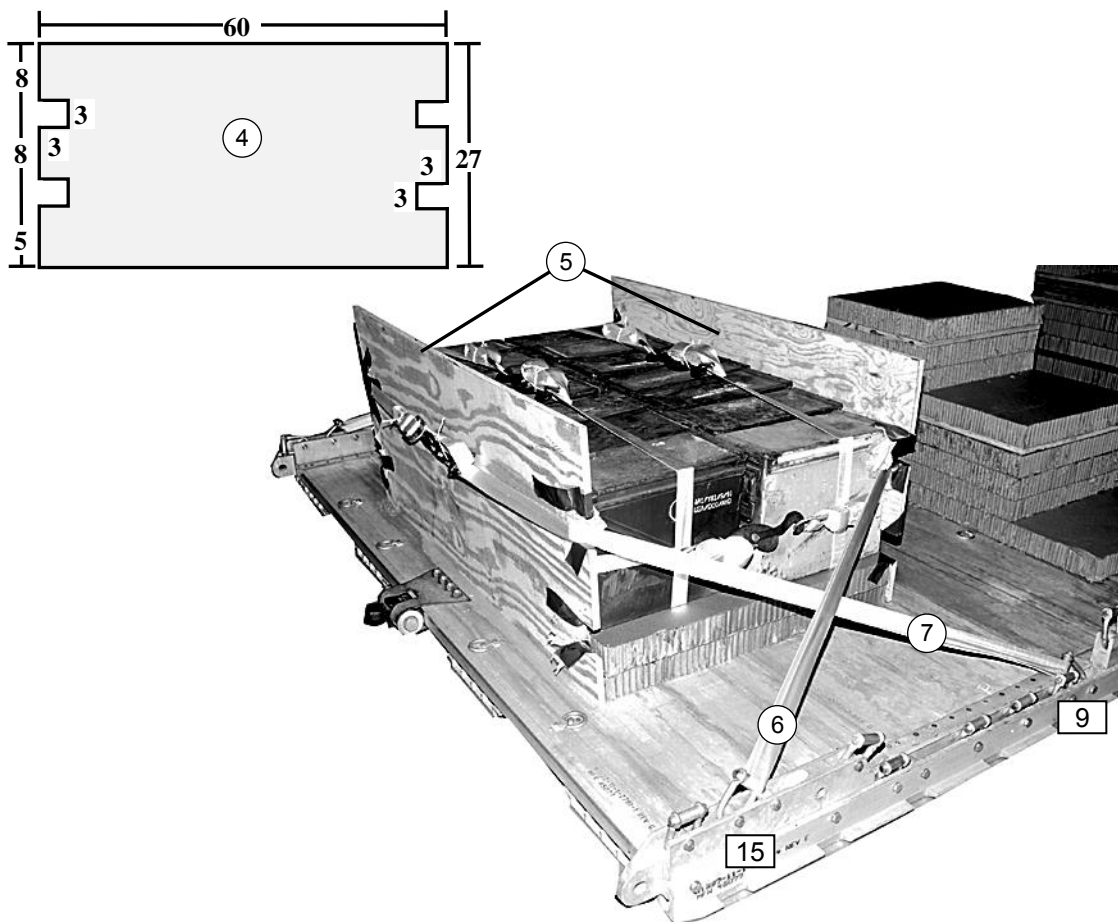
### CAUTION

Ammunition in TM 4-48.16 (FM 4-20.153)/MCRP 4-11.3B/TO 13C7-18-41 may be airdropped. Package, label, and mark hazardous material according to AFMAN 24-204(I)/TM 38-250/NAVSUP PUB 505/MCO P4030.19H/DLAI 4145.3.



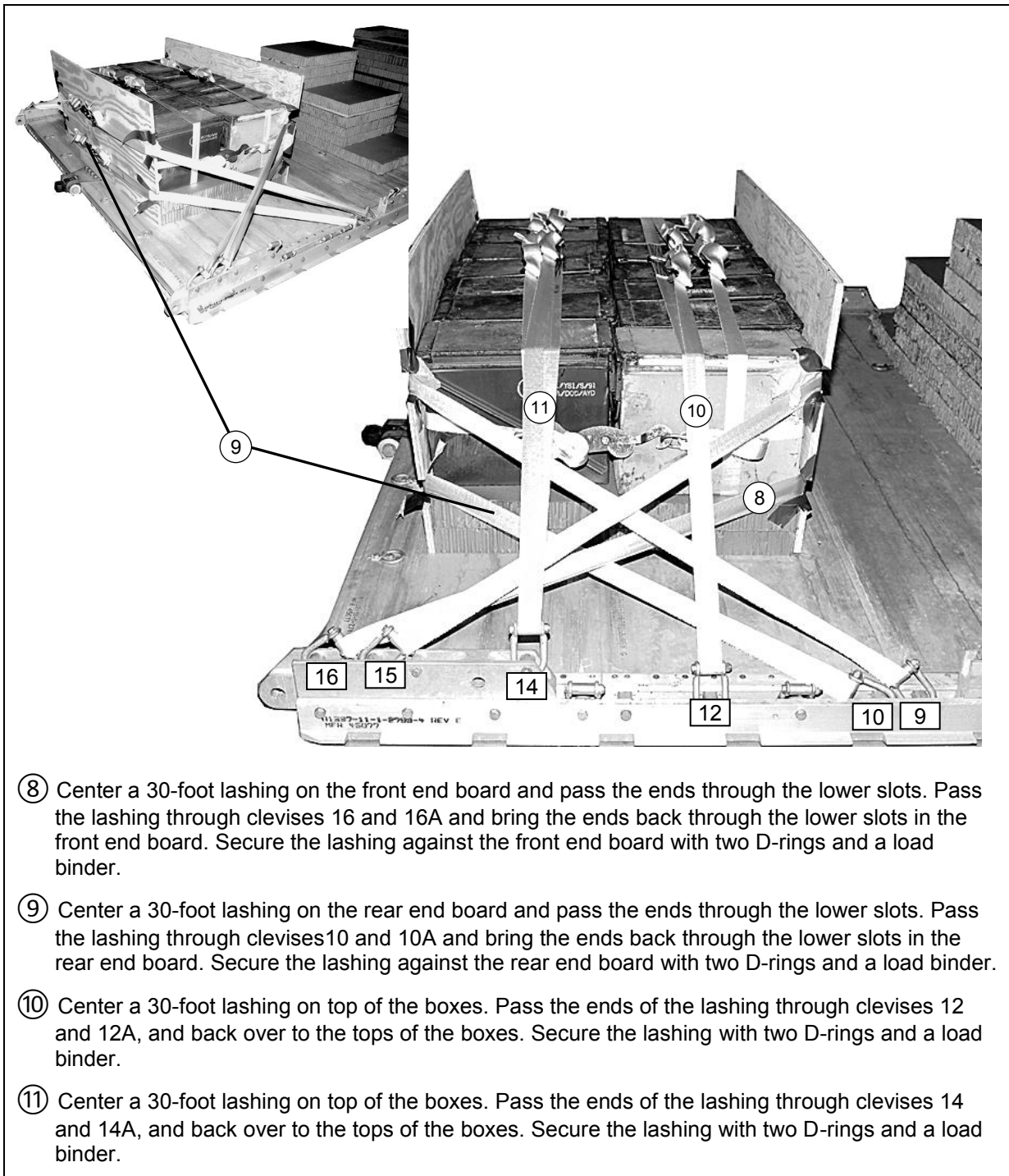
**Figure 2-10. Accompanying Load Stowed on Platform**

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



- ④ Construct two endboards of  $\frac{3}{4}$ - by 27- by 60-inch plywood as shown.
- ⑤ Center an endboard against each end of the stack. Pad the cutouts with cellulose wadding taped in place.
- ⑥ Center a 30-foot lashing on the front endboard and pass the ends through the upper slots. Pass the lashing through clevises 15 and 15A and bring the ends back through the upper slots in the front endboard. Secure the lashing against the front endboard with two D-rings and load binder.
- ⑦ Center a 30-foot lashing on the rear endboard and pass the ends through the upper slots. Pass the lashing through clevises 9 and 9A and bring the ends back through the upper slots in the rear endboard. Secure the lashing against the rear endboard with two D-rings and load binder.

**Figure 2-10. Accompanying Load Stowed on Platform (continued)**



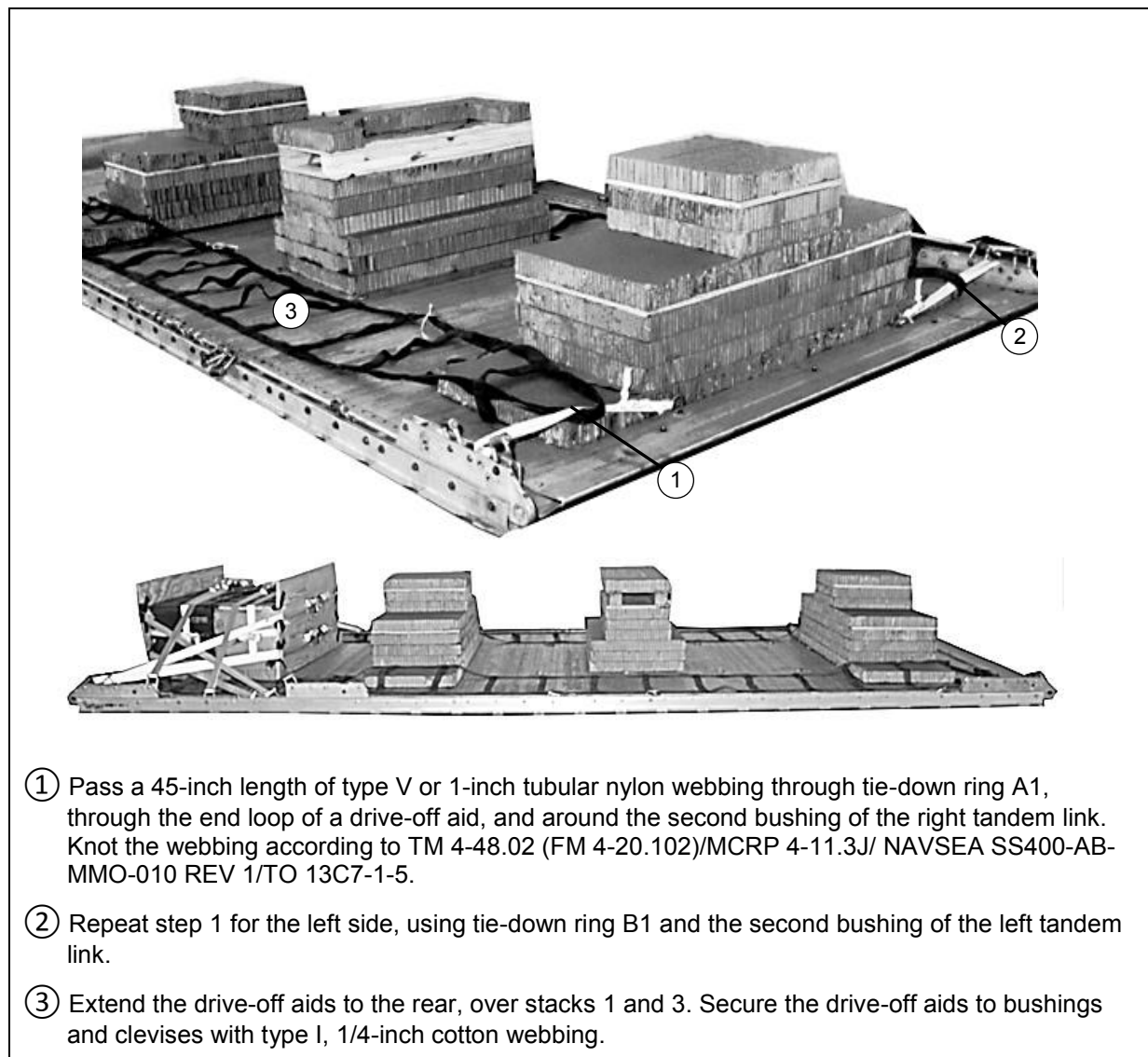
**Figure 2-10. Accompanying Load Stowed on Platform (continued)**

## PREPARING THE TRUCK

2-20. Prepare truck as described in Figures 1-6, 1-7 (do not do steps 1 and 3), Figure 1-8, Figure 1-9 does not apply to closed body vehicles. Continue preparing the vehicle as shown Figures 1-10 and 1-11. Finish preparing the closed-body HMMWV's as shown in Figures 2-2 and 2-3 (do not do step 3).

## INSTALLING OPTIONAL DRIVE-OFF AIDS

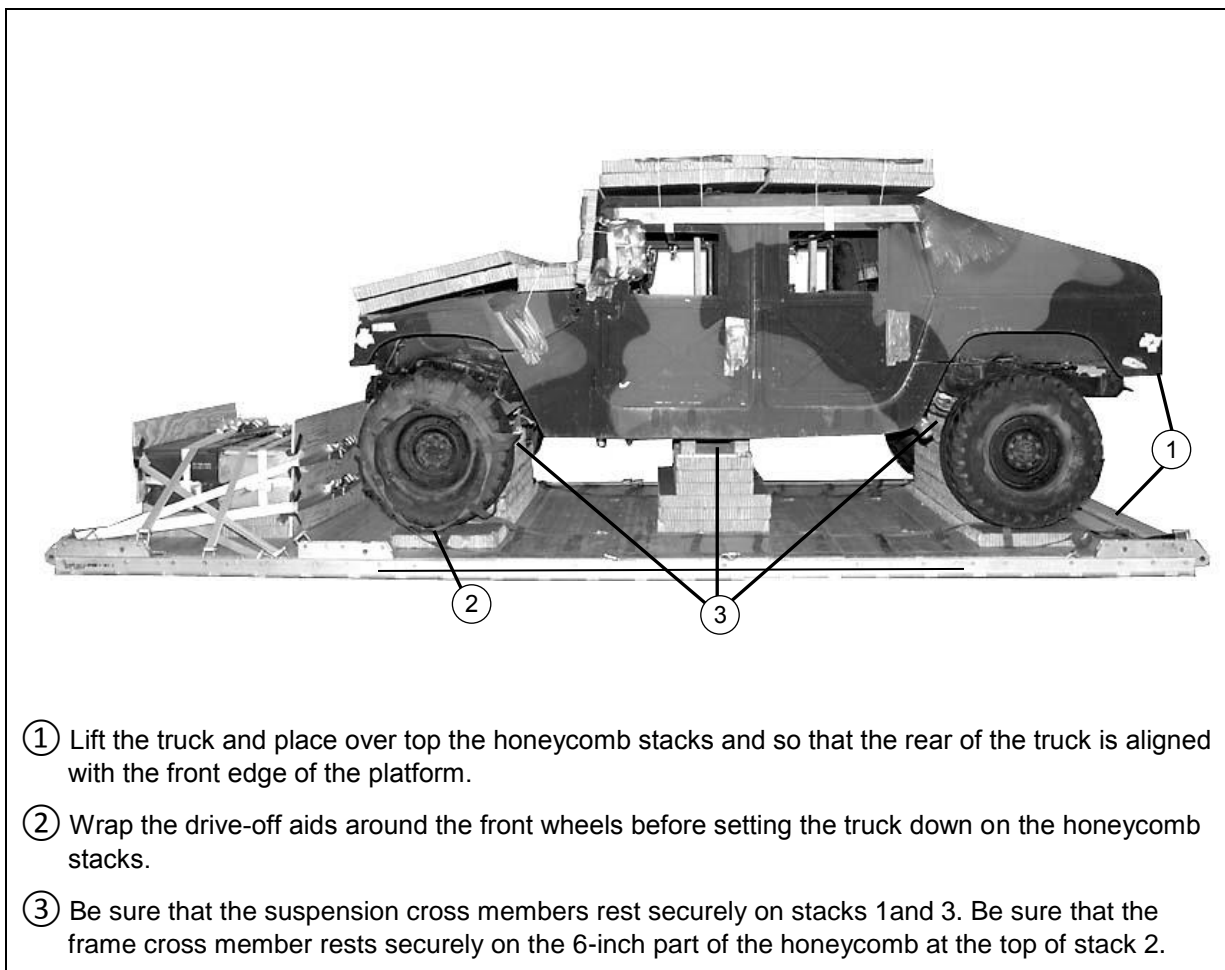
2-21. Install drive-off aids on the platform as shown in Figure 2-11, and according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.



**Figure 2-11. Drive-Off Aids Installed on Platform**

## LIFTING AND POSITIONING TRUCK AND INSTALLING OPTIONAL DRIVE-OFF AIDS

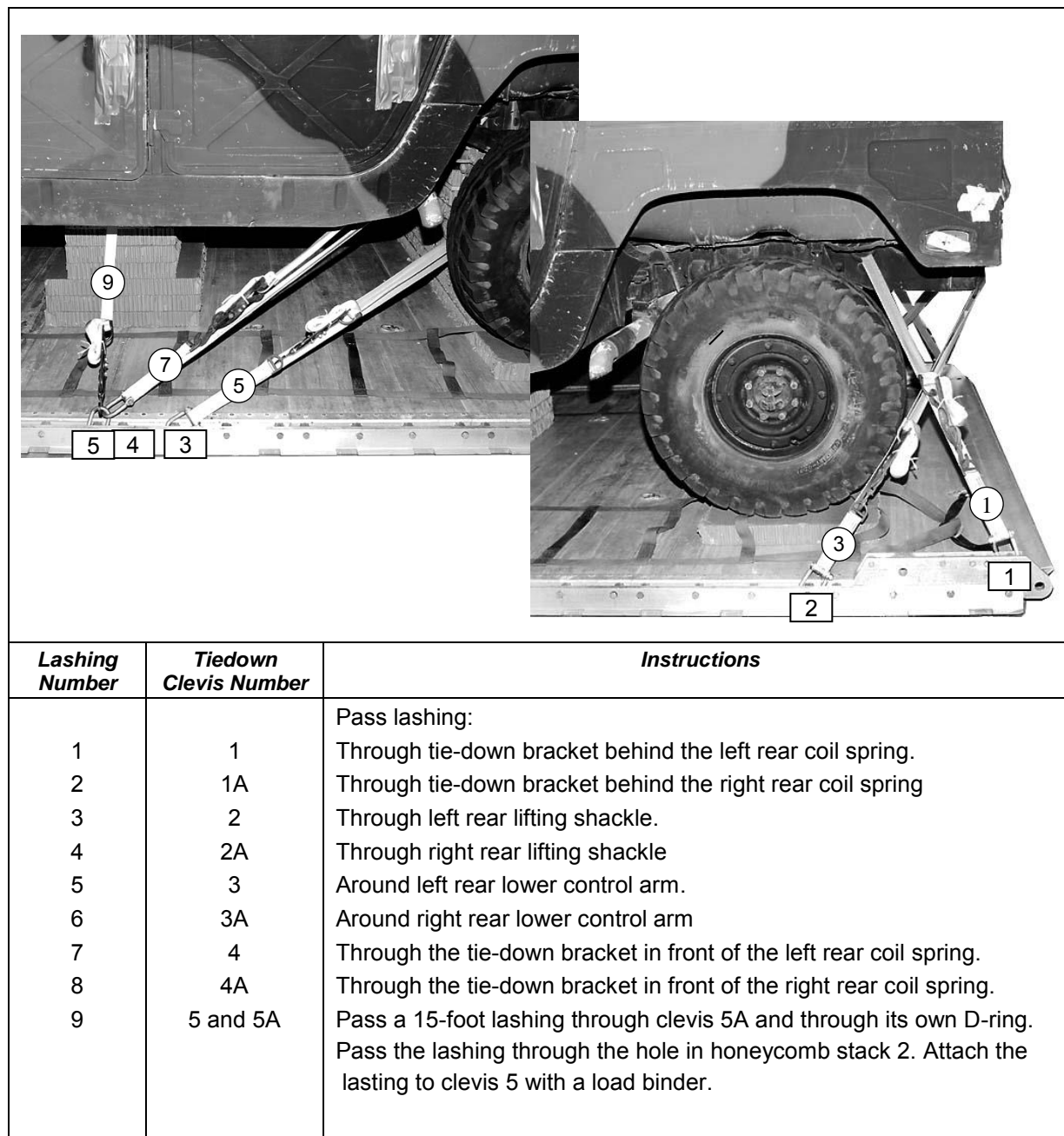
2-22. Install the lifting slings as shown in Figure 1-15. Position the truck on the honeycomb stacks as shown in Figure 2-12. Attach the drive-off aids to the wheels of the truck as shown in Figure 1-17, Figure 2-12, and according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.



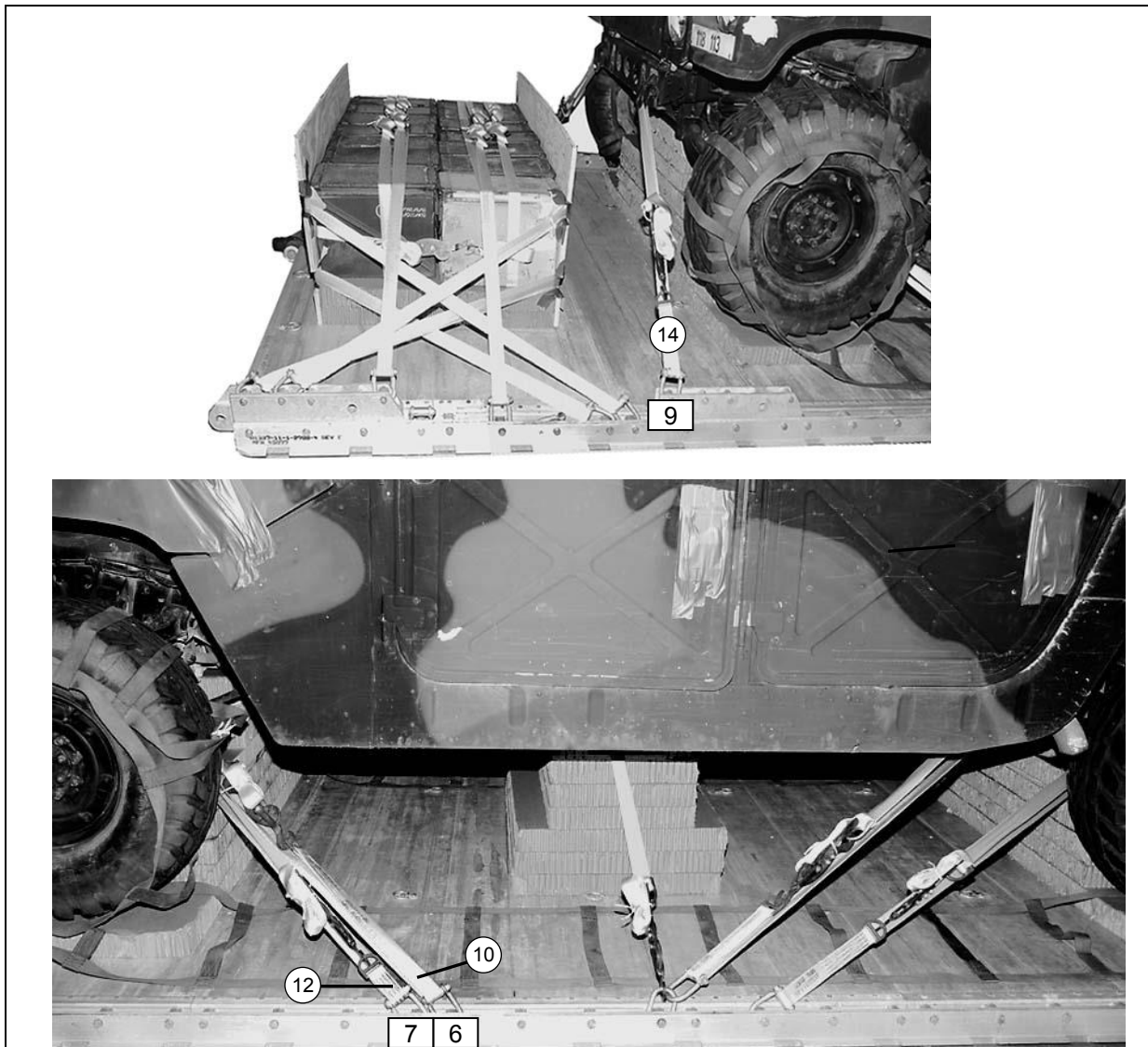
**Figure 2-12. Truck Positioned on Platform**

## LASHING THE TRUCK

2-23. Lash the truck to the platform according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figures 2-13 and 2-14.



**Figure 2-13. Lashings 1 through 9 Installed**

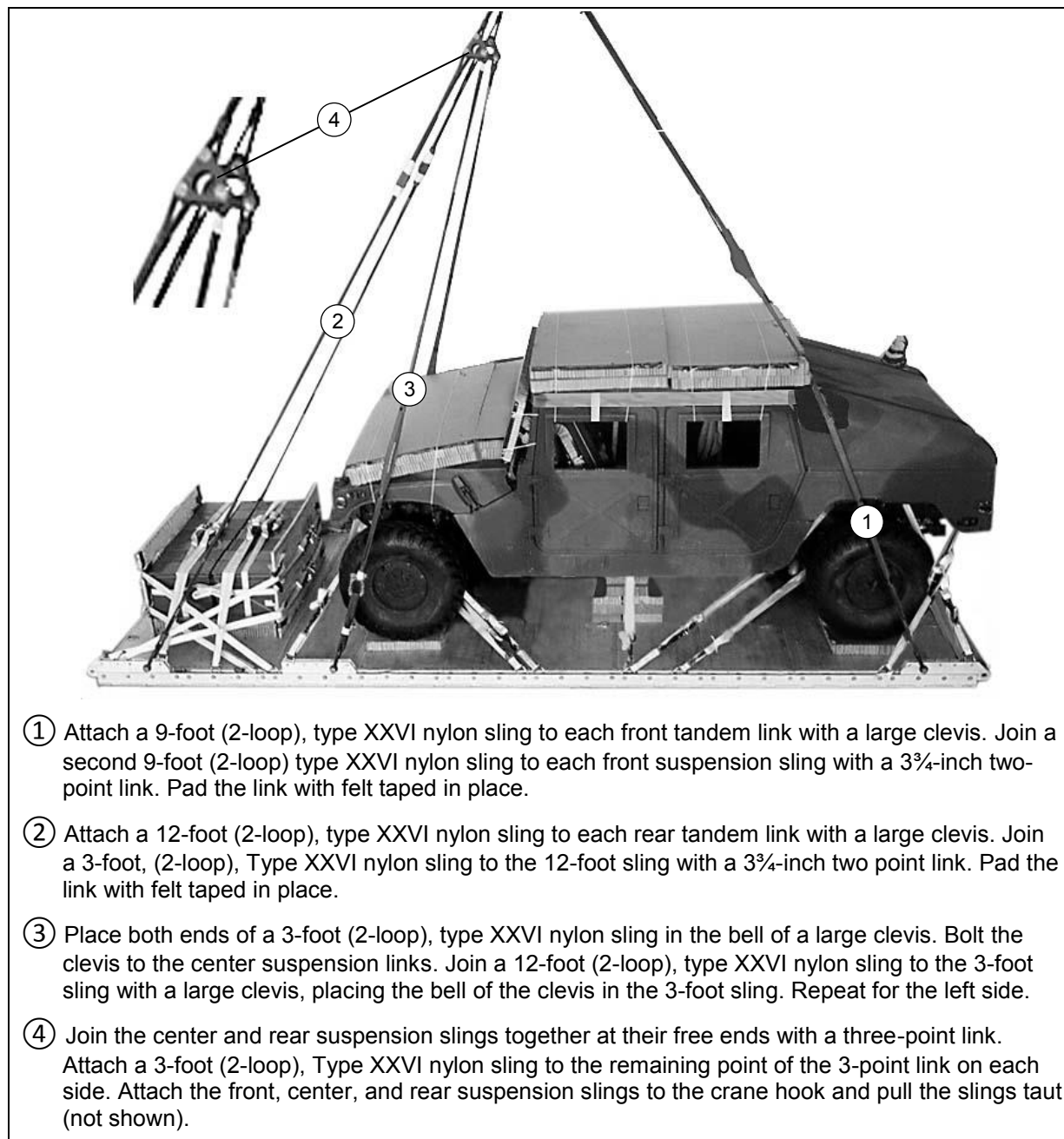


<b>Lashing Number</b>	<b>Tiedown Clevis Number</b>	<b>Instructions</b>
10	6	Pass lashing:
11	6A	Through the tiedown bracket behind the left front coil spring.
12	7	Through the tiedown bracket behind the right front coil spring.
13	7A	Around the left lower control arm.
14	9	Around the right lower control arm.
15	9A	Through the tie-down bracket on the end of the left frame rail.
		Through the tie-down bracket on the end of the right frame rail.

**Figure 2-14. Lashings 10 through 15 Installed**

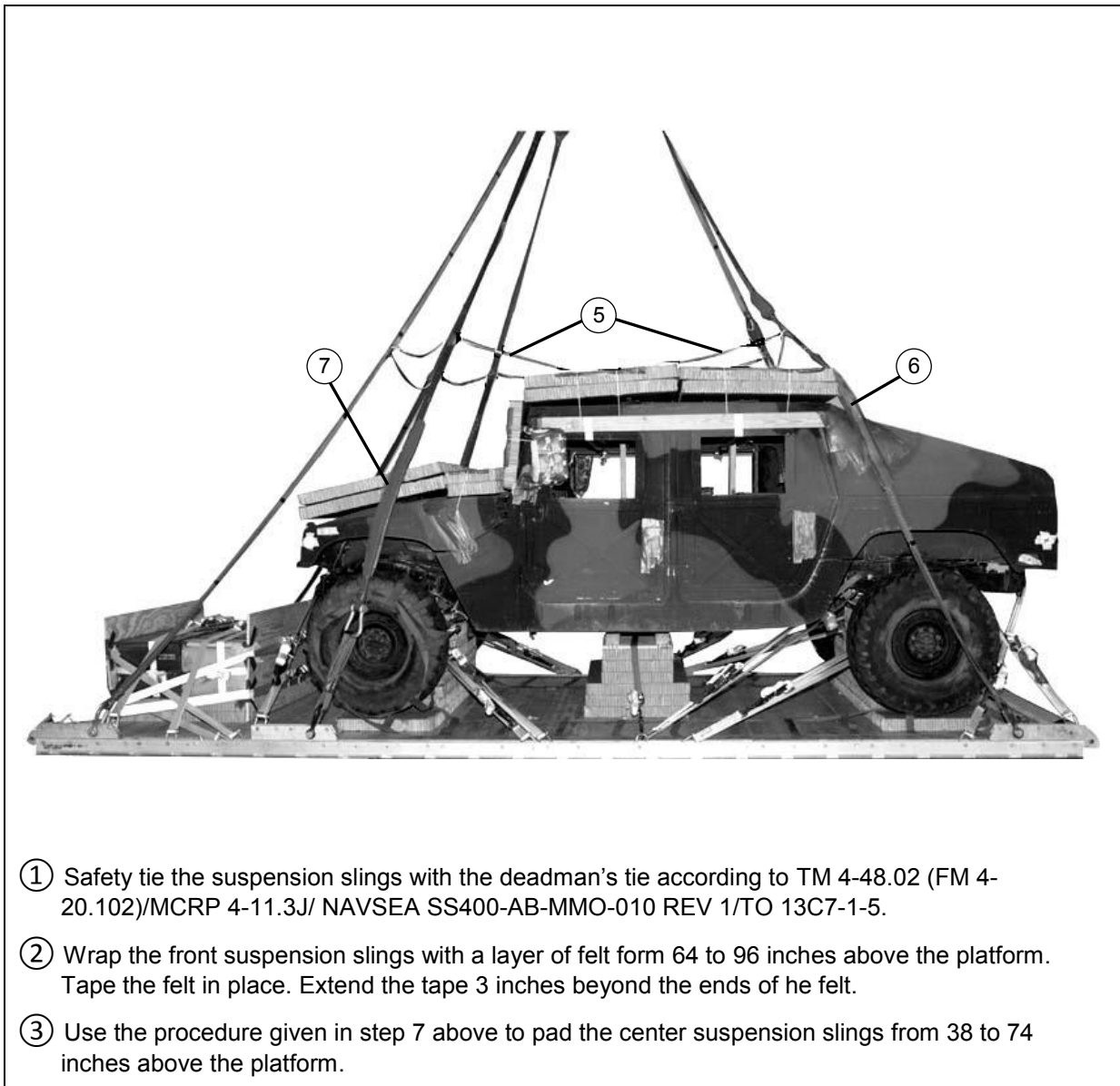
## INSTALLING AND SAFETY TIEING THE SUSPENSION SLINGS

2-24. Install, safety tie and pad the suspension slings according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figures 2-15.



**Figure 2-15. Suspension Slings Installed, Safety Tied and Padded**

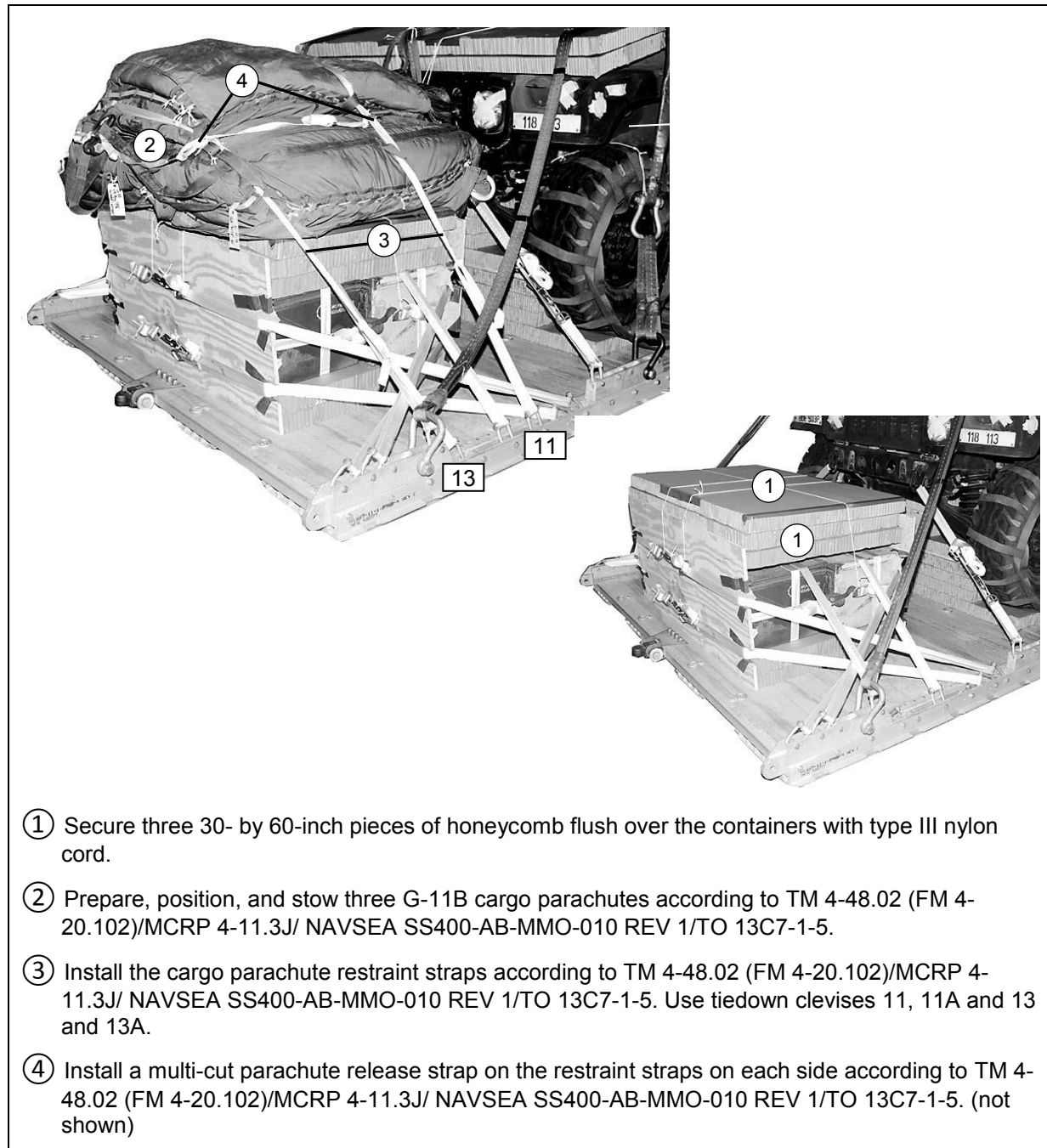




**Figure 2-15. Suspension Slings Installed, Safety Tied and Padded (continued)**

## STOWING CARGO PARACHUTES

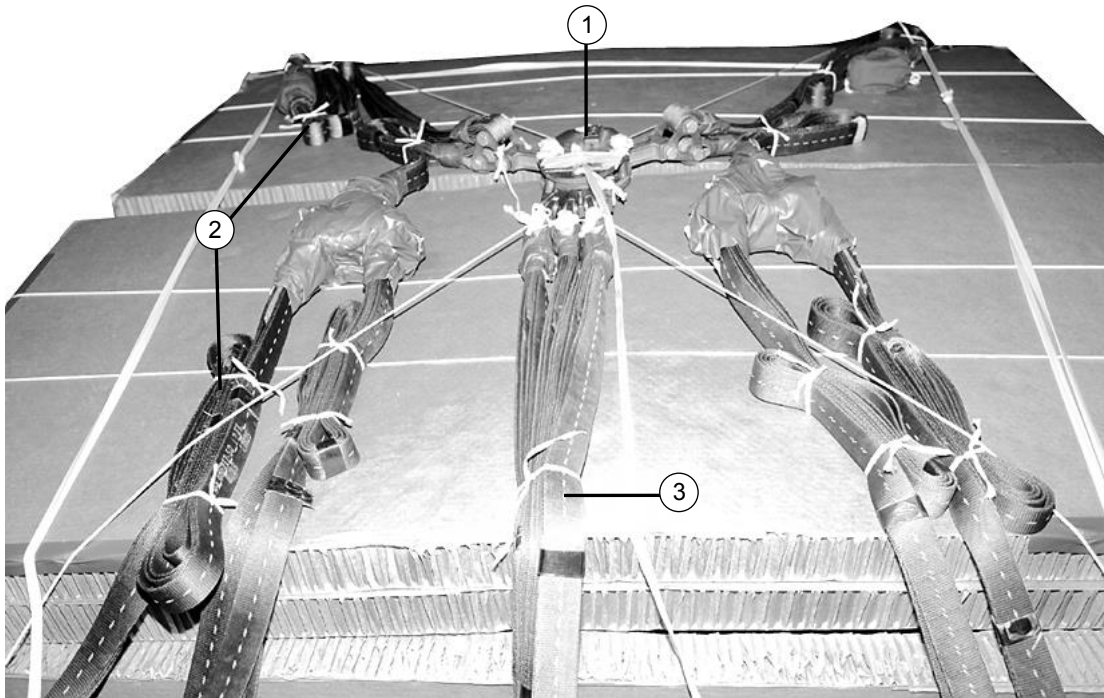
2-25. Stow the cargo parachutes according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figure 2-16.



**Figure 2-16. Cargo Parachutes Stowed and Restrained**

## INSTALLING THE RELEASE SYSTEM

2-26. Install the release assembly according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figure 2-17.

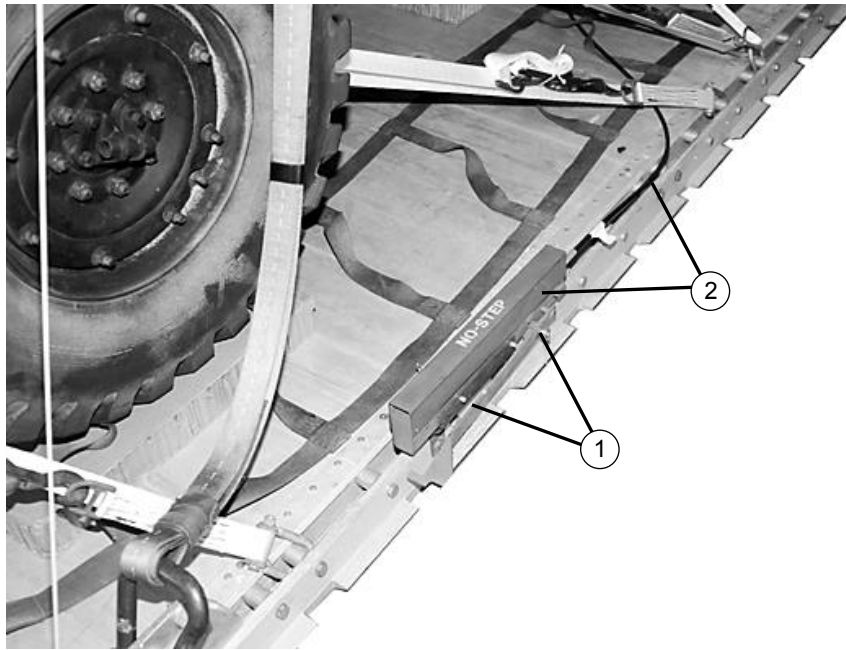


- ① Prepare and install the release assembly according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 centered on the honeycomb on the truck roof.
- ② S-fold any slack in the suspension slings. Tie the folds in place with type 1, 1/4-inch cotton webbing.
- ③ Tie the riser extensions together with type I, 1/4-inch cotton webbing.

**Figure 2-17. M-1 Cargo Parachute Release Assembly Installed**

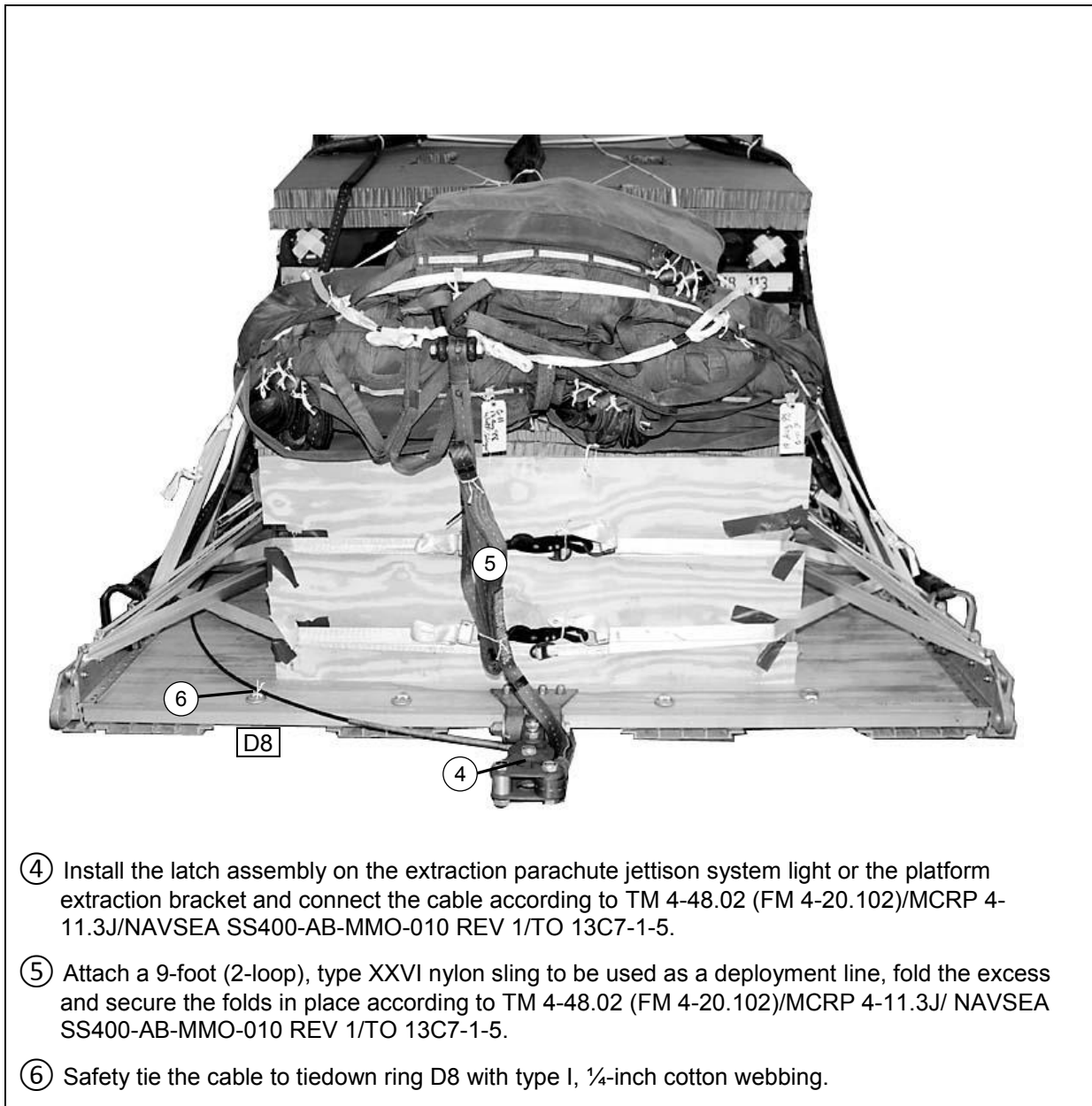
## INSTALLING THE EXTRACTION SYSTEM

2-27. Install the EFTC extraction system according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figure 2-18.



- ① Install the components of the extraction force transfer coupling according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5. Use the rear mounting holes for the extraction force transfer coupling actuator mounting brackets.
- ② Install an actuator, with a 20-foot cable, to the extraction force transfer coupling mounting brackets; route and safety tie the cable according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.
- ③ Install the extraction parachute jettison system Light according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 if applicable. (not shown)

**Figure 2-18. Extraction System Installed**



**Figure 2-18. Extraction System Installed (continued)**

## **INSTALLING PROVISIONS FOR EMERGENCY RESTRAINTS**

2-28. Install the provisions for emergency restraints on the load according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.

## **PLACING EXTRACTION PARACHUTE**

2-29. Select the extraction parachute and extraction line and using the requirements in table in TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5. Rig the extraction line in an extraction line bag according to TM 10-1670-286-20/TO 13C5-2-41. Place the extraction parachute and extraction line on the load for installation in the aircraft. Select a drogue parachute and a drogue line if using C-17/C-130J and place them on the load.

## **MARKING RIGGED LOAD**

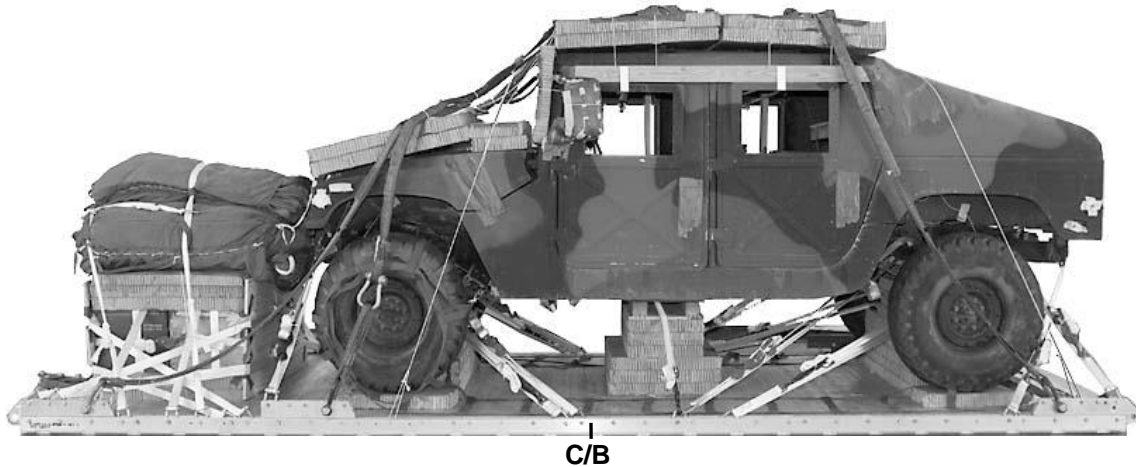
2-30. Mark the rigged load according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figure 2-19. Complete Shipper's Declaration for Dangerous Goods. If the load varies from the one shown, the weight, height, CB, and parachute requirements must be recomputed.

## **EQUIPMENT REQUIRED**

2-31. Use the equipment listed in Table 2-2 on page 2-32 and continuing on page 2-33 to rig this load.

### CAUTION

Make the final rigger inspection required by AR 59-4 and TM 4-48.02 /MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 before the load leaves the rigging site.



### RIGGED LOAD DATA

Weight: Load Shown.....	11,740 pounds
Maximum load allowed.....	12,100 pounds
Height (with two G-11B parachutes .....	91 inches
Width.....	108 inches
Length.....	265 inches
Length with extraction parachute jettison system (EPJS) Light	295 inches
Overhang: Front (vehicle) .....	0 inches
Rear (extraction force transfer coupling).....	18 inches
Rear (EPJS Light) .....	30 inches
Center of Balance (CB) (from front edge of platform) .....	112 inches

**Figure 2-19. M1025 Armament Carrier Rigged on a 20-Foot for Low-Velocity Airdrop**

**Table 2-2. Equipment Required for Rigging the M1025 Armament Carrier on a 20-Foot Platform for Low Velocity Airdrop**

<i>National Stock Number</i>	<i>Item</i>	<i>Quantity</i>
8040-00-273-8713	Adhesive paste, 1-gallon	As required
4030-00-090-5354	Clevis, suspension, 1-inch (large)	9
4030-00-678-8562	Clevis, suspension, 3/4-inch (medium)	4
4020-00-240-2146	Cord, nylon, type III,	As required
1670-00-434-5787	Coupling, Airdrop Extraction Force Transfer, w/20-foot. cable	1
8135-00-664-6958	Cushioning material (Cellulose wadding)	As required
1670-01-475-1990	Extraction Parachute Jettison System Light	1
8305-00-958-3685	Felt,	As required
1670-01-183-2678	Leaf, extraction line (line bag) (for C-130)	2
1670-01-183-2678	Leaf, extraction/drogue line (line bag) (for C-17/C130J)	4
	Line extraction:	
1670-01-062-6313	60-foot (3-loop), type XXVI (for C-130/J)	1
1670-01-107-7651	140-foot (3-loop), type XXVI (for C-17)	1
1670-01-064-4452	60-foot (1-loop), type XXVI (for C-17/C-130J), (drogue line)	1
1670-01-493-6418	Link assembly, two-point, 3¾-inch, small:	2
	Lumber:	
5510-00-550-6969	1- by 6- by 48-inch	1
5510-00-220-6146	2- by 4- by 96-inch	2
5510-00-220-6196	2- by 6- by 72-inch	4
5510-00-220-6274	4- by 4- by 96-inch	2
5315-00-010-4659	Nail, steel, common, 8D	As required
1670-00-753-3928	Pad, energy-dissipating (honeycomb)	10 sheets
1670-01-016-7841	Parachute, cargo, G-11B	3
	Parachute, cargo, extraction:	
1670-01-063-3716	22-foot	1
1670-01-063-3715	15-foot (for C-17/C130J) (DES)	1
	Platform, airdrop, type V, 16-foot:	
1670-01-353-8424	Bracket, assembly, extraction	1
1670-01-353-8425	Bracket, assembly, coupling	1
1670-01-162-2372	Clevis assembly (type V)	33
1670-01-162-2381	Tandem link assembly (Multipurpose link)	6
5530-00-128-4981	Plywood, 3/4-inch	2 sheets



**Table 2-2 Equipment Required for Rigging the M1025 Armament Carrier on a 20-Foot Platform for Low Velocity Airdrop (continued)**

<i>National Stock Number</i>	<i>Item</i>	<i>Quantity</i>
1670-01-097-8816	Release, cargo parachute, M-1	1
	Sling, cargo, airdrop:	
	For Deployment	
1670-01-062-6304	9-foot (2-loop), type XXVI nylon webbing	1
	For Lifting	
1670-01-062-6304	9-foot (2-loop), type XXVI nylon webbing	2
1670-01-062-6303	12-foot (2-loop), type XXVI nylon webbing	2
	For Suspension	
1670-01-062-6301	3-foot (2-loop), type XXVI nylon webbing	6
1670-01-062-6304	9-foot (2-loop), type XXVI nylon webbing	4
1670-01-062-6303	12-foot (2-loop), type XXVI nylon webbing	4
	For Riser Extension	
1670-01-062-6302	20-foot (2-loop), type XXVI	1
5340-00-040-8219	Strap, parachute, release, multi-cut, comes with 3 knives	1
7501-00-266-5016	Tape, adhesive, 2-inch	As required
1670-00-937-0271	Tiedown assembly, 15-foot	39
	D-rings, heavy duty, 10,000-pound	33
	Binder, load, 10,000-pound	26
1670-01-483-8259	Towplate release mechanism (H-block) (for C-17)	1
	Towplate release mechanism (H-block) (for C-130J)	1
	Webbing:	
8305-00-268-2411	Cotton, 1/4-inch, type I	As required
8305-00-082-5752	Nylon, tubular, 1/2-inch	As required
8305-00-559-6871	Nylon, type VIII	As required

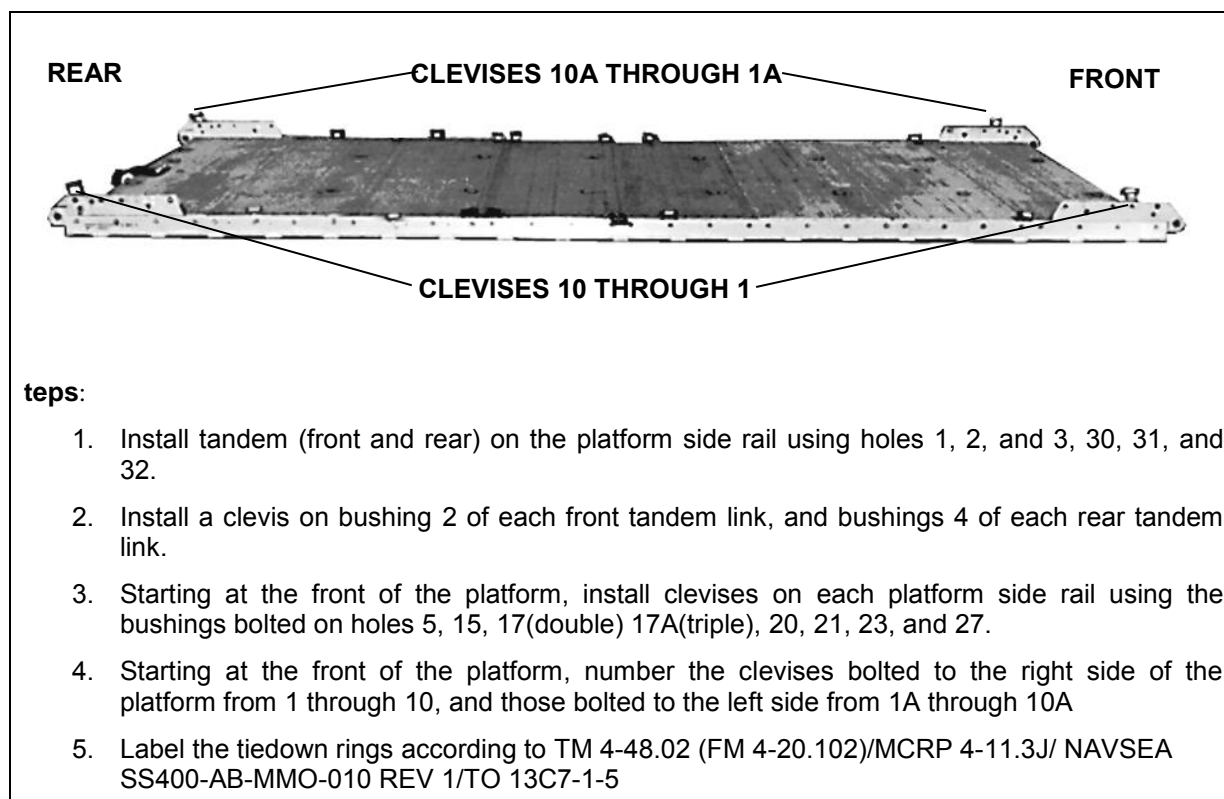
## SECTION III - RIGGING STRIKER IN ARMAMENT CARRIER-CONFIGURED M1025 HMMWV-SERIES TRUCK ON A 16-FOOT PLATFORM

### DESCRIPTION OF LOAD

2-32. The unrigged M1025A2 armament carrier is described in Chapter 1. The Striker vehicle is configured as a field artillery observer carrier. The Striker serves fire direction control, self-location, target designation and night observation functions. The Striker components are contained within the truck. This load requires three G-11 cargo parachutes. Striker-equipped trucks using the M1025 and M1025A1 models are rigged using these procedures.

### PREPARING PLATFORM

2-33. Prepare a 16-foot, type V airdrop platform according to TM 10-1670-268-20&P/TO 13C7-52-22. Install four tandem links, and 32 load tie-down clevises according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 4-20.102/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figure 2-20.



**Figure 2-20. Platform Prepared**

## PREPARING AND POSITIONING HONEYCOMB STACKS

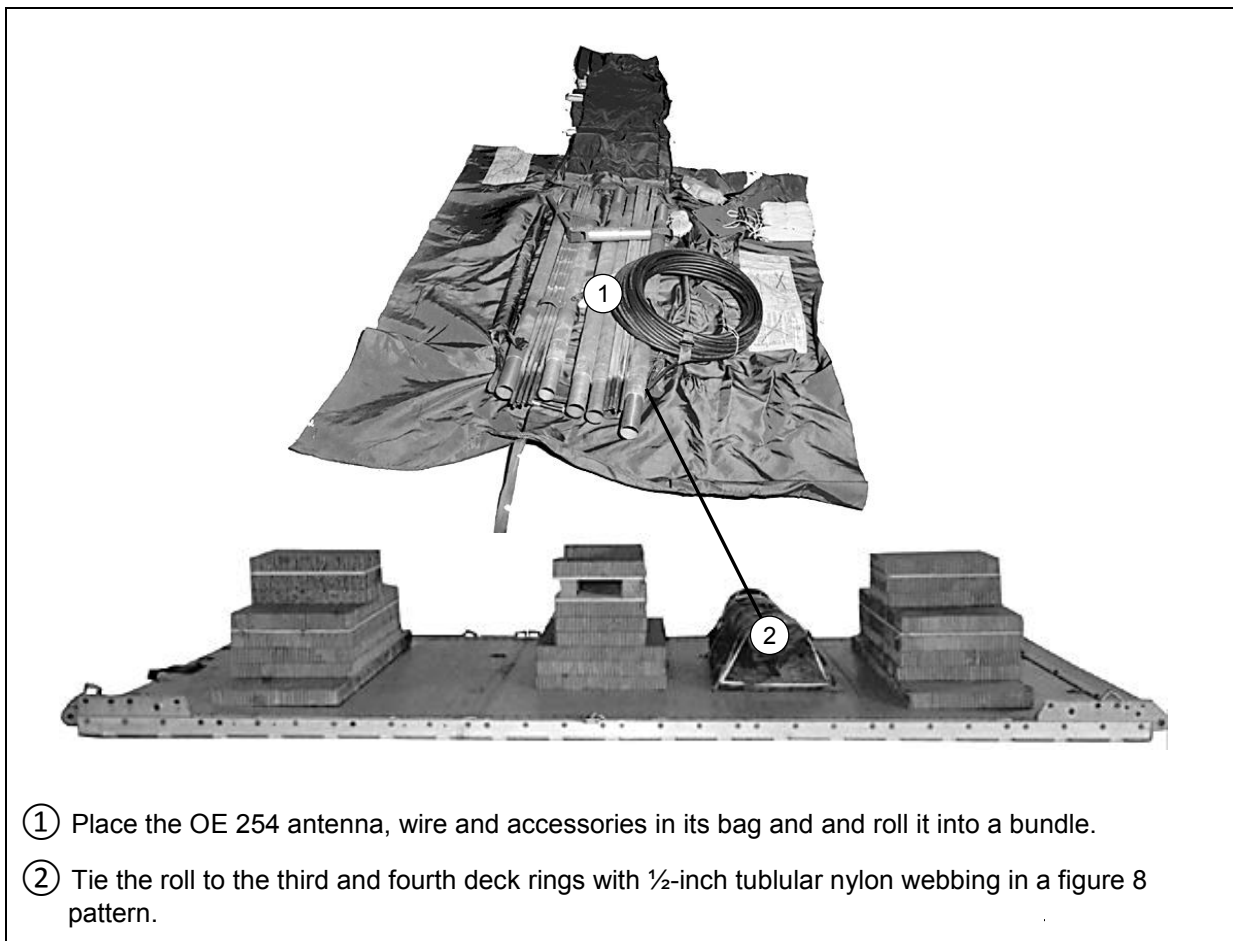
2-34. Build honeycomb stacks 1 through 3 as shown in Figures 1-3 and 1-4. Position the stacks on the platform as shown in Figure 1-5 and according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.

## PREPARING THE TRUCK

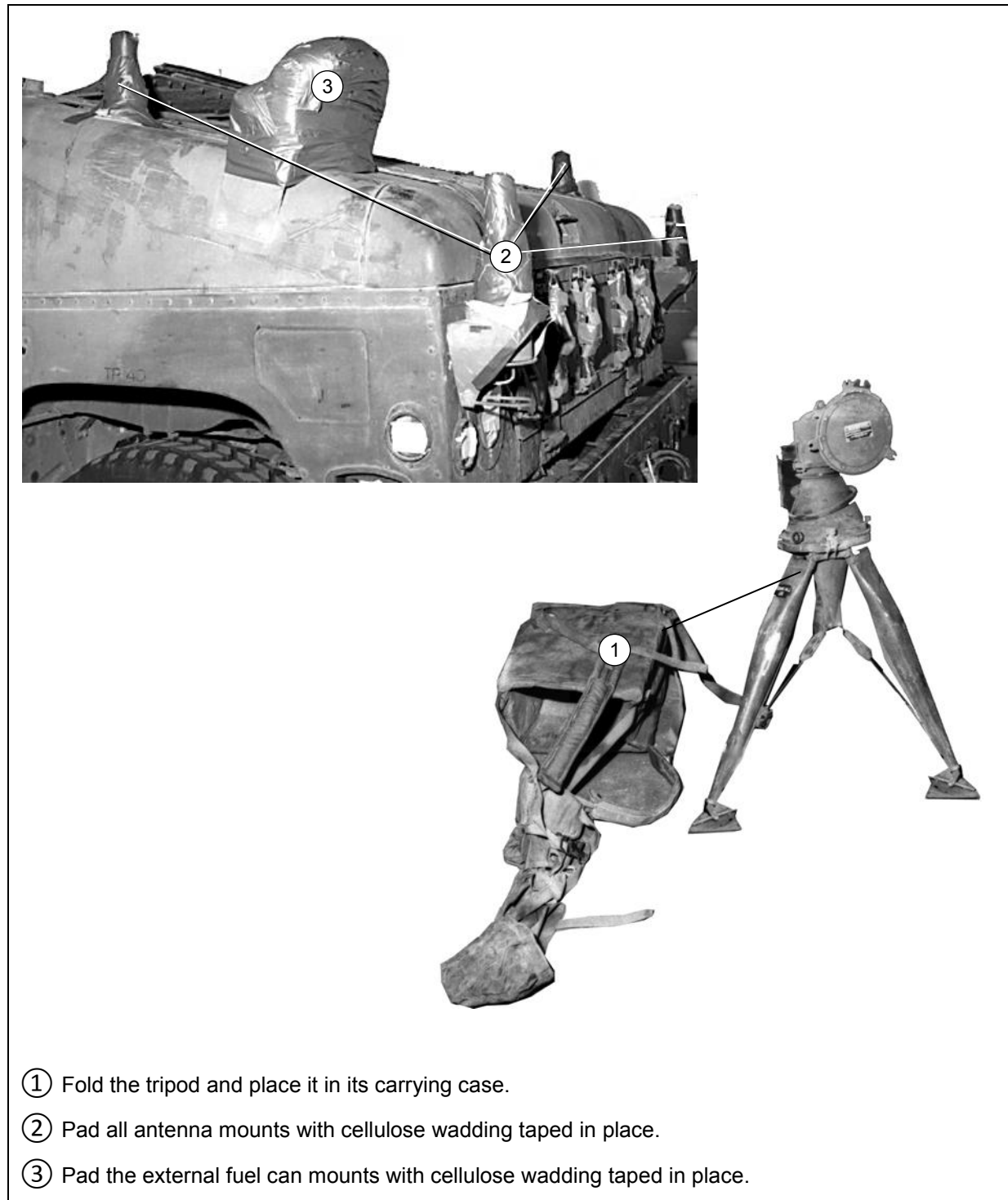
2-35. Prepare truck as described in Figures 1-6, 1-7 (do not do steps 1 and 3), Figure 1-8, Figure 1-9 does not apply to closed body vehicles. Continue preparing the vehicle as shown Figure 1-10 through 1-11. Finish preparing the closed-body HMMWV's as shown in Figures 2-2 and 2-3 (do steps 1, 2, 4, 5, 6).

## PREPARING STRIKER EQUIPMENT

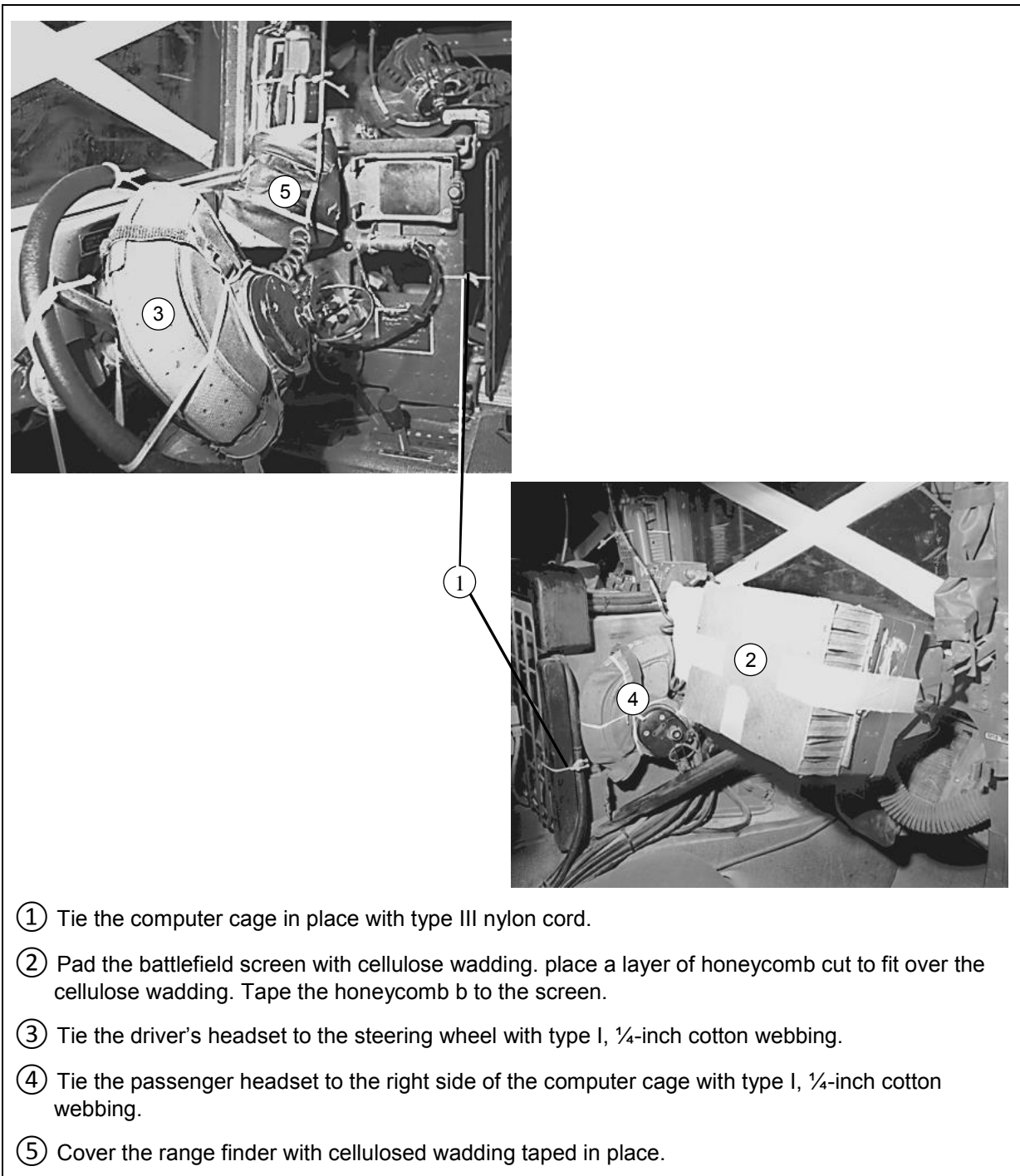
2-36. Prepare the components of the Striker system as shown in Figures 2-21 through 2-26.



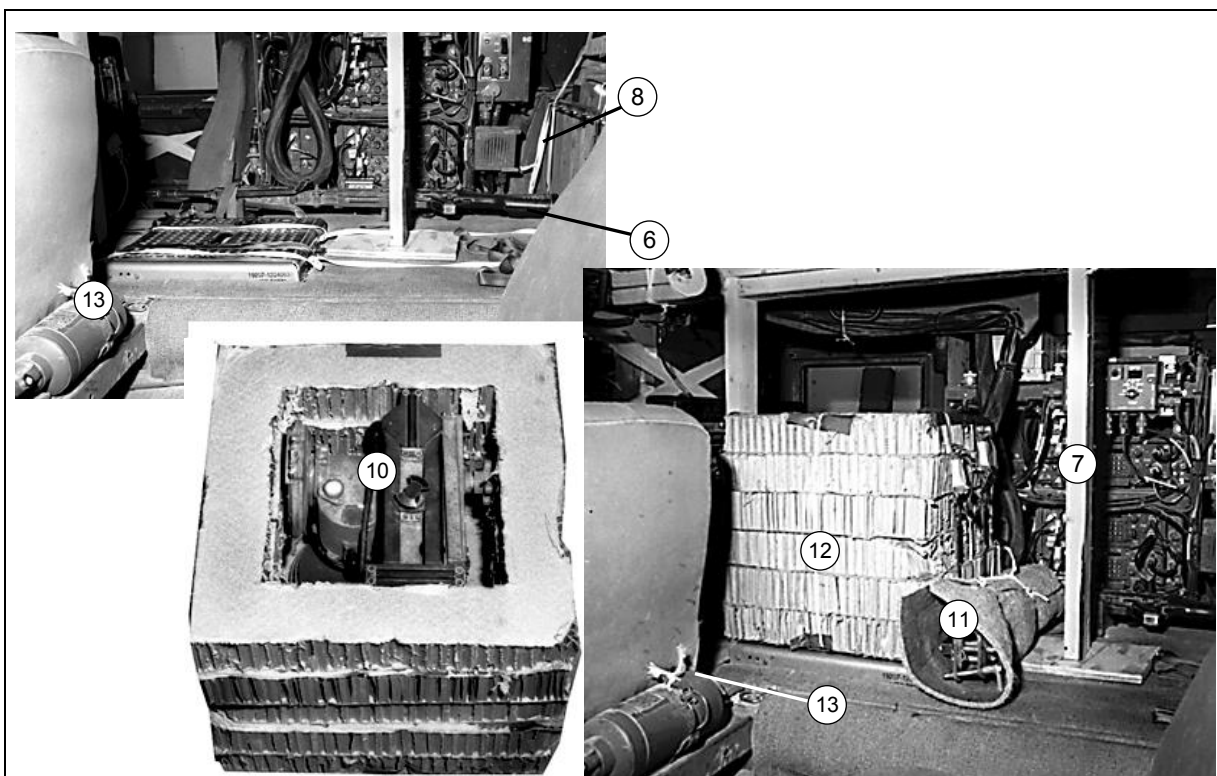
**Figure 2-21. Antenna Secured on Platform**



**Figure 2-22. Antenna Mounts Padded and Tripod Prepared.**

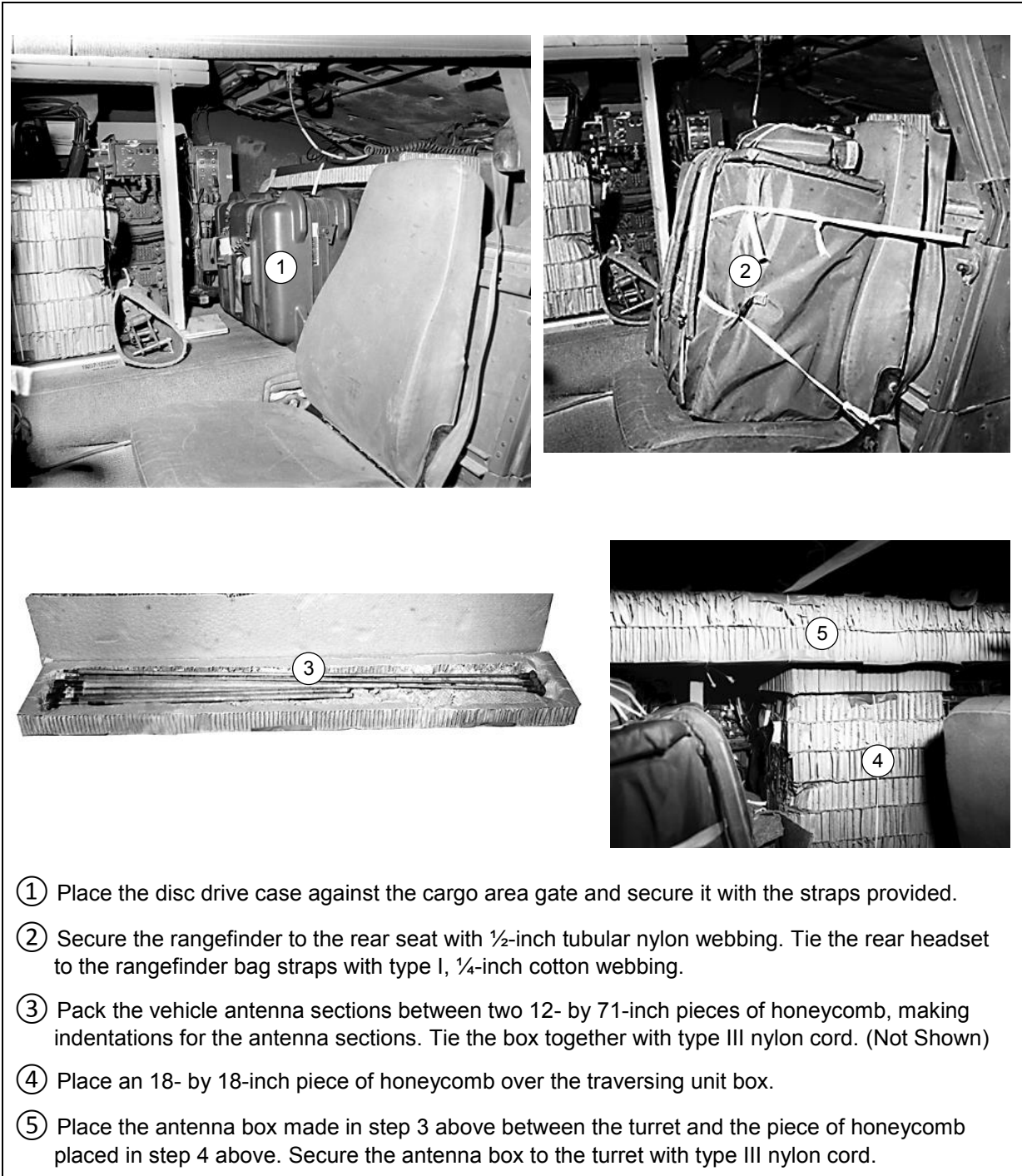


**Figure 2-23. Cab Section of Truck Prepared**



- ⑥ Tie the machine gun (optional) to a convenient points in the truck.
- ⑦ Build and place the turret support as shown in Figure 2-2.
- ⑧ Tie the cargo area gate to the cargo bed rings with ½-inch tubular nylon webbing.
- ⑨ Route three lengths of ½-inch tubular nylon webbing through the rear cargo bed rings, under all straps and fixtures, under the front gate, and through the strap rings. (not shown)
- ⑩ Center a 12- by 12-inch cutout in four 18- by 18-inch pieces of honeycomb. Glue one 18- by 18-inch piece to the stack as the box bottom. Pad the traversing unit with cellulose wadding, place it in the box, and tie an 18-by 18-inch piece of honeycomb on top with type III nylon cord.
- ⑪ Girth-hitch two lengths of ½-inch tubular nylon webbing through the strap brackets on the adjustable base. Wrap the machine gun mount with felt and tie it to the edge of the adjustable base with the ½ inch tubular nylon webbing.
- ⑫ Secure the traversing unit box made in step 10 to the adjustable base with straps provided.
- ⑬ Tie the fire extinguisher and decontamination bottles to the seat braces with type III nylon cord.

**Figure 2-23. Cab Section of Truck Prepared (continued)**



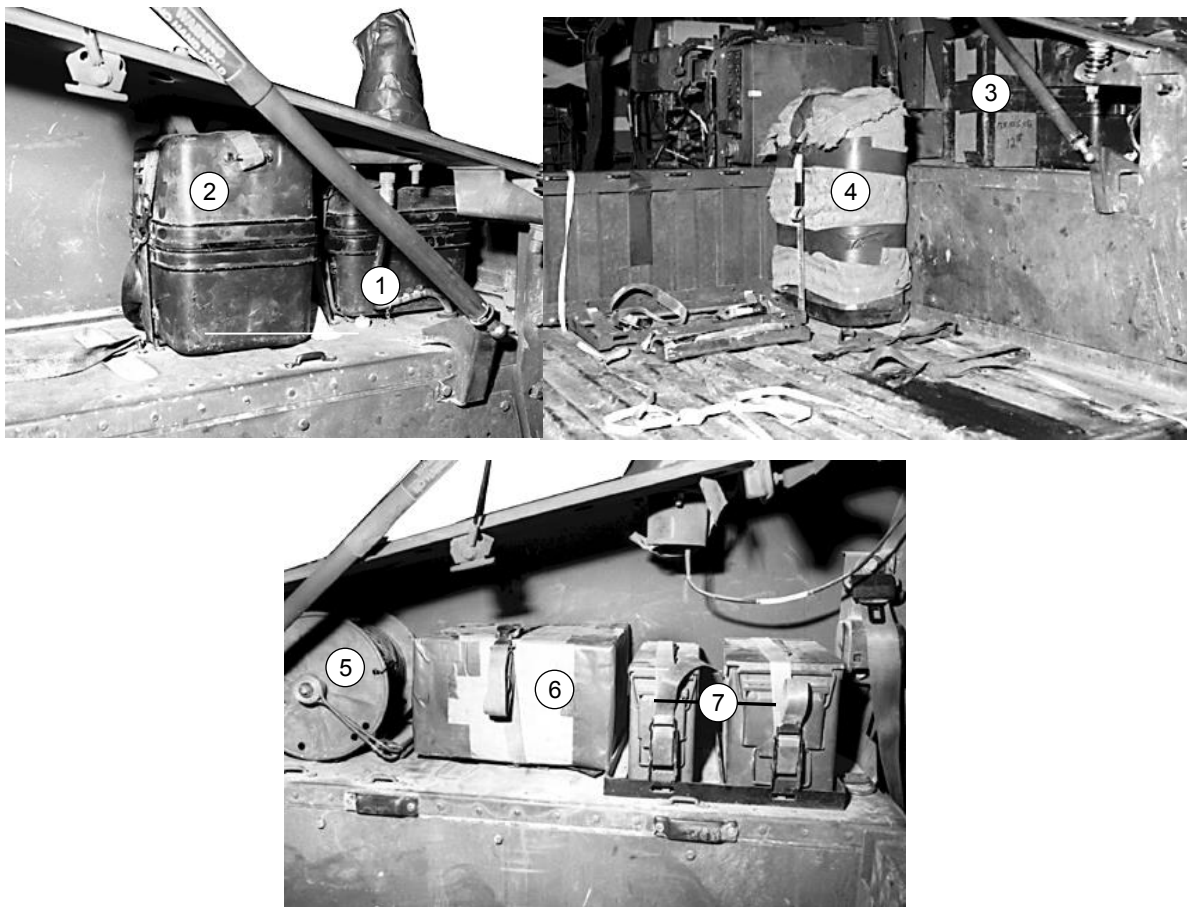
**Figure 2-24. Equipment Cases Stowed in Seat Area of Truck**



- ⑥ Secure the night vision infrared sight box to the front seat frame with ½-inch tubular nylon webbing.
- ⑦ Glue a 15-inch piece of 2- by 6-inch lumber to an eight-layer stack of 6- by 15-inch honeycomb. Place this stack with the lumber side down under the battlefield screen. Use the serene positioning controls to make a snug fit between the screen and the honeycomb.
- ⑧ Secure the computer case to the passenger seat back and frame with ½-inch tubular nylon webbing.

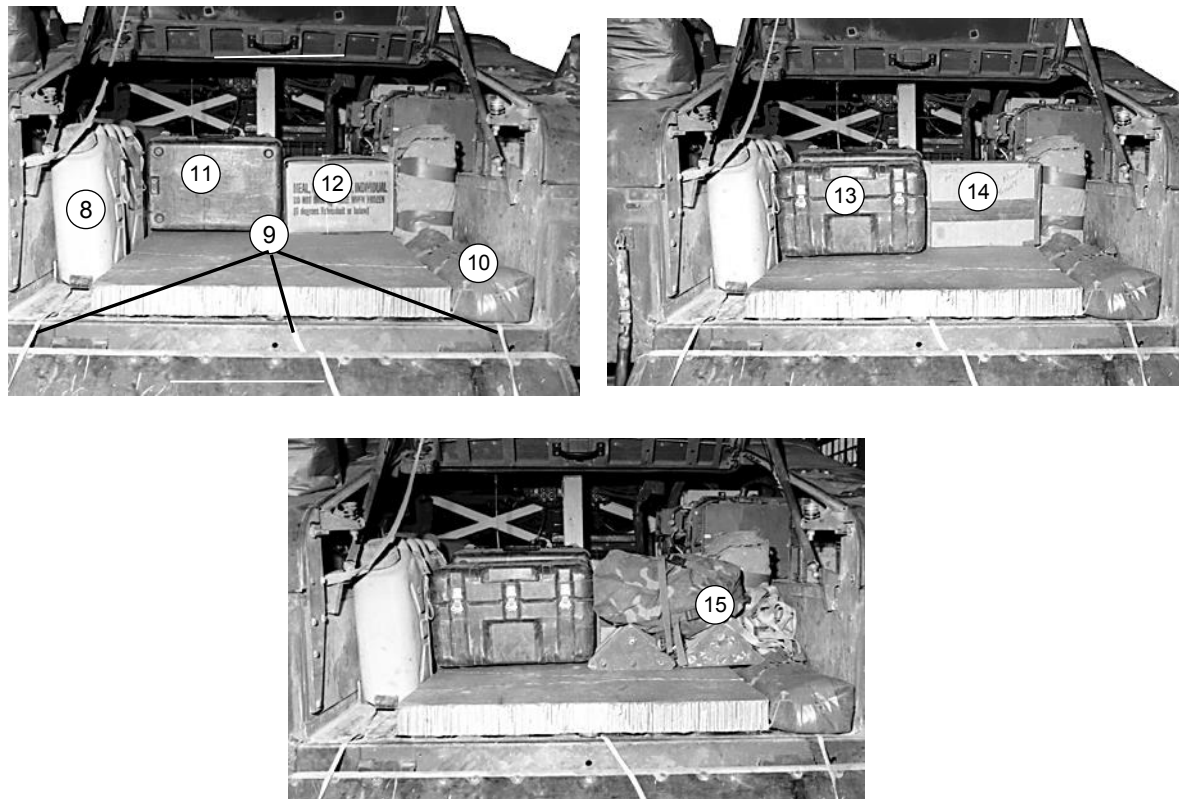
**Figure 2-24. Equipment Cases Stowed in Seat Area of Truck (continued)**





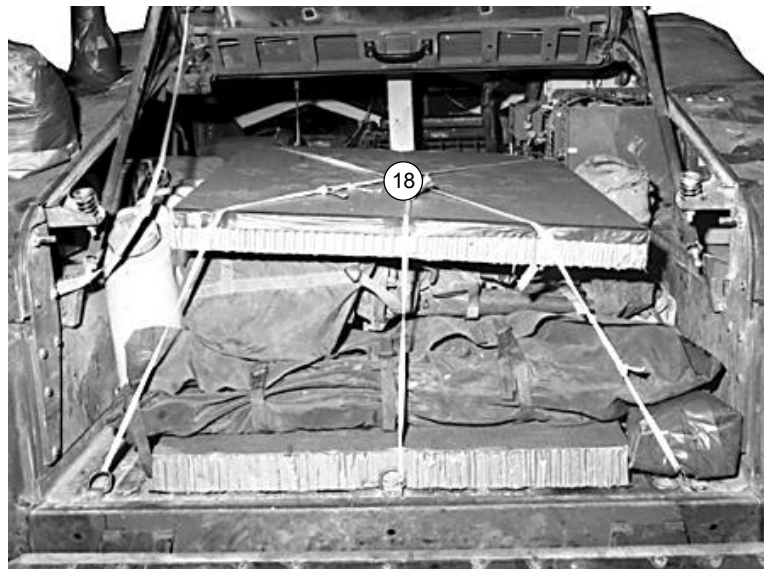
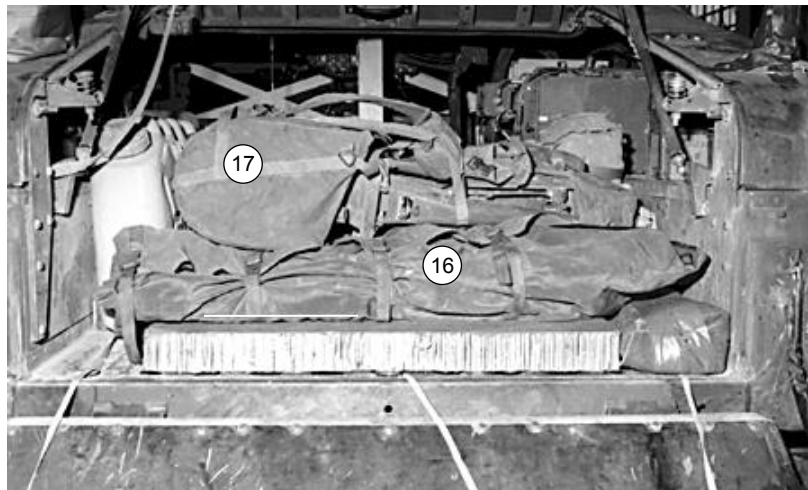
- ① Secure the lithium batteries case in the right rear corner of the cargo area with the strap provided.
- ② Secure the battery power conditioner in its case with the strap provided.
- ③ Pack the laser infrared observation sight in an appropriate box. Secure the sight box in front of the batter power conditioner with the strap provided.
- ④ Secure a padded fuel can in the mount with the strap provided.
- ⑤ Secure the wire spool in the left rear corner of the cargo bed with ½-inch tubular nylon webbing.
- ⑥ Secure a box of M8 chemical detector paper in the front of the wire spool with the strap provided.
- ⑦ Secure the ammunition cans on front of the M8 paper with the straps provided.

**Figure 2-25. Equipment Stowed in Cargo Area**



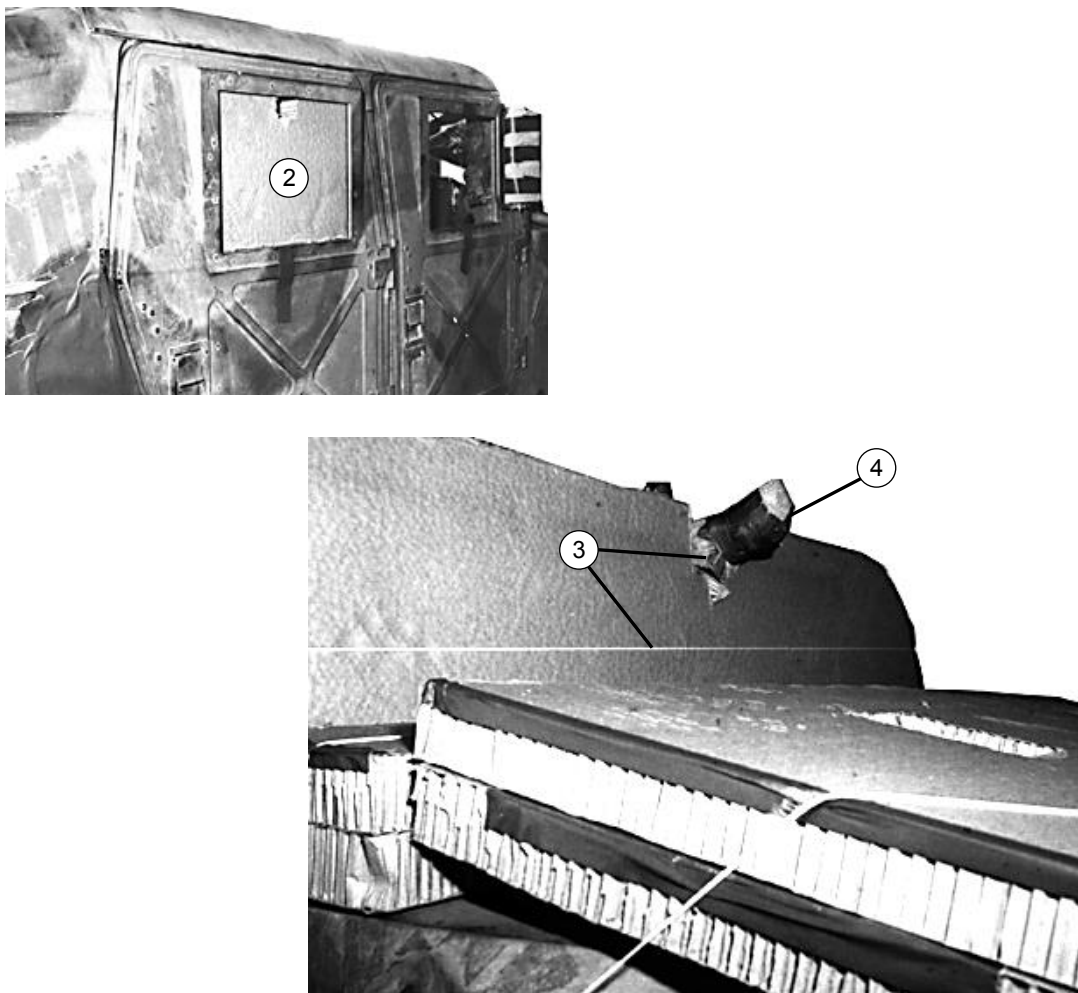
- ⑧ Secure three water cans in the mounts on the left with the straps provided.
- ⑨ Be sure the lengths of ½-inch tubular nylon webbing placed in Figure 2-23 step 9 are free of twist and lying flat. Cover the truck bed and the nylon webbing with a 44- by 36-inch piece of honeycomb.
- ⑩ Pad the M-240 tripod with felt taped in place. Position the tripod to the right of the honeycomb.
- ⑪ Place the collimator bore-sight case on the left front corner of the honeycomb.
- ⑫ Place a box of Meal, Ready-To-Eat (MRE)'s to the right of the collimator bore-sight case.
- ⑬ Place the ancillary equipment transit case to the rear of the collimator bore-sight case.
- ⑭ Place the night vision infrared sight in an appropriate box, pad it, and place the box to the rear of the MRE box.
- ⑮ Group the vehicle chock blocks, the bag of Mission Oriented Protective Posture gear, and the cargo net between the wheel well and the ancillary equipment case.

**Figure 2-25. Equipment Stowed in Cargo Area (continued)**



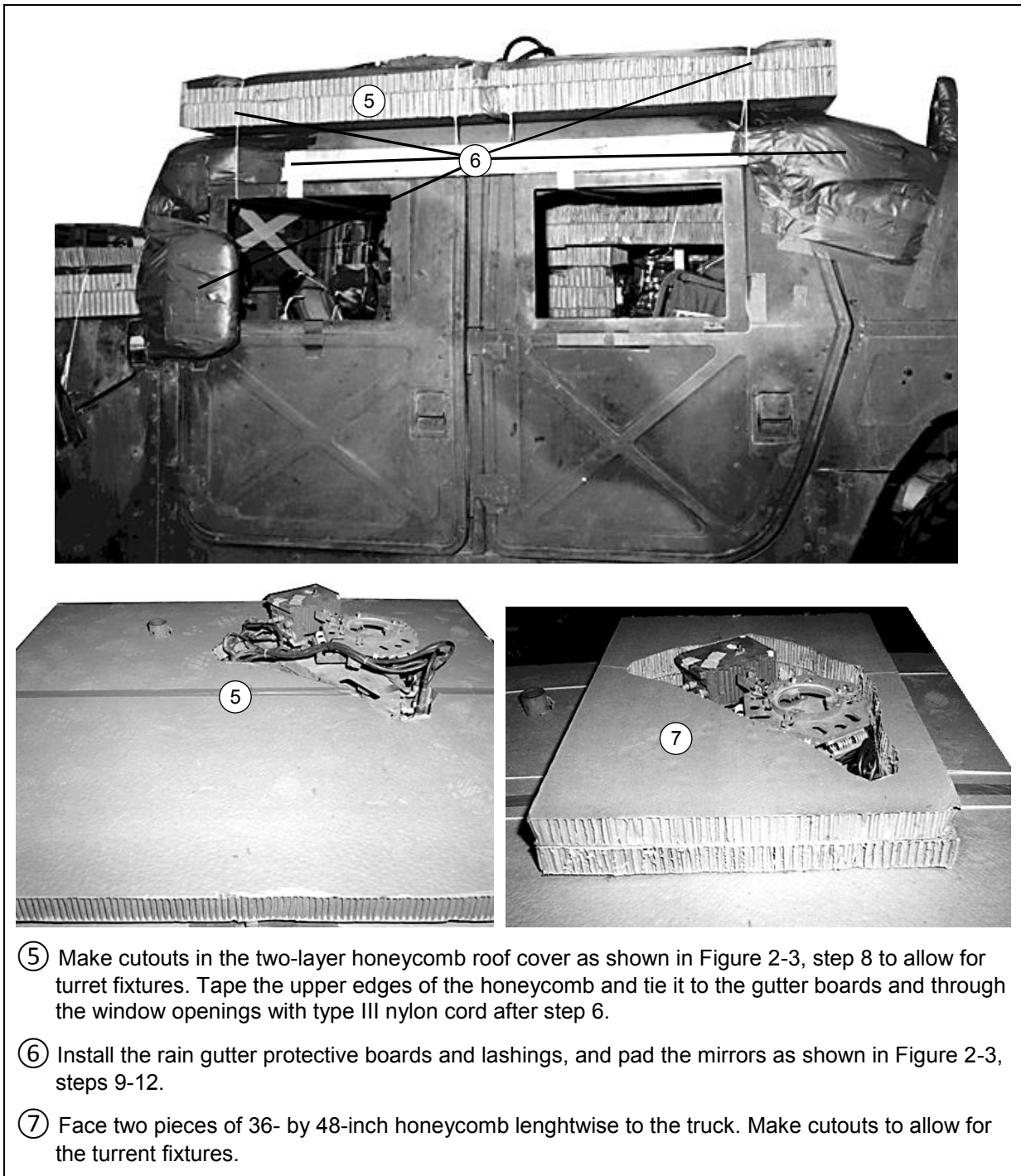
- ①⑥ Place the antenna group across the width of the cargo bed at the rear.
- ①⑦ Place the tripod in its case on top of the antenna case.
- ①⑧ Tape the upper edges of a 36- by 40-inch piece of honeycomb. Secure the ends of the pre-positioned ½-inch tubular nylon, front to rear, left front to right rear, and right front to left rear.
- ①⑨ Close and secure the hatch as shown in Figure 2-4 step 11. (not shown)

**Figure 2-25. Equipment Stowed in Cargo Area (continued)**



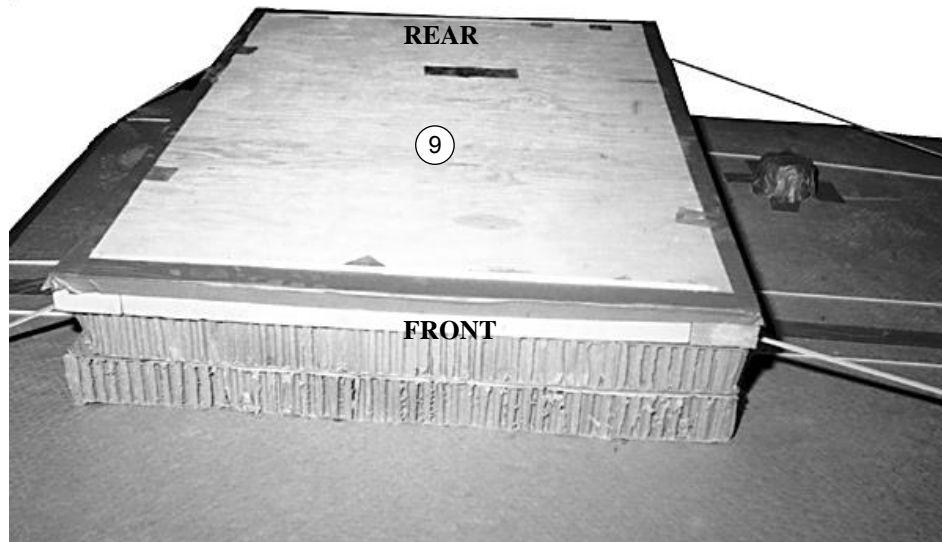
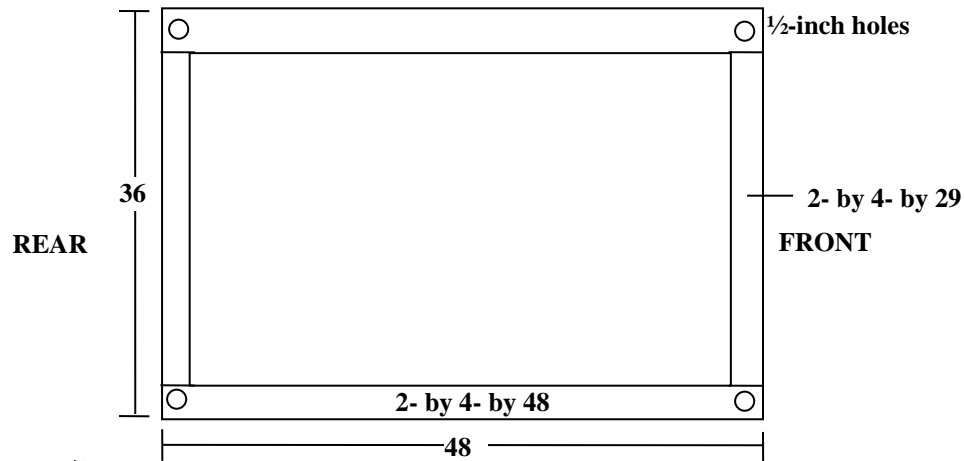
- ① Tape the windows in an X pattern, and lower them, (not shown)
- ② Center a 2- by 2-inch cutout in a long edge of a 21½- by 14½ -inch piece of honeycomb. Place the honeycomb in the right rear window with the cutout on top. Tape the honeycomb in the place between the equipment mount and the door.
- ③ Cut a notch in a 21- by 83-inch piece of honeycomb for the global positioning system (GPS) antenna and the windshield wipers and place it against the windshield. Round the upper edges of the windshield cover. Tie a length of type III nylon cord around the honeycomb and inside of the windshield frame.
- ④ Pad the GPS antenna with cellulose wadding and tape.

**Figure 2-26. Outside and Top of Striker Truck Prepared**



**Figure 2-26. Outside and Top of Striker Truck Prepared (continued)**

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



- ⑧ Construct the turret cover as shown above. Nail the lumber to the edges of the plywood with 8d nails. Tape the upper edges of the plywood.
- ⑨ Place the cover flush over the 36- by 48-inch honeycomb placed in step 8 above. Tie the plywood cover from 1/2-inch holes to convenient points inside the truck with 1/2-inch tubular nylon webbing.

**Figure 2-26. Outside and Top of Striker Truck Prepared (continued)**

## INSTALLING OPTIONAL DRIVE-OFF AIDS ON PLATFORM

2-37. Install the optional drive-off aids on the platform as shown in Figure 1-14.

## LIFTING AND POSITIONING TRUCK AND INSTALLING OPTIONAL DRIVE-OFF AIDS

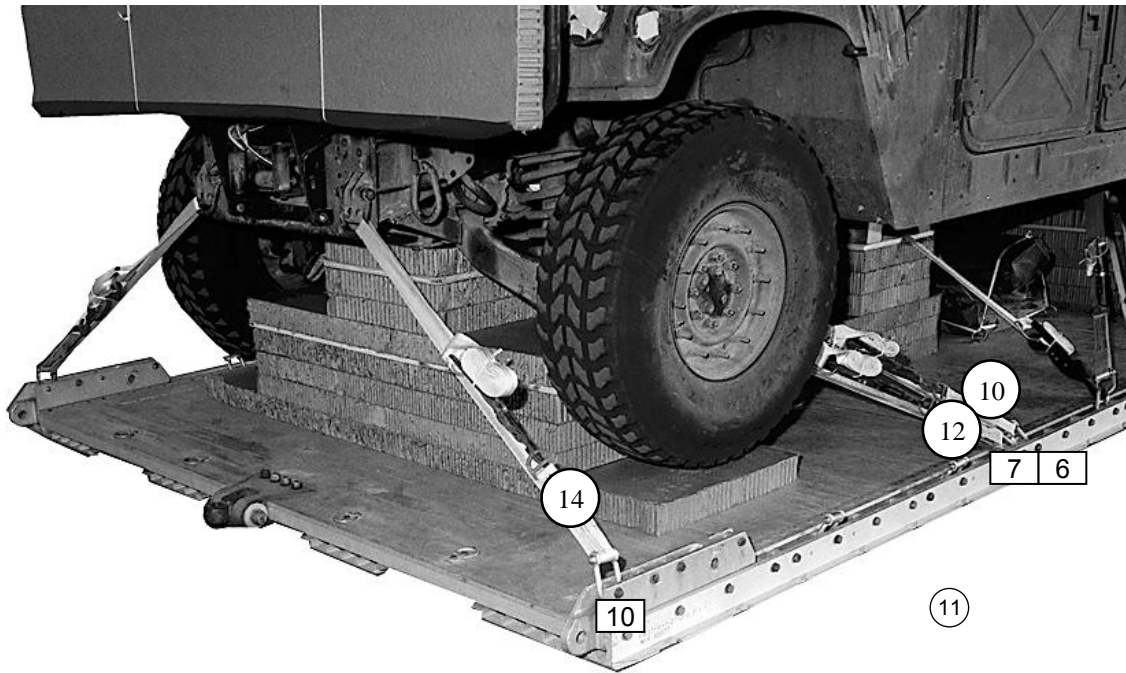
2-38. Install the lifting slings as shown in Figure 1-15. Position the truck on the honeycomb stacks as shown in Figure 1-16. Attach the drive-off aids to the wheels of the truck as shown in Figure 1-17, Figure 2-12, and according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.

## LASHING THE TRUCK

2-39. Lash the truck to the platform according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figures 2-27 and 2-28.

Lashing Number	Tiedown Clevis Number	Instructions
<div> </div>	<div> </div>	<p>Pass lashing:</p> <p>1 Through tie-down bracket behind the left rear coil spring.</p> <p>2 Through tie-down bracket behind the right rear coil spring</p> <p>3 Through left rear lifting shackle.</p> <p>4 Through right rear lifting shackle</p> <p>5 Around left rear lower control arm.</p> <p>6 Around right rear lower control arm</p> <p>7 Through the tie-down bracket in front of the left rear coil spring.</p> <p>8 Through the tie-down bracket in front of the right rear coil spring.</p> <p>9 Pass a 15-foot lashing through clevis 5A and through its own D-ring. Pass the lashing through the hole in stack 2. Attach the lashing to clevis 5 with a load binder.</p>

Figure 2-27. Lashings 1 through 9 Installed



<b>Lashing Number</b>	<b>Tiedown Clevis Number</b>	<b>Instructions</b>
10	6	Pass lashing:
11	6A	Through the tiedown bracket behind the left front coil spring.
12	7	Through the tiedown bracket behind the right front coil spring.
13	7A	Around the left lower control arm.
14	10	Around the right lower control arm.
15	10A	Through the tie-down bracket on the end of the left frame rail.
		Through the tie-down bracket on the end of the right frame rail.

**Figure 2-28. Lashings 10 through 15 Installed**

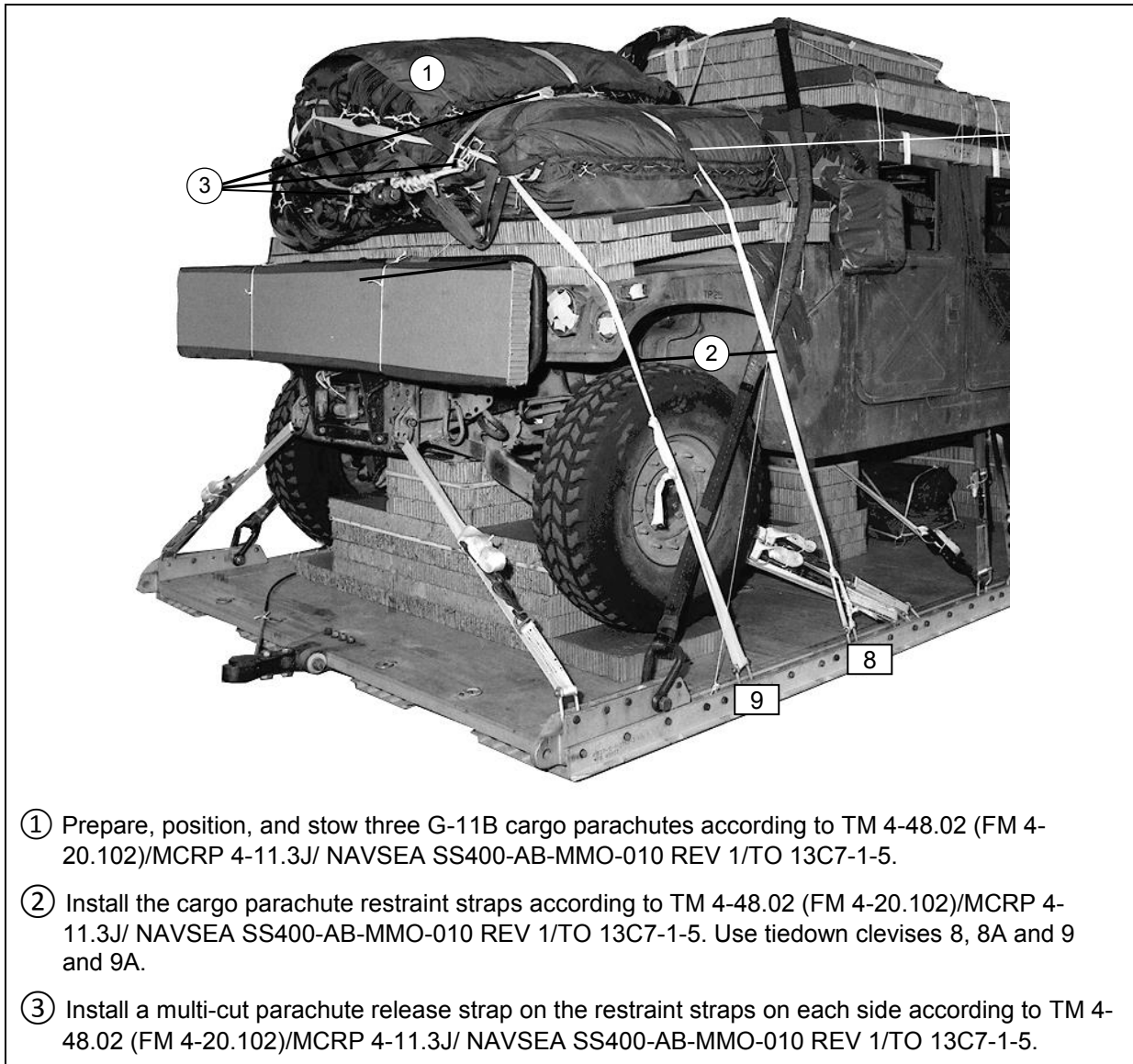


## INSTALLING AND SAFETY TIEING THE SUSPENSION SLINGS

2-40. Install, Safety tie and pad the suspension slings according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figures 2-5.

## STOWING CARGO PARACHUTES

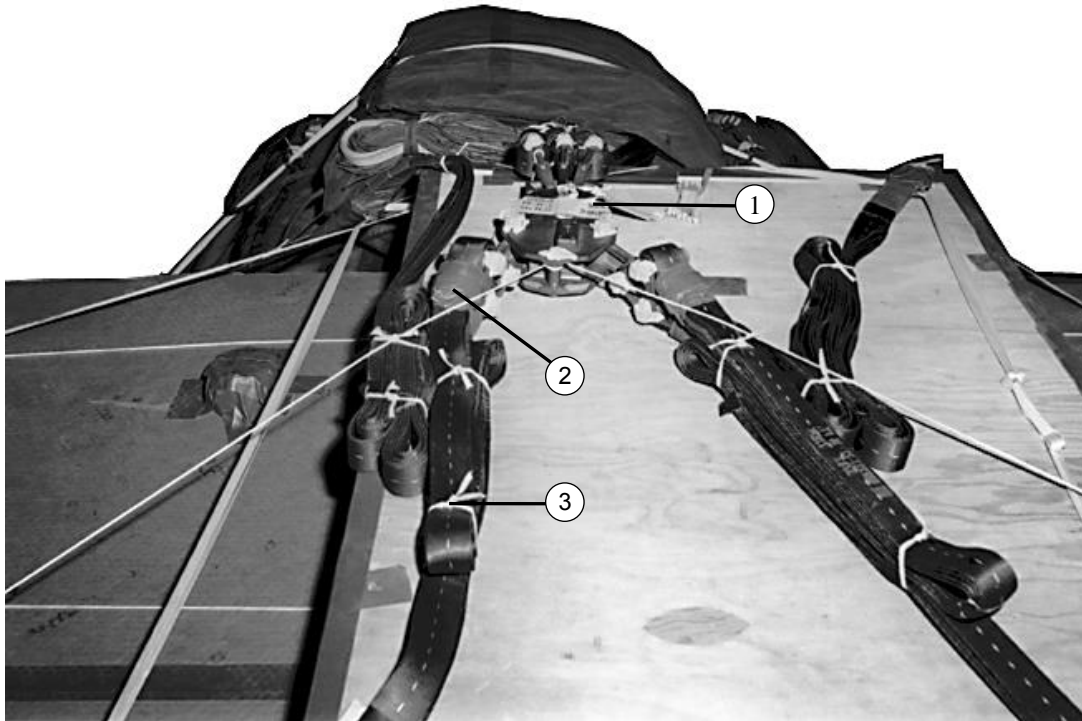
2-41. Stow the cargo parachutes according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figure 2-29.



**Figure 2-29. Cargo Parachutes Stowed and Restrained**

## INSTALLING THE RELEASE SYSTEM

2-42. Install the release assembly according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figure 2-30.



- ① Prepare and install the release assembly according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 in front of the top parachute on the plywood turret cover.
- ② Attach the suspension slings and the riser extensions to the release. Tie the riser extensions together with type I, ¼-inch cotton webbing.
- ③ S-fold any slack in the suspension slings. Tie the folds in place with type 1, ¼-inch cotton webbing.

**Figure 2-30. M-1 Cargo Parachute Release Assembly Installed**

## **INSTALLING THE EXTRACTION SYSTEM**

2-43. Install the EFTC extraction system according to TM 4-48.02 MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figure 1.23.

## **INSTALLING PROVISIONS FOR EMERGENCY RESTRAINTS**

2-44. Install the provisions for emergency restraints on the load according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.

## **PLACING EXTRACTION PARACHUTE**

2-45. Select the extraction parachute and extraction line and using the requirements in table in TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5. Rig the extraction line in an extraction line bag according to TM 10-1670-286-20/TO 13C5-2-41. Place the extraction parachute and extraction line on the load for installation in the aircraft. Select a drogue parachute and a drogue line if using C-17/C-130J and place them on the load.

## **MARKING RIGGED LOAD**

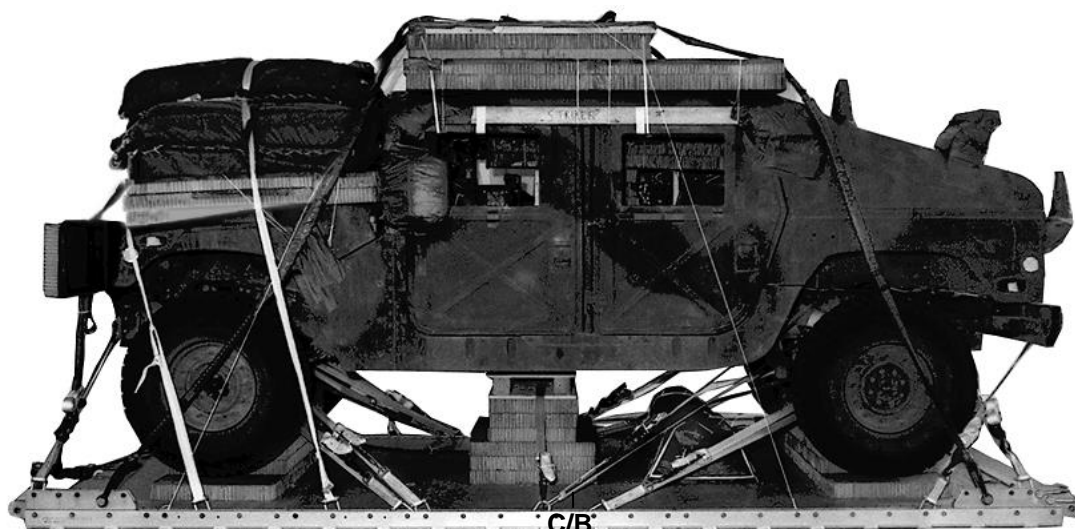
2-46. Mark the rigged load according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figure 2-31. Complete Shipper's Declaration for Dangerous Goods. If the load varies from the one shown, the weight, height, CB, and parachute requirements must be recomputed.

## **EQUIPMENT REQUIRED**

2-47. Use the equipment listed in Table 2-3 on page 2-53 and continuing on page 2-54 to rig this load.

**CAUTION**

Make the final rigger inspection required by AR 59-4 and TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 before the load leaves the rigging site.

**RIGGED LOAD DATA**

Weight: Load Shown .....	11,389 pounds
Maximum load allowed .....	11,500 pounds
Height (with two G-11B parachutes).....	98 inches
Width .....	108 inches
Length .....	215 inches
Length with extraction parachute jettison system (EPJS) Light	295 inches
Overhang: Front (vehicle).....	0 inches
Rear (extraction force transfer coupling) .....	18 inches
Rear (EPJS Light) .....	30 inches
Center of Balance (CB) (from front edge of platform) .....	97 inches

**Figure 2-31. M1025 Armament Carrier Rigged With Striker for Low-Velocity Airdrop on a 16-Foot Platform**

**Table 2-3. Equipment Required for Rigging the M1025 Armament Carrier on a 16-Foot Platform for Low Velocity Airdrop**

<i>National Stock Number</i>	<i>Item</i>	<i>Quantity</i>
8040-00-273-8713	Adhesive paste, 1-gallon	As required
4030-00-090-5354	Clevis, suspension, 1-inch (large)	5
4030-00-678-8562	Clevis, suspension, 3/4-inch (medium)	4
4020-00-240-2146	Cord, nylon, type III,	As required
1670-00-434-5785	Coupling, Airdrop Extraction Force Transfer, w/16-foot. cable	1
8135-00-664-6958	Cushioning material (Cellulose wadding)	As required
1670-01-475-1990	Extraction Parachute Jettison System Light	1
8305-00-958-3685	Felt	As required
1670-01-183-2678	Leaf, extraction line (line bag) (for C-130)	2
1670-01-183-2678	Leaf, extraction/drogue line (line bag) (for C-17/C130J)	4
	Line extraction:	
1670-01-062-6313	60-foot (3-loop), type XXVI (for C-130/J)	1
1670-01-107-7651	140-foot (3-loop), type XXVI (for C-17)	1
1670-01-064-4452	60-foot (1-loop), type XXVI (for C-17/C-130J), (drogue line)	1
1670-01-493-6418	Link assembly, two-point, 3¾-inch, small:	7
	Lumber:	
5510-00-550-6969	1- by 6- by 48-inch	1
5510-00-220-6146	2- by 4- by 96-inch	3
5510-00-220-6196	2- by 6- by 72-inch	1
5510-00-220-6274	4- by 4- by 96-inch	1
5315-00-010-4659	Nail, steel, common, 8D	As required
1670-00-753-3928	Pad, energy-dissipating (honeycomb)	15 sheets
1670-01-016-7841	Parachute, cargo, G-11B	3
	Parachute, cargo, extraction:	
1670-01-063-3716	22-foot	1
1670-01-063-3715	15-foot (for C-17/C130J) (DES)	1
	Platform, airdrop, type V, 16-foot:	
1670-01-353-8424	Bracket, assembly, extraction	1
1670-01-353-8425	Bracket, assembly, coupling	1
1670-01-162-2372	Clevis assembly (type V)	21
1670-01-162-2381	Tandem link assembly (Multipurpose link)	4
5530-00-128-4981	Plywood, 3/4-inch	2 sheets

**Table 2-3 Equipment Required for Rigging the M1025 Armament Carrier on a 16-Foot Platform for Low Velocity Airdrop (continued)**

<i>National Stock Number</i>	<i>Item</i>	<i>Quantity</i>
1670-01-097-8816	Release, cargo parachute, M-1	1
	Sling, cargo, airdrop: For Deployment	
1670-01-062-6304	9-foot (2-loop), type XXVI nylon webbing For Lifting	1
1670-01-062-6304	9-foot (2-loop), type XXVI nylon webbing	2
1670-01-062-6303	12-foot (2-loop), type XXVI nylon webbing For Suspension	2
1670-01-063-7761	16-foot (2-loop), type XXVI nylon webbing For Riser Extension	4
1670-01-062-6302	20-foot (2-loop), type XXVI	1
5340-00-040-8219	Strap, parachute, release, multi-cut, comes with 3 knives	1
7501-00-266-5016	Tape, adhesive, 2-inch	As required
1670-00-937-0271	Tiedown assembly, 15-foot	17
	D-rings, heavy duty, 10,000-pound	17
	Binder, load, 10,000-pound	17
1670-01-483-8259	Towplate release mechanism (H-block) (for C-17)	1
	Towplate release mechanism (H-block) (for C-130J)	1
	Webbing:	
8305-00-268-2411	Cotton, 1/4-inch, type I	As required
8305-00-082-5752	Nylon, tubular, 1/2-inch	As required
8305-00-559-6871	Nylon, type VIII	As required

## Chapter 3

# Rigging Expanded Capacity HMMWV-Series Trucks For Low-Velocity Airdrop

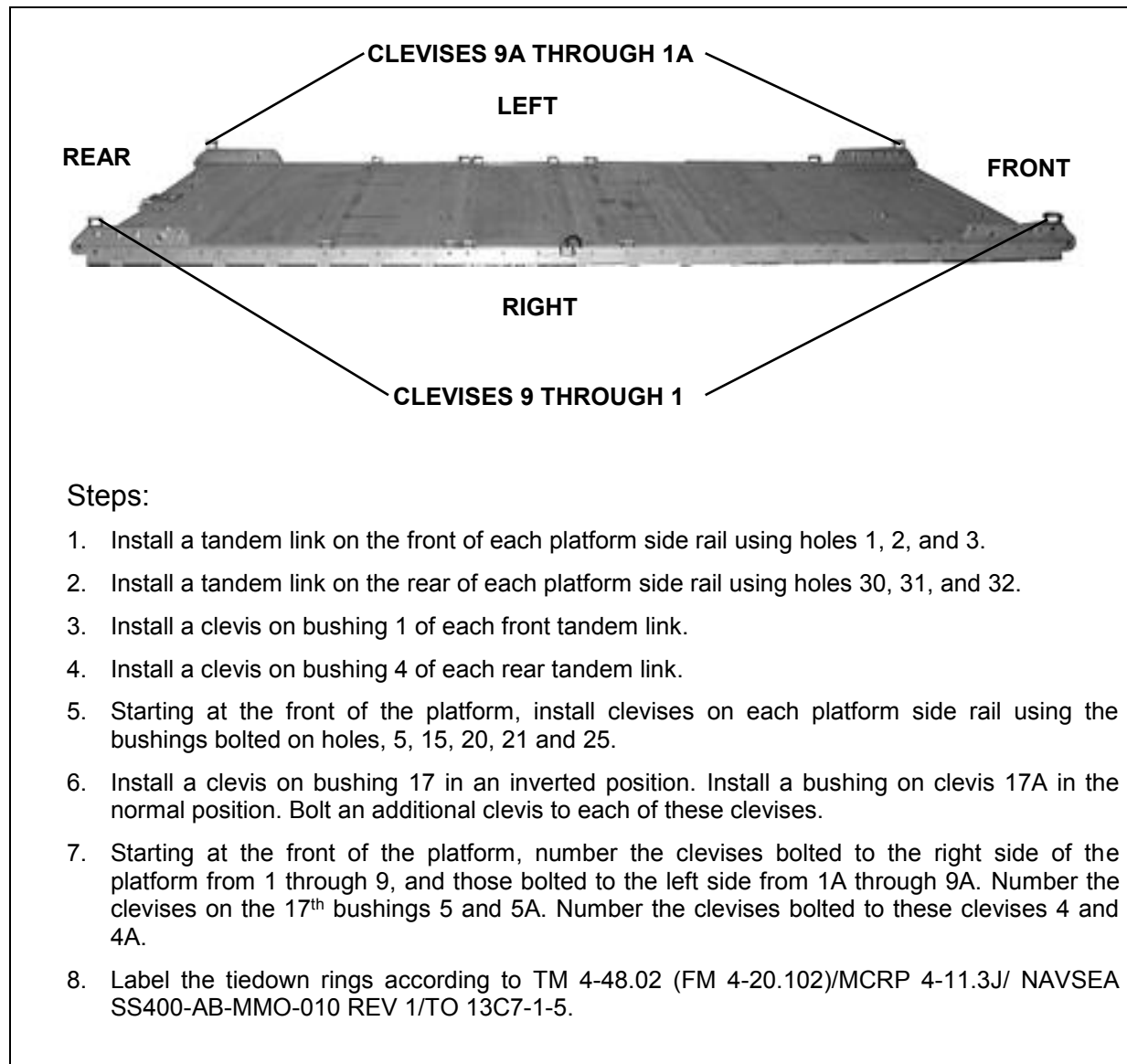
### SECTION I –RIGGING M1113 TRUCK WITH M56 SMOKE GENERATOR ON A 16-FOOT PLATFORM

#### DESCRIPTION OF LOAD

3-1. The M1113 HMMWV-series truck has a heavy-duty suspension and is rigged the same as the M998 truck except as noted. The truck is rigged on a 16-foot, type V airdrop platform for low-velocity airdrop. The M56 Smoke Generator is shown as the accompanying load. The procedure for rigging the M56 smoke generator in the truck is given in this chapter. An accompanying load weighing a minimum of 80 pounds and a maximum of 2,500 pounds must be rigged in the truck. The load requires three G-11 cargo parachutes.

#### PREPARING PLATFORM

3-2. Prepare a 16-foot, type V airdrop platform according to TM 10-1670-268-20&P/TO 13C7-52-22. Install four tandem links and 18 load tiedown clevises according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5, and as show in Figure 3-1

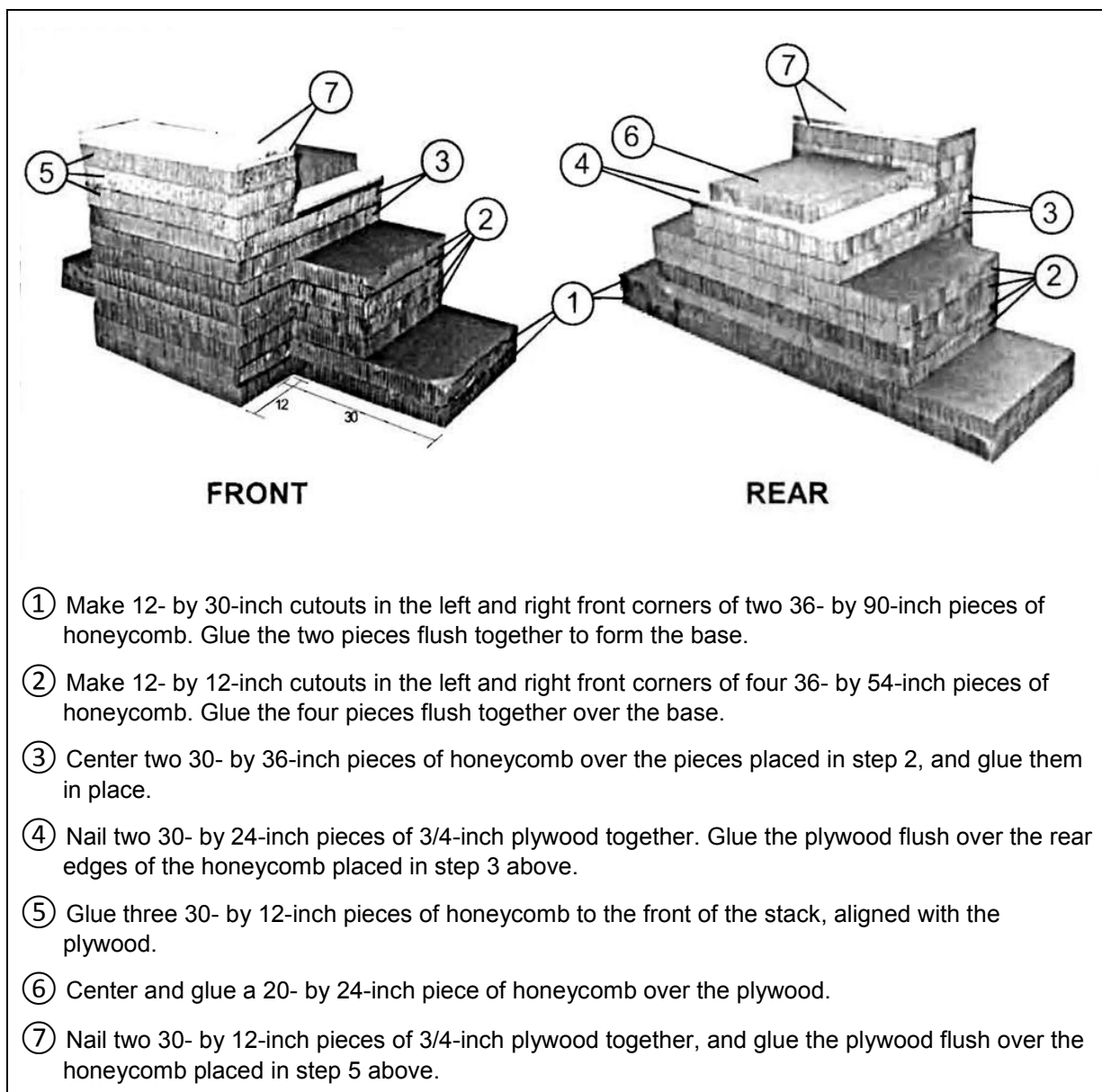


**Figure 3-1. Platform Prepared**



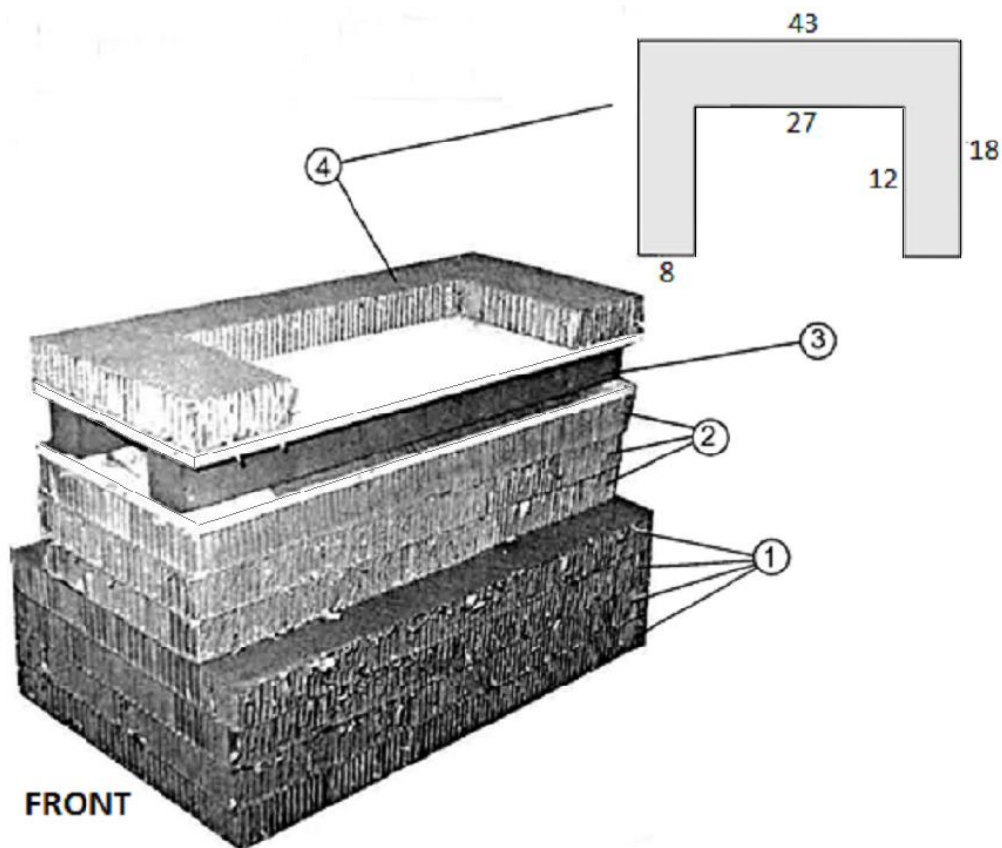
## PREPARING AND POSITIONING HONEYCOMB STACKS

3-3. Build the honeycomb stacks as shown in Figures 3-2 through 3-4. Position the stacks on the platform as shown in Figure 3-5.



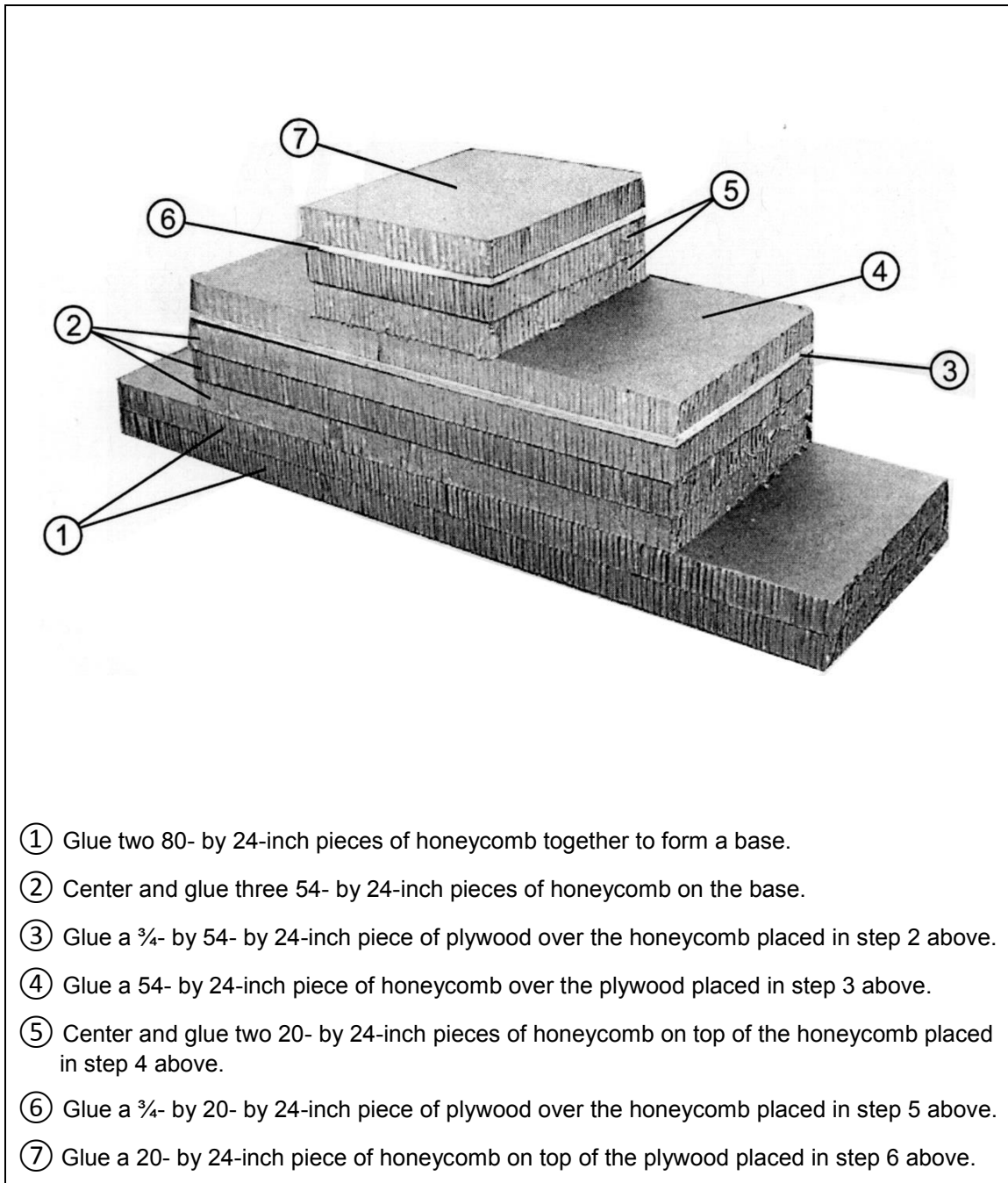
**Figure 3-2. Stack 1 Constructed**

**Note:** 1. This drawing is not drawn to scale.  
2. All dimensions are in inches.



- ① Glue four 43- by 26-inch pieces of honeycomb together to form a base.
- ② Center and glue three 43- by 18-inch pieces of honeycomb over the base.
- ③ Nail a 43-inch piece of 4- by 4-inch lumber parallel to each long side and 1 ½ inches from each long edge of a ¾- by 43- by 18-inch piece of plywood. Nail a second ¾- by 43—by 18-inch piece of plywood to the lumber and flush with the bottom piece of plywood. Glue the wood section of the stack flush on the honeycomb placed in step 2 above.
- ④ Make the cutout as shown in a 43- by 18-inch piece of honeycomb. Glue the honeycomb flush over the plywood, with the cutout facing the rear of the stack.

**Figure 3-3. Stack 2 Constructed**



**Figure 3-4. Stack 3 Constructed**

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

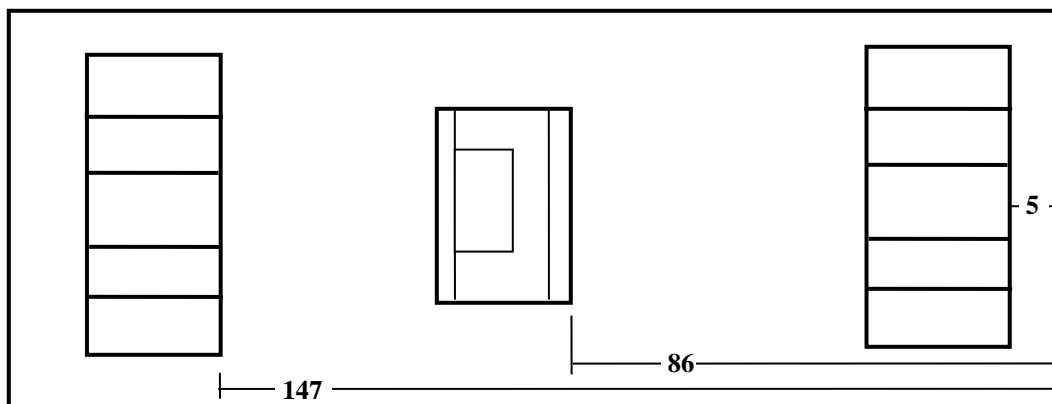
REAR

FRONT

STACK 3

STACK 2

STACK 1



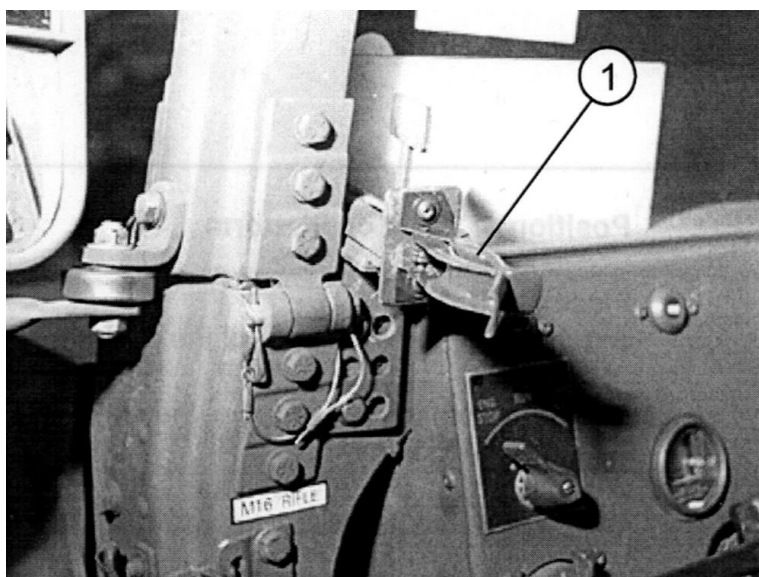
<b>Stack Number</b>	<b>Position on Platform</b>
1	Place stack: Centered 5 inches from the front edge of the platform.
2	Centered 86 inches from the front edge of the platform.
3	Centered 147 inches from the front edge of the platform.

**Figure 3-5. Honeycomb Stacks Positioned on Platform**

## PREPARING TRUCK AND SMOKE GENERATOR

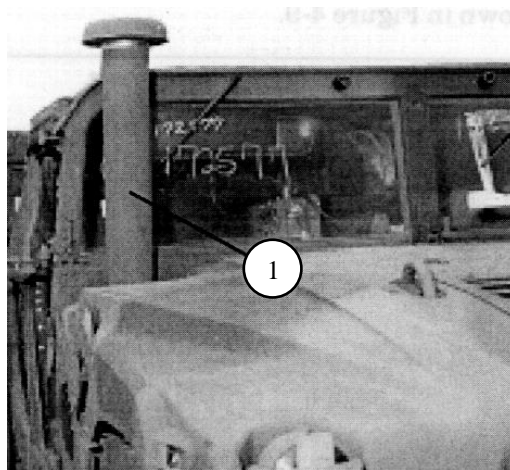
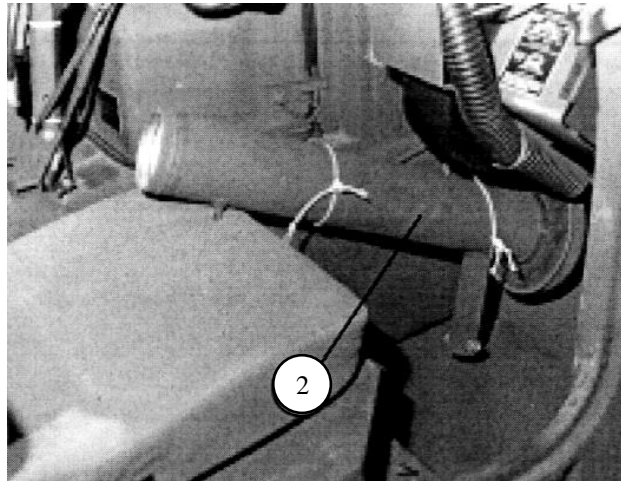
3-4. Prepare the truck and the smoke generator as described below.

- Prepare the truck as described in Paragraphs 1-3 as shown in Figures 1-6, 1-7 AND 3-6.
- Remove the pioneer tool kit from the rear underside of the truck and stow it in the cargo bed. (not shown).
- Prepare the cab of the truck as shown in Figure 1-7, and remove the rifle clips as shown in Figure 3-6.
- Secure and pad radio equipment in the cab as shown in Figure 1-8.
- Remove the breather cap and fording stack and stow them in the truck as shown in Figure 3-7.
- Prepare the front of the truck as shown in Figure 1-9. Place a 4- by 78-inch piece of honeycomb along the front edge of the hood. Also, cover the hood with one piece of honeycomb cut as shown in Figure 1-9, step 6, instead of with two pieces.
- Prepare the truck body as shown in Figure 1-12.
- Prepare the smoke generator as shown in figure 3-9.
- Stow and secure the fuel and water cans and the truck doors as shown in Figure 3-10.



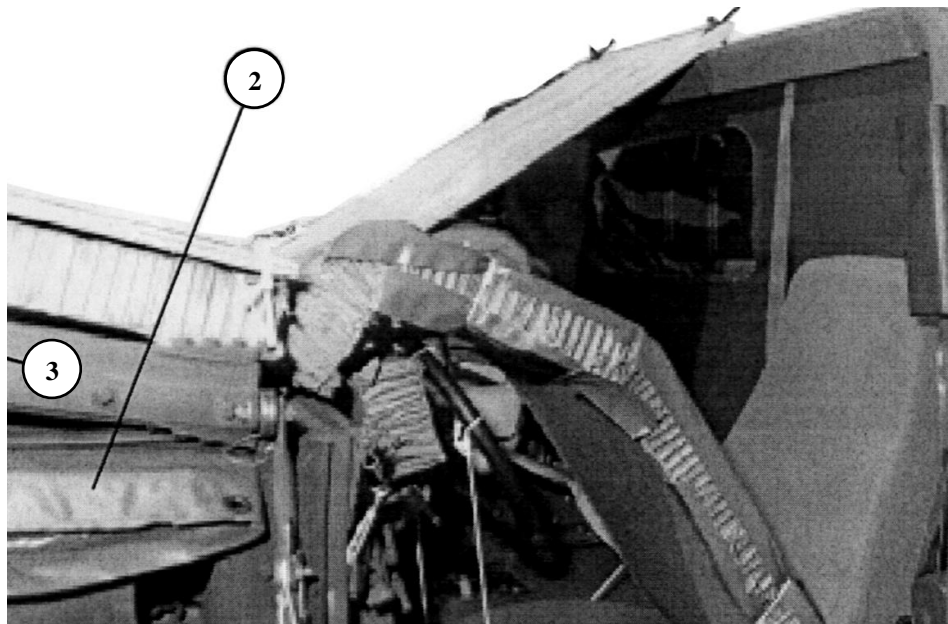
- ① Remove any weapons clip attached to the windshield frame.

**Figure 3-6. Weapons Clip**



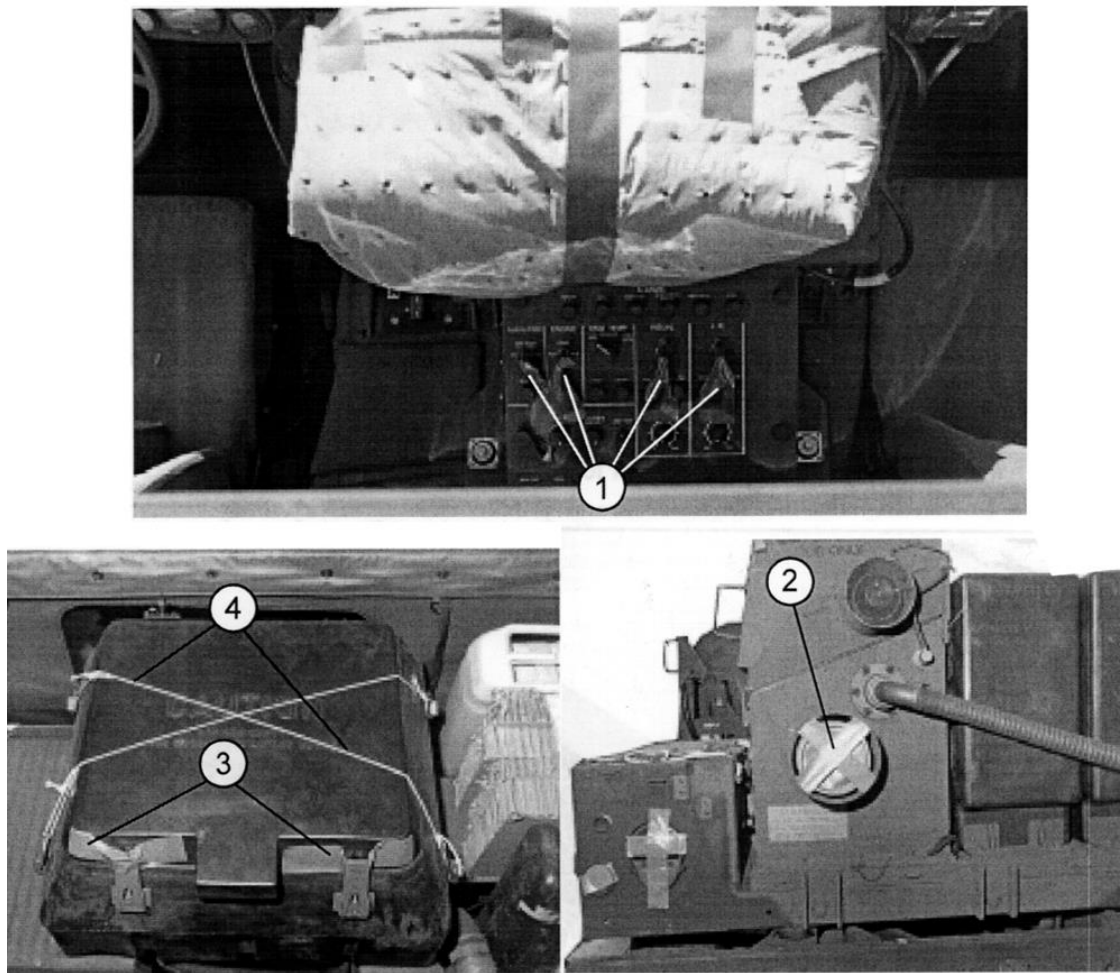
- ① Remove the breather cap and fording stack. Leave the cap attached to the stack.
- ② Tie the cap and stack in the passenger foot well with type III nylon cord.

**Figure 3-7. Fording Kit Removed and Stowed**



- ① Remove the fabric cab cover from its fasteners at the rear of the cab. Remove the roof bows. Do not detach the cab cover from its fasteners on the windshields frame. (not shown)
- ② Before folding the windshield, bring the cab cover over the front of the windshield. Rest the windshield on the folded cab cover. The cover must occupy the space between the honeycomb on which the front of the windshield rests and the windshield hinges.
- ③ Fold the windshield down over the cab cover and any padding.

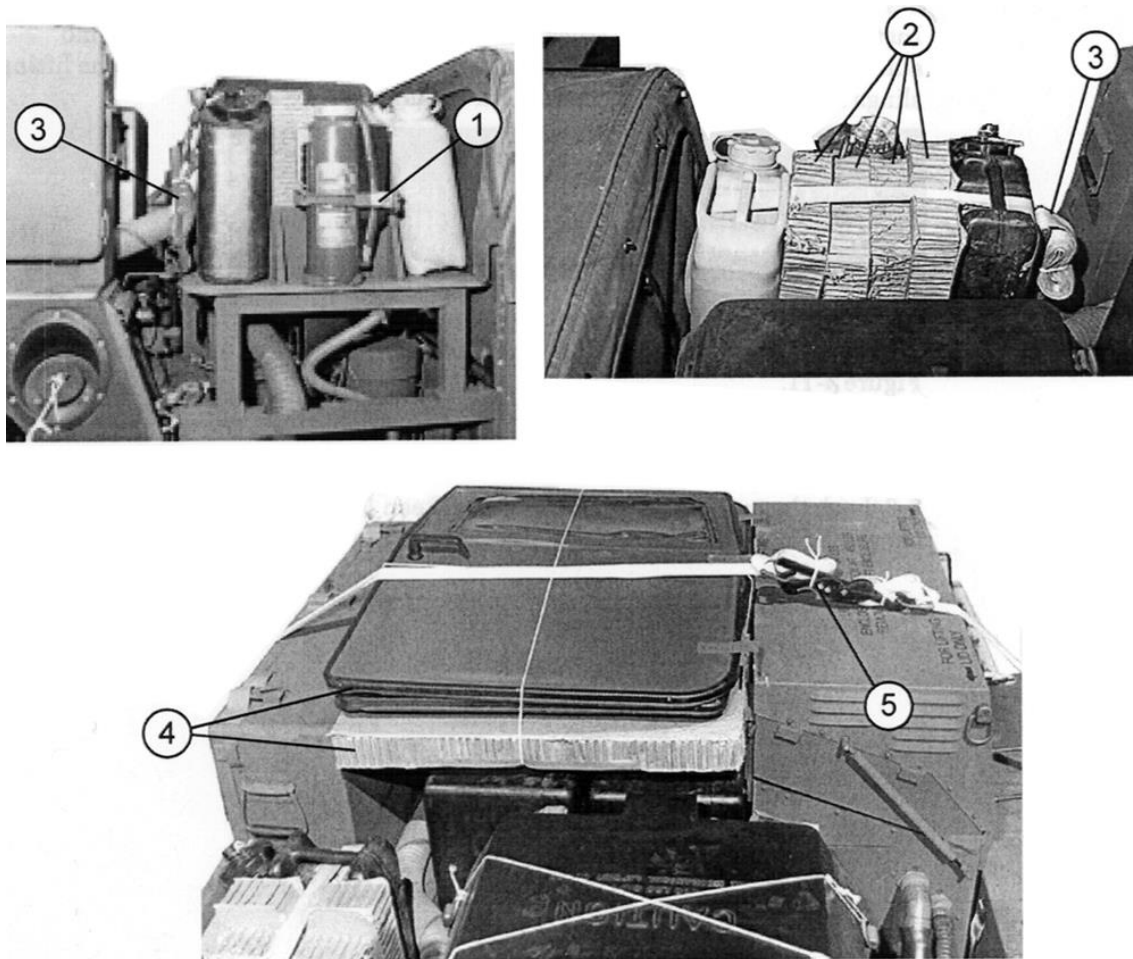
**Figure 3-8. Windshield Folded Over the Cab Cover**



- ① Tape the switches on the smoke generator control panel to the OFF position.
- ② Tape the exhaust port cover in place.
- ③ Tape the latches on the IR hopper, and any other latches elsewhere on the smoke generator.
- ④ Secure the IR hatch cover with two lengths of type III nylon cord.

**Figure 3-9. Smoke Generator Prepared**





- ① Tape the external fire extinguisher latch closed.
- ② Pad between the water and fuel cans with four pieces of honeycomb.
- ③ Pass a 15-foot lashing under the platform, and over the cans through their carrying handles. Secure the lashing at the rear.
- ④ Place a 33- by 44-inch piece of honeycomb over the fog oil tanks. Tie the truck doors over the honeycomb with two lengths of type III nylon cord.
- ⑤ When the lashings securing the body side boards are installed, pass the lashing at the rear of the truck over the smoke generator and the truck doors as shown.

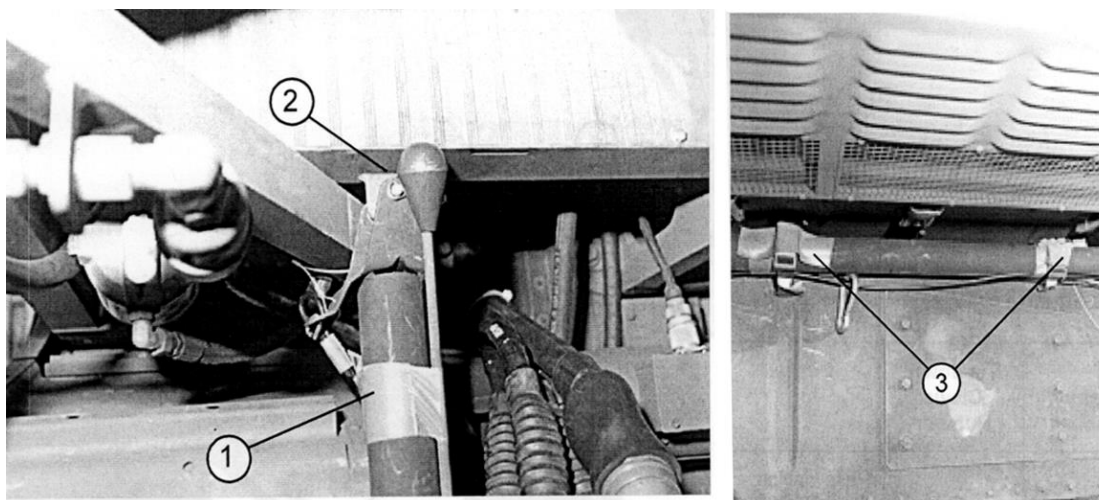
**Figure 3-10. Fuel Cans, Water Cans, and Truck Doors Secured**

## LIFTING AND POSITION TRUCK, INSTALLING OPTIONAL DRIVEOFF AIDS, AND STOWING SPREADER BAR

- 3-5. Install the optional driveoff aids on the platform, lift and position the truck as follows.
- Install the optional drive off aids as shown in Figure 1-14.
  - Install lifting slings on the truck and position the truck on the honeycomb stacks as shown in paragraph 2-22 and Figure 2-12.
  - Install the spreader bar assembly on the lifting slings to protect the smoke generator from damage. Install the drive-off aids, if used, to the rear wheels of the truck as shown in Figure 1-17.
  - Stow the spreader bar, roof bows, and whip antenna as shown in Figure 3-11.

### CAUTION

Use of the spreader bar is essential. Failure to comply will result in damage to the equipment.



- ① Tape the cab bows and antenna to the spreader bar. The tip of the antenna and the end of the spreader bar are shown in the first photograph.
- ② Secure the end of the spreader bar to the bracket provided on the equipment platform with the bar's pin.
- ③ Place the spreader bar in its original location in the truck cargo area, and secure it with the fasteners provided. Tape the fasteners shut.

**Figure 3-11. Spreader Bar, Antenna, and Cab Bows Stowed**

## LASHING TRUCK

3-6. Lash the truck to the platform with fifteen 15-foot tiedown assemblies as shown in Figures 3-12 and 3-13, and according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.

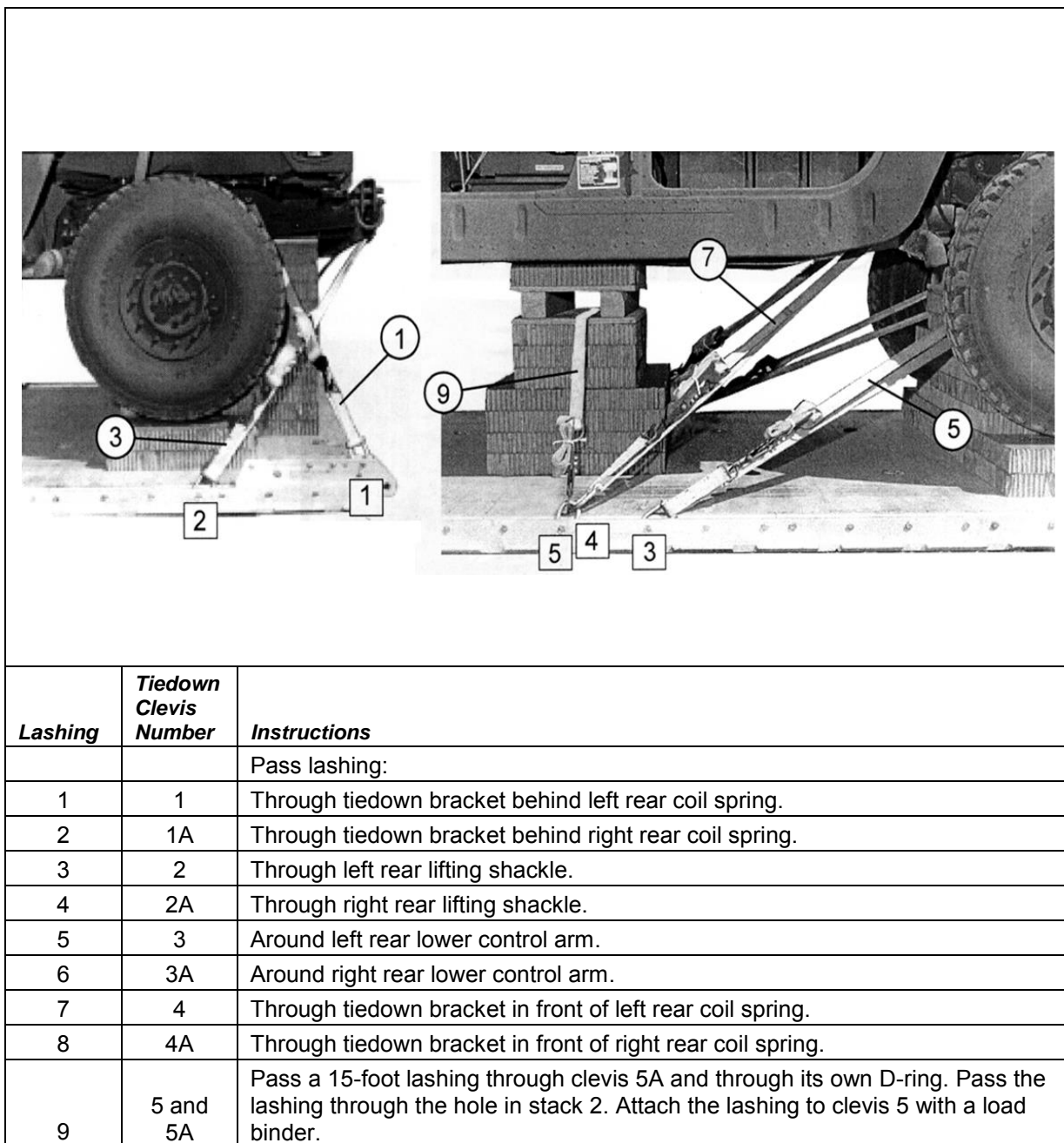
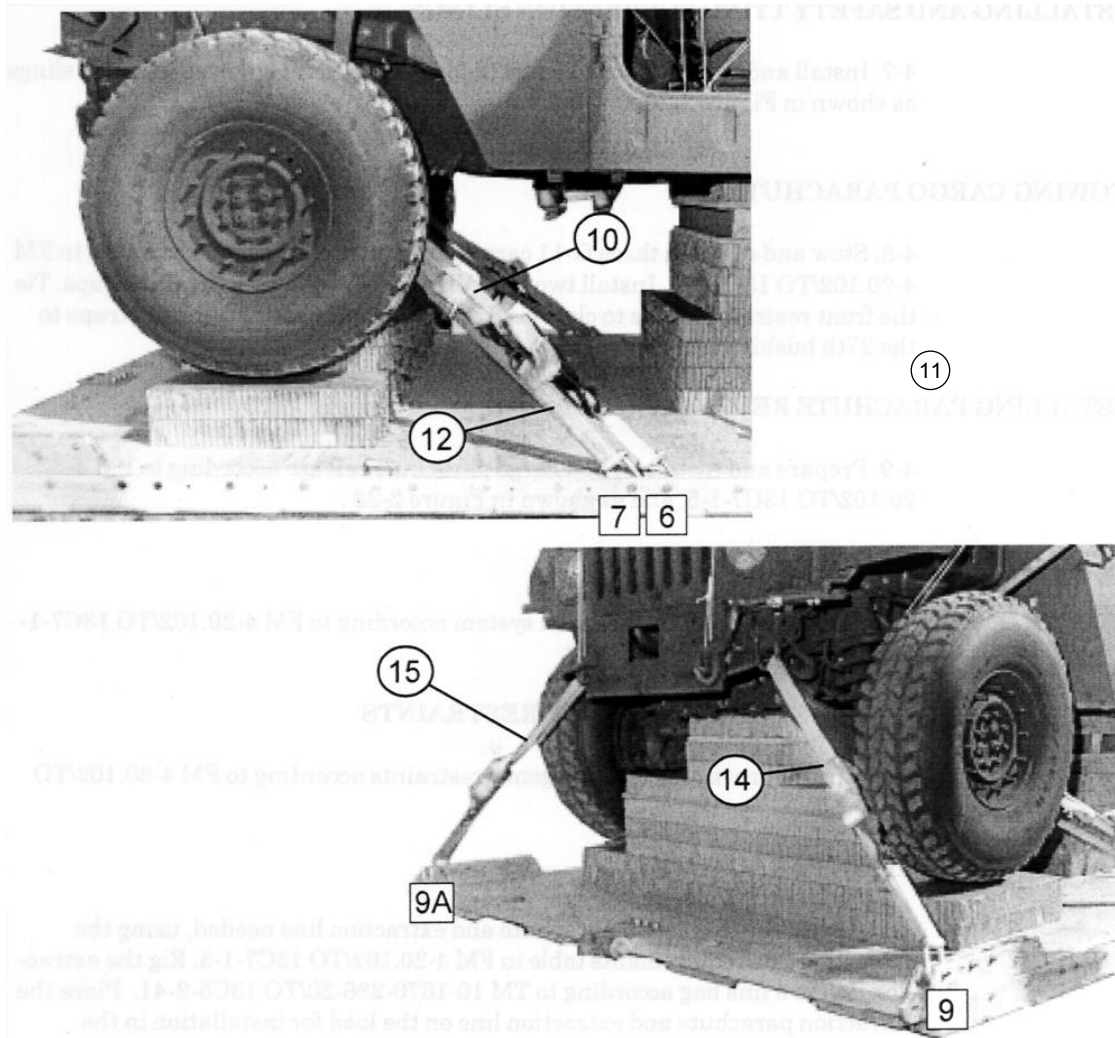


Figure 3-12. Lashings 1 Through 9 Installed



<b>Lashing</b>	<b>Tiedown Clevis Number</b>	<b>Instructions</b>
		Pass lashing:
10	6	Through tiedown bracket behind left front coil spring.
11	6A	Through tiedown bracket behind right front coil spring.
12	7	Around left lower control arm.
13	7A	Around right lower control arm.
14	9	Through tiedown bracket on end of left frame rail.
15	9A	Through tiedown bracket on end of right frame rail.

Figure 3-13. Lashings 10 Through 15 Installed

## **INSTALLING AND SAFETY TIEING SUSPENSION SLINGS**

3-7. Install and safety tie four 16-foot (2-loop), type XXVI nylon suspension slings as shown in Figure 1-20.

## **STOWING CARGO PARACHUTES**

3-8. Stow and restrain three G-11 cargo parachutes on the load according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5. Install two type VIII nylon webbing restraint straps. Tie the front restraint straps to clevises 8 and 8A. Tie the rear restraint straps to the 27<sup>th</sup> bushings on the platform side rails. Install a multi-cut parachute release strap on the restraint straps on each side according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5

## **INSTALLING PARACHUTE RELEASE**

3-9. Prepare and install an M-1 cargo parachute release according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figure 1-22.

## **INSTALLING EXTRACTION SYSTEM**

3-10. Install the extraction force transfer coupling extraction system according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figure 1-23.

## **INSTALLING PROVISIONS FOR EMERGENCY RESTRAINTS**

3-11. Install provisions for emergency restraints according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.

## **PLACING EXTRACTION PARACHUTE**

3-12. Select the extraction parachute and extraction line needed, using the extraction line requirements table in TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5. Rig the extraction line in a line bag according to TM 10-1670-286-20/TO 13C5-2-41. Place the extraction parachute and extraction line on the load for installation in the aircraft.

## **MARKING RIGGED LOAD**

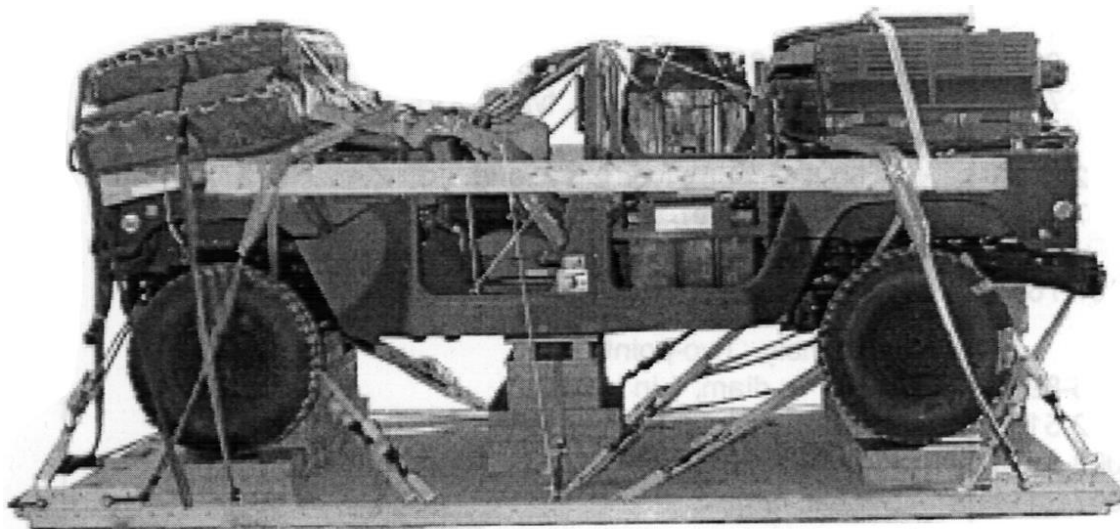
3-13. Mark the rigged load according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5, and as shown in Figure 3-14. Complete Shipper's Declaration for Dangerous Goods according to AFMAN 24-204/TM 38-250. If the load varies from the one shown, the weight, height, CB, and parachute requirements must be recomputed.

## **EQUIPMENT REQUIRED**

3-14. Use the equipment listed in Table 3-1 on page 3-17 and continuing on page 3-18 to rig this load.

**CAUTION**

Make the final rigger inspection required by TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 before the load leaves the rigging site.



CB

Weight: Load Shown.....	11,960 pounds
Maximum load allowed.....	12,710 pounds
Height (with two G-11B parachutes) .....	97 inches
Width.....	108 inches
Length.....	215 inches
Overhang: Front (vehicle) .....	8 inches
Rear (extraction force transfer coupling).....	18 inches
Center of Balance (CB) (from front edge of platform) .....	91 inches

**Figure 3-14. M56 Smoke Generator Rigged in M1113 Truck for Low-Velocity Airdrop**

**Table 3-1. Equipment Required for Rigging the M1113 truck with M56 Smoke Generator for Low-Velocity Airdrop**

<i>National Stock Number</i>	<i>Item</i>	<i>Quantity</i>
8040-00-273-8713	Adhesive paste, 1-gallon	As required
4030-00-090-5354	Clevis, suspension, 1-inch (large)	5
1670-00-360-0328	Cover, clevis, large	1
4020-00-240-2146	Cord, nylon, type III, 550-pound	As required
1670-00-434-5785	Coupling, Airdrop Extraction Force Transfer, w/16-foot. cable	1
8135-00-664-6958	Cushioning material (Cellulose wadding)	As required
1670-01-475-1990	Extraction Parachute Jettison System Light	1
8305-00-958-3685	Felt, ½-inch thick	As required
1670-01-183-2678	Leaf, extraction line (line bag) (for C-130)	2
1670-01-183-2678	Leaf, extraction/drogue line (line bag) (for C-17/C130J)	4
	Line extraction:	
1670-01-062-6313	60-foot (3-loop), type XXVI (for C-130/J)	1
1670-01-107-7651	140-foot (3-loop), type XXVI (for C-17)	1
1670-01-064-4452	60-foot (1-loop), type XXVI (for C-17/C-130J), (drogue line)	1
1670-01-493-6418	Link assembly, two-point, 3¾-inch, small:	1
5306-00-435-8994	Bolt, 1-inch diameter, 4-inches long	2
5310-00-232-5165	Nut, 1-inch diameter, 4-inches long	2
1670-00-003-1953	Plate, side 3 ¾-inches	2
5365-00-007-3414	Spacer, large	2
	Lumber:	
5510-00-220-6196	2- by 6- by 72-inch	As required
5510-00-220-6274	4- by 4- by 96-inch	As required
5315-00-010-4659	Nail, steel, wire, 8D	As required
1670-00-753-3928	Pad, energy-dissipating (honeycomb) 3- by 35- by 96-inches	13 sheets
1670-01-016-7841	Parachute, cargo, G-11B	3
	Parachute, cargo, extraction:	
1670-01-063-3716	22-foot (for C-17, use H-block with this parachute) Drogue (for C-17)	1
1670-01-063-3715	15-foot (for C-17/C130J) (DES)	1
	Platform, airdrop, type V, 16-foot:	
1670-01-353-8424	Bracket, assembly, extraction	1
1670-01-353-8425	Bracket, assembly, coupling	1
1670-01-162-2372	Clevis assembly (type V)	21
1670-01-162-2381	Tandem link assembly (Multipurpose link)	4
5530-00-128-4981	Plywood, 3/4-inch	4 sheets

**Table 3-1. Equipment Required for Rigging the M1113 Truck with M56 Generator for Low-Velocity Airdrop (continued)**

<i>National Stock Number</i>	<i>Item</i>	<i>Quantity</i>
1670-01-097-8816	Release, cargo parachute, M-1	1
	Sling, cargo, airdrop: For Deployment	
1670-01-062-6304	9-foot (2-loop), type XXVI nylon webbing	1
	For Lifting	
1670-01-062-6304	9-foot (2-loop), type XXVI nylon webbing	2
1670-01-062-6303	12-foot (2-loop), type XXVI nylon webbing	2
	For Suspension	
1670-01-063-7761	16-foot (2-loop), type XXVI nylon webbing	4
	For Riser Extension	
1670-01-062-6302	60-foot (3-loop), type XXVI nylon webbing	3
4910-01-313-8839	Spreader bar assembly	1
5340-00-040-8219	Strap, parachute, release, multi-cut, comes with 3 knives	2
7501-00-266-5016	Tape, adhesive, 2-inch	As required
1670-00-937-0271	Tiedown assembly, 15-foot	20
1670-01-344-0825	Vehicle drive-off aid	1
	Webbing:	
8305-00-268-2411	Cotton, 1/4-inch, type I	As required
8305-00-082-5752	Nylon, tubular, 1/2-inch	As required
8305-00-559-6871	Nylon, type VIII	As required



## SECTION II – RIGGING M1114 UP-ARMORED ARMAMENT CARRIER

### DESCRIPTION OF LOAD

3-15. The M1114 HMMWV-series truck has a heavy-duty suspension and additional armor in the sides, door, and floor. The truck is shown in Figure 3-15. The truck is rigged on a 16-foot, type V airdrop platform for low-velocity airdrop. The load required three G-11 cargo parachutes.

### PREPARING PLATFORM

3-16. Prepare a 16-foot, type V airdrop platform according to TM 10-1670-268-20&P/TO 13C7-52-22. Install four tandem links and 18 load tiedown clevises according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5, and as shown in Figure 3-16.

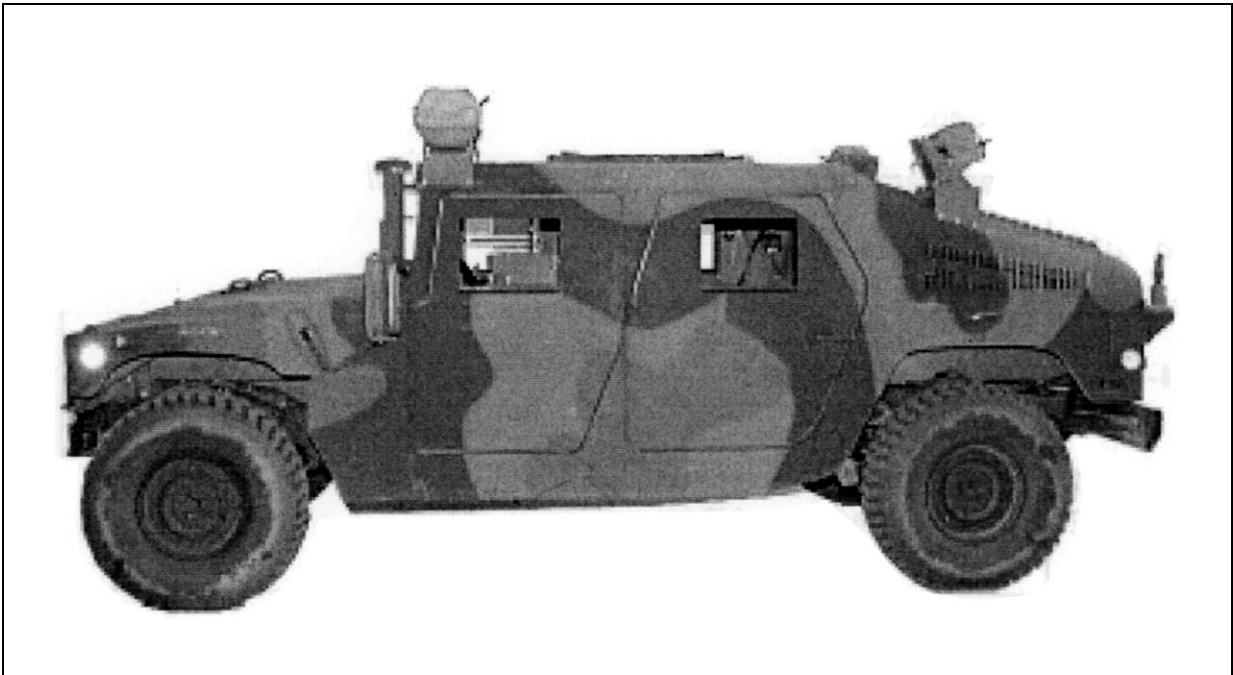
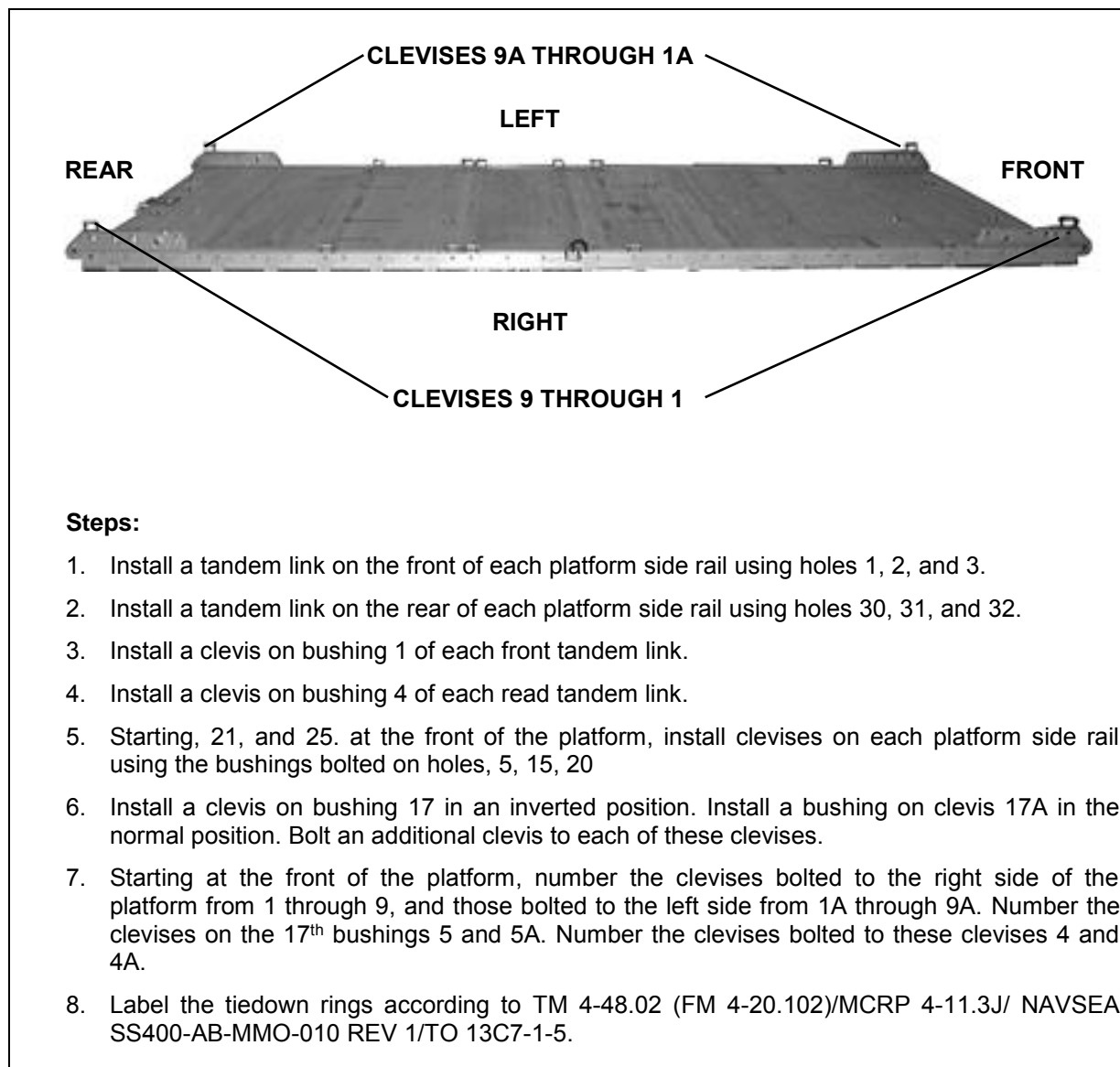


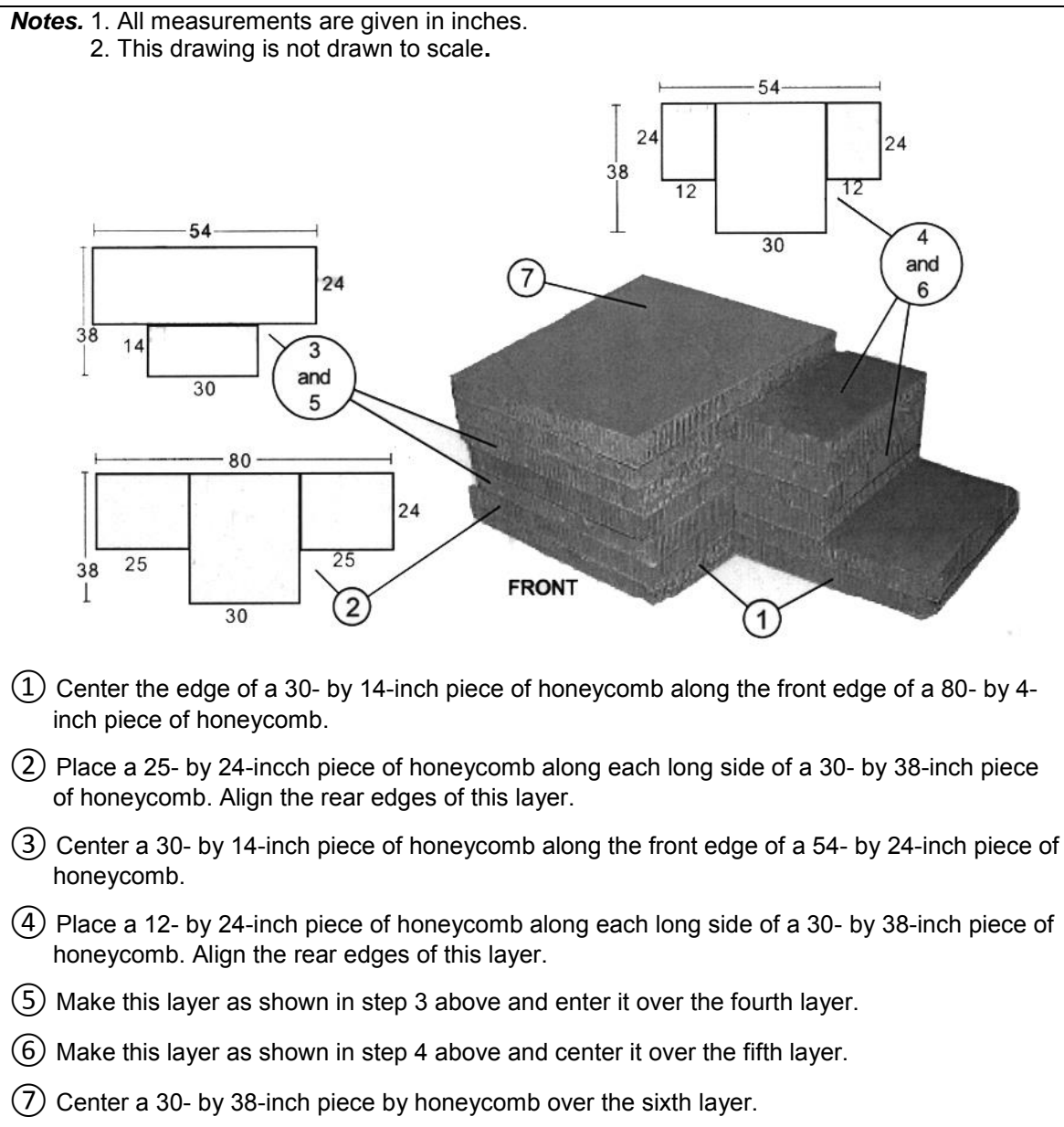
Figure 3-15. M1114 Up-Armored Armament Carrier



**Figure 3-16. Platform Prepared**

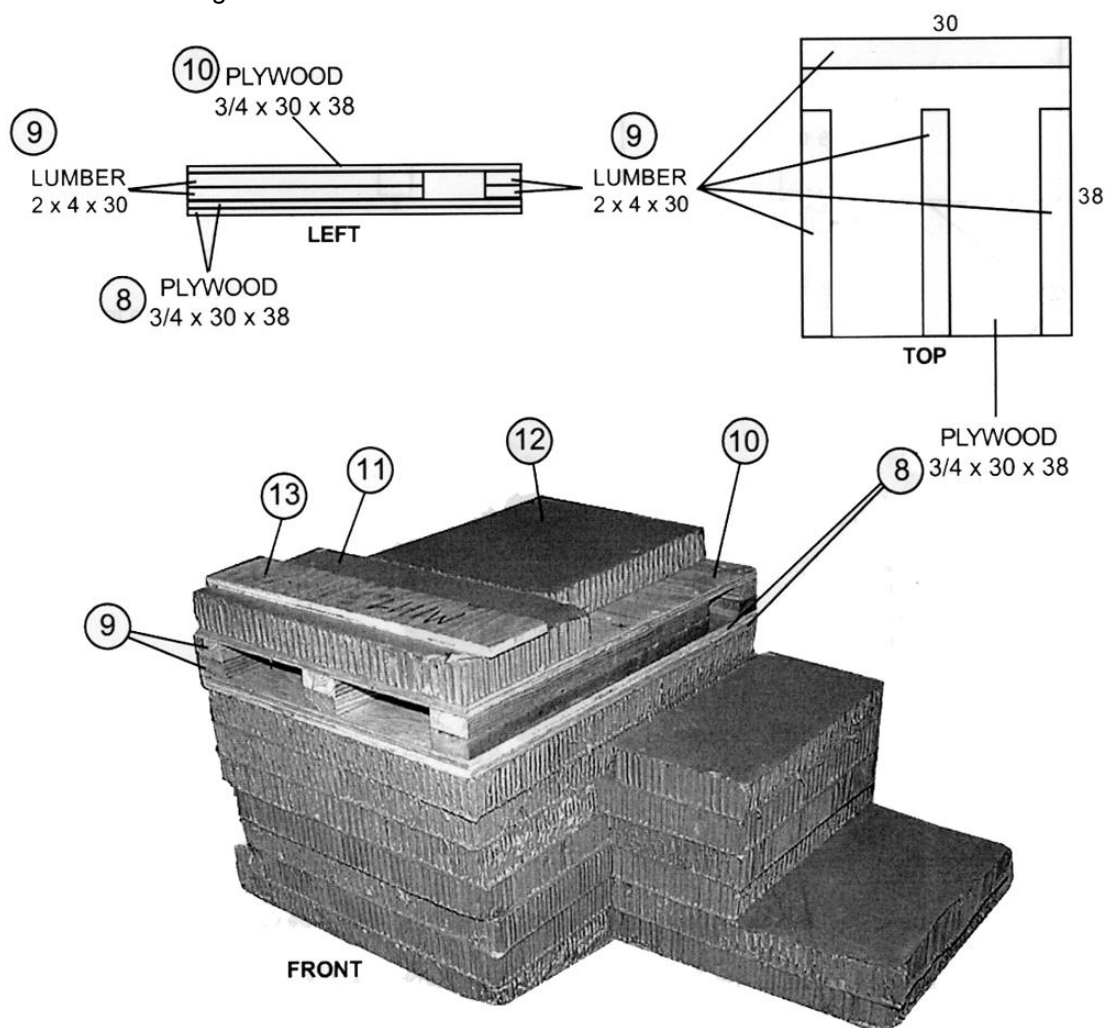
## PREPARING AND POSITIONING HONEYCOMB STACKS

3-17. Build the honeycomb stacks as shown in Figures 3-17 through 3-19. Position the stacks on the platform as shown in Figure 3-20.



**Figure 3-17. Stack 1 Prepared**

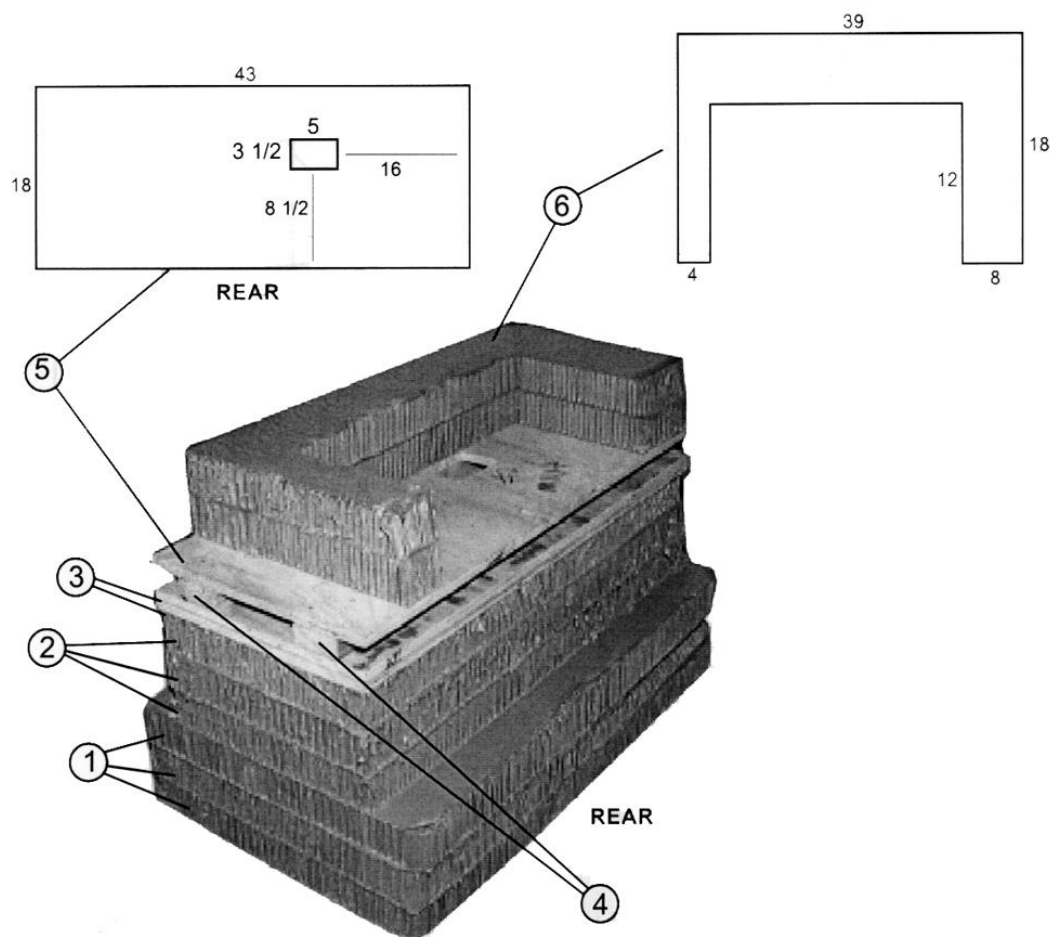
**Notes.** 1. All measurements are given in inches.  
2. This drawing is not drawn to scale.



- ① Nail two 30- by 38-inch pieces of  $\frac{3}{4}$ -inch plywood flush together.
- ② Space and nail eight pieces of 2- by 4-inch lumber in pairs and to the plywood as shown.
- ③ Nail one 30- by 38-inch piece of  $\frac{3}{4}$ -inch plywood flush over the lumber as shown.
- ④ Glue a 30- by 14-inch piece of honeycomb flush along the front edge as shown.
- ⑤ Center a 20-inch side of a 20- by 24-inch piece of honeycomb along the rear edge of the piece placed in step 11.
- ⑥ Glue a 30- by 6-inch piece of  $\frac{3}{4}$ -inch plywood 1 inch from the front edge of the stack.

**Figure 3-17. Stack 1 Prepared (continued)**

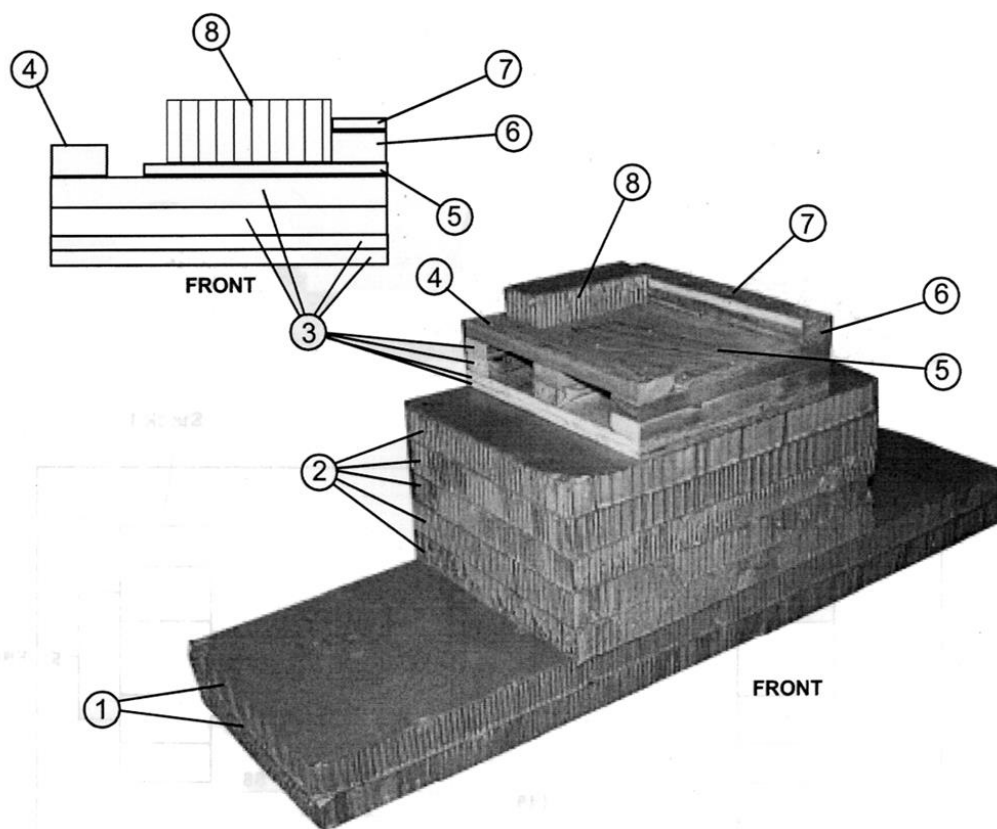
- Notes.** 1. All measurements are given in inches.  
2. This drawing is not drawn to scale.



- ① Glue three 43- by 26-inch pieces of honeycomb together to form a base.
- ② Center and glue three 43- by 18-inch pieces of honeycomb over the base.
- ③ Nail two 43- by 18-inch pieces of  $\frac{3}{4}$ -inch plywood flush together.
- ④ Nail a 43-inch piece of 2- 4-inch lumber flat side down, parallel to each long side, and 3 inches from each long edge of the plywood.
- ⑤ Make a 3  $\frac{1}{2}$ - by 5-inch cutout as shown in a third  $\frac{3}{4}$ - by 43- by 18-inch piece of plywood. Nail the plywood to the lumber and flush with the bottom pieces of plywood. Glue the wood section of the stack flush on the honeycomb placed in step 2 above.
- ⑥ Make the cutout as shown in two 39- by 18-inch pieces of honeycomb. Glue the honeycomb flush with the right edge of the plywood, with the cutout facing the rear of the stack.

**Figure 3-18. Stack 2 Prepared**

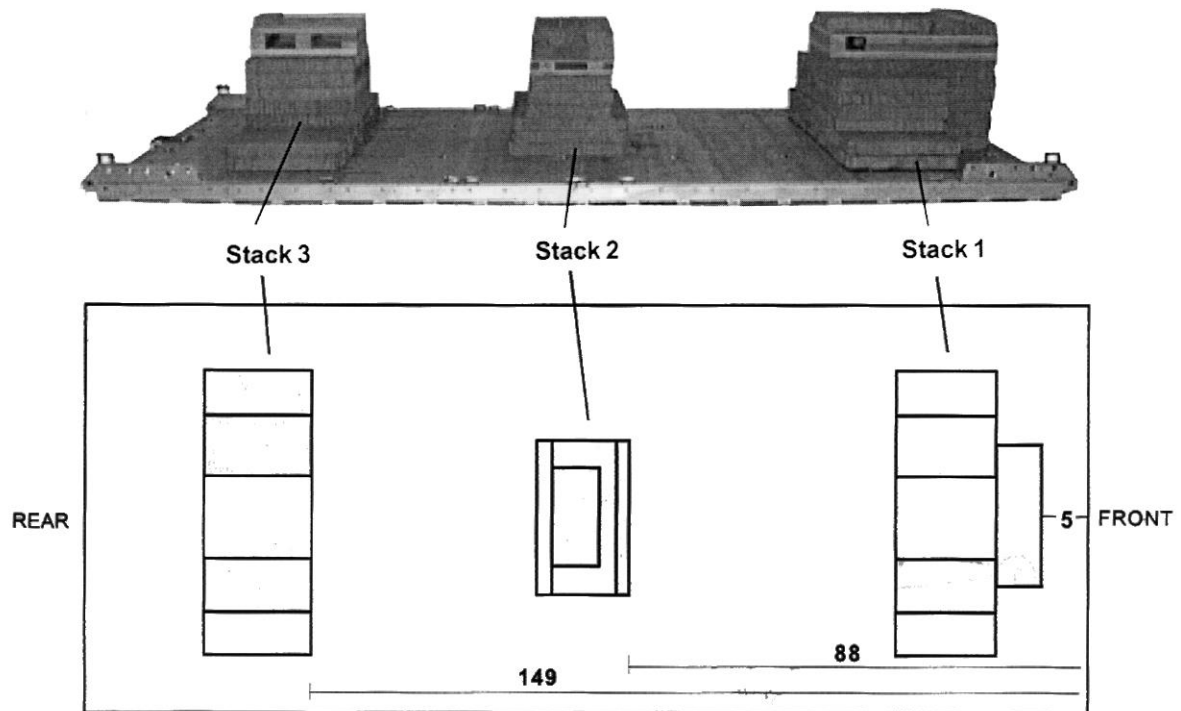
**Note.** This drawing is not drawn to scale.



- ① Glue two 80- by 24-inch pieces of honeycomb together to form a base.
- ② Center and glue five 35- by 24-inch pieces of honeycomb on the base.
- ③ Nail two 21- by 24-inch pieces of  $\frac{3}{4}$ -inch plywood to each other and to six 21-inch pieces of 2- by 2- by 4-inch lumber. Nail the number flush along the sides and in the center of the plywood.
- ④ Nail a 27-inch pieces of 2- by 4-inch lumber flush along the right side.
- ⑤ Nail a 17- by 24-inch piece of  $\frac{3}{4}$ -inch plywood flush with the left side.
- ⑥ Nail a 24-inch piece of 2- by 4-inch lumber flush with the left edge of the plywood placed in step 5 above.
- ⑦ Nail a 3  $\frac{1}{2}$ - by 24-inch piece of  $\frac{3}{4}$ -inch plywood flush over the lumber placed in step 6 above.
- ⑧ Glue a 13- by 5-inch piece of honeycomb along the rear edge of the plywood flush against the plywood and lumber placed in steps 6 and 7 above.

**Figure 3-19. Stack 3 Prepared**

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



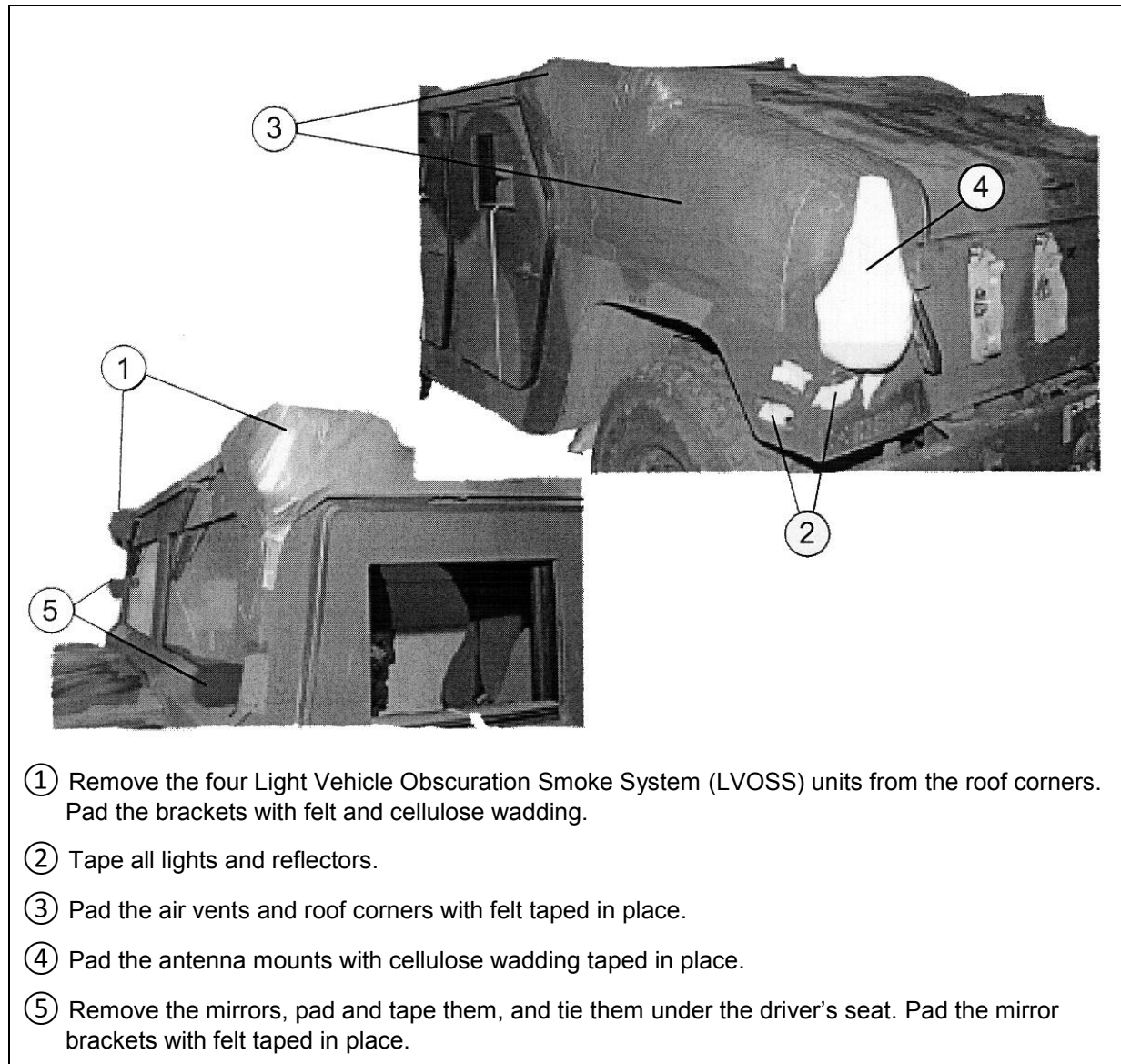
Stack Number	Position on Platform
1	Place stack: Centered 5 inches from the front edge of the platform.
2	Centered 88 inches from the front edge of the platform and face the cutout to the rear.
3	Centered 149 inches from the front edge of the platform.

**Figure 3-20. Honeycomb Stacks Positioned on Platform**

## PREPARING TRUCK

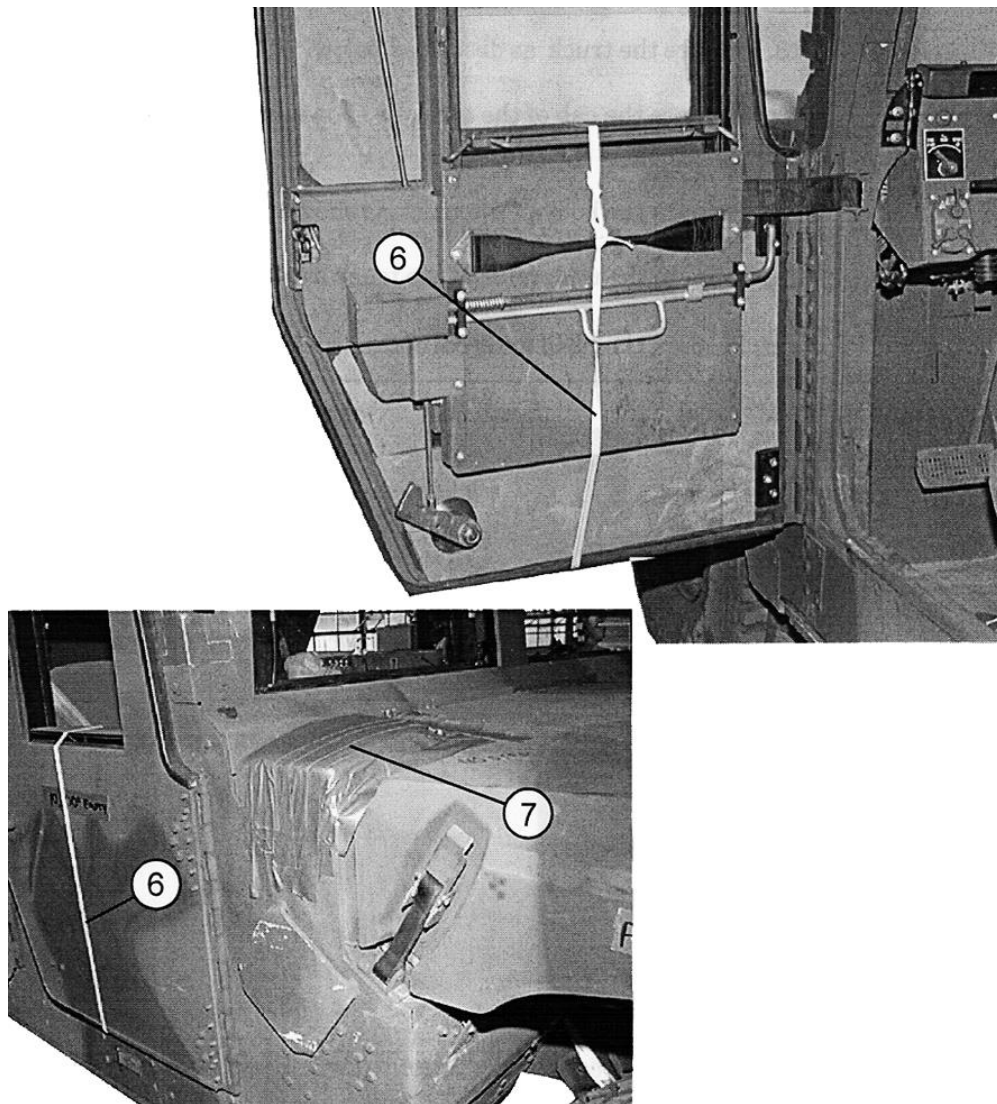
3-18. Prepare the truck as described below.

- Prepare the cab of the truck as shown in Figures 1-7, steps 3 through 10
- Prepare the body of the truck as shown in Figure 3-21.
- Prepare the underside of the truck as shown in Figure 3-22.
- Prepare the hood and roof of the truck as shown in figure 3-23.



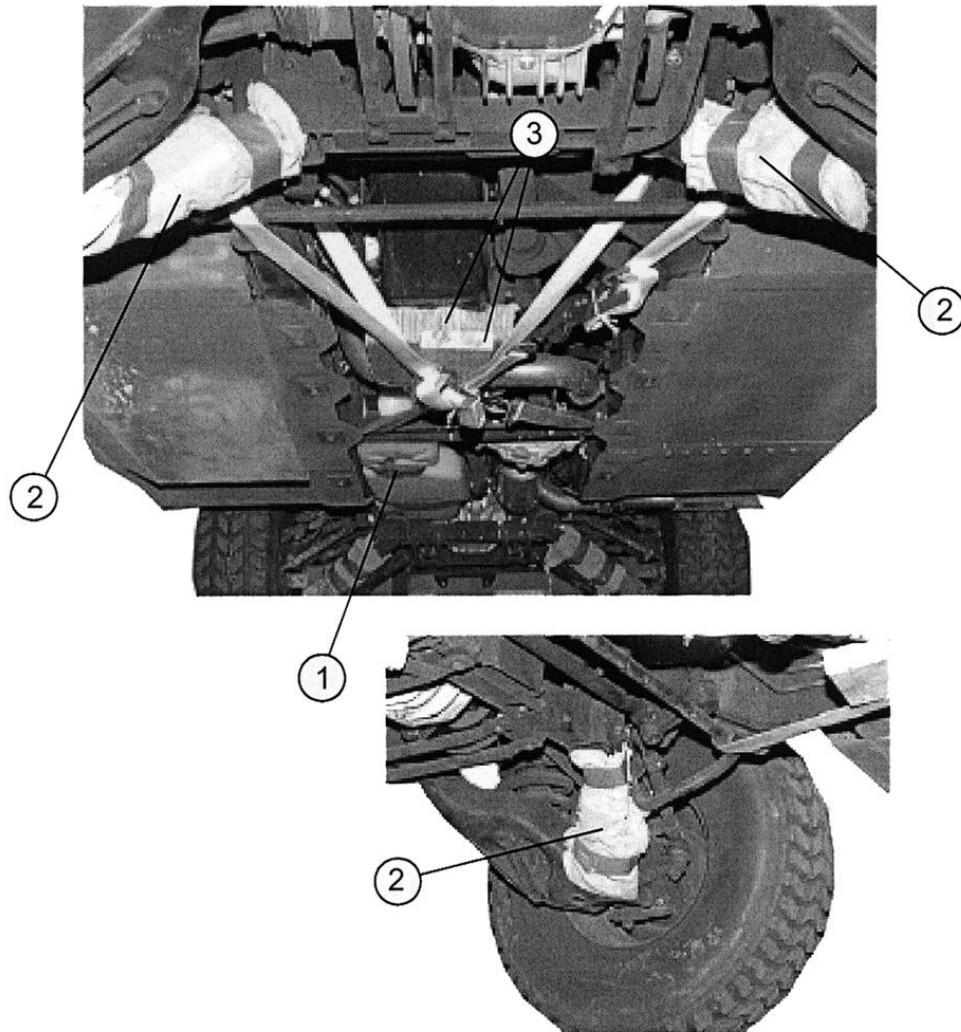
**Figure 3-21. Truck Body Prepared**





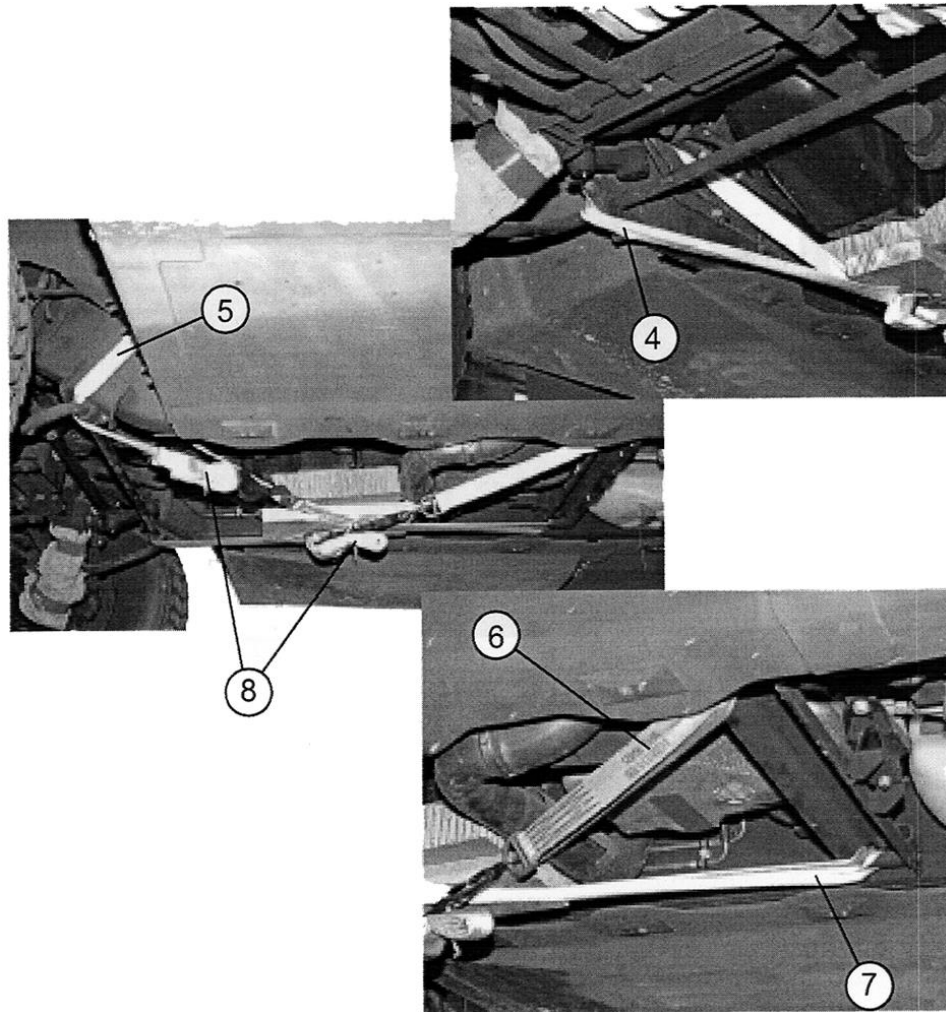
- ⑥ Lower all windows. Tie them in the lowered position with ½-inch tubular nylon webbing.
- ⑦ Remove the breather cap and fording stack. Place a layer of felt over the air intake hole and tape the felt in place and secure in the truck.

**Figure 3-21. Truck Body Prepared (continued)**



- ① Tape the fuel tank drain plug.
- ② Pad the lower control arms at the front and rear of the truck with cellulose wadding taped in place.
- ③ Have a 12- by 12-inch piece of honeycomb and 16-inch length of 2- by 6-inch lumber ready to place under the oil pan as shown.

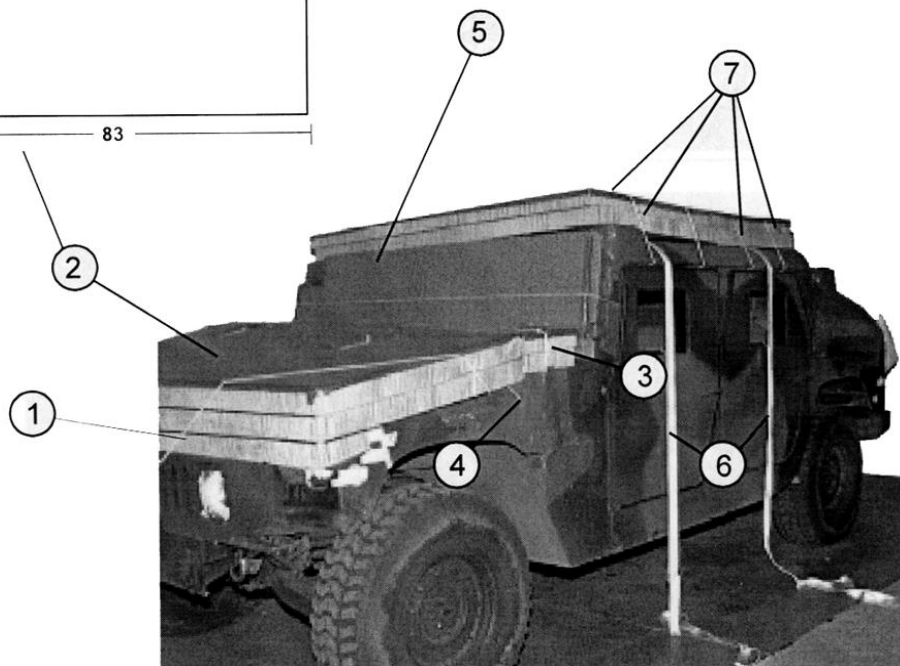
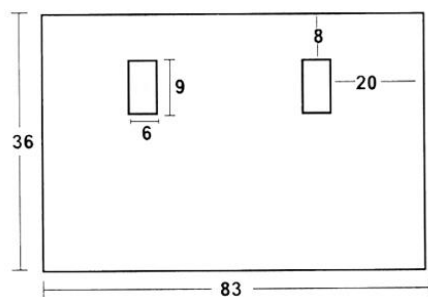
**Figure 3-22. Underside of Truck Prepared**



- ⑥ Route a 15-foot lashing around the right frame member and to the front side of the stabilizer bar.
- ⑦ Route a second 15-foot lashing around the left frame member and around the stabilizer bar.
- ⑧ Route the free end of the lashing placed in step 4 around the radius rod on the left side of the cross member in front of the fuel tank.
- ⑨ Route the free end of the lashing placed in step 5 around the radius rod on the right side of the cross member in front of the fuel tank.
- ⑩ Tighten and secure both lashings over the honeycomb and lumber placed under the oil pan. Separate the load binders so that they do not interfere with each other.

**Figure 3-22. Underside of Truck Prepared (continued)**

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



- ① Place a 4- by 78-inch piece of honeycomb with cutouts as shown to the hood.
- ② Tie two 83- by 36-inch pieces of honeycomb with cutouts as shown to the hood with type III nylon cord. Tape the upper edges of the honeycomb. Route the cord through the grille and tie it on each side to the hood latches.
- ③ Place two 83- by 12-inch pieces of honeycomb behind the honeycomb placed in step 1. Tape the upper outside edges, and tie the honeycomb to the hood latches with type III nylon cord.
- ④ Tape the hood latches.
- ⑤ Tie an 83- by 21-inch piece of honeycomb to the windshield. Tape the outside edges and tie the type III nylon cord through the door openings and around the honeycomb.
- ⑥ Center two 30-foot lashings across the wide of the roof. Center one lashing over the front window openings, and once lashing over the rear window openings.
- ⑦ Place four full sheets of honeycomb on the roof. Crush or cut out to allow for the turret fixtures. Tape the upper edges of the honeycomb. Tie the honeycomb to the roof through the door.

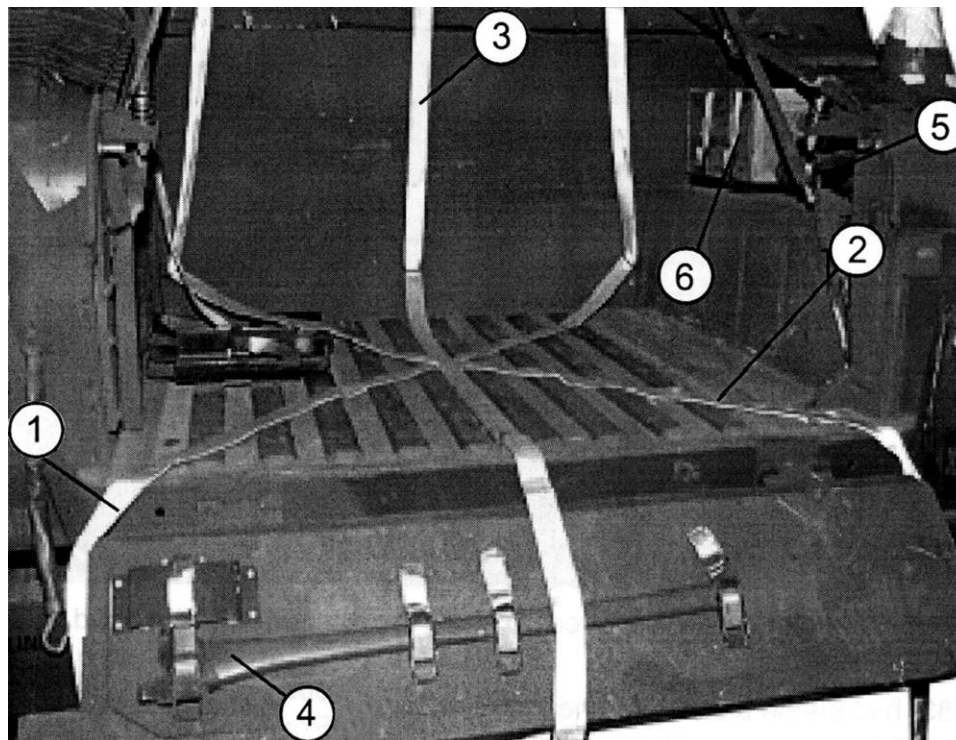
**Figure 3-23. Hood and Roof Covered**

## STOWING LOAD IN M1114 TRUCK

3-19. Stow mission equipment in the truck cargo compartment as shown in Figure 3-24. Stow items in the cab area as show in Figure 3-25. Install the wood side protection boards as shown in Figure 3-26.

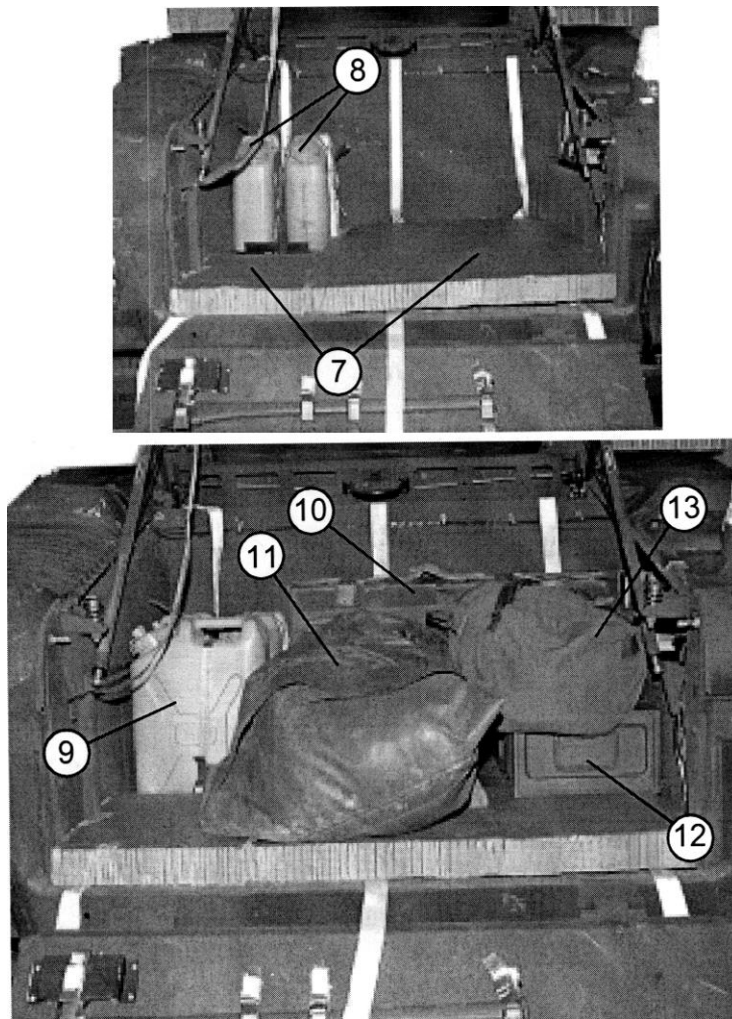
### CAUTION

Only ammunition listed in TM 4-48.16 (FM 4-20.153)/MCRP 4-11.3B/TO 13C7-18-41 may be airdropped.



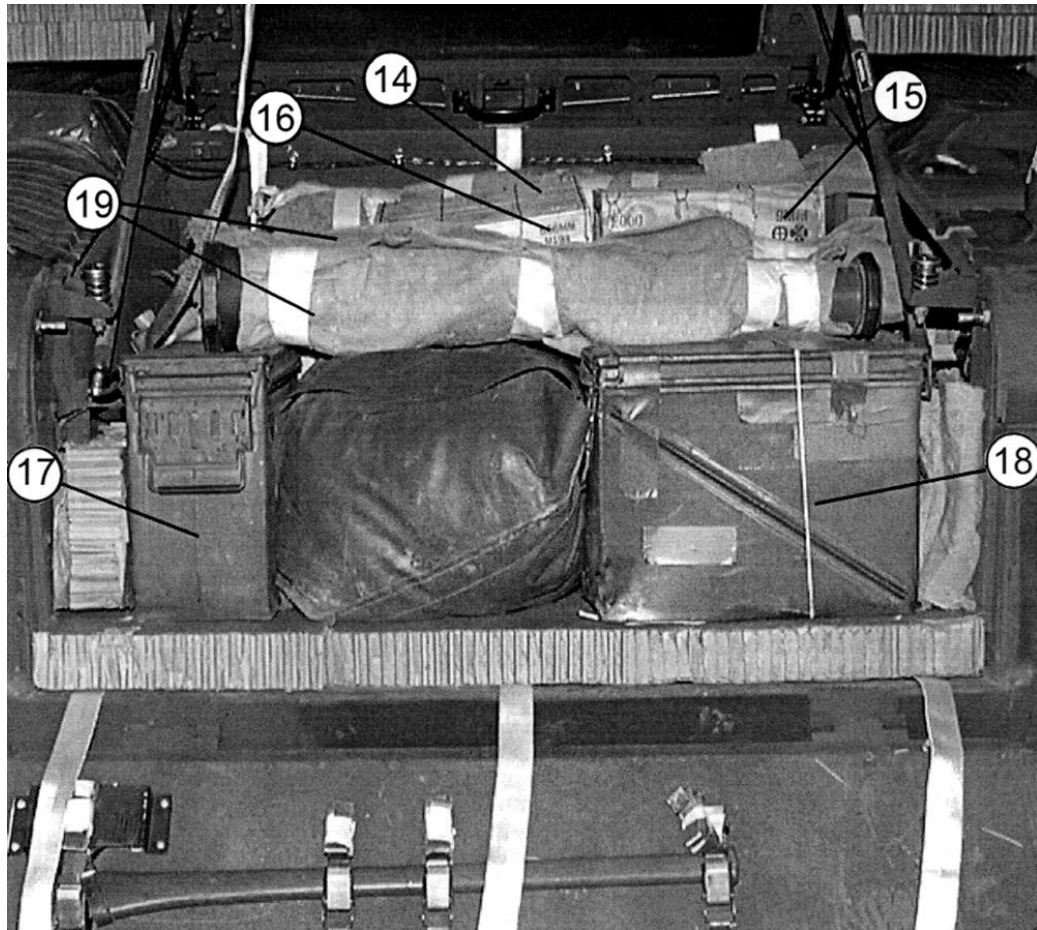
- ① Route a lashing through the left rear and right front cargo bed rings.
- ② Route a lashing through the right rear and left front cargo bed rings.
- ③ Route a lashing through the front center and rear center cargo bed rings.
- ④ Secure the axe in its mount on the tailgate with the straps provided.
- ⑤ Secure the jack and MAX tool kit in the right storage area over the wheel well with the straps provided.
- ⑥ Place one box of 9-mm ammunition in the right wheel well cargo area and secure it with the straps provided.

**Figure 3-24. Accompanying Load Stowed in Cargo Bed**



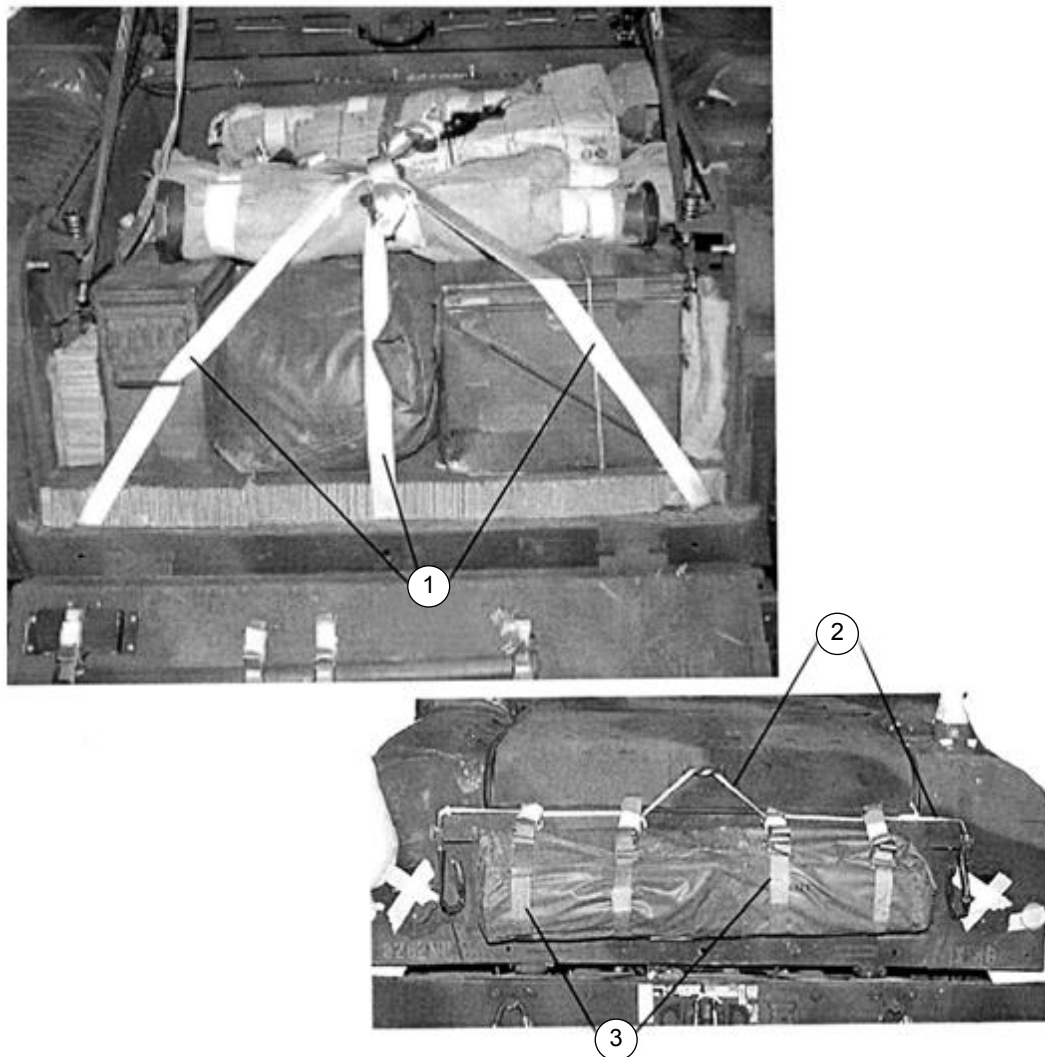
- ⑦ Cover the hatch bed with a 36- by 47-inch and a 15- by 20-inch piece of honeycomb.
- ⑧ Secure two fuel cans in the stowage brackets with the straps provided.
- ⑨ Secure one water can behind the fuel cans in the stowage bracket with the straps provided.
- ⑩ Place the route signing kit in the right front.
- ⑪ Place the Light Scattering-Screen (LSS) nets in the center.
- ⑫ Place the Enemy Prisoner of War (EPW) kit to the right of the LSS nets.
- ⑬ Place the team bag over the EPW kit box.

**Figure 3-24. Accompanying Load Stowed in Cargo Bed (continued)**



- ⑭ Wrap all three AT4 rocket launchers with cellulose wadding and tape. Place the first AT4 over the route signing kit. (not shown)
- ⑮ Place a box of 9-millimeter (mm) ammunition over the team bag.
- ⑯ Place a box of 5.56 ammunition over the light-scattering screen (LSS) net bag.
- ⑰ Place a can of 40-mm linked ammunition in the left rear.
- ⑱ Place a can of 40-mm linked ammunition in the right rear.
- ⑲ Place the two remaining AT4's over the 40-mm ammunition, team bag, and LSS bag.

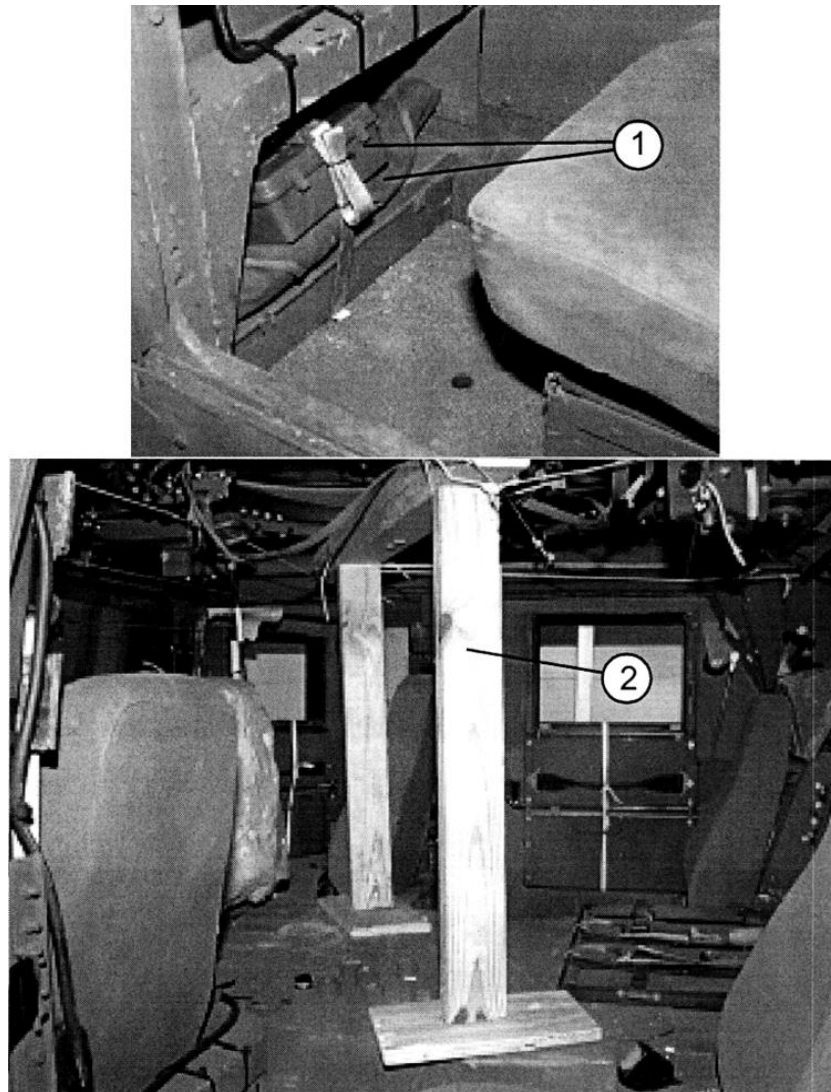
**Figure 3-24. Accompanying Load Stowed in Cargo Bed (continued)**



- ① Secure the three lashings placed in steps 1 through 3 over the load with D-rings and load binders. Pass the lashing through box handles where possible.
- ② Secure the tailgate shut with ½-inch tubular nylon webbing.
- ③ Secure the light-scattering screen (LSS) pole bag to the tailgate with the straps provided. Tape the loose strap ends.

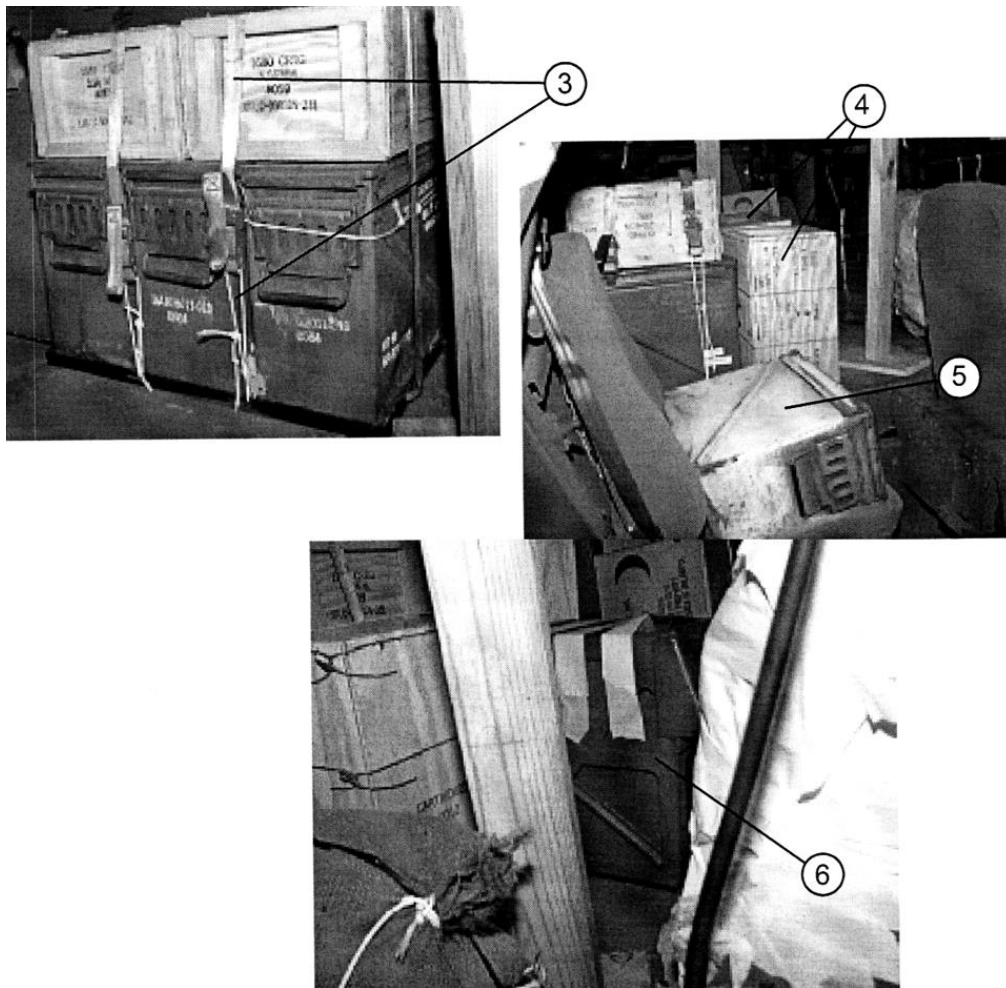
**Figure 3-24. Accompanying Load, Tailgate and Poles Secured**





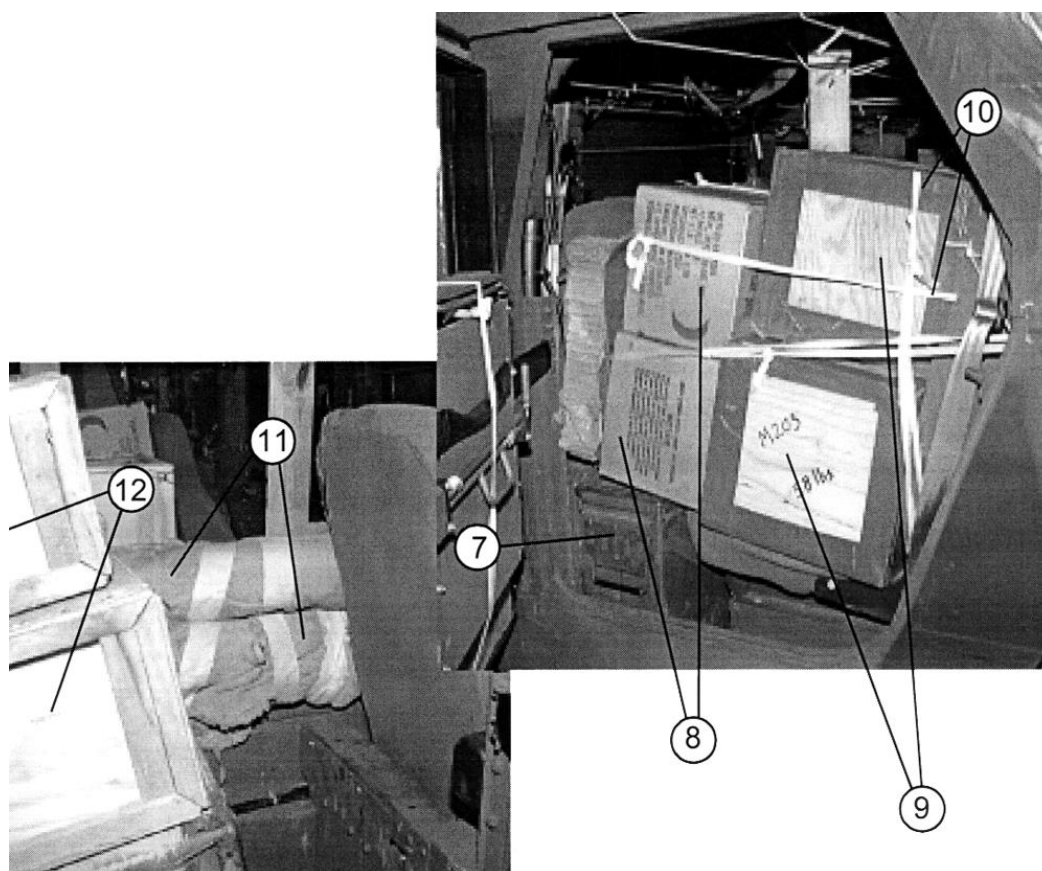
- ① Place the warning triangle and the first aid kit behind the driver's seat and secure them with the strap provided.
- ② Build the turret support according to Figure 3-2. Place the turret support under the turret across its diameter in a left rear to right front direction. Tie the support to convenient points on the turret with  $\frac{1}{2}$ -inch tubular nylon webbing. Tie the turret brake in the DOWN position with type III nylon cord. Secure the three turret latches to holes in the turret ring with type III nylon cord.

**Figure 3-25. Accompanying Load Stowed in Cab**



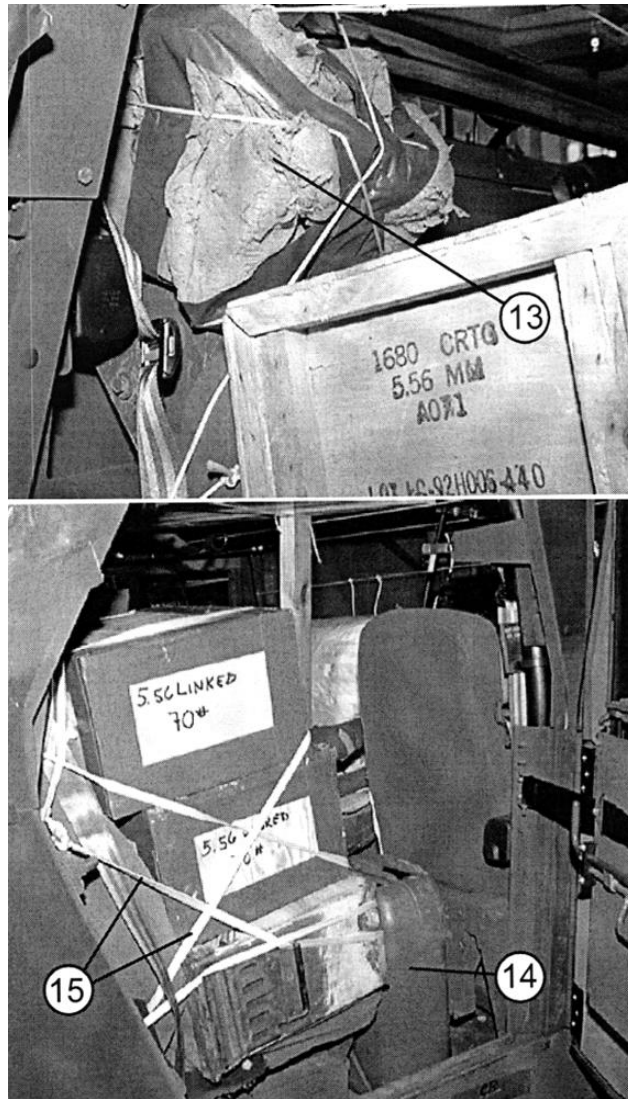
- ③ Place three boxes of 40-millimeter (mm) linked ammunition in the space provided between the seats. Place two boxes of 5.56-mm ammunition on the 40-mm boxes. Secure the ammunition with the straps provided. Safety the strap fasteners with type III nylon cord.
- ④ Place two 5.56-mm ammunition boxes in front of the ammunition placed in step 3.
- ⑤ Place a box of 40-mm linked ammunition on the right rear passenger seat.
- ⑥ Place the MOD60 kit to the left of the 5.56-mm ammunition boxes placed in step 4.

**Figure 3-25. Accompanying Load Stowed in Cab (continued)**



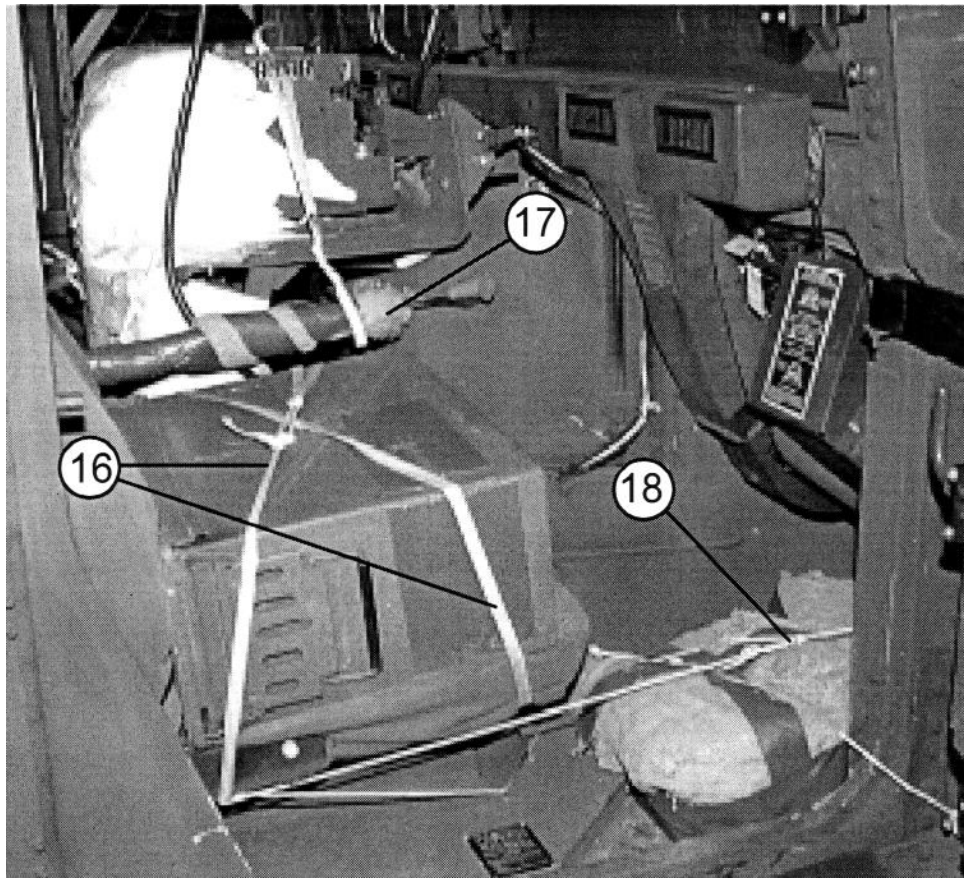
- ⑦ Place a box of 40-millimeter (mm) linked ammunition upright on the floor behind the driver's seat.
- ⑧ Set two boxes of Meal, Ready-To-Eat (MRE) on their sides over the 40-mm ammunition box.
- ⑨ Place a box of claymore mines and a box of M203 grenade rounds between the left rear seat back and the boxes placed in steps 7 and 8.
- ⑩ Tie the items placed in steps 7 through 9 to the seat back and to stationary points in the truck with ½-inch tubular nylon webbing. Place a piece of honeycomb between the driver's seat back and the tied items.
- ⑪ Wrap the Mark 19 grenade launcher, tripod, and fording stack with cellulose wadding and tape. Place them in the cab center between the passenger seats. Secure them to points near the floor with type III nylon cord.
- ⑫ Place two 5.56-mm ammunition boxes over the 40-mm ammunition box placed in step 5.

**Figure 3-25. Accompanying Load Stowed in Cab (continued)**



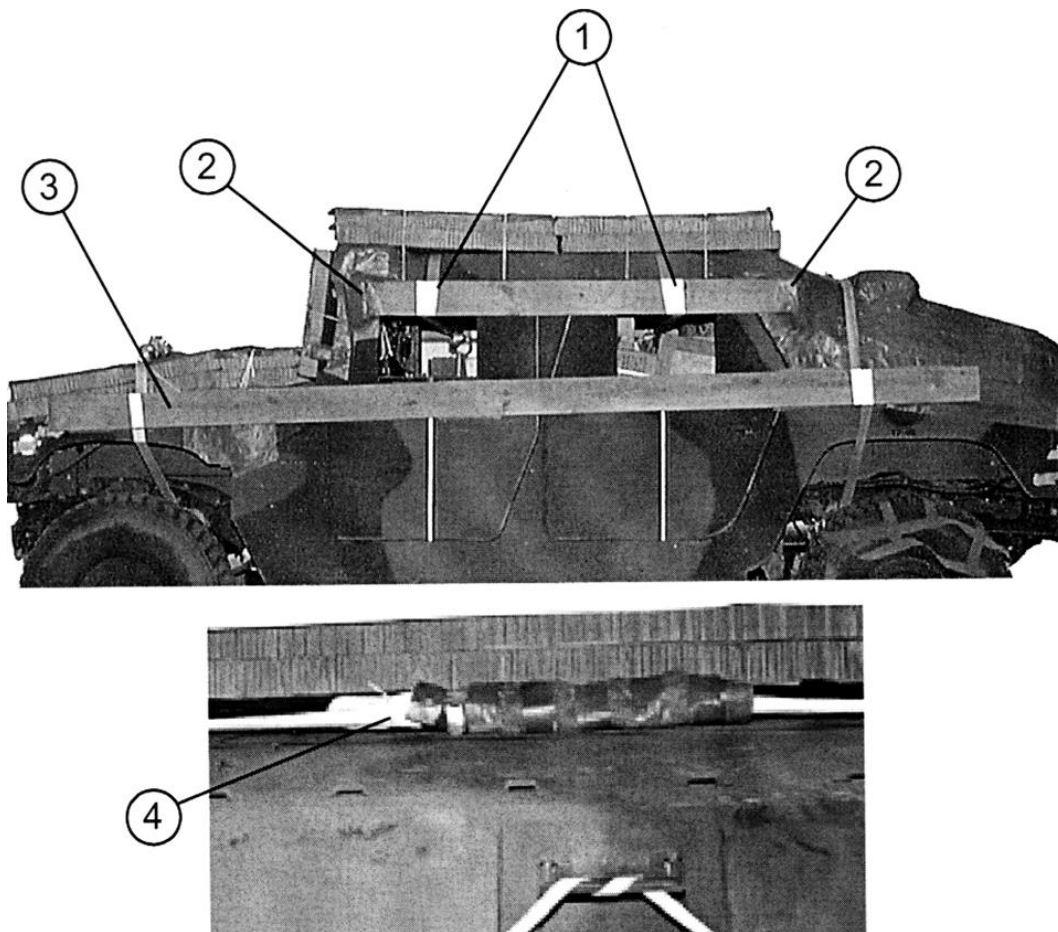
- ⑬ Place a light vehicle obscuration smoke system (LVOSS) unit and a chock block behind each rear seat. Wrap the LVOSS unit with cellulose wadding and tape. Secure them to the seat back with type III nylon webbing.
- ⑭ Place and secure a water can on the floor behind the front passenger seat.
- ⑮ Tie the ammunition boxes to the seat back and to stationary points with ½-inch tubular nylon webbing.

**Figure 3-25. Accompanying Load Stowed in Cab (continued)**



- ①⑥ Tie a box of 40-millimeter (mm) linked ammunition to the front passenger seat with ½-inch tubular nylon webbing.
- ①⑦ Wrap the antenna sections with cellulose wadding and tape. Tie the antenna sections to convenient points with ½-inch tubular nylon webbing.
- ①⑧ Pad the remaining light vehicle obscuration smoke system (LVOSS) units with cellulose wadding and tape. Tie them in the front passenger foot well with ½-inch tubular nylon webbing.

**Figure 3-25. Accompanying Load Stowed in Cab (continued)**

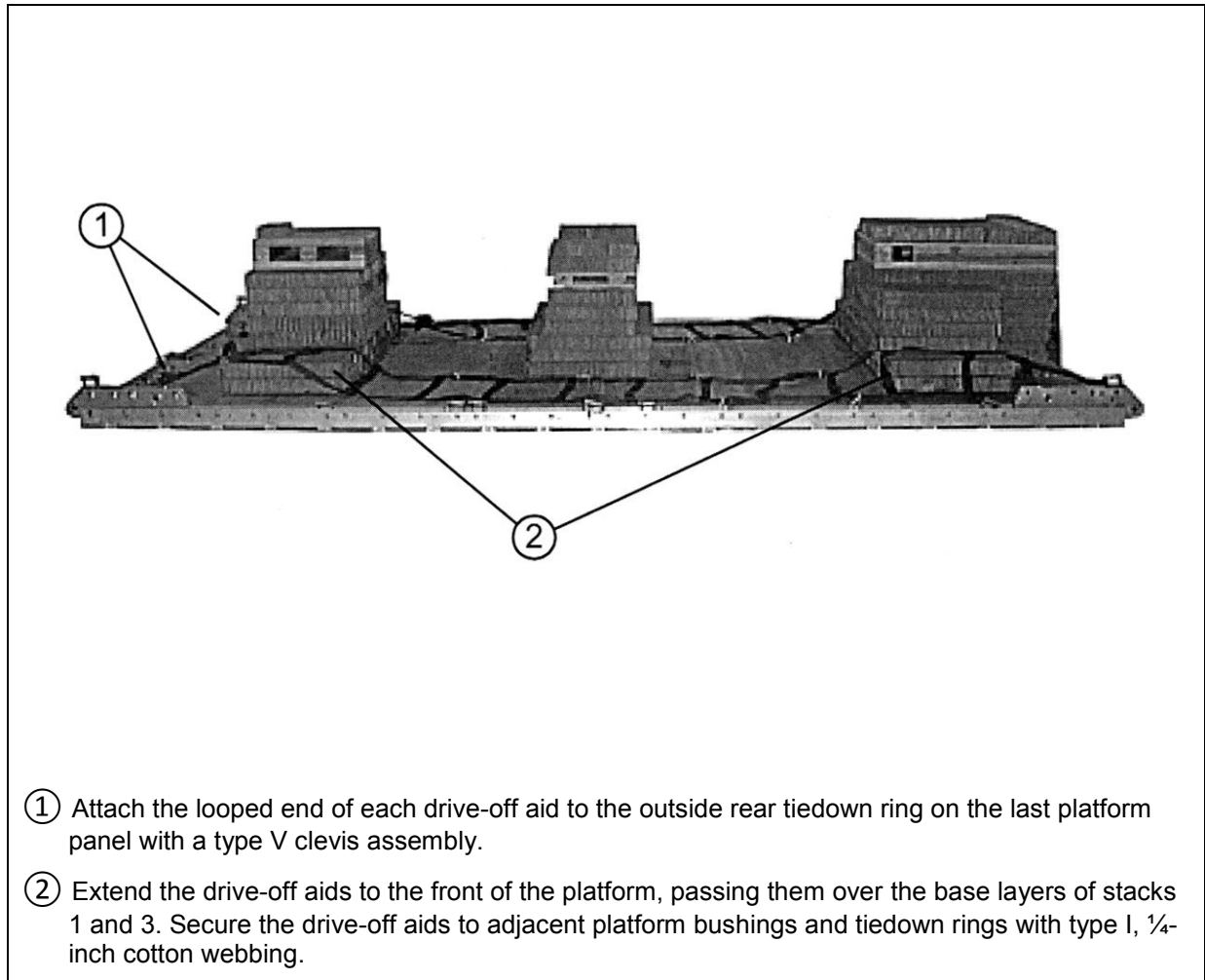


- ① Cut a 45-degree bevel in each end of two 69 ½- by 2- by 6-inch pieces of lumber. Hold the lumber even with the top of the window openings, with the beveled cuts facing outward. Extend the free ends of the lashings placed in Figure 3-24, step 12 down around the lumber, and around the board once, and through the door openings. Secure the ends of the lashings to each other inside the truck.
- ② Pad the ends of the gutter boards placed in step 1 above with felt and tape.
- ③ Make and install two body side protection boards according to Figure 2-13, steps 3 through 6.
- ④ Pad the load binder for the lashing over the rear of the truck with felt and tape.

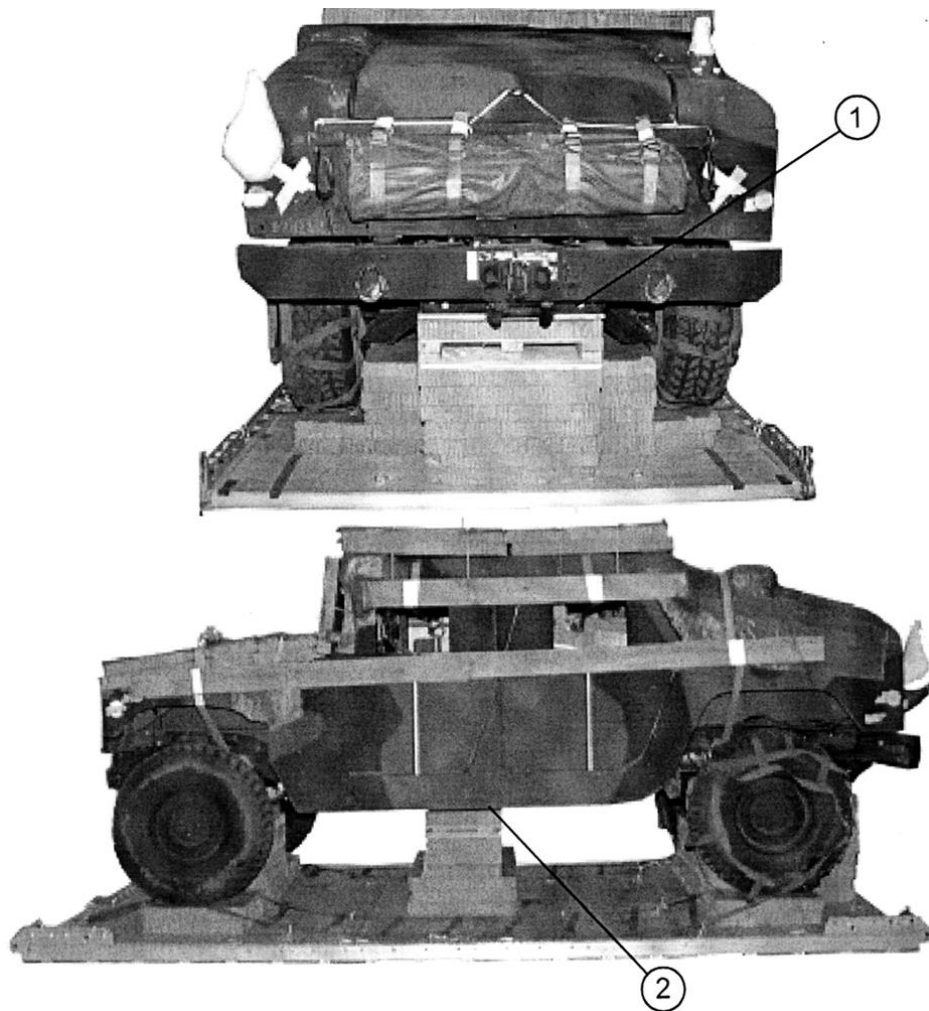
**Figure 3-26. Body Side Protection Boards Installed**

## LIFTING AND POSITION TRUCK, AND INSTALLING OPTIONAL DRIVEOFF AIDS

3-20. Install the optional drive-off aids on the platform as shown in Figure 3-27. Install lifting slings on the truck as shown in Figure 2-16. Position the truck on the honeycomb stacks as shown in Figure 3-28. Install the drive-off aids, if used, to the rear wheels of the truck as shown in Figure 1-17.



**Figure 3-27. Drive-off Aids Installed on Platform**



- ① Be sure that the suspension cross members of the truck rest securely on stacks 1 and 3.
- ② Be sure that frame cross member rests securely on the 6-inch part of the honeycomb at the front of stack 2.

**Figure 3-28. Truck Positioned on Platform and Drive-Off Aids Installed**



## LASHING TRUCK

3-21. Lash the truck to the platform with fifteen 15-foot tiedown assemblies as shown in Figures 3-29 and 3-30, and according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.

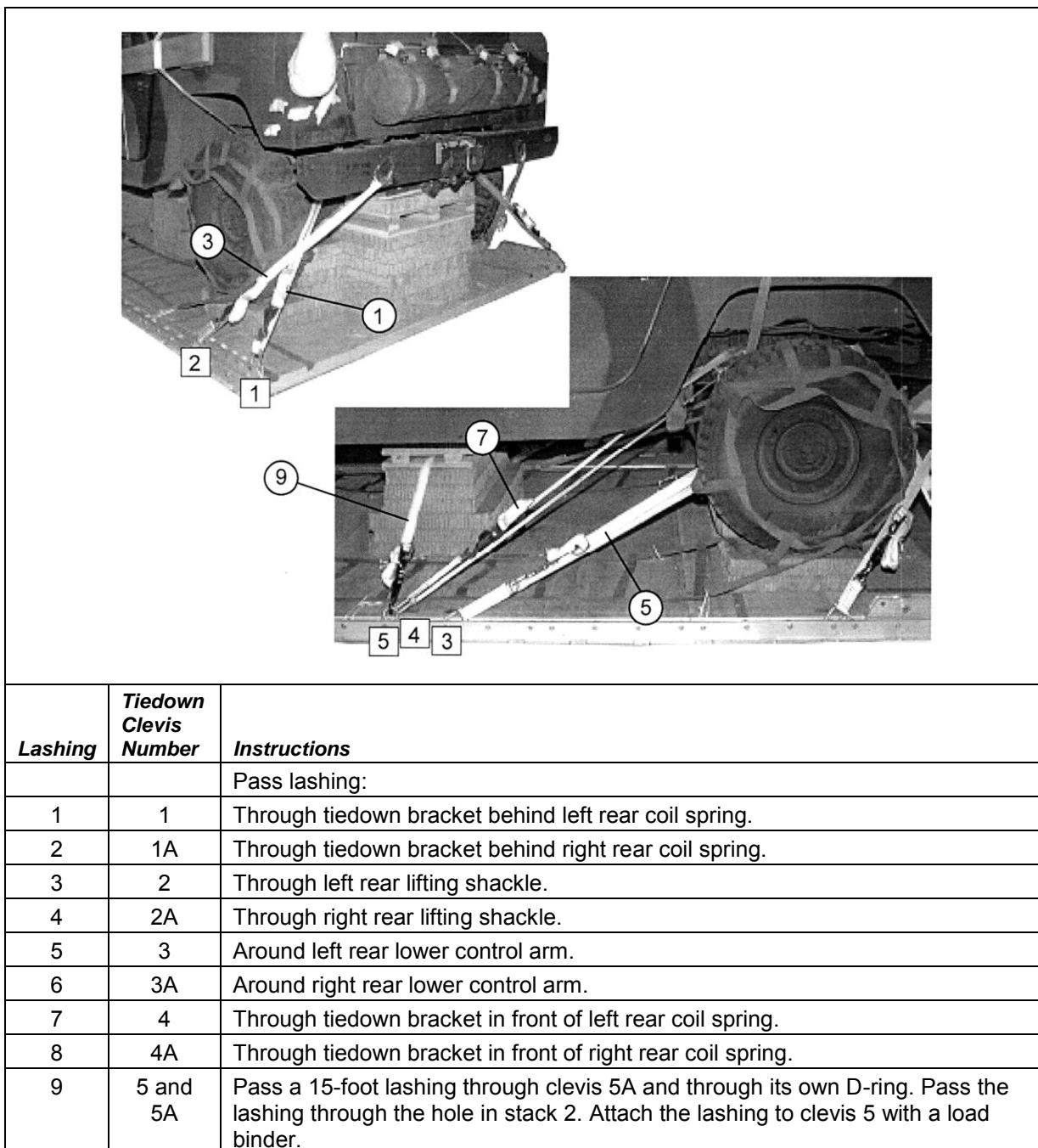
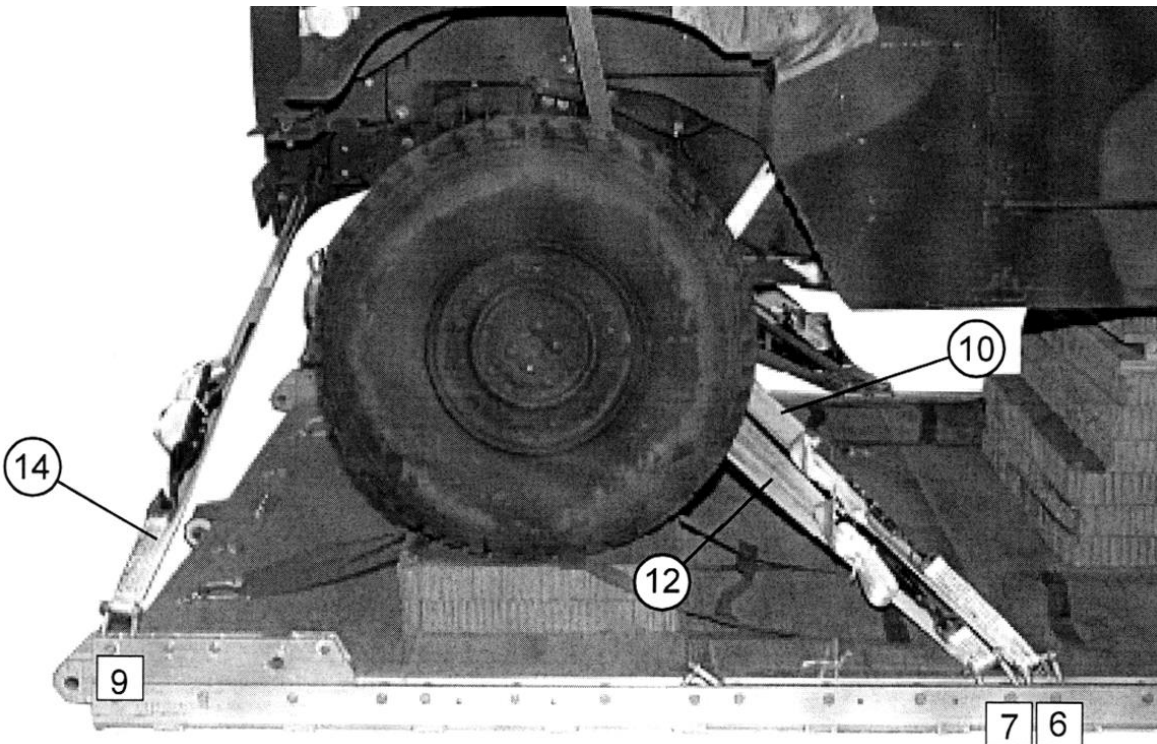


Figure 3-29. Lashings 1 Through 9 Installed

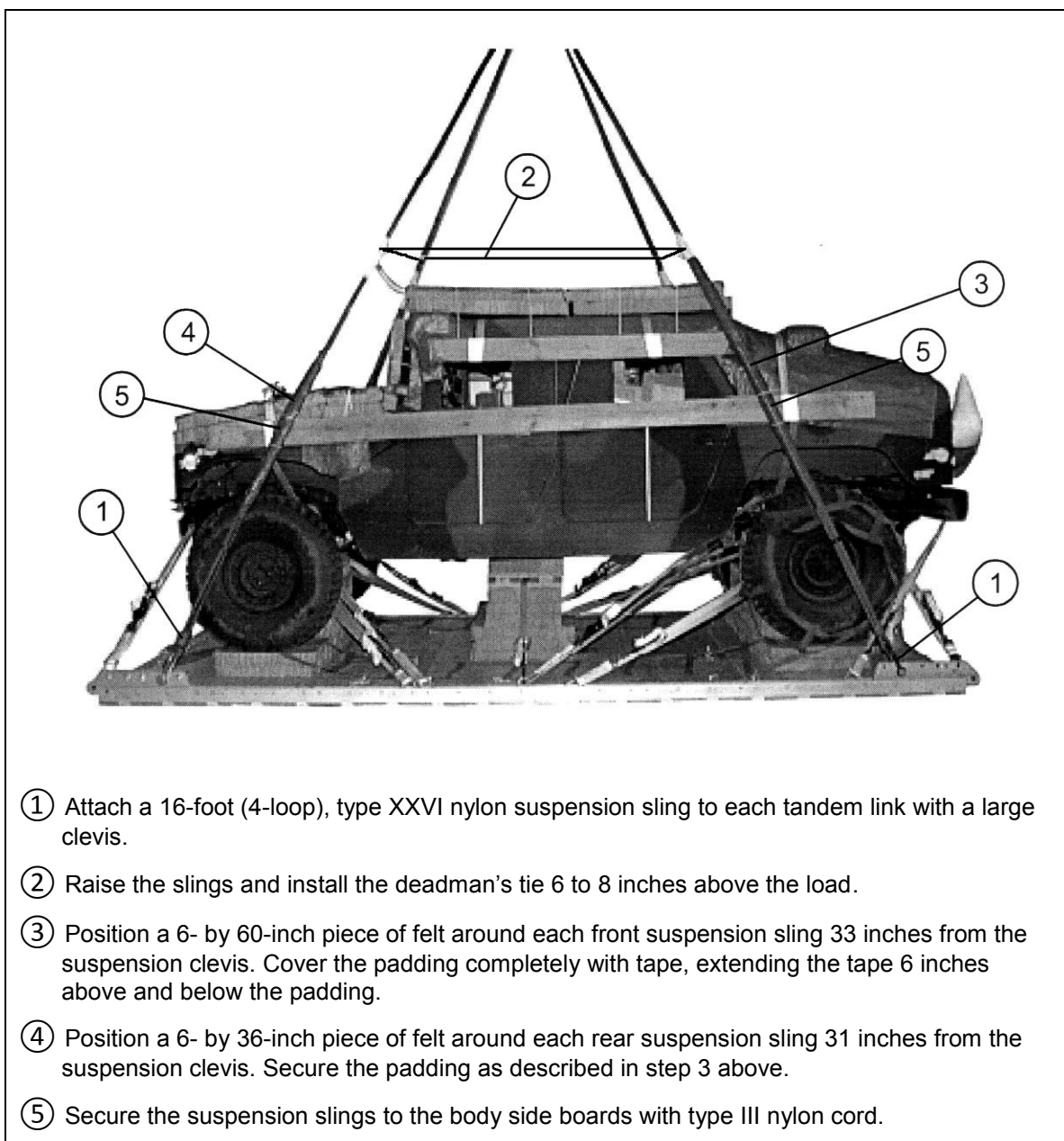


<i>Lashing</i>	<i>Tiedown Clevis Number</i>	<i>Instructions</i>
		Pass lashing:
10	6	Through tiedown bracket behind left front coil spring.
11	6A	Through tiedown bracket behind right front coil spring.
12	7	Around left lower control arm.
13	7A	Around right lower control arm.
14	9	Through tiedown bracket on end of left frame rail.
15	9A	Through tiedown bracket on end of right frame rail.

**Figure 3-30. Lashings 10 Through 15 Installed**

## INSTALLING AND SAFETY TIEING SUSPENSION SLINGS

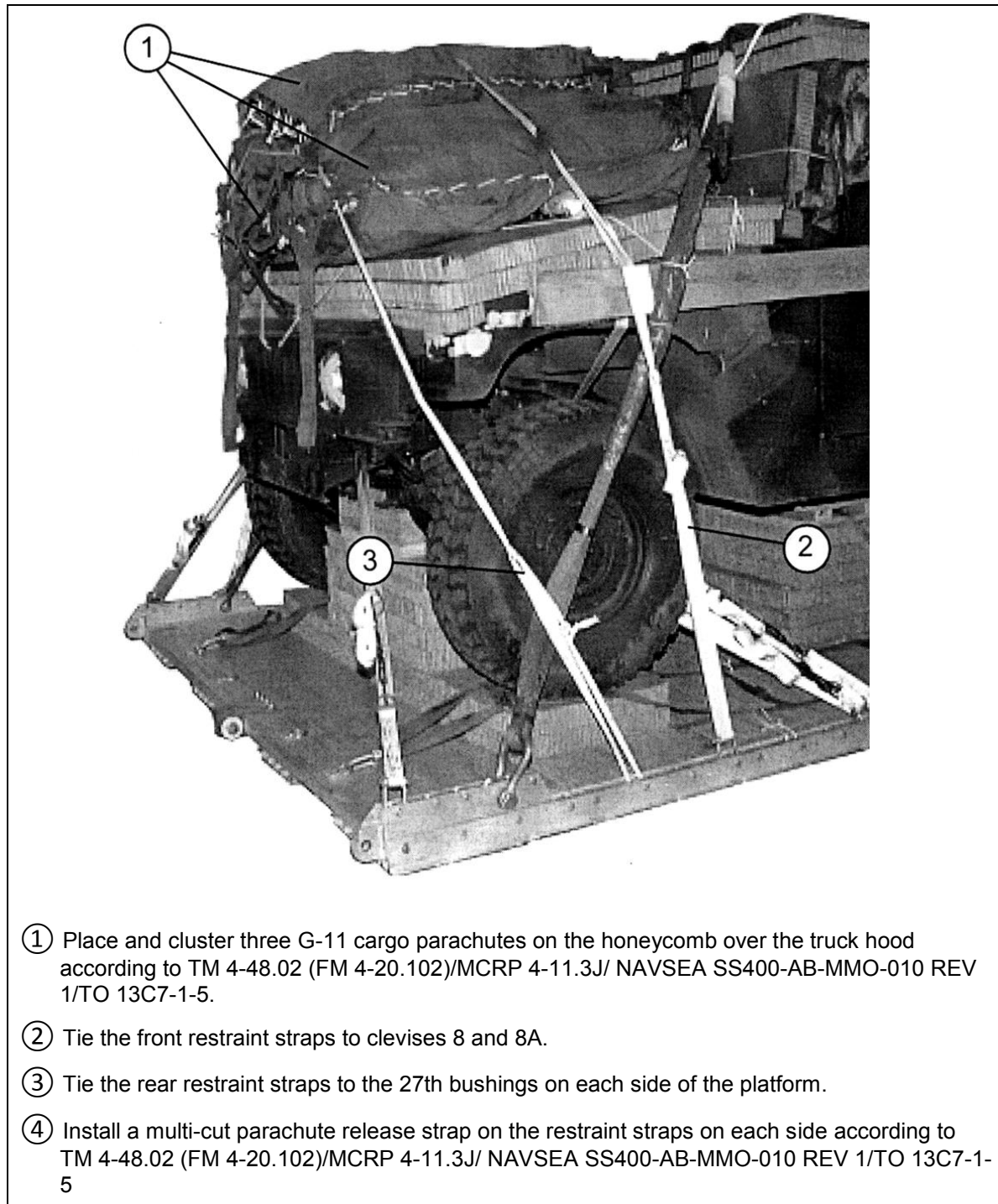
3-22. Install, pad and safety tie four 16-foot (4-loop), type XXVI nylon suspension slings as shown in Figure 3-31.



**Figure 3-31. Suspension Slings Installed, Padded and Safety Tied**

## STOWING CARGO PARACHUTES

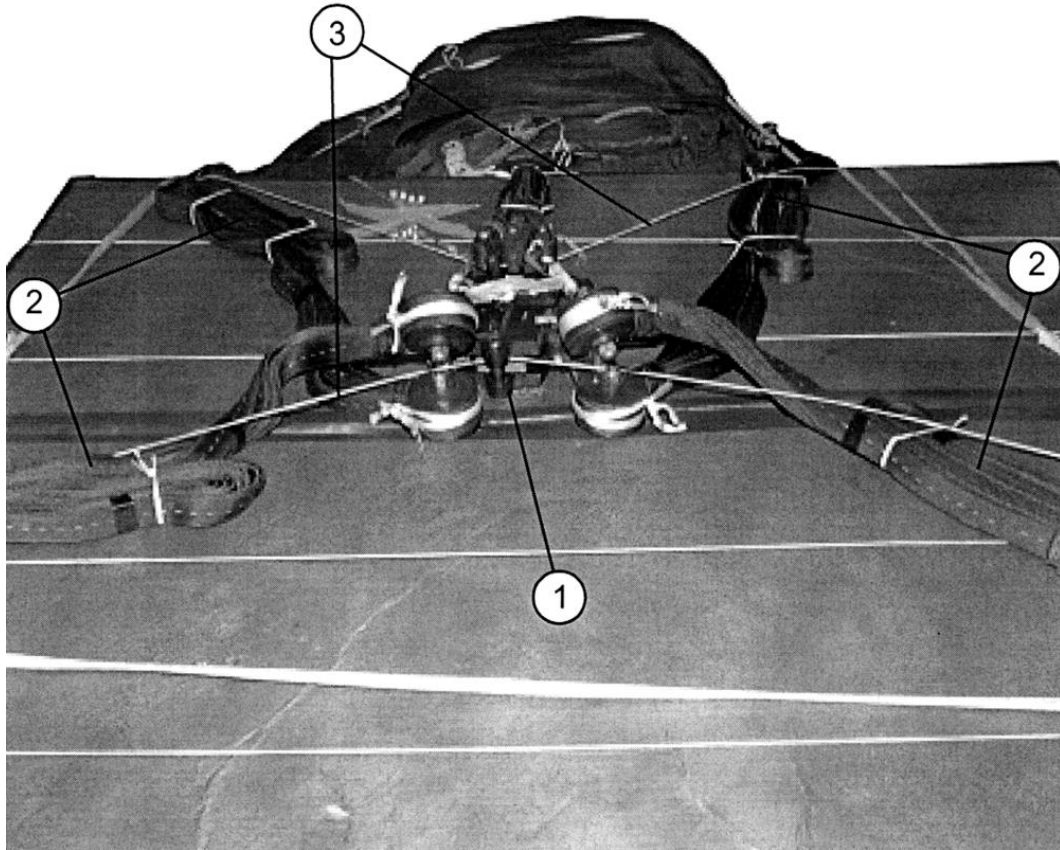
3-23. Stow and restrain three G-11 cargo parachutes on the load according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5, and as shown in Figure 3-32.



**Figure 3-32. Cargo Parachutes Installed**

## INSTALLING PARACHUTE RELEASE

3-24. Prepare and install an M-2 cargo parachute release according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figure 3-33.



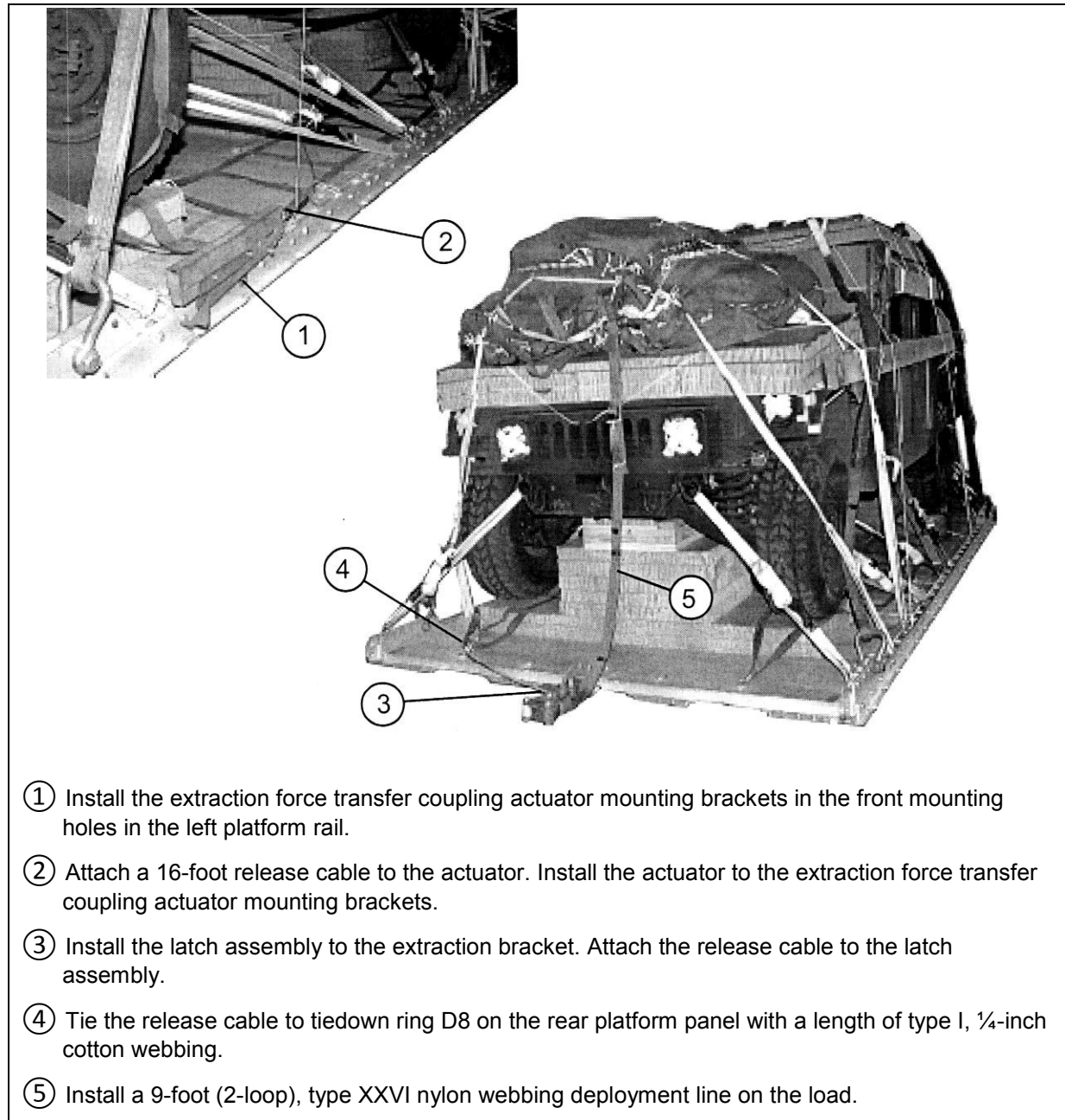
**Note.** The M-2 cargo parachute release is used on this load to accommodate the 4-loop suspension slings.

- ① Place the M-2 release on the roof honeycomb in front of the parachutes.
- ② S-fold the slack in the suspension slings. Tie the folds with type I, ¼-inch cotton webbing.
- ③ Attach the suspension slings and the riser extensions to the release. Tie the release to convenient points on the load with type III nylon cord.

**Figure 3-33. M-2 Release Installed**

## INSTALLING EXTRACTION SYSTEM

3-25. Install the extraction force transfer coupling extraction system according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5, and as shown in Figure 3-34.



**Figure 3-34. extraction force transfer coupling Installed**

## **INSTALLING PROVISIONS FOR EMERGENCY RESTRAINTS**

3-26. Install provisions for emergency restraints according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.

## **PLACING EXTRACTION PARACHUTE**

3-27. Select the extraction parachute and extraction line needed, using the extraction line requirements table in TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5. Rig the extraction line in a line bag according to TM 10-1670-286-20/TO 13C5-2-41. Place the extraction parachute and extraction line on the load for installation in the aircraft.

## **MARKING RIGGED LOAD**

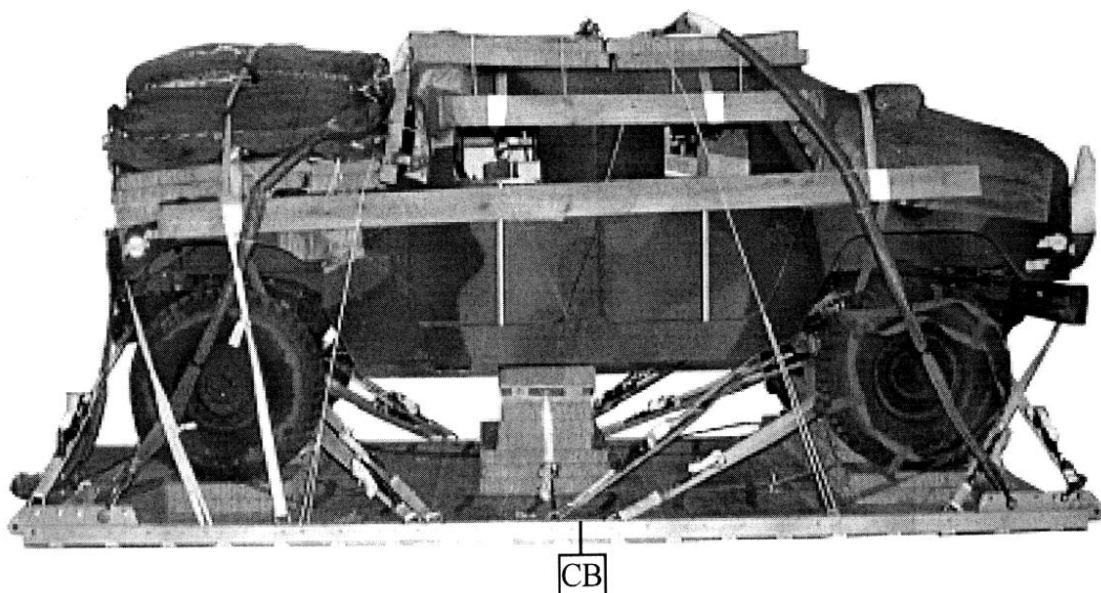
3-28. Mark the rigged load according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figure 3-35. Complete Shipper's Declaration for Dangerous Goods according to AFMAN 24-204/TM 38-250. If the load varies from the one shown, the weight, height, CB, and parachute requirements must be recomputed.

## **EQUIPMENT REQUIRED**

Use the equipment listed in Table 3-2 on page 3-51 to rig the load.

**CAUTION**

Make the final rigger inspection required by TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 before the load leaves the rigging site.

***Rigged Load Data***

Weight: Load shown.....	15,240 pounds
Maximum load allowed.....	15,240 pounds
Height (with three G-11B parachutes).....	98 inches
Width.....	108 inches
Length (overall).....	210 inches
Overhang: Front.....	0 inches
Rear (extraction force transfer coupling).....	18 inches
Center of balance (CB) (from front edge of platform).....	92 inches

**Figure 3-35. M1114 Up-Armored Armament Carrier Rigged for Low-Velocity Airdrop**



**Table 3-2. Equipment Required for Rigging the M1114 Up-Armored Armament Carrier for Low-Velocity Airdrop**

<i>National Stock Number</i>	<i>Item</i>	<i>Quantity</i>
8040-00-273-8713	Adhesive paste, 1-gallon	As required
4030-00-090-5354	Clevis, suspension, 1-inch (large)	5
1670-00-360-0328	Cover, clevis, large	1
4020-00-240-2146	Cord, nylon, type III, 550-pound	As required
1670-00-434-5785	Coupling, Airdrop Extraction Force Transfer, w/16-foot cable	1
8135-00-664-6958	Cushioning material (Cellulose wadding)	As required
1670-01-475-1990	Extraction Parachute Jettison System Light	1
8305-00-958-3685	Felt, ½-inch thick	As required
1670-01-183-2678	Leaf, extraction line (line bag) (for C-130)	2
1670-01-183-2678	Leaf, extraction/drogue line (line bag) (for C-17/C130J)	4
	Line extraction:	
1670-01-062-6313	60-foot (3-loop), type XXVI (for C-130/J)	1
1670-01-107-7651	140-foot (3-loop), type XXVI (for C-17)	1
1670-01-064-4452	60-foot (1-loop), type XXVI (for C-17/C-130J), (drogue line)	1
1670-01-493-6418	Link assembly, two-point, 3¾-inch, small:	1
5306-00-435-8994	Bolt, 1-inch diameter, 4-inches long	2
5310-00-232-5165	Nut, 1-inch diameter, 4-inches long	2
1670-00-003-1953	Plate, side 3 ¾-inches	2
5365-00-007-3414	Spacer, large	2
	Lumber:	
5510-00-220-6196	2- by 6- by 72-inch	As required
5510-00-220-6274	4- by 4- by 96-inch	As required
5315-00-010-4659	Nail, steel, wire, 8D	As required
1670-00-753-3928	Pad, energy-dissipating (honeycomb) 3- by 35- by 96-inches	13 sheets
1670-01-016-7841	Parachute, cargo, G-11B	3
	Parachute, cargo, extraction:	
1670-01-063-3716	22-foot (for C-17, use H-block with this parachute) Drogue (for C-17)	1
1670-01-063-3715	15-foot (for C-17/C130J) (DES)	1
	Platform, airdrop, type V, 16-foot:	
1670-01-353-8424	Bracket, assembly, extraction	1
1670-01-353-8425	Bracket, assembly, coupling	1
1670-01-162-2372	Clevis assembly (type V)	21
1670-01-162-2381	Tandem link assembly (Multipurpose link)	4
5530-00-128-4981	Plywood, 3/4-inch	4 sheets

**Table 3-2. Equipment Required for Rigging the M1114 Up-Armored Armament Carrier for Low-Velocity Airdrop (continued)**

<i>National Stock Number</i>	<i>Item</i>	<i>Quantity</i>
1670-01-097-8816	Release, cargo parachute, M-1	1
	Sling, cargo, airdrop: For Deployment	
1670-01-062-6304	9-foot (2-loop), type XXVI nylon webbing For Lifting	1
1670-01-062-6304	9-foot (2-loop), type XXVI nylon webbing	2
1670-01-062-6303	12-foot (2-loop), type XXVI nylon webbing For Suspension	2
1670-01-063-7761	16-foot (2-loop), type XXVI nylon webbing For Riser Extension	4
1670-01-062-6302	60-foot (3-loop), type XXVI nylon webbing	3
4910-01-313-8839	Spreader bar assembly	1
5340-00-040-8219	Strap, parachute, release, multi-cut, comes with 3 knives	2
7501-00-266-5016	Tape, adhesive, 2-inch	As required
1670-00-937-0271	Tiedown assembly, 15-foot	20
1670-01-344-0825	Vehicle drive-off aid Webbing:	1
8305-00-268-2411	Cotton, 1/4-inch, type I	As required
8305-00-082-5752	Nylon, tubular, 1/2-inch	As required
8305-00-559-6871	Nylon, type VIII	As required

## SECTION III – RIGGING M1151 ARMAMENT CARRIER WITH ACCOMPANYING LOAD ON A 16-FOOT PLATFORM

### DESCRIPTION OF LOAD

3-29. The M1151 HMMWV shown in Figure 3-36 is rigged with an accompanying load on a 16-foot, type V platform. The load uses three G-11 cargo parachutes and the accompanying load has a minimum weight of 1,300 pounds and a maximum weight of 2,000 pounds. This load is 93 inches high, 108 inches wide, and 215 inches long.

### PREPARING PLATFORM

Prepare a 16-foot, type V airdrop platform according to TM 10-1670-268-20&P/TO 13C7-52-22. Install four tandem links and platform clevises according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figure 3-37.

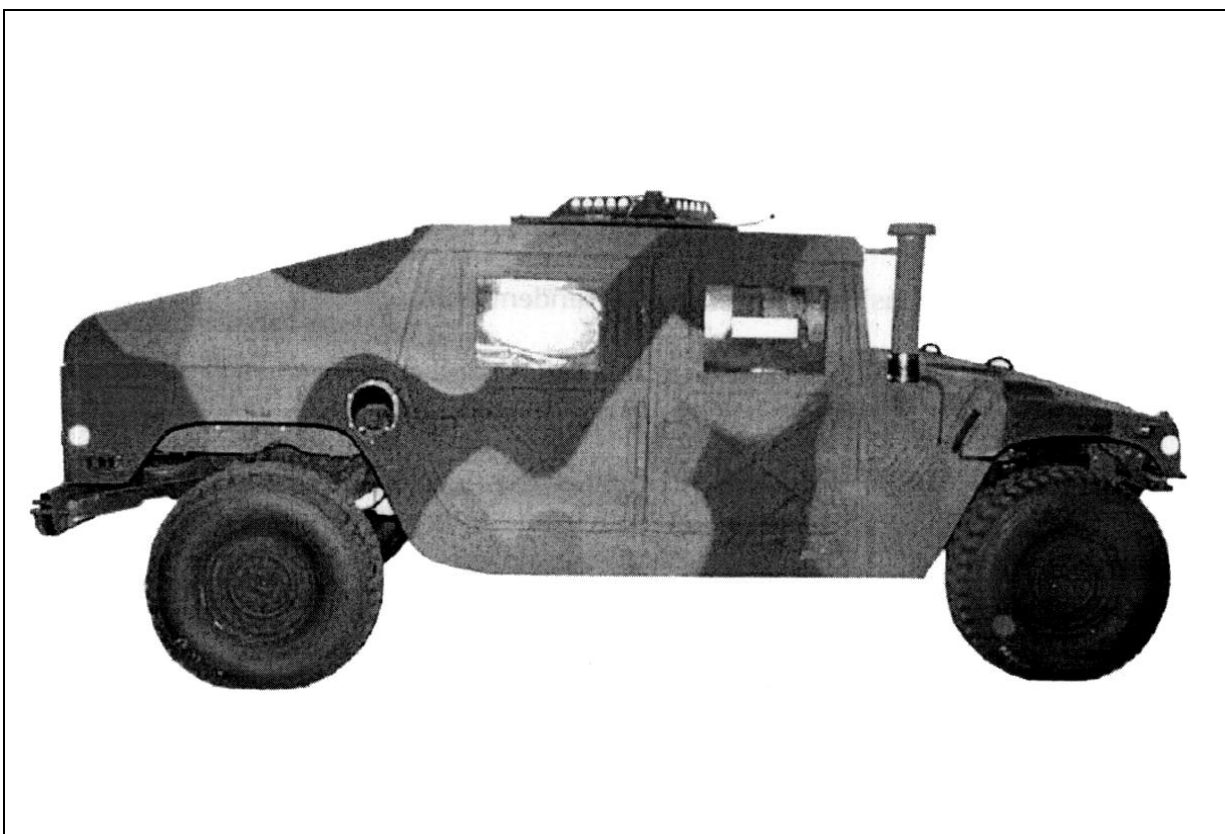
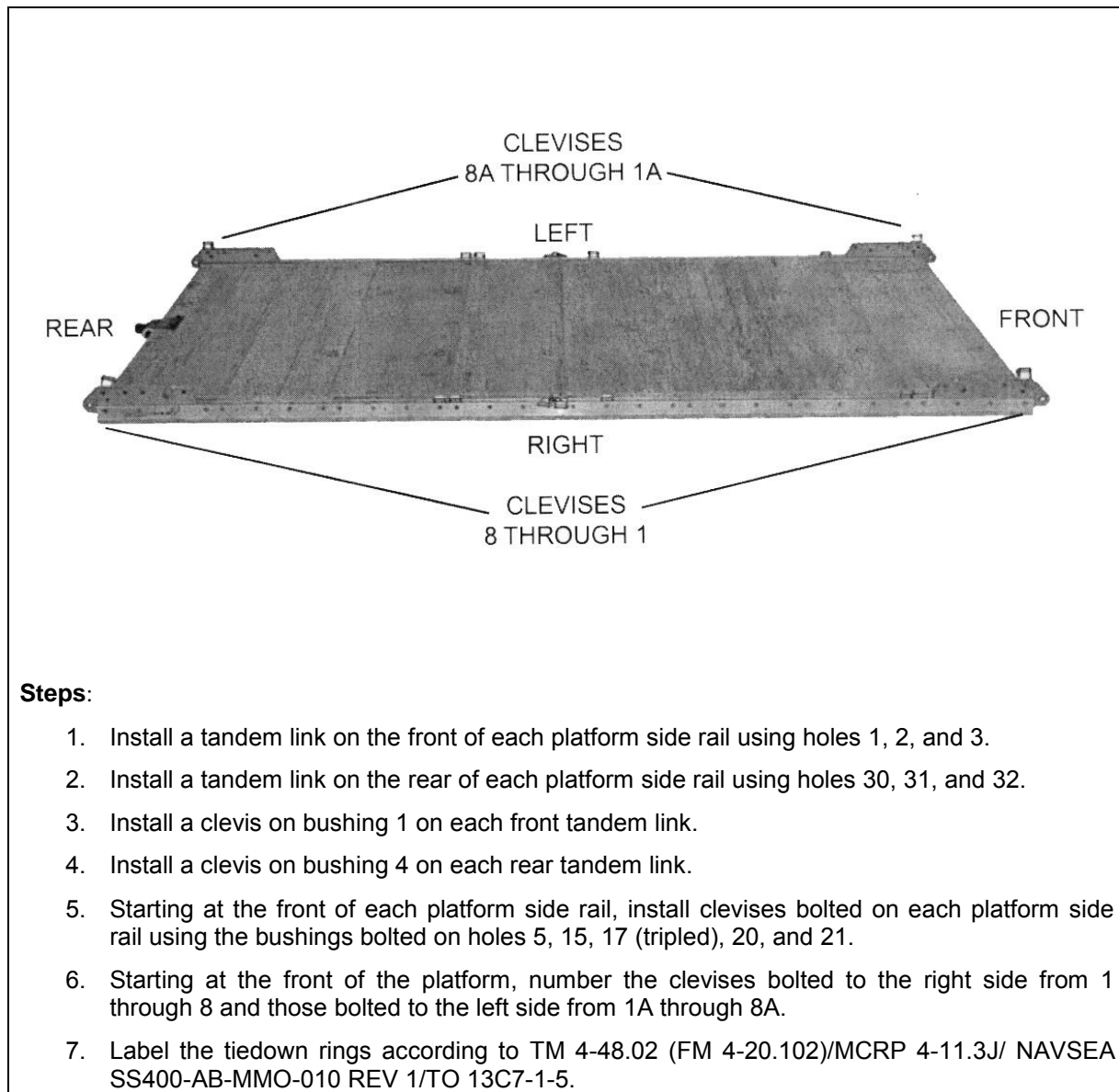


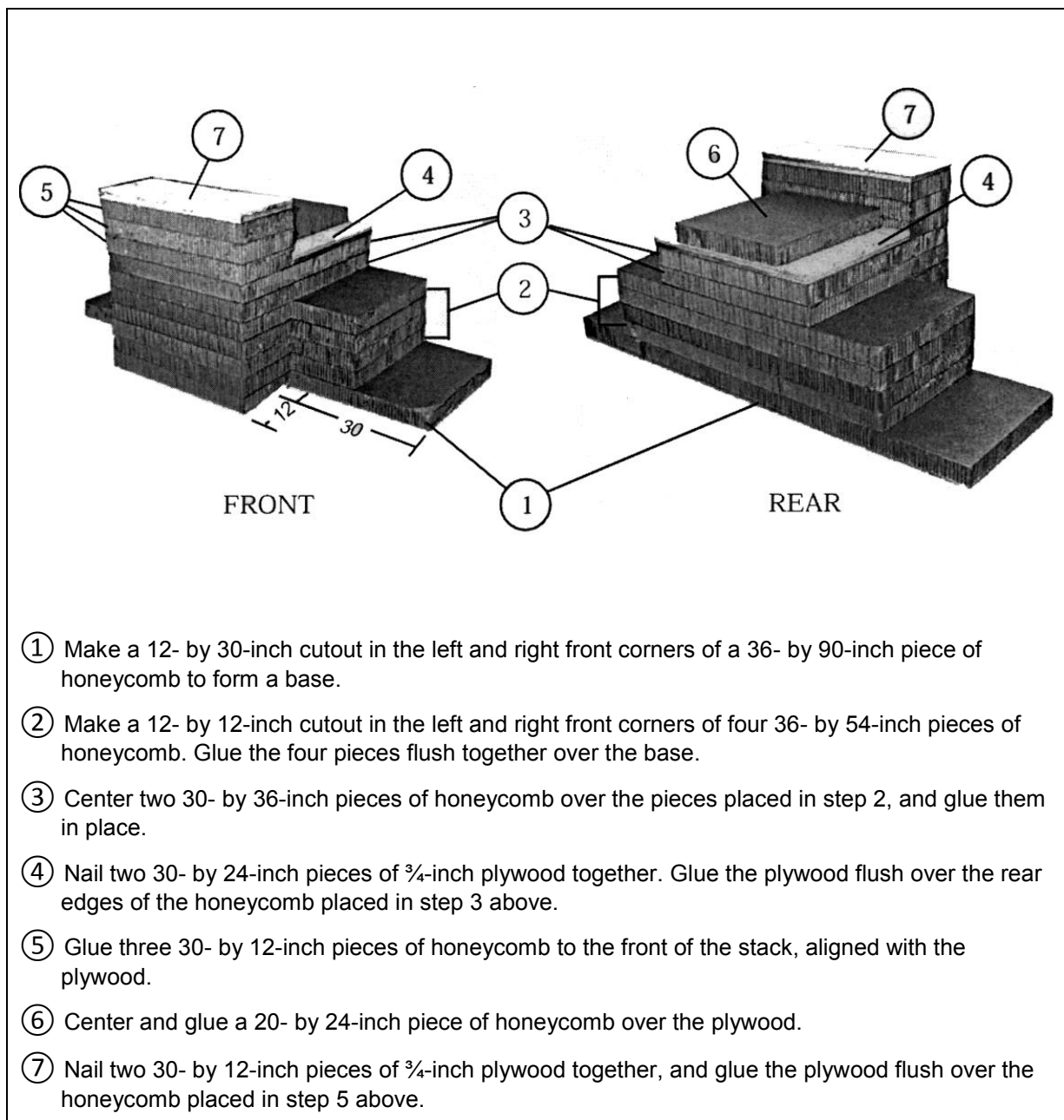
Figure 3-36. M1151 Armament Carrier



**Figure 3-37. Platform Prepared**

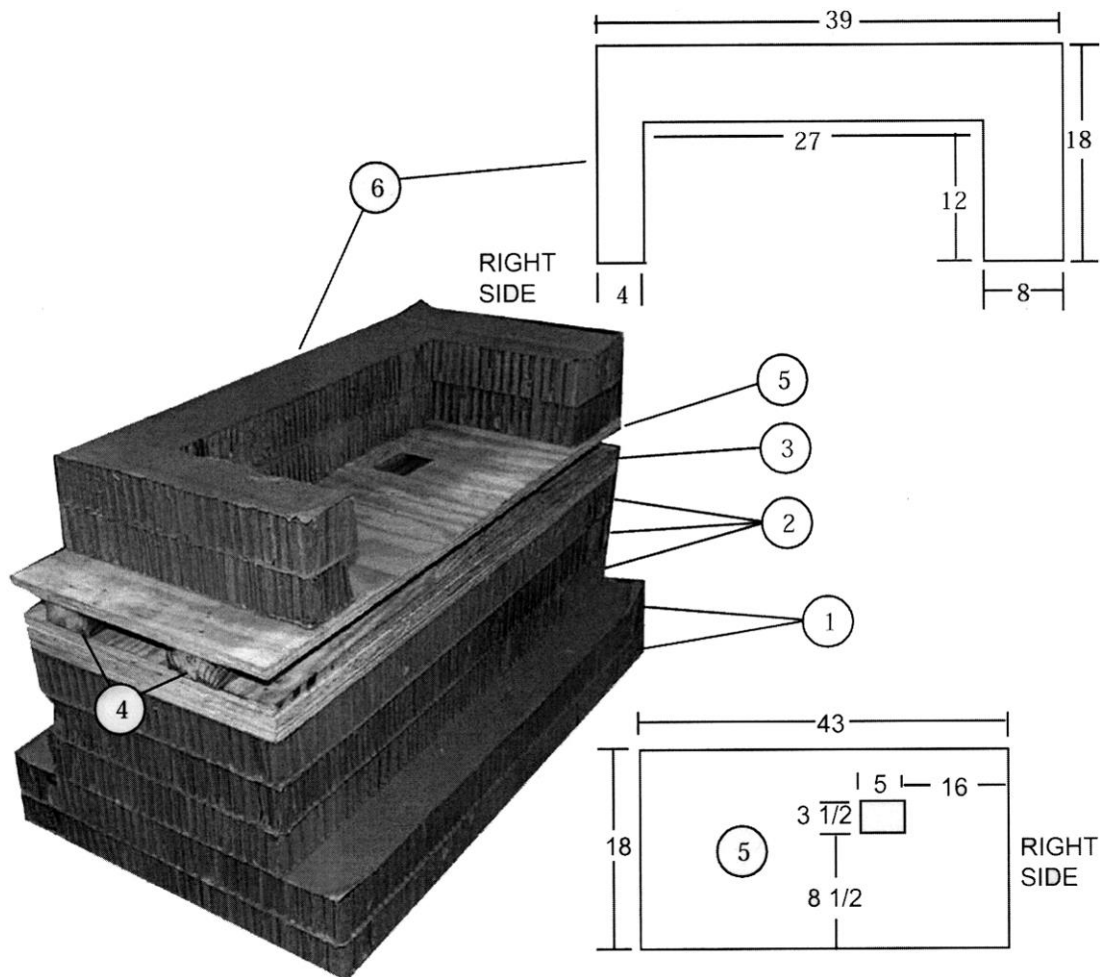
## PREPARING AND POSITIONING HONEYCOMB STACKS

3-30. Build the honeycomb stacks as shown in Figures 3-38 through 3-40. Position the stacks on the platform as shown in Figure 3-41.



**Figure 3-38. Stack 1 Constructed**

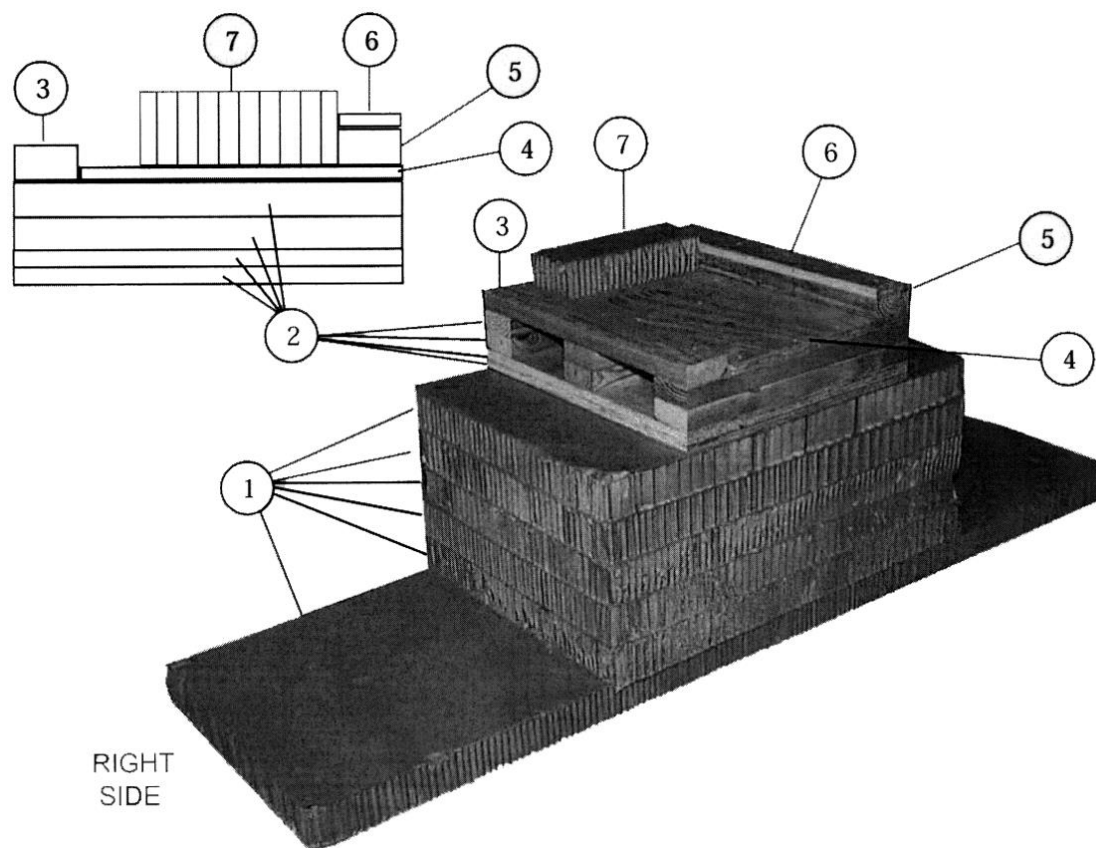
**Notes.** 1. All measurements are given in inches.  
2. This drawing is not drawn to scale.



- ① Glue two 43- by 26-inch pieces of honeycomb together to form a base.
- ② Center and glue three 43- by 18-inch pieces of honeycomb over the base.
- ③ Nail three pieces of  $\frac{3}{4}$ - by 43- by 18-inch plywood together.
- ④ Nail a 43-inch piece of 2- by 4-inch lumber parallel to each long side and 1 1/2 inches from each long edge of plywood formed in step 3.
- ⑤ Make a 3 1/2- by 5-inch cutout in a fourth  $\frac{3}{4}$ - by 43- by 18-inch piece of plywood as shown. Nail the lumber in step 4 and flush with the bottom pieces of plywood. Glue the wooden section of the stack flush on the honeycomb placed in step 2 above.
- ⑥ Make the cutout as shown in two 39- by 18-inch pieces of honeycomb. Glue the honeycomb flush to the right side over the plywood, with the cutout facing the rear of the stack.

**Figure 3-39. Stack 2 Constructed**

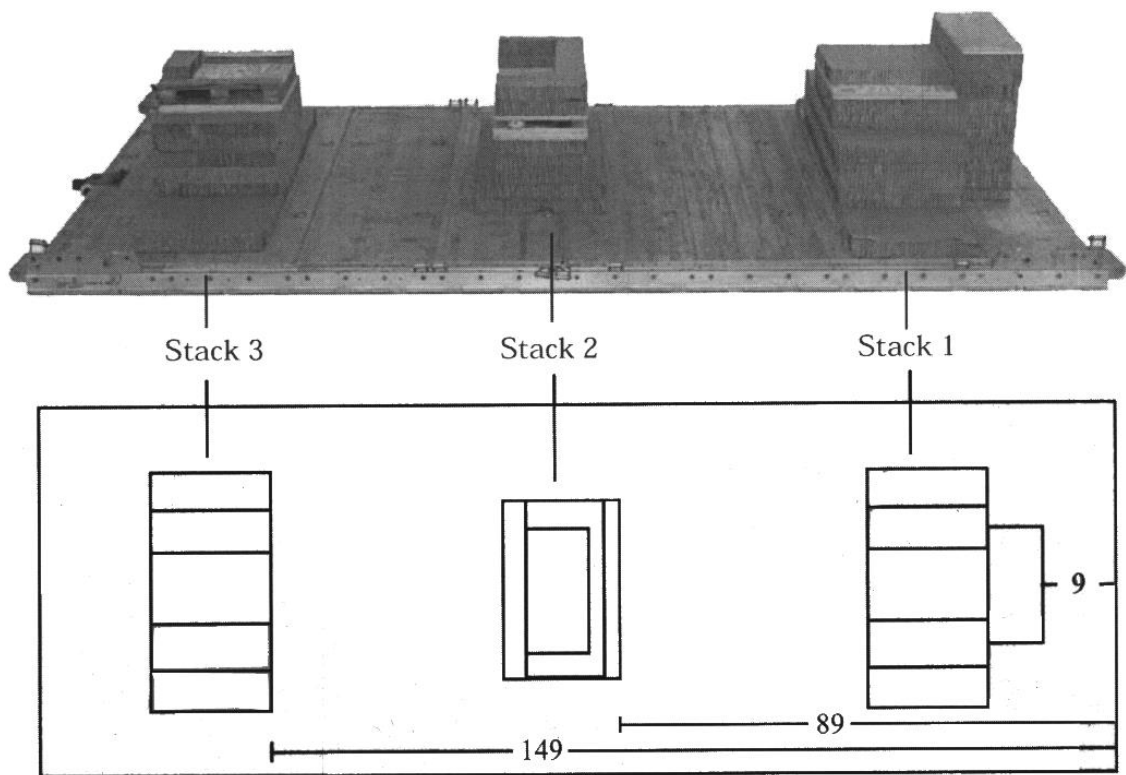
**Note.** This drawing is not drawn to scale.



- ① Cut an 80-by 24-inch piece of honeycomb to form a base. Center and glue give 35- by 24-inch pieces of honeycomb on tape of the 80- by 24-inch piece of honeycomb.
- ② Nail two 21- by 24-inch pieces of  $\frac{3}{4}$ -inch plywood to each other. Nail two pieces of 2-by 4- by 21-inch lumber flush along each side and in the center of the plywood.
- ③ Nail a 24-inch piece of 2- by 4-inch lumber flush along the right side.
- ④ Nail a 17- by 24-inch piece of  $\frac{3}{4}$ -inch plywood flush with the left side.
- ⑤ Nail a 24-inch piece of 2- by 4-inch lumber flush with the left edge of the plywood placed in step 4 above.
- ⑥ Nail a 3  $\frac{1}{2}$ - by 24-inch piece of  $\frac{3}{4}$ -inch plywood flush over the lumber placed in step 5 above.
- ⑦ Glue a 13- by 5-inch piece of honeycomb along the rear edge of the plywood flush against the plywood and lumber placed in steps 5 and 6 above.

**Figure 4-40. Stack 3 Constructed**

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



Stack Number	Position on Platform
1	Place stack: Centered 9 inches from the front edge of the platform.
2	Centered 89 inches from the front edge of the platform and face the cutout to the rear.
3	Centered 149 inches from the front edge of the platform.

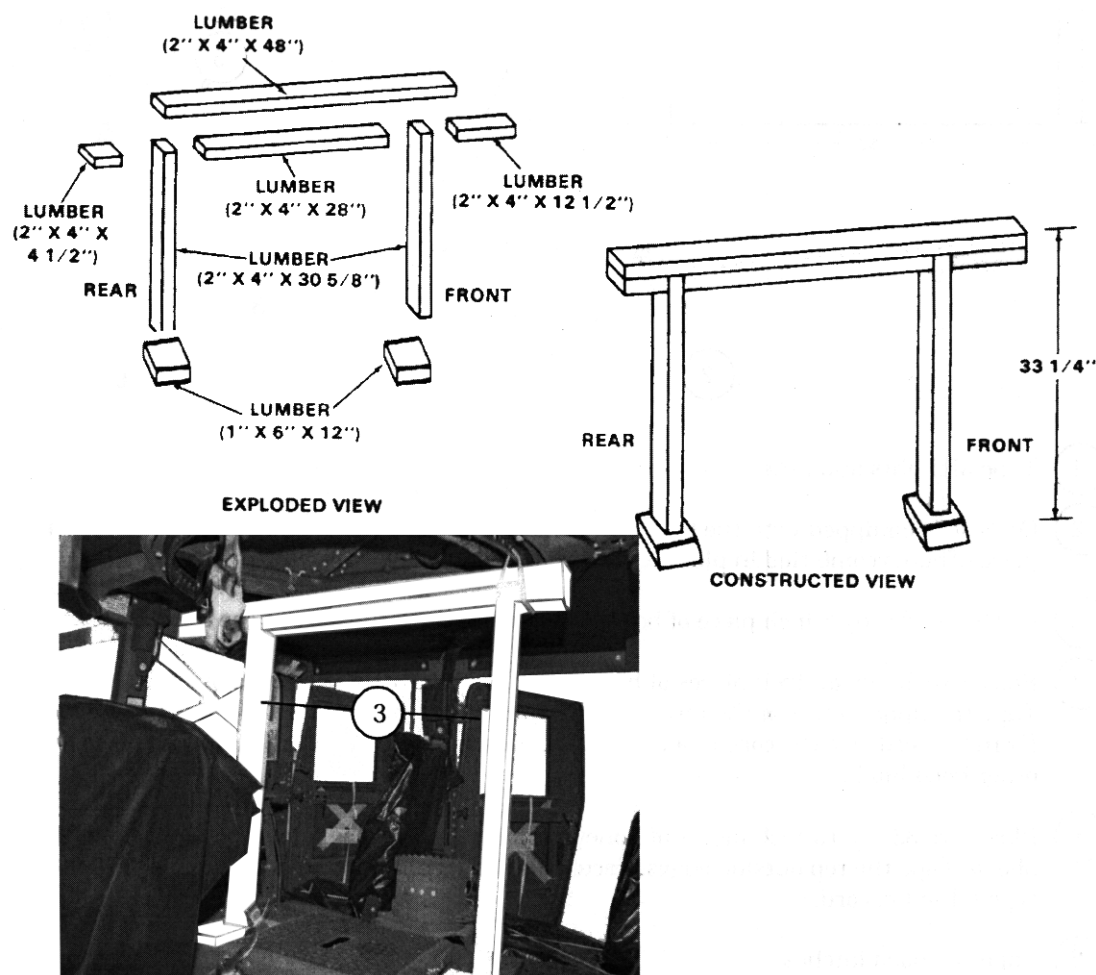
**Figure 3-41. Honeycomb Stacks Positioned on Platform**



## PREPARING THE TRUCK

3-31. Prepare the truck as described in Figures 1-6, 1-7 (do not do steps 1 and 3), Figure 1-8, Figure 1-9 does not apply to closed body vehicles. Continue preparing the vehicle as shown Figure 1-10 through 1-11. Finish preparing the closed-body HMMWV's as shown in Figures 2-2 and 2-3 omit step 3.

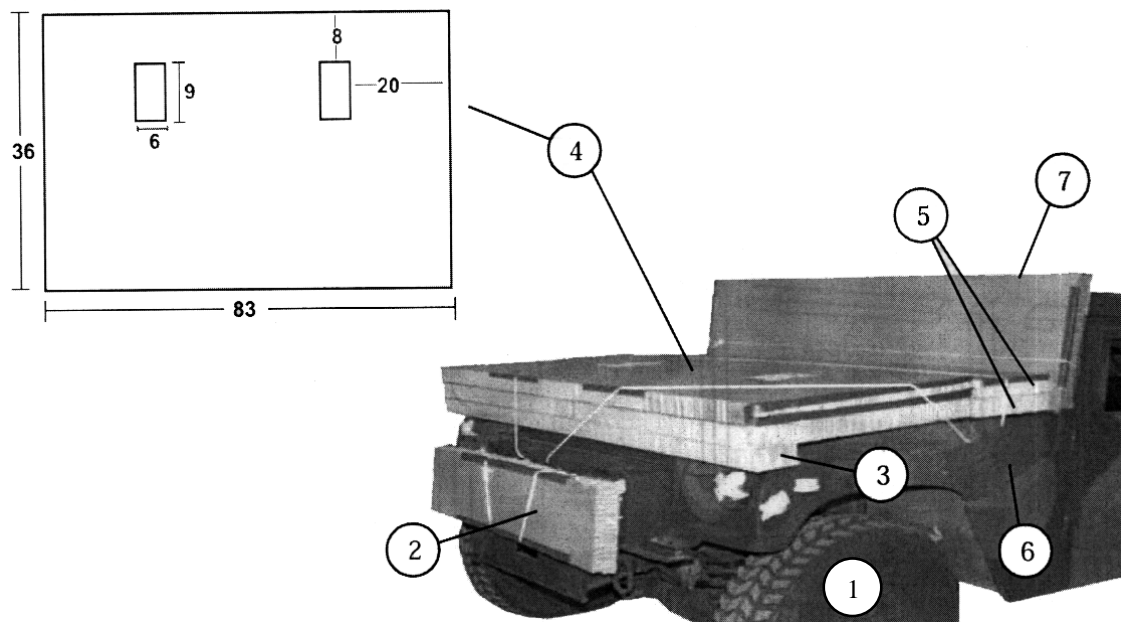
**Notes.** 1. All measurements are given in inches.  
2. This drawing is not drawn to scale.



- ① Build the turret housing support as shown. Nail the lumber together with 8d nails.
- ② Close the turret cover and secure it with the fasteners provided (not shown).
- ③ Center the support under the turret housing with the front end of the support toward the front end of the truck. Tie the support in place with two lengths of type III nylon cord.

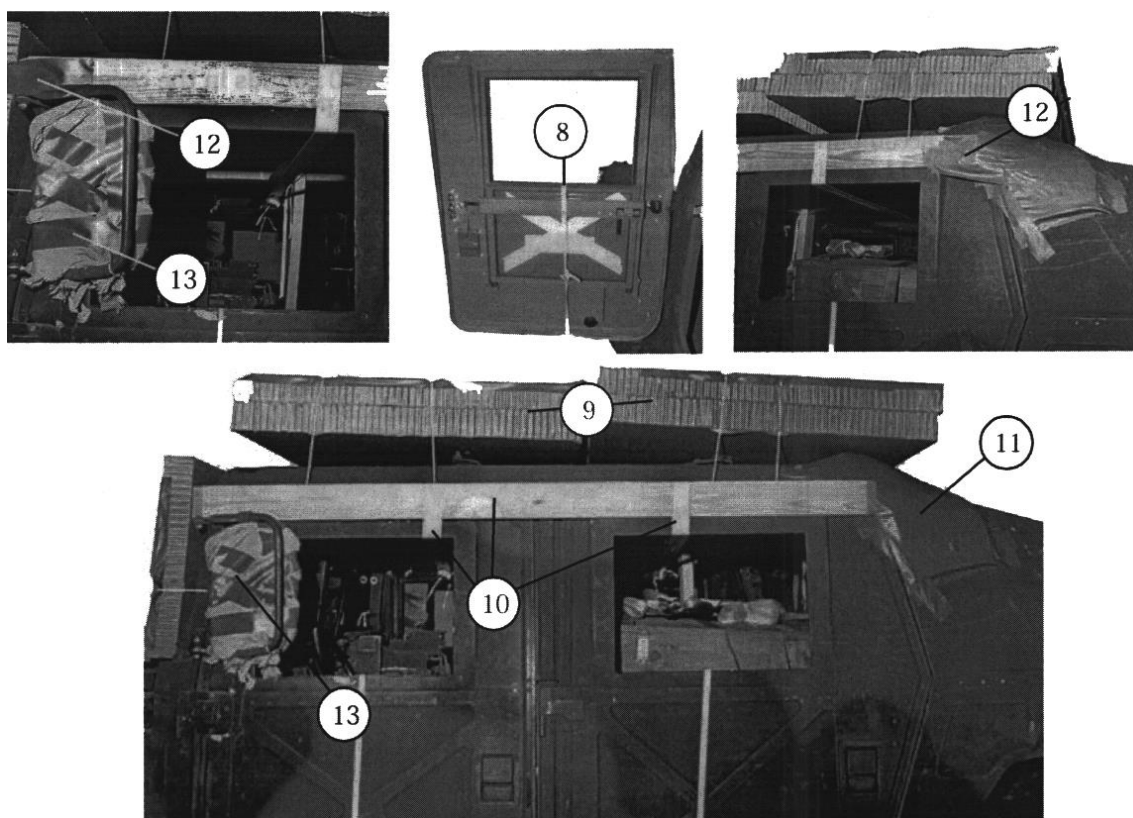
**Figure 3-42. Turret Support Built and Placed**

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



- ① Tape all lights and reflectors.
- ② On trucks equipped with the brush guard, cover the front side with an 83- by 14-inch piece of honeycomb tied in place with type III nylon cord.
- ③ Center an 83- by 6-inch piece of honeycomb along the front edge of the hood.
- ④ Place two 36- by 83-inch pieces of honeycomb, with cutouts as shown, over the hood. Tape the upper edges of the top piece. Tie the honeycomb in place with a length of type III nylon cord. Tie the cord to a hood latch, pass it through the grille, and tie off to the other hood latch.
- ⑤ Place two 83- by 15-inch pieces of honeycomb just behind the honeycomb placed in step 2 above. Tape the top outside edges. Secure the honeycomb to the hood latch brackets with type III nylon cord.
- ⑥ Tape the hood latches.
- ⑦ Lower all side windows and open the truck doors. Place a 21- by 83-inch piece of honeycomb against the windshield. Tie a length of type III nylon cord around the honeycomb and the inside of the windshield frame.

**Figure 3-43. Truck Body Prepared**

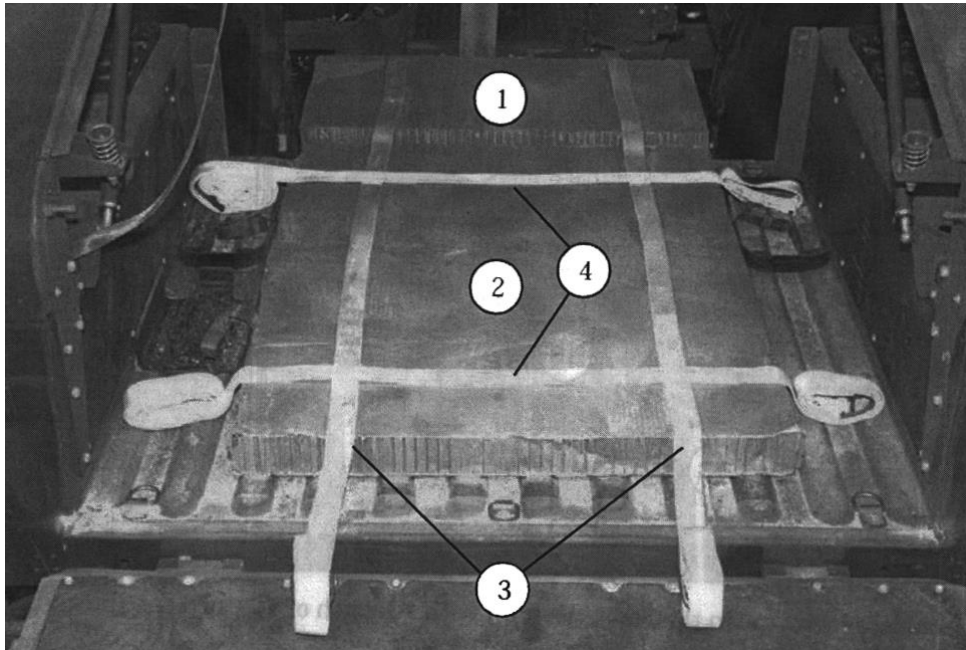


- ⑧ Secure the window in the down position with a length of ½-inch tubular nylon webbing. Secure with a slip knot on the inside of the door.
- ⑨ Cover the roof with four 82- by 36-inch pieces by honeycomb. Tape the upper 36-inch edges. Tie four lengths of type III nylon cord over the honeycomb and through the door openings.
- ⑩ Pass 15-foot lashings through the door openings on each side of the truck and close the doors. Cut a 45-degree bevel in each end of the two pieces of 2- by 4- by 69 ½-inch lumber. Rest the long side of each piece of lumber over the window openings and even with the front edge of the windshield frame. Pass the free ends of the lashings down over the lumber and through the windows. Secure the lashings inside the truck.
- ⑪ Pad the upper rear corner of the door and the end of the rain gutter with a 12- by 12-inch piece of felt taped in place.
- ⑫ Tape the front and rear ends of the lumber to the windshield frame and to the padding over the rear gutter.
- ⑬ Pad the mirrors with cellulose wadding taped in place. Fold the mirrors inward and tie them together through the cab of the truck.

**Figure 3-43. Truck Body Prepared (continued)**

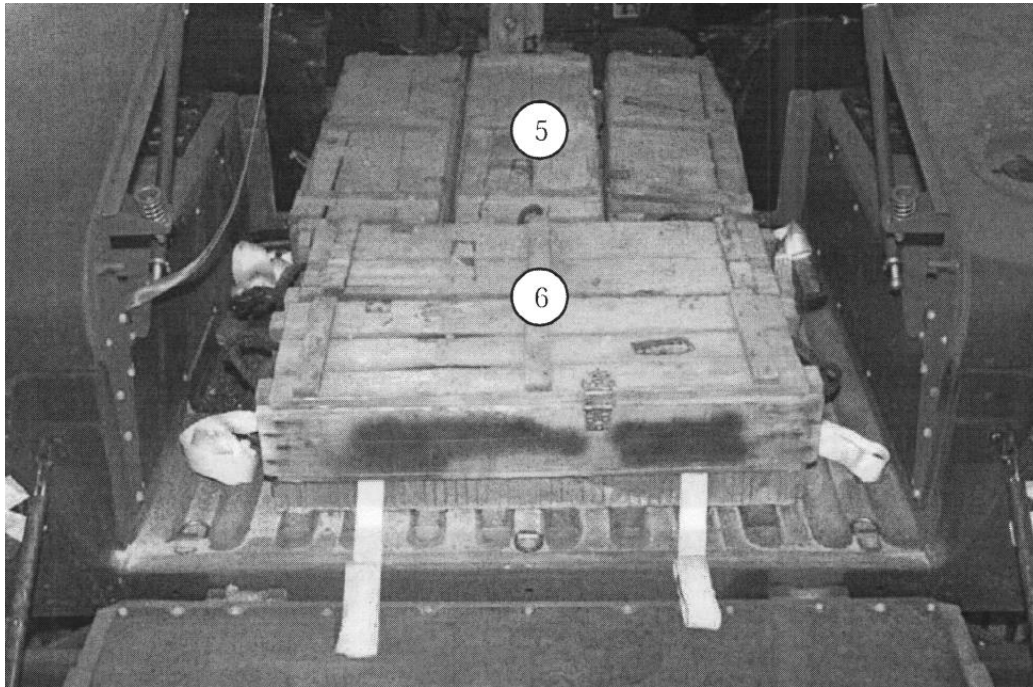
## STOWING ACCOMPANYING LOAD

3-32. Stow and accompanying load of 1,300 to 2,000 pounds in the cargo area of the truck. Use or adapt the procedures shown in Figure 3-44. Make sure the accompanying load complies with the restrictions outlined in TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.



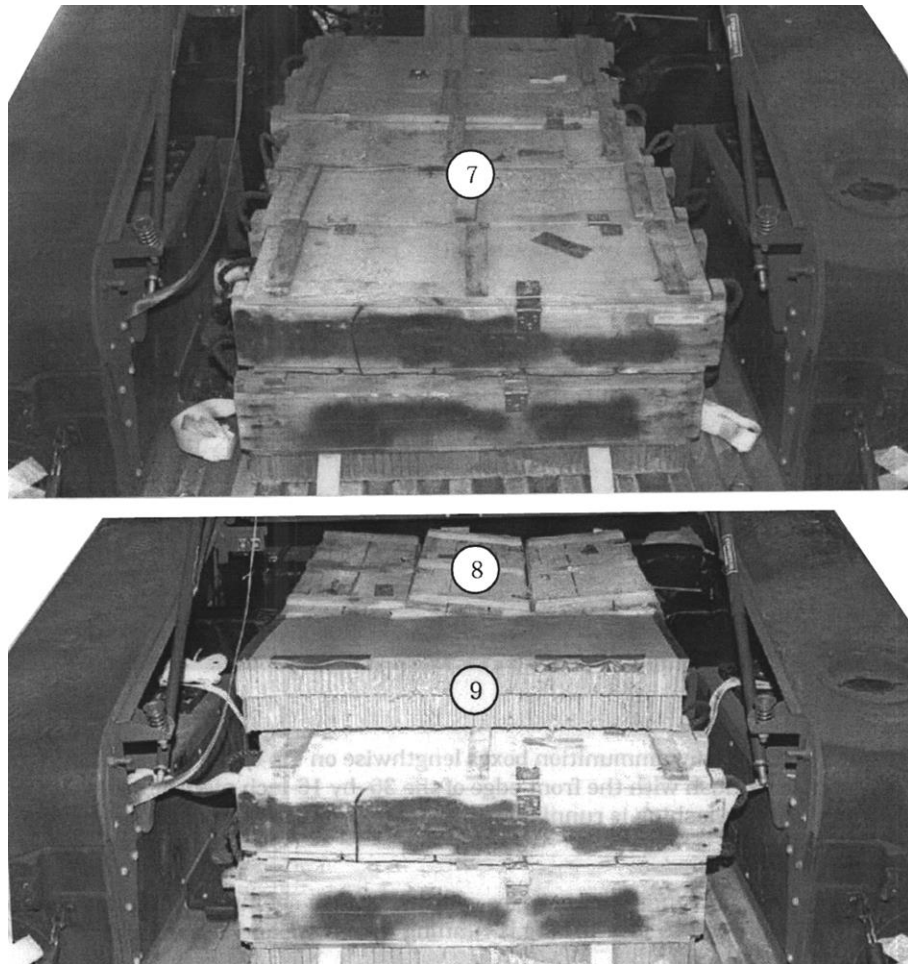
- ① Cut a 36- by 16-inch piece of honeycomb and position it against the rear turret support.
- ② Cut a 36- by 43-inch piece of honeycomb and position it against the honeycomb in step 1.
- ③ Position two 15-foot lashings lengthwise 6 inches from each outside edge of honeycomb.
- ④ Position two 15-foot lashings widthwise 6 inches from the front and rear edge of the honeycomb positioned in step 1 and 2.

**Figure 3-44. Accompanying Load Stowed in Truck**



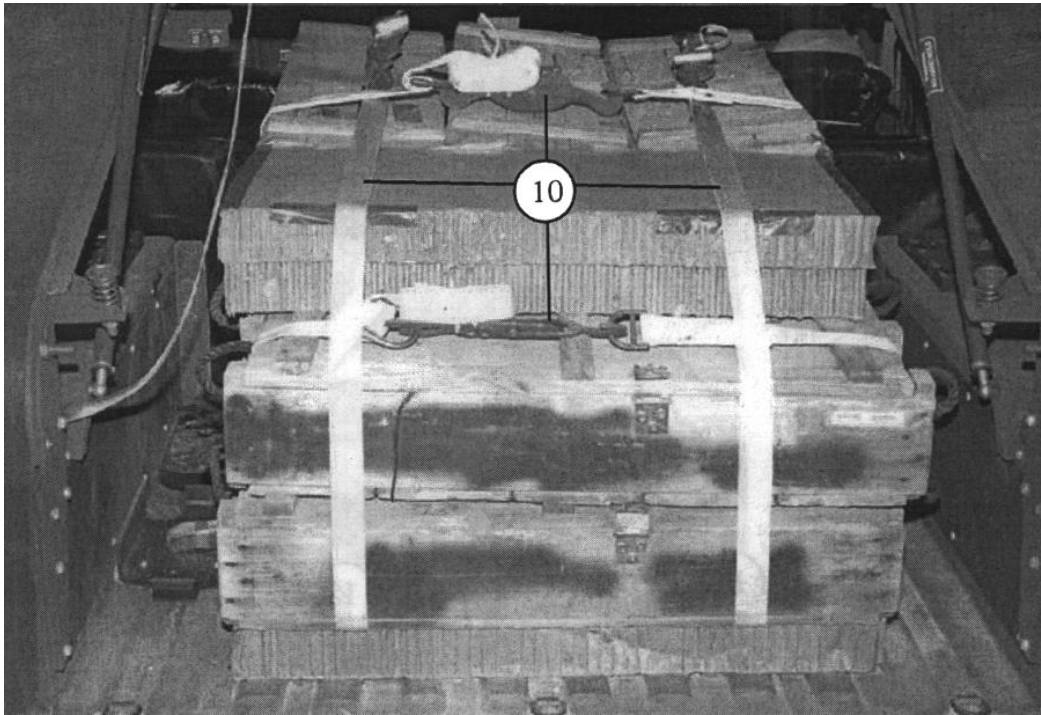
- ⑤ Position three 105-millimeter (mm) ammunition boxes lengthwise on top of the honeycomb. The boxes should be flush with the front edge of the 36- by 16-inch piece of honeycomb. Ensure the 15-foot lashing is running widthwise under the rear end of the ammunition boxes.
- ⑥ Position two 105-mm ammunition boxes widthwise flush against the ammunition boxes in step 5. Ensure the 15-foot lashing is running widthwise and is entered under the rear ammunition box.

**Figure 3-44. Accompanying Load Stowed in Truck (continued)**



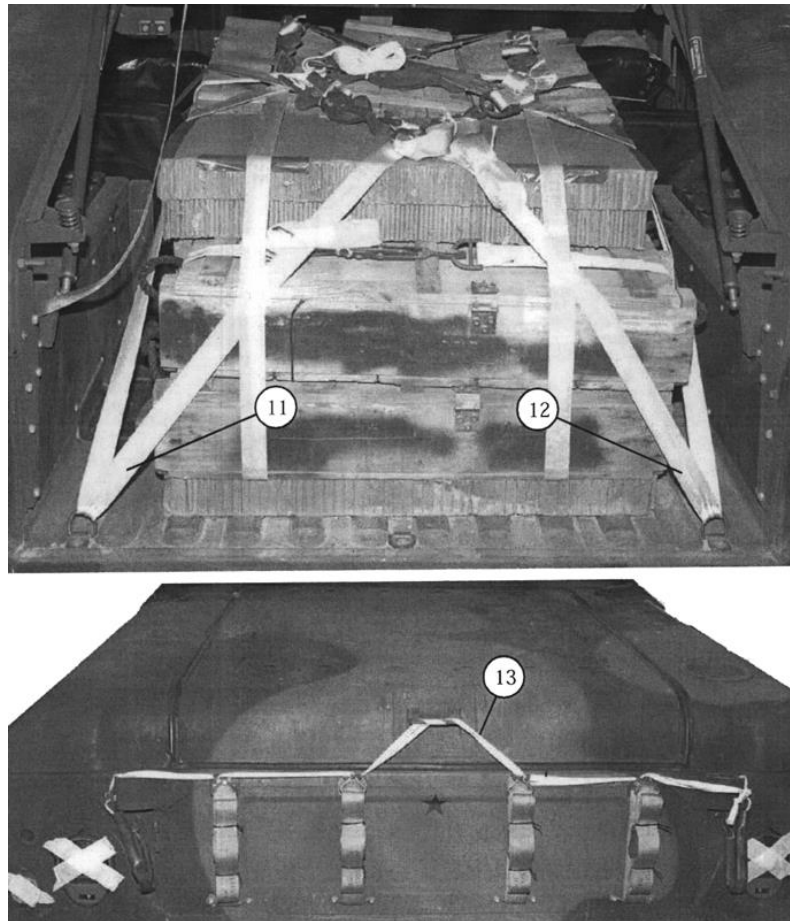
- ⑦ Position five ammunition boxes widthwise on top of the first layer of ammunition. The boxes should be flush with the bottom edges against the turret support.
- ⑧ Position three ammunition boxes lengthwise flush against the turret support on top of the previously placed ammunition boxes.
- ⑨ Cut two 17- by 36-inch pieces of honeycomb and position them to the rear of the boxes in step 8. Tape the edge of the honeycomb where the lashing makes contact.

**Figure 3-44. Accompanying Load Stowed in Truck (continued)**



- ⑩ Secure the four pre-positioned lashings and secure with a D-ring and load binder.

**Figure 3-44. Accompanying Load Stowed in Truck (continued)**



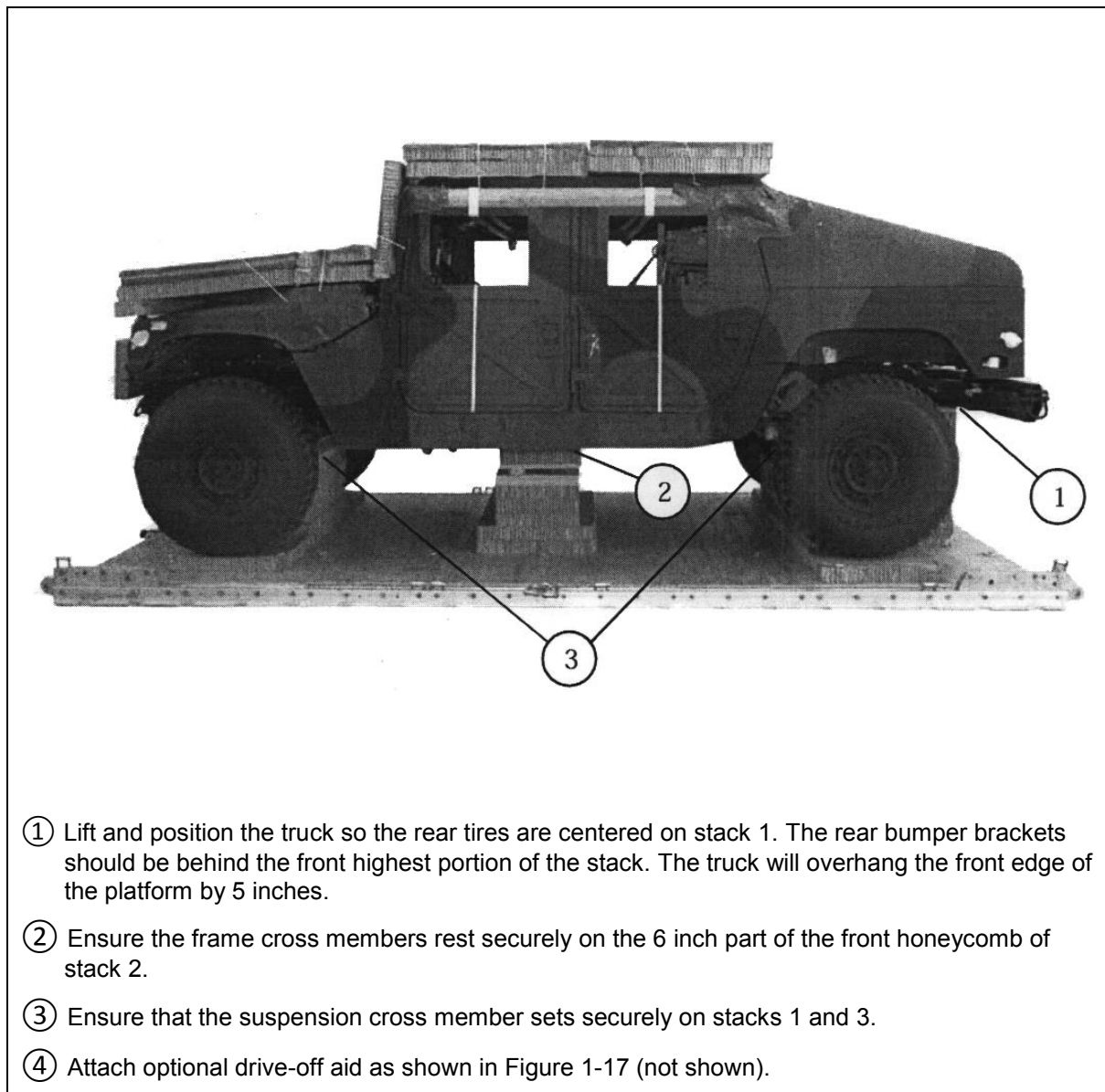
- ⑪ Route a 30-foot lashing through the left rear tiedown ring. Bring both ends over the boxes diagonally. Route the lashing through the right front tiedown ring. Secure the lashing over the load making sure to split the lashing on the corners.
- ⑫ Repeat step 11 using the right rear and left front tiedown rings.
- ⑬ Close the latch the tailgate and hatch. Fold and tape the cargo straps. Run a length of  $\frac{1}{2}$ -inch tubular nylon webbing under the cargo straps and through the hatch cover handle. Tie the running ends to the tailgate hood brackets.

**Figure 3-44. Accompanying Load Stowed in Truck (continued)**



## LIFTING AND POSITIONING TRUCK AND INSTALLING OPTIONAL DRIVEOFF AIDS

3-33. Install the optional drive-off aids on the platform as show in Figure 2-15. Install lifting slings on the truck as shown in Figure 1-15 and position the truck as shown in Figure 3-45.



**Figure 3-45. Truck Positioned**

## LASHING TRUCK

3-34. Lash the truck to the platform with fifteen 15-foot tiedown assemblies as shown in Figures 3-46 and 3-47, and according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.

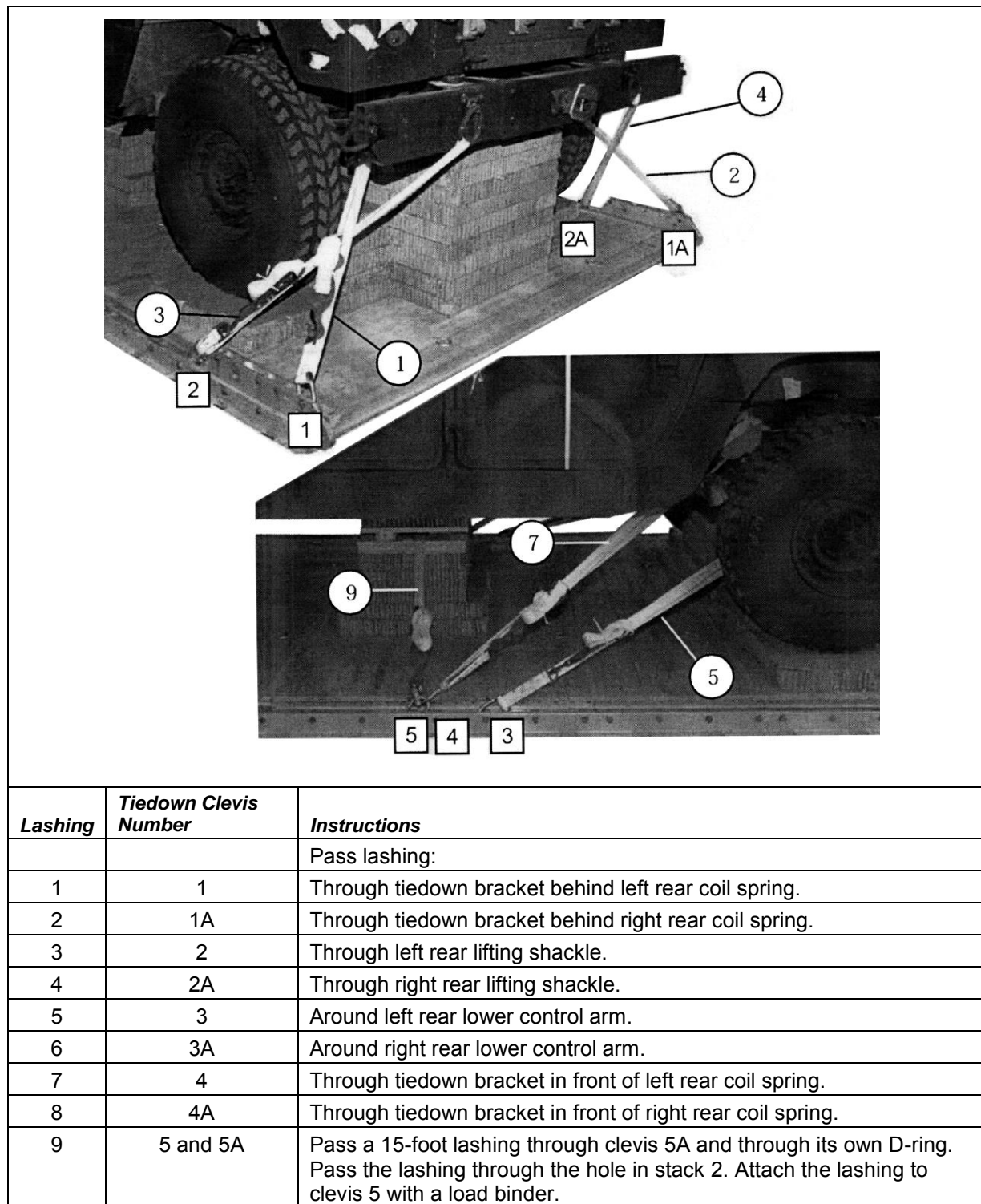
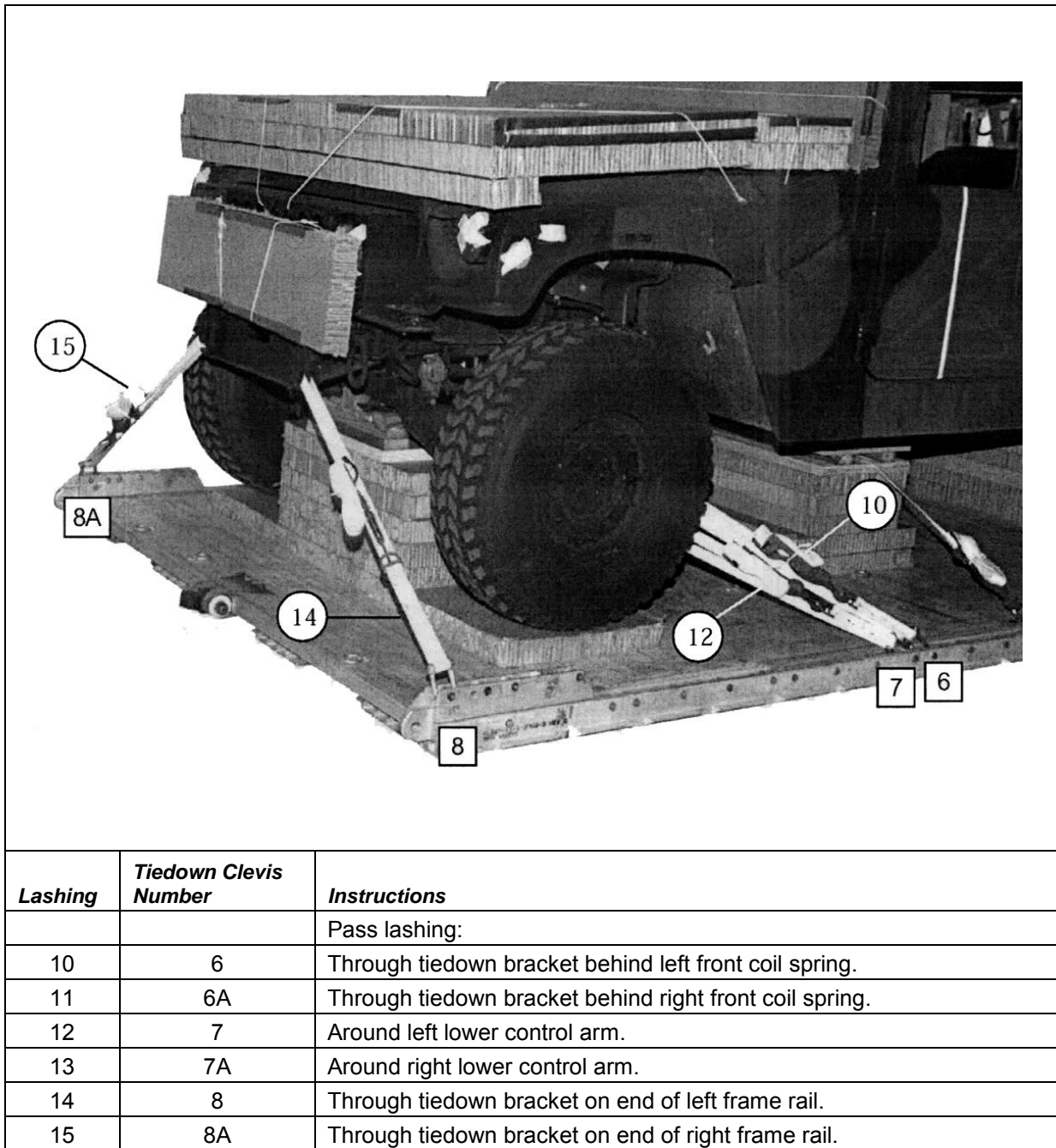


Figure 3-46. Lashings 1 Through 9 Installed



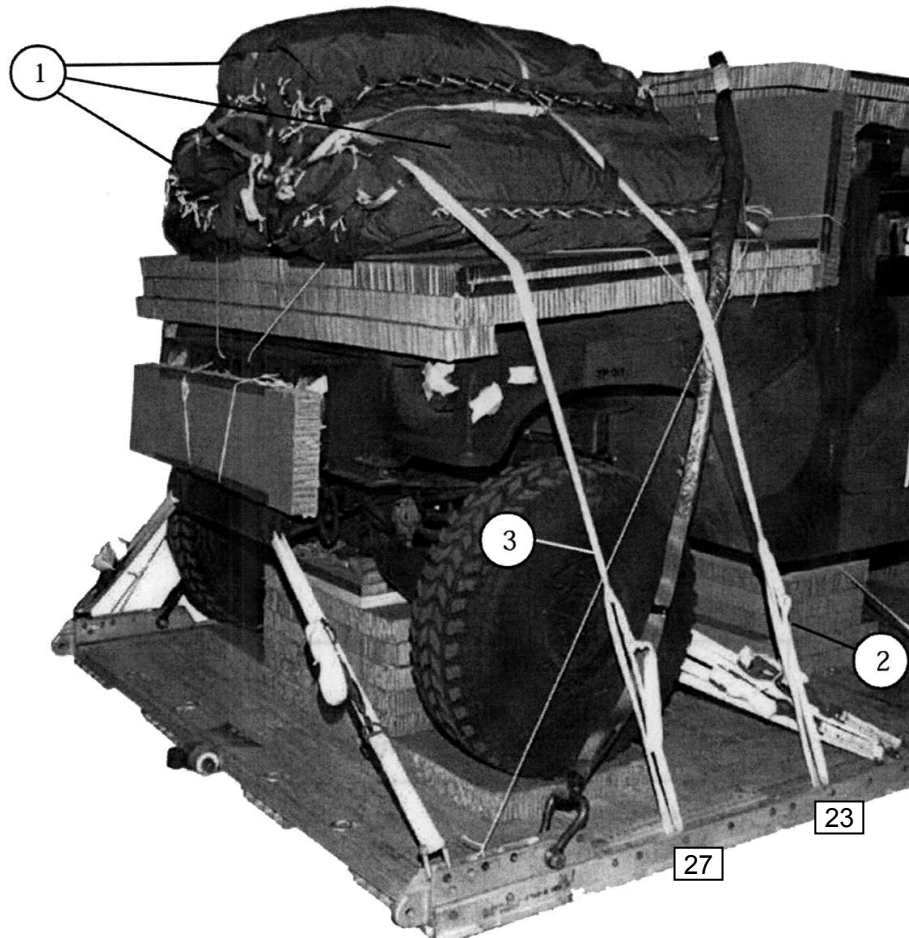
**Figure 3-47. Lashings 10 Through 15 Installed**

## INSTALLING AND SAFETY SUSPENSION SLINGS

3-35. Install, pad and safety tie four 16-foot 2-loop type XXVI nylon suspension slings as shown in Figure 1-20.

## STOWING CARGO PARACHUTES

3-36. Stow and restrain three G-11 cargo parachutes on the load according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5, and as shown in Figure 3-48.

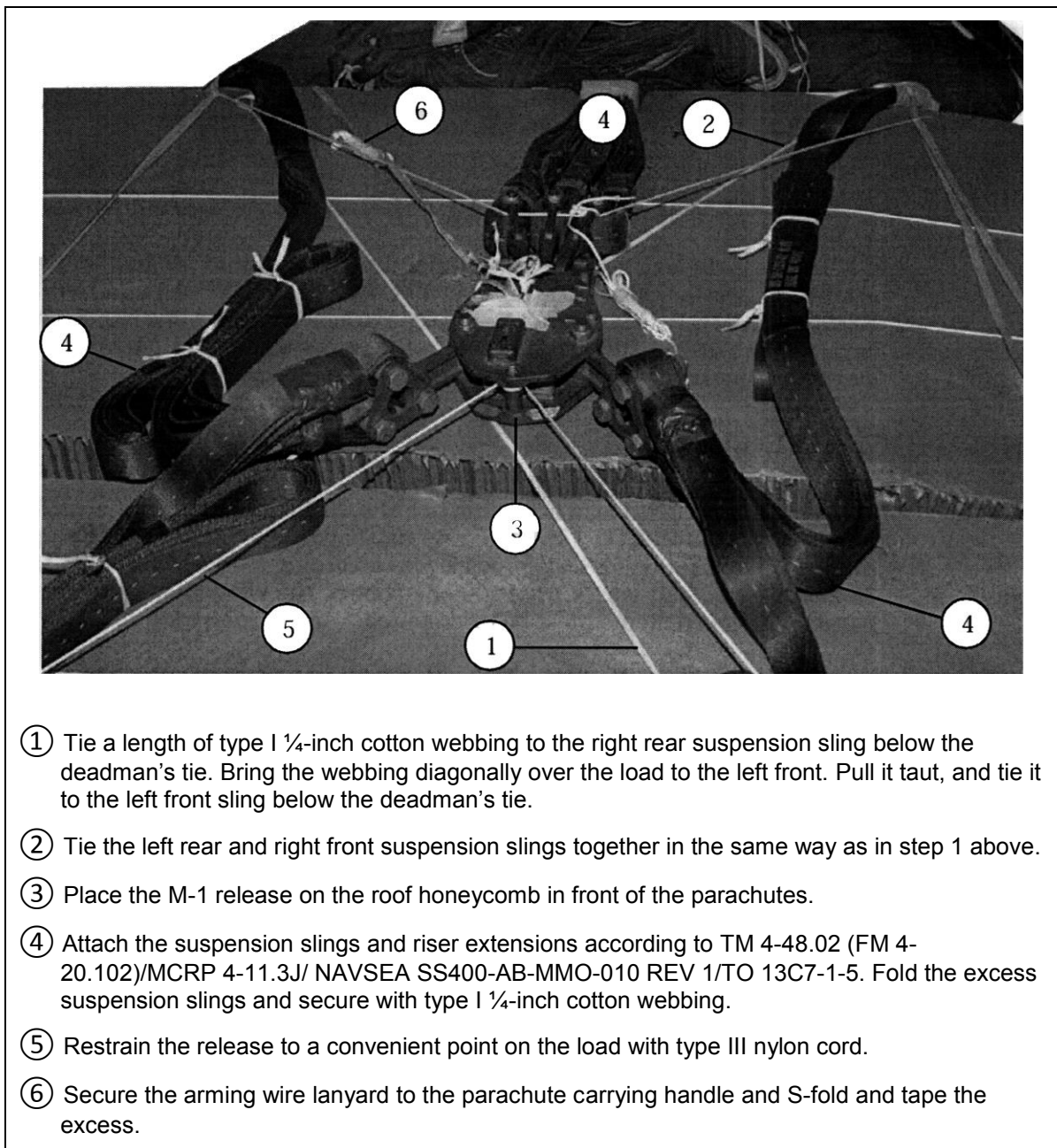


- ① Place and cluster three G-11 cargo parachutes on the honeycomb over the truck hood according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.
- ② Tie the front restraint straps to bushings 23 and 23A.
- ③ Tie the rear restraint straps to bushings 27 and 27A.

**Figure 3-48. Cargo Parachutes Installed**

## INSTALLING PARACHUTE RELEASE

3-37. Prepare and install an M-1 cargo parachute release according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5, and as shown in Figure 3-49.



**Figure 3-49. M-1 Release Installed**

## **INSTALLING EXTRACTION SYSTEM**

3-38. Install the extraction force transfer coupling extraction system according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figure 3-34.

## **INSTALLING PROVISIONS FOR EMERGENCY RESTRAINTS**

3-39. Install provisions for emergency restraints according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.

## **PLACING EXTRACTION PARACHUTE**

3-40. Select the extraction parachute and extraction line needed, using the extraction line requirements table in TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5. Rig the extraction line in a line bag according to TM 10-1670-286-20/TO 13C5-2-41. Place the extraction parachute and extraction line on the load for installation on the aircraft.

## **MARKING RIGGED LOAD**

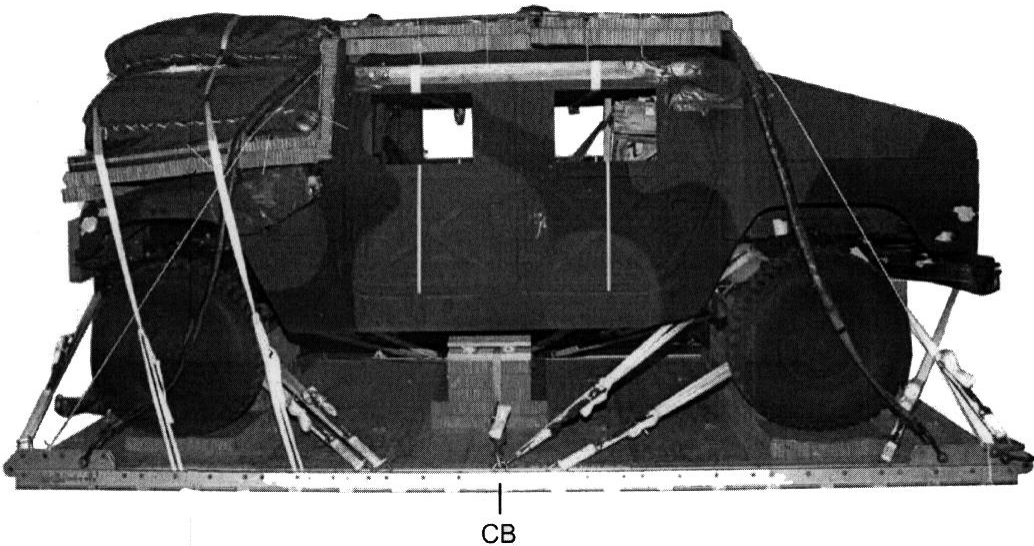
3-41. Mark the rigged load according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figure 3-50. Complete Shipper's Declaration for Dangerous Goods according to AFMAN 24-204/TM 38-250/NAVSUB PUB 505/MCO P 4030.19H/DLAI 4145.3 If the load varies from the one shown, the weight, height, CB, and parachute requirements must be recomputed.

## **EQUIPMENT REQUIRED**

3-42. Use the equipment listed in Table 3-3 on page 3-74 to rig this load.

**CAUTION**

Make the final rigger inspection required by TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and AR 59-4/OPNAVINST 4463.24C/AFJ 13-210(1)/MCO 13480.1B before the load leaves the rigging site.



**Rigged Load Data**

Weight: Load Shown .....	11,340 pounds
Maximum load allowed .....	12,100 pounds
Height (with three G-11B parachutes .....	93 inches
Width .....	108 inches
Length .....	215 inches
Overhang: Front (vehicle).....	5 inches
Rear (extraction force transfer coupling) .....	18 inches
Rear (extraction parachute jettison system).....	30 inches
Center of Balance (CB) (from front edge of platform).....	96 inches

**Figure 3-50. M1151 Expanded Capacity Armament Carrier**

**Table 3-3. Equipment Required for Rigging the M1151 Expanded Capacity Armament Carrier for Low-Velocity Airdrop**

<i>National Stock Number</i>	<i>Item</i>	<i>Quantity</i>
8040-00-273-8713	Adhesive paste, 1-gallon	As required
4030-00-090-5354	Clevis, suspension, 1-inch (large)	5
4030-00-678-8562	Clevis, suspension, ¾-inch (medium)	2
1670-00-360-0328	Cover, clevis, large	3
4020-00-240-2146	Cord, nylon, type III, 550-pound	As required
1670-00-434-5785	Coupling, Airdrop Extraction Force Transfer, w/16-foot cable	1
8135-00-664-6958	Cushioning material (Cellulose wadding)	As required
8305-00-958-3685	Felt, ½-inch thick	As required
1670-00-003-4391	Knife, parachute bag (for C-17)	1
1670-01-183-2678	Leaf, extraction line (line bag)	2
1670-01-064-4452	60-foot (1-loop), type XXVI (for C-17/C130J), (drogue line)	1
	Line extraction:	
1670-01-062-6313	60-foot (3-loop), type XXVI (for C-130/J)	1
1670-01-107-7651	140-foot (3-loop), type XXVI (for C-17)	1
1670-01-493-6418	Link assembly, two-point, 3¾-inch, small:	2
5306-00-435-8994	Bolt, 1-inch diameter, 4-inches long	4
5310-00-232-5165	Nut, 1-inch diameter, 4-inches long	4
1670-00-003-1953	Plate, side 3 ¾-inches	4
5365-00-007-3414	Spacer, large	4
	Lumber:	
5510-00-220-6448	2- by 6- by 72-inch	As required
5510-00-220-6274	4- by 4- by 96-inch	As required
5315-00-010-4659	Nail, steel, wire, 8D	As required
1670-00-753-3928	Pad, energy-dissipating (honeycomb) 3- by 36- by 96-inches	10 sheets
1670-01-016-7841	Parachute, cargo, G-11B	3
	Parachute, cargo, extraction:	
1670-01-063-3716	22-foot (for C-17, use H-block with this parachute) Drogue (for C-17)	1
1670-01-063-3715	15-foot (for C-17/C130J) (DES)	1
	Platform, airdrop, type V, 16-foot:	
1670-01-353-8424	Bracket, assembly, extraction	1
1670-01-353-8425	Bracket, assembly, coupling	1
1670-01-162-2372	Clevis assembly (type V)	18
1670-01-162-2381	Tandem link assembly (Multipurpose link)	4
5530-00-128-4981	Plywood, ¾-inch	3 sheets



**Table 3-3. Equipment Required for Rigging the M1151 Expanded Capacity Armament Carrier for Low-Velocity Airdrop (continued)**

<i>National Stock Number</i>	<i>Item</i>	<i>Quantity</i>
1670-01-097-8816	Release, cargo parachute, M-1	1
	Sling, cargo, airdrop: For Deployment	
1670-01-062-6304	9-foot (2-loop), type XXVI nylon webbing	1
	For Lifting	
1670-01-062-6304	9-foot (2-loop), type XXVI nylon webbing	2
1670-01-062-6303	12-foot (2-loop), type XXVI nylon webbing	2
	For Suspension	
1670-01-063-7761	16-foot (2-loop), type XXVI nylon webbing	4
	For Riser Extension	
1670-01-062-6302	60-foot (3-loop), type XXVI nylon webbing	3
5340-00-040-8219	Strap, parachute, release, multi-cut, comes with 3 knives	2
7501-00-266-5016	Tape, adhesive, 2-inch	As required
1670-00-937-0271	Tiedown assembly, 15-foot	27
1670-01-483-8259	Towplate, release mechanism (H-block) (for C-17)	1
1670-01-431-8486	Vehicle drive-off aid	1
	Webbing:	
8305-00-268-2411	Cotton, 1/4-inch, type I	As required
8305-00-082-5752	Nylon, tubular, 1/2-inch	As required
8305-00-268-2455	Nylon, tubular, 1-inch	As required
8305-00-263-3591	Nylon, type VIII	As required

## **SECTION IV: RIGGING THE M1151A1B1 ARMOR KIT ENHANCED ARMAMENT CARRIER WITH LONG RANGE ADVANCED SCOUT SURVEILLANCE SYSTEM (LRAS3) NEW DOORS AND ACCOMPANYING LOAD FOR LOW-VELOCITY AIRDROP**

### **DESCRIPTION OF LOAD**

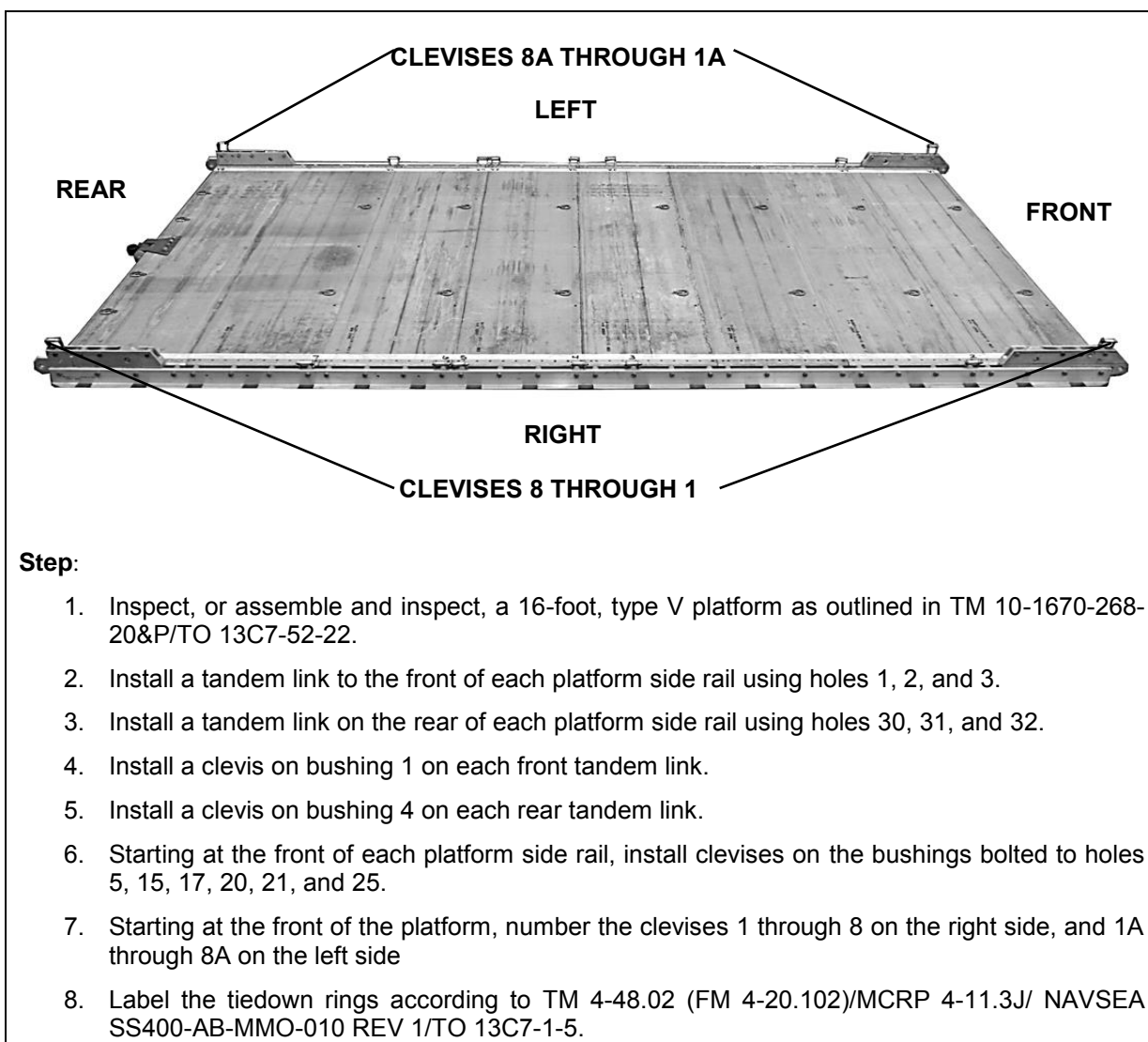
3-43. The M1151A1B1 armor kit truck is equipped with long range advanced scout surveillance system (LRAS3) integrated air conditioning system, two parallel condenser assemblies located above each of the rear wheel wells and new variable rate rear springs. The B2 armor kit is an intergraded armor package (IAP), including underbodies, rocket armor and lower windshield deflector armor and new doors. The truck shown in Figure 3-51 is rigged on a 16-foot, type V platform. The load uses three G-11 cargo parachutes and accompanying load has a maximum weight of 778 pounds. This load is 96 inches high, 108 inches wide and 214 inches long.

### **PREPARING PLATFORM**

3-44. Prepare a 16-foot, type V airdrop platform according to TM 10-1670-268-20&P/TO 13C7-52-22. Install four tandem links and platform clevises according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figure 3-52.



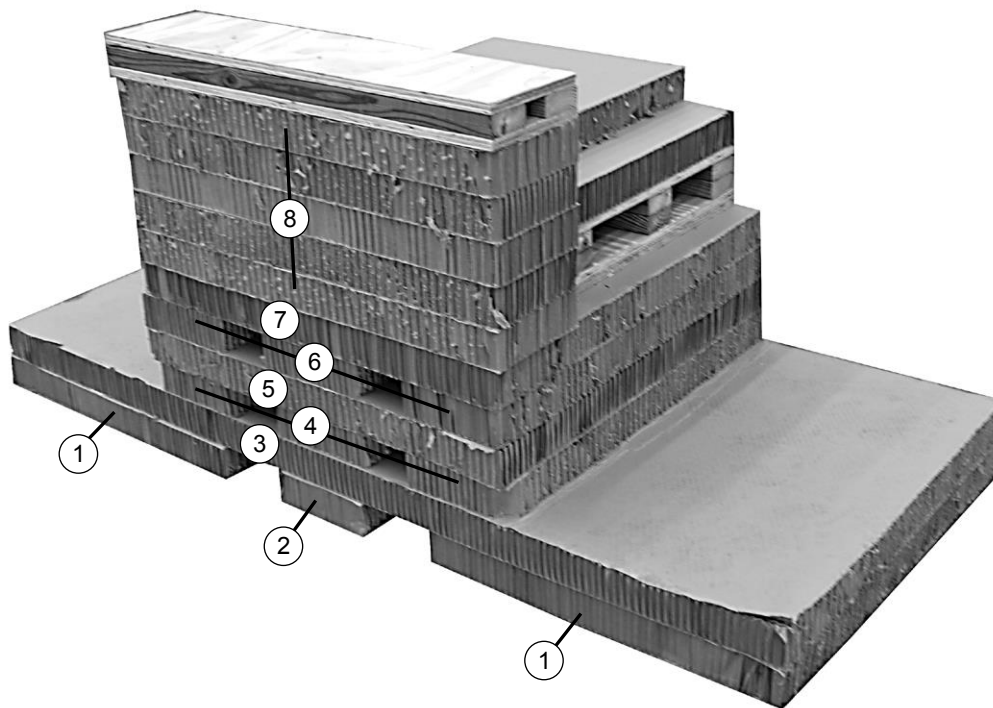
**Figure 3-51. M1151A1B1 Armament Carrier with Long Range Advanced Scout Surveillance System**



**Figure 3-52. Platform Prepared**

## PREPARING AND POSITIONING HONEYCOMB STACKS

3-45. Build the honeycomb stacks as shown in Figures 3-53 through 3-55. Position the stacks on the platform as shown in Figure 3-56.



- ① Cut two 29- by 36-inch pieces of honeycomb to form a base.
- ② Cut a 9- by 36-inch piece of honeycomb to form a base.
- ③ Glue an 80- by 36-inch piece of honeycomb to the honeycomb pieces in steps 1 and 2. Glue the 29- by 36-inch pieces flush with the outside edges of the 80- by 36-inch honeycomb and glue the 9- by 36-inch piece centered on the 80- by 36-inch honeycomb.
- ④ Cut three 9- by 36-inch pieces of honeycomb. Glue one piece centered on the 80- by 36-inch piece of honeycomb. Glue the second and third pieces to the 80- by 36-inch honeycomb 22 inches from the 36-inch edge of the 80- by 36-inch honeycomb.
- ⑤ Glue a 36- by 36-inch piece of honeycomb centered on top of the honeycomb in step 4.
- ⑥ Cut three 9- by 36-inch pieces of honeycomb. Glue one piece centered on the 36- by 36-inch piece of honeycomb. Glue the second and third pieces to the 36- by 36-inch honeycomb flush with the outside edges.
- ⑦ Glue a 36- by 36-inch piece of honeycomb centered on top of the honeycomb in step 6.
- ⑧ Glue five 36- by 9-inch pieces of honeycomb flush with the front edge of the 36- by 36-inch honeycomb.

**Figure 3-53. Stack 1 Constructed**

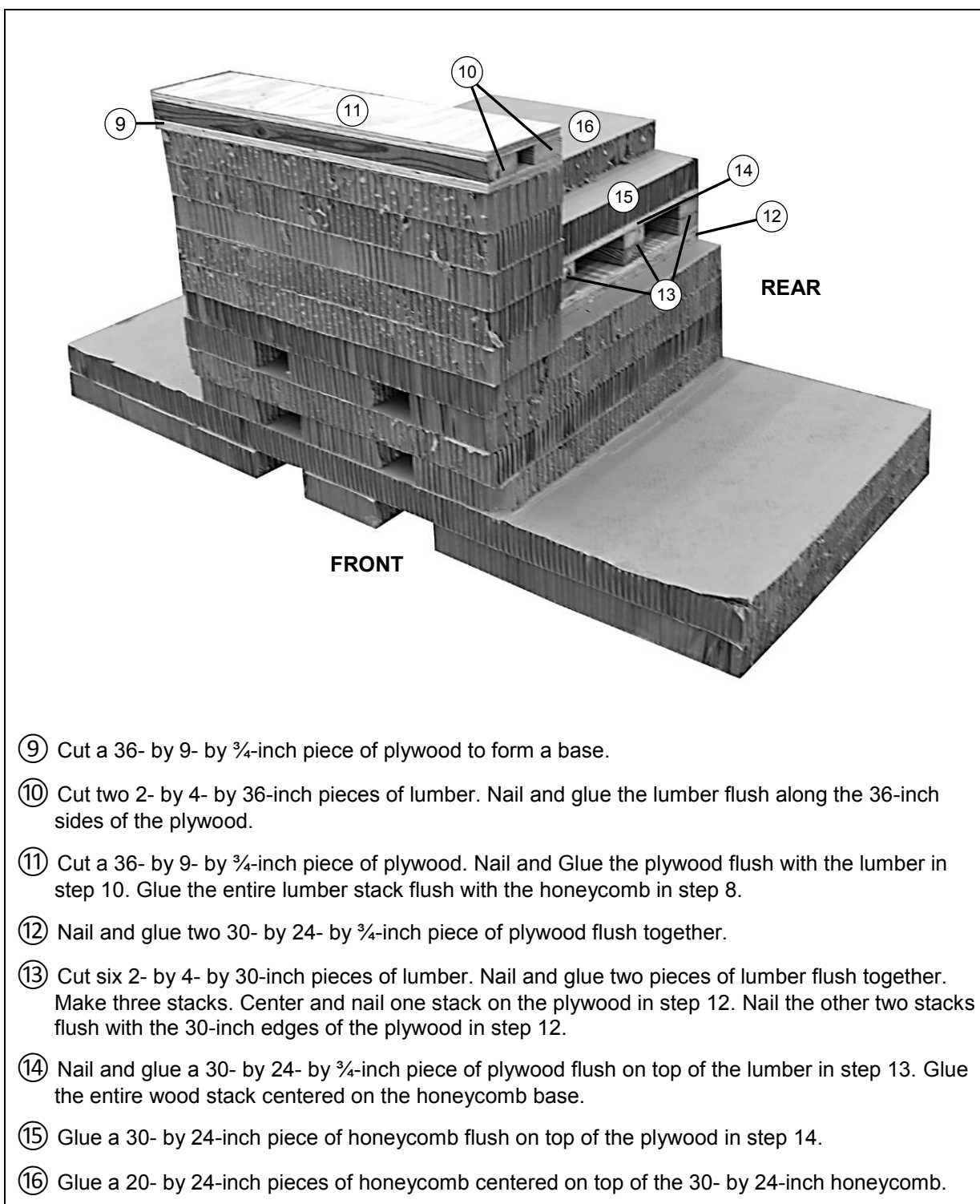
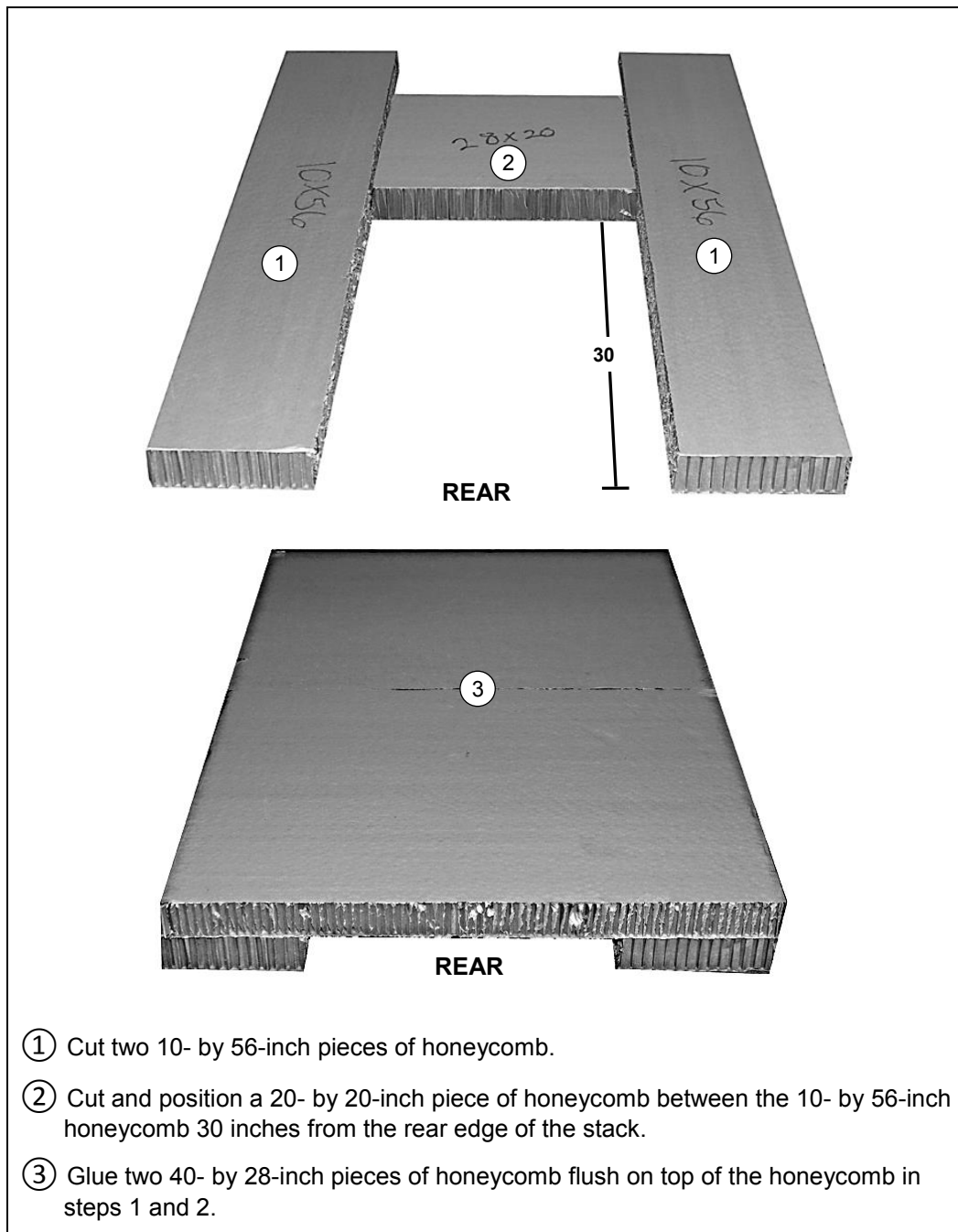
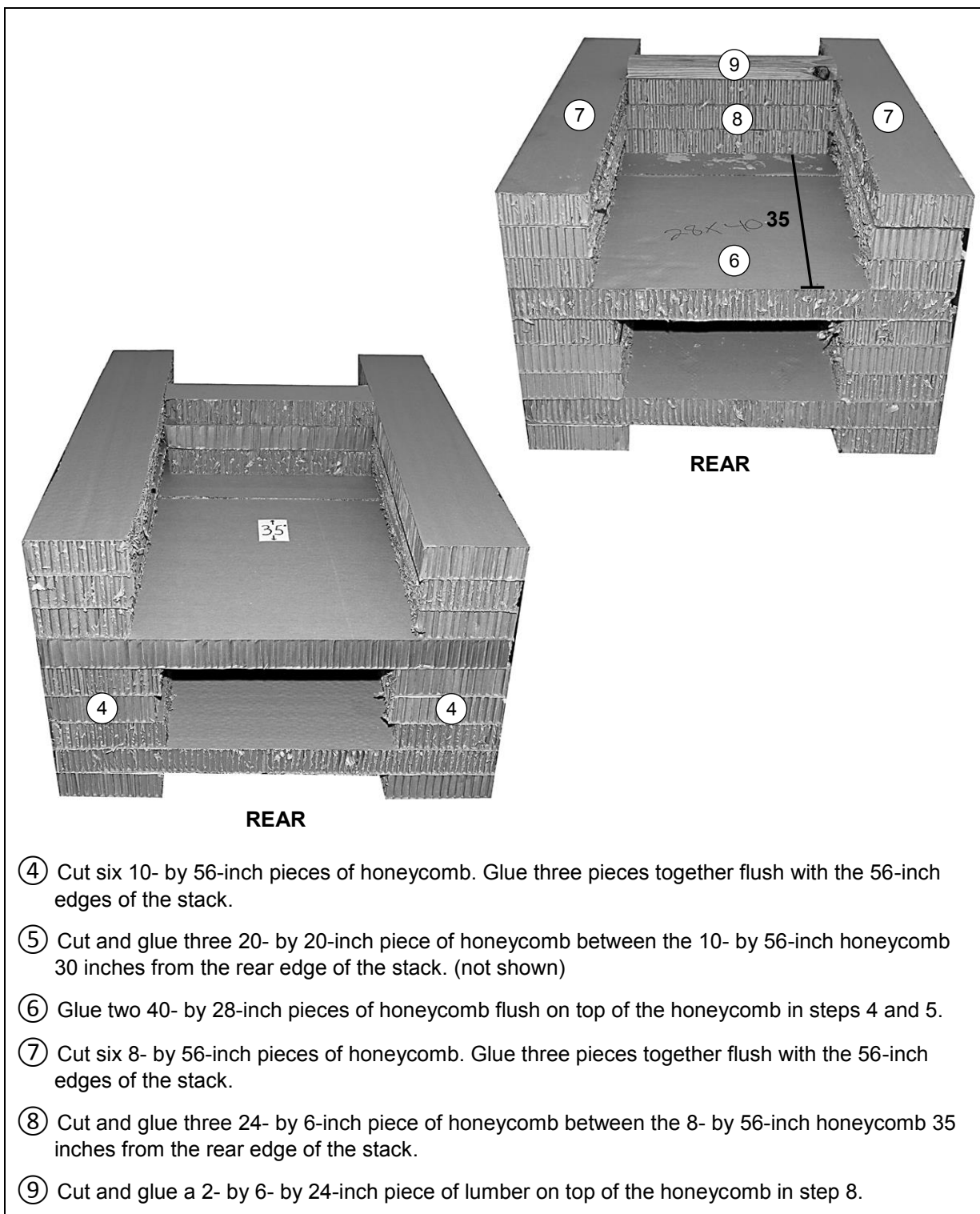
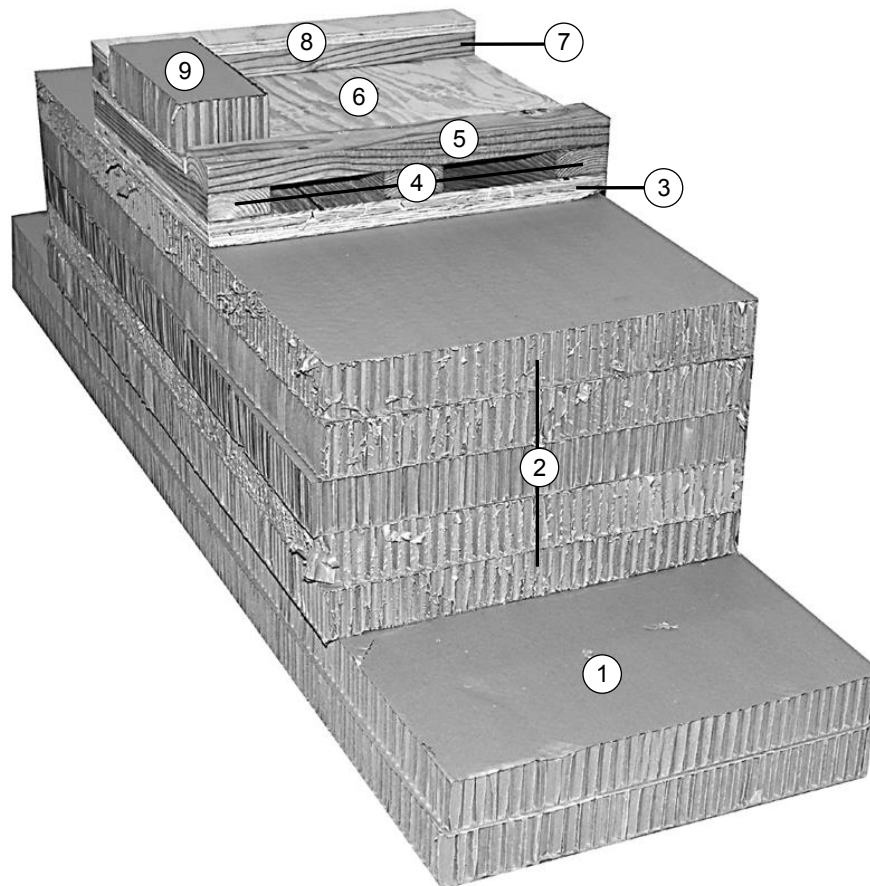


Figure 3-53. Stack 1 Constructed (Continued)

**Figure 3-54. Stack 2 Constructed**



**Figure 3-54. Stack 2 Constructed (Continued)**

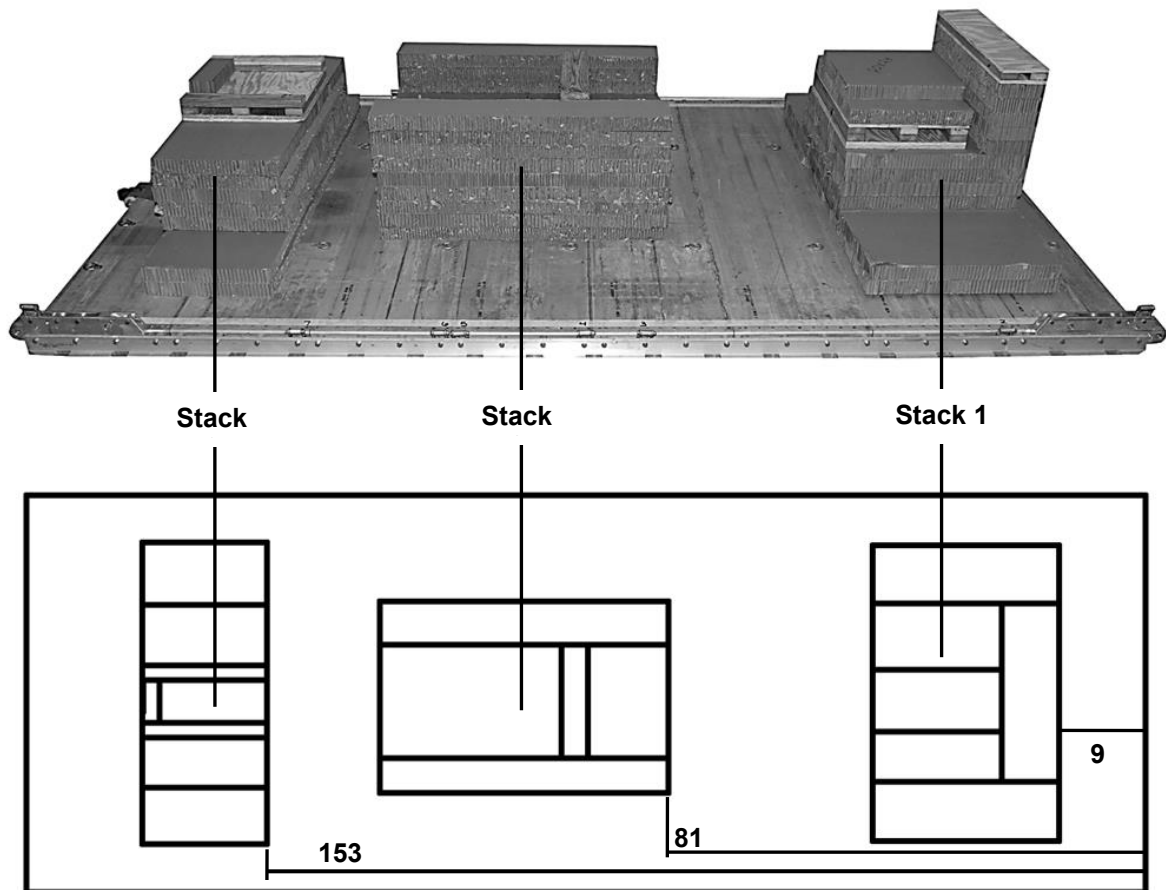


- ① Glue two 80- by 24-inch pieces of honeycomb to form a base.
- ② Center and glue five 35- by 24-inch pieces of honeycomb on top of the 80- by 24-inch piece of honeycomb.
- ③ Nail two 21- by 24- by 3/4-inch pieces of plywood to each other.
- ④ Nail a piece of 2- by 4- by 21-inch lumber flush along each side and in the center of the plywood.
- ⑤ Nail a 2- by 4- by 24-inch piece of lumber flush along the right side.
- ⑥ Nail a 17- by 24- 3/4-inch piece of plywood flush with the left side.
- ⑦ Nail a 2- by 4- by 24-inch piece of lumber flush with the left edge of the plywood placed in step 6.
- ⑧ Nail a 3 1/2- by 24- by 3/4-inch piece of plywood flush over the lumber placed in step 7.
- ⑨ Center and glue a 13- by 5-inch piece of honeycomb along the rear edge of the plywood placed in steps 6 above.

**Figure 3-55. Stack 3 Constructed**



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

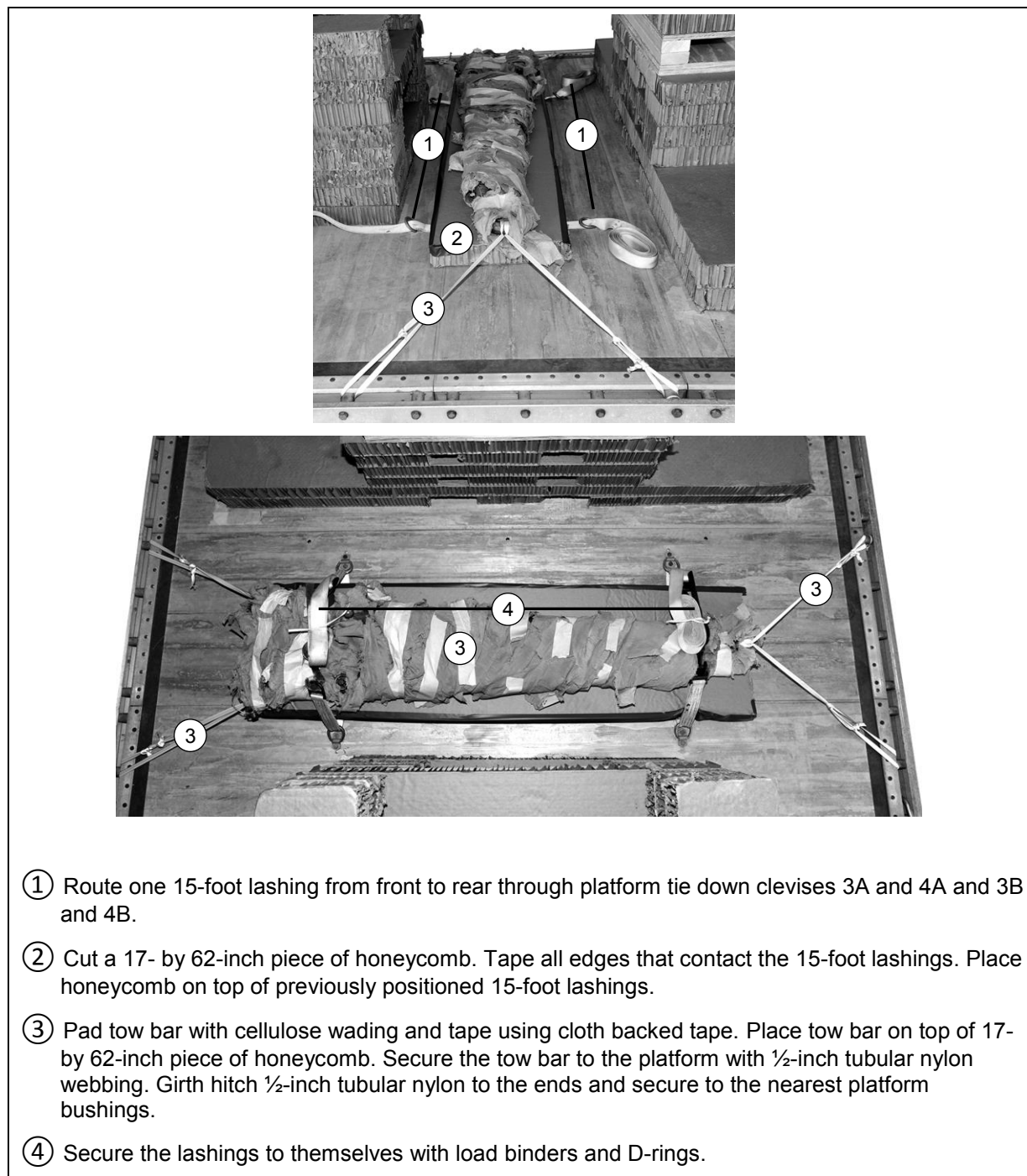


Stack Number	Position on Platform
1	Place stack: Centered 9 inches from the front edge of the platform.
2	Centered 81 inches from the front edge of the platform.
3	Centered 153 inches from the front edge of the platform.

**Figure 3-56. Honeycomb Stacks Positioned on Platform**

## PLACING AND SECURING TOW BAR

3-46. Place and secure the tow bar as shown in Figure 3-57.



**Figure 3-57. Tow Bar Placed and Secured on Platform**

## PREPARING THE TRUCK

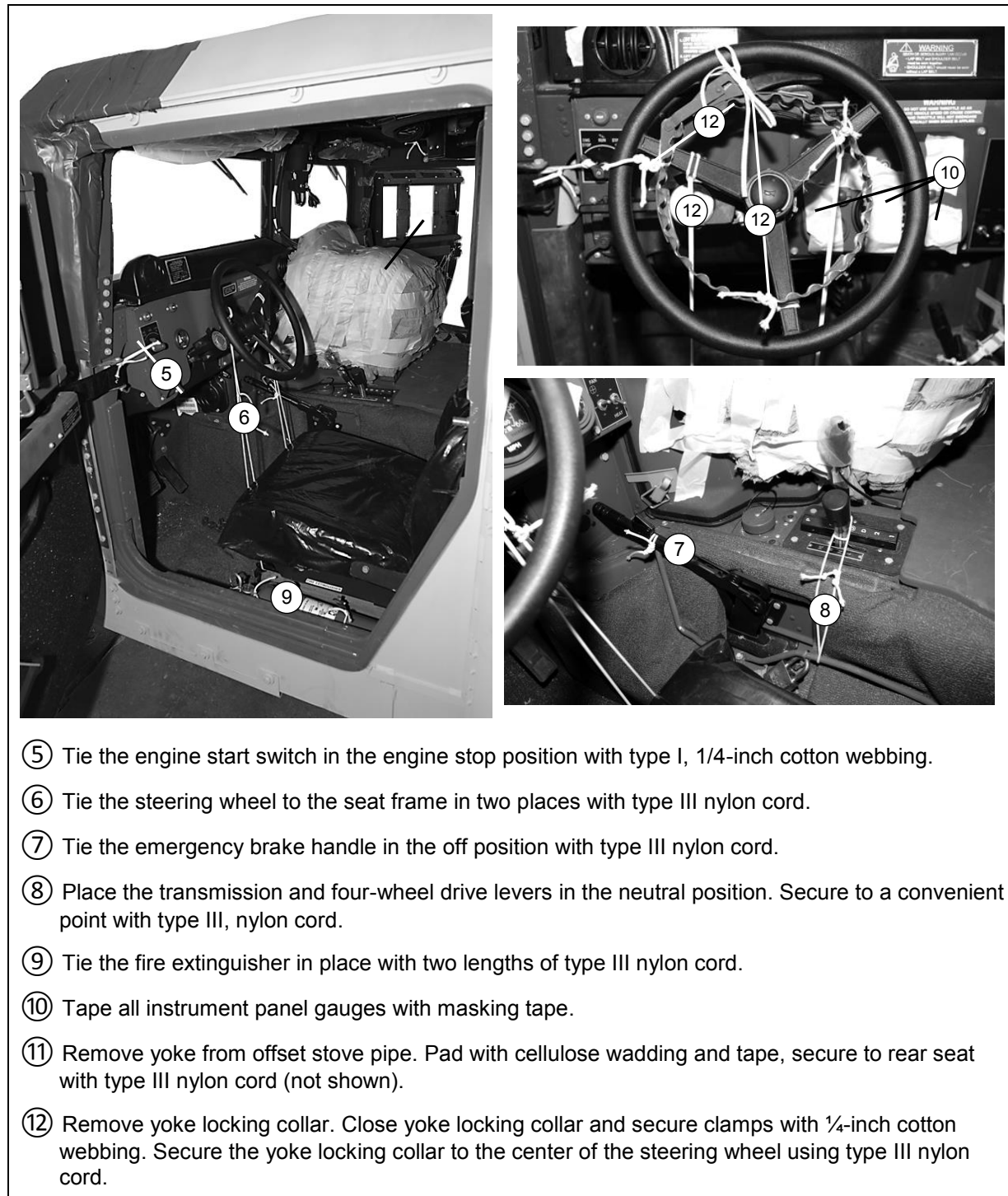
3-47. Prepare the truck as shown as shown in Figures 3-58 through 3-63.



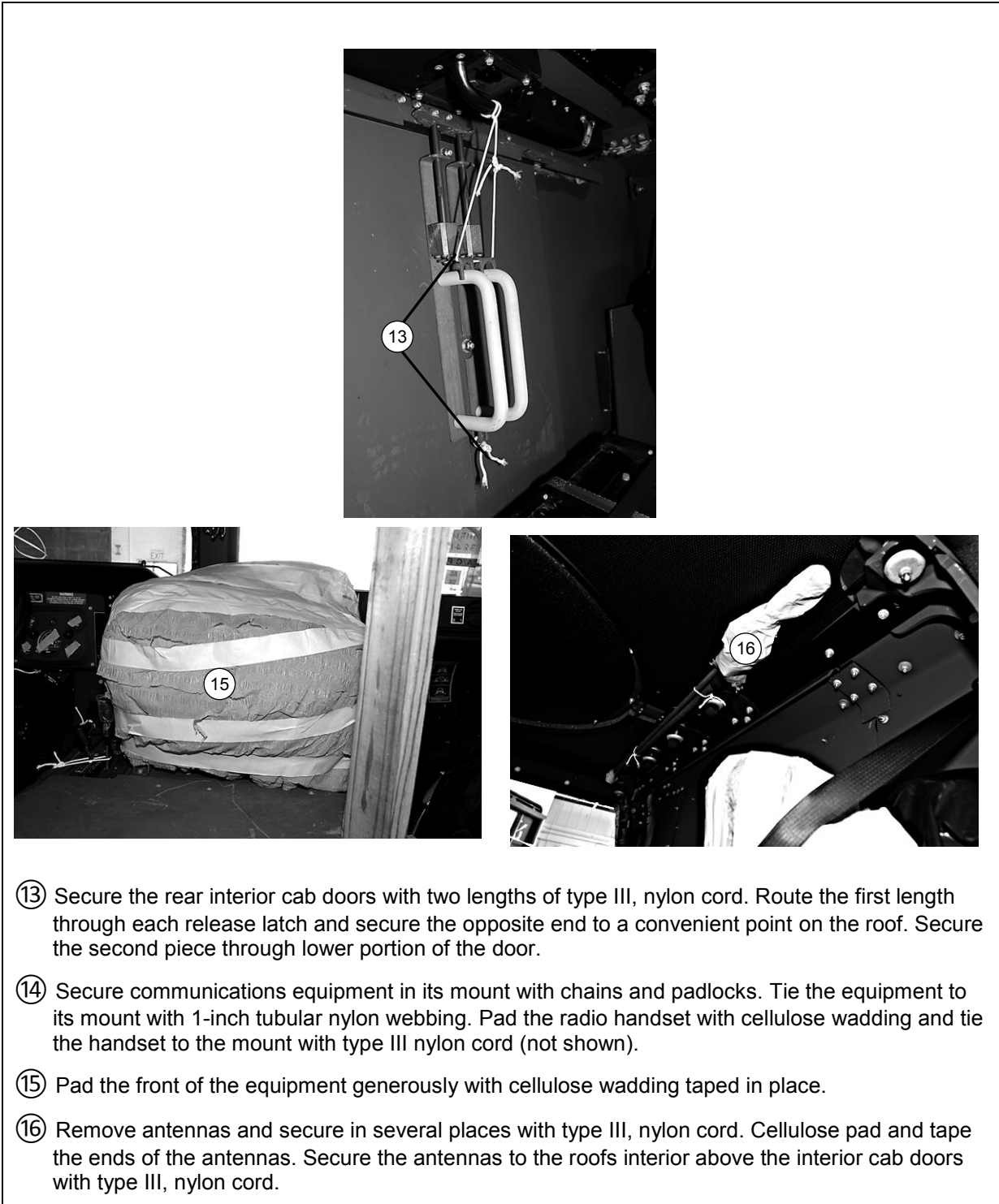
**Note.** Remove the gunner protection kit (GPK) and set aside (the GPK is not dropped with the vehicle (not shown)).

- ① Ensure the fuel tank is no more than 3/4 full (not shown).
- ② Ensure the batteries and battery compartment comply with Air Force Interservice Manual 24-204(I), TM 38-250, NavSup Pub 505, MCO P4030.19I, DLAI 4145.3, DCMAD1, Ch3.4 (Hm24) (not shown).
- ③ Remove and pad the mirrors with cellulose wadding. Place the nuts and bolts in the mounting holes and tighten in place. Cut two 4- by 15-inch pieces of honeycomb and position a piece behind each front seat. Position and secure the mirrors on top of the honeycomb pieces against the back of the seats and secure to the front seats with type III nylon cord.
- ④ Remove the breather cap and fording stack. Leave the cap attached to the stack. Pad the stack with cellulose wadding and tape. Secure to the left rear passenger seat with type III, nylon cord. Secure the seat belt over the stack.

**Figure 3-58. Truck Prepared**

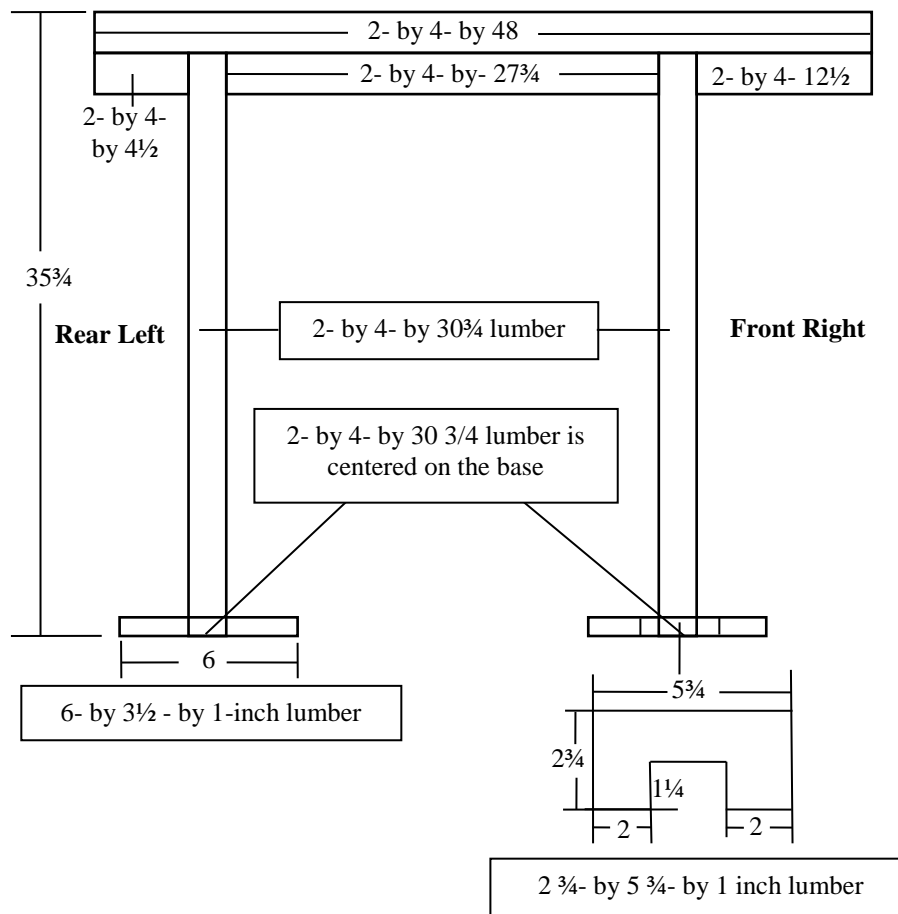


**Figure 3-58. Truck Prepared (Continued)**



**Figure 3-58. Truck Prepared (Continued)**

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



Step:

1. Build the turret housing support as shown using 8d nails.
2. Close the turret cover and secure it with the fasteners provided (not shown).
3. Center the support under the turret housing with the front end of the support toward the front end of the truck. Tie the top of the support in place with  $\frac{1}{2}$ -inch tubular nylon and the bottom of the support with type III nylon cord to convenient points. (not shown)
4. Tie the turret brake in the DOWN position with type III nylon cord. Secure the three turret latches to holes in the turret ring with type III nylon cord (not shown).

**Figure 3-59. Turret Support Prepared and Installed**

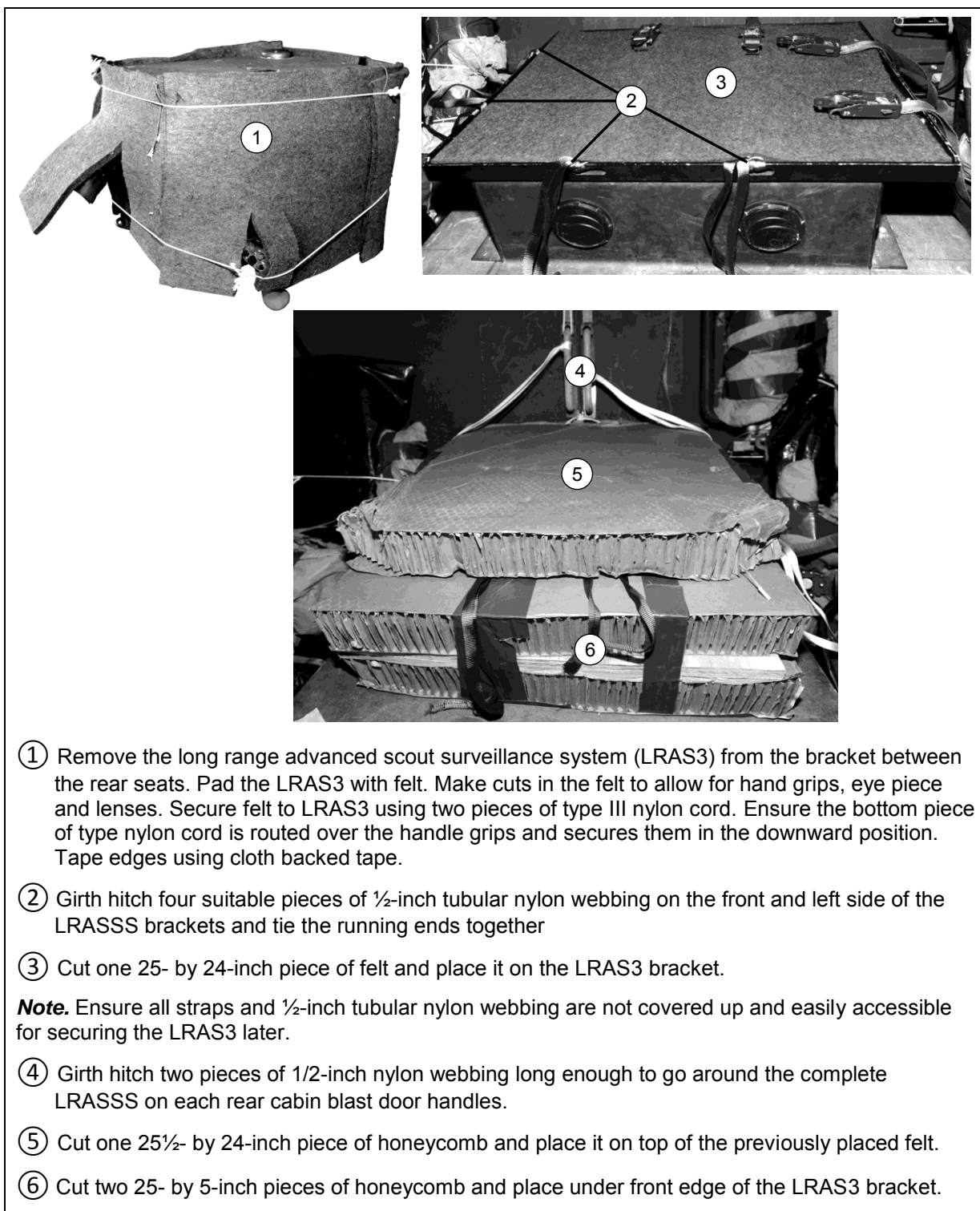
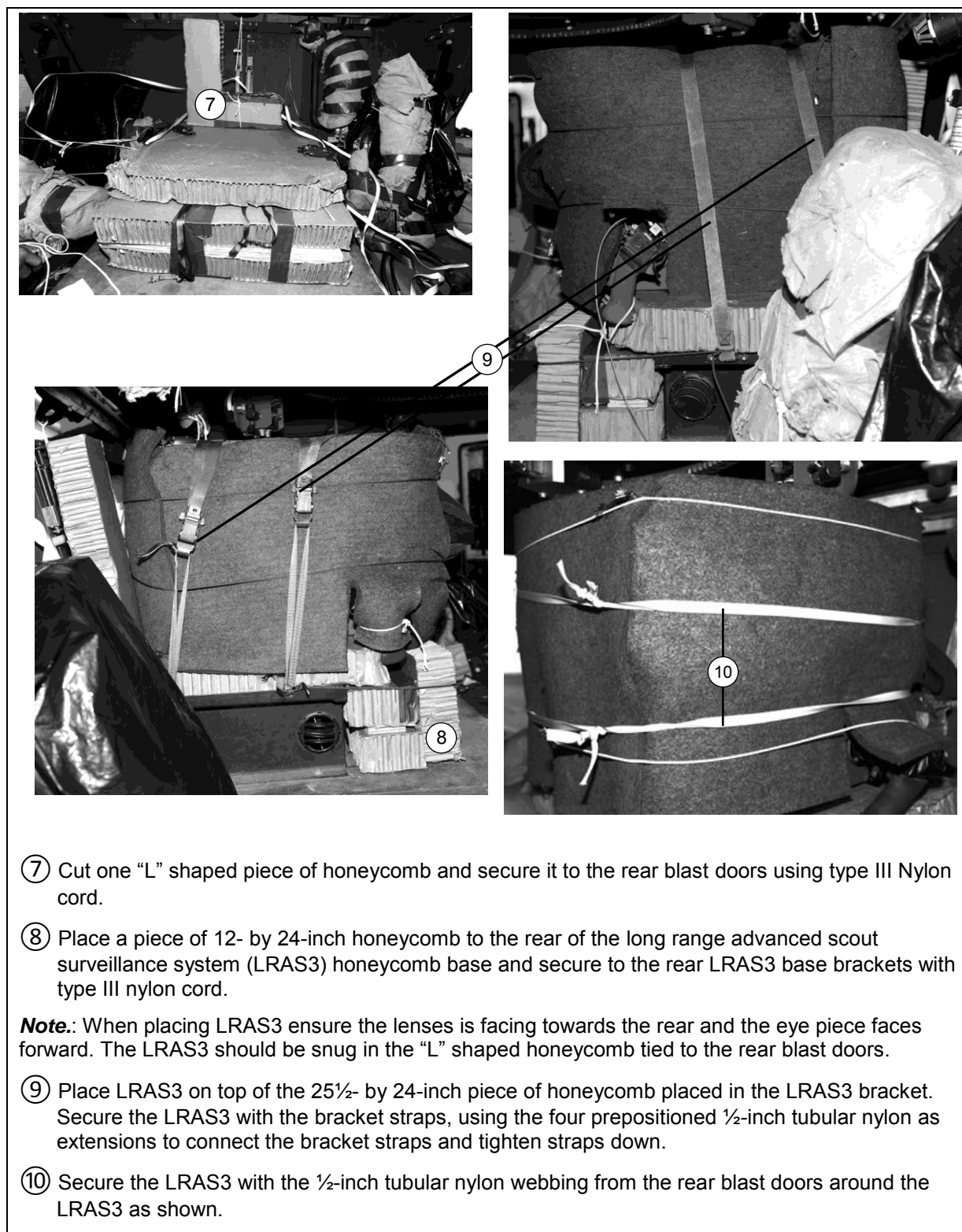
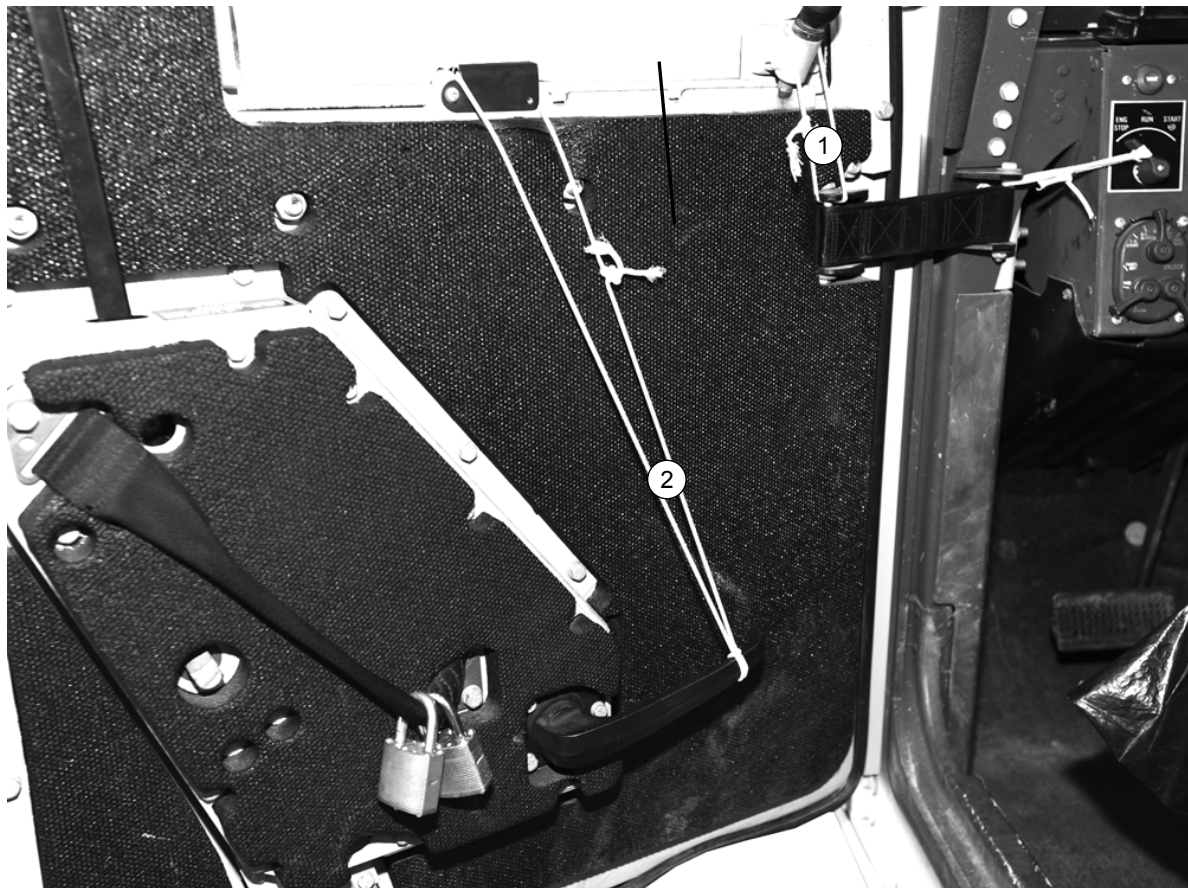


Figure 3-60. LRASSS Prepared



**Figure 3-61. Long Range Advanced Scout Surveillance System Reinstalled and Secured**





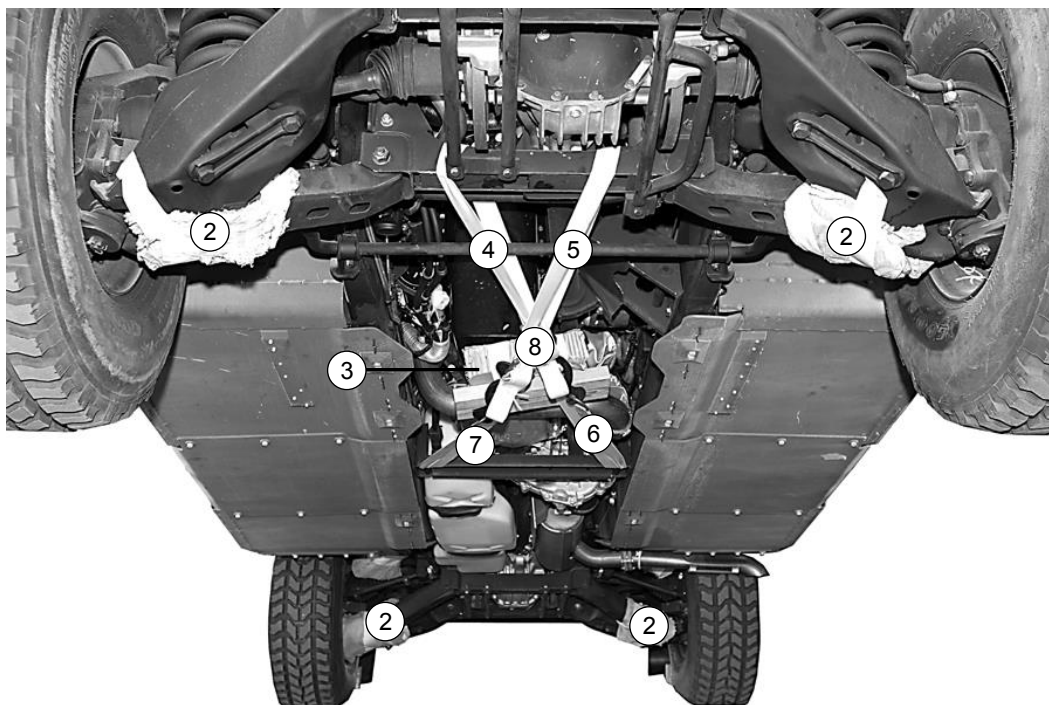
- ① Slide all windows to the 'closed' position. Secure each window closed by routing a length of type III nylon cord around the window adjusting knob and through the top door hinge and tie using a slip knot.
- ② Girth hitch a piece of type III nylon cord to the interior door latch and route through window frame.

#### CAUTION

Ensuring the doors are properly closed is critical for the integral strength of the doors during airdrop. If the doors are not properly closed, damage will occur.

**Note.** Ensure the door latches do not move once secured.

**Figure 3-62. Truck Doors Prepared and Secured**

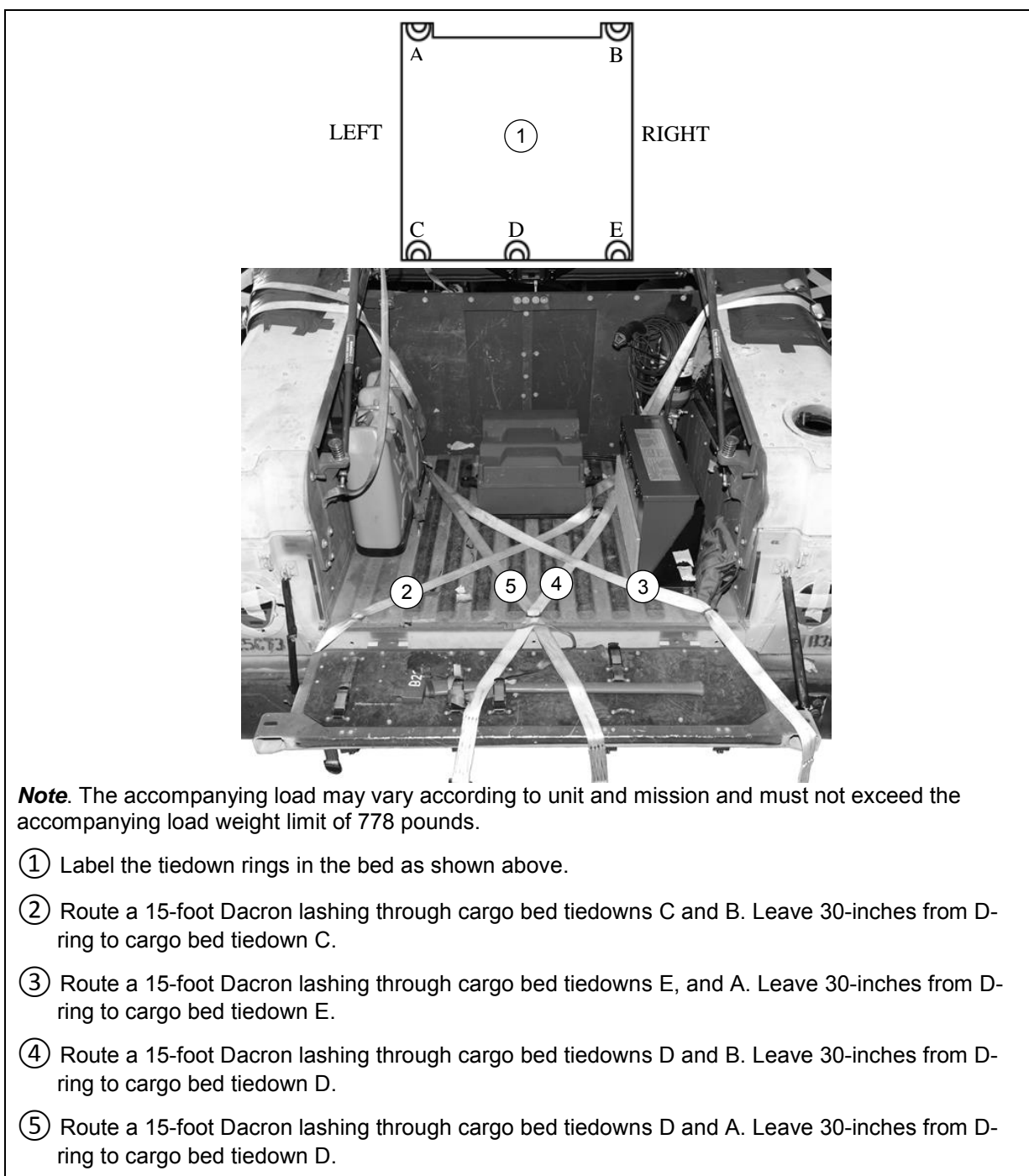


- ① Tape the fuel tank drain plug (not shown).
  - ② Pad the inside lower control arms at the front and rear of the truck with cellulose wadding and tape.
- Note.** When positioning the honeycomb and lumber ensure that the lumber is positioned side to side.
- ③ Prepare a 12- by 12-inch piece of honeycomb and a 2- by 6- by 16-inch piece of lumber to be placed under the oil pan. Center and tape the honeycomb to the lumber piece. Position the honeycomb flush against the oil pan.
  - ④ Route a 15-foot lashing around the right front frame cross member. Ensure that the plies of the lashing are routed around the stabilizer bar.
  - ⑤ Route a second 15-foot lashing around the left front frame cross member. Ensure that the plies of the lashing are routed around the stabilizer bar.
  - ⑥ Route the free end of the lashing placed in step 4 around the radius rod on the left side of the cross member in front of the fuel tank.
  - ⑦ Route the free end of the lashing placed in step 5 around the radius rod on the right side of the cross member in front of the fuel tank.
  - ⑧ Tighten and secure both lashings over the honeycomb and lumber placed under the oil pan. Separate the load binders so that they do not interfere with each other.

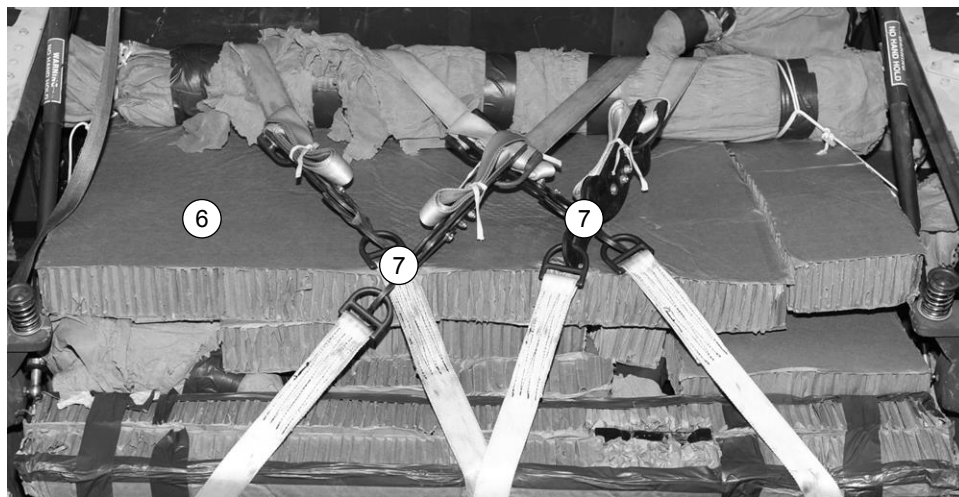
**Figure 3-63. Truck Underside Prepared**

## PREPARE AND SECURE THE ACCOMPANYING LOAD

3-48. Prepare and secure the accompanying load as shown in Figure 3-64.



**Figure 3-64. Accompanying Load Prepared and Secured**

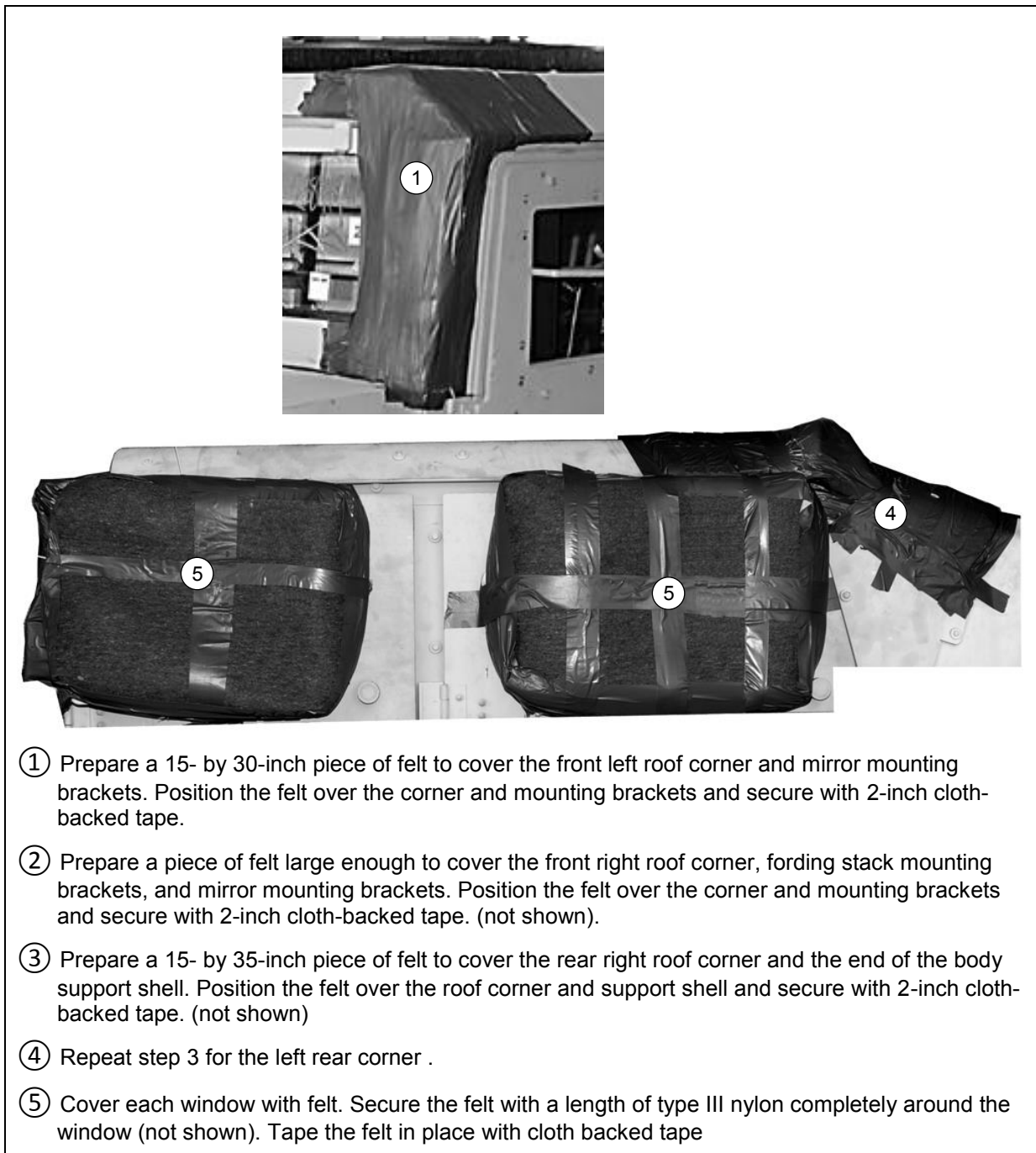


- ⑥ Place accompanying load in the cargo bed using honeycomb to fill any extra space.
- ⑦ Secure the load with previously routed lashings with D-rings and load binders.
- ⑧ Raise and close the tailgate and pull down and close the rear cargo door (not shown).

**Figure 3-64. Accompanying Load Prepared and Secured (continued)**

## PREPARE THE EXTERIOR OF THE TRUCK

3-49. Prepare the exterior of the truck as shown in Figure 3-65.



**Figure 3-65. Truck Exterior Prepared**

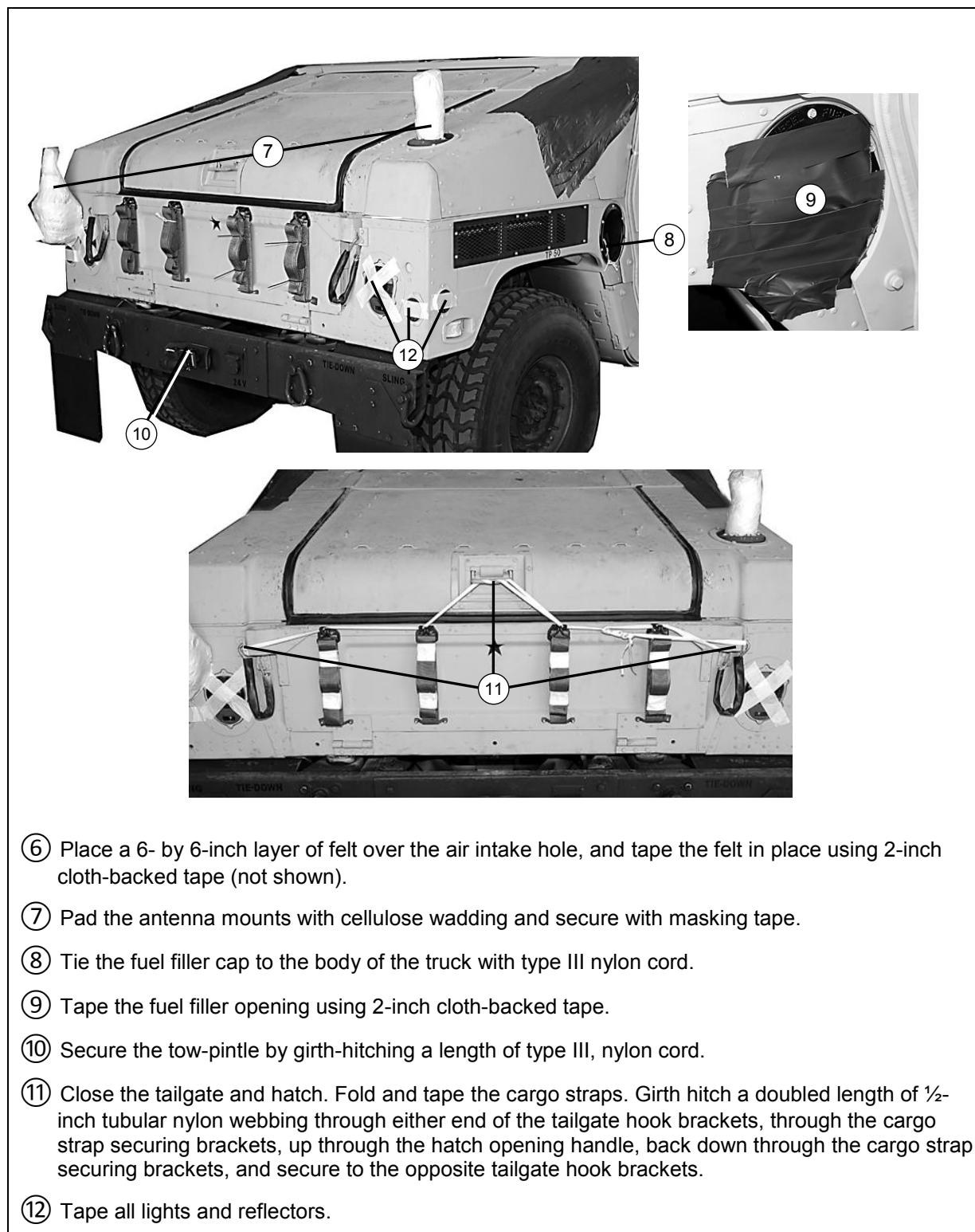


Figure 3-65. Truck Exterior Prepared (continued)

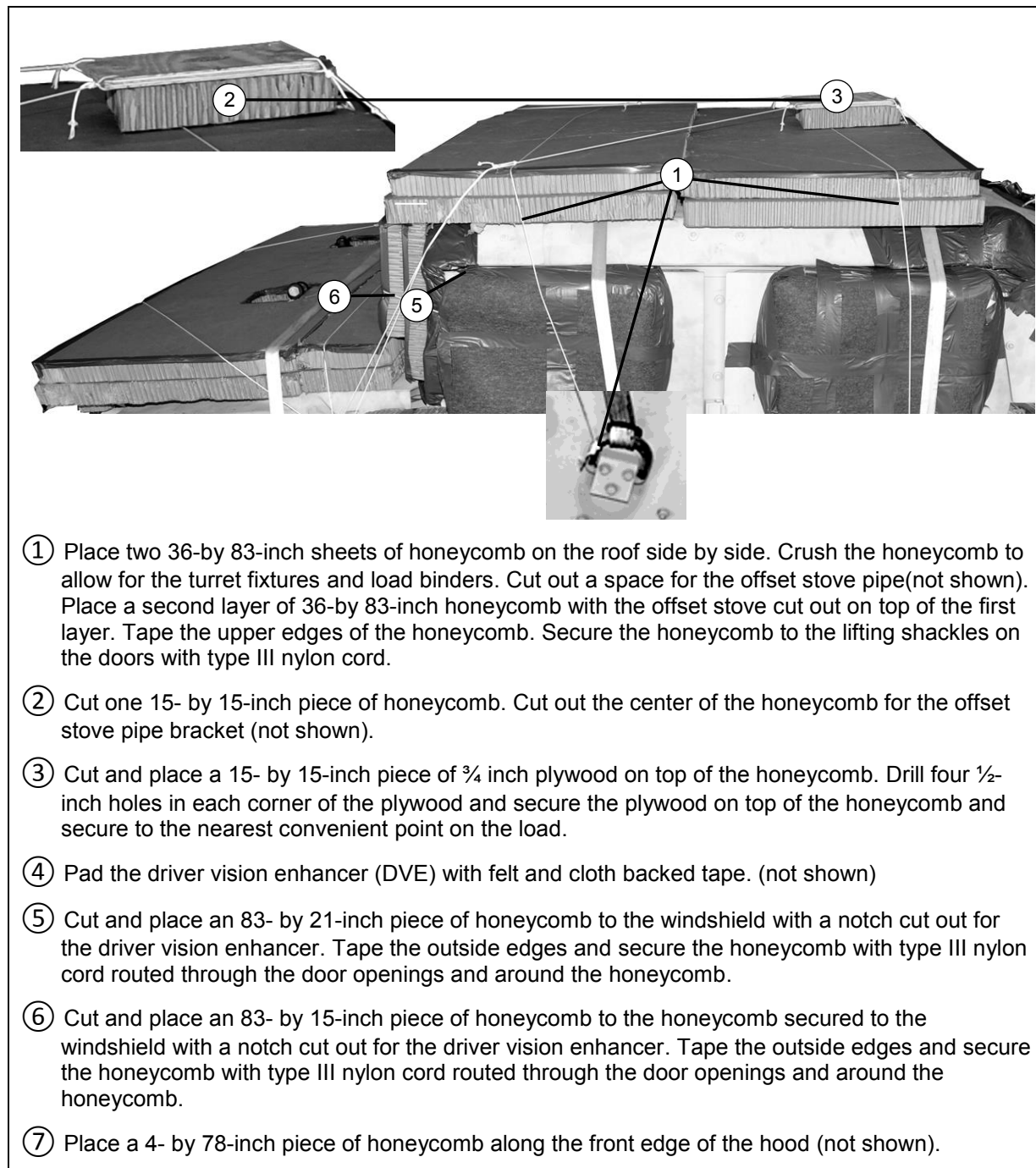


- ⑬ Girth hitch a 15-foot lashing to the lifting shackle on each of the four doors. Route all four running ends up over the top of the vehicle and secure with a load binder and D Ring.

**Figure 3-65. Truck Exterior Prepared (continued)**

## PREPARING THE HOOD, ROOF AND SIDE BOARDS.

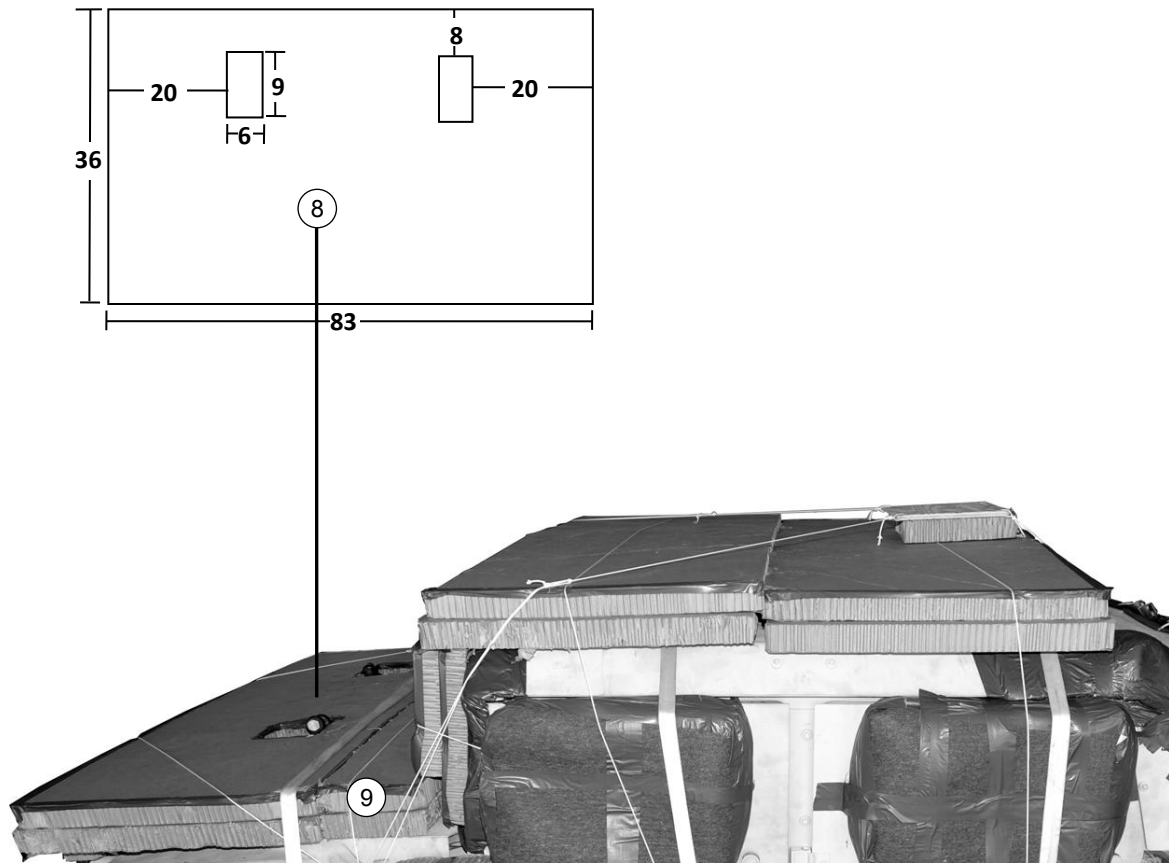
3-50. Prepare the hood and roof as shown in Figure 3-66.



**Figure 3-66. Hood, Roof and Sideboards Prepared and Installed**



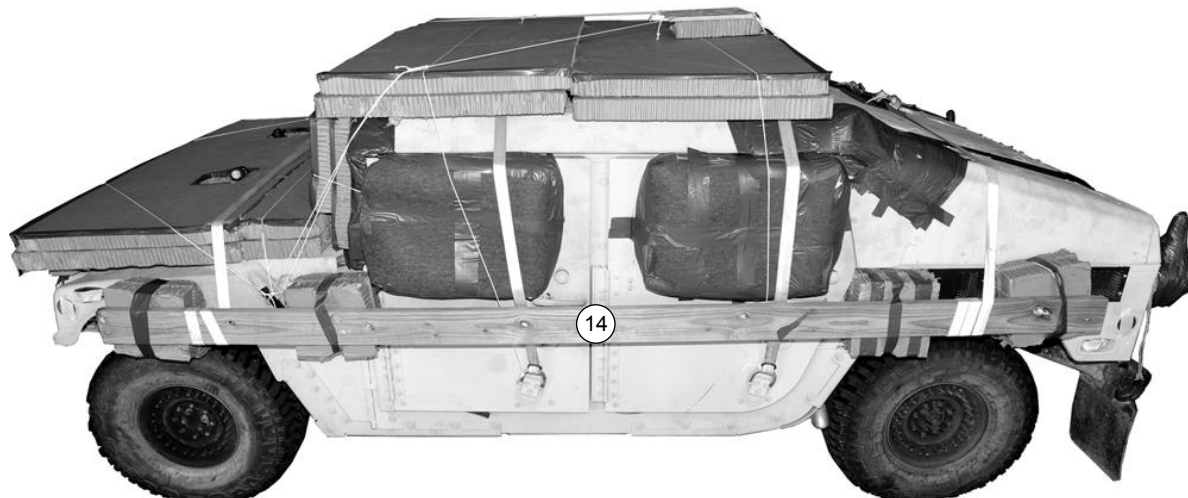
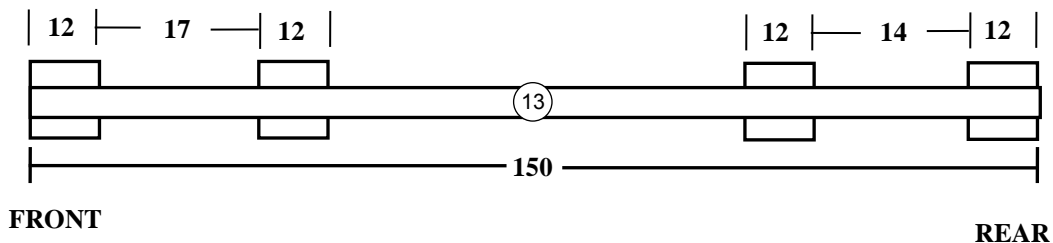
- Notes.** 1. All measurements are given in inches.  
2. This drawing is not drawn to scale.



- ⑧ Tie two 83- by 36-inch pieces of honeycomb with cutouts as shown above to the front of the hood with type III nylon cord. Tape the upper edges of the honeycomb. Route the cord through the grille and tie it on each side to the hood latches.
- ⑨ Place two 83-by12-inch piece of honeycomb behind the honeycomb on the hood flush against the honeycomb placed on the windshield. Tape the outer edges and secure with type III nylon cord to the hood latches.
- ⑩ Tape the hood latches using 2-inch cloth-backed tape. (not shown)

**Figure 3-66. Hood, Roof and Sideboards Prepared and Installed (continued)**

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

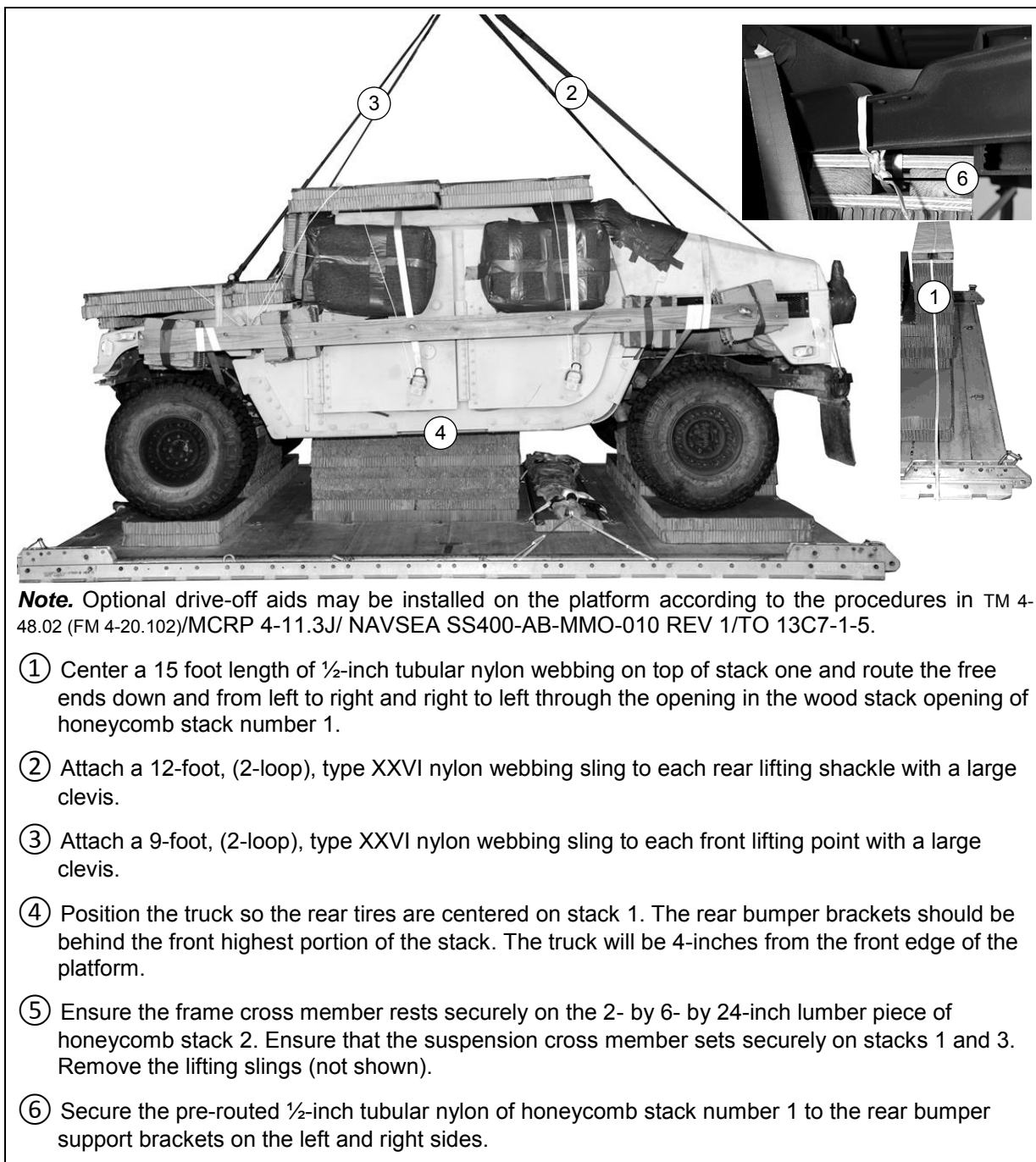


- ⑪ Pass a 15-foot lashing around the upper control arm behind a front wheel and through its own D-ring. Repeat for the other side of the truck. (not shown)
  - ⑫ Pass a 15-foot lashing around the upper control arm behind a rear wheel and through its own D-ring. Repeat for the other side of the truck. (not shown)
  - ⑬ Tape and glue two pieces of 12- by 12-inch pieces of honeycomb in four places to a 2- by 6- by 150-inch piece of lumber spaced as shown above. Repeat for the second side board (not shown).
  - ⑭ Position each body side protection board against the side of the cab. Ensure that all honeycomb pieces are flush against the front and rear fenders of the vehicle.
- Note.** When routing the lashings around the body side protection boards ensure to alternate the direction from top to bottom and bottom to top.
- ⑮ Bring the lashings positioned in steps 1 and 2 around the boards two turns. Secure the lashings from the left and right sides of the truck together with D-rings and load binders. (not shown)

**Figure 3-66. Hood, Roof and Sideboards Prepared and Installed (continued)**

## LIFTING AND POSITIONING THE M1151A1B1

3-51. Lift the vehicle using the slings and position it on the honeycomb stacks as shown in Figure 3-67.



**Figure 3-67. M1151A1B1 Lifted and Positioned**

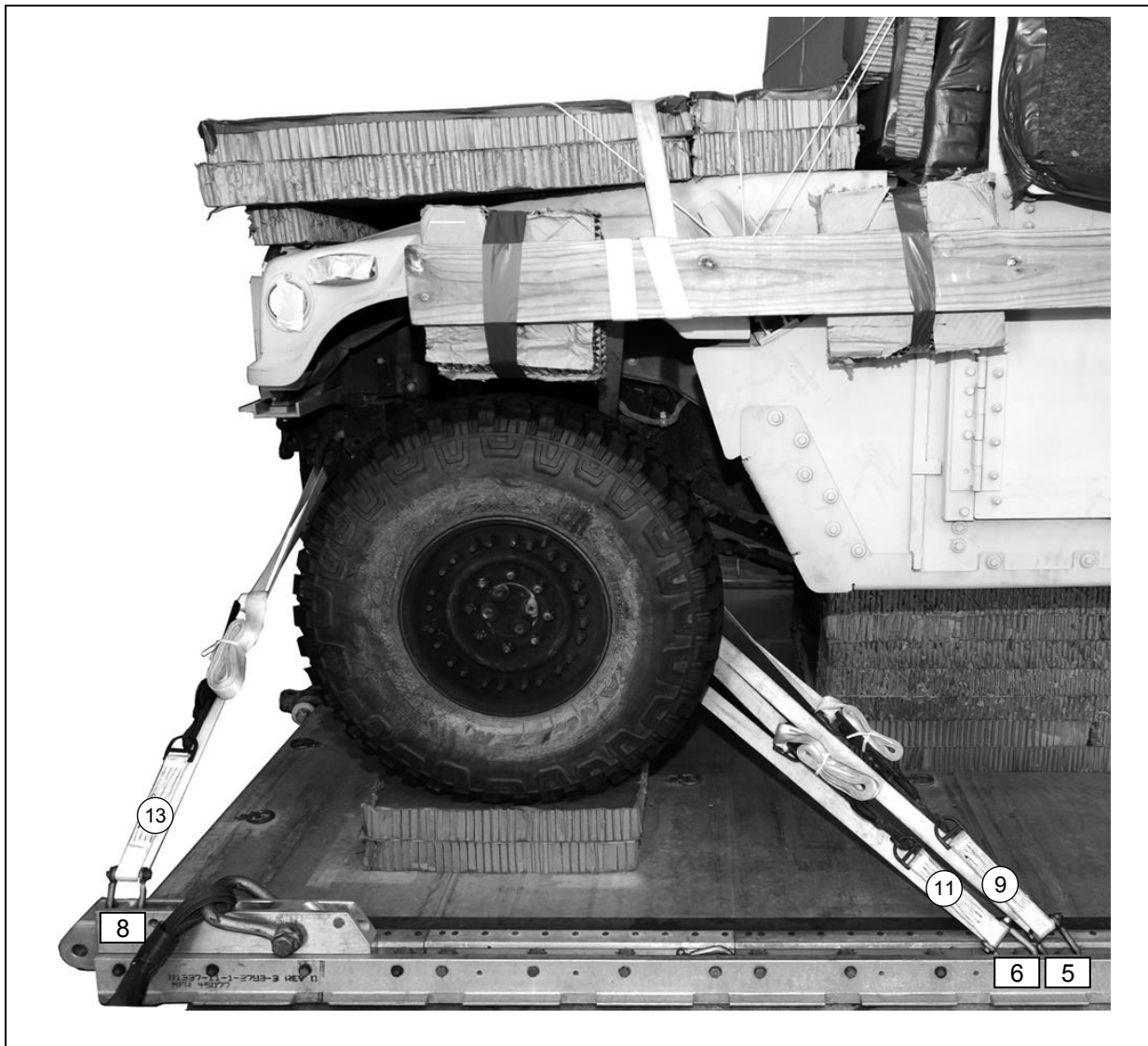
## LASHING THE M1151A1B1

3-52. Lash the M1151A1 B2 to the platform according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figures 3-68 and 3-69.



<i>Lashing Number</i>	<i>Tiedown Clevis Number</i>	<i>Instructions</i>
1	1	Pass lashing:
2	1A	Through tiedown bracket behind the left rear coil spring.
3	2	Through tiedown bracket behind the right rear coil spring
4	2A	Through left rear lifting shackle.
5	3	Through right rear lifting shackle
6	3A	Around left rear lower control arm.
7	4	Around right rear lower control arm
8	4A	Around the control arm, and through the tiedown bracket in front of the left rear coil spring. Ensure the lashing splits the exhaust pipe.
		Around the control arm, and through the tie-down bracket in front of the right rear coil spring.

**Figure 3-68. Lashings 1 through 8 Installed**

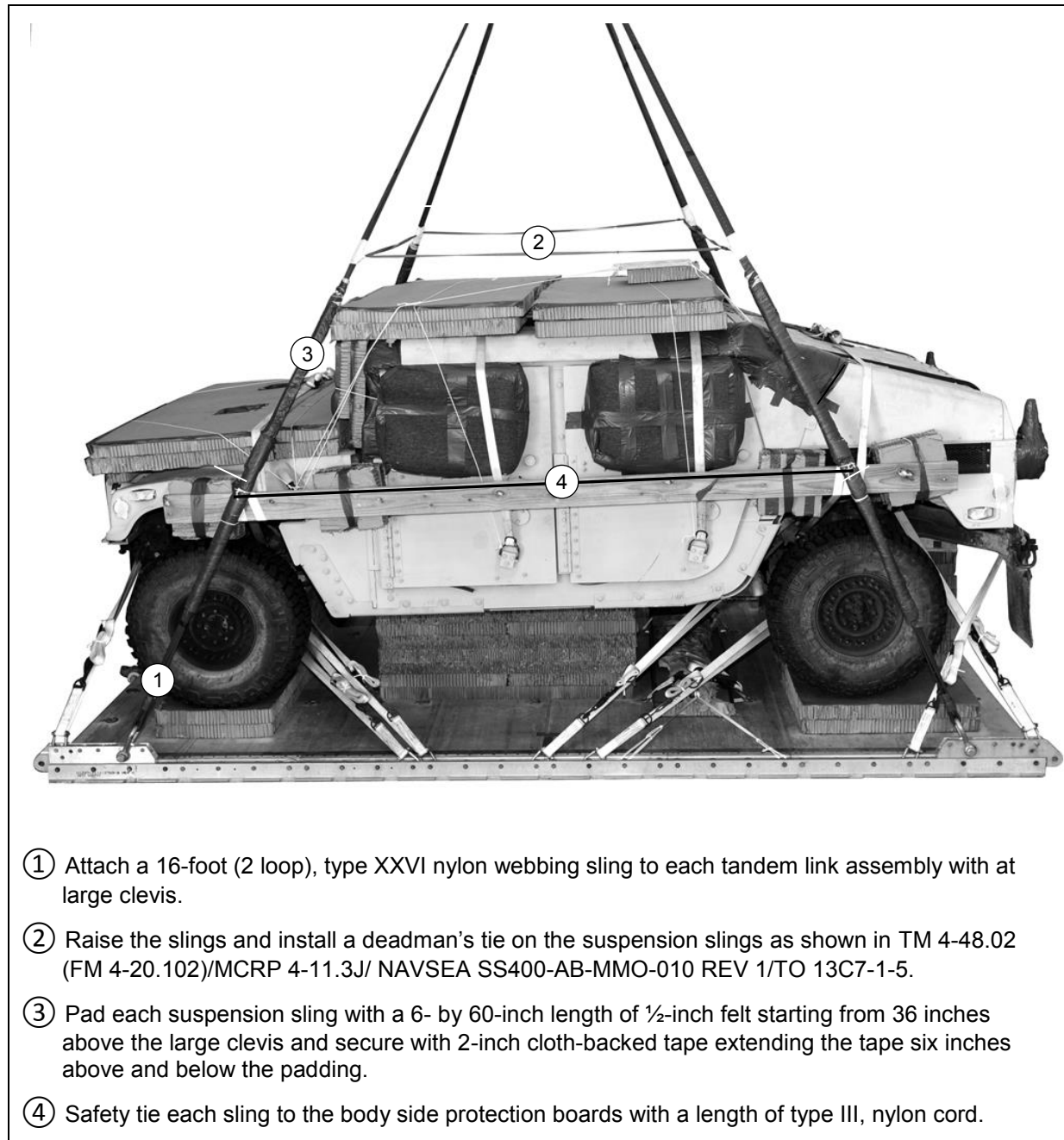


<b>Lashing Number</b>	<b>Tiedown Clevis Number</b>	<b>Instructions</b>
9	5	Pass lashing:
10	5A	Through the tiedown bracket behind the left front coil spring.
11	6	Through the tiedown bracket behind the right front coil spring.
12	6A	Around the left lower control arm.
13	8	Around the right lower control arm.
14	8A	Through the tiedown bracket on the end of the left frame rail.
		Through the tiedown bracket on the end of the right frame rail.

**Figure 3-69. Lashings 9 through 14 Installed**

## INSTALLING AND SAFETY TIEING THE SUSPENSION SLINGS

3-53. Install and safety tie the suspension slings as shown in Figure 3-70.



**Figure 3-70. Suspension Slings Installed and Safetytied**

## STOWING CARGO PARACHUTES

3-54. Stow the parachutes as shown in Figure -3-71.

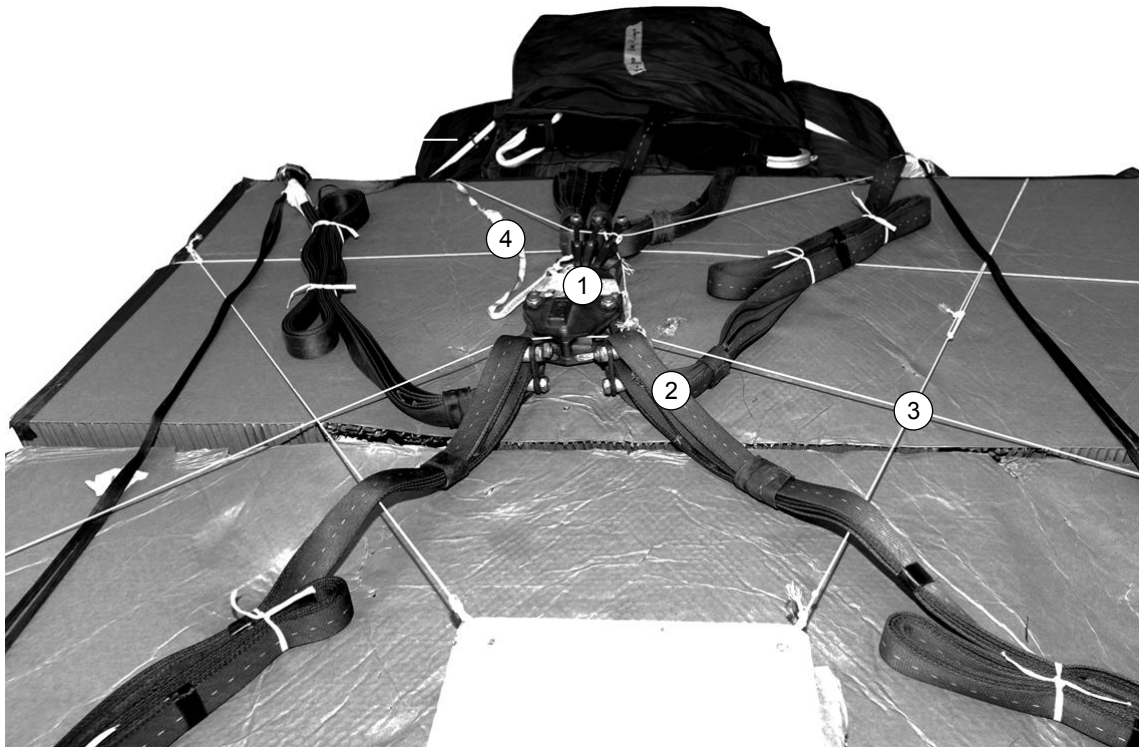


- ① Prepare, position, and stow three G-11B cargo parachutes according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.
- ② Install the front cargo parachute restraint strap according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5. Use tiedown clevises 7 and 7A.
- ③ Install the rear cargo parachute restraint strap according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 using platform bushings 27 and 27A.
- ④ Install a multiknife parachute release strap on the restraint straps on each side according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.

**Figure 3-71. Cargo Parachutes Stowed**

## INSTALLING THE RELEASE SYSTEM

3-55. Install the release assembly as shown in Figure 3-72.



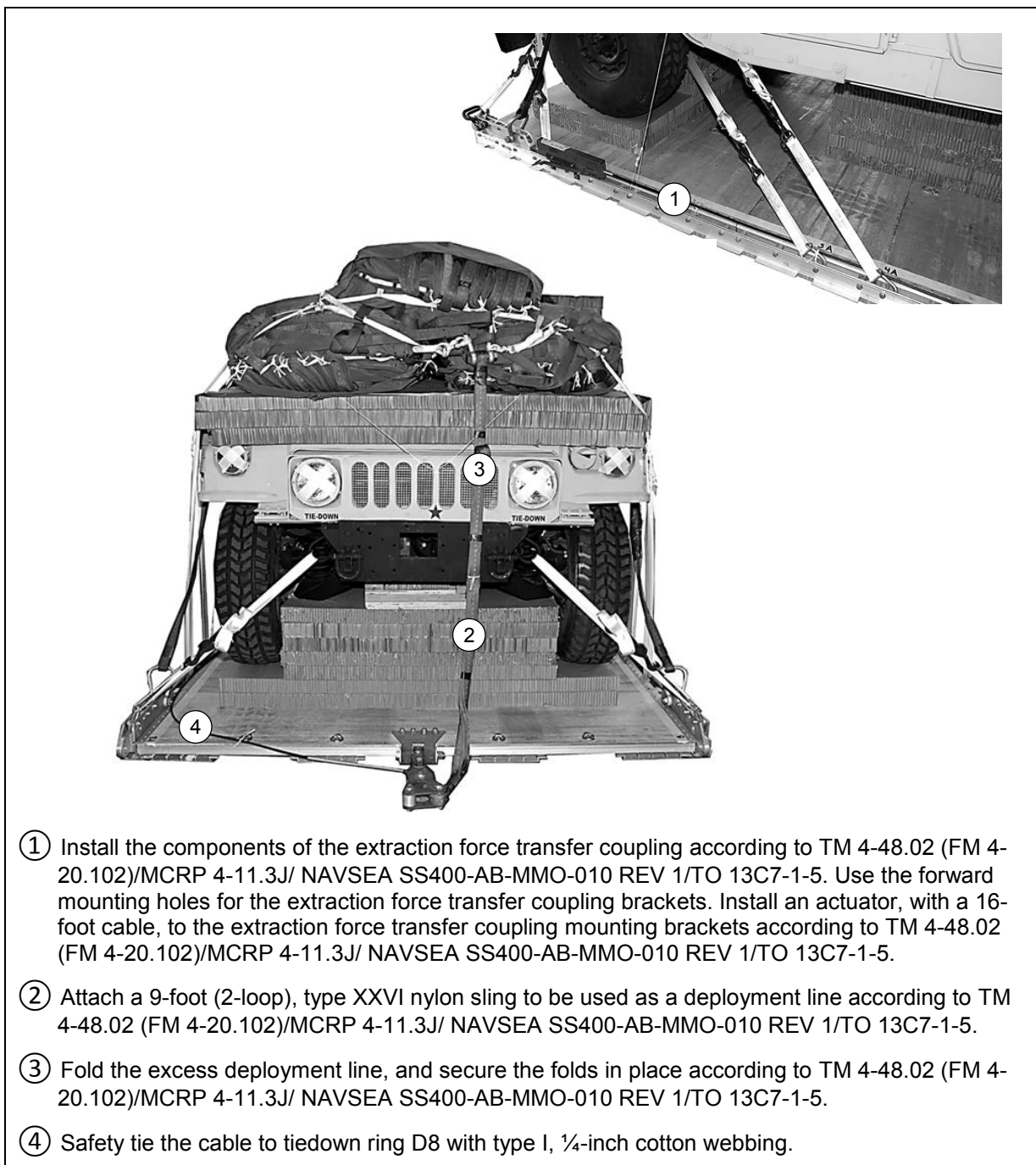
- ① Prepare and install the release assembly on top of the honeycomb over the turret according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.
- ② Attach the suspension slings and riser extensions according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 4. Fold the excess and secure with 1/4-inch cotton webbing.
- ③ Restrain the release to convenient points on the load using type III nylon cord.
- ④ Secure the arming wire lanyard to the parachute carrying handle and S-fold and tape the excess with a single wrap of masking tape.

**Figure 3-72. M-1 Cargo Parachute Release Assembly Installed**



## INSTALLING THE EXTRACTION SYSTEM

3-56. Install the extraction force transfer coupling (extraction force transfer coupling) extraction system according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figure 3-73.



**Figure 3-73. Extraction System Installed**

## **INSTALLING PROVISIONS FOR EMERGENCY RESTRAINTS**

3-57. Install the provisions for emergency restraints on the load according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.

## **PLACING EXTRACTION PARACHUTE**

3-58. Select the extraction parachute and extraction line needed using the extraction line requirements table in TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5. Rig the extraction line in an extraction line bag according to TM 10-1670-286-20/TO 13C5-2-41. Place the extraction parachute and extraction line on the load for installation in the aircraft.

## **MARKING RIGGED LOAD**

3-59. Mark the rigged load according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figure 3-74. Complete Shipper's Declaration for Dangerous Goods. If the load varies from the one shown, the weight, height, CB, and parachute requirements must be recomputed.

## **EQUIPMENT REQUIRED**

3-60. Use the equipment listed in Table 3-4 on page 3-110 to rig this load.

**CAUTION**

Make the final rigger inspection required by AR 59-4 (using DD Form 1748, Joint Airdrop Inspection Record (Platforms), or appropriate DD Form 1748 series).



C/B

**RIGGED LOAD DATA**

Weight: Load Shown.....	14,160 pounds
Maximum load allowed.....	14,160 pounds
Height (with three G-11B parachutes.....	96 inches
Width.....	108 inches
Length.....	196 inches
Overhang: Front (vehicle) .....	4 inches
Rear (extraction force transfer coupling).....	18 inches
Rear (extraction parachute jettison system).....	30 inches
Center of Balance (CB) (from front edge of platform).....	98 inches

**Figure 3-74. M1151A1B1 Armament Carrier with Long Range Advanced Scout Surveillance System and New Doors Rigged for Low-Velocity Airdrop**

**Table 3-4. Equipment Required for Rigging the M1151A1B1 Long Range Advanced Scout Surveillance System and New Doors for Low-Velocity Airdrop**

<i>National Stock Number</i>	<i>Item</i>	<i>Quantity</i>
8040-00-273-8713	Adhesive paste, 1-gallon	As required
4030-00-090-5354	Clevis, suspension, 1-inch (large)	5
4030-00-678-8562	Clevis, suspension, 3/4-inch (medium)	4
4020-00-240-2146	Cord, nylon, type III, 550-pound	As required
1670-00-434-5785	Coupling, airdrop extraction force transfer, w/16-ft. cable	1
8135-00-664-6958	Cushioning material (Cellulose wadding)	As required
8305-00-958-3685	Felt, 1/2-inch thick	As required
1670-01-183-2678	Leaf, extraction line (line bag) ( add 2 for C-17)	2
	Line extraction:	
1670-01-062-6313	60-foot (3-loop), type XXVI (for C-130)	1
1670-01-107-7651	140-foot (3-loop), type XXVI (for C-17)	1
1670-01-064-4452	60-foot (1-loop), type XXVI (for C-17), (drogue line)	1
1670-00-783-5988	Link assembly, type IV (C-17 only)	1
1670-01-493-6418	Link assembly, two-point, 3 3/4-inch, small:	1
	Lumber:	
5510-00-220-6146	2- by 4- by 96-inch	6
5510-00-220-6148	2- by 6- by 192-inch	2
5315-00-753-3885	Nail, steel, common, 16D	As required
5315-00-010-4659	Nail, steel, common, 8D	As required
1670-00-753-3928	Pad, energy-dissipating (honeycomb)	19 sheets
1670-01-016-7841	Parachute, cargo, G-11B	3
	Parachute, cargo, extraction:	
1670-01-063-3716	22-foot	2
1670-01-063-3715	15-foot (C-17 only)	1
	Platform, airdrop, type V, 16-foot:	
1670-01-162-2372	Clevis assembly (type V)	68
1670-01-162-2376	Extraction bracket assembly	1
1670-01-162-2381	Tandem link assembly (Multipurpose link)	2
5530-00-128-4981	Plywood, 3/4-inch	2 sheets

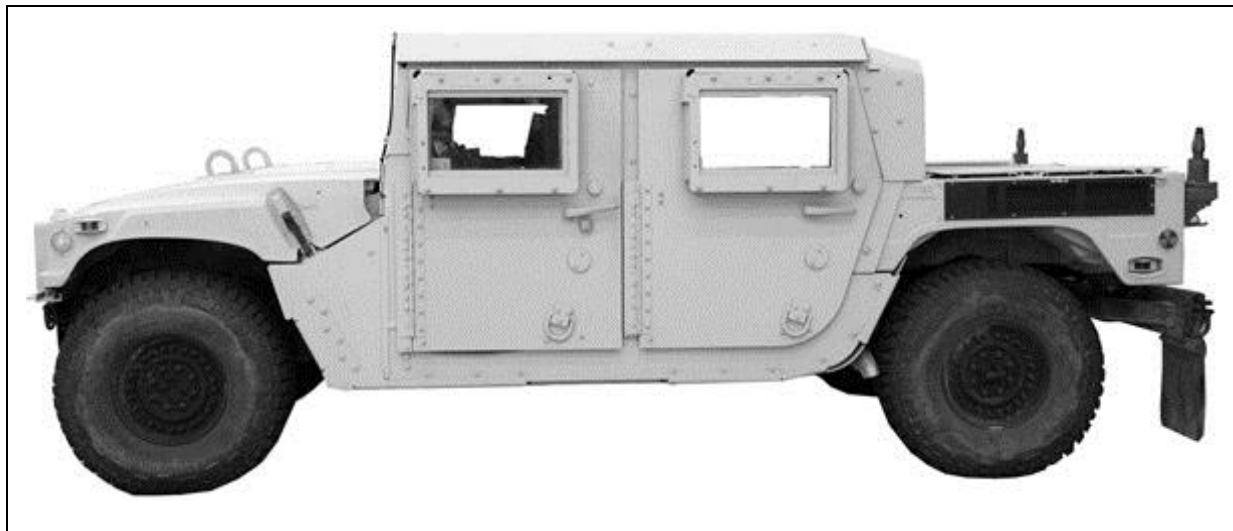
**Table 3-4. Equipment Required for Rigging the M1151A1B1, Long Range Advanced Scout Surveillance System and New Doors for Low-Velocity Airdrop (continued)**

<i>National Stock Number</i>	<i>Item</i>	<i>Quantity</i>
1670-01-097-8816	Release, cargo parachute, M-1	1
	Sling, cargo, airdrop:	
1670-01-062-6304	9-foot (2-loop), type XXVI	2
1670-01-062-6303	12-foot (2-loop), type XXVI	2
1670-01-063-7761	16-foot (2-loop), type XXVI	4
5340-00-040-8219	Strap, parachute, release, multi-knife	2
7501-00-266-5016	Tape, adhesive, 2-inch	As required
1670-00-937-0271	Tiedown assembly, 15-foot	30
1670-01-483-8259	Towplate release mechanism (H-block) (C-17 only)	1
	Webbing:	
8305-00-268-2411	Cotton, 1/4-inch, type I	As required
8305-00-082-5752	Nylon, tubular, 1/2-inch	As required
8305-00-559-6871	Nylon, type VIII	As required

**SECTION V: RIGGING THE M1165A1 WITH B3 ARMOR KIT, TRUCK, UTILITY:  
ARMORED, COMMAND AND CONTROL / GENERAL PURPOSE VEHICLE  
WITH ACCOMPANYING LOAD FOR LOW-VELOCITY AIRDROP ON A 16-  
FOOT PLATFORM**

**DESCRIPTION OF LOAD**

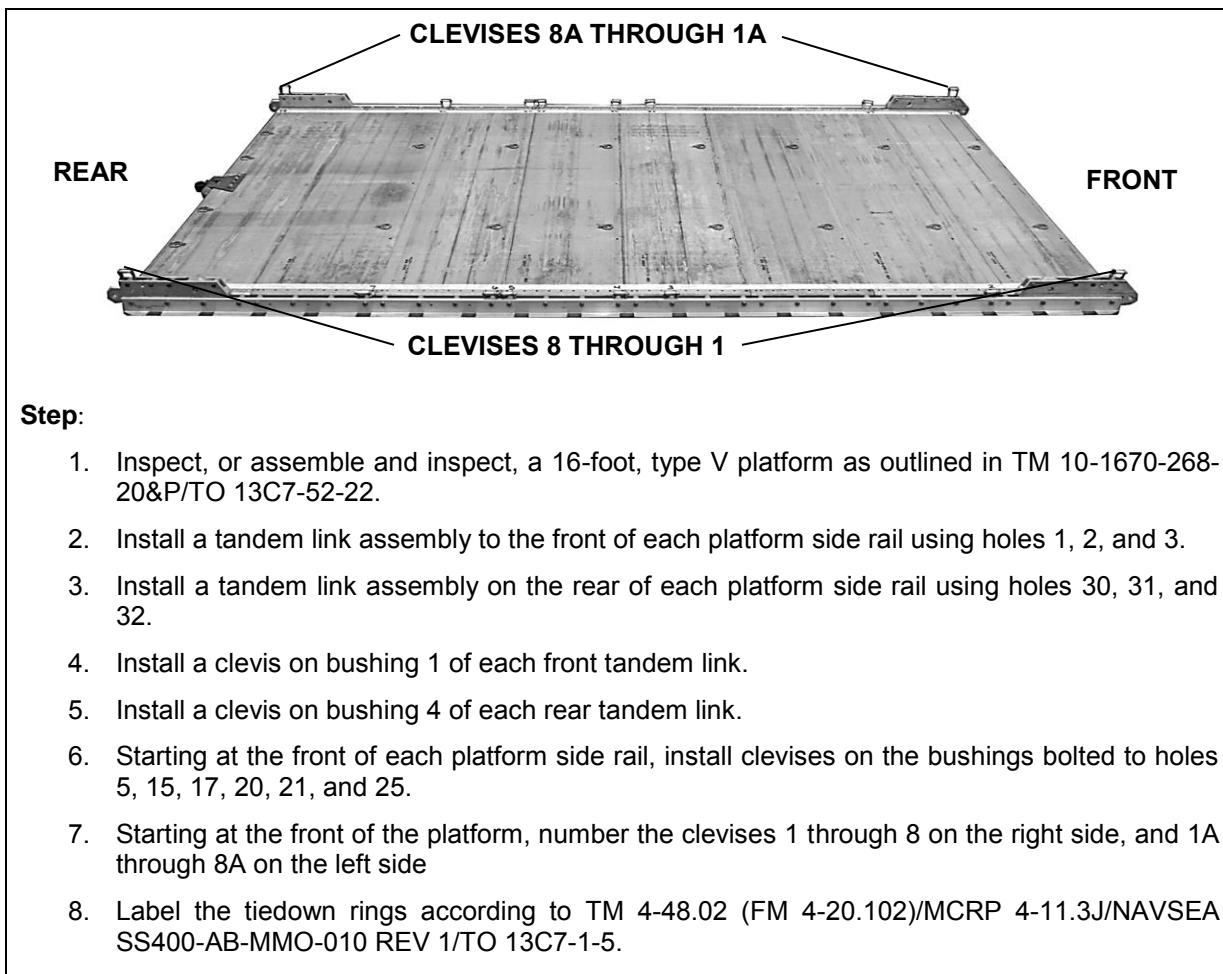
3-61. The M1165A1 is shown in Figure 3-75. The M1165A1 with the B3 armor kit truck is equipped with an integrated air conditioning system, two parallel condenser assemblies located above each of the rear wheel wells and new variable rate rear springs. The B3 armor kit is an IAP, including underbodies, rocket armor and lower windshield deflector armor. The M1165A1 with B3 armor kit has a payload of 2,230 pounds (including crew), is 75-inches high, 91-inches wide, and 194 inches long and a gross vehicle weight (GVW) of 12,100 pounds. The M1165A1 with the B3 armor kit is rigged with an accompanying load of 105-millimeter (mm) ammunition boxes weighing a maximum of 1,034 pounds on a 16-foot, type V platform.



**Figure 3-75. M1165A1 Utility Truck with the B3 Armor Kit**

## PREPARING PLATFORM

3-62. Prepare a 16-foot, type V airdrop platform according to TM 10-1670-268-20&P/TO 13C7-52-22. Install tandem links and platform clevises according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figure 3-76.



**Figure 3-76. Platform Prepared**

## PREPARING AND POSITIONING HONEYCOMB STACKS

3-63. Build the honeycomb stacks as shown in Figures 3-77 through 3-79. Position the stacks on the platform as shown in Figure 3-80.

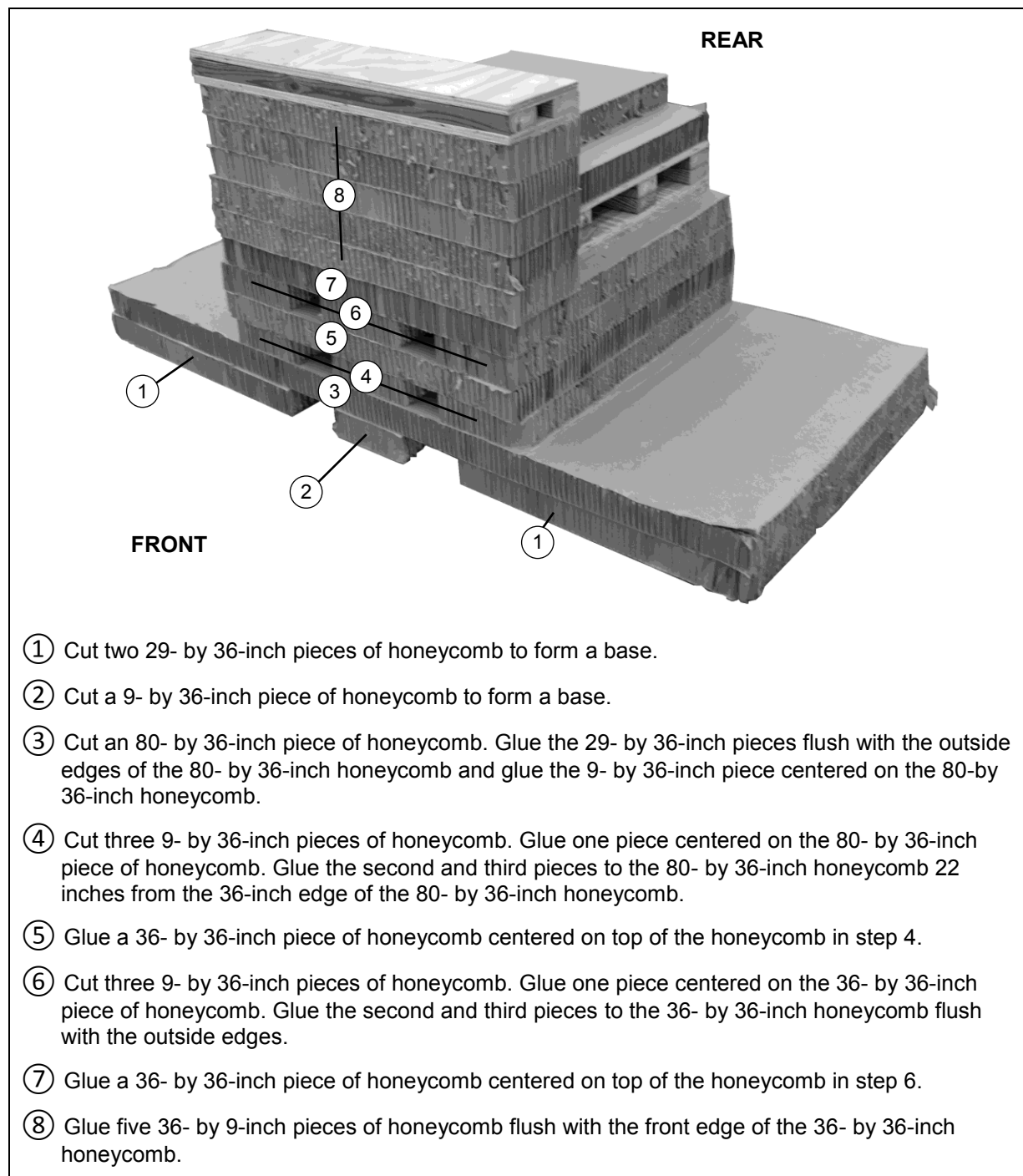


Figure 3-77. Stack 1 Constructed



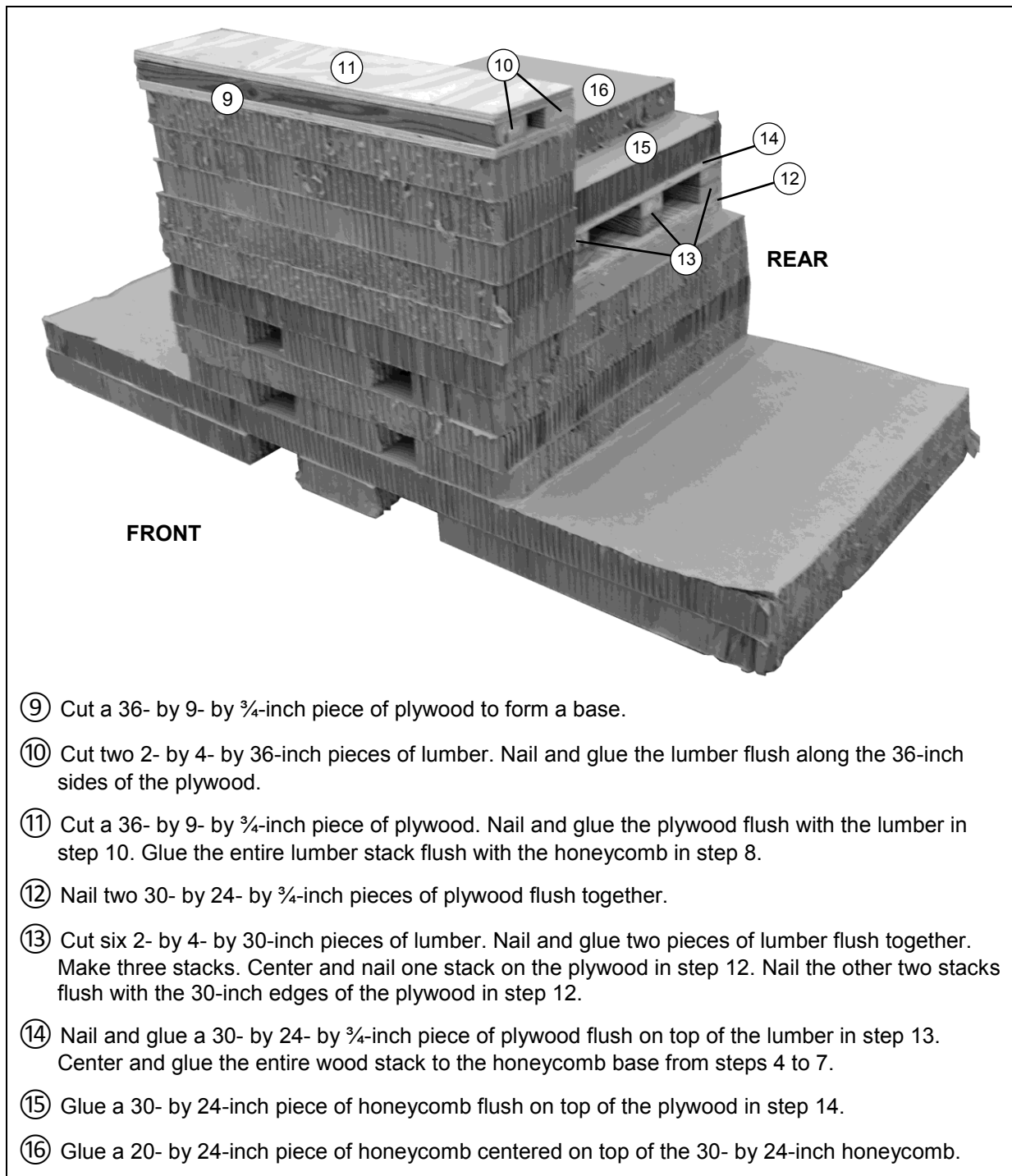
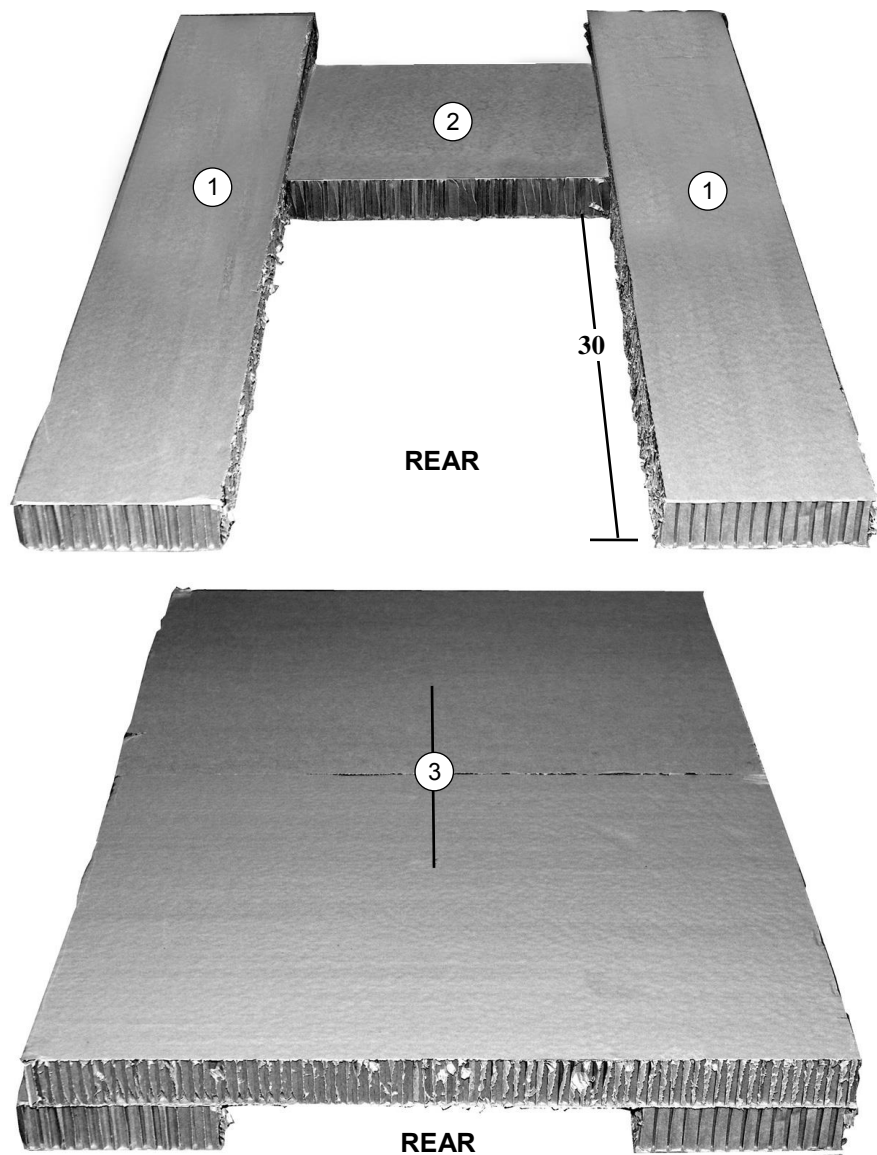


Figure 3-77. Stack 1 Constructed (Continued)

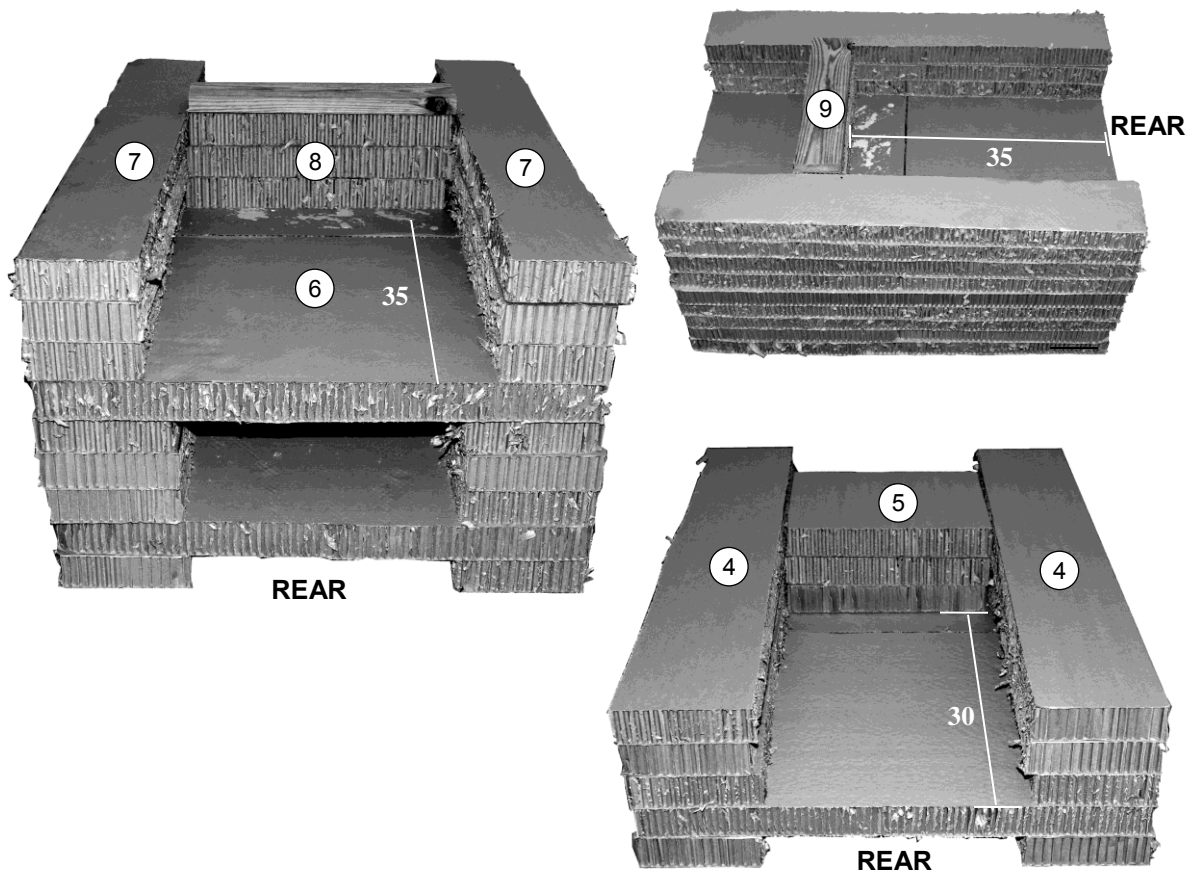
*Note.* All measurements are given in inches.



- ① Cut two 10- by 56-inch pieces of honeycomb.
- ② Cut and position a 20- by 16-inch piece of honeycomb between the 10- by 56-inch honeycomb 30 inches from the rear edge of the stack.
- ③ Glue two 40- by 28-inch pieces of honeycomb front to rear flush with the side edges on top of the honeycomb in steps 1 and 2.

**Figure 3-78. Stack 2 Constructed**

*Note.* All measurements are given in inches.



- ④ Cut six 10- by 56-inch pieces of honeycomb. Glue three pieces together flush with the 56-inch edges of the stack.
- ⑤ Cut and glue three 20- by 16-inch piece of honeycomb between the 10- by 56-inch honeycomb 30 inches from the rear edge of the stack.
- ⑥ Cut two pieces of 40- by 28-inch honeycomb. Glue and place front to rear and flush on top of the honeycomb in steps 4 and 5.
- ⑦ Cut six 8- by 56-inch pieces of honeycomb. Glue three pieces together and place flush with outside edge of the 56-inch pieces.
- ⑧ Cut and glue three 24- by 6-inch piece of honeycomb between the 8- by 56-inch honeycomb 35 inches from the rear edge of the stack.
- ⑨ Cut and glue a 2- by 6- by 24-inch piece of lumber on top of the honeycomb in step 8.

**Figure 3-78. Stack 2 Constructed (Continued)**

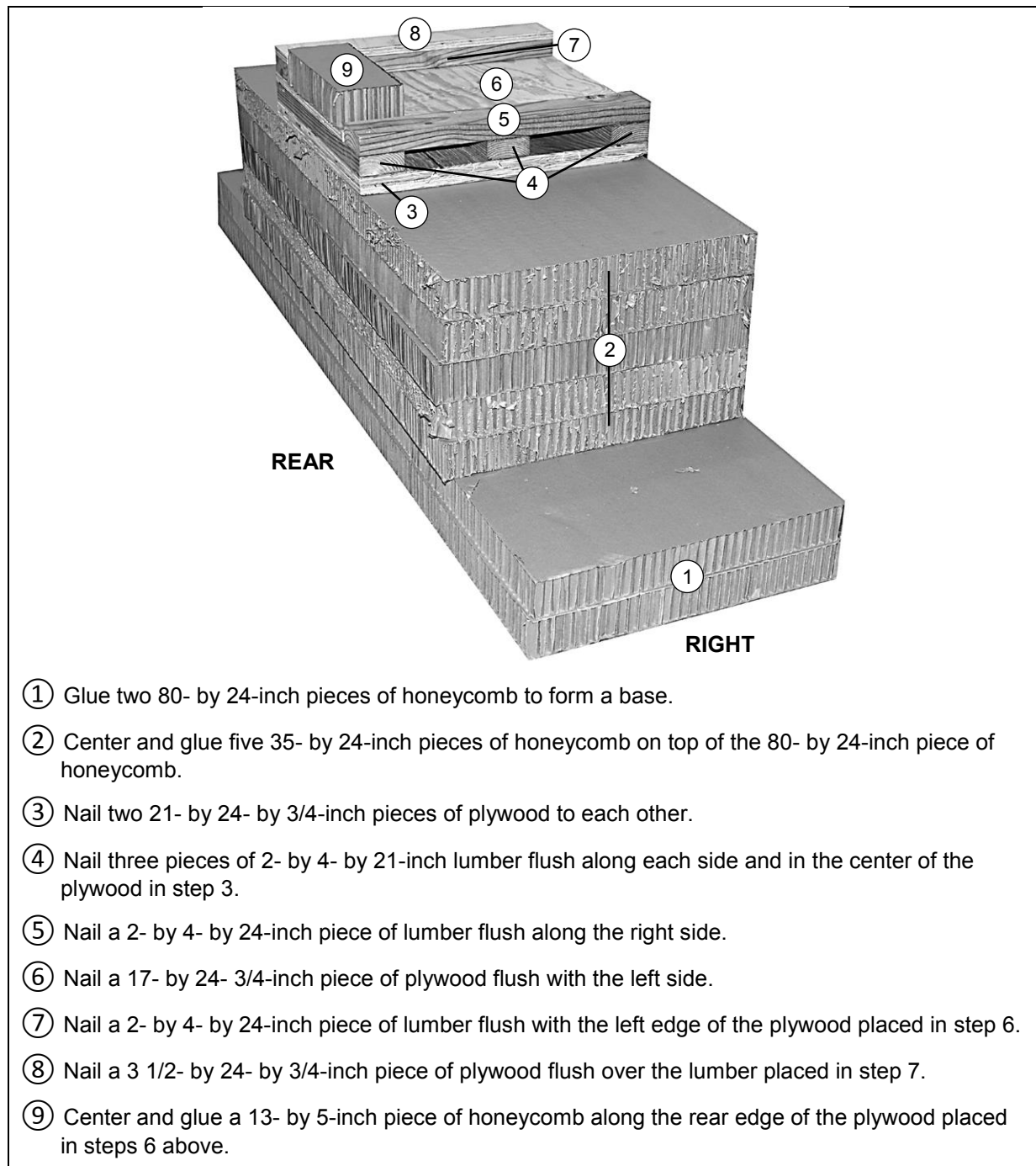
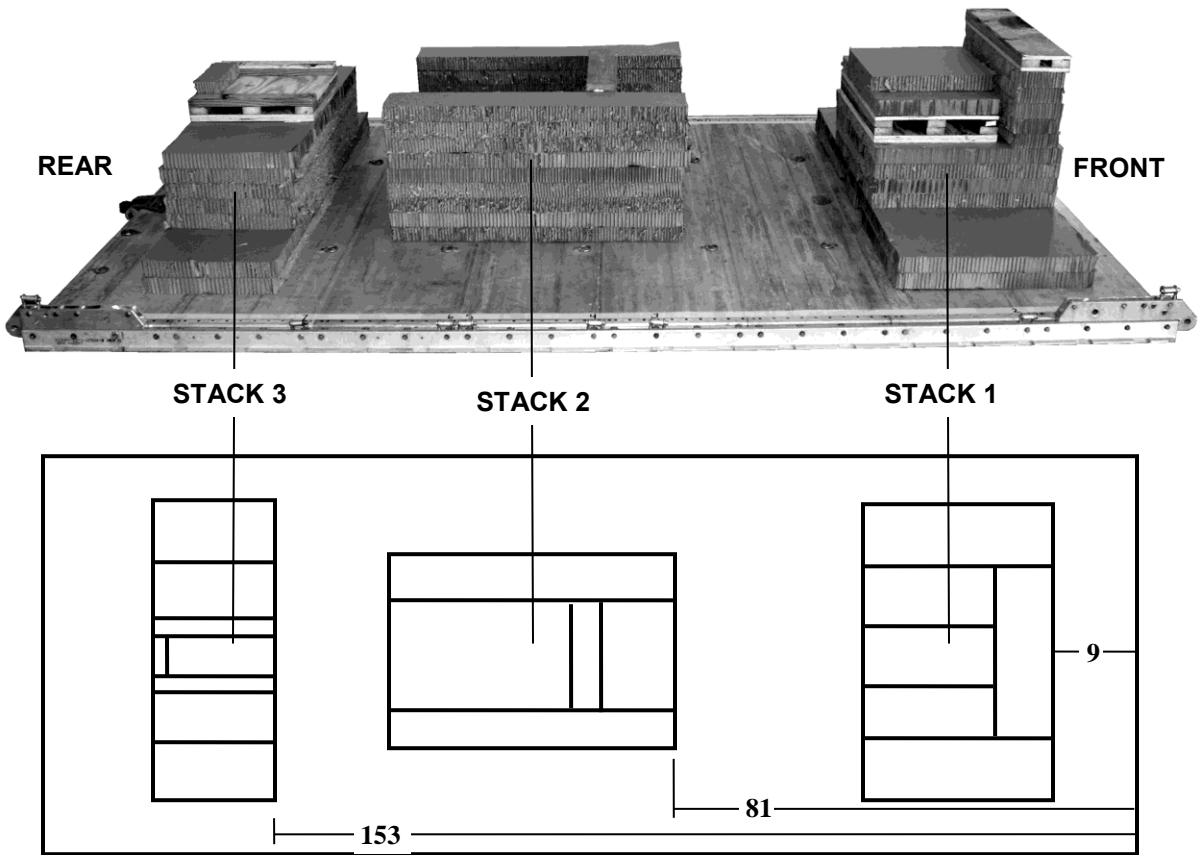


Figure 3-79. Stack 3 Constructed

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



Stack Number	Position on Platform
1	Place stack: Centered 9 inches from the front edge of the platform.
2	Centered 81 inches from the front edge of the platform.
3	Centered 153 inches from the front edge of the platform.

**Figure 3-80. Honeycomb Stacks Positioned on Platform**

## PREPARING THE TRUCK

3-64. Prepare the interior of the truck as shown in Figure 3-81. Prepare the undercarriage as shown in Figure 3-82. Prepare the exterior of the truck as shown in Figure 3-83.

### CAUTION

Package, label, and mark hazardous material according to AFMAN 24-204(I)/TM 38-250/NAVSUP PUB 505/MCO P4030.19H/DLAI 4145.3.

### CAUTION

A full fuel tank does not allow for fuel expansion, and is a danger to aircraft and crew.

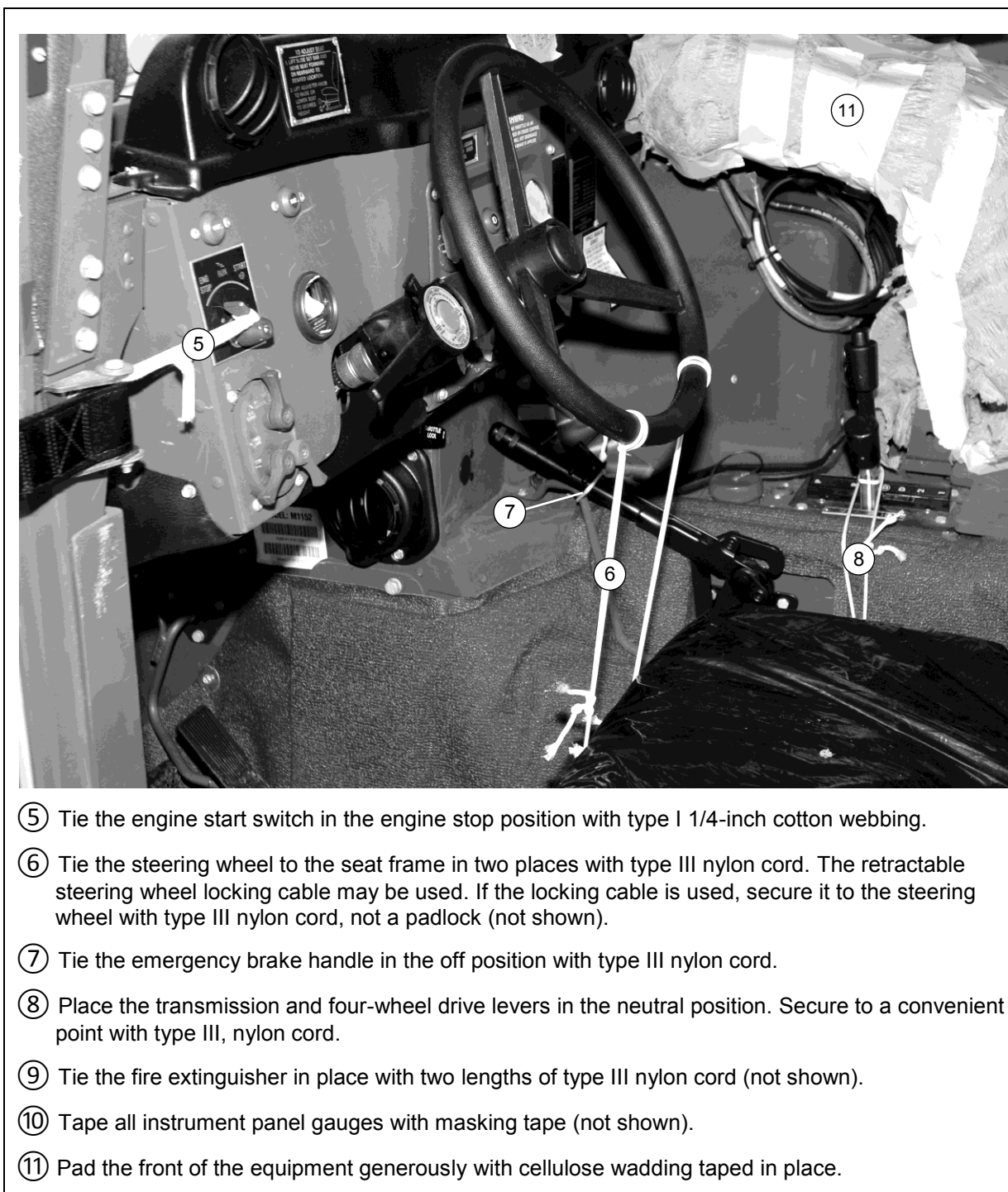


- ① Ensure the fuel tank is no more than 3/4 full (not shown).

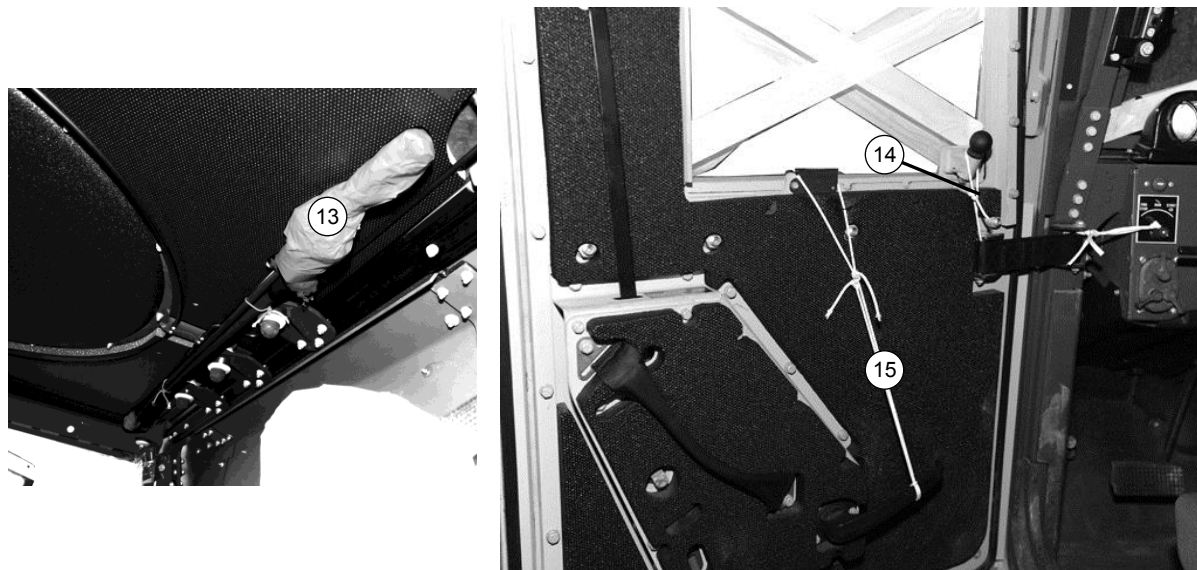
**Note.** Certain units may be authorized a waiver allowing 95% fuel. One way to verify the tank is 95% full is to fill the tank and withdraw 1 ¼ gallons with a hand pump.

- ② Ensure the batteries and battery compartment comply with AFMAN 24-204(I)/TM 38-250/NAVSUP PUB 505/MCO P4030.19H/DLAI 4145.3 (not shown).
- ③ Remove and pad the side view mirrors with cellulose wadding. Place the nuts and bolts in the mounting holes and tighten in place. Cut two 4- by 15-inch pieces of honeycomb and position a piece behind each front seat. Position and secure the mirrors on top of the honeycomb pieces against the back of the seats and secure to the front seats with type III nylon cord.
- ④ Remove the breather cap and fording stack. Leave the cap attached to the stack. Pad the stack with cellulose wadding and tape. Secure to the left rear passenger seat with type III nylon cord. Secure the seat belt over the stack.

**Figure 3-81. Truck Interior Prepared**



**Figure 3-81. Truck Interior Prepared (Continued)**



- ⑫ Secure communications equipment in its mount with chains and padlocks. Tie the equipment to its mount with 1-inch tubular nylon webbing. Pad the radio handset with cellulose wadding and tie the handset to the mount with type III nylon cord (not shown).
- ⑬ Remove antennas, pad and tape the ends and secure the antennas to the roofs interior above the interior cab doors with type III nylon cord.
- ⑭ Slide all windows to the closed position. Secure each window by routing a length of type III nylon cord around the window adjusting knob and through the top door hinge and secure with a slip knot.

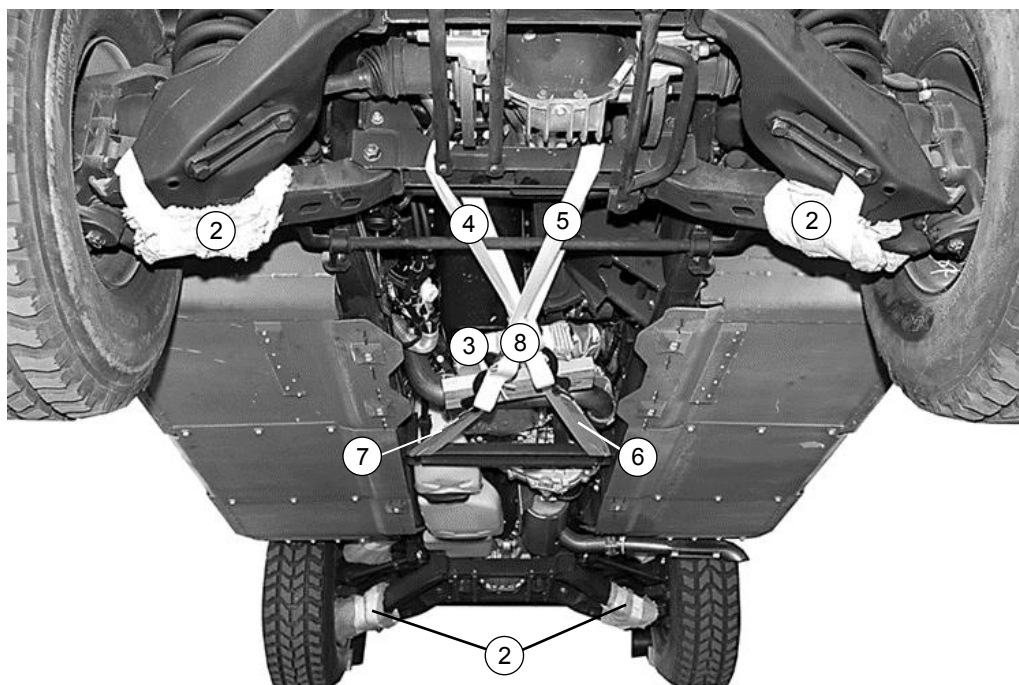
### CAUTION

Ensuring the doors are properly closed is critical for the integral strength of the doors during airdrop. If the door is not properly closed damage will occur.

- ⑮ Girth hitch a piece of type III nylon cord to the interior door latch and route through window frame and secure using a slip knot.

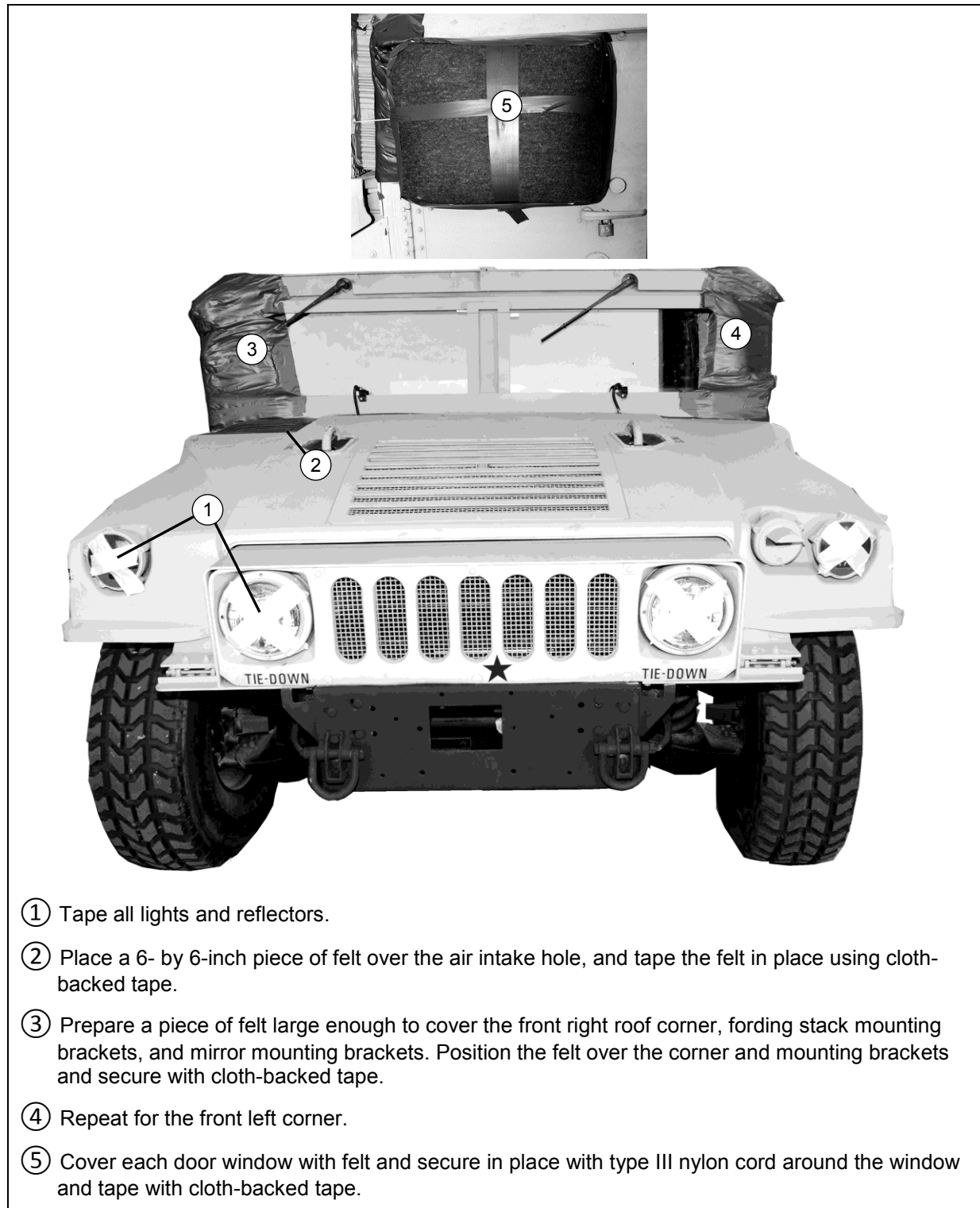
**Figure 3-81. Truck Interior Prepared (Continued)**



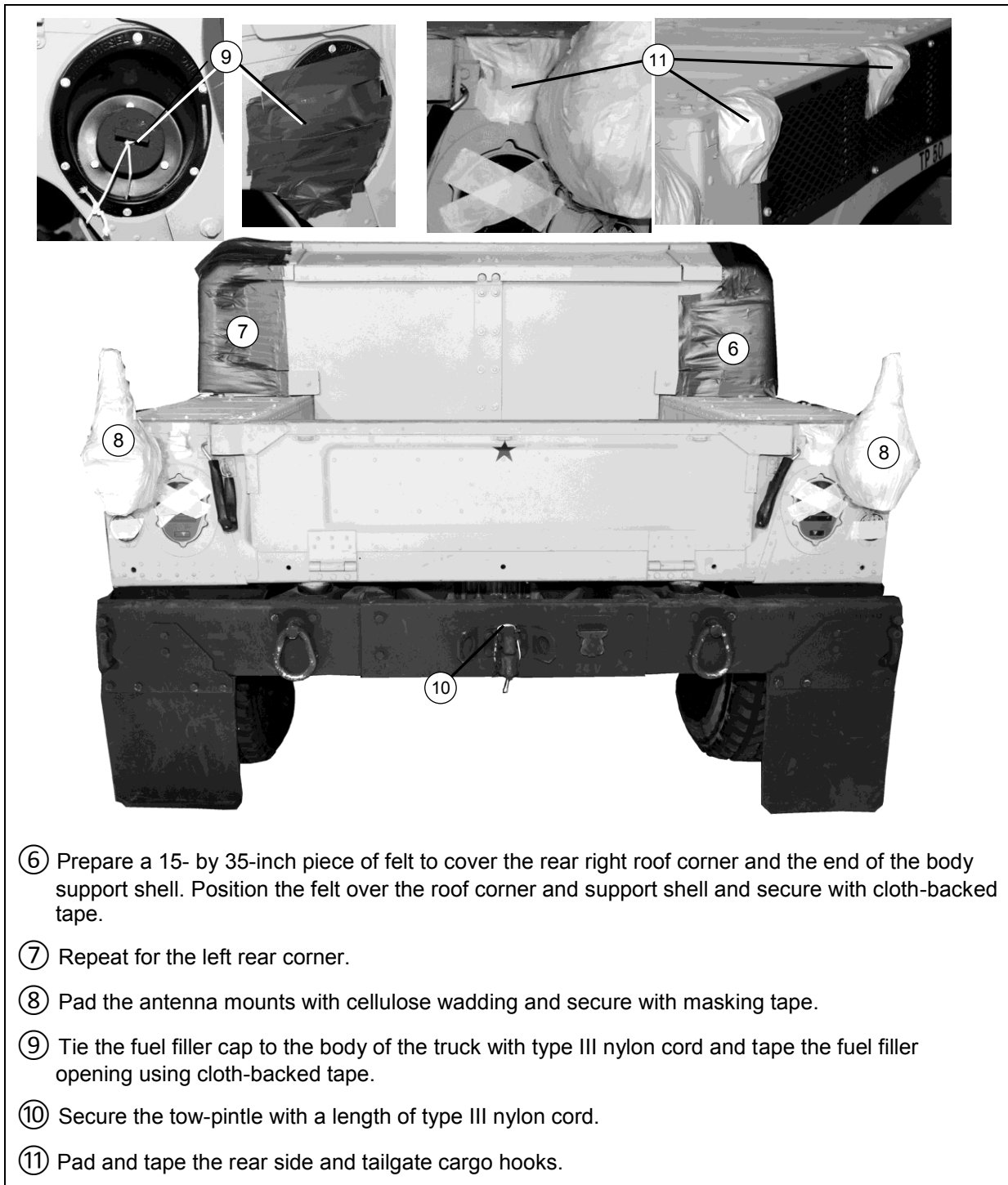


- ① Tape the fuel tank drain plug (not shown).
  - ② Pad the inside lower control arms at the front and rear of the truck with cellulose wadding and tape.
  - ③ Prepare a 12- by 12-inch piece of honeycomb and a 2- by 6- by 16-inch piece of lumber to be placed under the oil pan. Center and tape the honeycomb to the lumber piece. Position the honeycomb flush against the oil pan.
- Note.** When positioning the honeycomb and lumber ensure that the lumber is positioned width wise.
- ④ Route a 15-foot lashing around the right front frame cross member. Ensure that the plies of the lashing are routed around the stabilizer bar.
  - ⑤ Route a second 15-foot lashing around the left front frame cross member. Ensure that the plies of the lashing are routed around the stabilizer bar.
  - ⑥ Route the free end of the lashing placed in step 4 around the radius rod on the left side of the cross member in front of the fuel tank.
  - ⑦ Route the free end of the lashing placed in step 5 around the radius rod on the right side of the cross member in front of the fuel tank.
  - ⑧ Tighten and secure both lashings over the honeycomb and lumber placed under the oil pan. Separate the load binders so that they do not interfere with each other.

**Figure 3-82. Truck Underside Prepared**

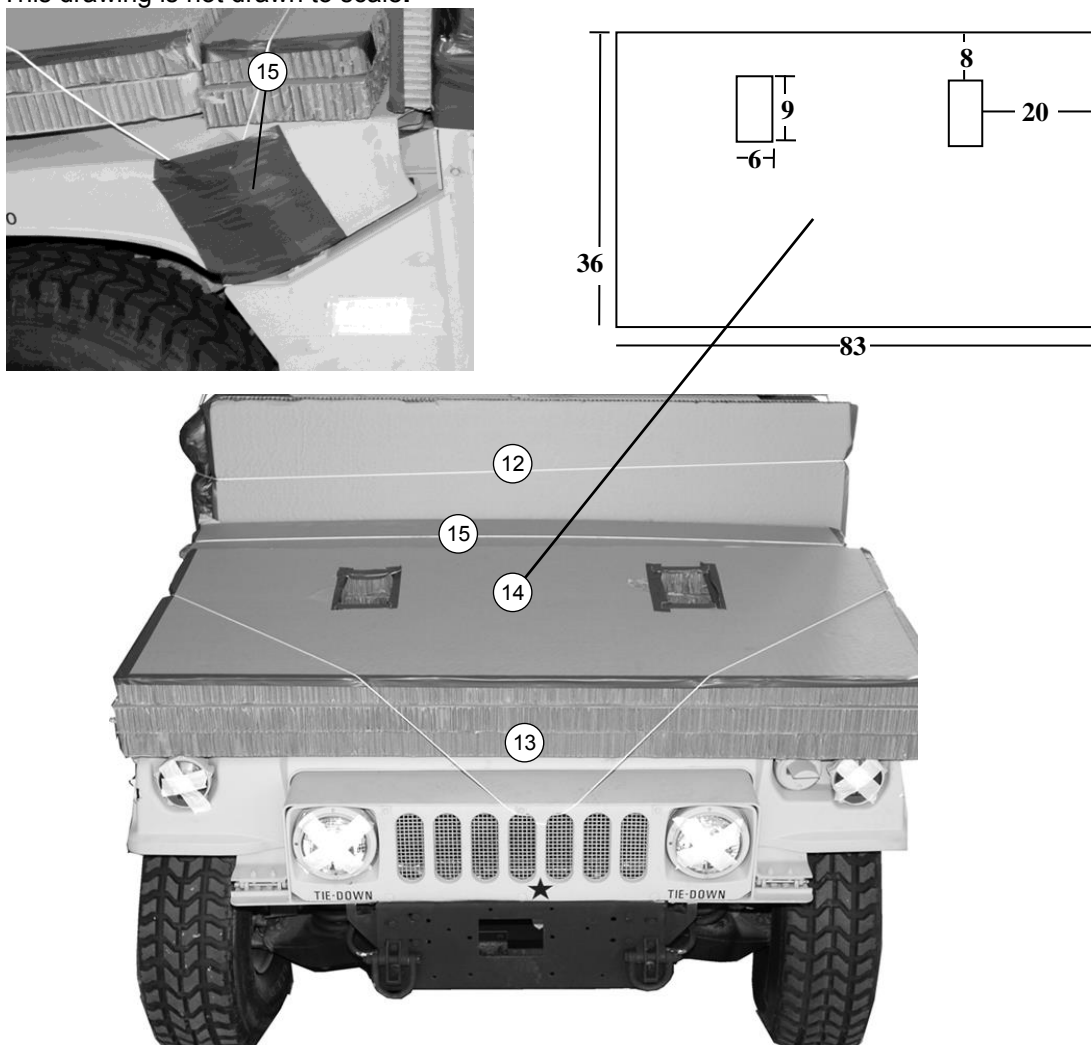


**Figure 3-83. Truck Exterior Prepared**



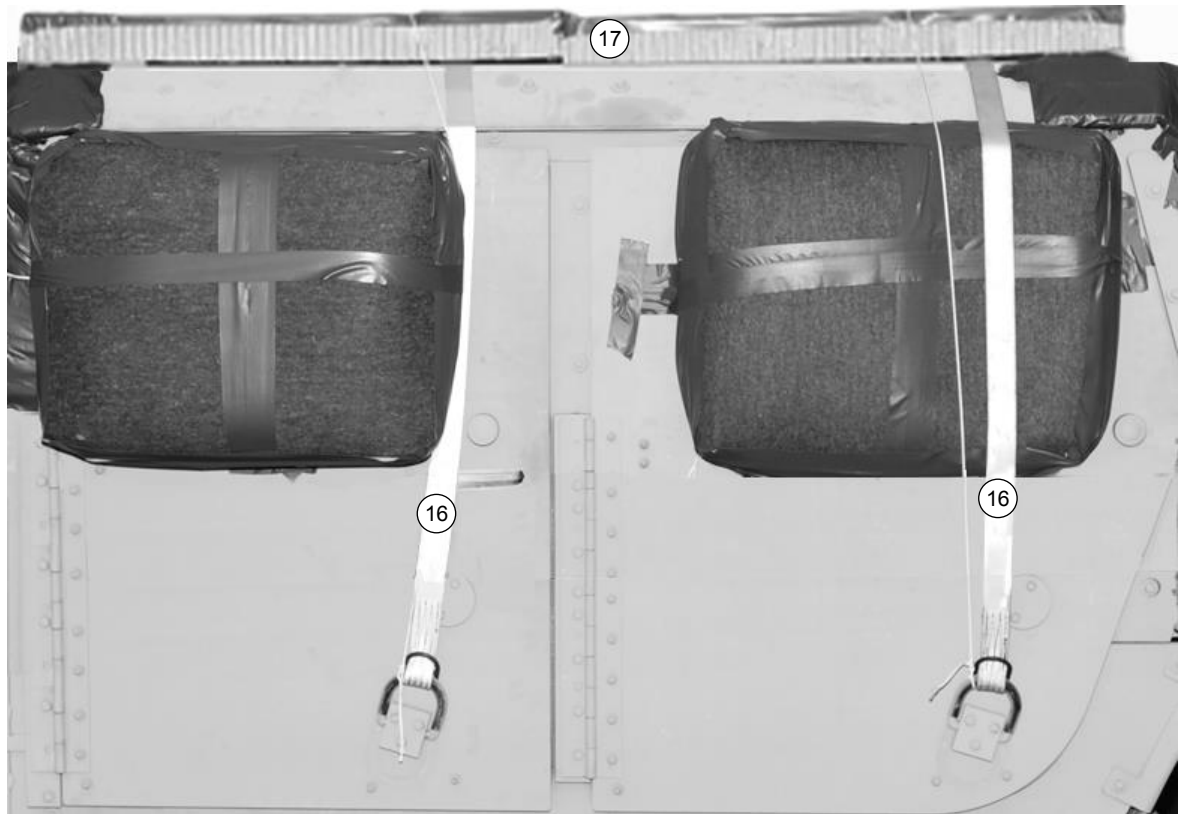
**Figure 3-83. Truck Exterior Prepared (Continued)**

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



- ⑫ Place an 83- by 21-inch piece of honeycomb against the windshield. Tape the outside edges and secure with type III nylon cord through the window openings and around the honeycomb.
- ⑬ Place a 4- by 78-inch piece of honeycomb along the front edge of the hood.
- ⑭ Place and tie two 83- by 36-inch pieces of honeycomb with cutouts as shown above to the front of the hood with type III nylon cord. Tape the upper edges of the honeycomb. Route the cord through the grille and tie it on each side to the hood latches.
- ⑮ Place two 83- by 12-inch pieces of honeycomb behind the honeycomb placed in step 13 and flush against the windshield. Tape the upper outside edges, and tie the honeycomb to the hood latches with type III nylon cord. Tape the hood latches using cloth-backed tape.

**Figure 3-83. Truck Exterior (Continued)**



- ①⑥ Girth hitch a 15-foot lashing to each door exterior lifting shackle and route the running ends of a lashing over the top of vehicle and secure on top with a D-ring and load binder. Repeat for the rear windows.
- ①⑦ Place two 36-by 83-inch sheets of honeycomb on the roof. Crush or cut out to allow for the turret fixture and load binders and D-rings. Tape the outer edges of the honeycomb. Secure the honeycomb to the roof with type III nylon cord to the lifting shackles on each door.

**Figure 3-83. Truck Exterior Prepared (continued)**

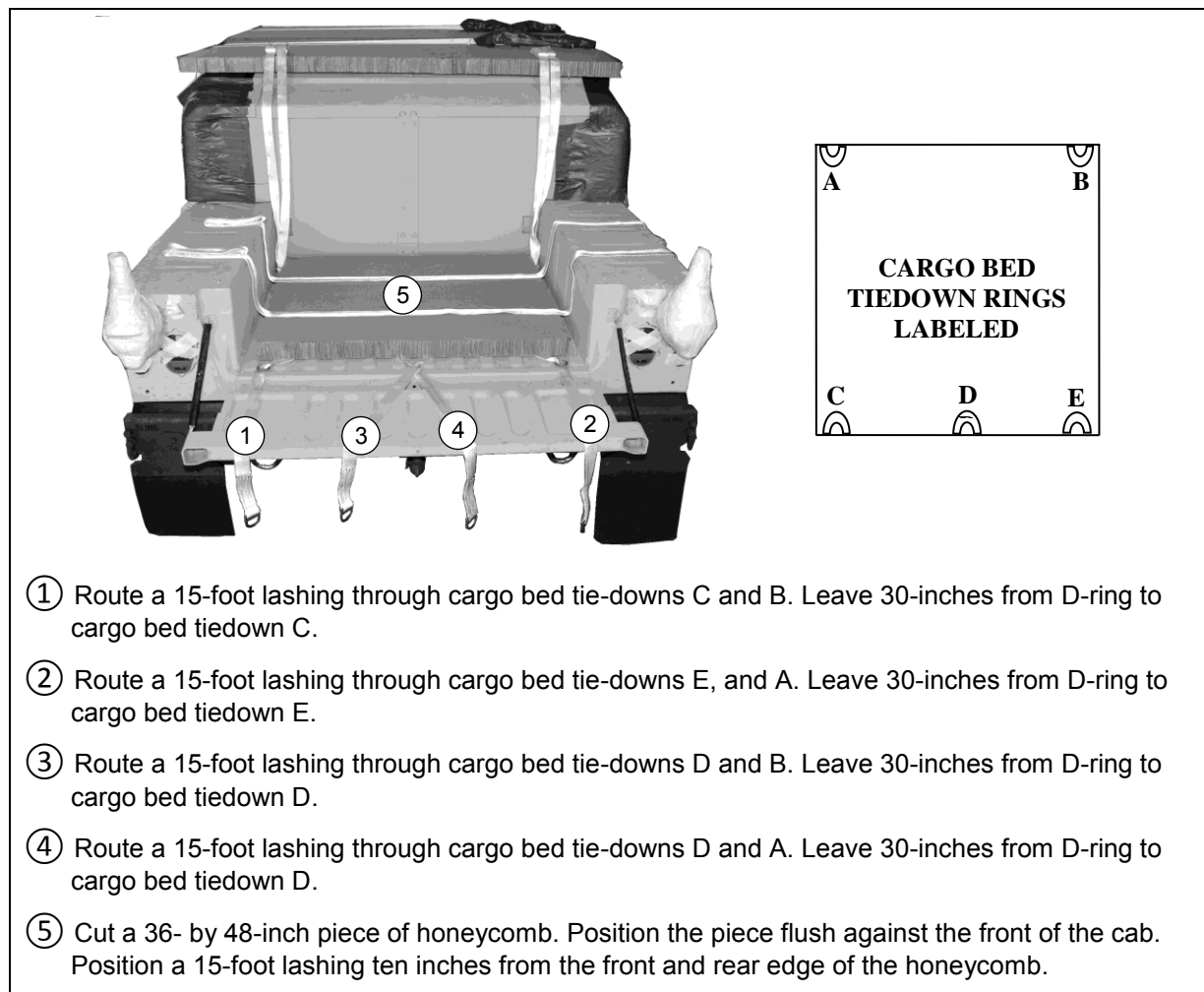
## STOWING ACCOMPANYING LOAD

3-65. Stow the accompanying load as shown in Figure 3-84. Ensure the accompanying load complies with the TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5. The accompanying load shown consists of nine boxes of 105-mm ammunition.

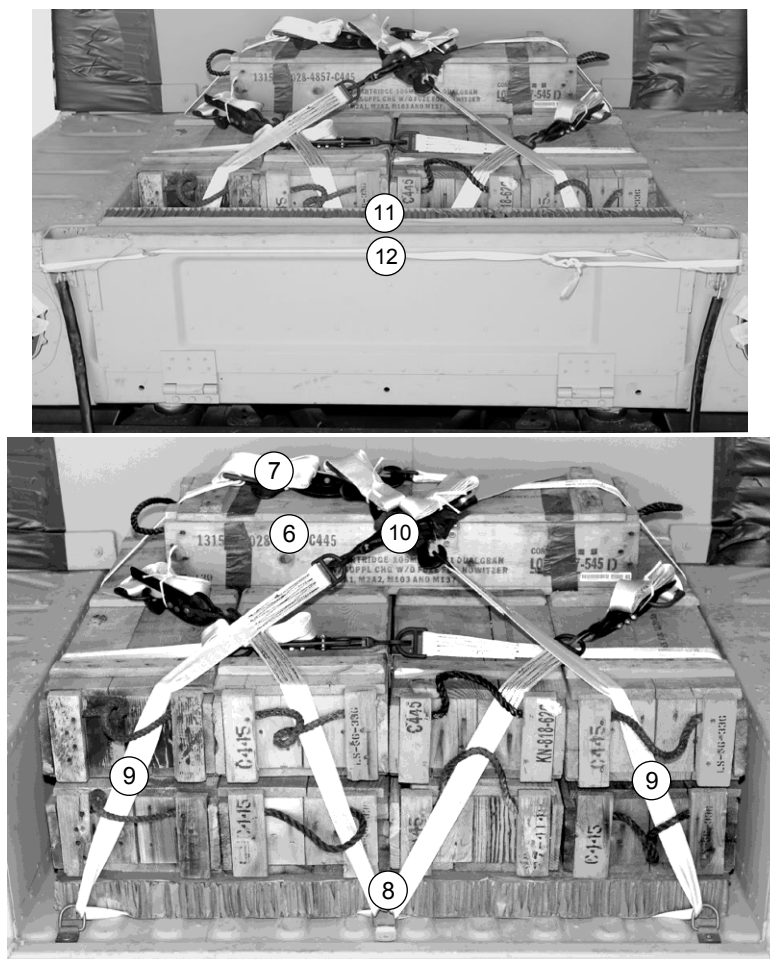
### CAUTION

Only ammunition listed in TM 4-48.16 (FM 4-20.153)/MCRP 4-11.3B/TO 13C7-18-41 may be airdropped.

**Note:** The accompanying load will have a maximum weight of 1,034 pounds.



**Figure 3-84. Accompanying Load Stowed and Secured**



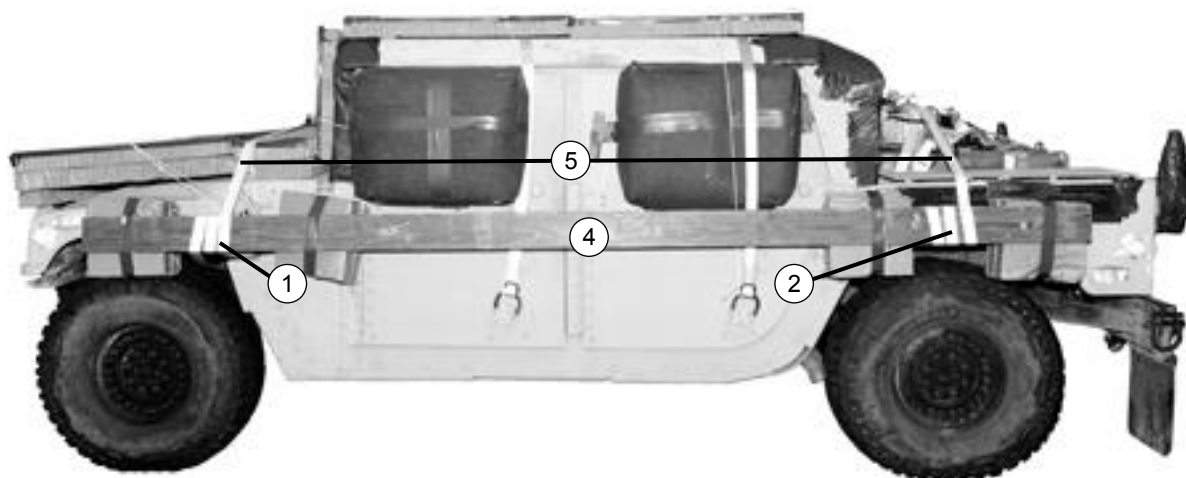
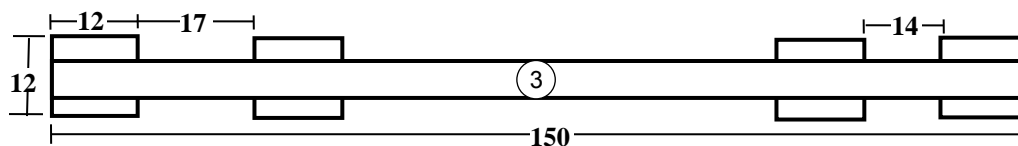
- ⑥ Position and center up to nine boxes of 105-mm ammunition boxes (two rows of four), front to rear and one box on top, left to right, flush against the wall of the cab
- ⑦ Secure the previously positioned lashings from step 5 using D-rings and load binders.
- ⑧ Secure the previously routed lashings from step 3 and 4 using D-rings and load binders.
- ⑨ Secure the previously routed lashings from step 1 and 2 using D-rings and load binders.
- ⑩ Pad under any load binder that has metal to metal contact.
- ⑪ Cut and position a 52- by 14-inch piece of honeycomb vertically behind the ammunition stack.
- ⑫ Close the tailgate. Girth hitch a doubled length of ½-inch tubular nylon webbing through either end of the tailgate hook brackets, through the cargo strap securing brackets, and secure to the opposite tailgate hook brackets.

**Figure 3-84. Accompanying Load Stowed and Secured (Continued)**

## PREPARING AND INSTALLING BODY SIDE PROTECTION BOARDS

3-66. Prepare and install the body side protective boards as shown in Figure 1-11.

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



- ① Pass a 15-foot lashing around the upper control arm behind a front wheel and through its own D-ring. Repeat for the other side of the truck (not shown).
- ② Pass a 15-foot lashing around the upper control arm behind a rear wheel and through its own D-ring (not shown). Repeat for the other side of the truck (not shown).
- ③ Glue and tape two 12- by 12-inch pieces of honeycomb in four places to a 2- by 6- by 150-inch piece of lumber spaced as shown above. Repeat for the second body side protection board.
- ④ Position each body side protection board against the side of the cab. Ensure that all honeycomb pieces are flush against the front and rear fenders of the vehicle.

**Note.** When routing the lashings around the body side protection boards alternate the direction from top to bottom and bottom to top. This will keep the boards flush and prevent twisting.

- ⑤ Bring the lashings positioned in steps 1 and 2 around the boards two turns. Secure the lashings from the left and right sides of the truck together on top of the truck with D-rings and load binders.

**Figure 3-85. Body Side Protection Boards Prepared and Installed**



## LIFTING AND POSITIONING THE VEHICLE

3-67. Lift the vehicle using the slings and position it on the honeycomb stacks as shown in Figure 3-86.

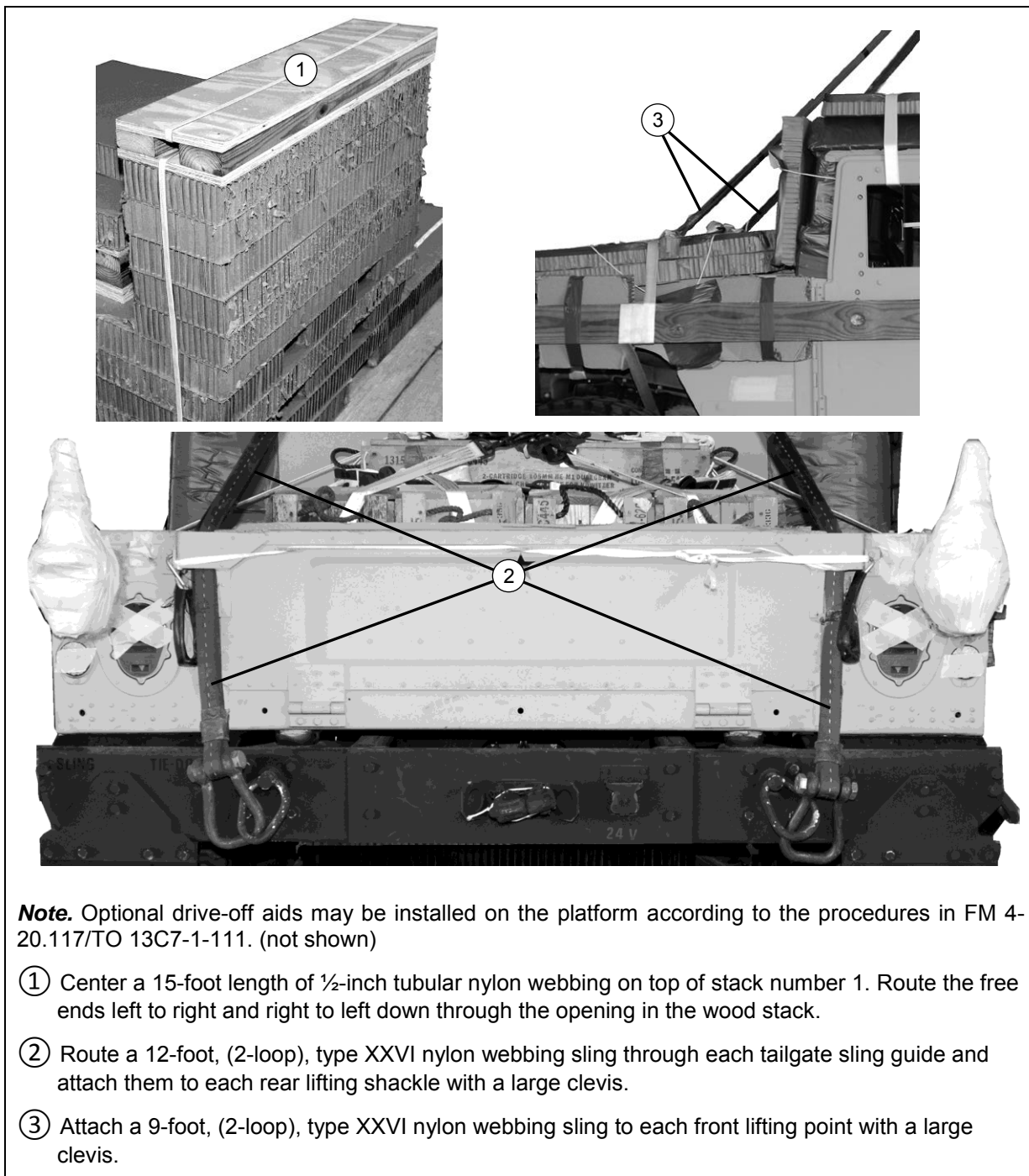
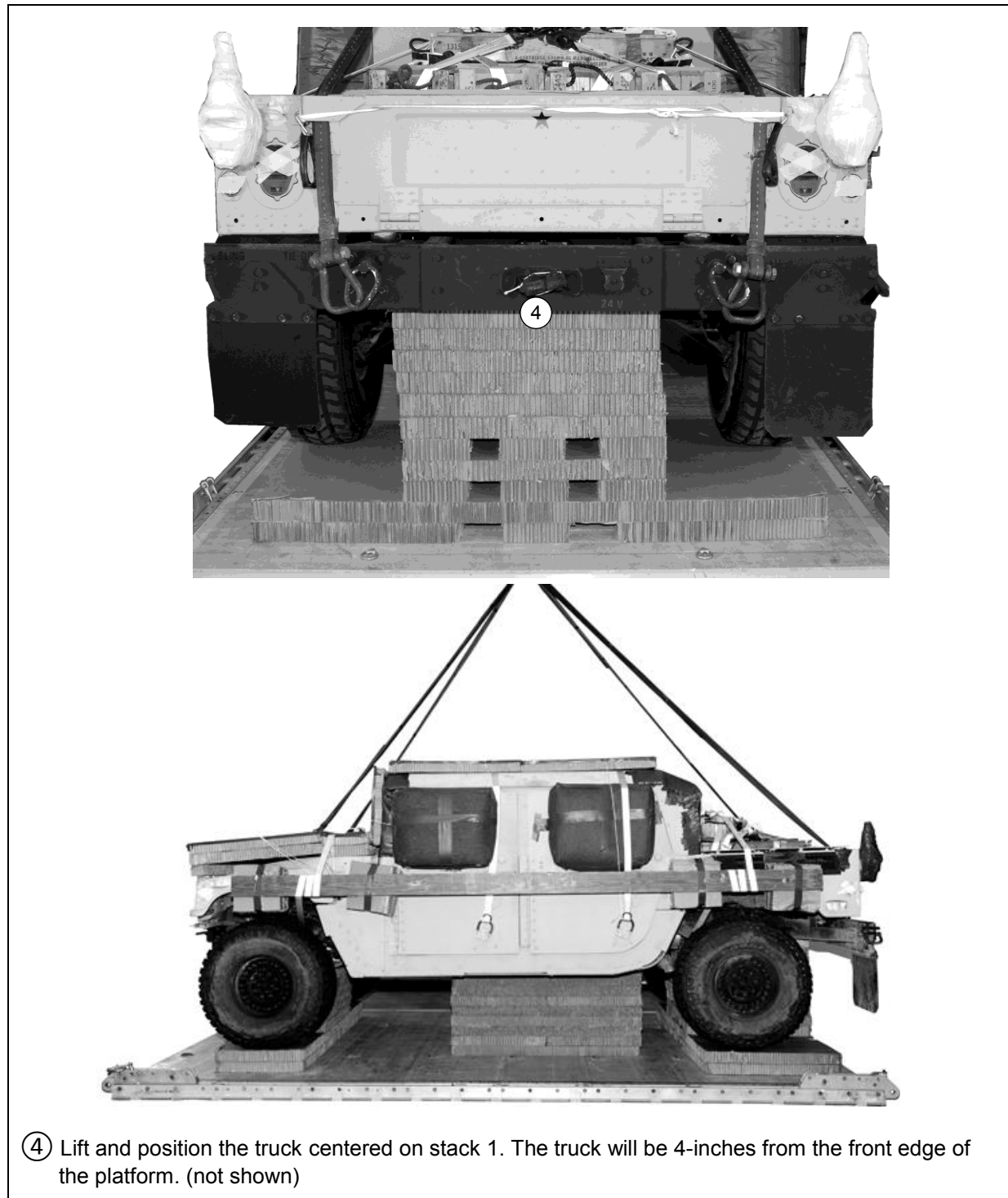
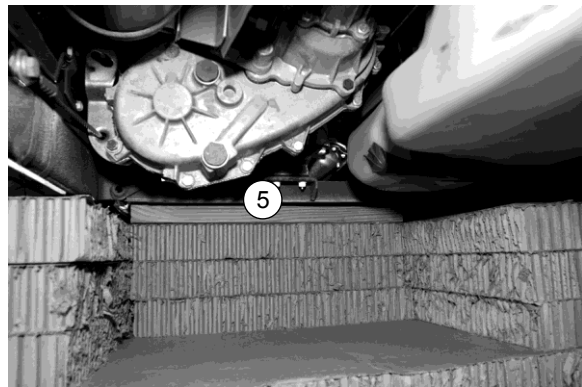
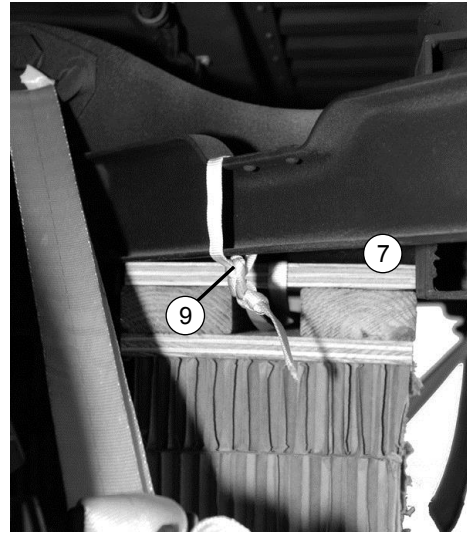
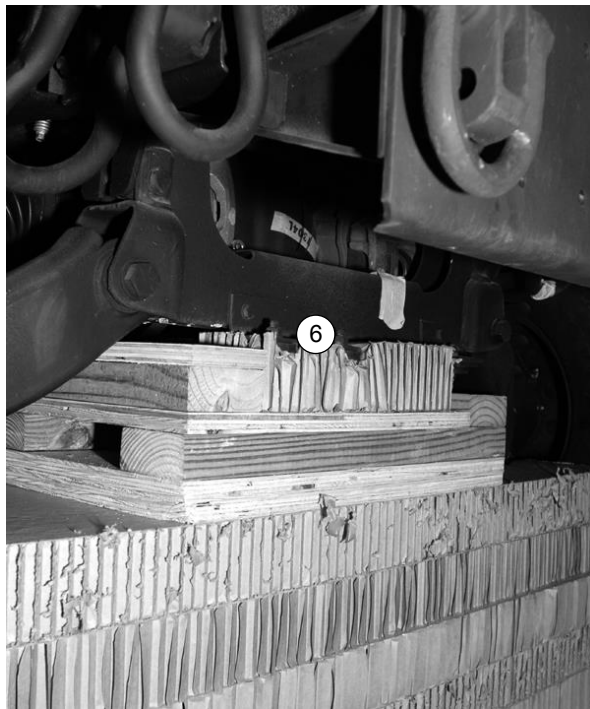


Figure 3-86. M1165A1 Positioned



**Figure 3-86. M1165A1 Positioned (Continued)**

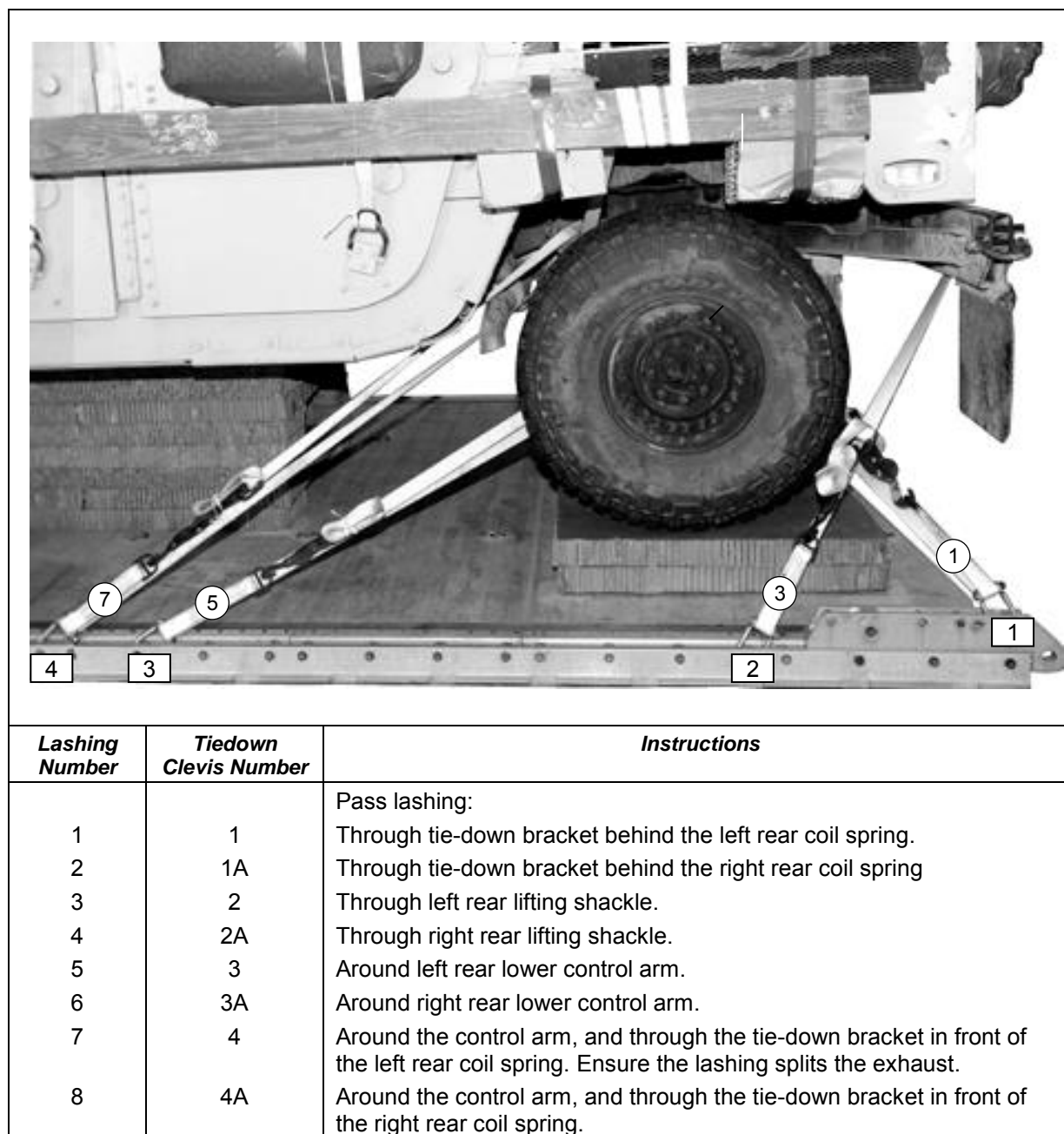


- ⑤ Ensure the frame cross member rests securely on the 2- by 6- by 24-inch lumber piece of honeycomb stack 2.
- ⑥ Ensure the truck's front suspension cross member sets securely on stack 3.
- ⑦ Ensure the rear vehicle suspension cross member sets securely on stack 1. The rear bumper support brackets should be over the edges and slightly above stack 1.
- ⑧ Remove the lifting slings. (not shown)
- ⑨ Secure the pre-routed ½-inch tubular nylon of honeycomb stack number 1 to the rear bumper support brackets on the left and right sides.

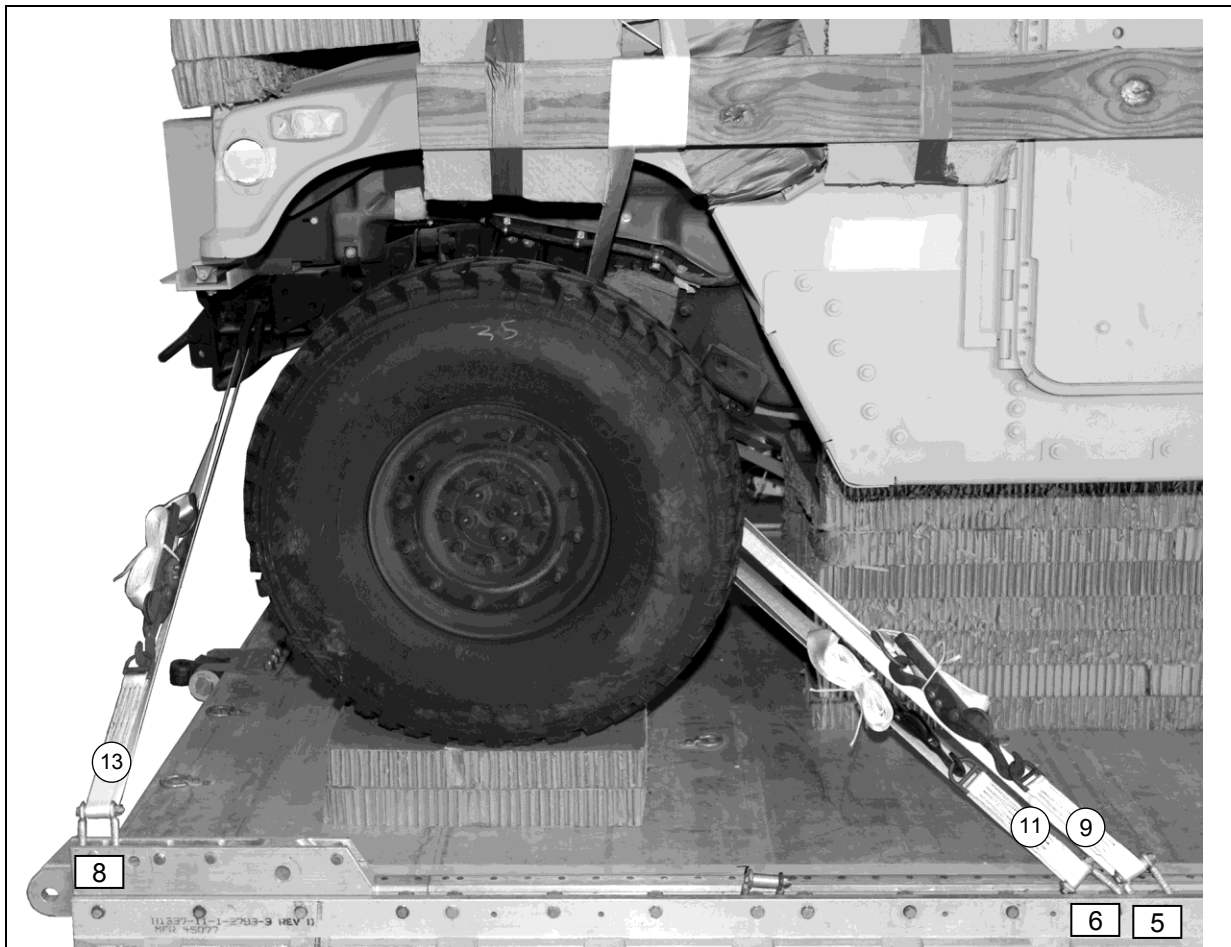
**Figure 3-86. M1165A1 Positioned (Continued)**

## LASHING THE M1165A1

3-68. Lash the M1165A1 utility truck to the platform according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figures 3-87 and 3-88.



**Figure 3-87. Lashings 1 through 8 Installed**

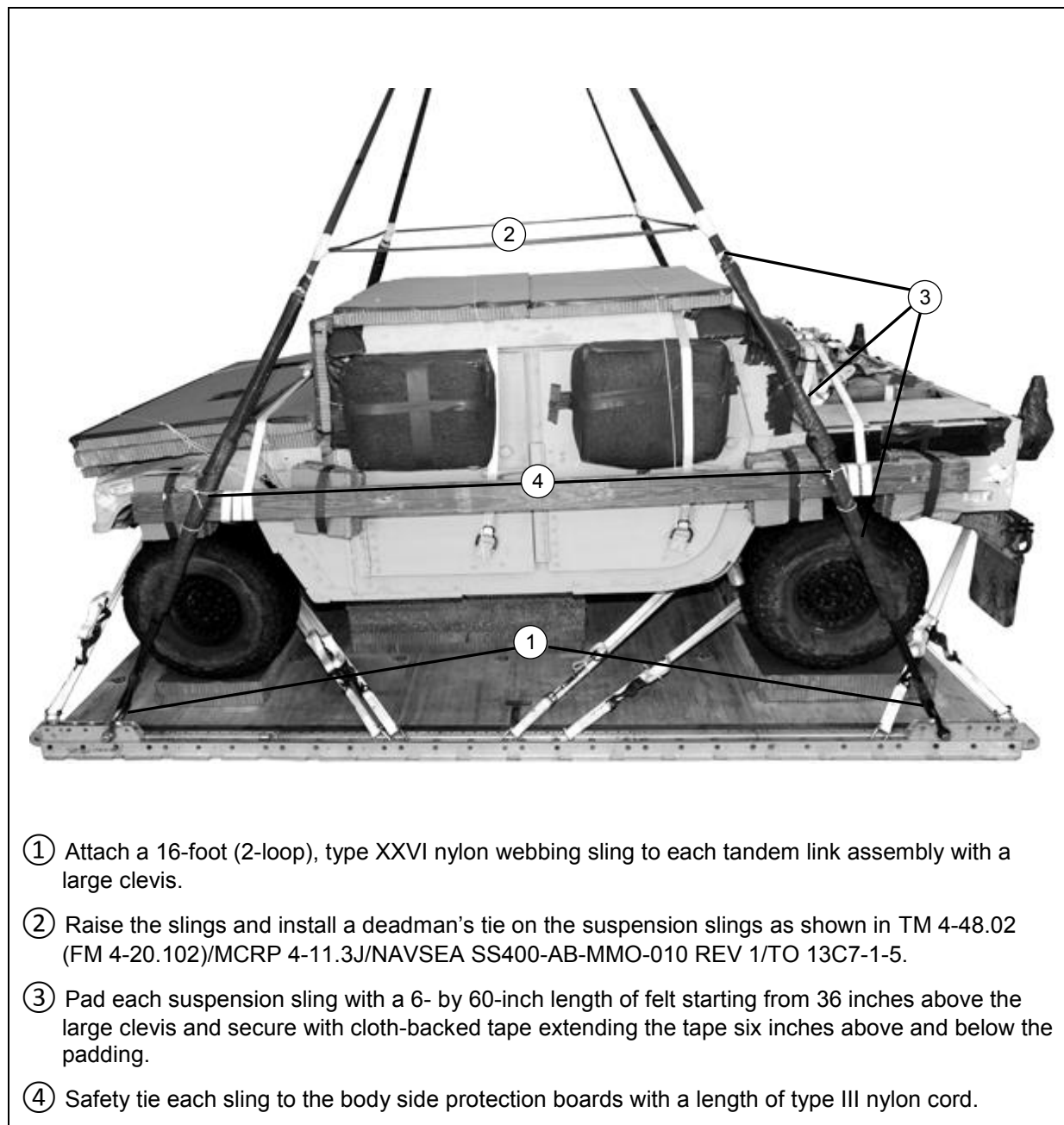


<b>Lashing Number</b>	<b>Tiedown Clevis Number</b>	<b>Instructions</b>
9	5	Pass lashing:
10	5A	Through the tiedown bracket behind the left front coil spring.
11	6	Through the tiedown bracket behind the right front coil spring.
12	6A	Around the front left lower control arm.
13	8	Around the front right lower control arm.
14	8A	Through the tie-down bracket on the end of the left frame rail.
		Through the tie-down bracket on the end of the right frame rail.

**Figure 3-88. Lashings 9 through 14 Installed**

## INSTALLING AND SAFETY TIEING THE SUSPENSION SLINGS

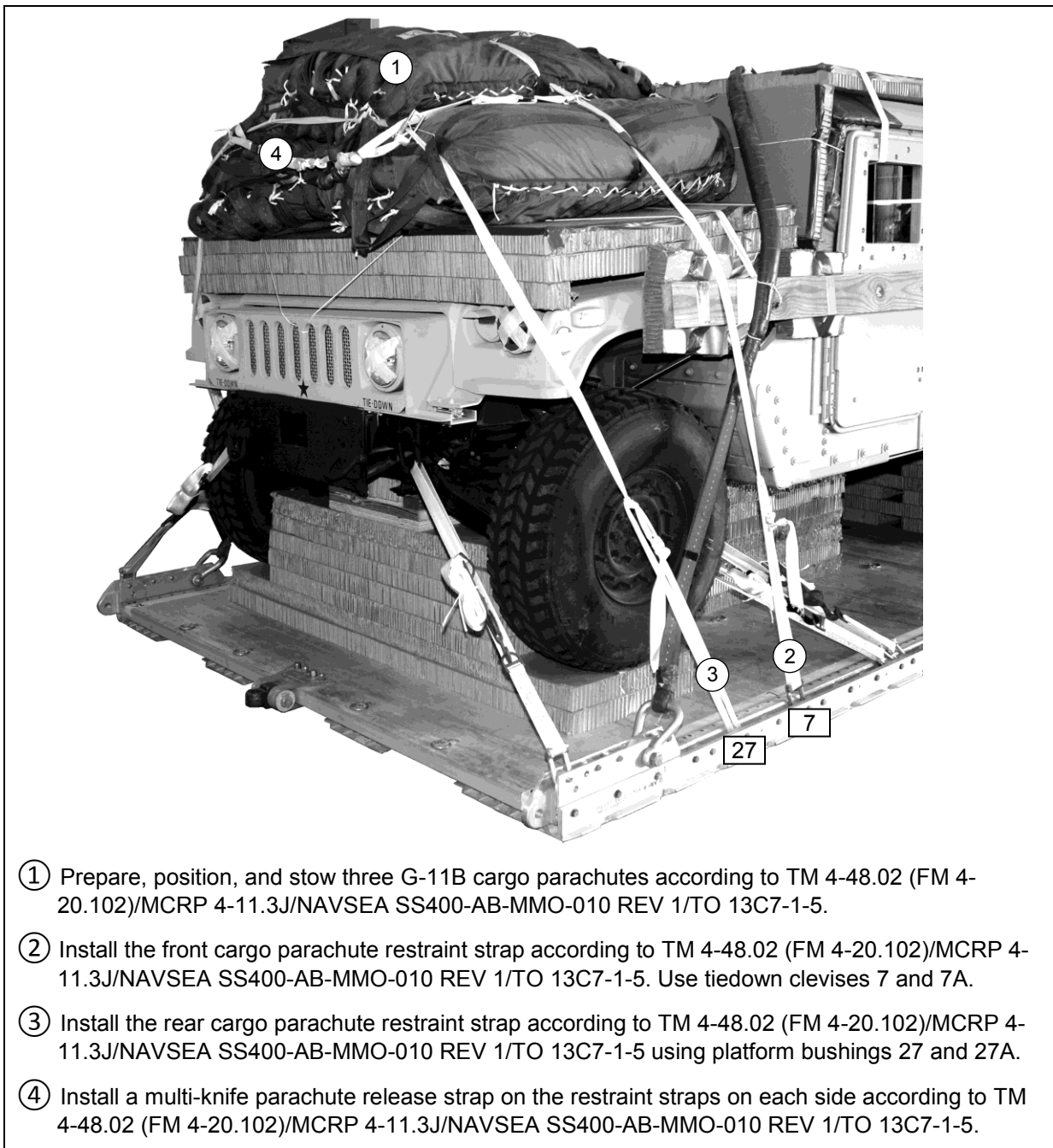
3-69. Install and safety tie the suspension slings as shown in Figure 3-89.



**Figure 3-89. Suspension Slings Installed**

## STOWING CARGO PARACHUTES

3-70. Stow the parachutes as shown in Figure 3-90.

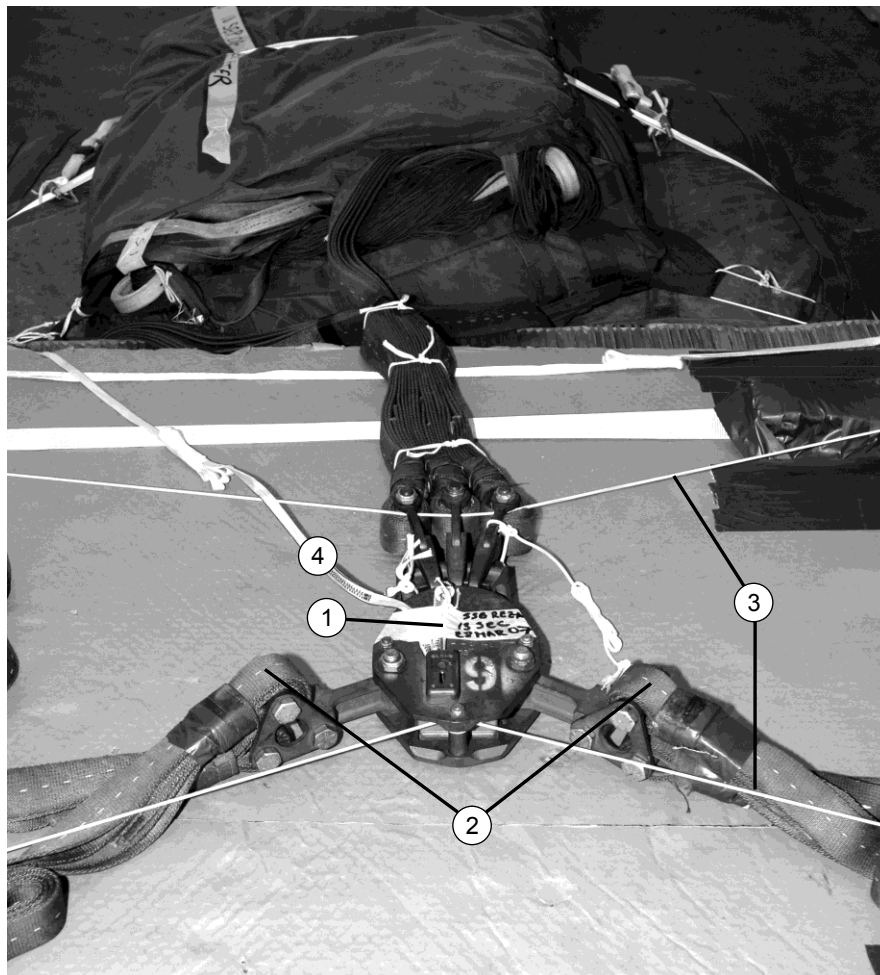


**Figure 3-90. Parachutes Stowed**

- ① Prepare, position, and stow three G-11B cargo parachutes according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.
- ② Install the front cargo parachute restraint strap according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5. Use tiedown clevises 7 and 7A.
- ③ Install the rear cargo parachute restraint strap according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 using platform bushings 27 and 27A.
- ④ Install a multi-knife parachute release strap on the restraint straps on each side according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.

## INSTALLING THE M-1 CARGO PARACHUTE RELEASE SYSTEM

3-71. Install the M-1 cargo parachute release assembly as shown in Figure 3-91.



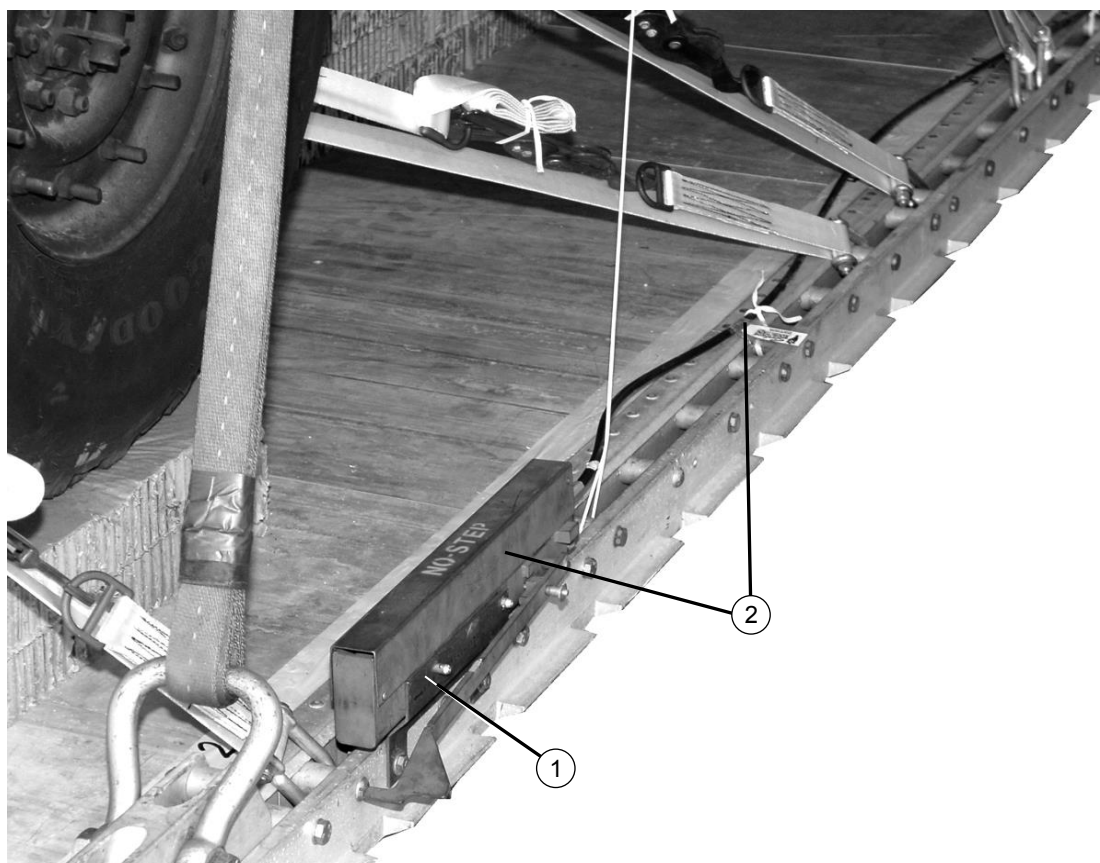
- ① Prepare and install the release assembly on top of the honeycomb over the turret according to TM 4-48.02 (FM 4-20.102)/ MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.
- ② Attach the suspension slings and riser extensions according to TM 4-48.02 (FM 4-20.102)/ MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5. Fold the excess and secure with ¼-inch cotton webbing.
- ③ Restrain the release to convenient points on the load using type III nylon cord.
- ④ Secure the arming wire lanyard to the parachute carrying handle, S-fold and tape the excess with a single wrap of masking tape.

**Figure 3-91. M-1 Cargo Parachute Release Assembly Installed**



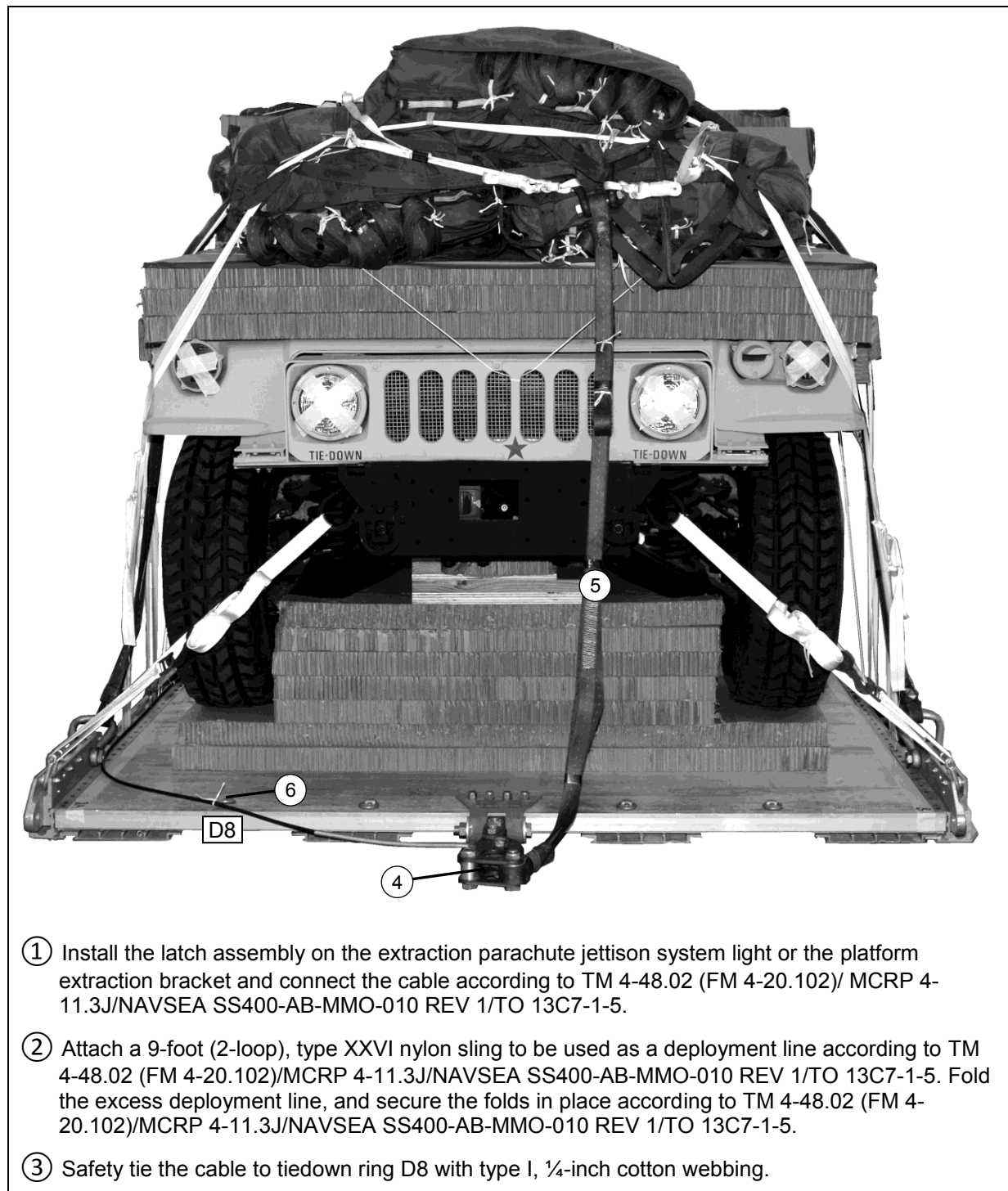
## INSTALLING THE EXTRACTION SYSTEM

3-72. Install the EFTC extraction system according to TM 4-48.02 (FM 4-20.102) /MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figure 3-92. Install the Extraction Parachute Jettison System (EPJS) light according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 if applicable.



- ① Install the components of the extraction force transfer coupling (EFTC) according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5. Use the forward mounting holes for the EFTC actuator mounting brackets.
- ② Install an actuator, with a 16-foot cable to the EFTC mounting brackets; route and safety tie the cable according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.
- ③ Install the extraction parachute jettison system Light according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 if applicable. (not shown)

**Figure 3-92. Extraction System Installed**



**Figure 3-92. Extraction System Installed (Continued)**

## **INSTALLING PROVISIONS FOR EMERGENCY RESTRAINTS**

3-73. Install the provisions for emergency restraints on the load according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.

## **PLACING EXTRACTION PARACHUTE**

3-74. Select the extraction parachute and extraction line needed using the extraction line requirements table in TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5. Rig the extraction line in an extraction line bag according to TM 10-1670-286-20/TO 13C5-2-41. Place the extraction parachute and extraction line on the load for installation in the aircraft.

## **MARKING RIGGED LOAD**

3-75. Mark the rigged load according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figure 3-93. Complete Shipper's Declaration for Dangerous Goods. If the load varies from the one shown, the weight, height, CB, and parachute requirements must be recomputed.

## **EQUIPMENT REQUIRED**

3-76. Use the equipment listed in Table 3-5 to rig this load.

**CAUTION**

Make the final rigger inspection required by AR 59-4 and TM 4-48.02 (FM 4-20.102) /MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 before the load leaves the rigging site.



C/B

**RIGGED LOAD DATA**

Weight .....	13,860 pounds
Maximum Weight .....	13,860 pounds
Height .....	93 inches
Width .....	108 inches
Length .....	214 inches
Length with extraction parachute jettison system Light .....	226 inches
Overhang: Front (vehicle) .....	9 inches
Rear (extraction force transfer coupling) .....	18 inches
Center of Balance (CB) (from front edge of platform) .....	98 inches

**Figure 3-93. M1165A1 with B3 Armor Kit Rigged for Low-Velocity Airdrop**

**Table 3-5. Equipment Required for Rigging the M1151A1 with B3 Armor Kit for Low-Velocity Airdrop**

<i>National Stock Number</i>	<i>Item</i>	<i>Quantity</i>
8040-00-273-8713	Adhesive paste, 1-gallon	As required
4030-00-090-5354	Clevis, suspension, 1-inch (large)	5
4030-00-678-8562	Clevis, suspension, 3/4-inch (medium)	4
4020-00-240-2146	Cord, nylon, type III, 550-lb	As required
1670-00-434-5785	Coupling, airdrop extraction force transfer, w/16-ft. cable	1
8135-00-664-6958	Cushioning material (Cellulose wadding)	As required
1670-01-475-1990	Extraction Parachute Jettison System Light	1
8305-00-958-3685	Felt,	As required
1670-01-183-2678	Leaf, extraction line (line bag) (C-130)	2
	Leaf, extraction line (line bag) C-17/C130J	4
	Line extraction:	
1670-01-062-6313	60-foot (3-loop), type XXVI (for C-130/J)	1
1670-01-107-7651	140-foot (3-loop), type XXVI (for C-17/C-130J)	1
1670-01-064-4452	60-foot (1-loop), type XXVI (for C-17/C-130J), (drogue line)	1
1670-01-493-6418	Link assembly, two-point, 3 3/4-inch, small:	1
	Lumber:	
5510-00-220-6146	2- by 4- by 96-inch	6
5510-00-220-6148	2- by 6- by 96-inch	2
5315-00-753-3885	Nail, steel, common, 16D	As required
5315-00-010-4659	Nail, steel, common, 8D	As required
1670-00-753-3928	Pad, energy-dissipating (honeycomb)	16 sheets
1670-01-016-7841	Parachute, cargo, G-11B	3
	Parachute, cargo, extraction:	
1670-01-063-3716	22-foot	1
1670-01-063-3715	15-foot (C-17/C130J) (DES)	1
	Platform, airdrop, type V, 16-foot:	
1670-01-162-2372	Clevis assembly (type V)	16
1670-01-162-2376	Extraction bracket assembly	1
1670-01-162-2381	Tandem link assembly (Multipurpose link)	4
5530-00-128-4981	Plywood, 3/4-inch	2 sheets

**Table 3-5. Equipment Required for Rigging the M1165A1 with B3 Armor Kit for Low-Velocity Airdrop (Continued)**

<i>National Stock Number</i>	<i>Item</i>	<i>Quantity</i>
1670-01-097-8816	Release, cargo parachute, M-1	1
	Sling, cargo, airdrop: For Deployment	
1670-01-062-6304	9-foot (2-loop), type XXVI	1
	For Lifting	
1670-01-062-6304	9-foot (2-loop), type XXVI	2
1670-01-062-6303	12-foot (2-loop), type XXVI	2
	For Suspension	
1670-01-063-7761	16-foot (2-loop), type XXVI	4
5340-00-040-8219	Strap, parachute, release, multi-knife	2
7501-00-266-5016	Tape, adhesive, 2-inch	As required
1670-00-937-0271	Tiedown assembly, 15-foot	32
	D-rings, heavy duty, 10,000-lb	28
	Binder, load, 10,000-lb	28
1670-01-483-8259	Towplate release mechanism (H-block) (C-17)	1
	Towplate release mechanism (H-block) (C-130J)	1
	Webbing:	
8305-00-268-2411	Cotton, 1/4-inch, type I	As required
8305-00-082-5752	Nylon, tubular, 1/2-inch	As required
8305-00-559-6871	Nylon, type VIII	As required
Legend		
lb	pound	

## SECTION VI: RIGGING THE M1167 HIGH MOBILITY MULTIPURPOSE WHEELED VEHICLE (HMMWV) WITH ACCOMPANYING LOAD FOR LOW-VELOCITY AIRDROP

### DESCRIPTION OF LOAD

3-77. The M1167 is shown in Figure 3-94. The M1167 has a 4-man capability and is equipped with a tube launched, optically-tracked, wire command data link; guided missile (TOW) improved target acquisition system (ITAS) and an IAP, which includes underbody and rocker armor, lower windscreen deflective armor and a TOW gunner's protection kit (TGPK). The M1167 has a gross vehicle weight (GVWR) of 13,100 pounds. The M1167 is rigged with an accompanying load of operational equipment including the TGPK and ammunition weighing 3,140 pounds. The load is rigged on a 20 foot platform using four G-11B cargo parachutes and a total rigged weight of 16,920 pounds.

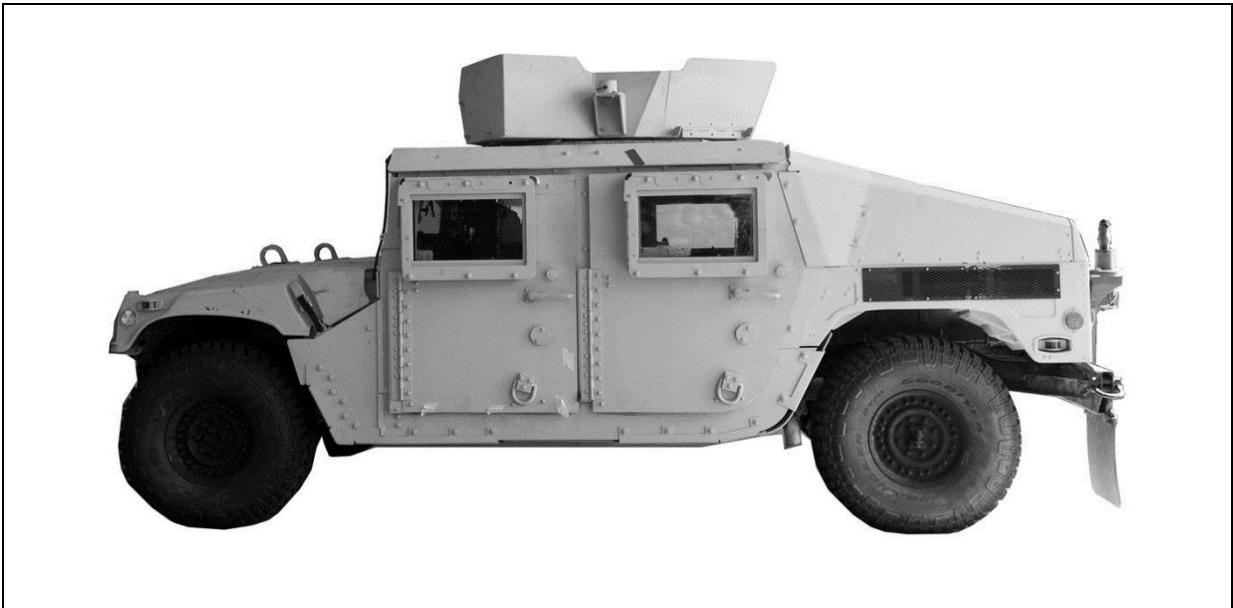
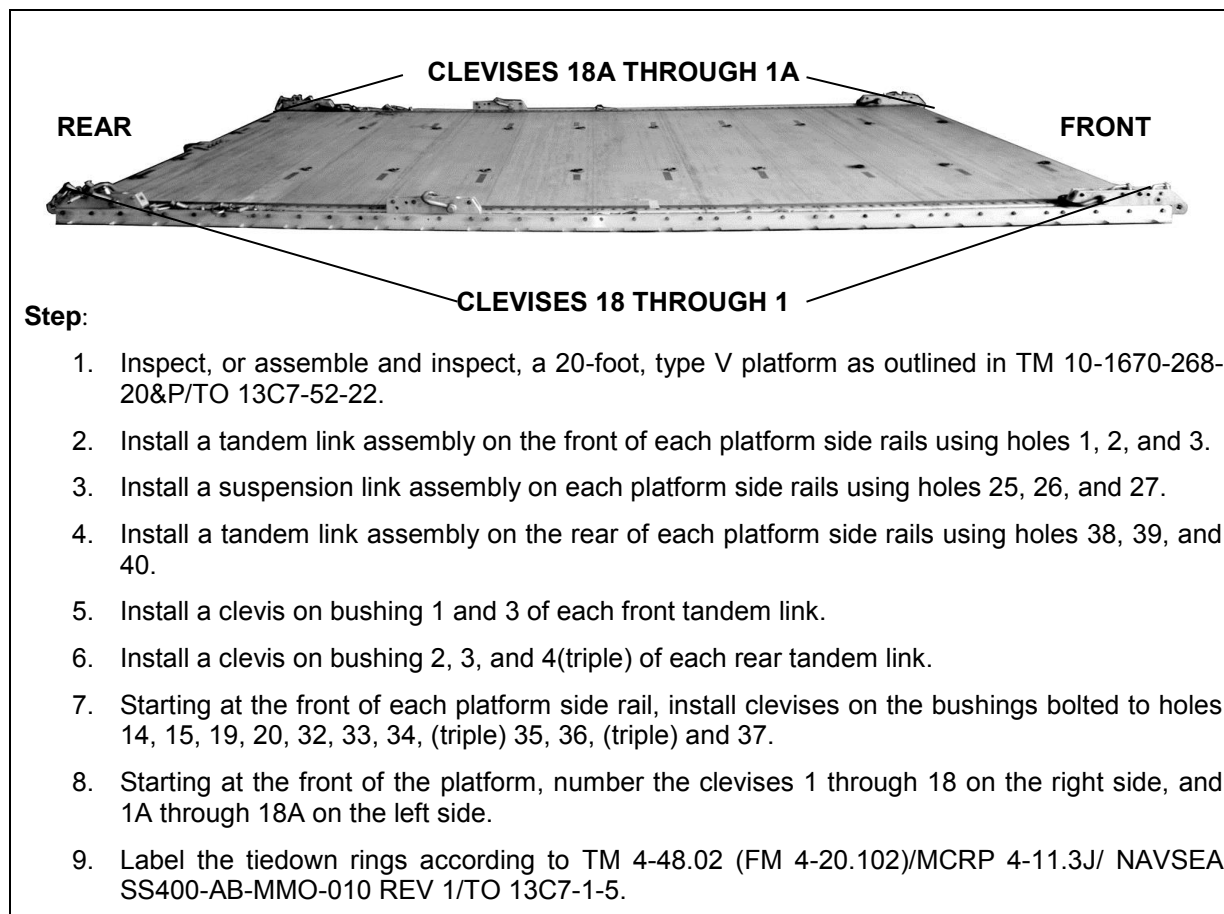


Figure 3-94. M1167 HMMWV with TOW, Improved Target Acquisition System, TGPK and IAP

## PREPARING PLATFORM

3-78. Prepare a 20-foot, type V airdrop platform according to TM 10-1670-268-20&P/TO 13C7-52-22. Install tandem links, suspension link assemblies, and platform clevises according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figure 3-95.



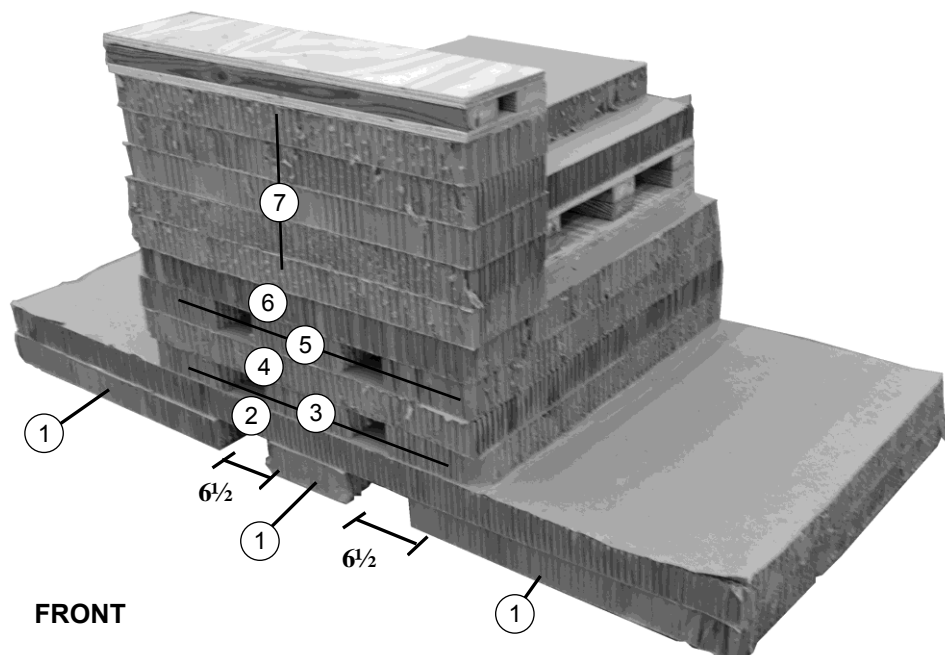
**Figure 3-95. Platform Prepared**



## PREPARING AND POSITIONING HONEYCOMB STACKS

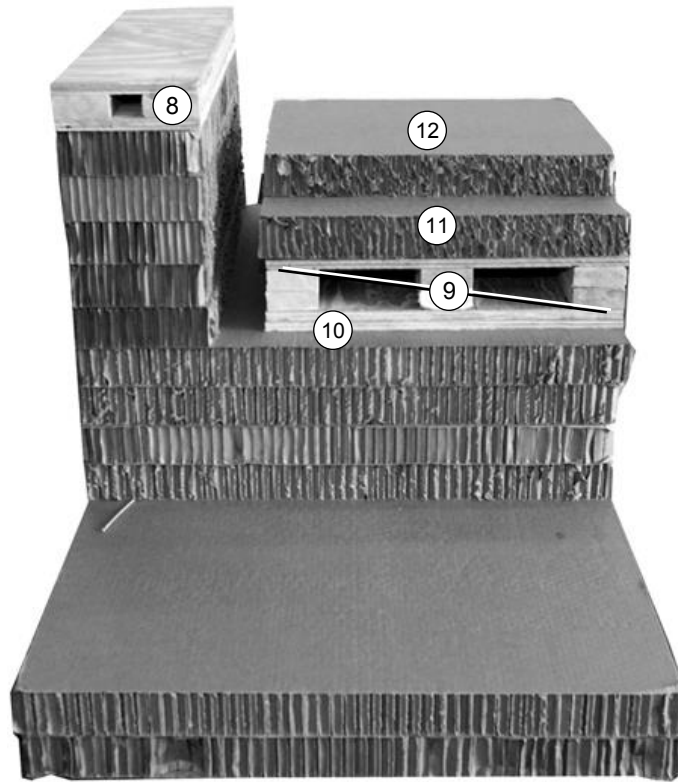
3-79. Build the honeycomb stacks as shown in Figures 3-96 through 3-98. Position the stacks on the platform as shown in Figure 3-99.

**Note.** All measurements are given in inches.



- ① Cut two 29- by 36-inch pieces of honeycomb and one 9- by 36-inch piece of honeycomb. Center the 9-inch piece and place the 29-inch pieces 6½ inches away to the left and right side of the 9-inch piece.
- ② Cut an 80- by 36-inch piece of honeycomb. Glue the 29- by 36-inch pieces flush with the outside edges of the 80- by 36-inch honeycomb and glue the 9- by 36-inch piece centered on the 80-by 36-inch piece of honeycomb.
- ③ Cut three 9- by 36-inch pieces of honeycomb. Glue one piece centered on the 80- by 36-inch piece of honeycomb. Glue the second and third pieces to the 80- by 36-inch honeycomb, 22 inches from the 36-inch edge of the 80- by 36-inch honeycomb.
- ④ Glue a 36- by 36-inch piece of honeycomb flush on top of the honeycomb in step 3.
- ⑤ Cut three 9- by 36-inch pieces of honeycomb. Glue one piece centered on the 36- by 36-inch piece of honeycomb. Glue the second and third pieces to the 36- by 36-inch honeycomb flush with the outside edges.
- ⑥ Glue a 36- by 36-inch piece of honeycomb centered on top of the honeycomb in step 5.
- ⑦ Glue five 36- by 9-inch pieces of honeycomb flush with the front edge of the 36- by 36-inch honeycomb.

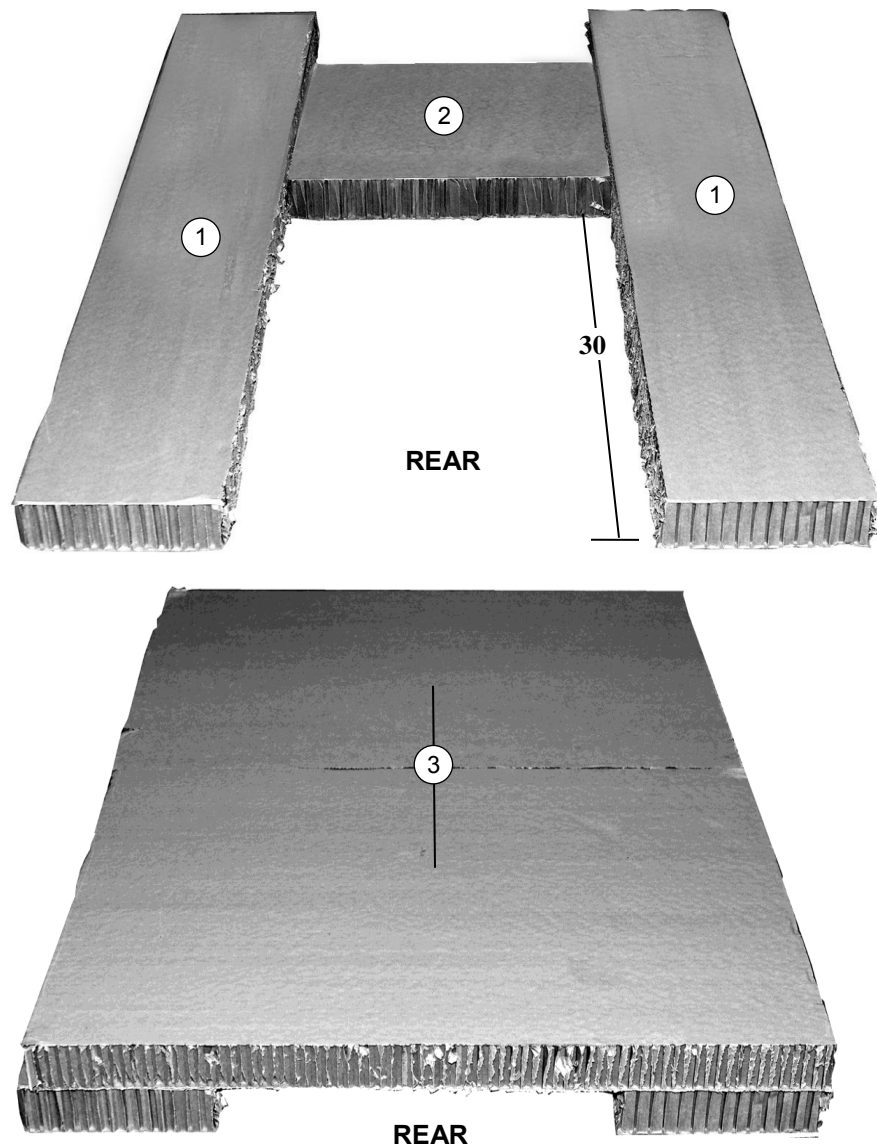
**Figure 3-96. Stack 1 Constructed**



- ⑧ Cut a 36- by 9- by  $\frac{3}{4}$ -inch piece of plywood to form a base. Cut two 2- by 4- by 36-inch pieces of lumber. Nail the lumber flush along the 36-inch sides of the plywood. Cut a 36- by 9- by  $\frac{3}{4}$ -inch piece of plywood. Nail the plywood flush on top of the 2- by 4's. Glue the entire lumber stack flush with the honeycomb in step 7.
- ⑨ Nail two 30- by 24- by  $\frac{3}{4}$ -inch piece of plywood flush together. Cut six 2- by 4- by 30-inch pieces of lumber. Nail two pieces flush together, repeat two more times to make three stacks total. Center and nail one stack on the plywood. Nail the other two stacks flush with the 30-inch edges of the plywood. Nail a 30- by 24- by  $\frac{3}{4}$ -inch piece of plywood flush on top of the lumber.
- ⑩ Center and glue the entire wood stack to the honeycomb base flush with the rear of the stack. Leave three inches between the rear wood stack and the front honeycomb stack.
- ⑪ Glue a 30- by 24-inch piece of honeycomb flush on top of the plywood in step 9.
- ⑫ Glue a 20- by 24-inch piece of honeycomb centered on top of the 30- by 24-inch honeycomb.

**Figure 3-96. Stack 1 Constructed (continued)**

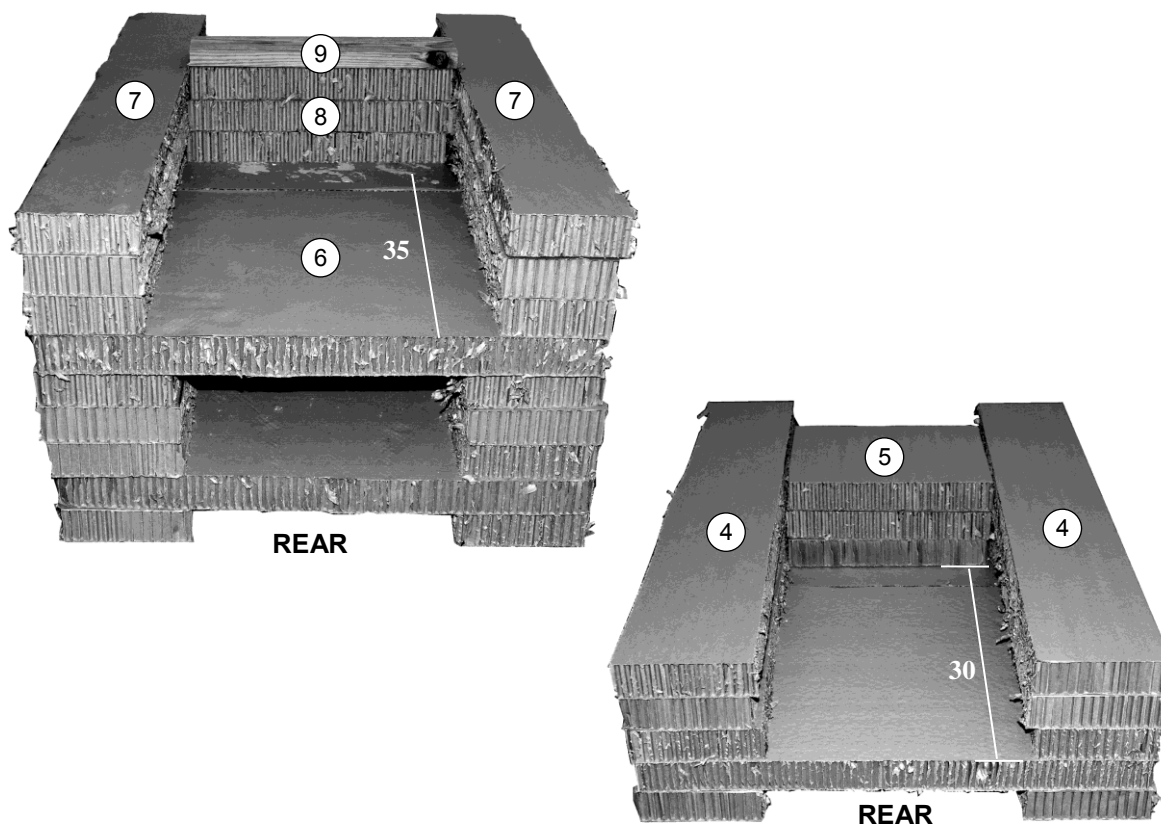
**Note.** All measurements are given in inches.



- ① Cut two 10- by 56-inch pieces of honeycomb.
- ② Cut and position a 20- by 16-inch piece of honeycomb between the 10- by 56-inch, pieces of honeycomb, 30 inches from the rear edge of the stack.
- ③ Glue two 40- by 28-inch pieces of honeycomb, flush with the front and rear side edges on top of the honeycomb in steps 1 and 2.

**Figure 3-97. Stack 2 Constructed**

*Note.* All measurements are given in inches.



- ④ Cut six 10- by 56-inch pieces of honeycomb. Glue three pieces together flush with the 56-inch edges of the stack on each side.
- ⑤ Cut and glue three 20- by 16-inch pieces of honeycomb between the 10- by 56-inch pieces of honeycomb, 30 inches from the rear edge of the stack.
- ⑥ Glue two 40- by 28-inch pieces of honeycomb, flush with the front and rear side edges on top of the honeycomb in steps 4 and 5
- ⑦ Cut six 8- by 56-inch pieces of honeycomb. Glue three pieces together and place flush with outside edge of the 56-inch pieces on each side.
- ⑧ Cut and glue three 24- by 6-inch pieces of honeycomb between the 8- by 56-inch pieces of honeycomb, 35 inches from the rear edge of the stack.
- ⑨ Cut and glue a 2- by 6- by 24-inch piece of lumber on top of the honeycomb in step 8.

**Figure 3-97. Stack 2 Constructed (continued)**

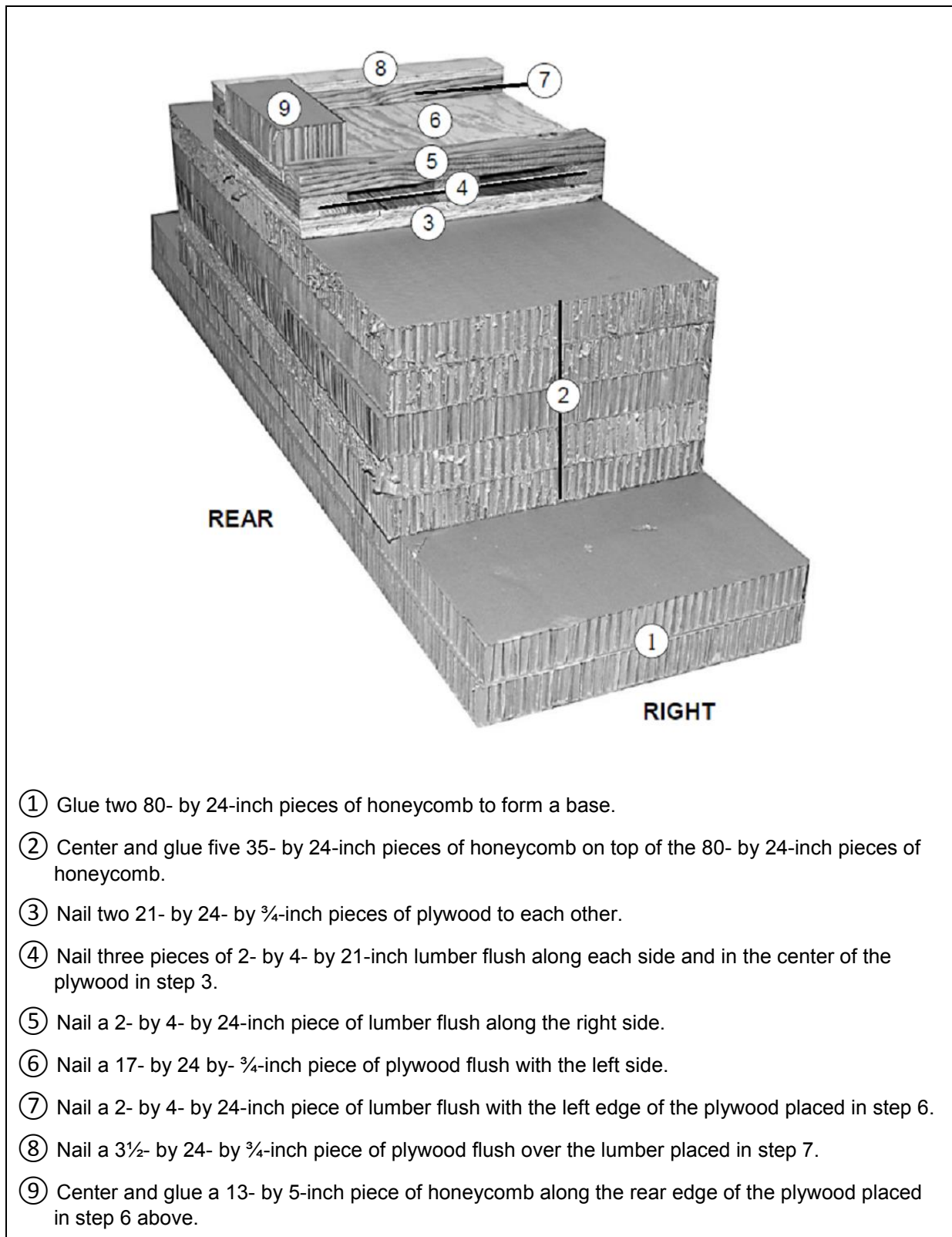
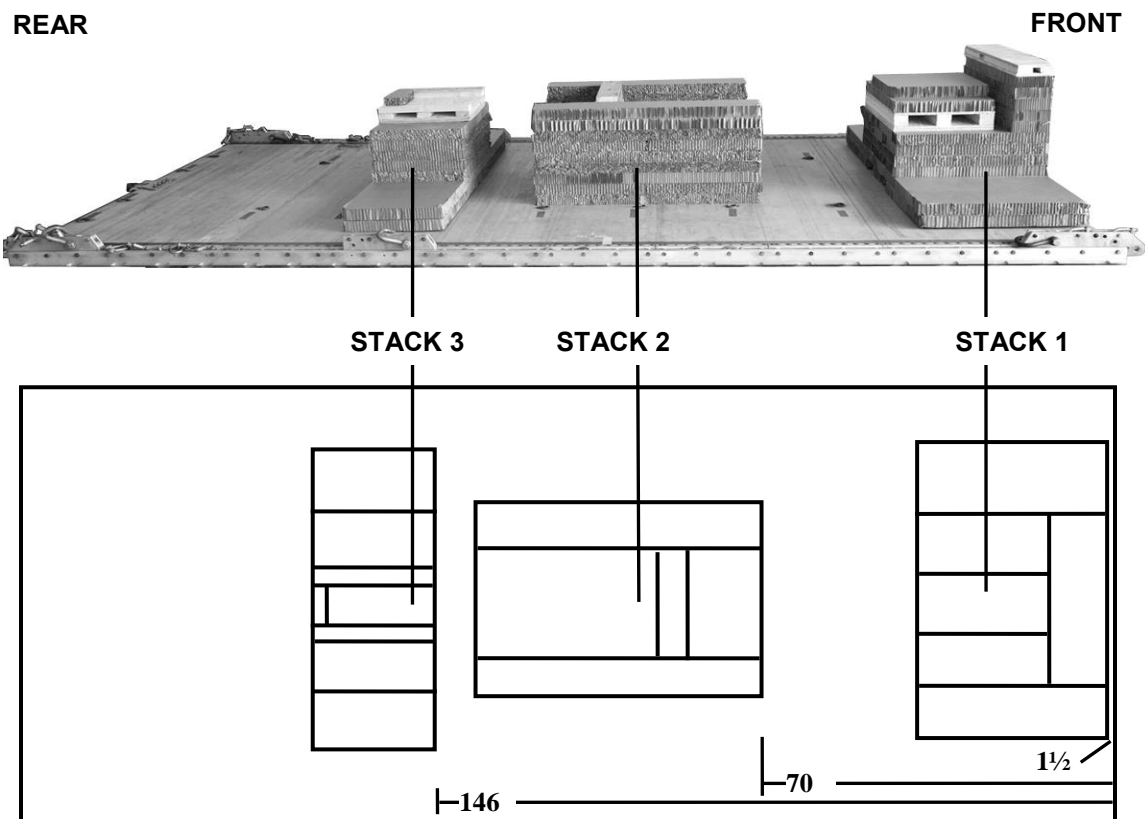


Figure 3-98. Stack 3 Constructed

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



<b>Stack Number</b>	<b>Position on Platform</b>
1	Place stack: Centered 1½ inches from the front edge of the platform.
2	Centered 70 inches from the front edge of the platform.
3	Centered 146 inches from the front edge of the platform.

**Figure 3-99. Honeycomb Stacks Positioned on Platform**

## PREPARING THE TOP OF THE TRUCK

3-80. Remove the TGPK as shown in Figure 3-100 and reattach the weapons mounting bracket shown in Figure 3-101.

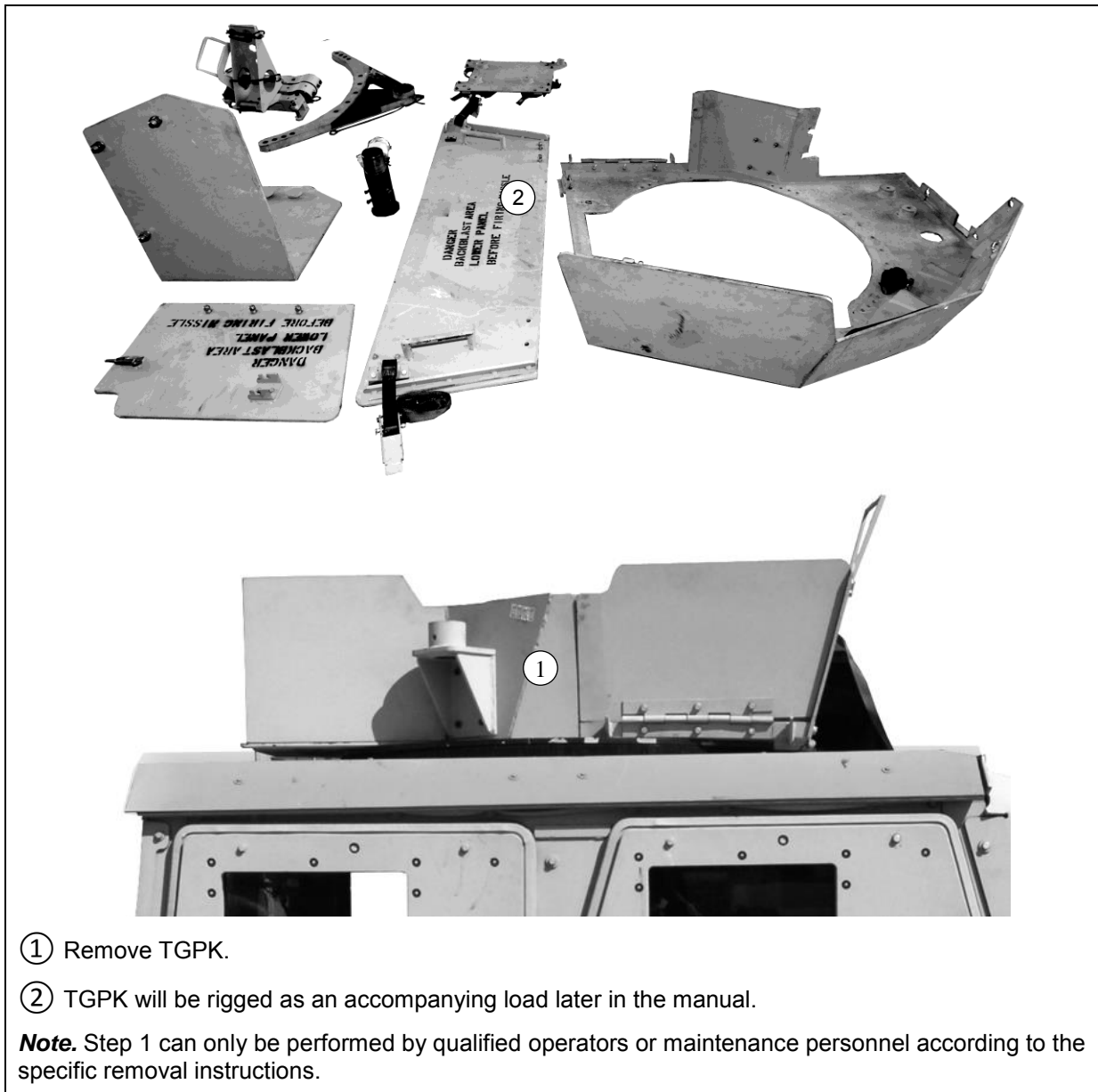
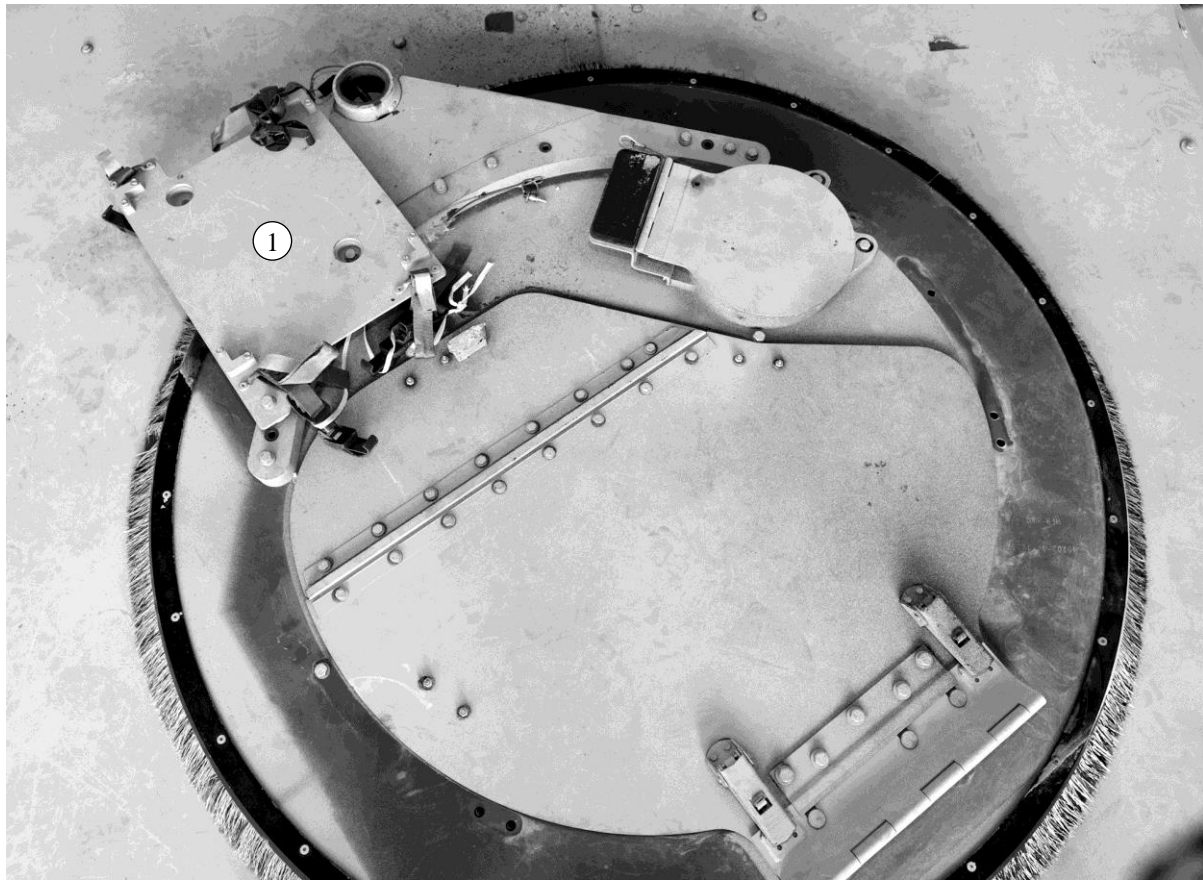


Figure 3-100. TGPK Removed



- ① Reattach the weapon mounting bracket to turret.

**Figure 3-101. Weapon Mounting Bracket Reattached**



## PREPARING THE TRUCK

3-81. Prepare the truck as shown as shown in Figure 3-102 through Figure 3-117.

### CAUTION

Package, label, and mark hazardous material according to AFMAN 24-204(I)/TM 38-250/NAVSUP PUB 505/MCO P4030.19I/DLAI 4145.3.

### CAUTION

A full fuel tank does not allow for fuel expansion, and is a danger to aircraft and crew.



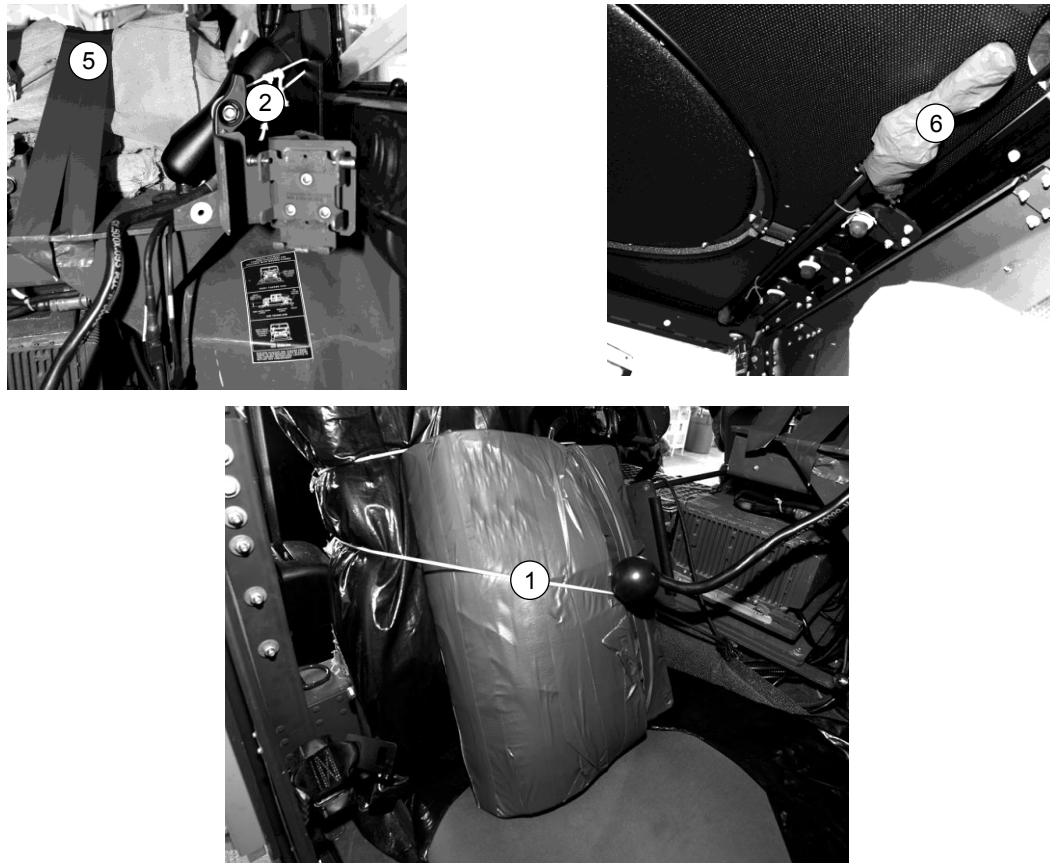
- ① Ensure the fuel tank is no more than  $\frac{3}{4}$  full (not shown).
- ② Ensure the batteries and battery compartment comply with AFMAN 24-204(I)/TM 38-250/NAVSUP PUB 505/MCO P4030.19I/DLAI 4145.3 (not shown).
- ③ Remove and pad the side view mirrors with cellulose wadding. Place the nuts and bolts in the mounting holes and tighten in place (not shown). Cut two 4- by 15-inch pieces of honeycomb and position a piece behind each front seat. Position and secure the mirrors on top of the honeycomb pieces against the back of the seats and secure to the front seats with type III nylon cord.
- ④ Remove the breather cap and fording stack. Leave the cap attached to the stack. Pad the stack with cellulose wadding and tape. Secure to the left rear passenger seat with type III nylon cord. Secure the seat belt over the stack. Cover the air intake hole with felt and tape.

**Figure 3-102. Truck Interior Prepared**



- ① Tie the engine start switch in the engine stop position with type I, 1/4-inch cotton webbing.
- ② Tie the steering wheel to the seat frame in two places with type III nylon cord. The retractable steering wheel locking cable may be used (not shown). If the locking cable is used, secure it to the steering wheel with type III nylon cord, not a padlock (not shown).
- ③ Tie the emergency brake handle in the off position with type III nylon cord.
- ④ Place the transmission and four-wheel drive levers in the neutral position. Secure to a convenient point with type III, nylon cord.
- ⑤ Tie the fire extinguisher in place with two lengths of type III nylon cord (not shown).
- ⑥ Tape all instrument panel gauges with masking tape.

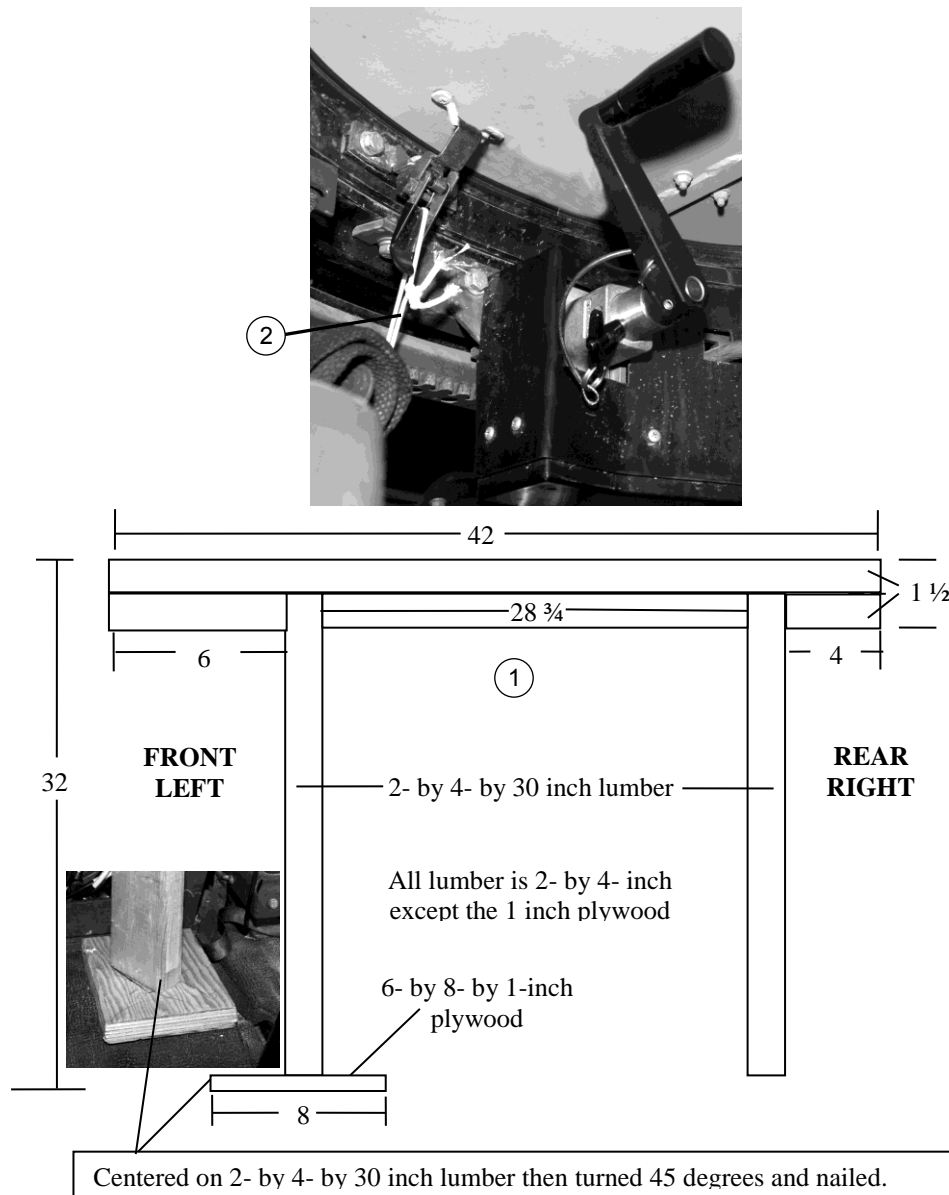
**Figure 3-103. Steering Wheel Secured**



- ① Remove blue force tracking (BFT) computer. Pad with felt and tape with 2-inch cloth backed tape and secure to front passenger seat with a piece of type III nylon cord.
- ② Secure BFT Mounting bracket to nearest convenient point with type III nylon cord.
- ③ Secure the rear interior cab doors with two lengths of type III, nylon cord. Route the first length through each release latch and secure the opposite end to a convenient point on the roof. Secure the second piece through lower portion of the door (not shown).
- ④ Secure communications equipment in its mount with chains and padlocks. Tie the equipment to its mount with 1-inch tubular nylon webbing. Pad the radio handset with cellulose wadding and tie the handset to the mount with type III nylon cord (not shown).
- ⑤ Pad the communications equipment and mount and with cellulose wadding and tape in place.
- ⑥ Remove antennas, secure in several places with type III nylon cord, then pad and tape the ends and secure the antennas to the roofs interior above the interior cab doors with type III nylon cord.

**Figure 3-104. Stow and Secure Communications Equipment and Doors**

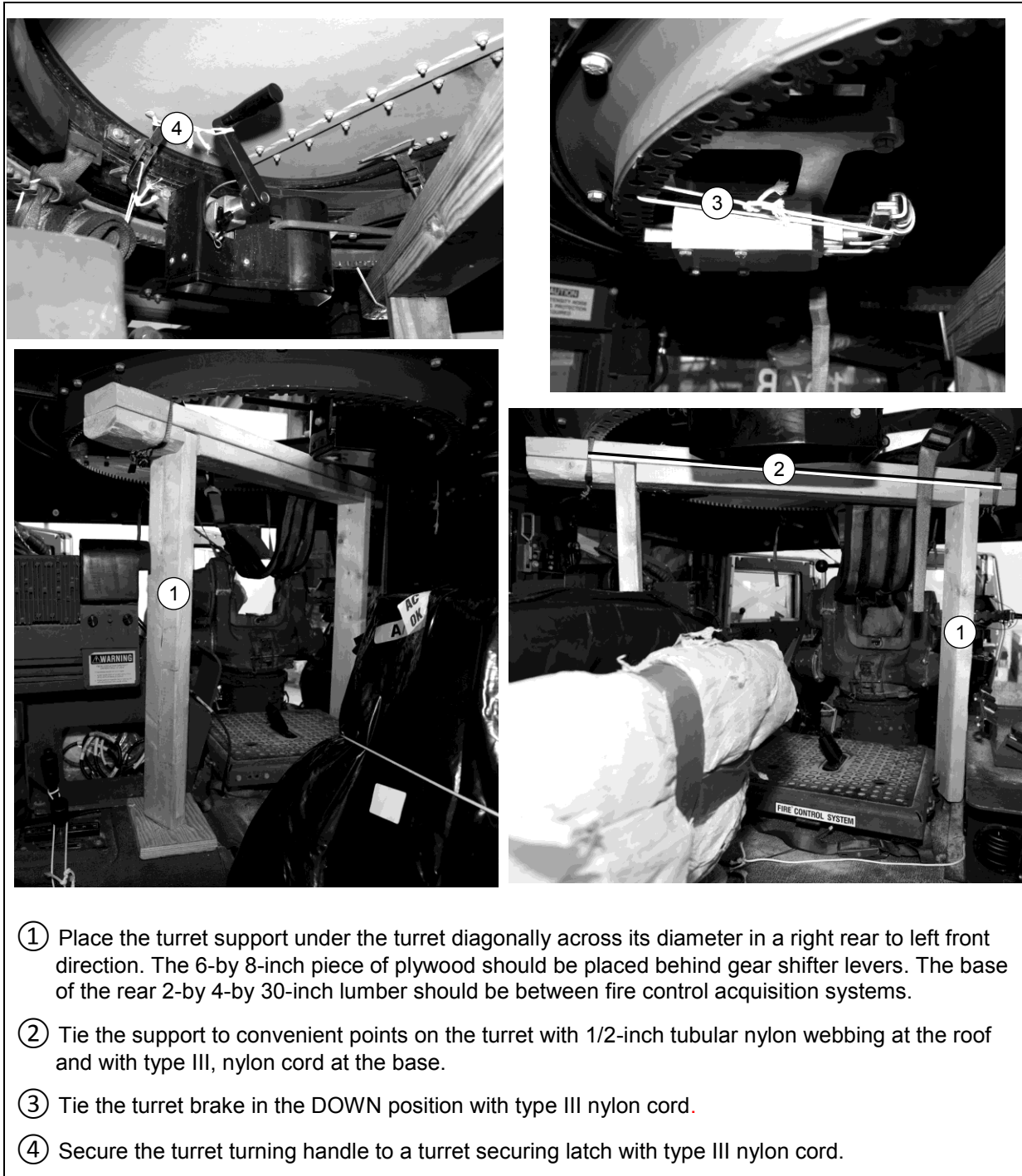
- Notes.** 1. All measurements are given in inches.  
2. This drawing is not drawn to scale.



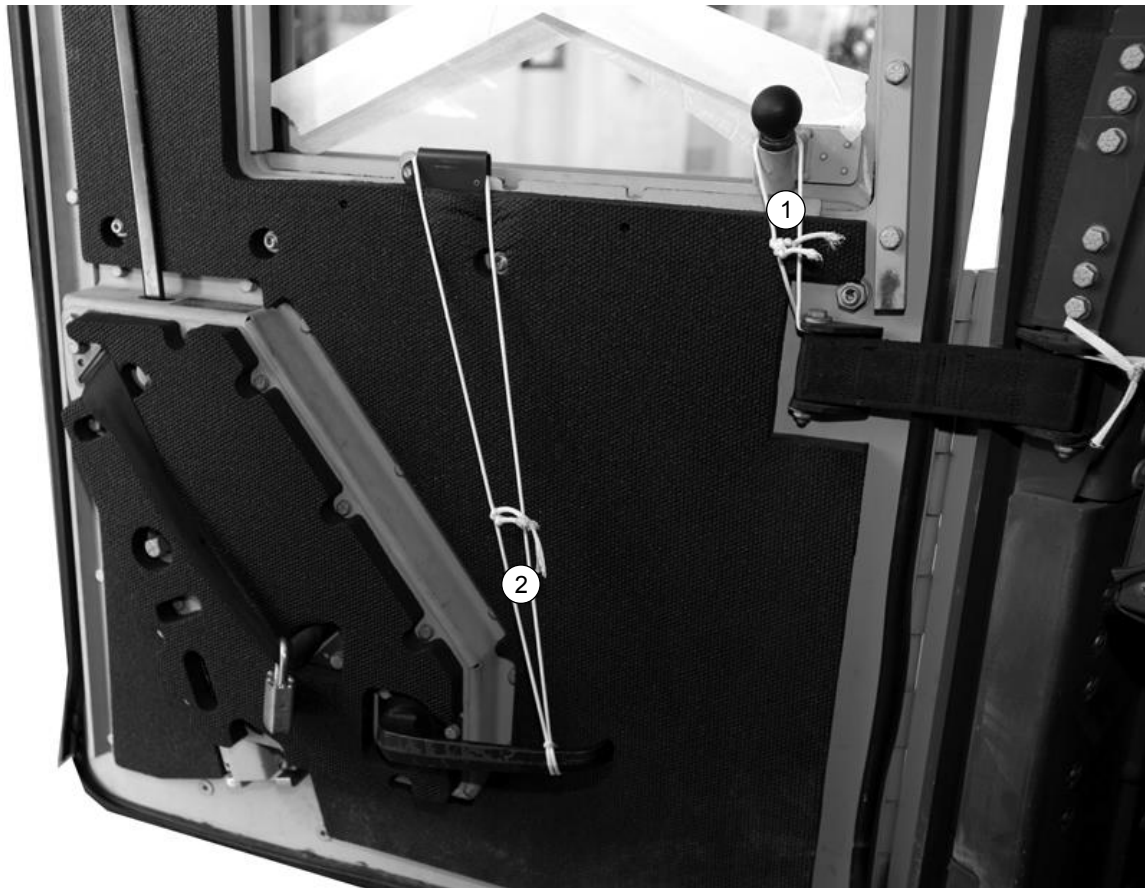
**Note.** The turret should be turned so that the traverse mechanism is in line with the back of the driver's seat.

- ① Build the turret housing support using 8d nails as shown above.
- ② Close the turret cover and secure it with the fasteners provided and to holes in the turret ring with type III nylon cord.

**Figure 3-105. Turret Support Built, Installed and Secured**



**Figure 3-106. Turret Support Placed Secured**



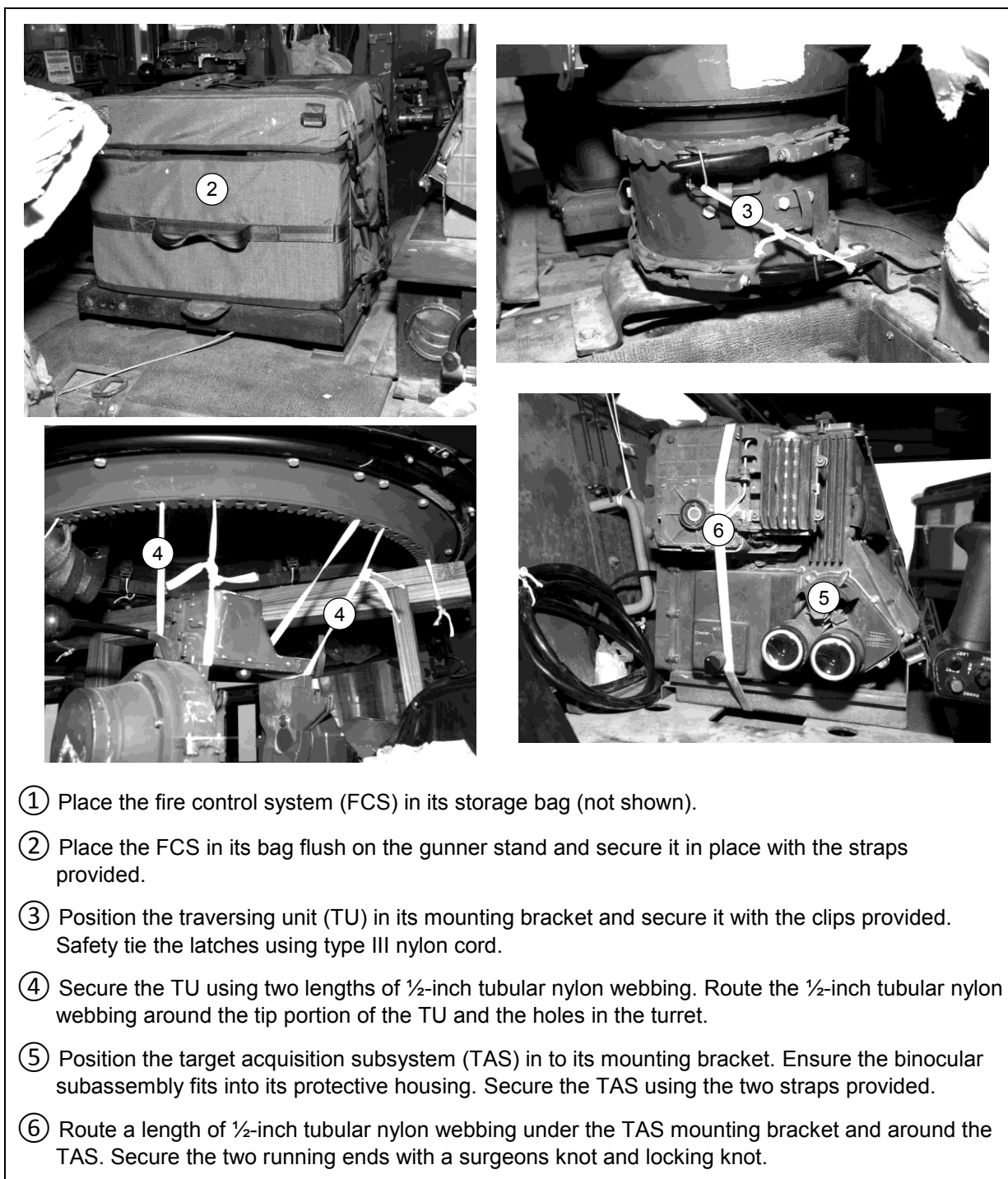
- ① Slide all windows to the “CLOSED” position. Secure each window with a piece of type III nylon to the top door hinge.

**CAUTION**

Ensuring the doors are properly closed is critical for the integral strength of the doors during airdrop. If the door is not properly closed damage will occur.

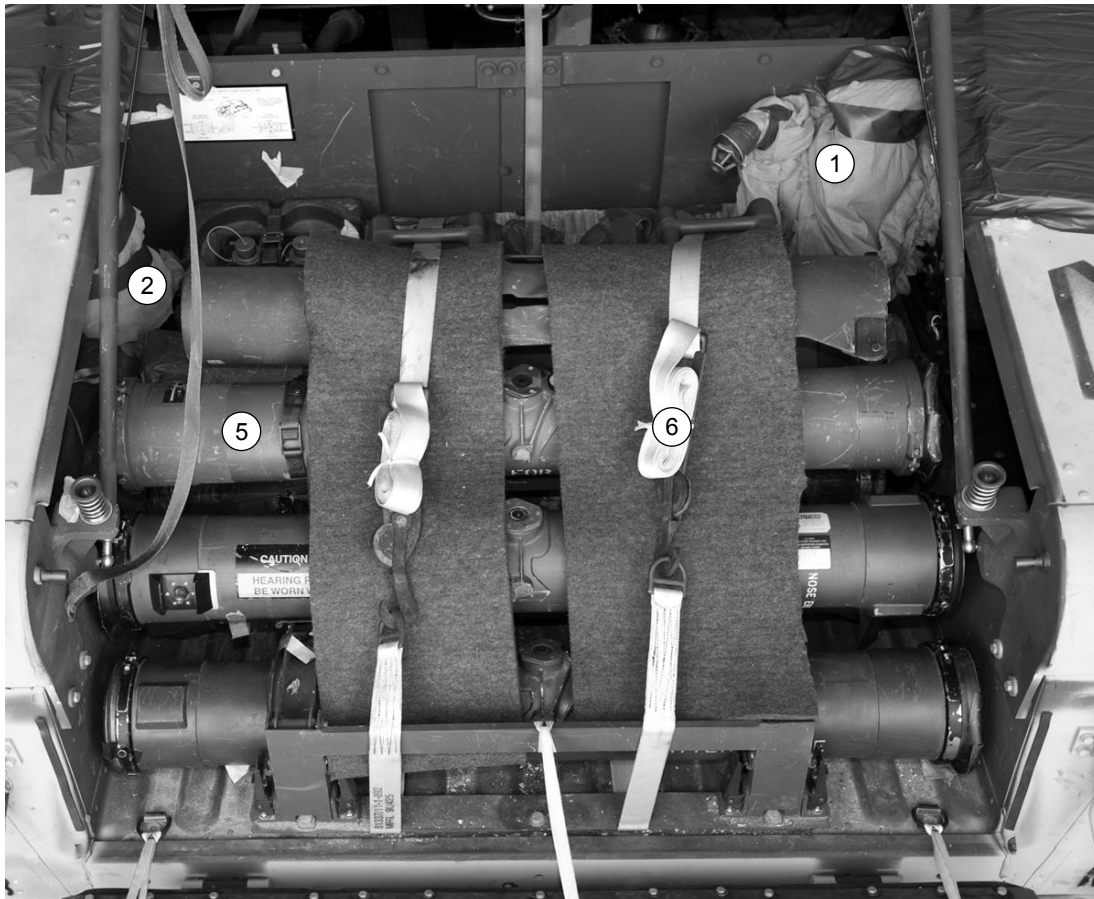
- ② Secure all side interior door latches by girth hitching a length of type III nylon cord from the latch to a convenient point and tie off using a trucker’s hitch. Close the doors and ensure the doors are properly closed for integral strength. Ensure the latch does not move once secured.

**Figure 3-107. Windows and Door Latch Secured**



**Figure 3-108. Fire Control System, Traversing Unit and Target Acquisition Subsystem Secured**

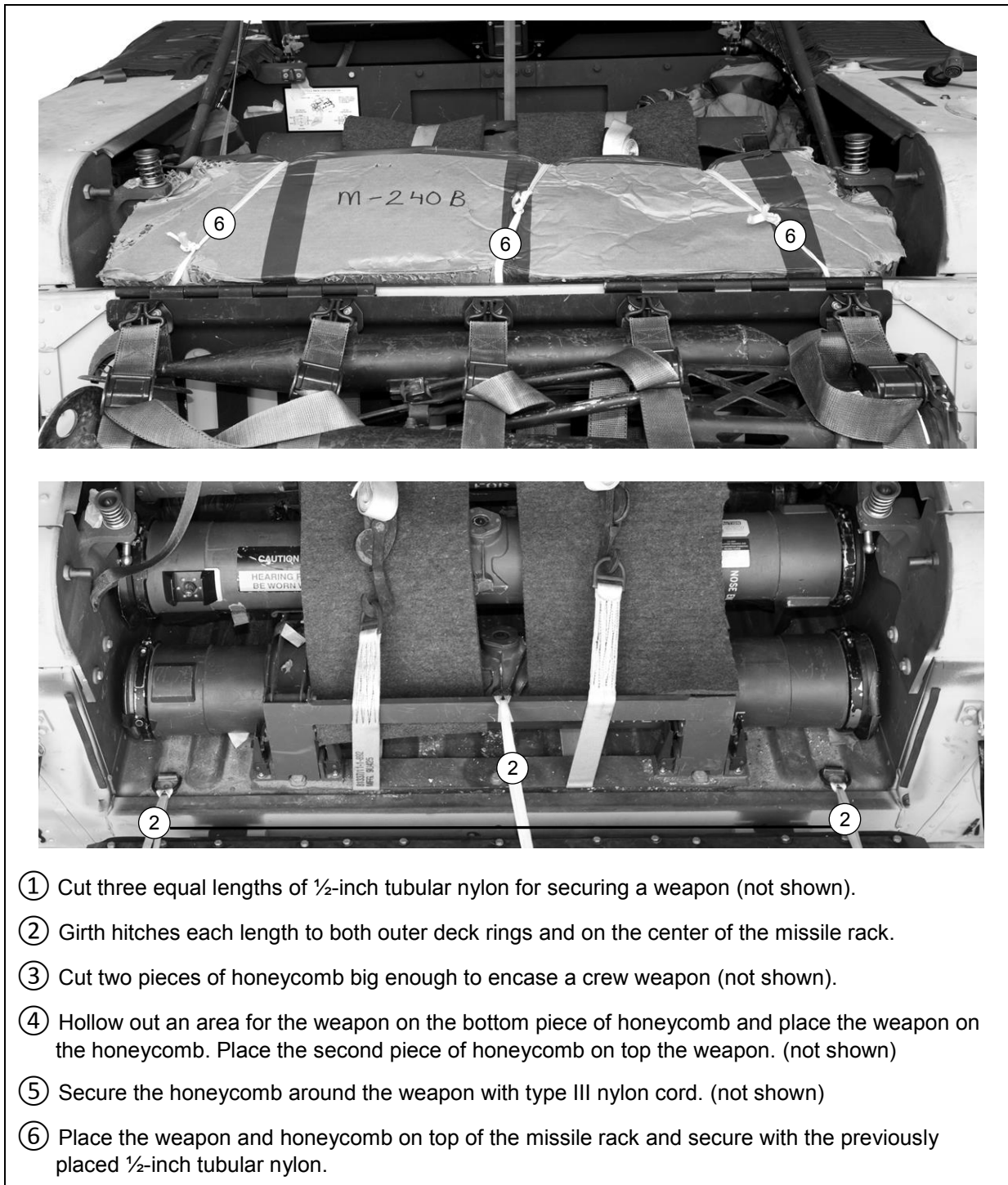




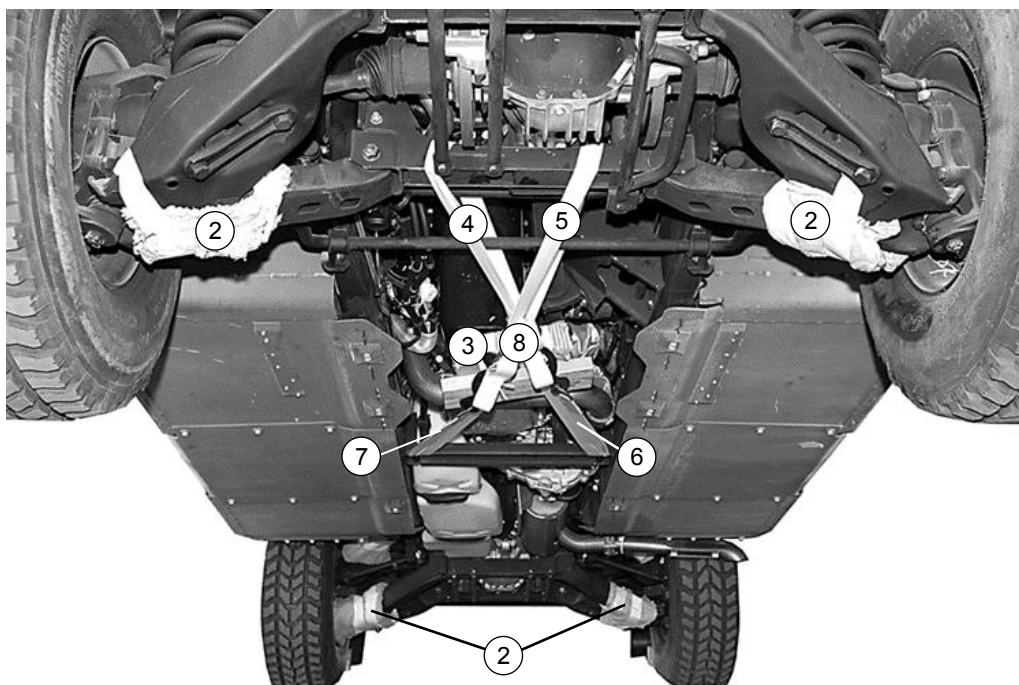
- ① Pad the extinguisher and its components using cellulose wadding and masking tape.
- ② Pad the power box using cellulose wadding and masking tape.
- ③ Place two 15-foot lashings under the TOW missile rack approximately 20 inches apart (not shown).
- ④ Secure 5.56 ammunition cans in brackets and straps provided on the right side of the cargo compartment (not shown).
- ⑤ Place six TOW missiles in the rack. Secure them with the straps provided.
- ⑥ Route the pre-positioned lashings through the water cans handles over the missiles and secure with two Drings and load binders. Place pieces of felt where the load binders will be for added protection.

**Figure 3-109. Cargo Compartment Equipment and TOW Missiles Secured**



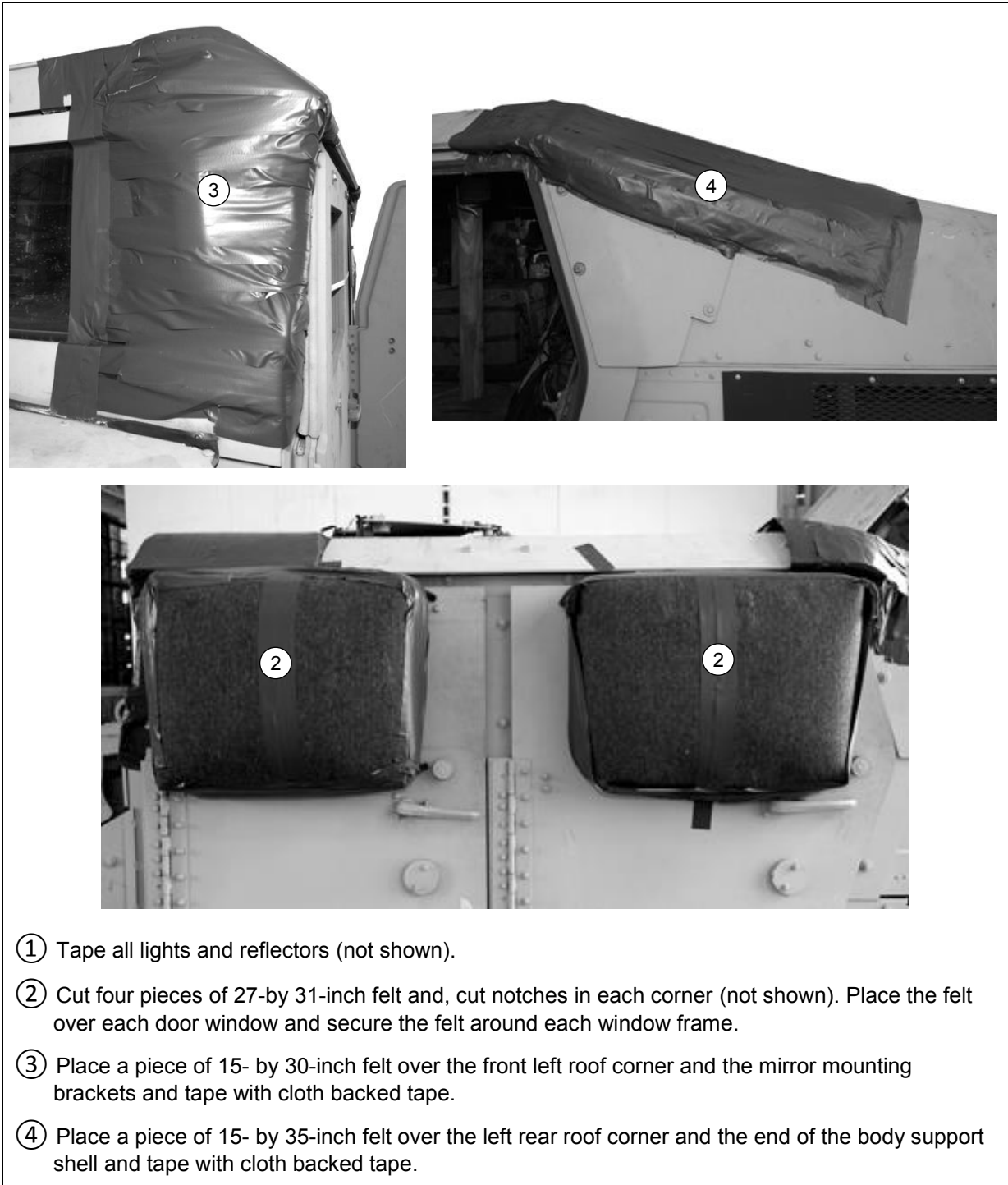


**Figure 3-110. Crew Weapon Padded and Secured**



- ① Tape the fuel tank drain plug (not shown).
  - ② Pad the inside lower control arms at the front and rear of the truck with cellulose wadding and tape.
  - ③ Prepare a 12- by 12-inch piece of honeycomb and a 2- by 6- by 16-inch piece of lumber to be placed under the oil pan. Center and tape the honeycomb to the lumber piece. Position the honeycomb flush against the oil pan.
- Note.** When positioning the honeycomb and lumber ensure that the lumber is positioned widthwise.
- ④ Route a 15-foot lashing around the right front frame cross member. Ensure that the plies of the lashing are routed around the stabilizer bar.
  - ⑤ Route a second 15-foot lashing around the left front frame cross member. Ensure that the plies of the lashing are routed around the stabilizer bar.
  - ⑥ Route the free end of the lashing placed in step 4 around the radius rod on the left side of the cross member in front of the fuel tank.
  - ⑦ Route the free end of the lashing placed in step 5 around the radius rod on the right side of the cross member in front of the fuel tank.
  - ⑧ Tighten and secure both lashings over the honeycomb and lumber placed under the oil pan. Separate the load binders so that they do not interfere with each other.

**Figure 3-111. Truck Underside Prepared**

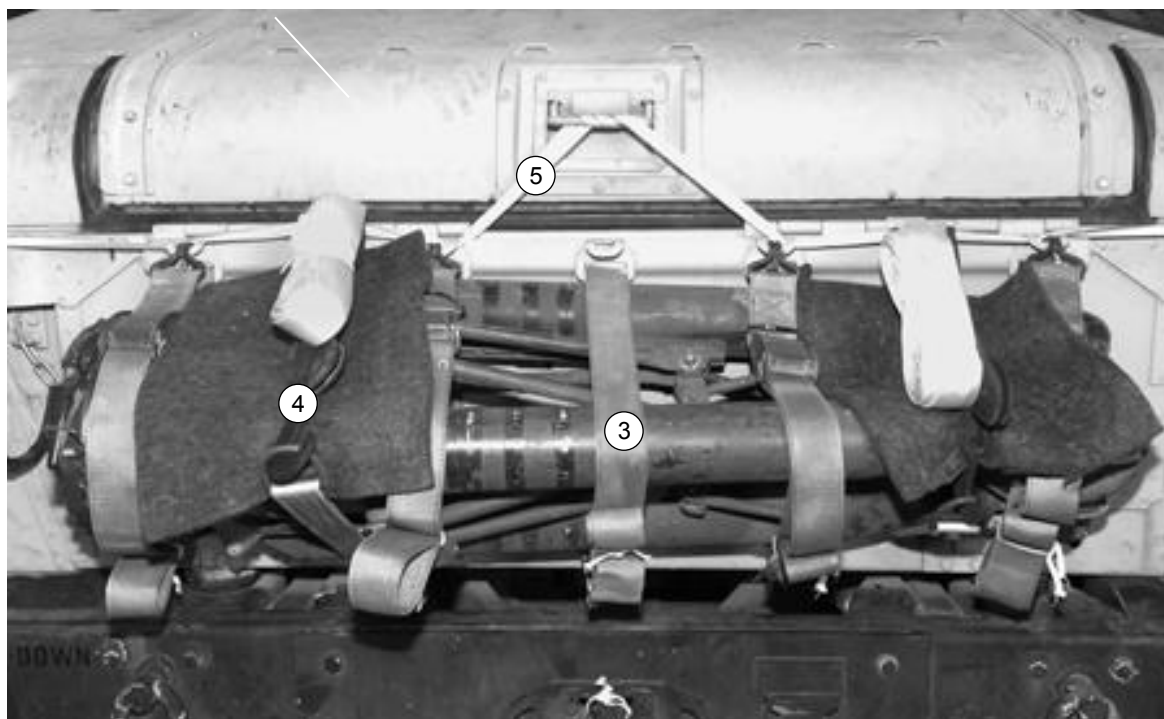


**Figure 3-112. Windows Prepared**



- ① Place a piece of 15- by 30-inch felt over the front right roof corner, fording stack mounting brackets and the mirror mounting brackets and tape with cloth backed tape.
- ② Place a piece of 15- by 35-inch felt over the right rear roof corner and the end of the body support shell and tape with cloth backed tape.
- ③ Pad with felt and tape the antenna mount and scoop.
- ④ Secure the fuel filler cap to the truck with type III nylon cord and tape the opening.

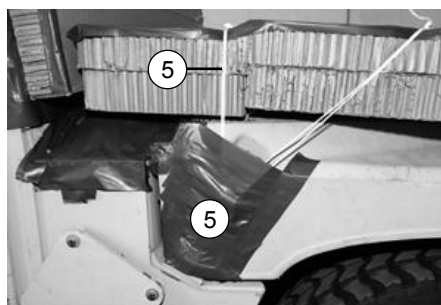
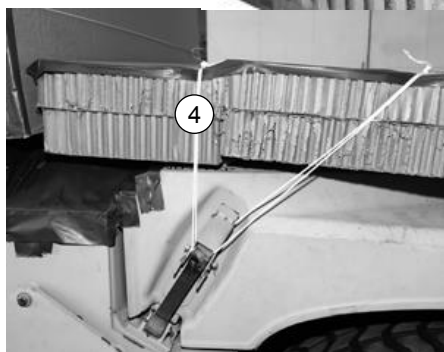
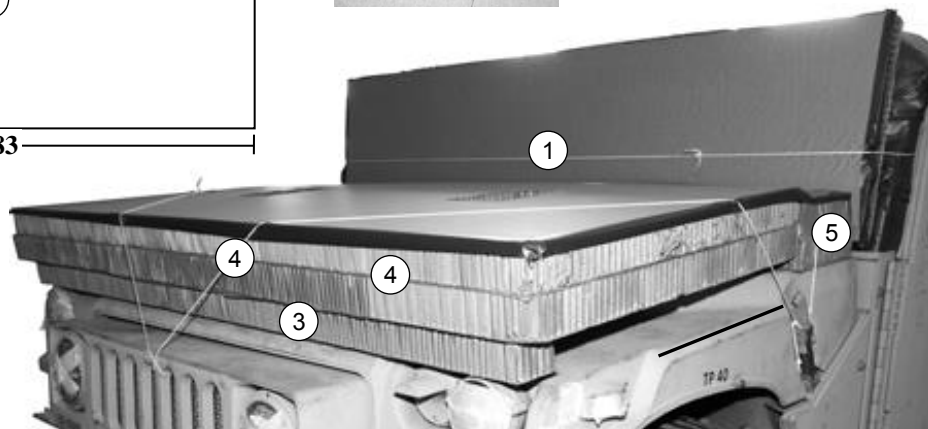
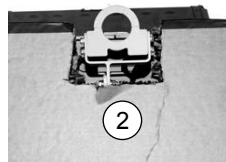
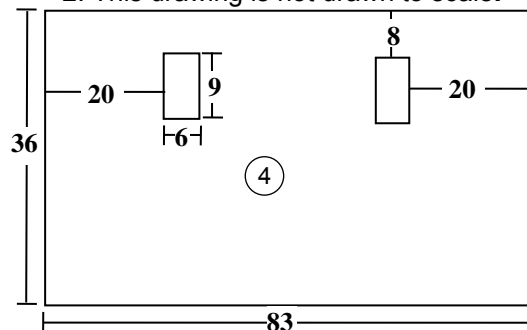
**Figure 3-113. Exterior Prepared**



- ① Secure the tow-pintle with a length of type III nylon cord (not shown).
- ② Open the rear tailgate and lift up the hatch. Lay two 15-foot lashings about 24-inches apart across the tailgate, run the free ends down between the bottom of the tailgate and the vehicle body. Close the tailgate and route the running ends of the lashings up and over the tailgate. Close the hatch leaving the lashings exposed (not shown).
- ③ Place the TOW tripod on the tailgate and secure the tripod with the securing straps.
- ④ Secure the tripod with the prepositioned 15 foot lashings. Place pieces of felt where the lashings will run and secure the lashings with D-rings and load binders.
- ⑤ Girth hitch a doubled length of 1/2-inch tubular nylon webbing through either end of the tailgate hook brackets through the cargo strap securing brackets, up through the hatch opening handle, back down through the cargo strap securing brackets, and secure to the opposite tailgate hook brackets.

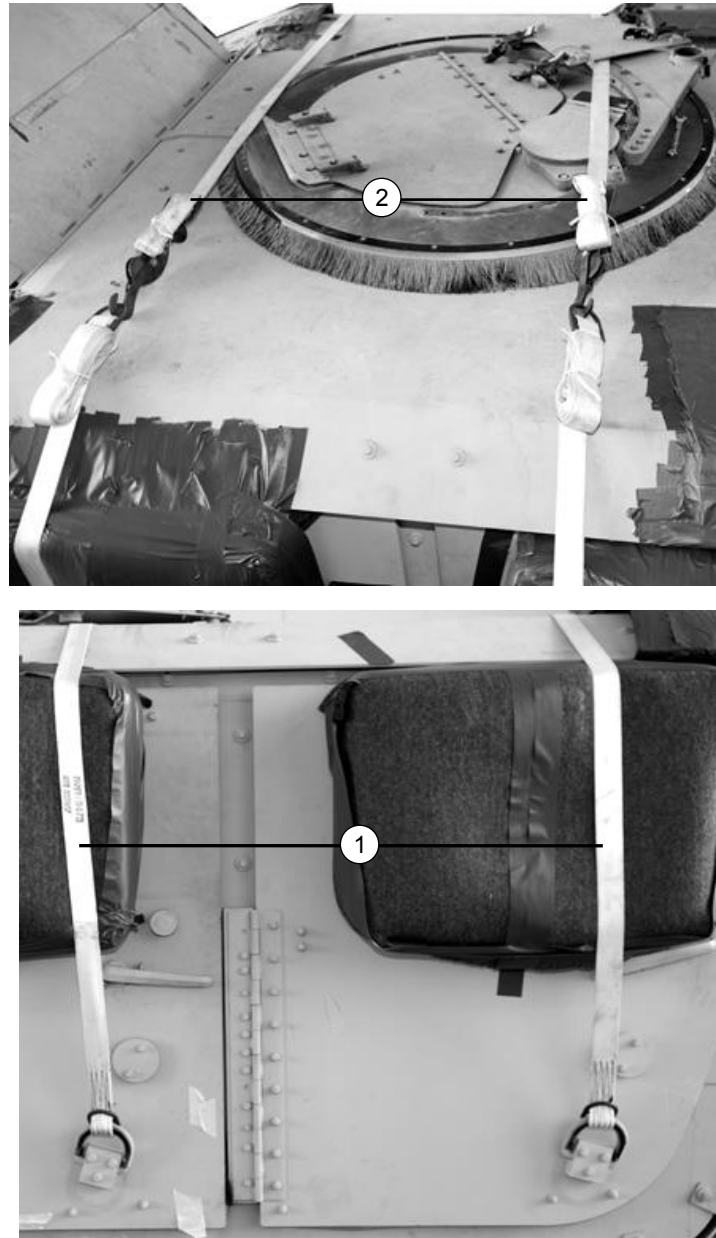
**Figure 3-114. Rear Hatch and Tailgate Prepared**

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



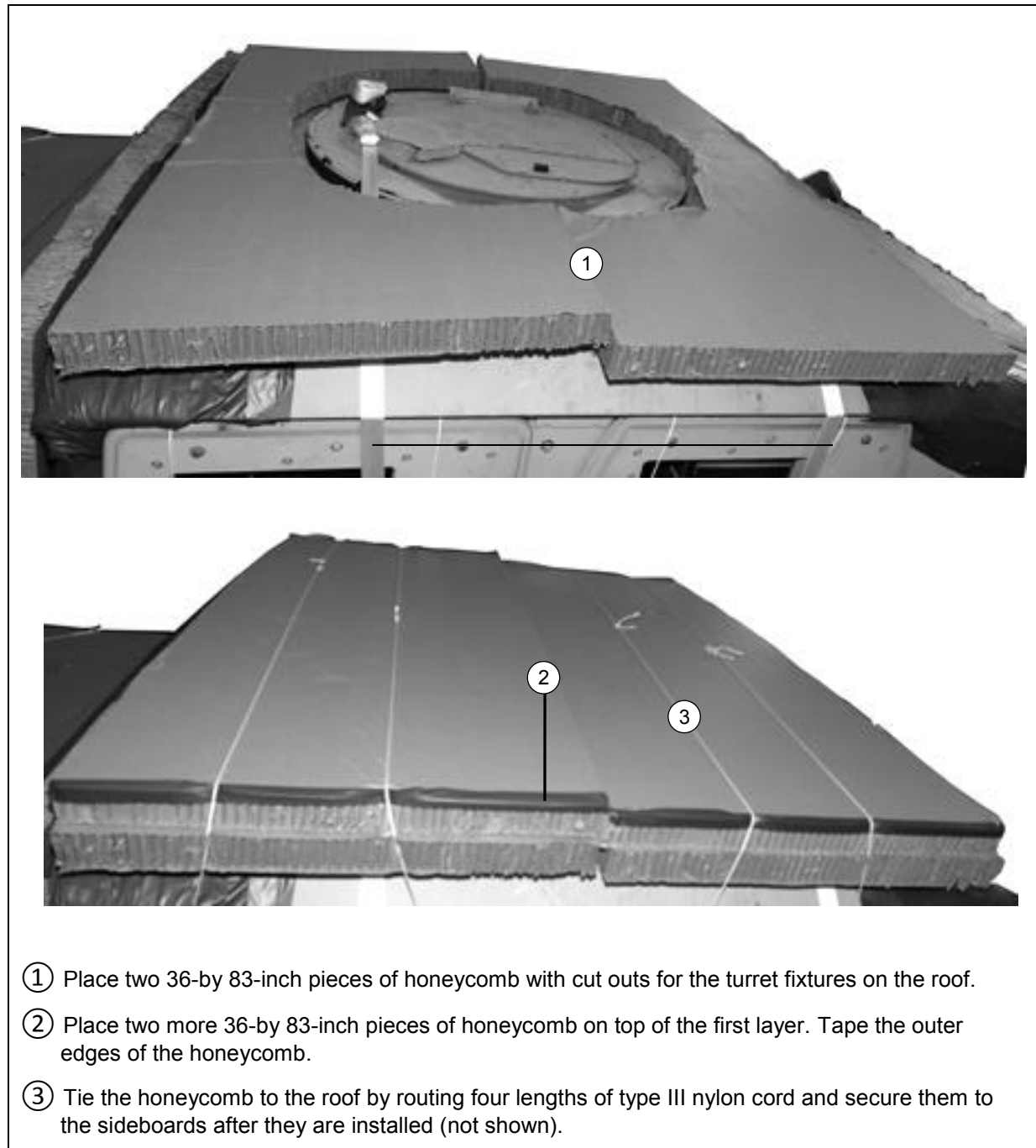
- ① Place an 83- by 21-inch piece of honeycomb against the windshield. Tape the outside edges and secure with type III nylon cord through the window openings and around the honeycomb.
- ② If the driver's visual equipment bracket is there, cut a notch in the honeycomb for it, then pad it with felt and tape in place with cloth backed tape.
- ③ Place a 4- by 78-inch piece of honeycomb along the front edge of the hood.
- ④ Place and tie two 83- by 36-inch pieces of honeycomb with cutouts as shown above to the front of the hood with type III nylon cord. Tape the upper edges of the honeycomb. Route the cord through the grille and tie it on each side to the hood latches.
- ⑤ Place two 83- by 12-inch pieces of honeycomb behind the honeycomb placed in step 3 and flush against the windshield. Tape the upper outside edges, and tie the honeycomb to the hood latches with type III nylon cord. Tape the hood latches using cloth-backed tape.

**Figure 3-115. Hood and Windshield Prepared**



- ① Route a 15-foot lashing around each shackle mounted on the outside of the front and rear on both sides and back through its own D-ring.
- ② Secure the pre-positioned front door lashings on top of the vehicle roof with two D-rings and a load binder. Repeat for the rear door lashings.

**Figure 3-116. Door Lashings Prepared and Secured**



**Figure 3-117. Roof Prepared**

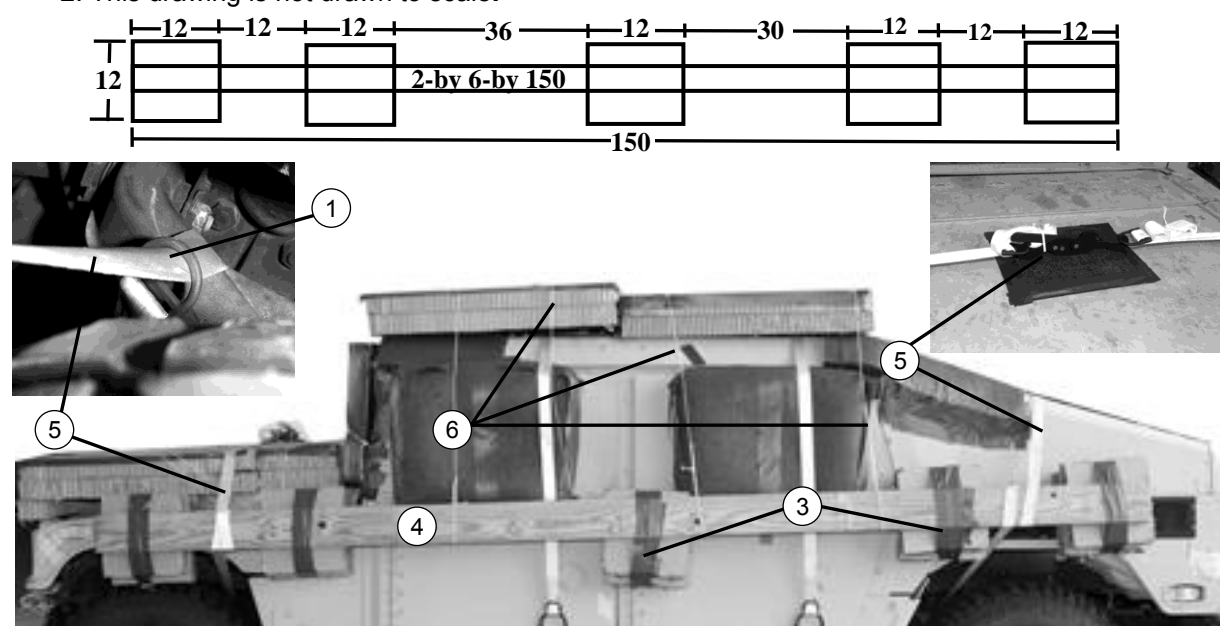


## PREPARING AND INSTALLING BODY SIDE PROTECTION BOARDS

3-82. Prepare and install the body side protective boards as shown in Figure 3-118.

**Notes.** 1. All measurements are given in inches.

2. This drawing is not drawn to scale.



- ① Pass a 15-foot lashing around the upper control arm behind a front wheel and through its own D-ring. Repeat for the other side of the truck.
- ② Pass a 15-foot lashing around the upper control arm behind a rear wheel and through its own D-ring (not shown). Repeat for the other side of the truck (not shown).
- ③ Glue and tape six 12- by 12-inch pieces of honeycomb to a 2- by 6- by 150-inch piece of lumber spaced as shown above. Repeat for the second body side protection board.
- ④ Position each body side protection board against the side of the cab. Ensure that all honeycomb pieces are flush against the front and rear fenders of the vehicle.

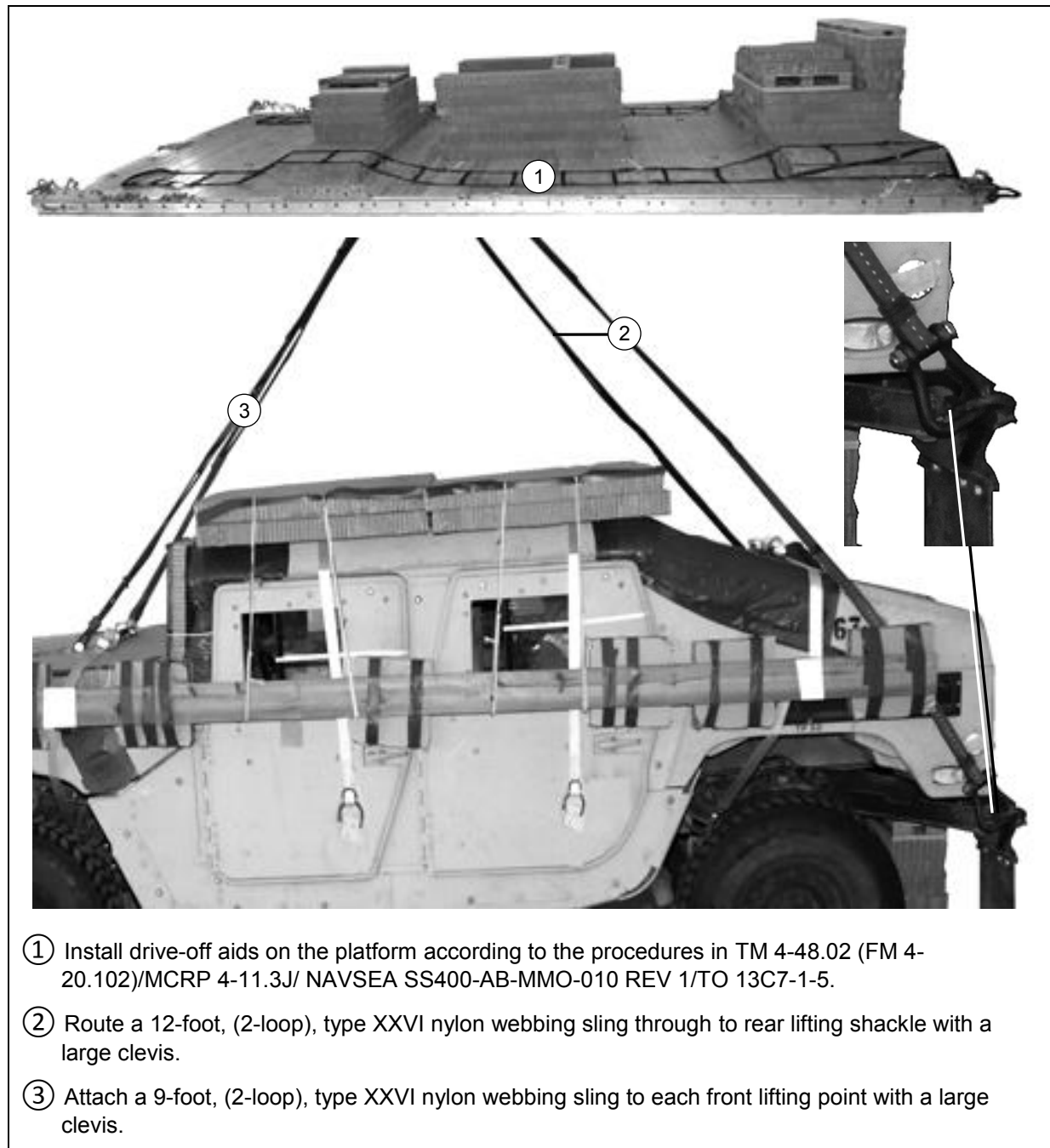
**Note.** When routing the lashings around the body side protection boards alternate the direction from top to bottom and bottom to top. This will keep the boards flush and prevent twisting.

- ⑤ Bring the lashings positioned in steps 1 and 2 around the boards two turns. Secure the lashings from the left and right sides on top of the truck with D-rings and load binders. Pad the hatch with felt where the load binder is on the rear hatch.
- ⑥ Tie the four type III nylon cords on each side of the vehicle to the side boards to secure the honeycomb on the top of the vehicle.

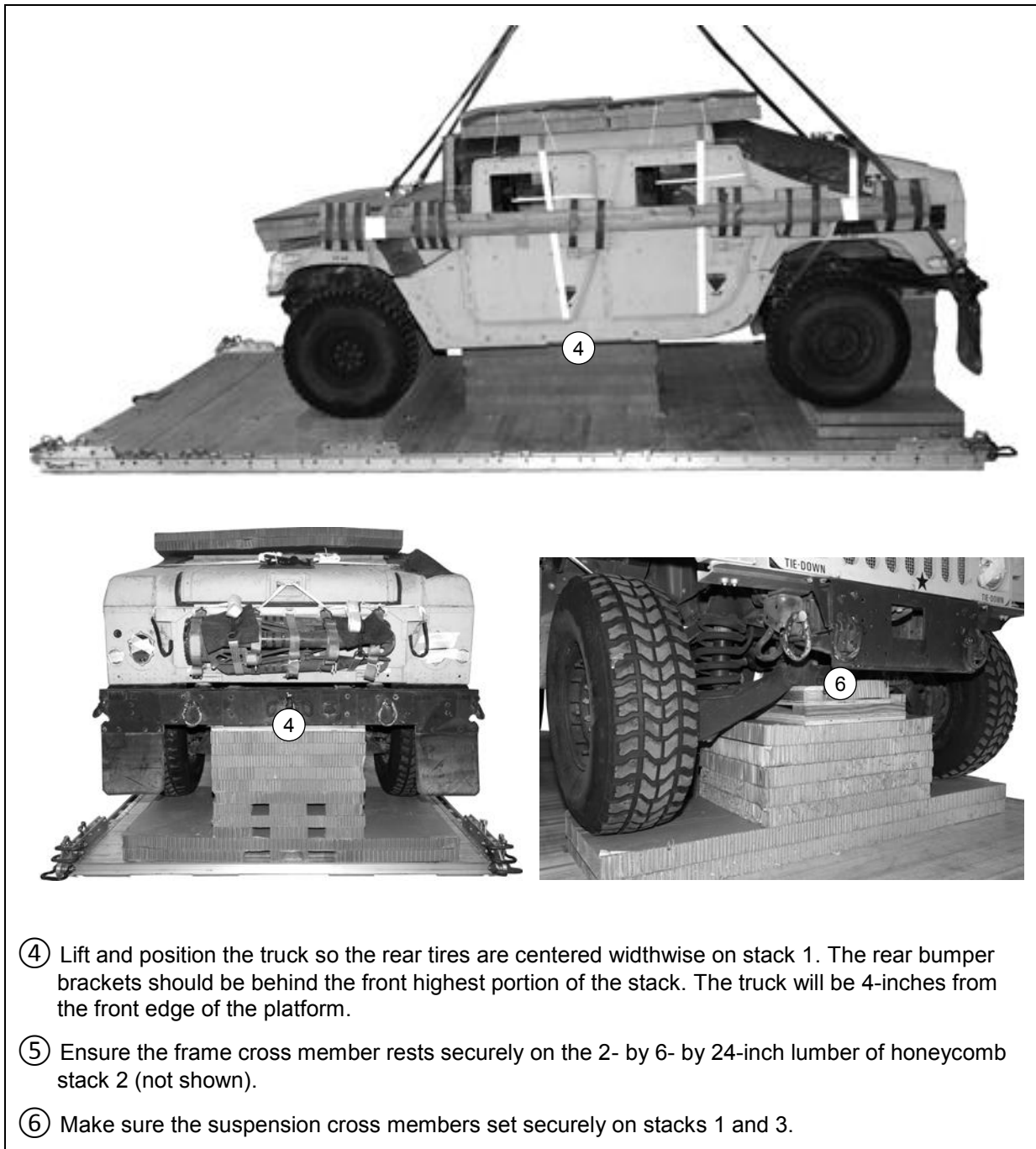
**Figure 3-118. Body Side Protection Boards Prepared and Installed**

## LIFTING AND POSITIONING THE VEHICLE

3-83. Lift the vehicle using the slings and position it on the honeycomb stacks as shown in Figure 3-119.



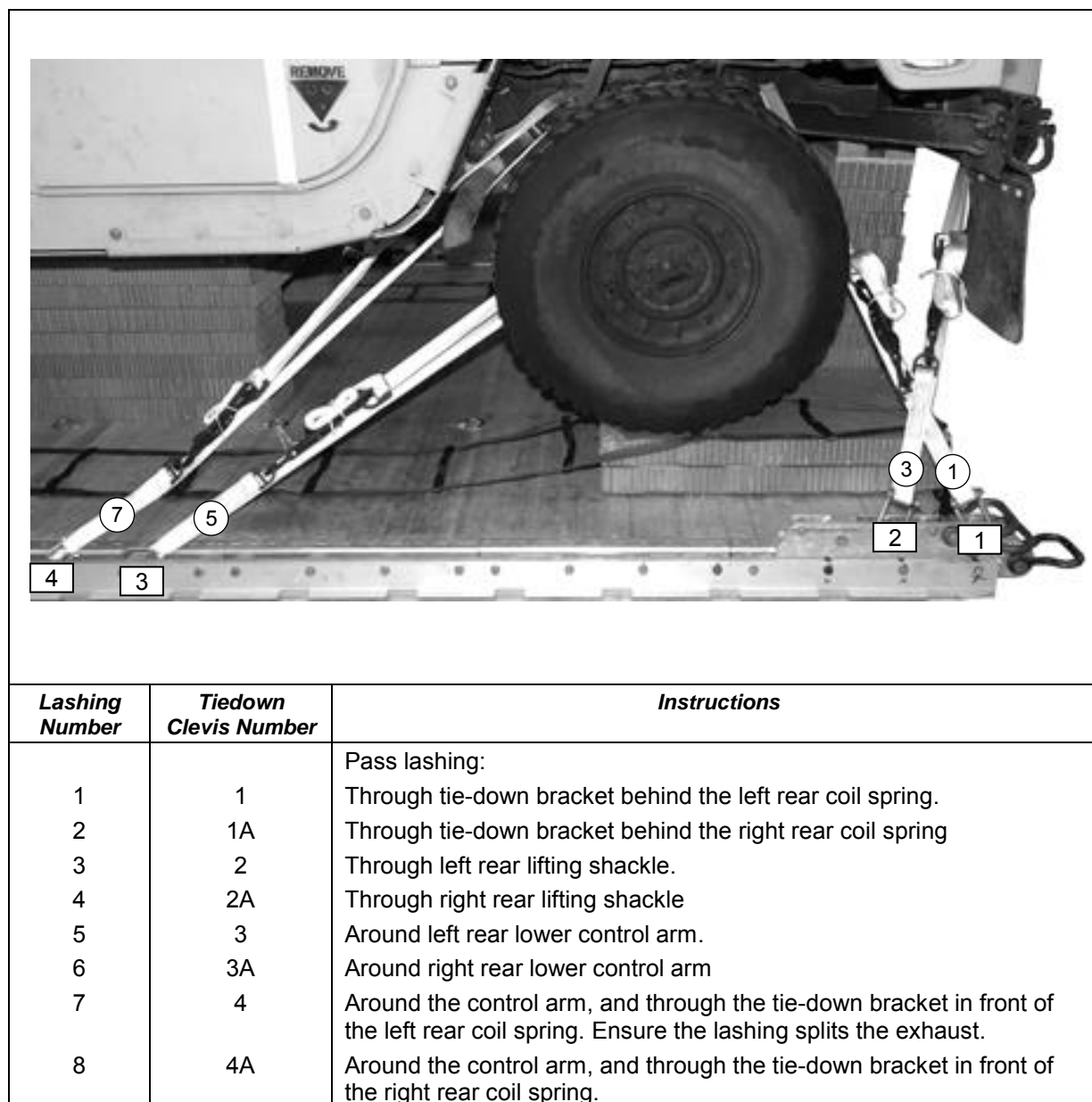
**Figure 3-119. M1167 Positioned**



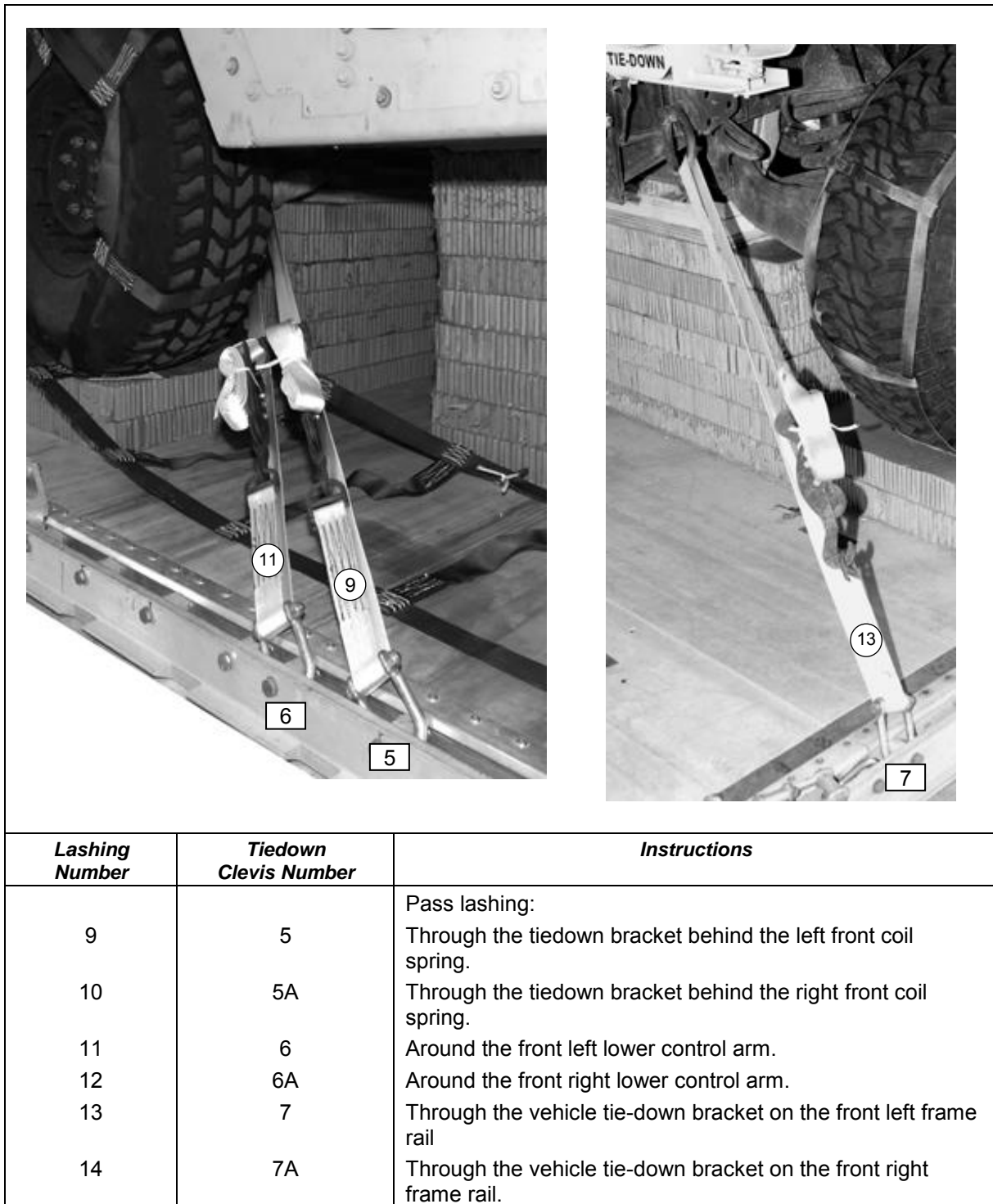
**Figure 3-119. M1167 Positioned (continued)**

## LASHING THE M1167

3-84. Lash the M1167 to the platform according to FM4-20.102/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figures 3-120 and 3-121.



**Figure 3-120. Lashings 1 through 8 Installed**



**Figure 3-121. Lashings 9 through 14 Installed**

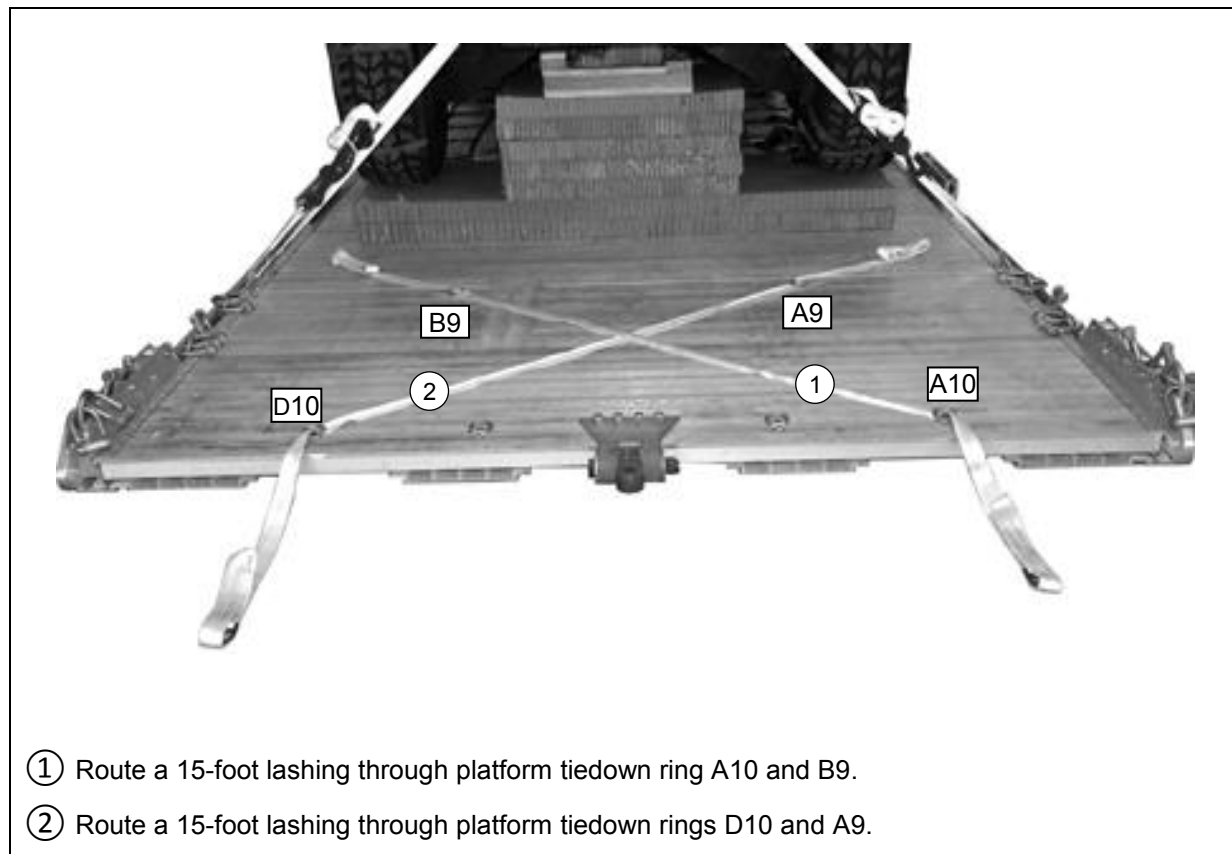
## STOWING ACCOMPANYING LOAD

3-85. Stow the accompanying load as shown in Figure 3-122 through Figure 3-130. Ensure the accompanying load complies with the TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5. The accompanying load shown consists of TGPK and 6 TOW missiles.

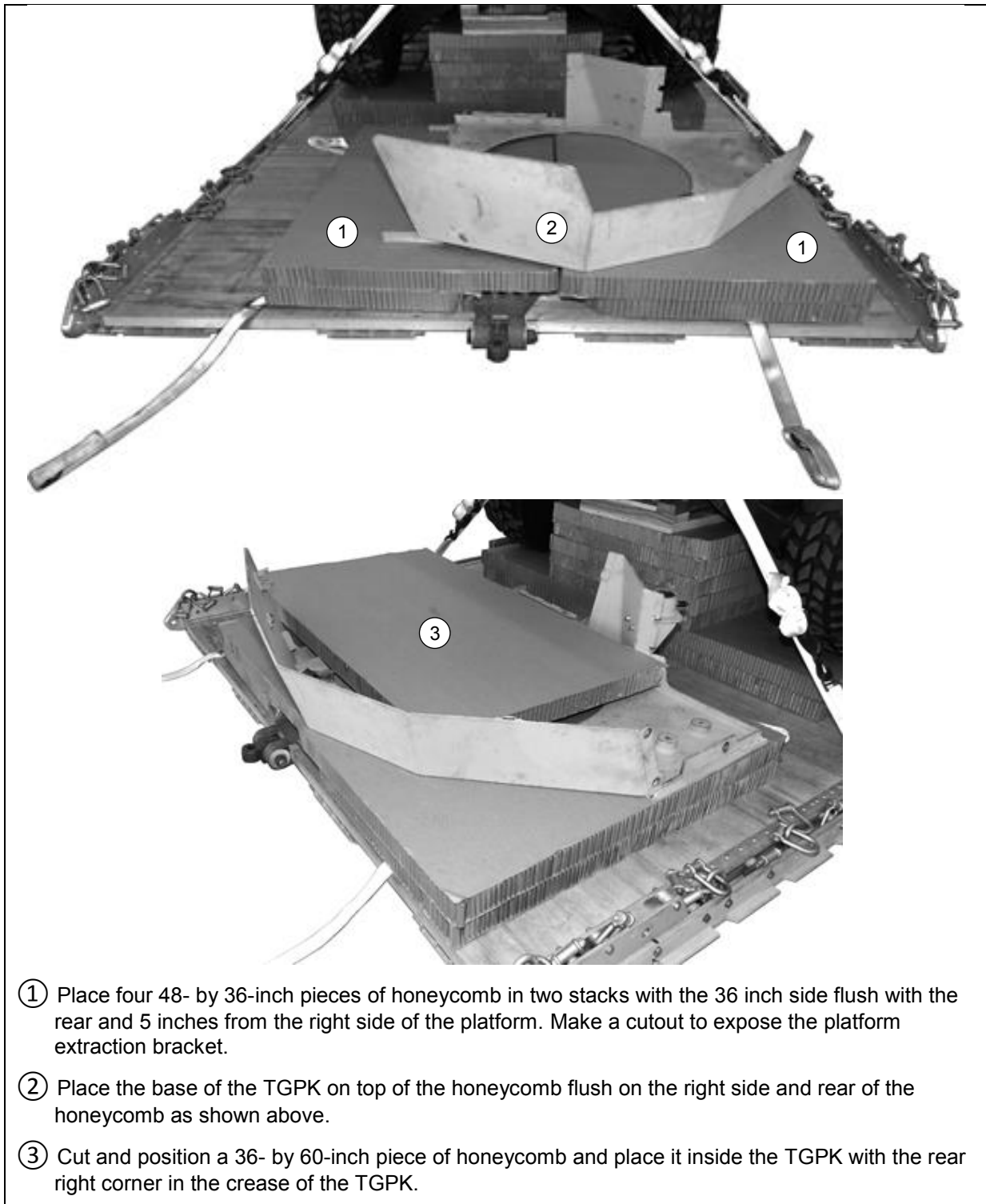
### CAUTION

Only ammunition listed in TM 4-48.16 (FM 4-20.153)/MCRP 4-11.3B/ TO 13C7-18-41 may be airdropped.

**Note:** The accompanying load will have a maximum weight of 3,140 pounds.



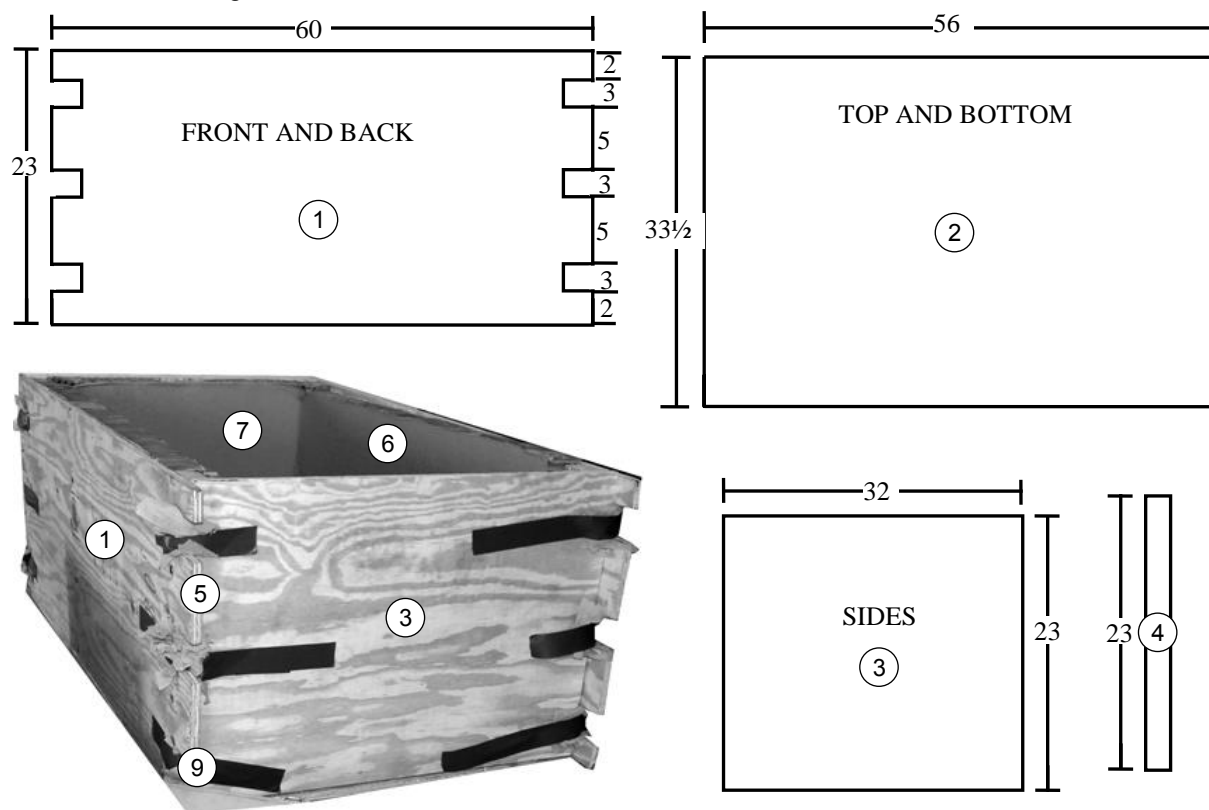
**Figure 3-122. Accompanying Load Lashings Placed**



**Figure 3-123. TGP Honeycomb Placed**

**Notes.** 1. All measurements are given in inches.

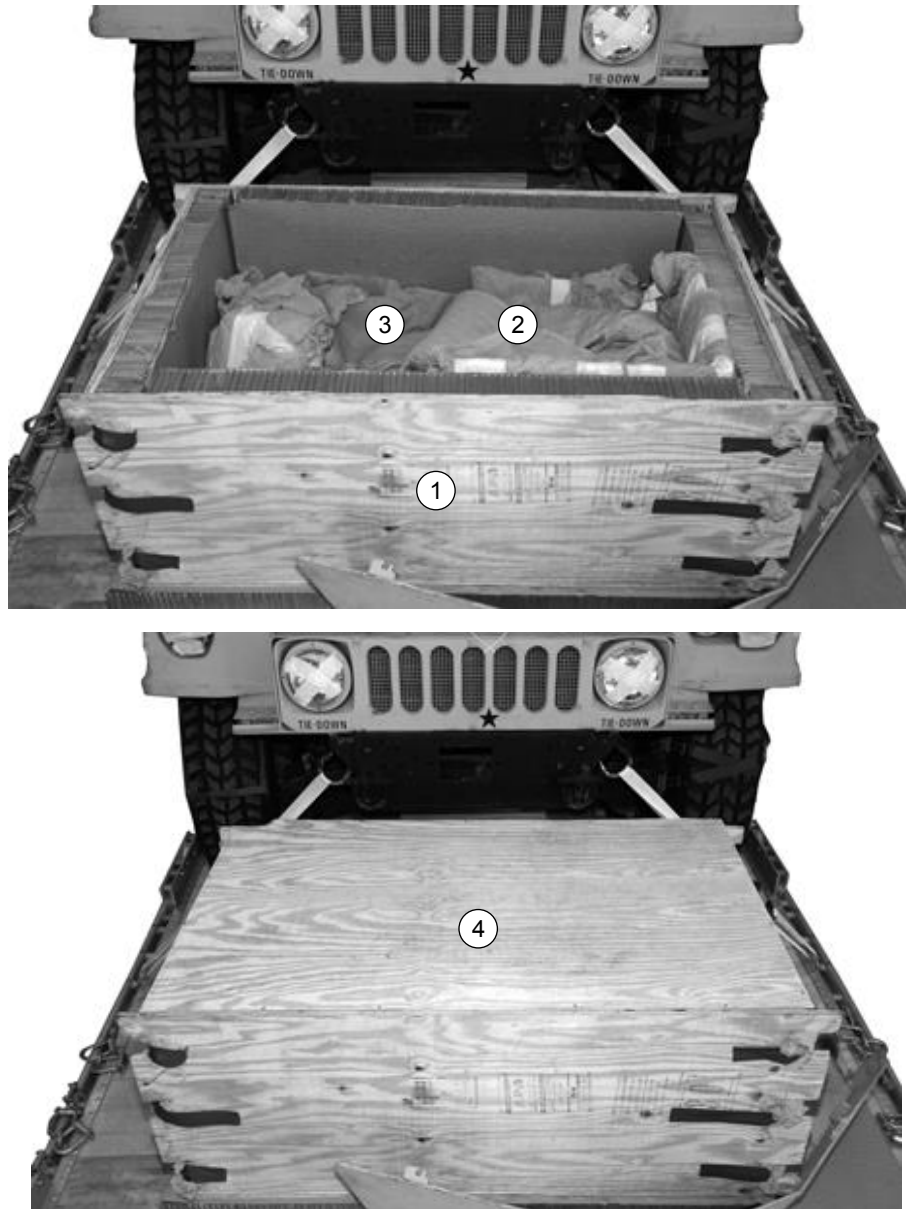
2. This drawing is not drawn to scale.



- ① Cut two 23- by 60- by  $\frac{3}{4}$ -inch pieces of plywood for end boards. Cut three inch slots out of each side two inches from the top and bottom and 5 inches in the middle
- ② Cut two 33 $\frac{1}{2}$ - by 56 by  $\frac{3}{4}$ -inch pieces of plywood for the top and bottom.
- ③ Cut two 23- by 32 by  $\frac{3}{4}$ -inch pieces of plywood for the sides.
- ④ Cut four 2- by 4- by 23-inch pieces of wood for the corner supports.
- ⑤ Nail all the pieces together with 8d nails. Pad and tape cutouts for lashings.
- ⑥ Cut two 23- by 47-inch pieces of honeycomb for inside the front and back.
- ⑦ Cut two 23- by 29-inch pieces of honeycomb for inside both sides.
- ⑧ Cut two 32- by 54-inch pieces of honeycomb. Place one inside the bottom and the other one on top, after the equipment is in the box (not shown).
- ⑨ Pad with cellulose wadding and tape all sharp edges where lashings will run.

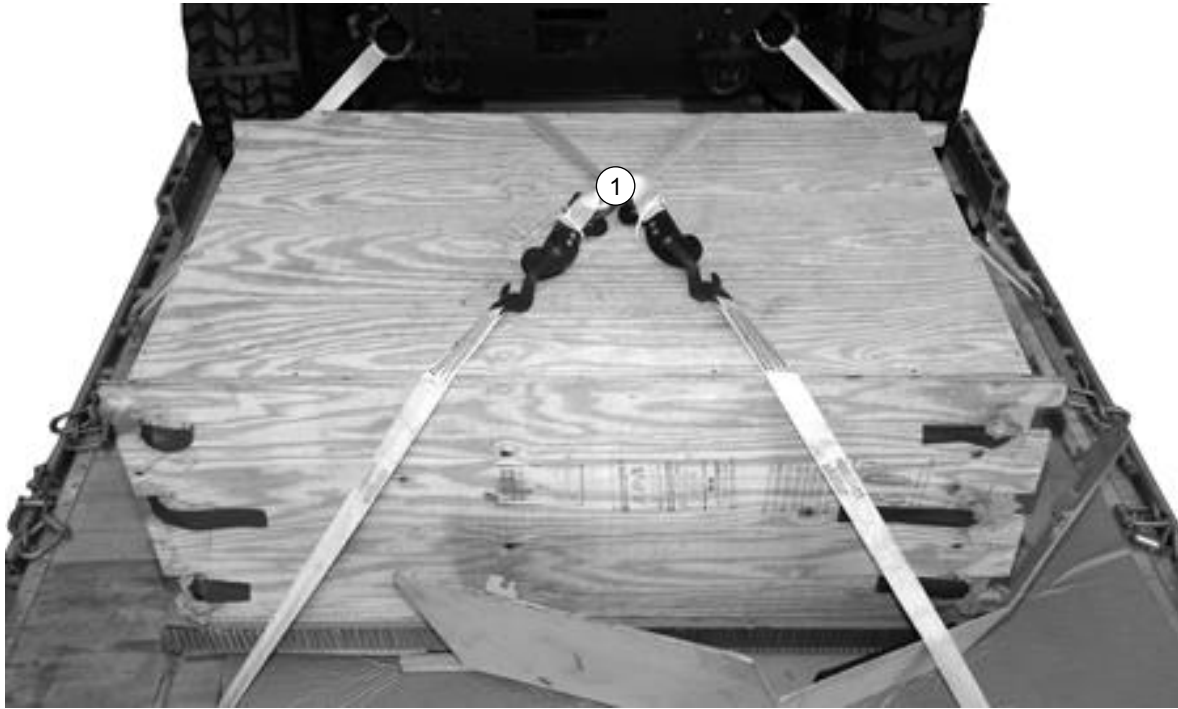
**Figure 3-124. TGPK Box Built**





- ① Place the TGPK box on the 36- by 60-inch honeycomb.
- ② Wrap all remaining TGPK equipment in cellulose wadding and place inside the box.
- ③ Fill in the gaps with cellulose wadding.
- ④ Nail the top on the box.

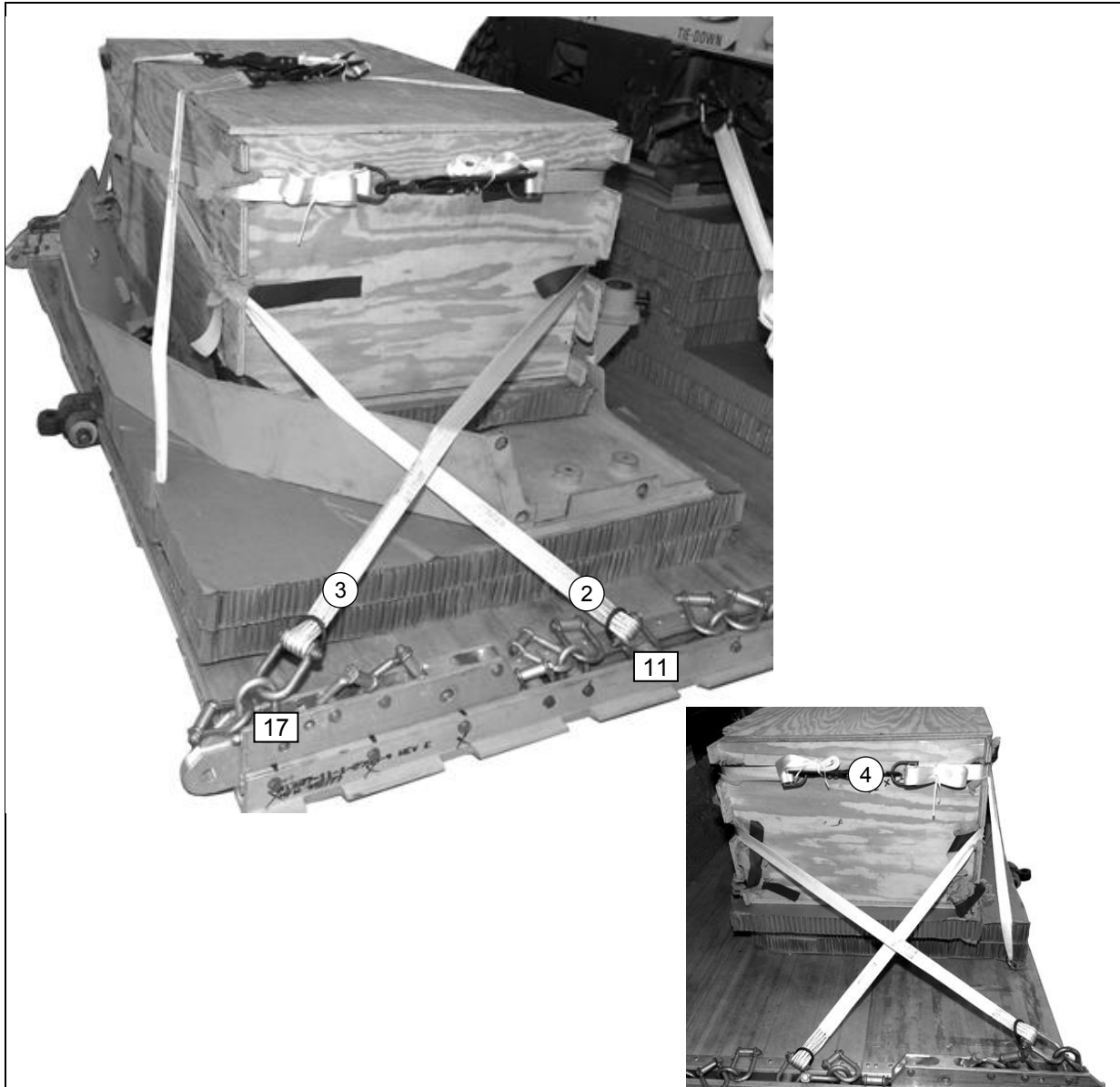
**Figure 3-125. TGPK Box Placed and Closed**



- ① Secure the prepositioned lashings on top of the box with two D-rings and load binders.

**Note:** Pad with cellulose padding where the lashings contact the TGPB (not shown).

**Figure 3-126. TGPB Box Restrained**

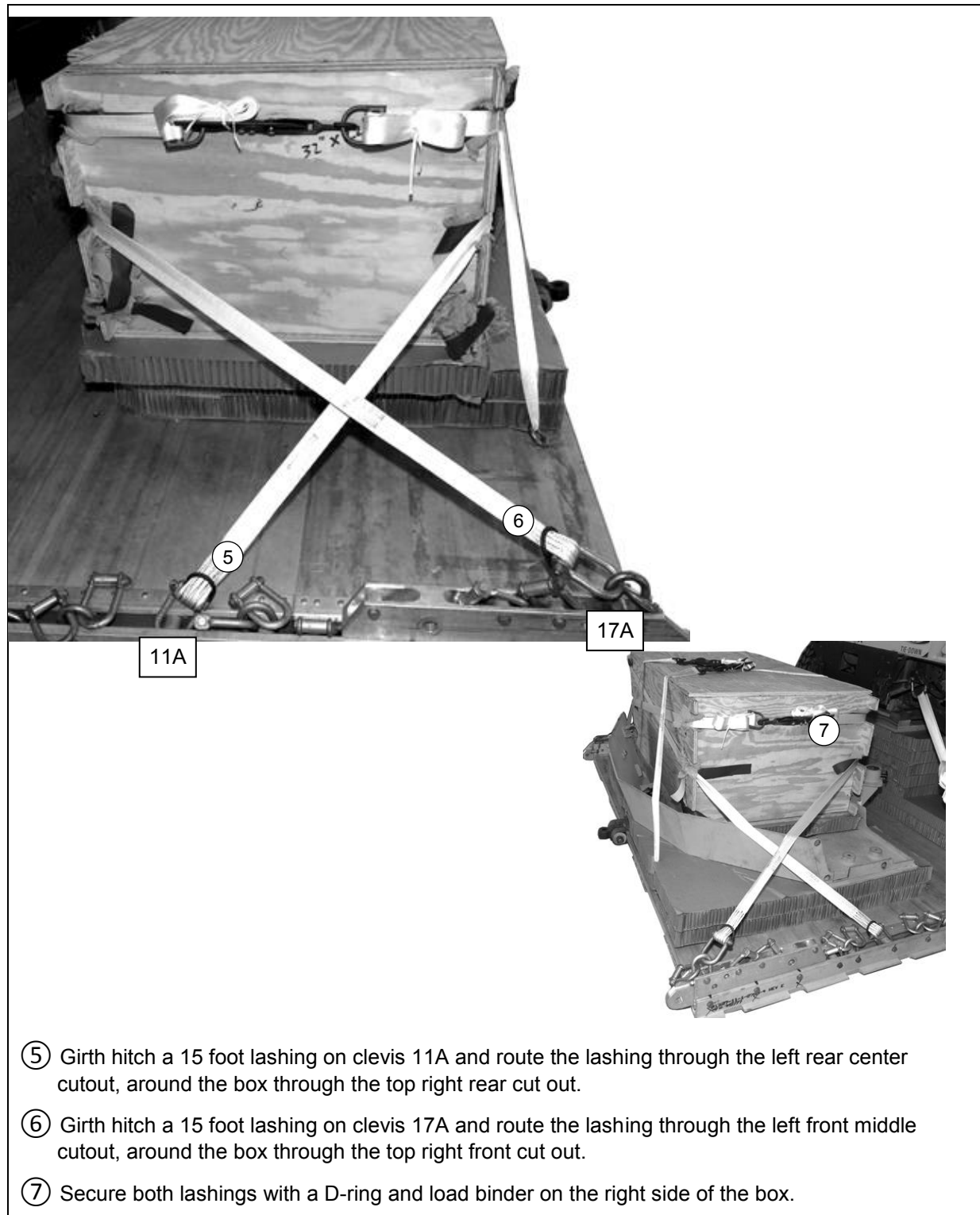


- ② Girth hitch a 15 foot lashing on clevis 11 and route the lashing through the right rear middle cutout around the box through the top left rear cut out.

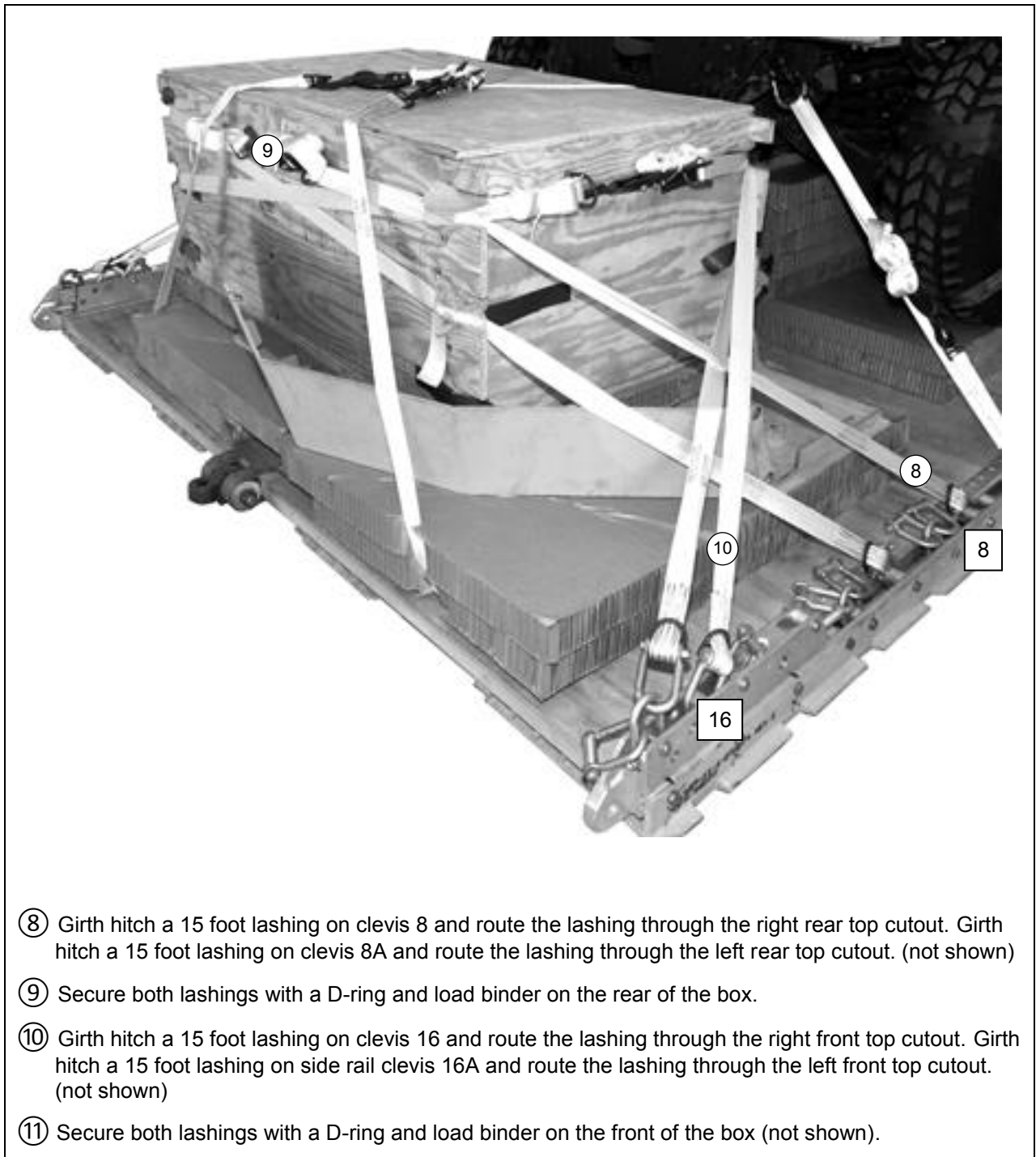
**Note:** Pad with cellulose wadding where the lashings meet the TGPB. (not shown)

- ③ Girth hitch a 15 foot lashing on side rail clevis 17 and route the lashing through the right front middle cutout around the box and through the top left front cut out.
- ④ Secure both lashings with a D-ring and load binder on the left side of the box.

**Figure 3-126. TGPB Box Restrained (continued)**

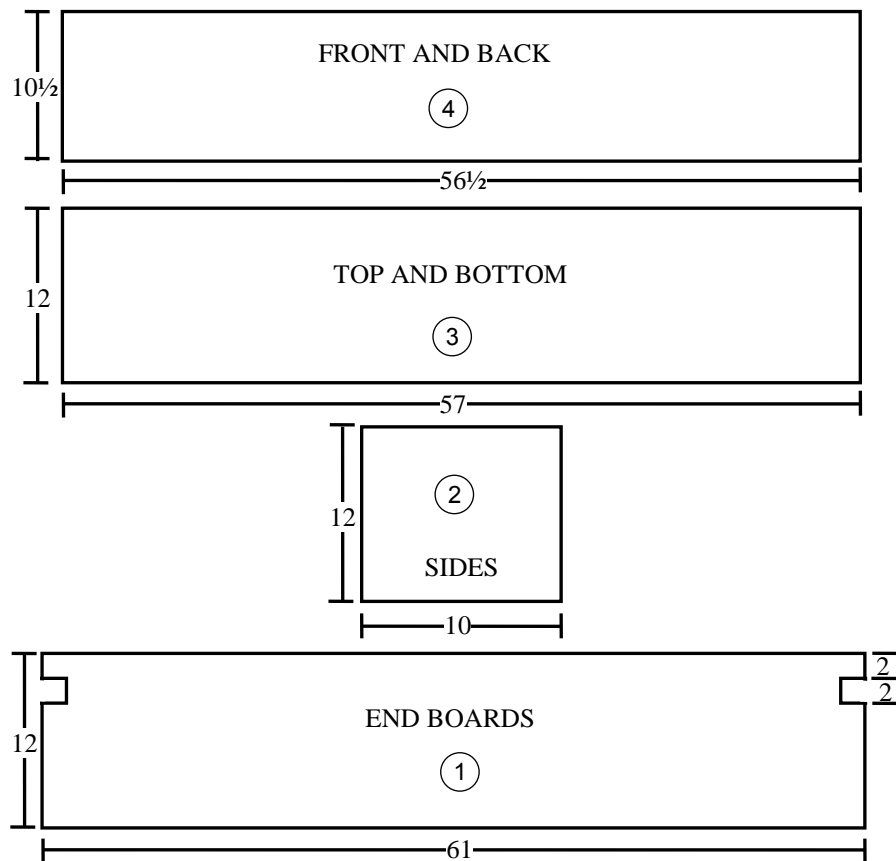


**Figure 3-126. TGPK Box Restrained (continued)**



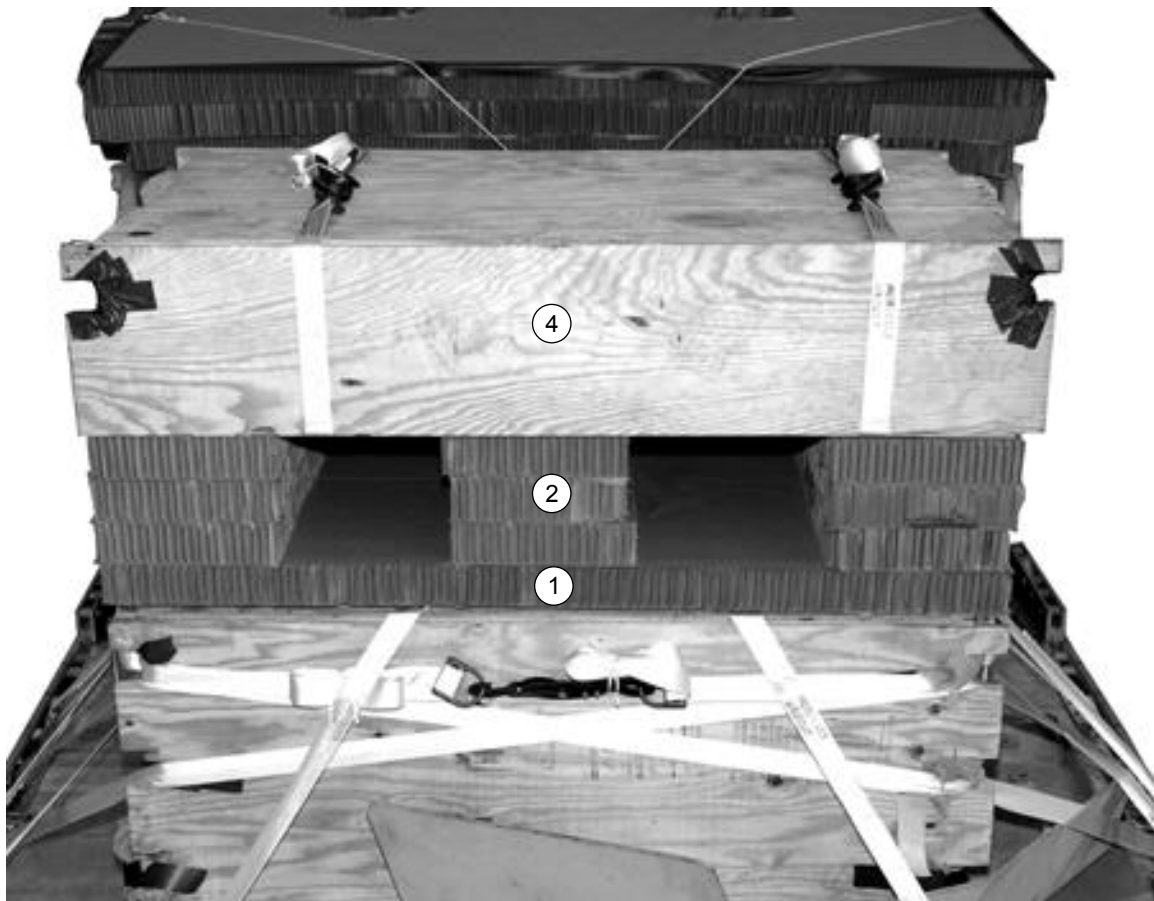
**Figure 3-126. TGPB Box Restrained (continued)**

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



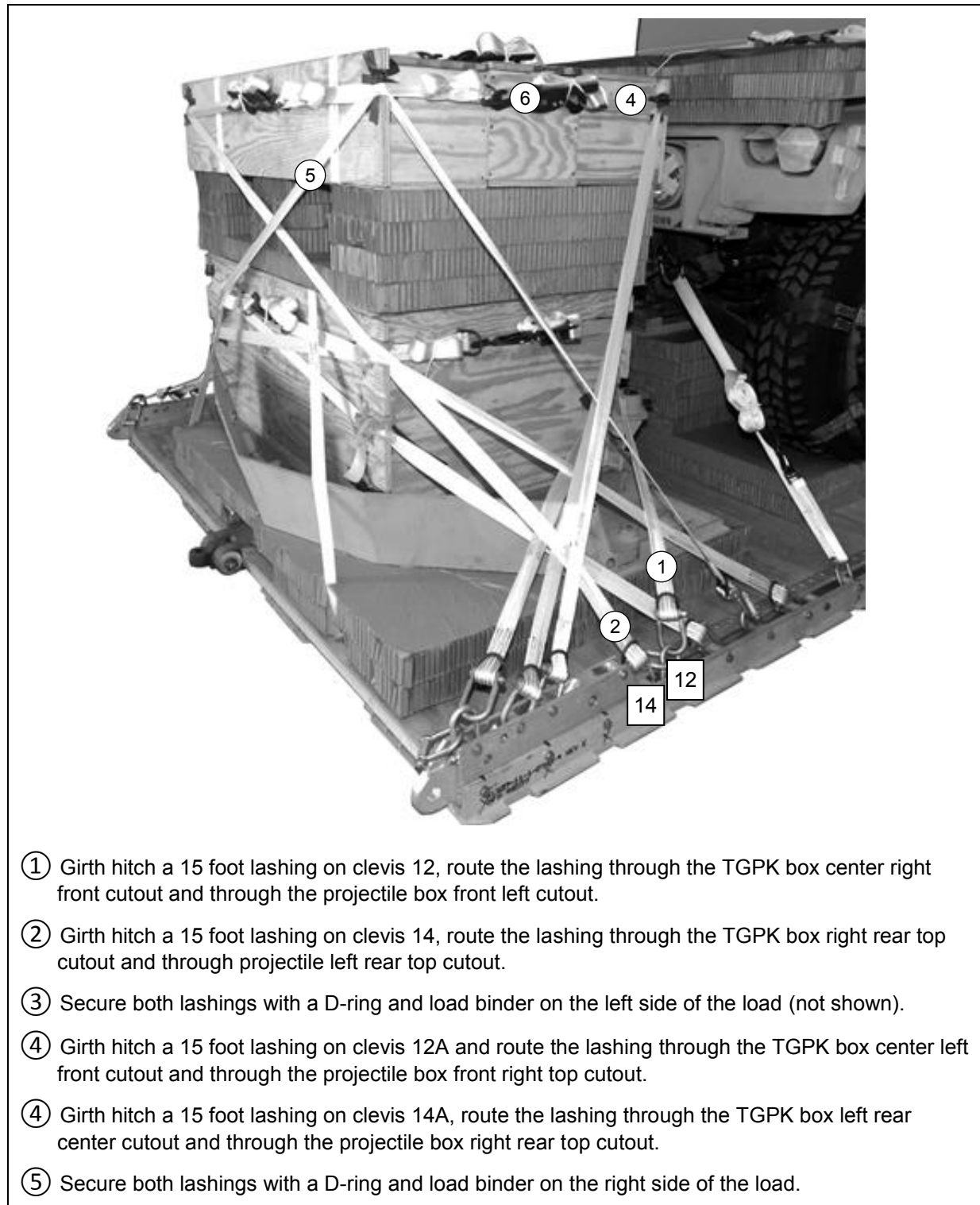
- ① Cut two 12- by 61-inch pieces of  $\frac{3}{4}$  inch plywood for end boards. Make 2 inch cutouts 2 inches down from the top on each side. Pad with cellulose wadding and tape cutouts (not shown).
- ② Cut six 10½ - by 12-inch pieces of  $\frac{3}{4}$ -inch plywood for the sides.
- ③ Cut six 12- by 57½ -inch pieces of  $\frac{3}{4}$ -inch plywood for top and bottom of the box.
- ④ Cut six 10½- by 56-inch pieces of  $\frac{3}{4}$ -inch plywood for the front and rear sides of the projectile boxes.
- ⑤ Nail the three boxes together except for the tops with 8d nails (not shown).
- ⑥ Place two missiles in each box or other equipment weighing 340 pounds total for all three boxes and nail top on (not shown).

**Figure 3-127. Projectile Boxes Built**



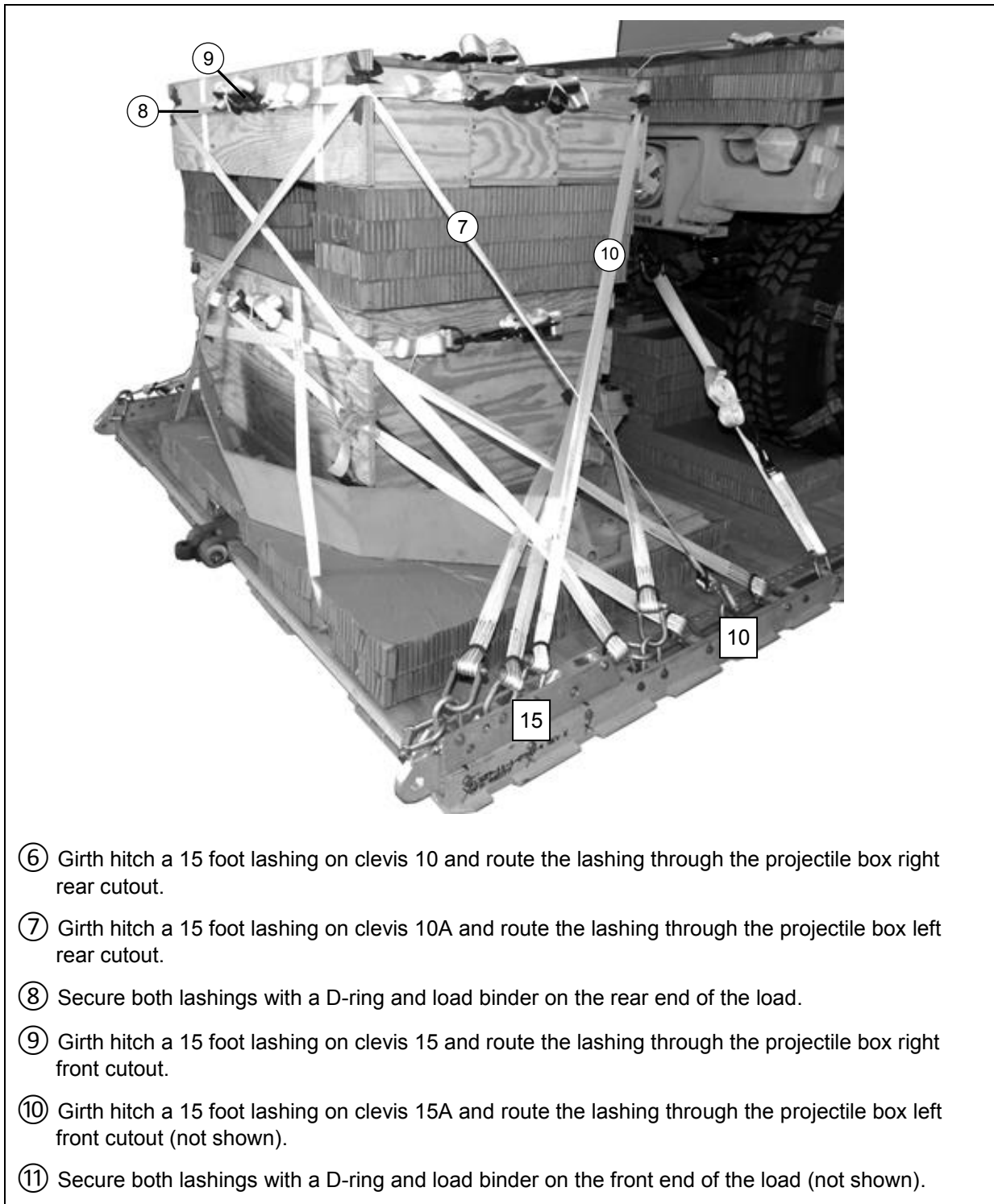
- ① Cut a 36- by 60-inch piece of honeycomb and place it on top of the TGPK box. Crush the underside of the honeycomb for the two load binders on top of the box (not shown).
- ② Cut nine 12- by 36-inch pieces of honeycomb. Glue together three stacks of three pieces. Place the three stacks on top of the honeycomb in step 1 centered in the middle and flush with the outsides.
- ③ Place two 15-foot lashings on the ground 36-inches apart. Center and place the three projectile boxes on top of the straps. Place the end boards in front and rear of the three boxes. Route the prepositioned lashings around the boxes and end boards and secure both lashings with a D-rings and load binders (not shown).
- ④ Lift the lashed boxes and place them on top of the three stacks of honeycomb.

**Figure 3-128. Projectile Boxes Placed**

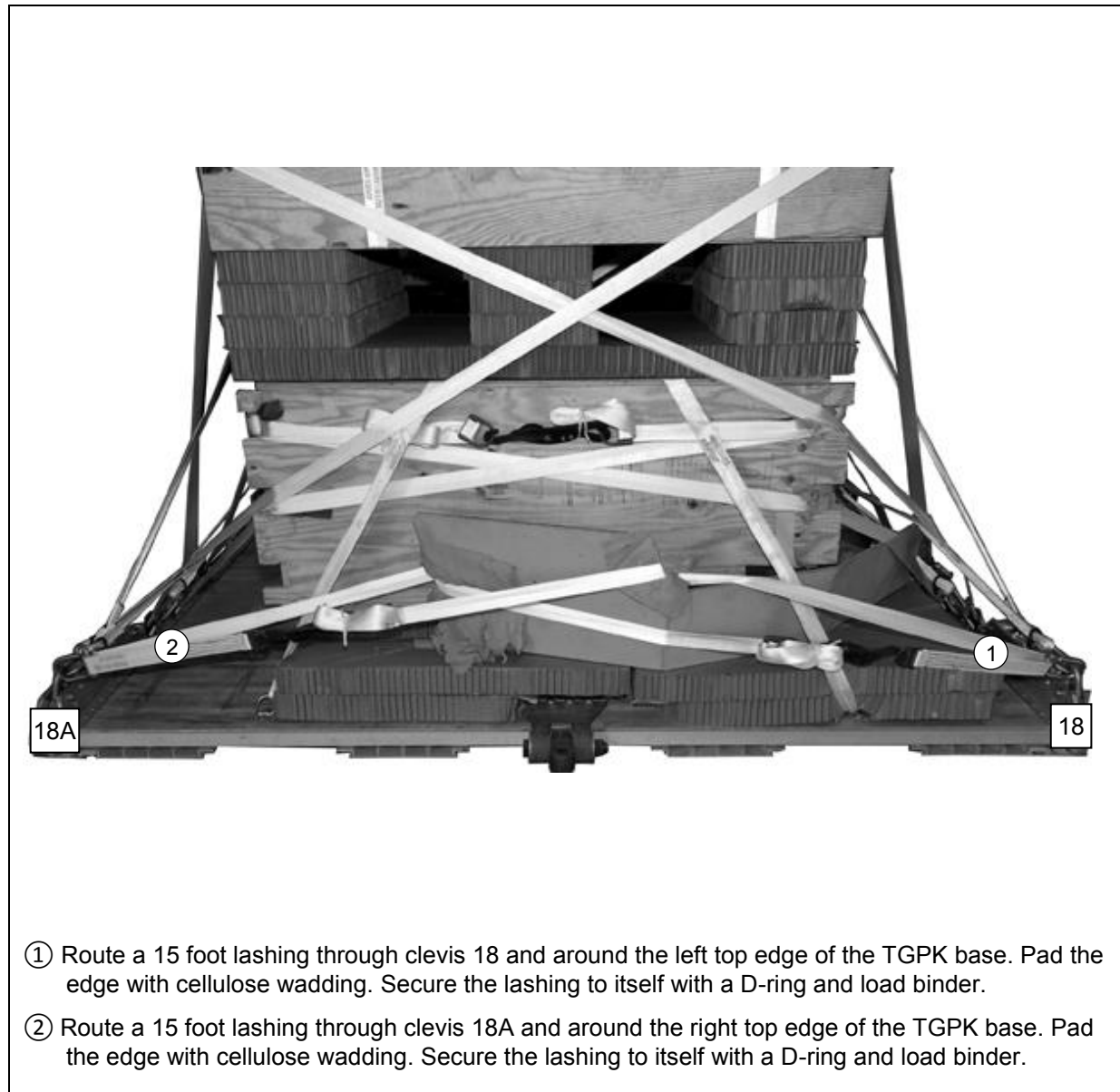


**Figure 1-129. Projectile Boxes Restrained**





**Figure 3-129. Projectile Boxes Restrained (continued)**



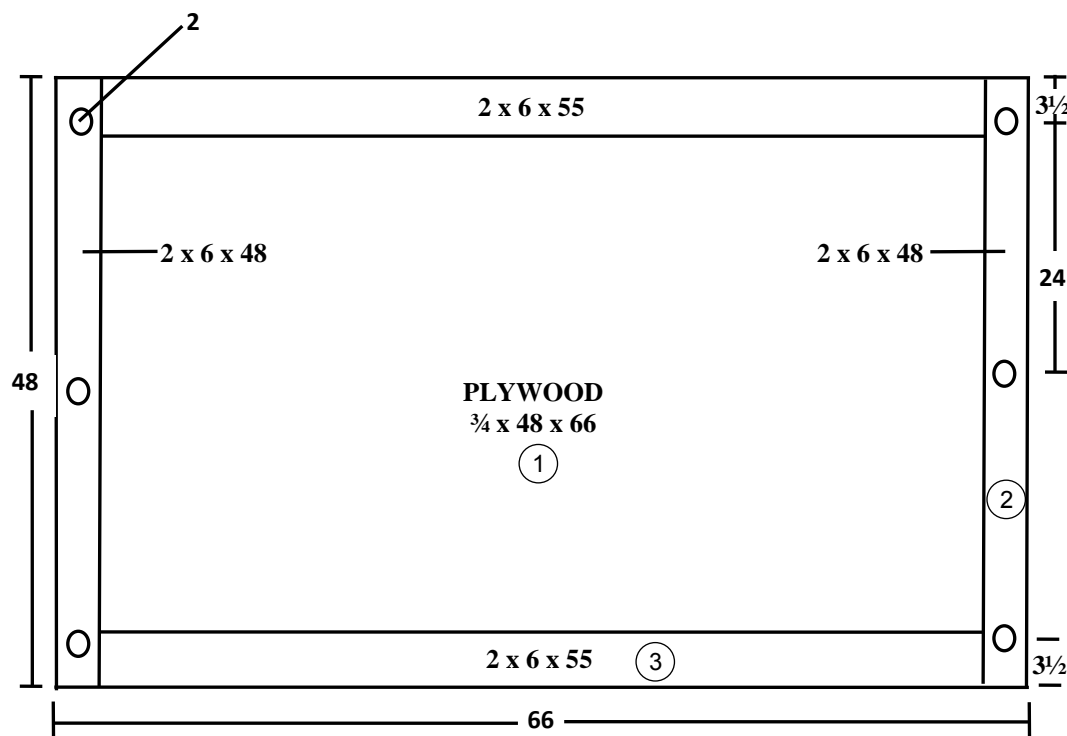
**Figure 3-130. TGPK Base Restrained**

## BUILDING AND INSTALLING CARGO PARACHUTE PLATFORM

3-86. Build and secure the cargo parachute platform as shown in Figure 3-131 and 3-132.

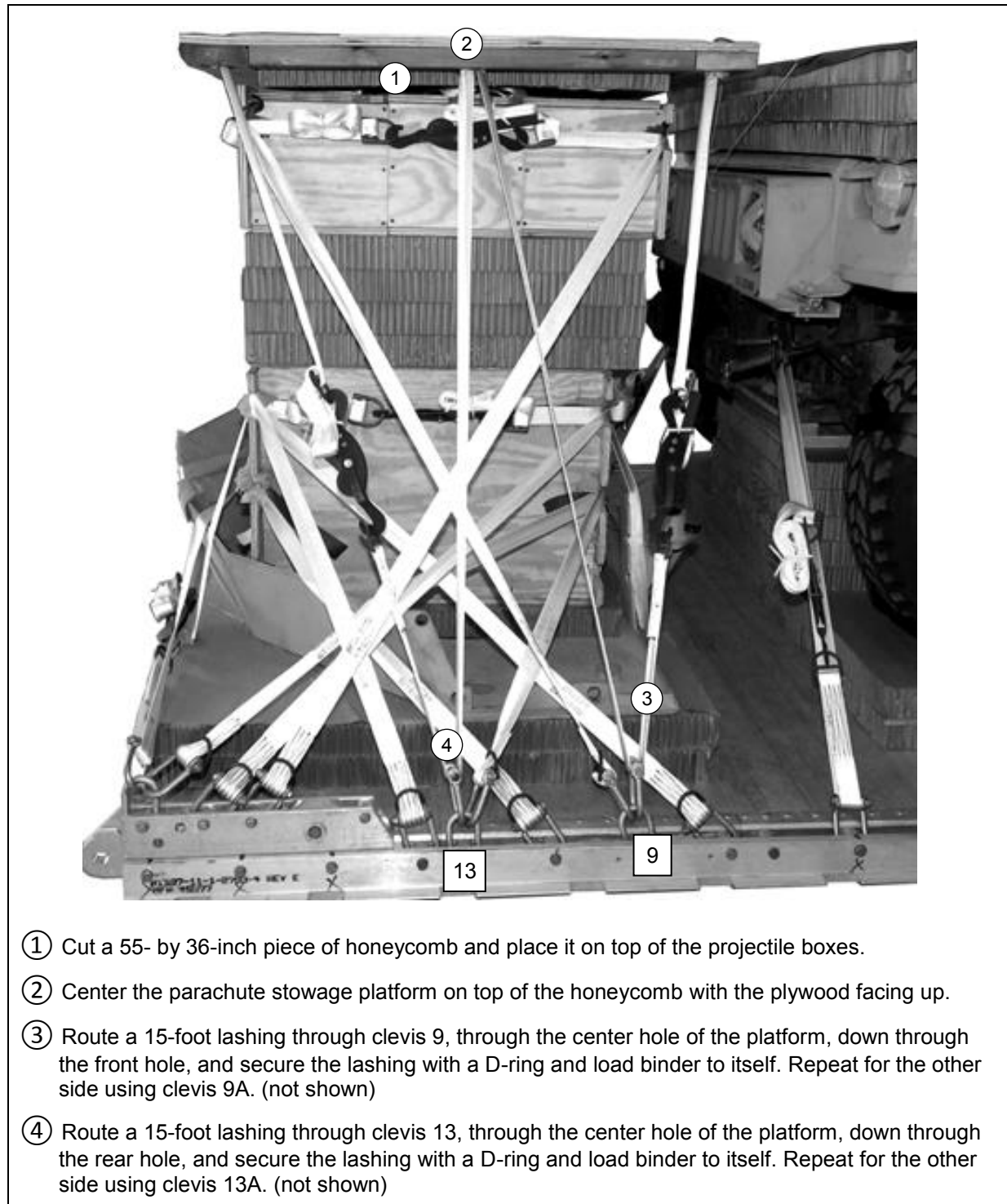
**Notes.** 1. All measurements are given in inches.

2. This drawing is not drawn to scale.



- ① Cut a piece of 48-by 66- by  $\frac{3}{4}$ -inch plywood.
- ② Cut two pieces of 2- by 6- by- 48 inch pieces of lumber and nail to the sides of the plywood with 8d nails.
- ③ Cut two pieces of 2- by 6- by 55- inch lumber and nail flush between the 2- by 6- by 48-inch lumber.
- ④ Drill four 2 inch holes centered from side to side and  $3\frac{1}{2}$  inches in from the top and bottom and drill two 2-inch holes centered 24-inches from the top and bottom.

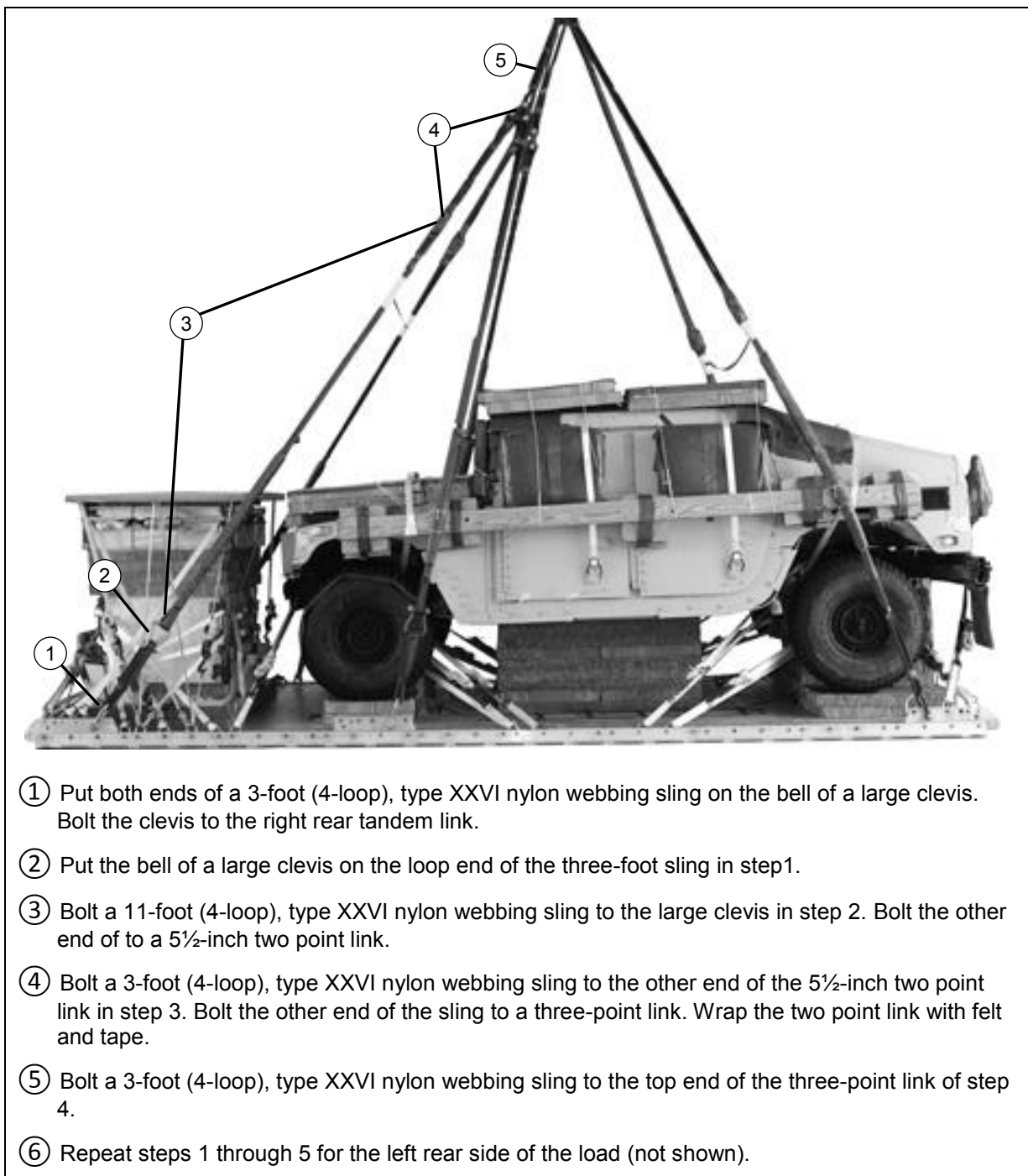
**Figure 3-131. Parachute Platform Built**



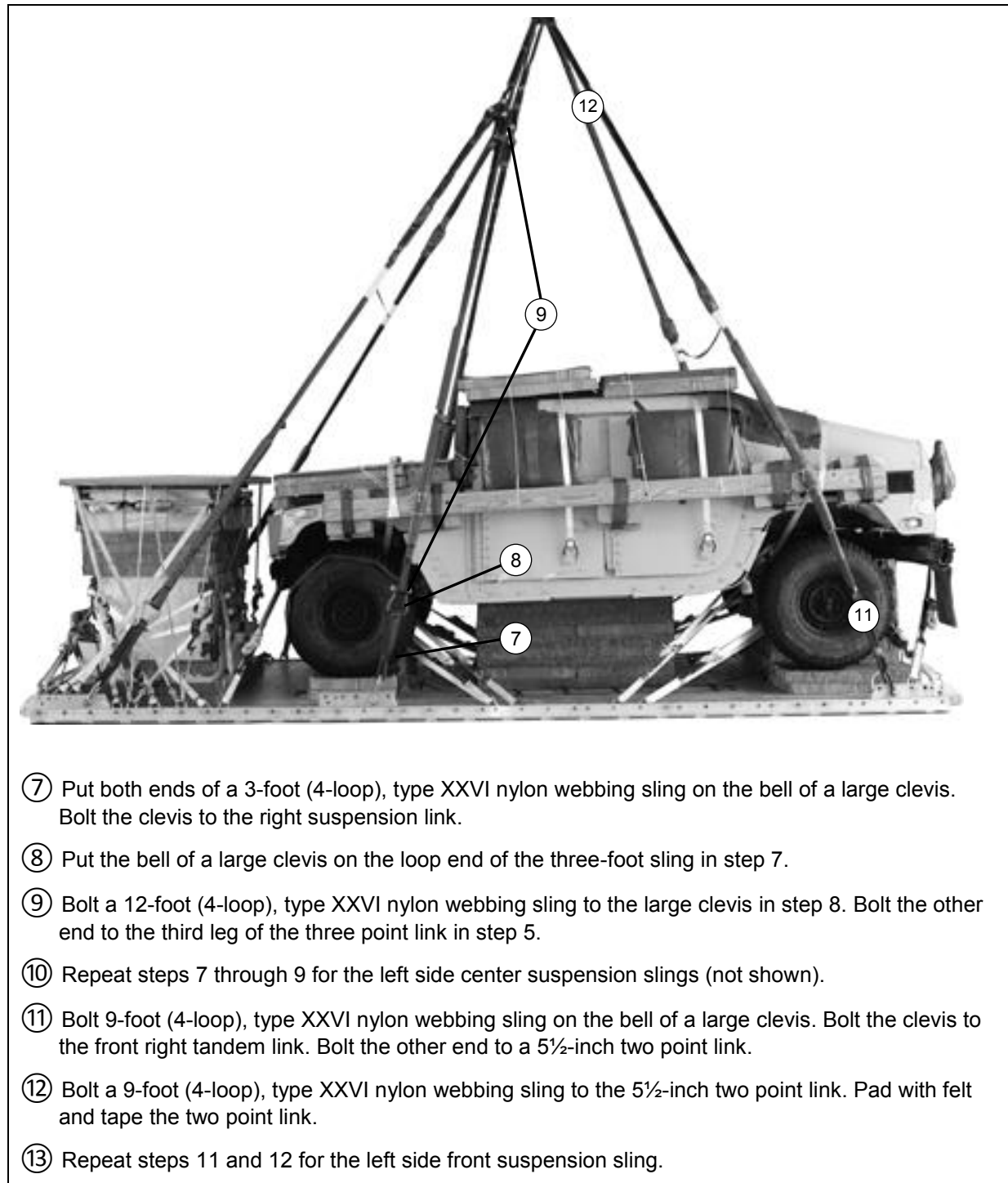
**Figure 3-132. Parachute Platform Installed and Secured**

## INSTALLING AND SAFETY TIEING THE SUSPENSION SLINGS

3-87. Install and safety tie the suspension slings as shown in Figure 3-133 through 3-134.

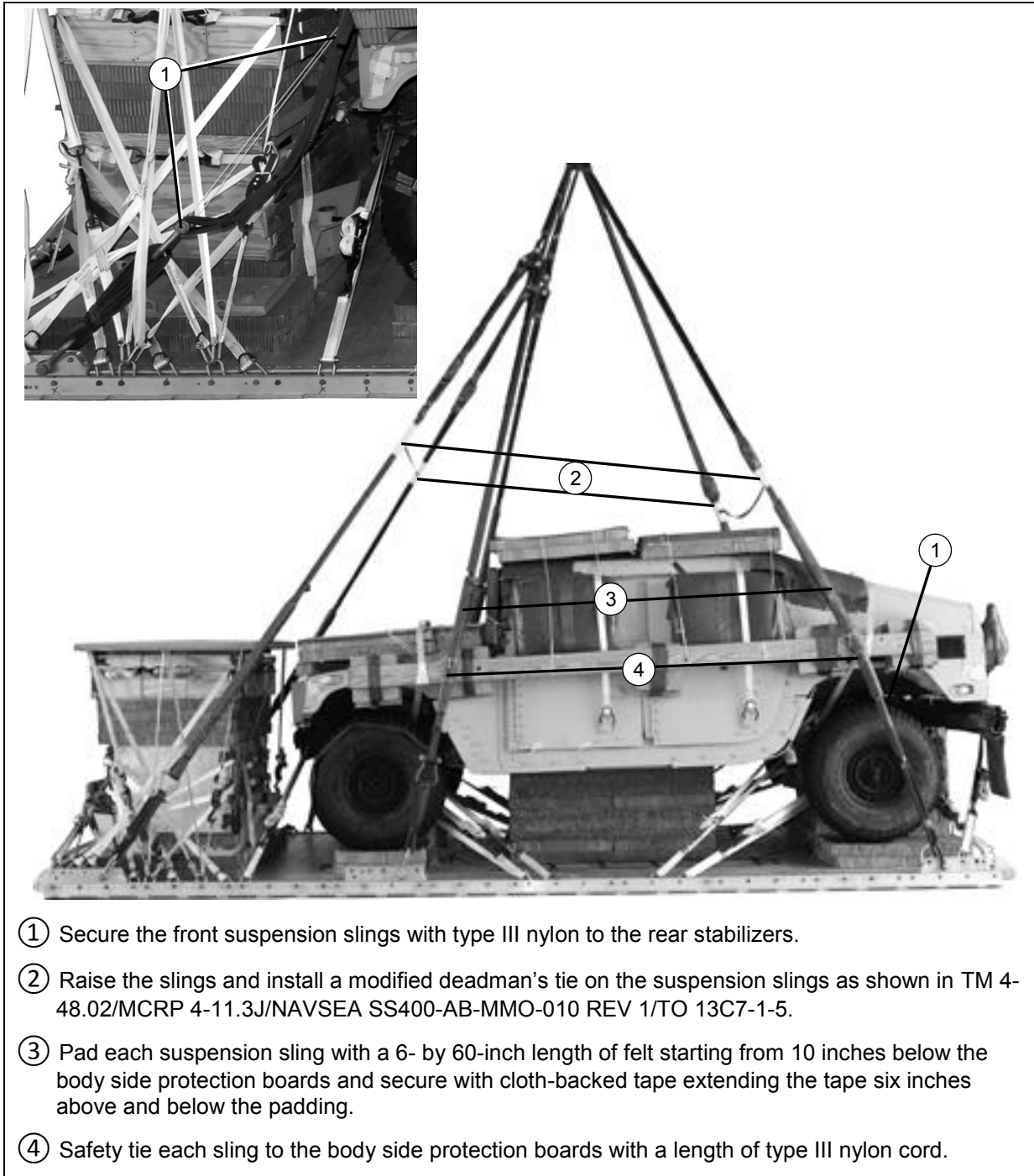


**Figure 3-133. Suspension Slings Installed**



- ⑦ Put both ends of a 3-foot (4-loop), type XXVI nylon webbing sling on the bell of a large clevis. Bolt the clevis to the right suspension link.
- ⑧ Put the bell of a large clevis on the loop end of the three-foot sling in step 7.
- ⑨ Bolt a 12-foot (4-loop), type XXVI nylon webbing sling to the large clevis in step 8. Bolt the other end to the third leg of the three point link in step 5.
- ⑩ Repeat steps 7 through 9 for the left side center suspension slings (not shown).
- ⑪ Bolt 9-foot (4-loop), type XXVI nylon webbing sling on the bell of a large clevis. Bolt the clevis to the front right tandem link. Bolt the other end to a 5½-inch two point link.
- ⑫ Bolt a 9-foot (4-loop), type XXVI nylon webbing sling to the 5½-inch two point link. Pad with felt and tape the two point link.
- ⑬ Repeat steps 11 and 12 for the left side front suspension sling.

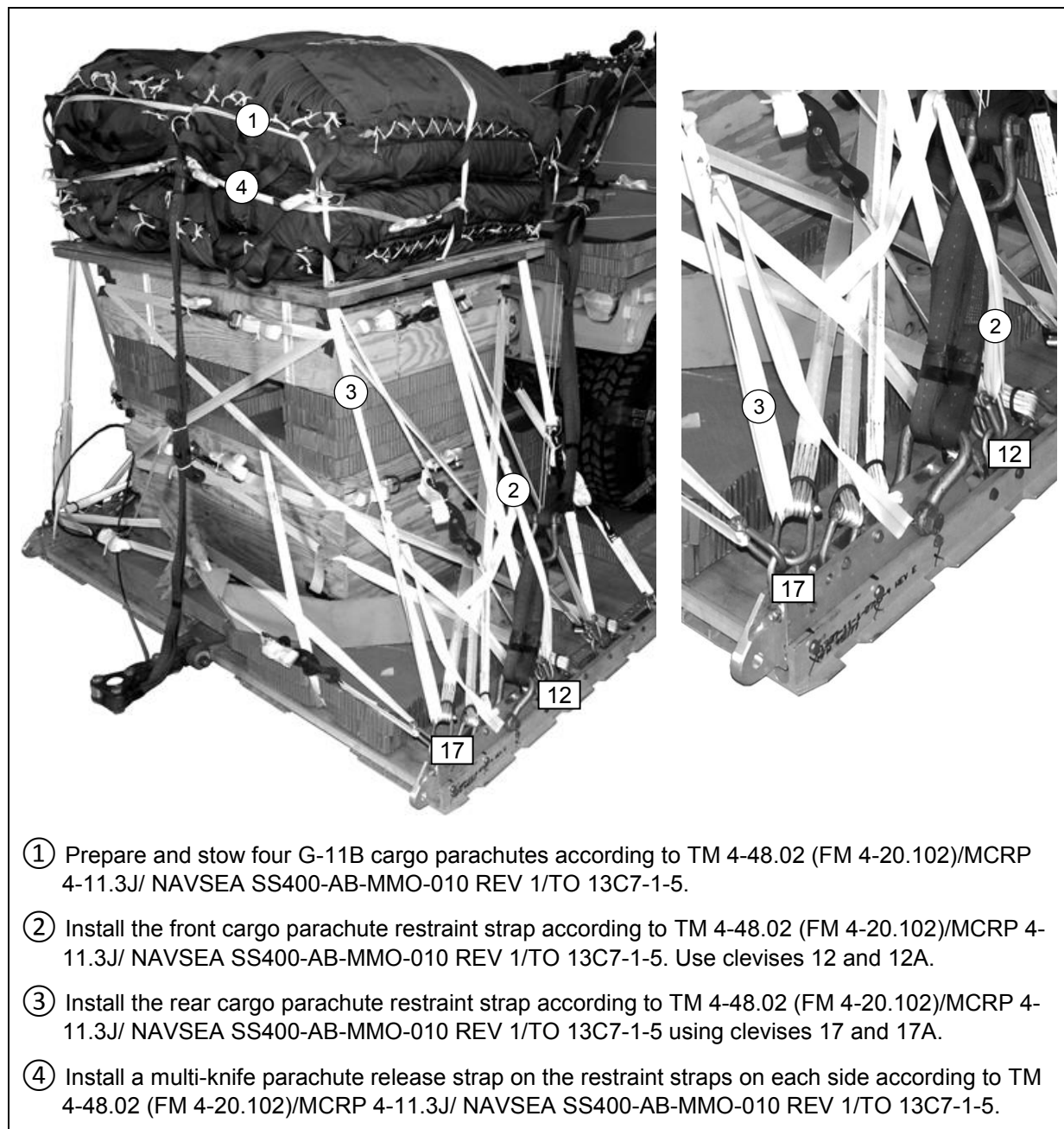
**Figure 3-133. Suspension Slings Installed (continued)**



**Figure 3-134. Suspension Slings Safety Tie Installed, Padded and Secured**

## STOWING CARGO PARACHUTES

3-88. Stow the parachutes as shown in Figure 3-135.

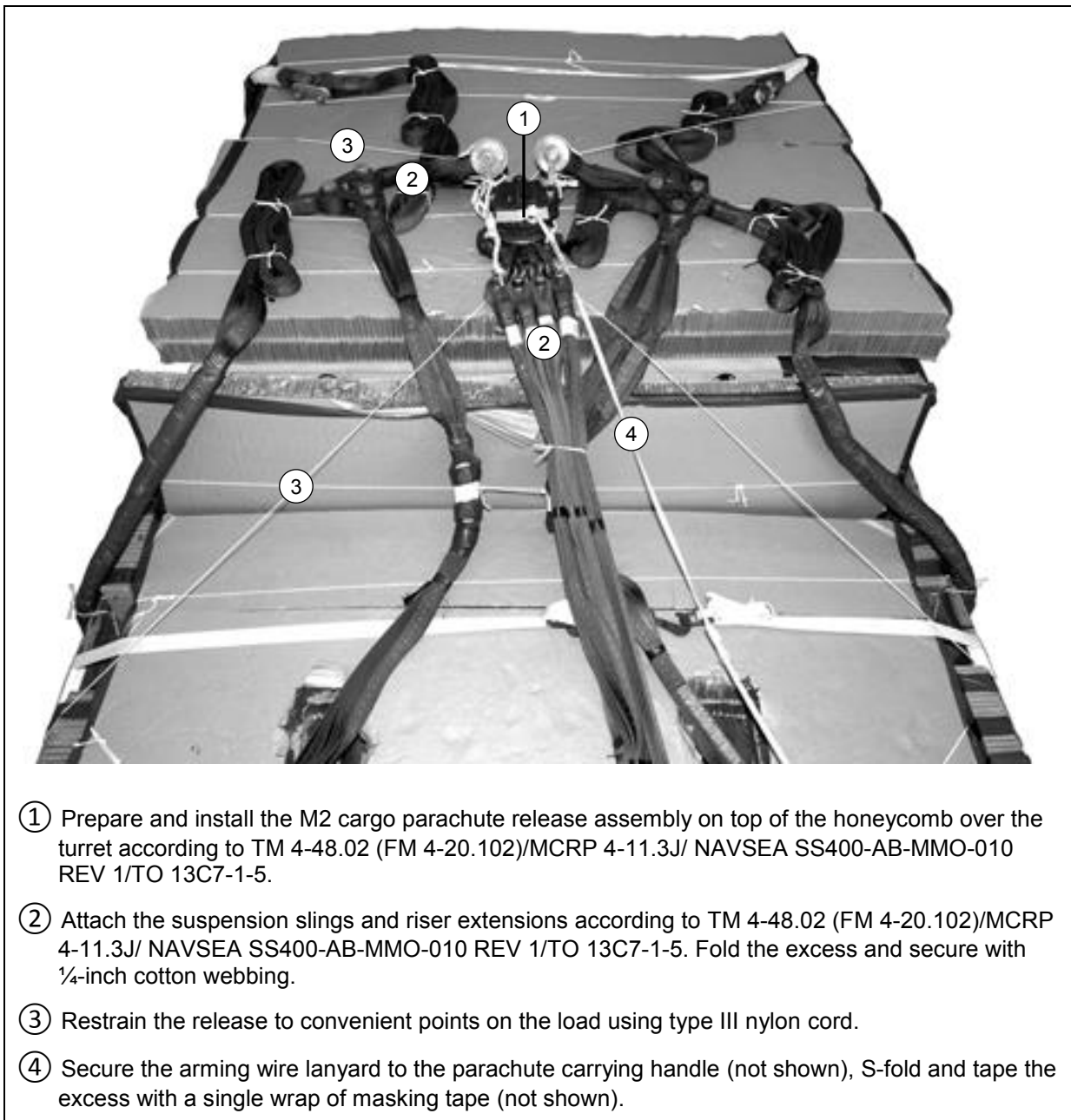


**Figure 3-135. Parachutes Stowed, Restrained and Release Strap Installed**



## INSTALLING THE RELEASE SYSTEM

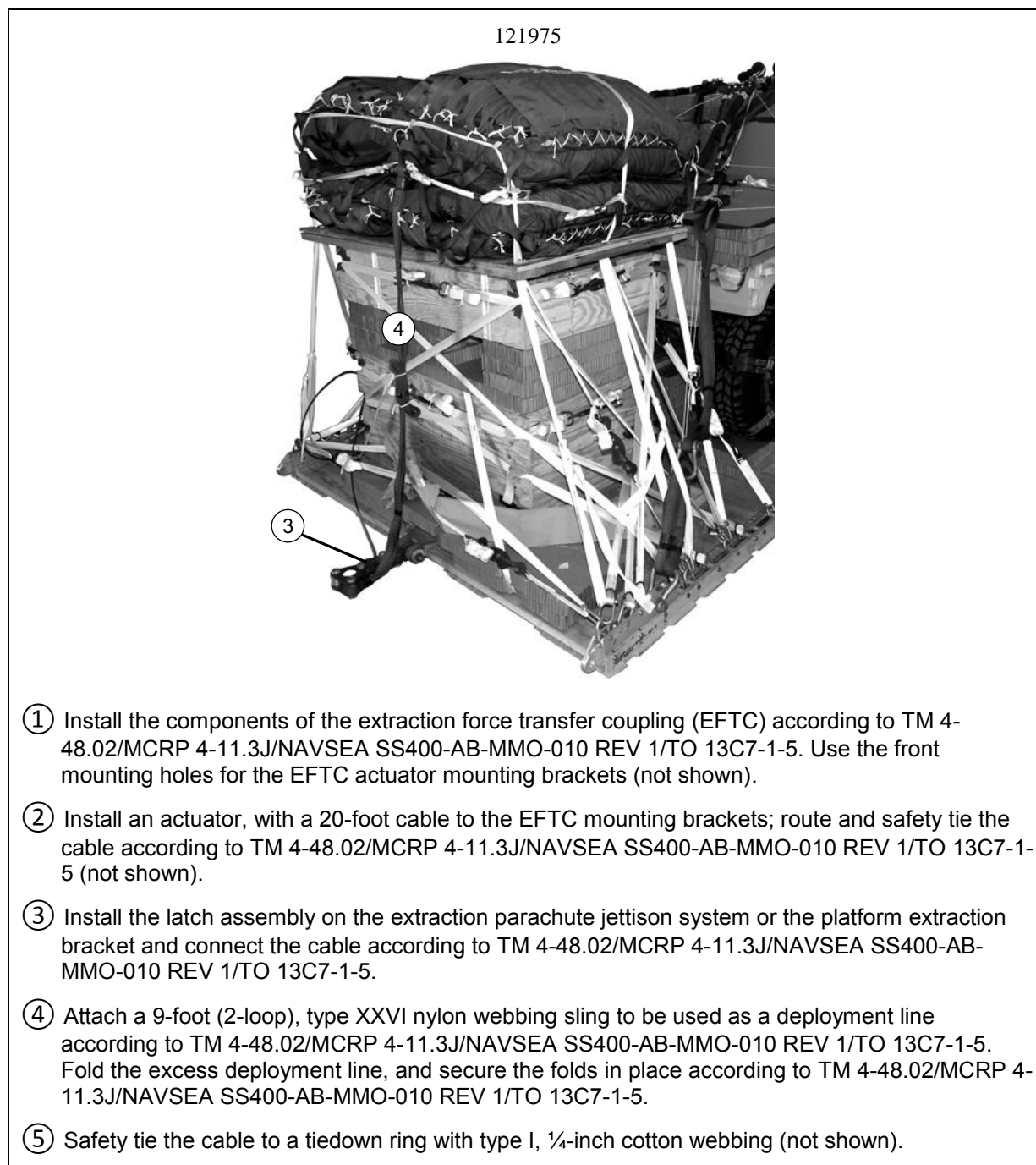
3-89. Install the release assembly as shown in Figure 3-136.



**Figure 3-136. M-2 Cargo Parachute Release Assembly Installed**

## INSTALLING THE EXTRACTION SYSTEM

3-90. Install the EFTC extraction system according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figure 3-137



**Figure 3-137. Extraction System Installed**

## **INSTALLING PROVISIONS FOR EMERGENCY RESTRAINTS**

3-91. Install the provisions for emergency restraints on the load according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.

## **PLACING EXTRACTION PARACHUTE**

3-92. Select the extraction parachute and extraction line needed using the extraction line requirements table in TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5. Rig the extraction line in an extraction line bag according to TM 10-1670-286-20/TO 13C5-2-41. Place the extraction parachute and extraction line on the load for installation in the aircraft.

## **MARKING RIGGED LOAD**

3-93. Mark the rigged load according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figure 1-138. Complete Shipper's Declaration for Dangerous Goods. If the load varies from the one shown, the weight, height, CB, and parachute requirements must be recomputed.

## **EQUIPMENT REQUIRED**

3-94. Use the equipment listed in Table 3-6 on page 3-199 to rig this load.

**CAUTION**

Make the final rigger inspection required by AR 59-4 and TM 4-48.02 (FM 4-20.102)/ MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 before the load leaves the rigging site.



|  
C/B

**RIGGED LOAD DATA**

Weight .....	16,920 pounds
Height .....	97 inches
Width .....	108 inches
Length .....	270 inches
Overhang: Front (vehicle) .....	12 inches
Rear (extraction force transfer coupling) .....	18 inches
Center of Balance (CB) (from front edge of platform) .....	114 inches

**Figure 3-138. M1167 Rigged for Low-Velocity Airdrop**

Table 3-6. Equipment Required for Rigging the M1167 for Low-Velocity Airdrop

<i>National Stock Number</i>	<i>Item</i>	<i>Quantity</i>
8040-00-273-8713	Adhesive paste, 1-gallon	As required
4030-00-090-5354	Clevis, suspension, 1-inch (large)	17
4030-00-678-8562	Clevis, suspension, 3/4-inch (medium)	4
4020-00-240-2146	Cord, nylon, type III, 550-lb	As required
1670-00-434-5787	Coupling, airdrop extraction force transfer, w/20-ft. cable	1
8135-00-664-6958	Cushioning material (Cellulose wadding)	As required
1670-01-394-0825	Drive Off Aid Type V	2
8305-00-958-3685	Felt,	As required
1670-01-183-2678	Leaf, extraction line (line bag) (C-130)	2
	Leaf, extraction line (line bag) C-17/C130J	4
	Line extraction:	
1670-01-062-6313	60-foot (3-loop), type XXVI (for C-130/J)	1
1670-01-107-7651	140-foot (3-loop), type XXVI (for C-17/C-130J)	1
1670-01-064-4452	60-foot (1-loop), type XXVI (for C-17/C-130J), (drogue line)	1
1670-01-493-6418	Link assembly, two-point, 3 3/4-inch, small:	1
1670-01-493-6420	Link assembly, two-point, 5 1/2 -inch, large	4
	Lumber:	
5510-00-550-6969	1- by 6- by 48-inch	1
5510-00-220-6146	2- by 4- by 96-inch	4
5510-00-220-6148	2- by 6- by 96-inch	6
5315-00-010-4659	Nail, steel, common, 8D	As required
1670-00-753-3928	Pad, energy-dissipating (honeycomb)	26 sheets
1670-01-016-7841	Parachute, cargo, G-11B	4
	Parachute, cargo, extraction:	
1670-01-063-3716	22-foot	1
1670-01-063-3715	15-foot (C-17/C130J) (DES)	1
	Platform, airdrop, type V, 20-foot:	
1670-01-162-2372	Clevis assembly (type V)	42
1670-01-247-2389	Link, suspension bracket	2
1670-01-162-2381	Link, tandem, link suspension assembly	4
1670-01-162-2376	Extraction bracket assembly	1
5530-00-128-4981	Plywood, 3/4-inch	7 sheets

Table 3-6. Equipment Required for Rigging the M1167 for Low-Velocity Airdrop (Continued)

<i>National Stock Number</i>	<i>Item</i>	<i>Quantity</i>
1670-01-097-8817	Release, cargo parachute, M-2	1
	Sling, cargo, airdrop:	
	For Deployment	
1670-01-062-6304	9-foot (2-loop), type XXVI	1
	For Lifting	
1670-01-062-6304	9-foot (2-loop), type XXVI	2
1670-01-062-6303	12-foot (2-loop), type XXVI	2
	For Suspension	
1670-01-062-6306	3-foot (4-loop), type XXVI	8
1670-01-062-6305	9-foot (4-loop), type XXVI	4
1670-01-062-6310	11-foot (4-loop), type XXVI	4
1670-01-062-6307	12-foot (4-loop), type XXVI	4
5340-00-040-8219	Strap, parachute, release, multi-knife	2
7501-00-266-5016	Tape, adhesive, 2-inch	As required
1670-00-937-0271	Tiedown assembly, 15-foot	50
	D-rings, heavy duty, 10,000-lb	42
	Binder, load, 10,000-lb	42
1670-01-483-8259	Towplate release mechanism (H-block) (C-17)	1
1670-01-072-1378	Towplate release mechanism (H-block) (C-130J)	1
	Webbing:	
8305-00-268-2411	Cotton, 1/4-inch, type I	As required
8305-00-082-5752	Nylon, tubular, 1/2-inch	As required
8305-00-559-6871	Nylon, type VIII	As required
Legend		
lb	pounds	

## **Chapter 4**

# **Rigging Specific Accompany Loads in HMMWV-Series Trucks for Low-Velocity Airdrop**

### **DESCRIPTION OF LOADS**

4-1. This chapter describes and details how to rig specific items of Army equipment in the cargo bodies of HMMWV-series trucks. All trucks on 16-foot and 20-foot platforms must be rigged with a load in the truck. See the chapter or section for the particular truck for the minimum and maximum allowable load weights. If a specific piece of equipment is lighter than the minimum specified weight, additional items must be rigged to meet the minimum weight requirement.. Consult the chapter or section for the truck shown to find alternative truck models that can be used to rig the load.

### **PREPARING ACCOMPANYING LOADS**

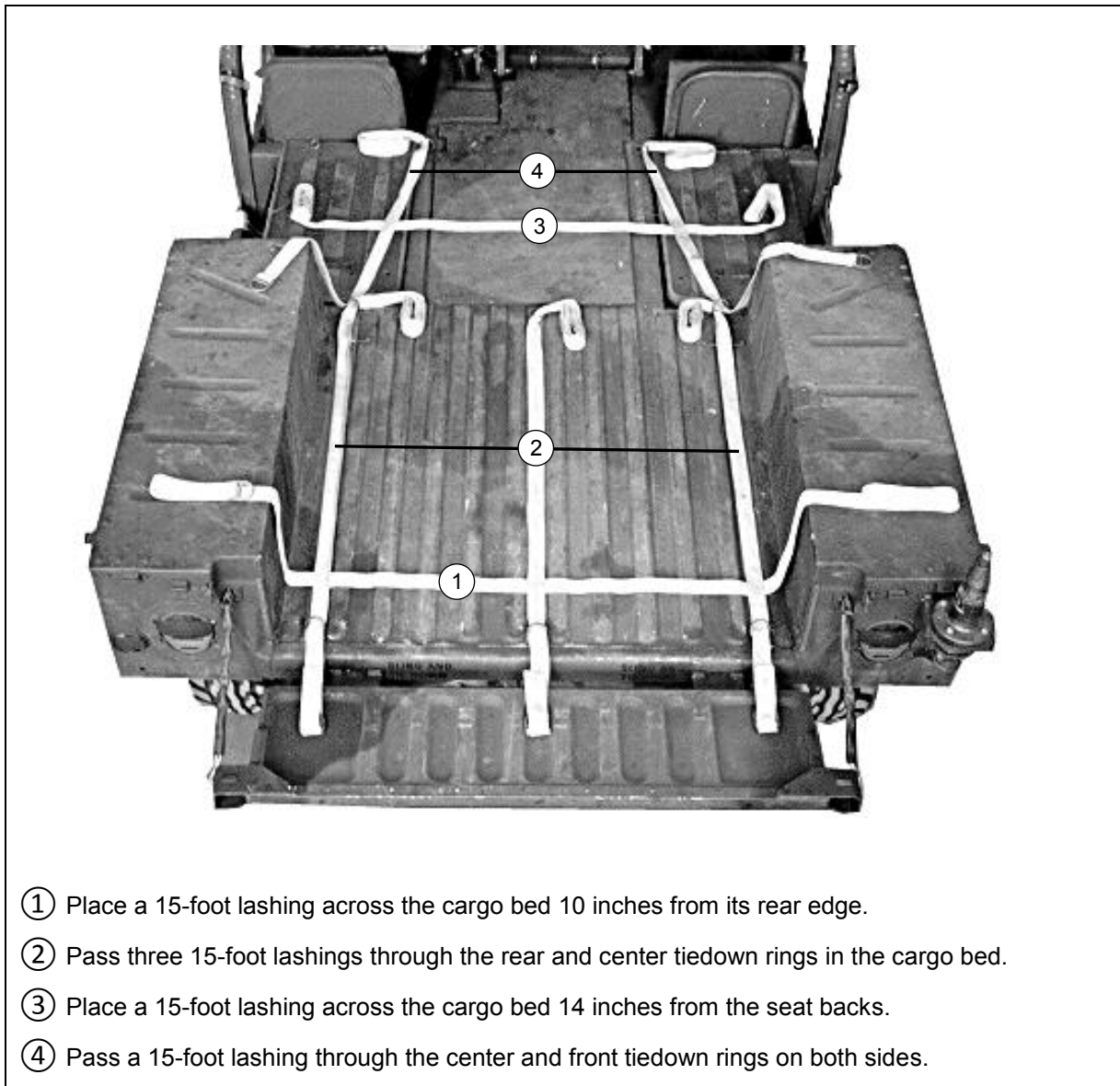
4-2. There are 17 separate sections in this chapter. Each section provides detailed instructions on how to prepare various military equipment in the cargo areas of the HMMWV series trucks. Since loads in actual tactical situations vary greatly, and equipment changes frequently, use these procedures as a guideline for rigging similar items. The loads shown in this chapter can be rigged in trucks of similar configuration and load capacity, unless the procedures specify that the load can be rigged in only one model of truck

#### **CAUTION**

Only ammunition listed in TM 4-48.16 (FM 4-20.153)/MCRP 4-11.3B/TO 137-18-41 may be airdropped. Package, mark, and label hazardous material according to AFMAN 24-204/TM 38-250.

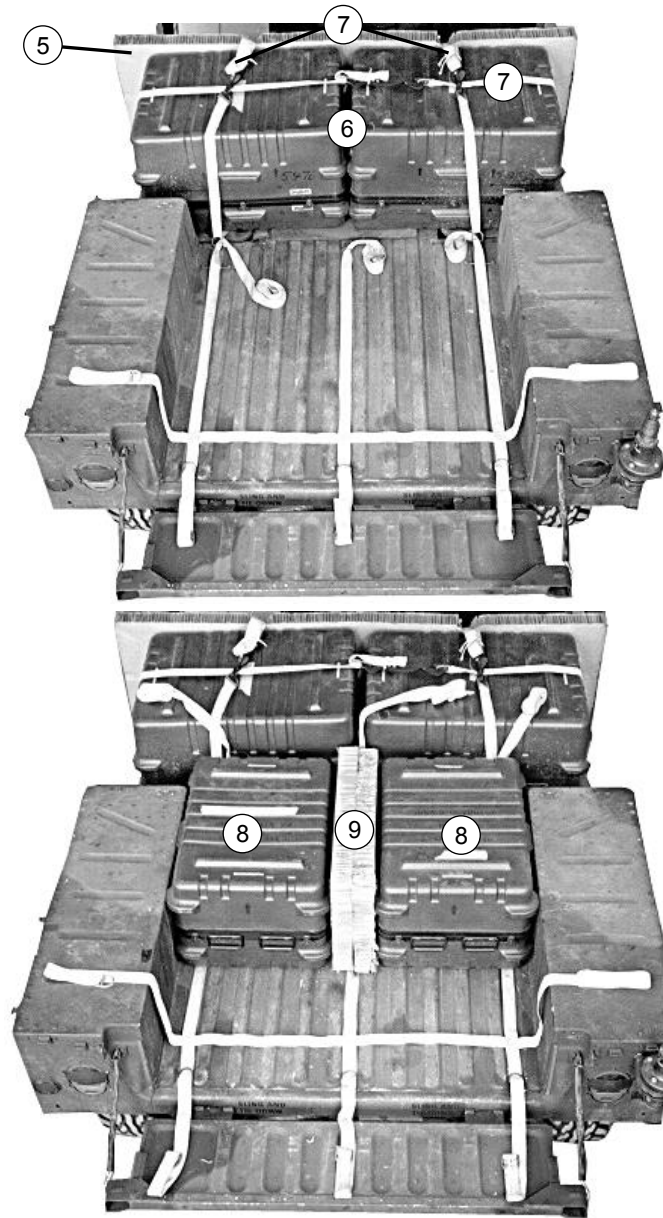
## SECTION I: RIGGING TACTICAL ARMY COMBAT SERVICE SUPPORT COMPUTER SYSTEM (TACCS), AMMUNITION, AND TRUCK EQUIPMENT IN M998 AND M1039

4-3. Use the procedures in Figures 4-1 and 4-2 to stow the tactical army combat service support computer system (TACCS), six boxes of 20-mm ammunition, and truck equipment. The accompanying load shown weighs 990 pounds.



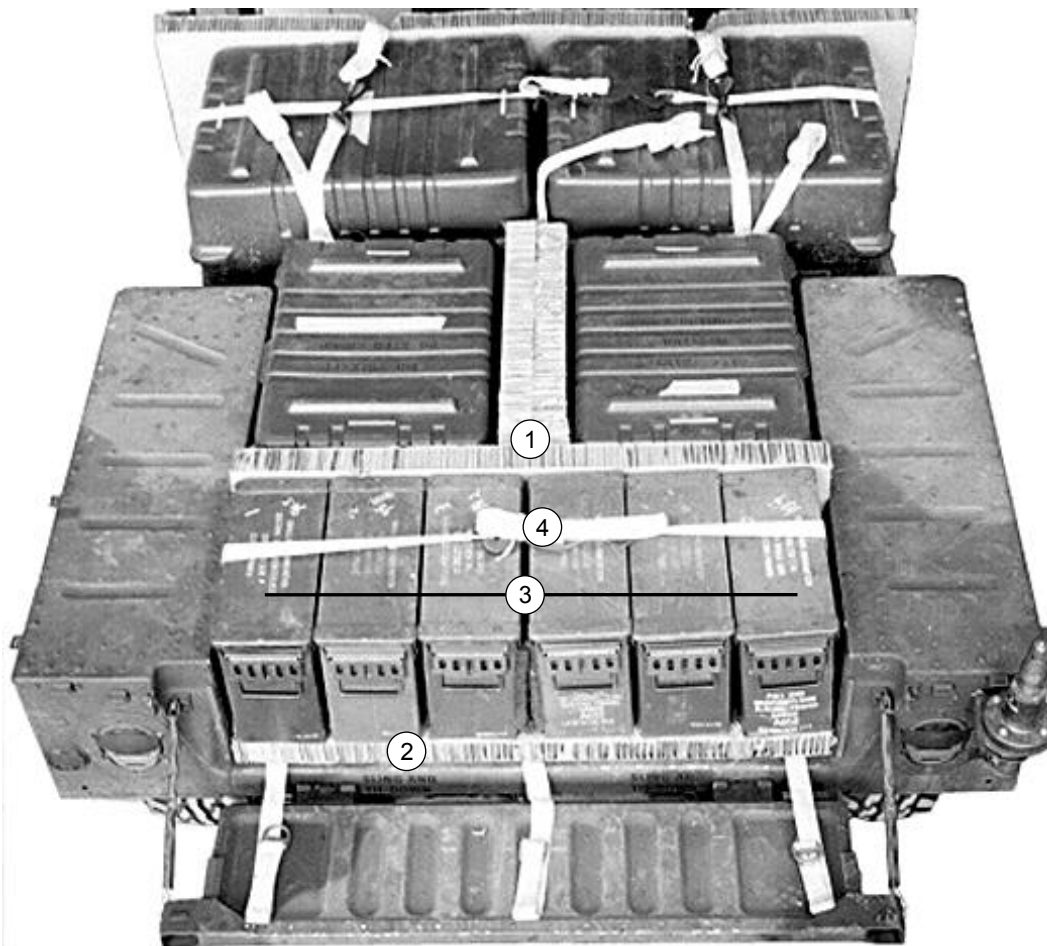
**Figure 4-1. TACCS, Ammunition, and Truck Equipment Rigged in Cargo/Troop Carrier**





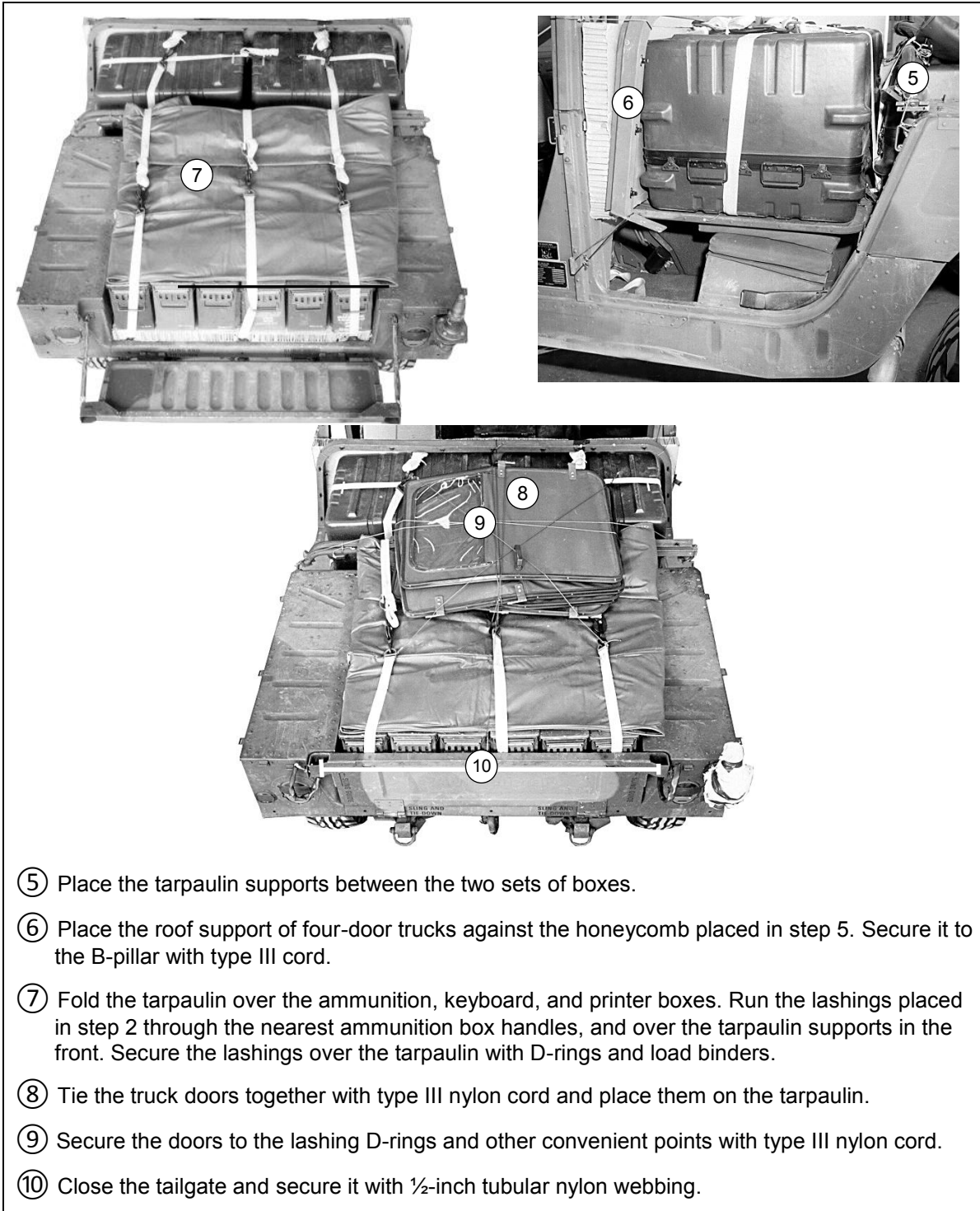
- ⑤ Place a 22- by 82-inch piece of honeycomb flush against the seat backs.
- ⑥ Place the logic module and terminal cases side by side against the honeycomb.
- ⑦ Secure the lashings placed in steps 3 and 4 with D-rings and load binders.
- ⑧ Place the keyboard and printer cases against the components placed in step 6 above.
- ⑨ Place two pieces of 18- by 32-inch honeycomb between the keyboard and printer cases.

**Figure 4-1. TACCS, Ammunition, and Truck Equipment Rigged in Cargo/Troop Carrier (continued)**



- ① Place an 18- by 52-inch piece of honeycomb against the keyboard and printer boxes.
- ② Place an 18- by 52-inch piece of honeycomb on the cargo bed floor.
- ③ Place six boxes of 20mm ammunition on the honeycomb. Place two pieces of ½- by 15- by 19-inch felt between the third and fourth boxes.
- ④ Bind the boxes together with the lashing placed in step 1.

**Figure 4-2. TACCS, Ammunition, and Truck Equipment Secured in Cargo/Troop Carrier**



**Figure 4-2. TACCS, Ammunition, and Truck Equipment Secured in Cargo/Troop Carrier (continued)**

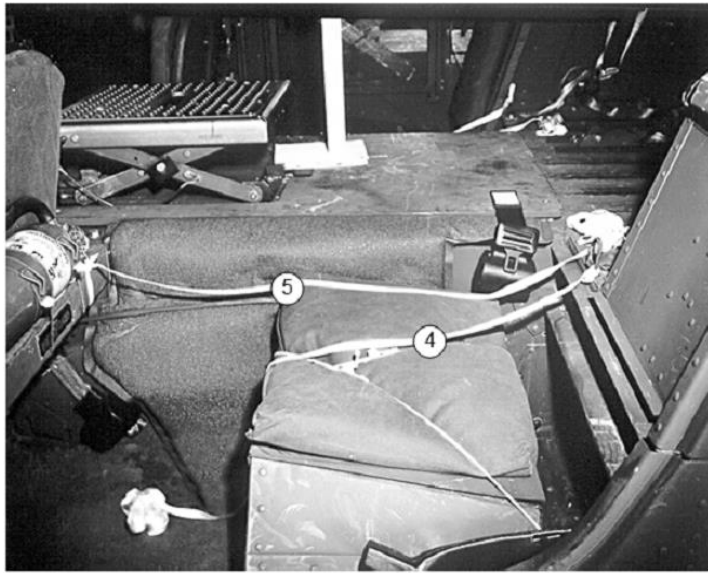
## SECTION II: RIGGING AN/TVQ/2 GROUND/VEHICLE LASER LOCATOR DESIGNATOR (G/VLLD) IN M966 TOW CARRIER

4-4. Use the procedures in Figures 4-3 and 4-4 to stow the ground/vehicle laser locator designator (G/VLLD), its accompanying equipment, camouflage net and poles, antenna, fuel can, and water can. This accompanying load weighs 801 pounds.

**Note:** Make sure the unit owning the truck has installed the deck tiedown rings.

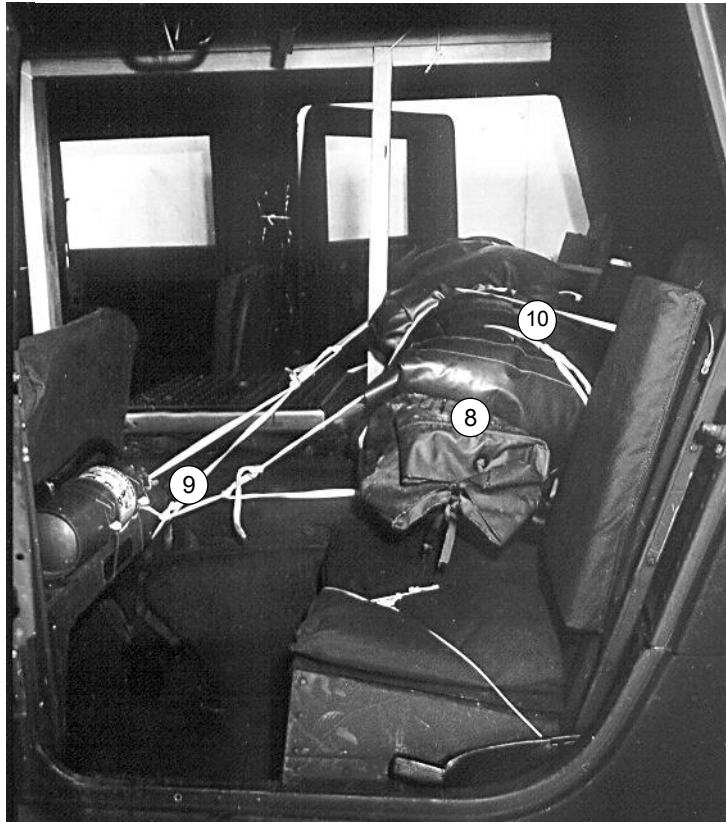
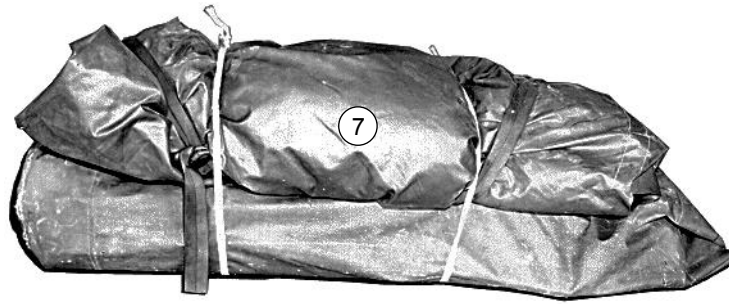


**Figure 4-3. Ground/Vehicle Laser Locator Designator and Cab Accompanying Equipment Rigged in M966 Truck**



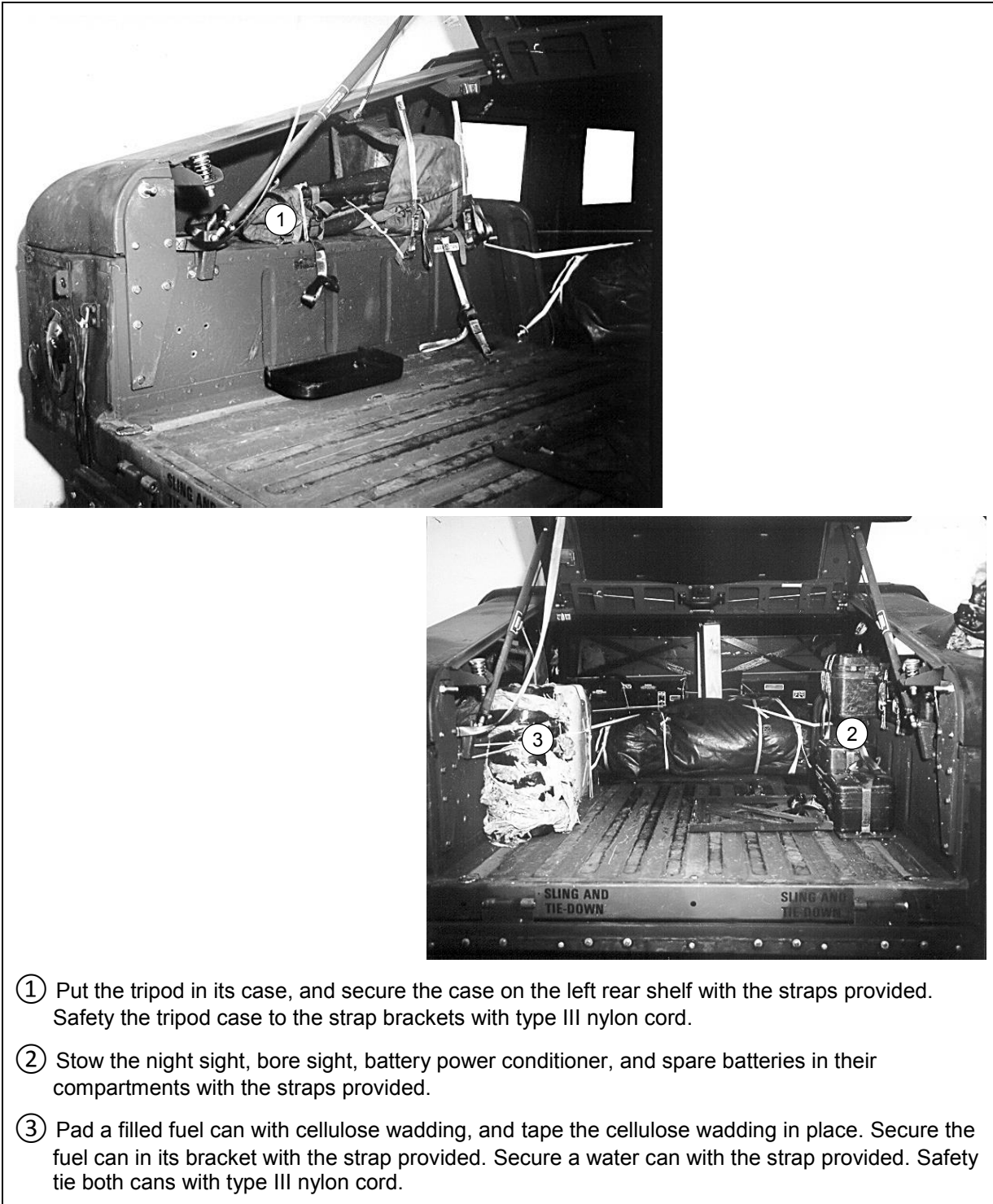
- ④ Tie an 8-foot length of ½-inch tubular nylon webbing to the deck ring behind each rear seat with two half hitches.
- ⑤ Tie an 8-foot length of ½-inch tubular nylon webbing to the frame behind each rear set with two half hitches.
- ⑥ Tie an 8-foot length of ½-inch tubular nylon webbing through each rear seat support. Tape the ends of the seat supports.

**Figure 4-3. Ground/Vehicle Laser Locator Designator and Cab Accompanying Equipment Rigged in M966 Truck (continued)**

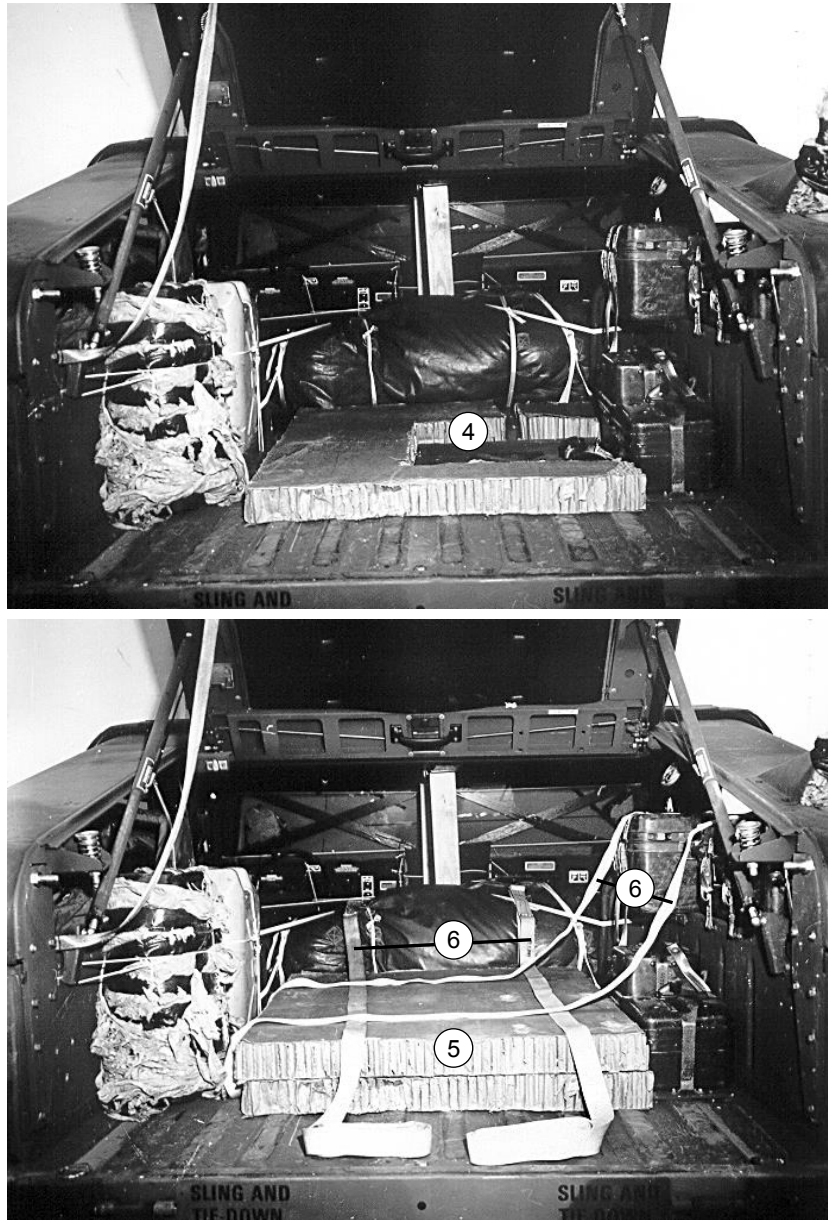


- ⑦ Tie the camouflage net and net pole bags together with two lengths of 1/2-inch tubular nylon webbing.
- ⑧ Raise the back seats and place the bags across the seats.
- ⑨ Bring each nylon tie placed in steps 4 and 5 around the bags, and tie each to itself with a trucker's hitch.
- ⑩ Bring each length of nylon webbing placed in step 6 over the bags, and tie them to the frame behind the front seat on the opposite side.

**Figure 4-3. Ground/Vehicle Laser Locator Designator and Cab Accompanying Equipment Rigged in M966 Truck (continued)**



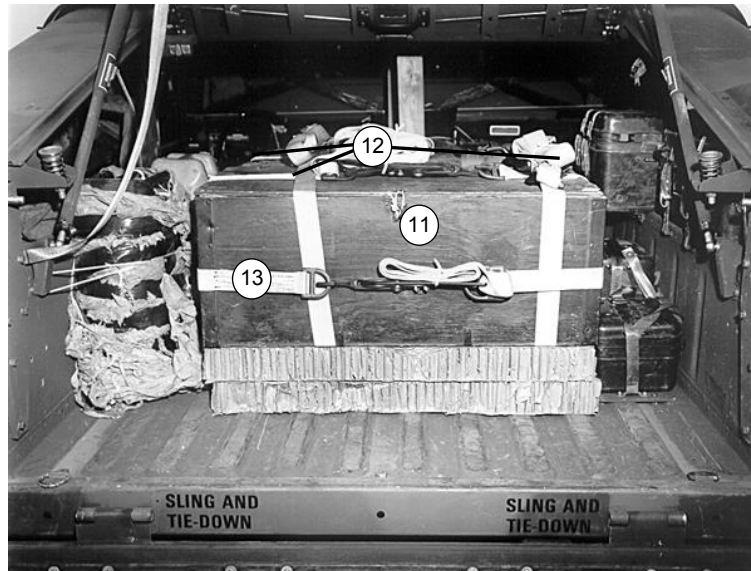
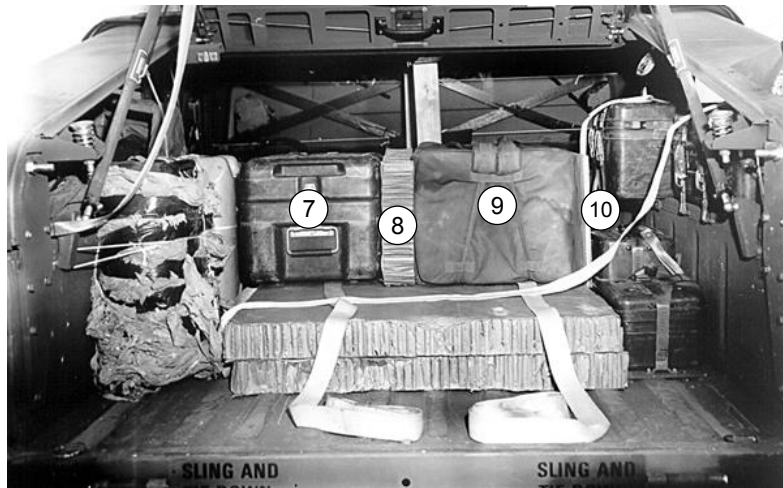
**Figure 4-4. Ground/Vehicle Laser Locator Designator and Cargo Area Accompanying Equipment Rigged in M966 Truck**



- ④ Make cutouts in a 31 ½- by 35-inch piece of honeycomb to fit the fixtures on the floor. Fit a 9 ½- by 10 ½-inch piece of honeycomb in the front right.
- ⑤ Place a 31 ½- by 35-inch piece of honeycomb over the honeycomb placed in step 14 above.
- ⑥ Place two 15-foot lashings vertically and two 15-foot lashings horizontally on top of the honeycomb.

**Figure 4-4. Ground/Vehicle Laser Locator Designator and Cargo Area Accompanying Equipment Rigged in M966 Truck (continued)**





- ⑦ Place the transformer at the left front edge of the honeycomb.
- ⑧ Place a 12 ½- by 20 ½-inch piece of honeycomb to the right of the transformer.
- ⑨ Place the laser designator/rangefinder (LD/R) case next to the honeycomb.
- ⑩ Place a ¾- by 12 ½- by 20 ½-inch piece of plywood to the right of the LD/R case.
- ⑪ Place the accessory chest along the rear edge of the honeycomb.
- ⑫ Secure the four lashings placed in step 16 with D-rings and load binders.
- ⑬ Place and secure a fifth 15-foot lashing around the items on the honeycomb.

**Figure 4-4. Ground/Vehicle Laser Locator Designator and Cargo Area Accompanying Equipment Rigged in M966 Truck (continued)**



- ⑭ Place the antenna poles on top of the load. Secure them to convenient points with type III nylon cord.
- ⑮ Place any other truck equipment on top of the load, and secure it with ½-inch tubular nylon webbing. (The pioneer tool kit is shown, but it is not necessary to remove it from its normal stowage position under the truck.)
- ⑯ Pass a 15-foot lashing over the load from the right rear to the left front tiedown ring. Secure it with a D-ring and a load binder.
- ⑰ Pass a 15-foot lashing over the load from the left rear to the right front tiedown ring. Secure it with a D-ring and a load binder.

**Figure 4-4. Ground/Vehicle Laser Locator Designator and Cargo Area Accompanying Equipment Rigged in M966 Truck (continued)**

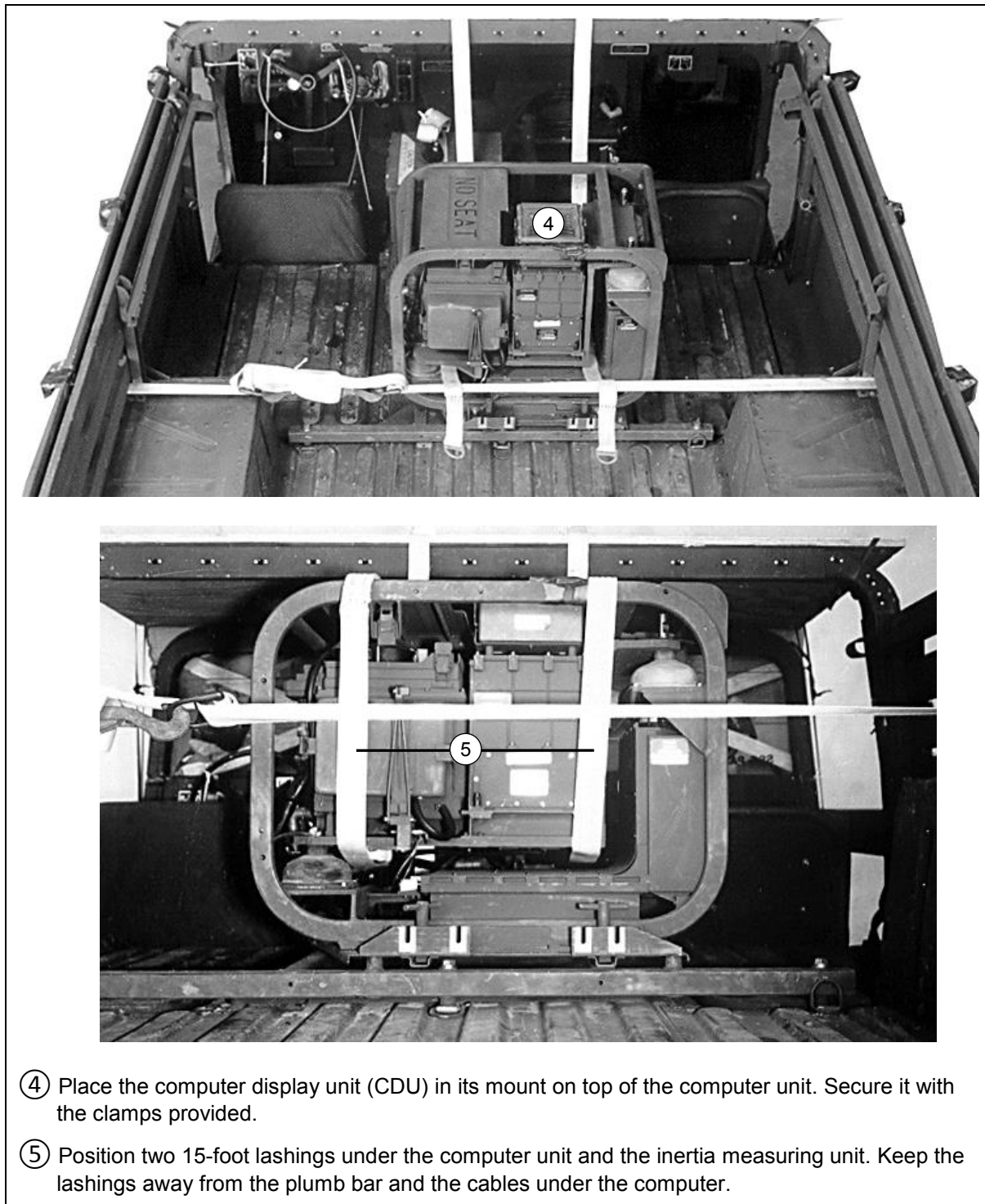
### SECTION III: RIGGING AN/USG-70 POSITION AND AZIMUTH DETERMINING SYSTEM (PADS) IN M998 CARGO/TROOP CARRIER

4-5. Use the procedures shown in Figure 4-5 to rig the position and azimuth determining system (PADS), camouflage net and poles, fuel can, water can, and four boxes of 105-mm ammunition. The load shown here weighs 834 pounds.



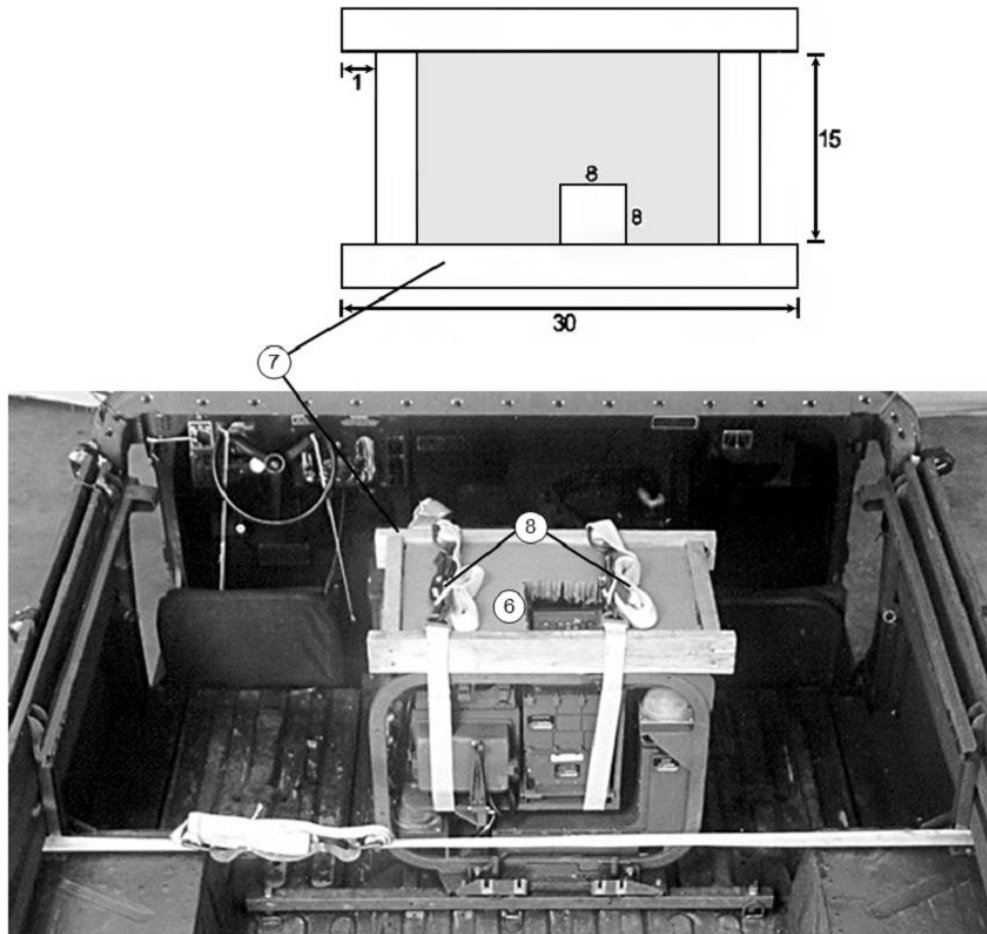
- ① Roll and tie any cables. Secure them to the radio rack or other convenient points with type III nylon cord. They may also be stored in the battery box.
- ② Remove the computer display unit (CDU) from its mount.
- ③ Secure the battery box to the tiedowns provided with a 15-foot lashing. Pass the lashing through the handles of the battery box.

**Figure 4-5. PADS and Ammunition Rigged in M998 Truck**



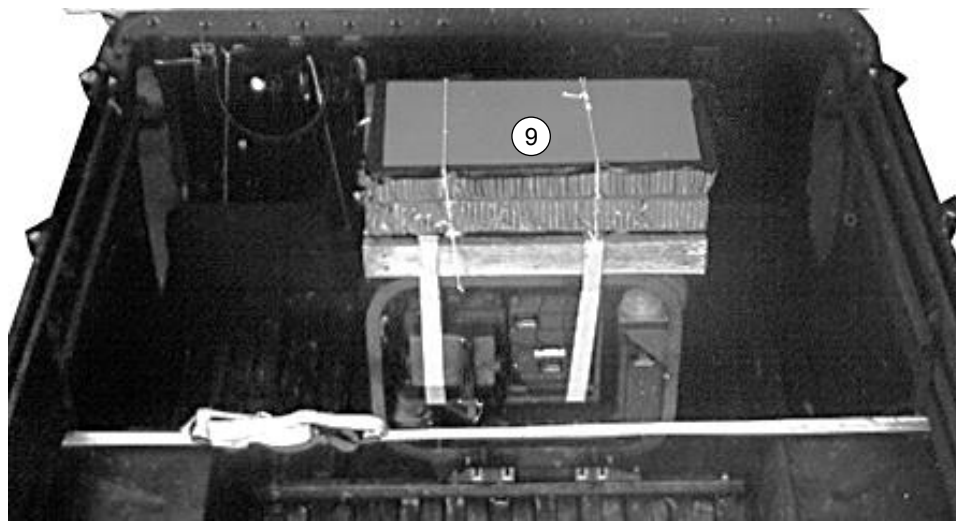
**Figure 4-5. PADS and Ammunition Rigged in M998 Truck (continued)**

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



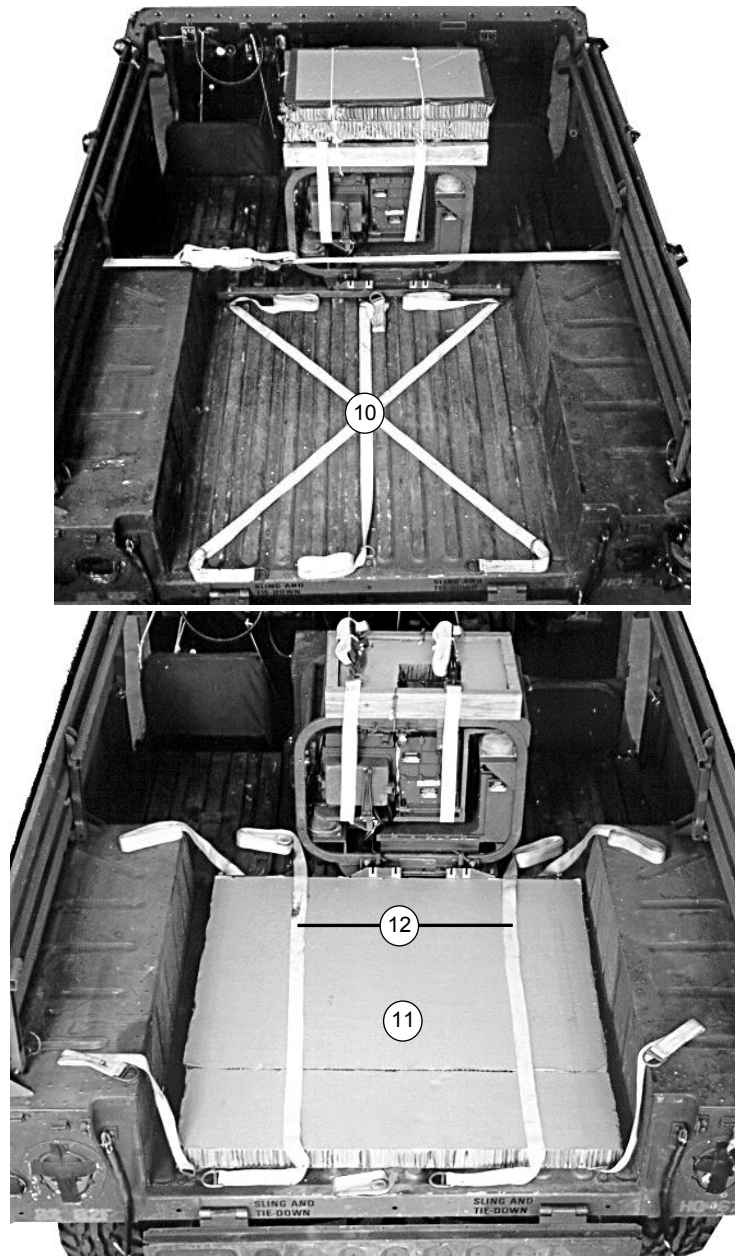
- ⑥ Center a 15- by 25-inch piece of honeycomb over the top of the equipment rack. Position an 8- by 8-inch cutout along the rear edge of the honeycomb to accommodate the computer display unit (CDU).
- ⑦ Construct a wood frame as shown using 2- by 4-inch lumber and 6-penny nails. Fit the wood frame around the honeycomb placed in step 6 above.
- ⑧ Fasten the lashings placed in step 5 over the honeycomb with D-rings and load binders.

**Figure 4-5. PADS and Ammunition Rigged in M998 (continued)**



- ⑨ Place two 14- by 14-inch pieces of honeycomb over the battery box. Place two 18- by 31-inch pieces of honeycomb over the wood frame. Tape the edges of the top layers, and tie the honeycomb over the components with type III nylon cord.

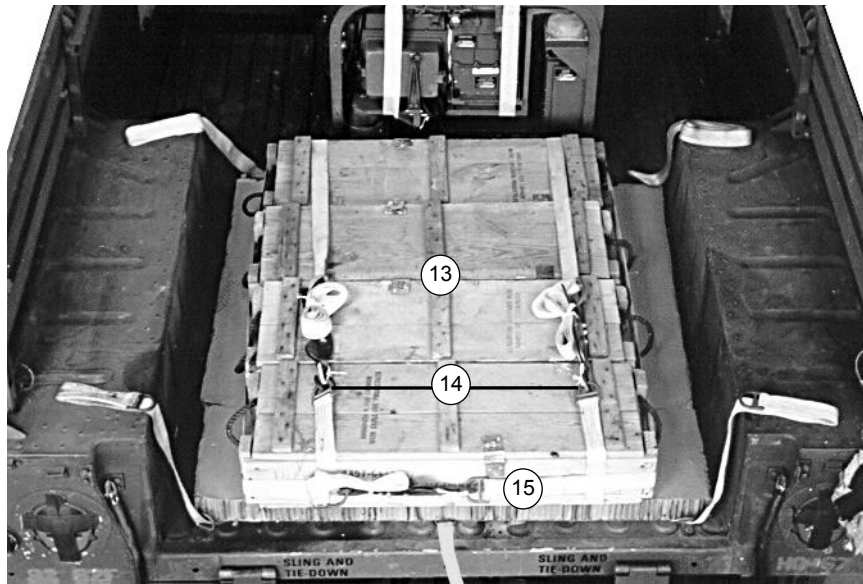
**Figure 4-5. PADS and Ammunition Rigged in M998 Truck (continued)**



- ⑩ Pass a 15-foot lashing through the center tiedown rings. Pass a 5-foot lashing through the left front and right rear tiedown rings. Pass another 15-foot lashing through the left rear and right front tiedown rings.
- ⑪ Place a 12- by 48-inch piece and a 36- by 48-inch piece of honeycomb as a single layer over the lashings.
- ⑫ Position two 15-foot lashings 10 inches from each side of the honeycomb.

**Figure 4-5. PADS and Ammunition Rigged in M998 Truck (continued)**

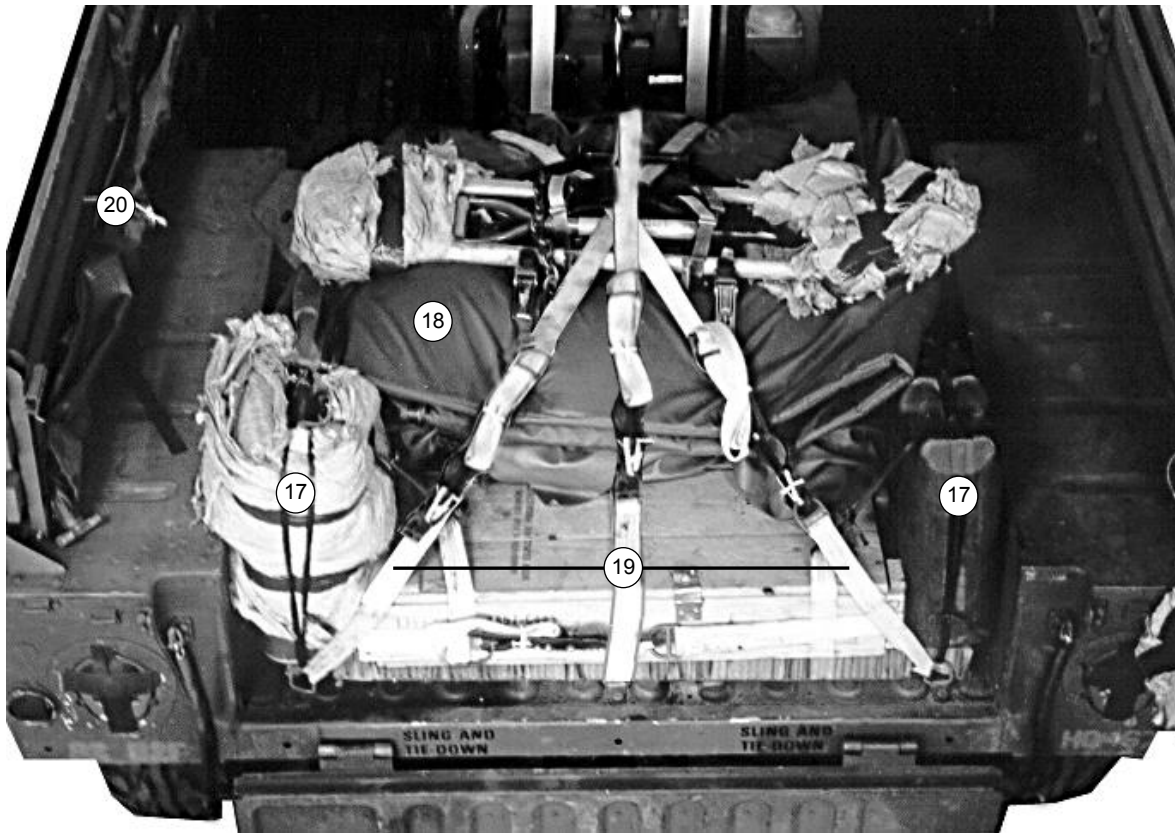




- ⑬ Center four boxes of ammunition on the honeycomb.
- ⑭ Bind the boxes together with the lashings placed in step 10.
- ⑮ Run a 15-foot lashing through all the box carrying handles. Fasten the lashing at the rear of the boxes.
- ⑯ Tape the truck tarpaulin support bows together, and tie them to the B-pillar with type III nylon cord.

**Figure 4-5. PADS and Ammunition Rigged in M998 Truck (continued)**





- ⑪ Set a padded fuel can and plastic water can between the ammunition boxes and wheel wells at the rear of the load. Tie them to the nearest tiedown rings, to the position and azimuth determining system frame, and to the binding lashings with ½-inch tubular nylon webbing.
  - ⑫ Place the camouflage net and pole bags, the cab doors, the truck cab cover, and tarpaulin on top of the ammunition boxes.
- Note:** The pioneer tool kit is also shown, but it does not need to be removed from its rack under the truck.
- ⑬ Fasten the three lashings placed in step 10 over the load with D-rings and load binders.
  - ⑭ Tie the antenna, cab cover supports, or other loose objects to the side slats with type III nylon cord and close the tailgate and tie it with ½-inch tubular nylon webbing (not shown).

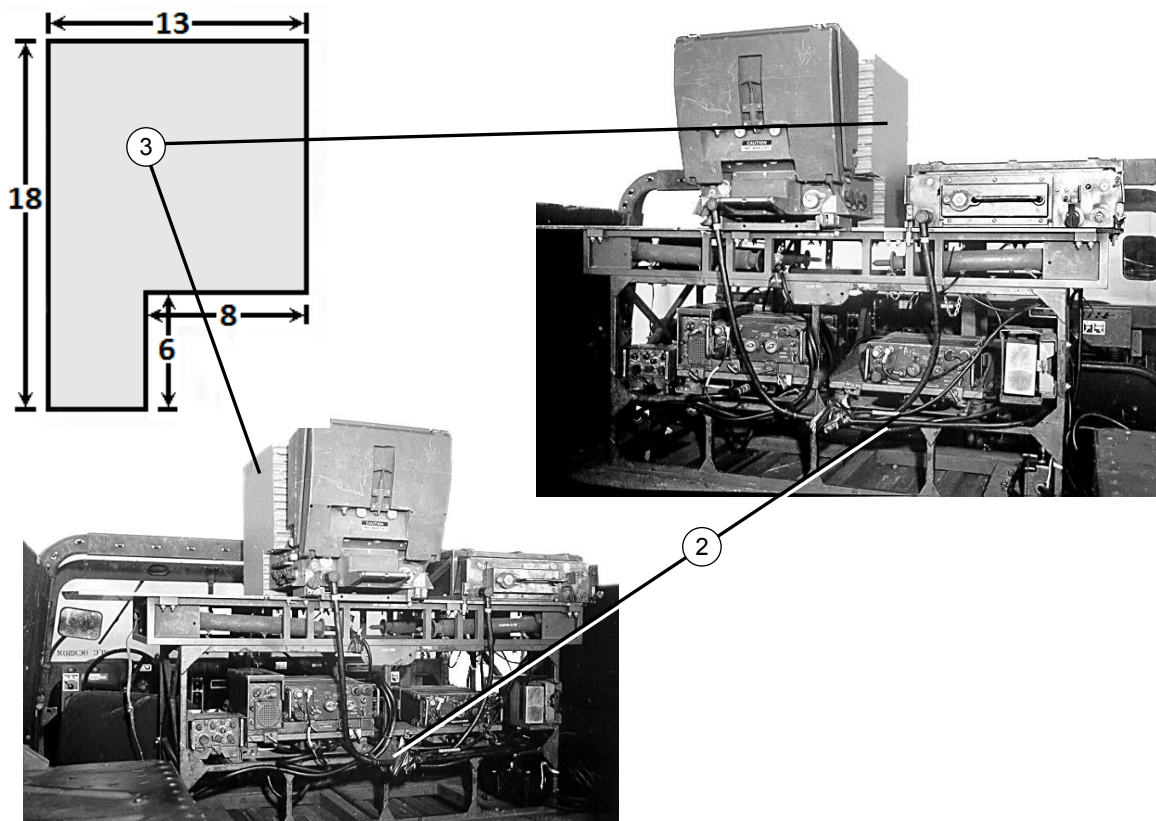
Figure 4-5. PADS and Ammunition Rigged in M998 Truck (continued)

## SECTION IV: RIGGING BATTERY COMPUTER SYSTEM (BCS) IN M998 TRUCK

4-6. Use the procedures shown in Figures 4-6 through 4-10 to rig the battery computer system (BCS), camouflage net and poles, generator, and truck and crew equipment. This accompanying load weighs 801 pounds.

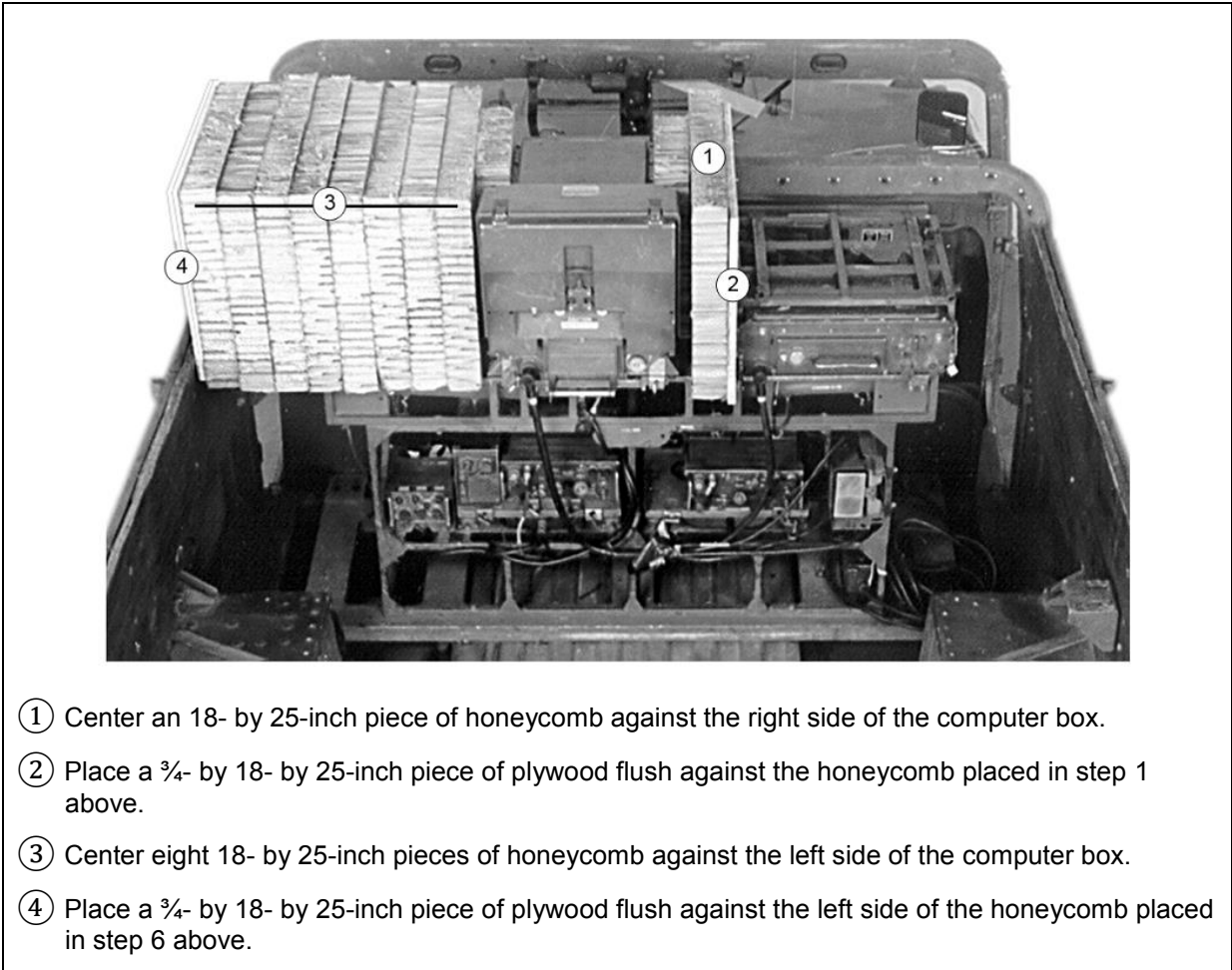
**Note:** Be sure the unit owning the truck has installed the BCS in its mount and the solid side boards on the truck.

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

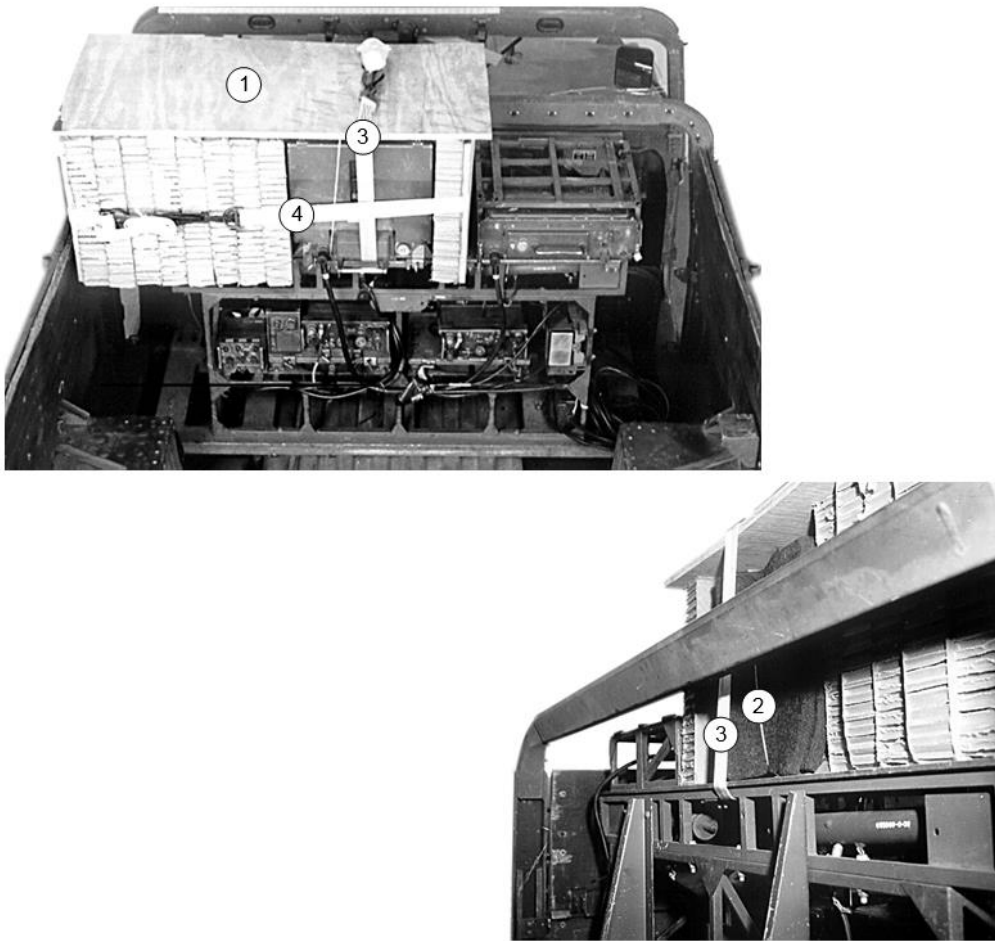


- ① Remove the antenna mount on the left side of the truck. Wrap it with cellulose wadding taped in place. Place the mount in the camouflage net bag (not shown).
- ② Roll loose cables and tie or tape them to the battery computer system (BCS) mount. Tape all exposed cable connectors.
- ③ Cut two 13- by 18-inch pieces of honeycomb, with cutouts as shown. Place one on each side of the computer box with the cutouts facing the rear.

**Figure 4-6. BCS and Accompanying Equipment Prepared in M998 Truck**

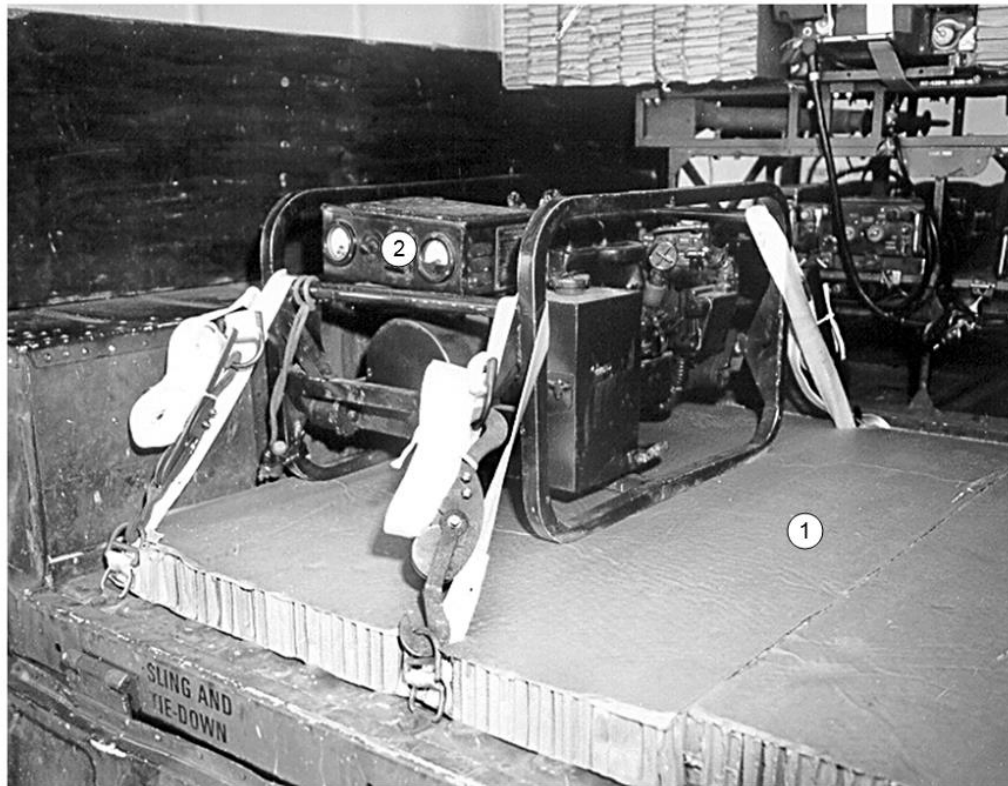


**Figure 4-7. BCS and Accompanying Equipment Honey Comb Placed in M998 Truck**



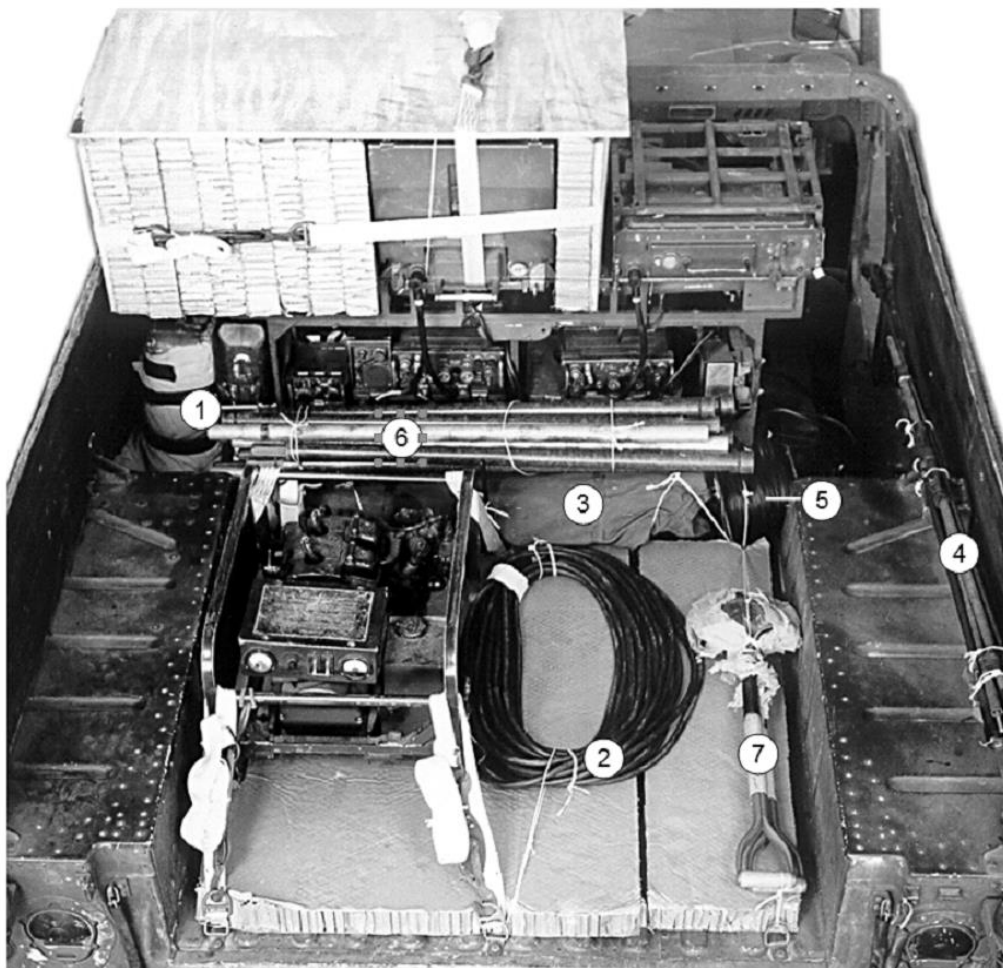
- ① Place a  $\frac{3}{4}$ - by 27- by 47-inch piece of plywood flush over the honeycomb and plywood placed in Figure 4-7 steps 1 through 4.
- ② Pad the front side of the computer box with two 12- by 16-inch pieces of felt. Tie the felt in place with type III nylon cord.
- ③ Run a 15-foot lashing around the computer box, through the rear carrying handle, and under the top bar of the mount. Fasten the lashing on top of the plywood cover.
- ④ Run a 15-foot lashing around the plywood and honeycomb placed in Figure 4-7 steps 1 through 4. Fasten the lashing on the rear side.

**Figure 4-8. BCS Computer Box Placed and Secured in M998 Truck**



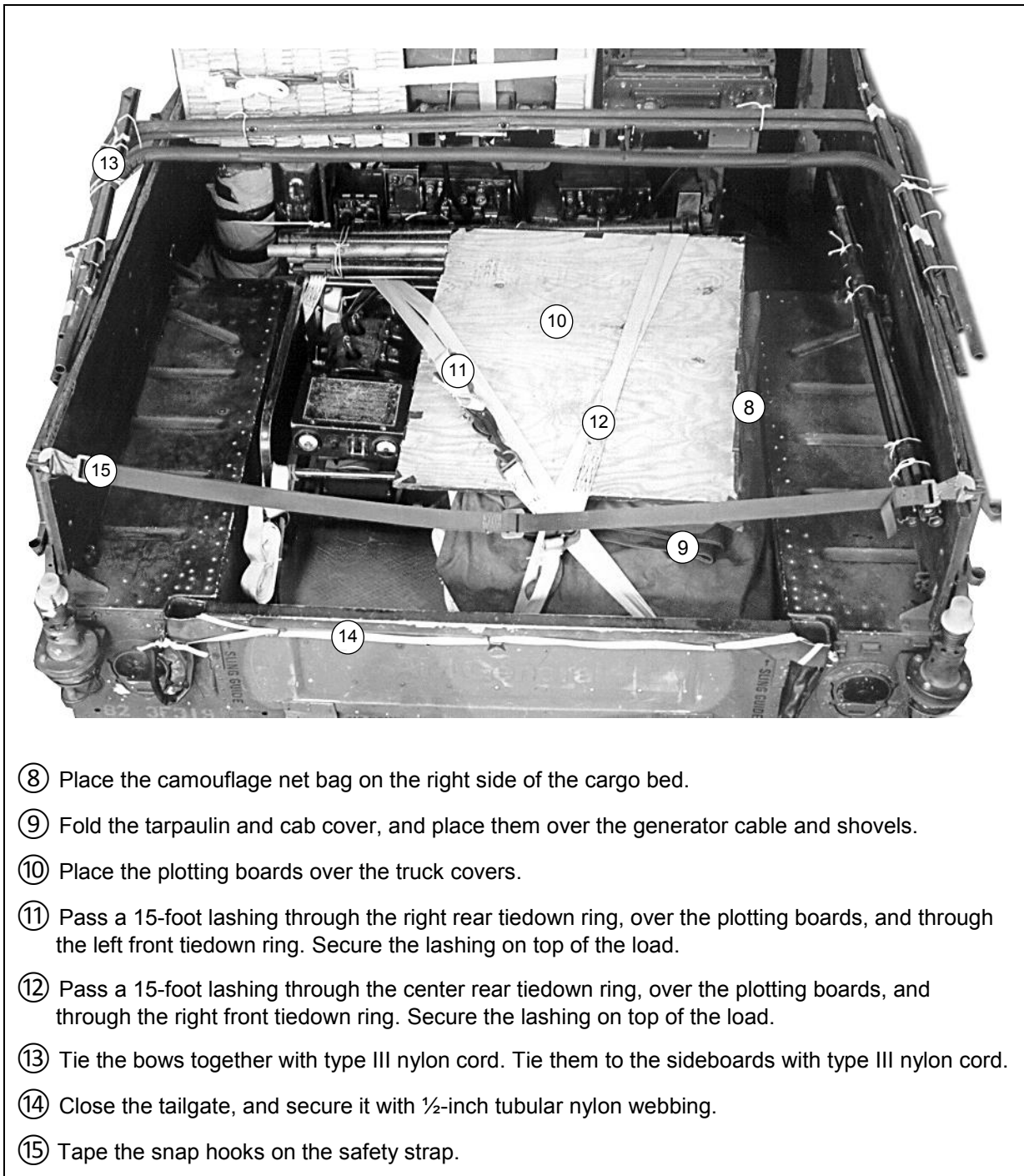
- ① Cover the bed of the truck between the center and rear tiedown rings with a 12- by 48-inch piece and a 36- by 48-inch piece of honeycomb. Place the honeycomb as shown.
- ② Place the generator on the honeycomb against the left wheel well. Lash each corner of the generator frame to the nearest tiedown ring.

**Figure 4-9. BCS Generator Placed and Secured in M998 Truck**



- ① Set a padded fuel can and a plastic water can to the left of the battery computer system (BCS) rack. Tie them to the rack with type III nylon cord.
- ② Roll and tie the generator cable with type I, ¼-inch cotton webbing. Lay it to the right of the generator, and tie the cable to the center tiedown rings with type III nylon cord.
- ③ Place the antenna bag on the floor across the front of the BCS rack. Use type III nylon cord to tie the ends of the bag, and to secure the bag to the nearest tiedown rings.
- ④ Secure the small truck antenna to the truck sideboards with type III nylon cord.
- ⑤ Place the spool of communications wire over the right center tiedown ring. Tie it to the ring with type III nylon cord.
- ⑥ Place the camouflage net poles over the antenna bag. Secure them to the left and right center tiedown rings with type III nylon cord.
- ⑦ Pad the blades of the two shovels with cellulose wadding taped in place. Tie the shovels to the right rear and right center tiedown rings with type III nylon cord.

**Figure 4-10. BCS and Accompanying Equipment Rigged in M998 Truck**

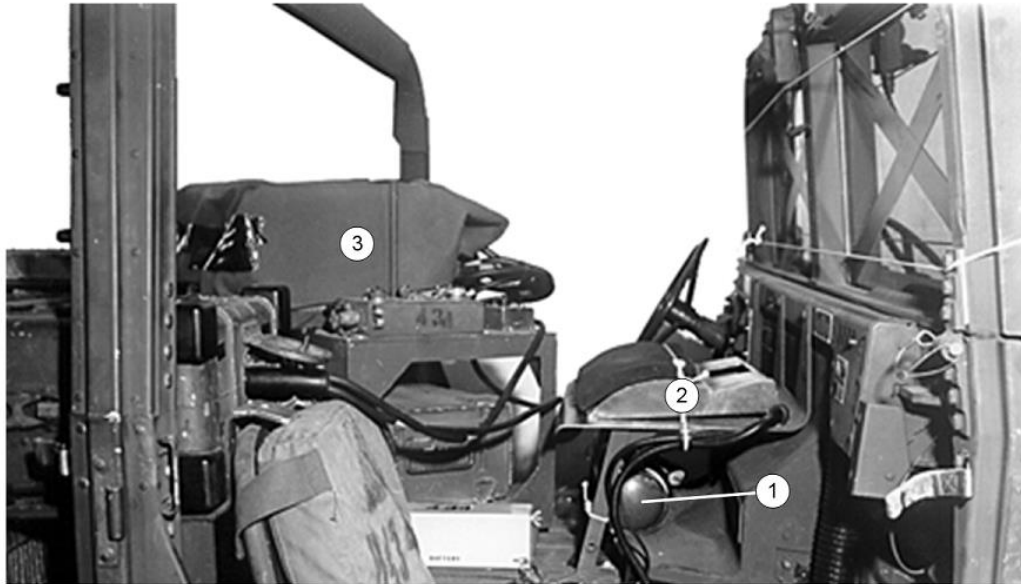


**Figure 4-10. BCS and Accompanying Equipment Rigged in M998 Truck (continued)**



## SECTION V: RIGGING AN/VSC-2 RADIOTELETYPE IN M998 TRUCK

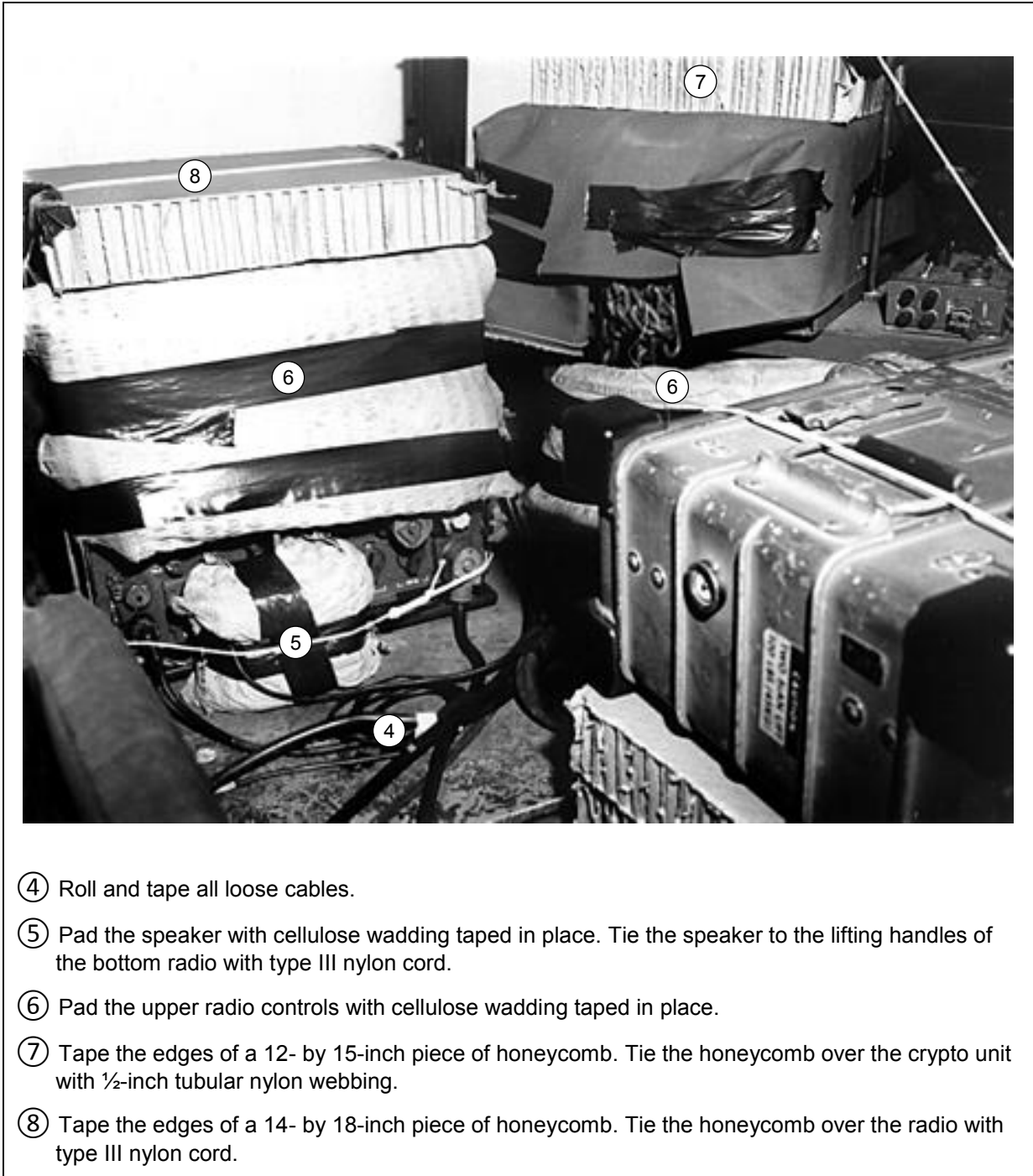
4-7. Use the procedures shown in Figure 4-11 to 4-13 to rig the AN/VSC-2 radioteletype, two generators, and truck and crew equipment. This load weighs 1,373 pounds.



- ① Tie the fire extinguisher to the radio mount supports with type III nylon cord.
- ② Tie the radioteletype operator backrest to the radio mount with type III nylon cord.
- ③ Cover the crypto unit with cotton duck cloth, and tape the cloth in place.

**Figure 4-11. AN/VSC-2 Radioteletype Cab Rigged in M998 Truck**





- ④ Roll and tape all loose cables.
- ⑤ Pad the speaker with cellulose wadding taped in place. Tie the speaker to the lifting handles of the bottom radio with type III nylon cord.
- ⑥ Pad the upper radio controls with cellulose wadding taped in place.
- ⑦ Tape the edges of a 12- by 15-inch piece of honeycomb. Tie the honeycomb over the crypto unit with  $\frac{1}{2}$ -inch tubular nylon webbing.
- ⑧ Tape the edges of a 14- by 18-inch piece of honeycomb. Tie the honeycomb over the radio with type III nylon cord.

**Figure 4-11. AN/VSC-2 Radioteletype Cab Rigged in M998 Truck (continued)**



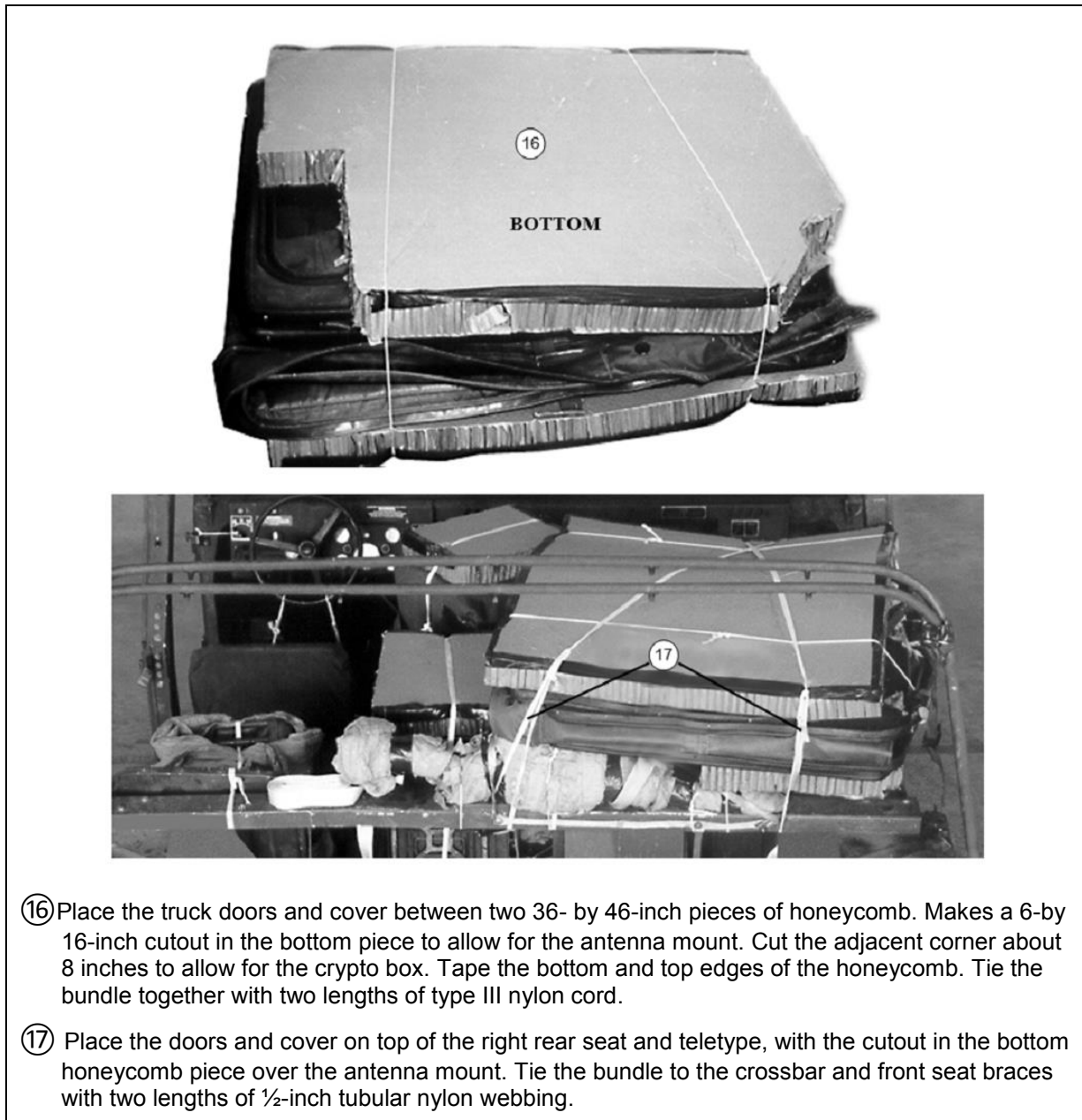
- ⑨ Place four 10- by 16-inch pieces of honeycomb between the teletype cover and the seat cushion. Tape the bottom edges of the stack, and tie the stack to the teletype cover with type III nylon cord.
- ⑩ Detach the antenna from its mount, and remove the mount from the crossbar. Wrap the mount generously in cellulose wadding. Tape the cellulose wadding in place. Tie the antenna mount along the crossbar with four length of type III nylon cord.
- ⑪ Lash a filled plastic water can to the right rear seat back with a 15-foot lashing, a D-ring, and a load binder.
- ⑫ Lay the camouflage net bag between the rear seats and in the space between the teletype and radio sets. Secure it with a length of ½-inch tubular nylon webbing tied to the brace behind the driver's seat and to the crossbar behind the rear seats.

**Figure 4-11. AN/VSC02 Radioteletype Cab Rigged in M998 Truck (continued)**

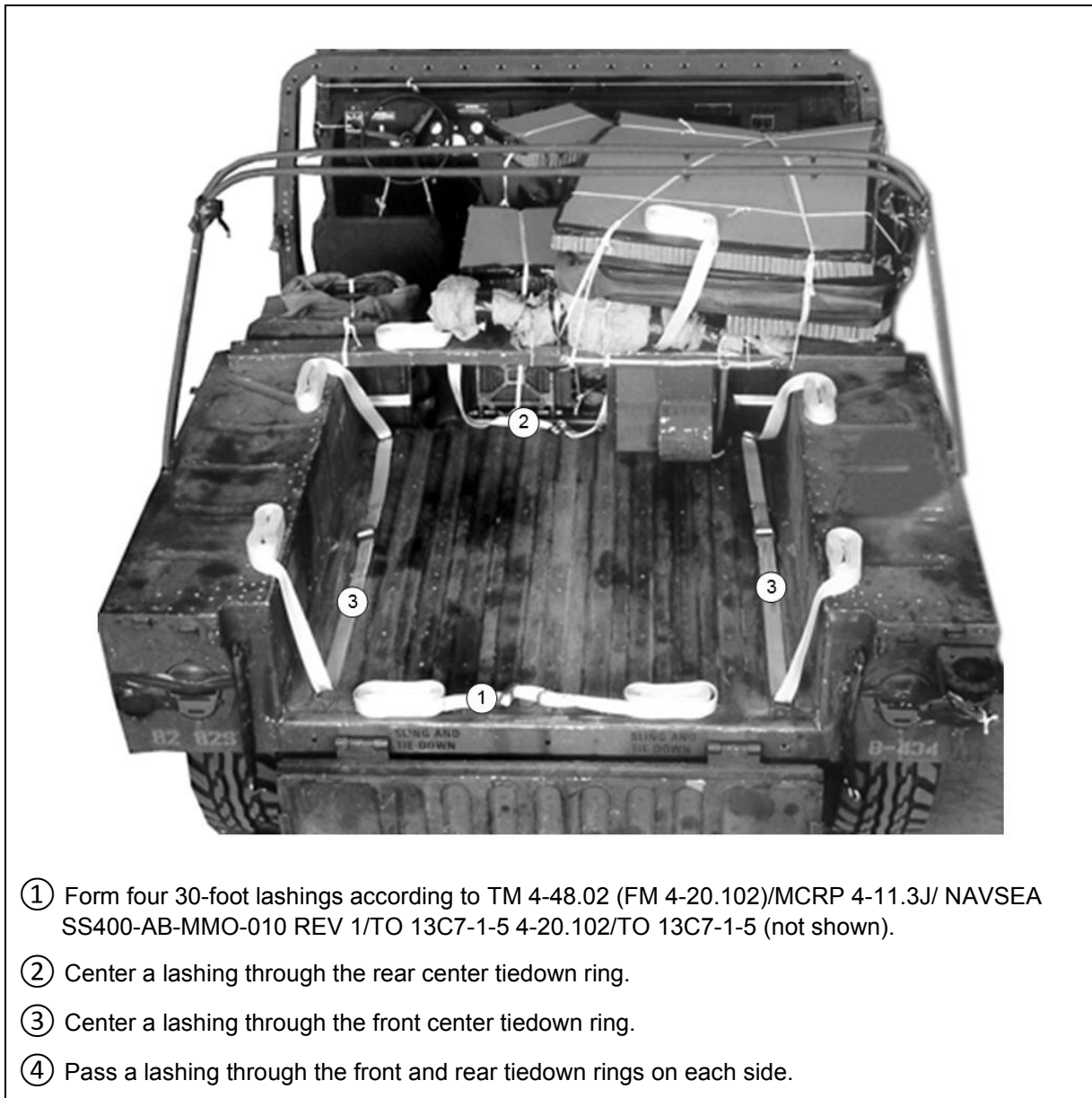


- ⑬ Wrap two filled fuel cans with cellulose wadding taped in place. Lash the fuel cans to the left rear seat back with a 15-foot lashing, a D-ring, and a load binder.
- ⑭ Tie a length of ½-inch tubular nylon webbing to the brace behind the driver's seat. Run the webbing through the fuel can handles, and tie it to the crossbar behind the left rear seat.
- ⑮ Wrap an oil can with cellulose wadding taped in place. Tie the oil can to the rear seat hinges and to the front seat with ½-inch tubular nylon webbing.

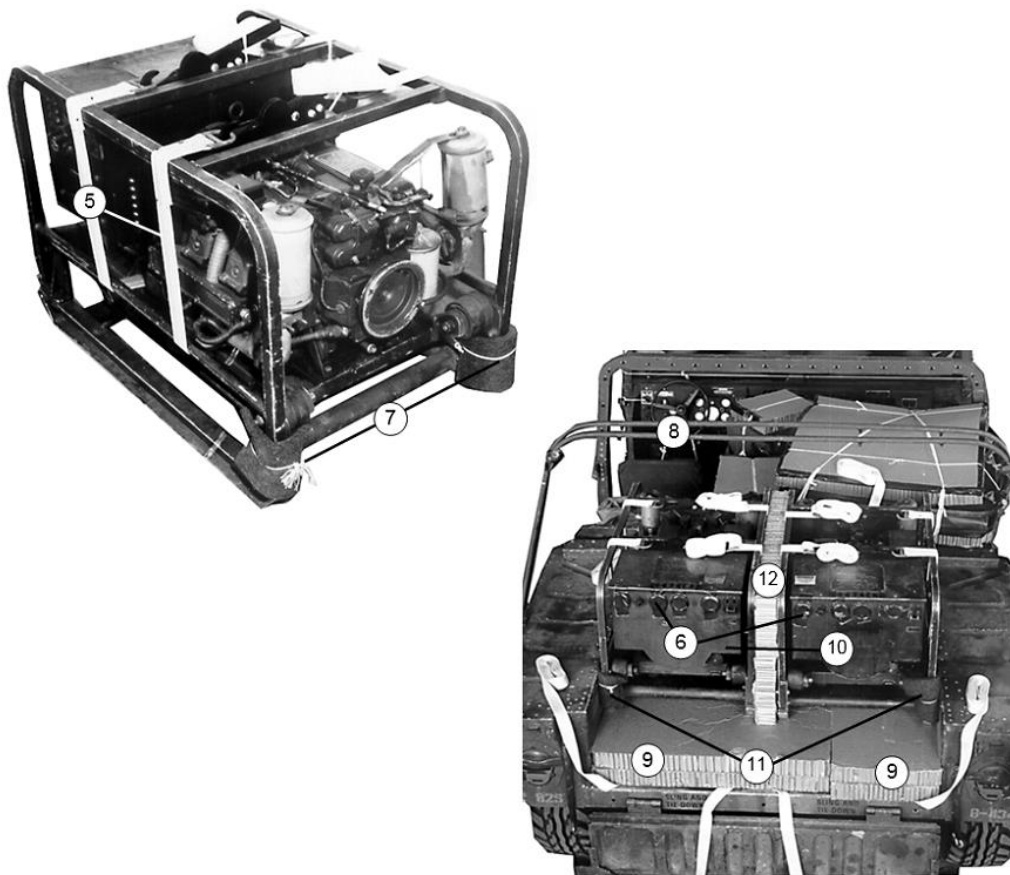
**Figure 4-11. AN/VSC-2 Radioteletype Cab Rigged in M998 Truck (continued)**



**Figure 4-11. AN/VSC-2 Radioteletype Cab Rigged in M998 Truck (continued)**



**Figure 4-12. AN/VSC-2 Radioteletype Generator Rigged in M998 Truck**



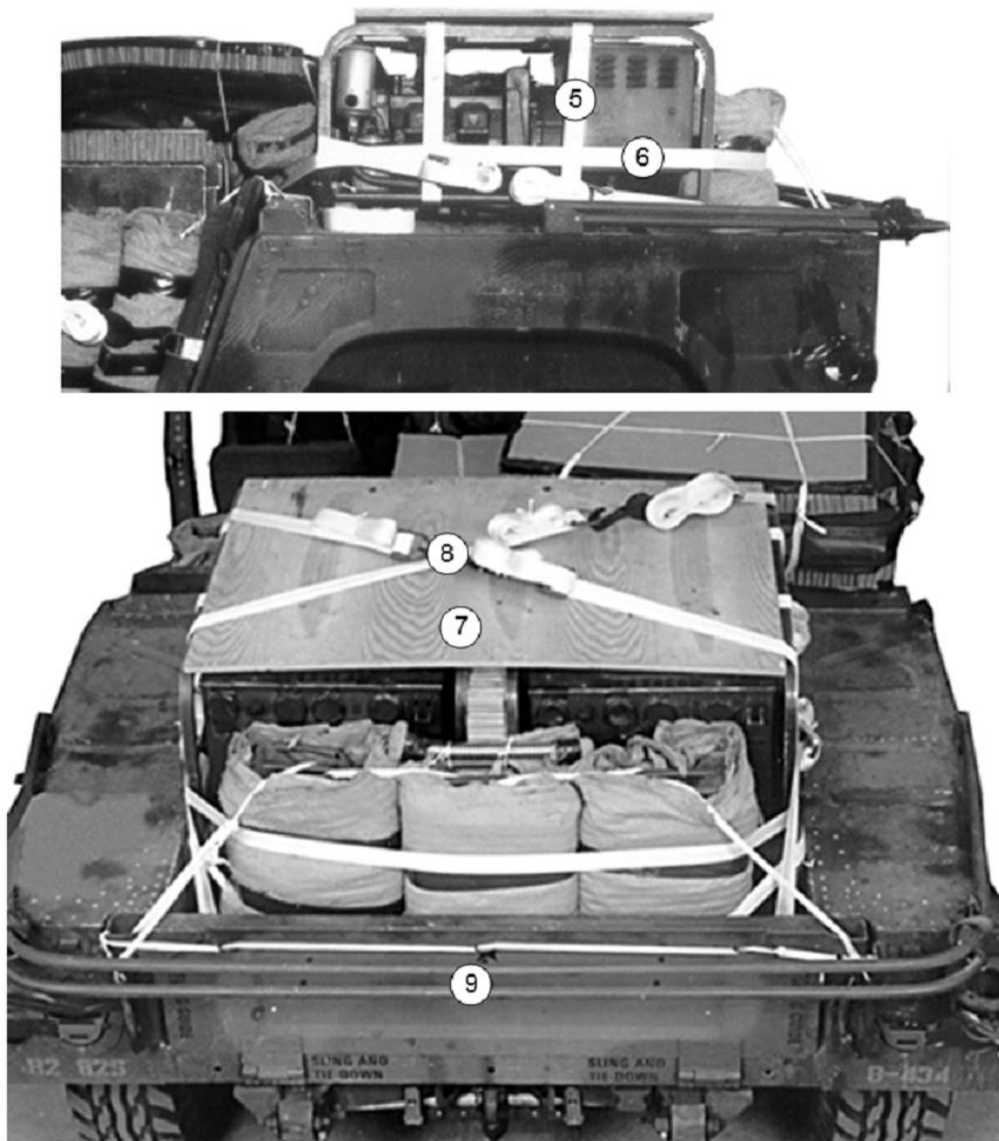
- ⑤ Pass two 15-foot lashings around the center and top horizontal bars of each generator.
- ⑥ Tape the gauges.
- ⑦ Pad the front ends of the generator frames with felt. Tie the felt in place with type III nylon cord.
- ⑧ Raise the truck bow, but do not detach them.
- ⑨ Cover the cargo bed, using two 36- by 42-inch and two 15- by 42- inch pieces of honeycomb as shown above.
- ⑩ Place the two generators against the crossbar, facing as shown.
- ⑪ Pad the outside rear frames with felt, tied in place with type III nylon cord.
- ⑫ Place a 24- by 34-inch piece of honeycomb between the two generators.

**Figure 4-12. AN/VSC-2 Radioteletype Generator Rigged in M998 Truck (continued)**



- ① Pad three filled fuel cans with cellulose wadding, and tape the wadding in place. Set the fuel cans flat against the rear of the generators.
- ② Tie a filler nozzle to the center can handle with type III nylon cord.
- ③ Close the tailgate and tie it with ½-inch tubular nylon webbing.
- ④ Secure the fuel cans to the tailgate brackets with ½-inch tubular nylon webbing, running the webbing through the can handles.

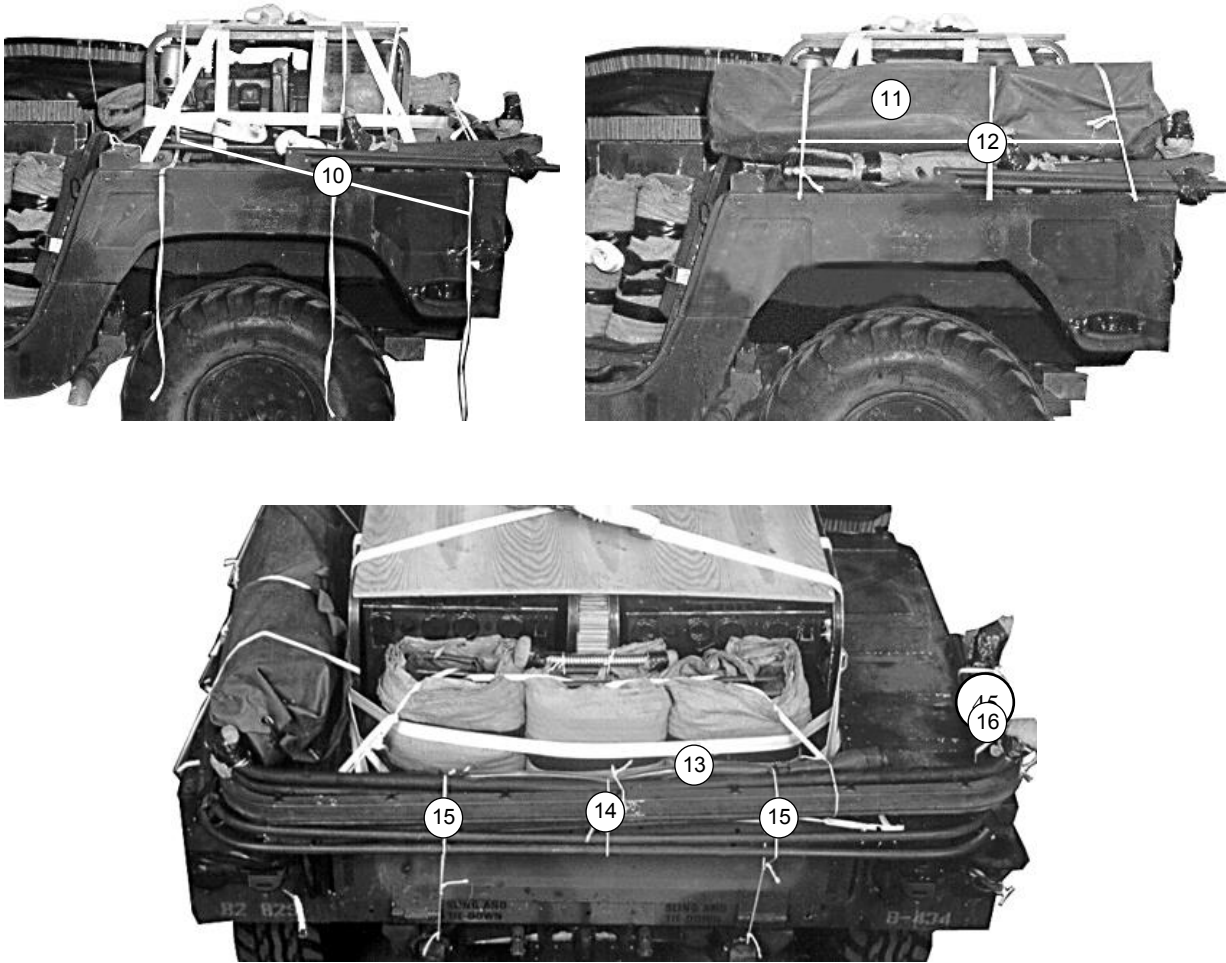
**Figure 4-13. AN/VSC-2 Radioteletype Cargo Area Rigged in M998 Truck**



- ⑤ Run the lashing placed in step 19 around the front of the generators. Secure it with two D-rings and a load binder on the side of the load.
- ⑥ Run the lashing placed in step 20 around the rear of the fuel cans. Secure it with two D-rings and load binder on the side of the load.
- ⑦ Place a  $\frac{3}{4}$ - by 32- by 50-inch piece of plywood over the generators.
- ⑧ Join the running ends of the lashings placed in step 21 as follows: left front to right rear, and left rear to right front. Fasten the lashings on top of the plywood with two D-rings and a load binder.
- ⑨ Lower the bows toward the rear of the truck.

**Figure 4-13. AN/VSC-2 Radioteletype Cargo Area Rigged in M998 Truck (continued)**





- ⑩ Place three 10-foot lengths of ½-inch tubular nylon webbing over the wheel wells and down through the footman loops. Extend the webbing under the horizontal bar on the generator frame and up over the generator.
- ⑪ Lay the antenna case, the probe rods and stake driver, and the camouflage net pole bag (in order) over the webbing on the wheel well.
- ⑫ Tie the three lengths of nylon over the items placed in step 40 above.
- ⑬ Lay the soft top enclosure supports over the folded bows at the rear of the truck. Pad and tape all sharp fixtures.
- ⑭ Tie the items together with type III nylon cord.
- ⑮ Tie all the bows to the rear shackles with type III nylon cord.
- ⑯ Tie all the bows to the footman loops with ½-inch tubular nylon webbing.

**Figure 4-13. AN/VSC-2 Radioteletype Cargo Area Rigged in M998 Truck (continued)**

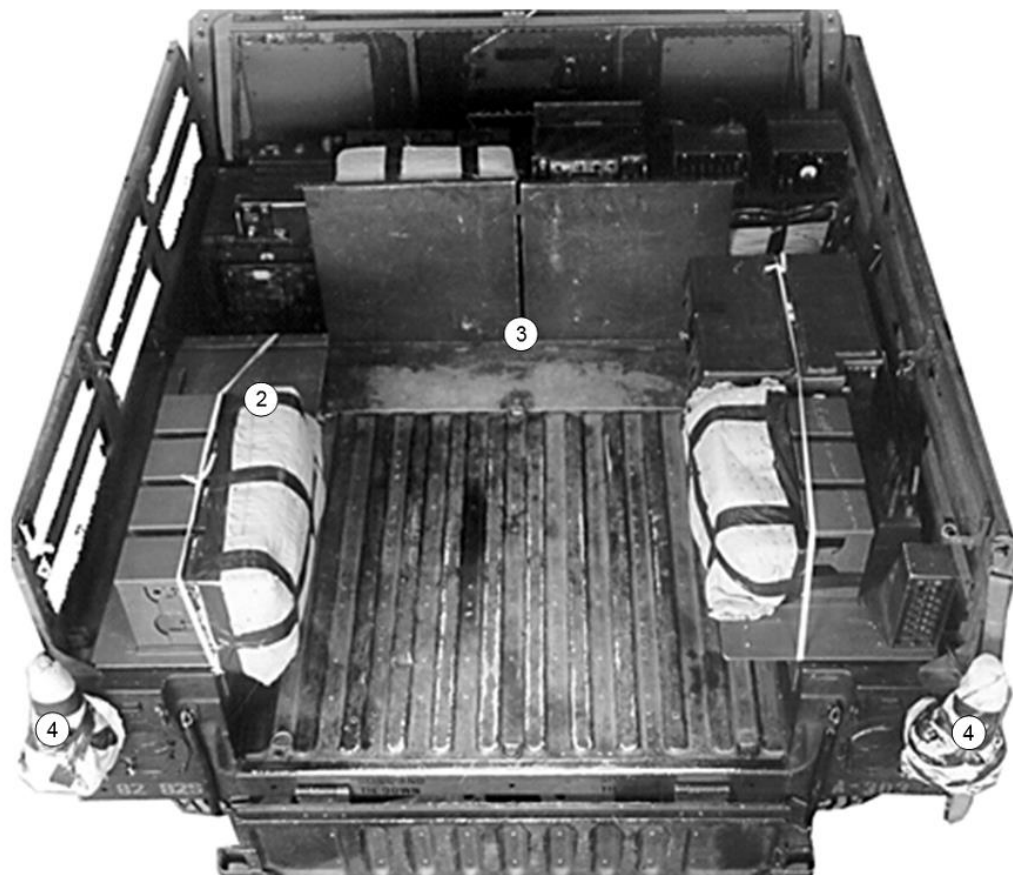
## SECTION VI: RIGGING DIVISION ASSAULT COMMAND RADIO SYSTEM IN M998 TRUCK

4-8. Use the procedures shown in Figures 4-14 through 4-16 to rig the Division Assault Command Radio System, and truck and crew equipment. This load weighs 1,520 pounds.



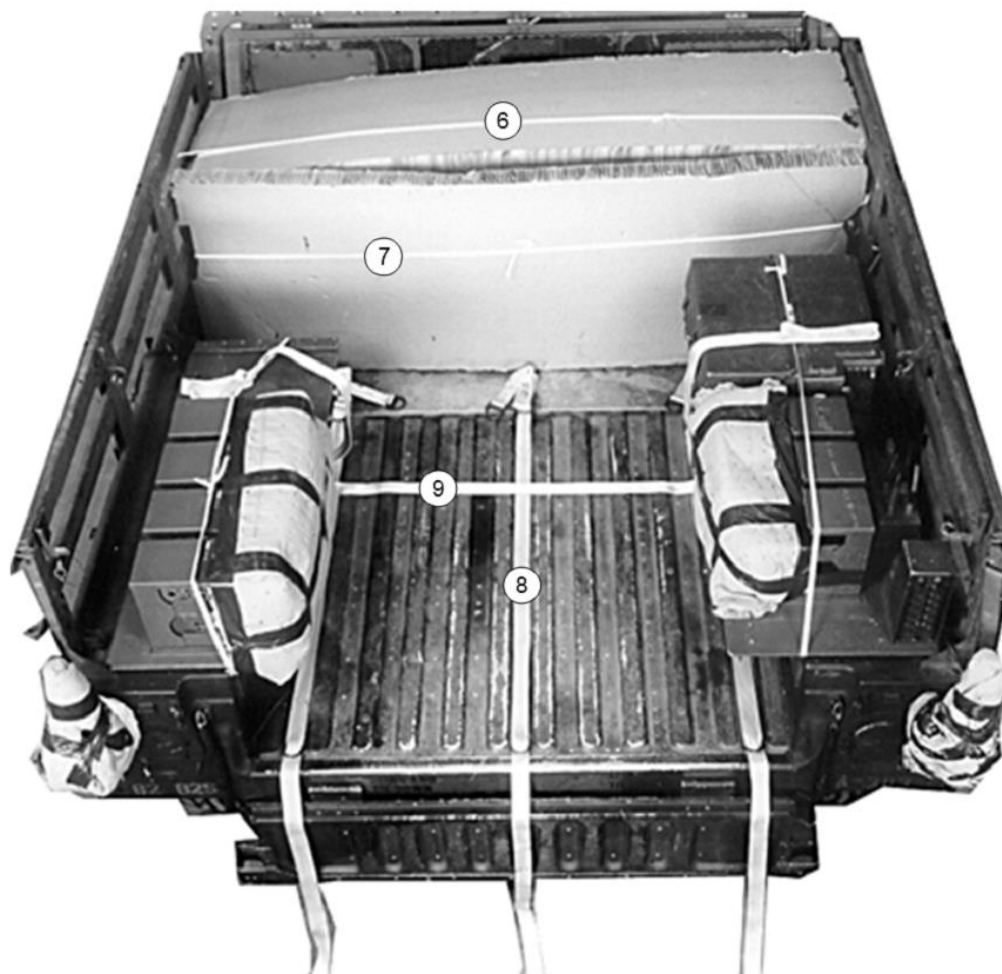
- ① Secure the cab-mounted radios to their mounts and to the rack behind the seats with ½-inch tubular nylon webbing.
- ② Wrap the fire extinguisher with cellulose wadding taped in place. Tie the fire extinguisher to the radio rack behind the seats with type III nylon cord.

**Figure 4-14. Division Assault Command Radio System Cab Rigged in M998 Truck**



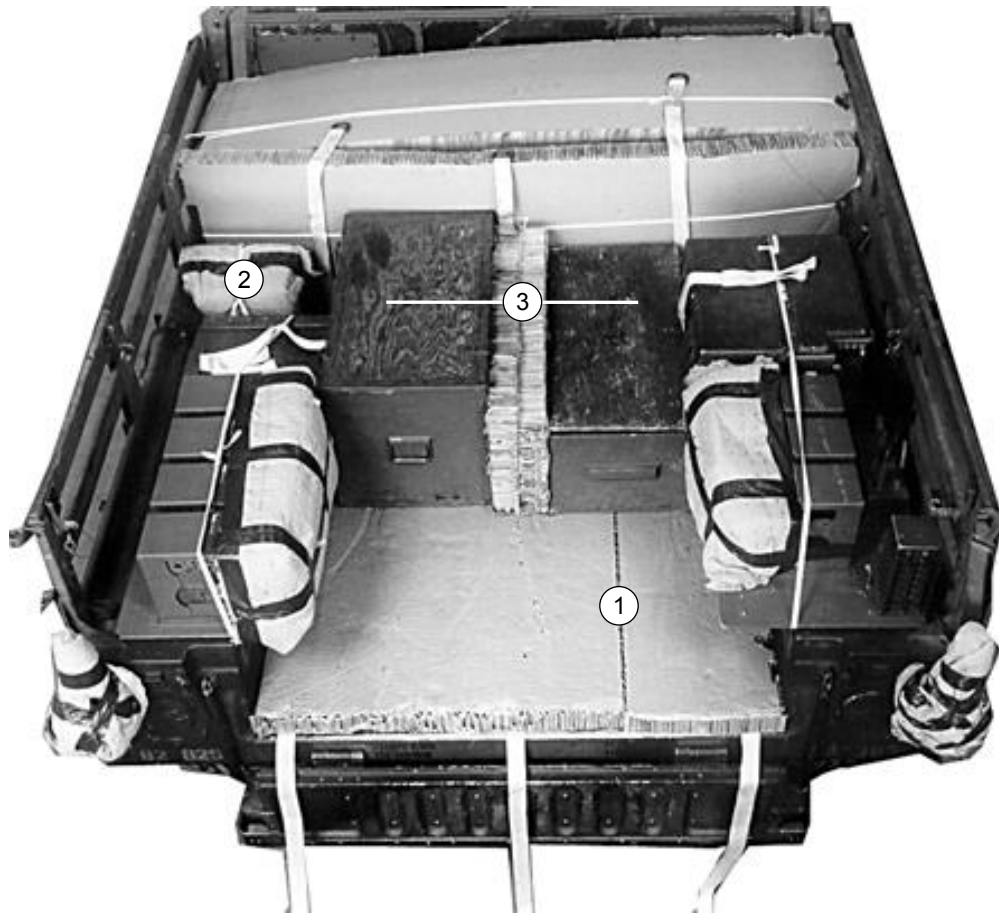
- ① Make sure all radio equipment is secured in its mounts. Reinforce the equipment and mounts with ½-inch tubular nylon webbing if necessary (not shown).
- ② Secure the communications security devices (shown covered with paper) to their racks with ½-inch tubular nylon webbing.
- ③ Place the tabletops on edge in the area between the cargo floor and the equipment racks.
- ④ Pad the rear antenna mounts with cellulose wadding. Tape the wadding in place.
- ⑤ Remove the antenna mount from the left side of the truck. Pad it with cellulose wadding, and place it in the radio equipment chest. (not shown)

**Figure 4-15. Division Assault Command Radio System Cargo Area Prepared in M998 Truck**



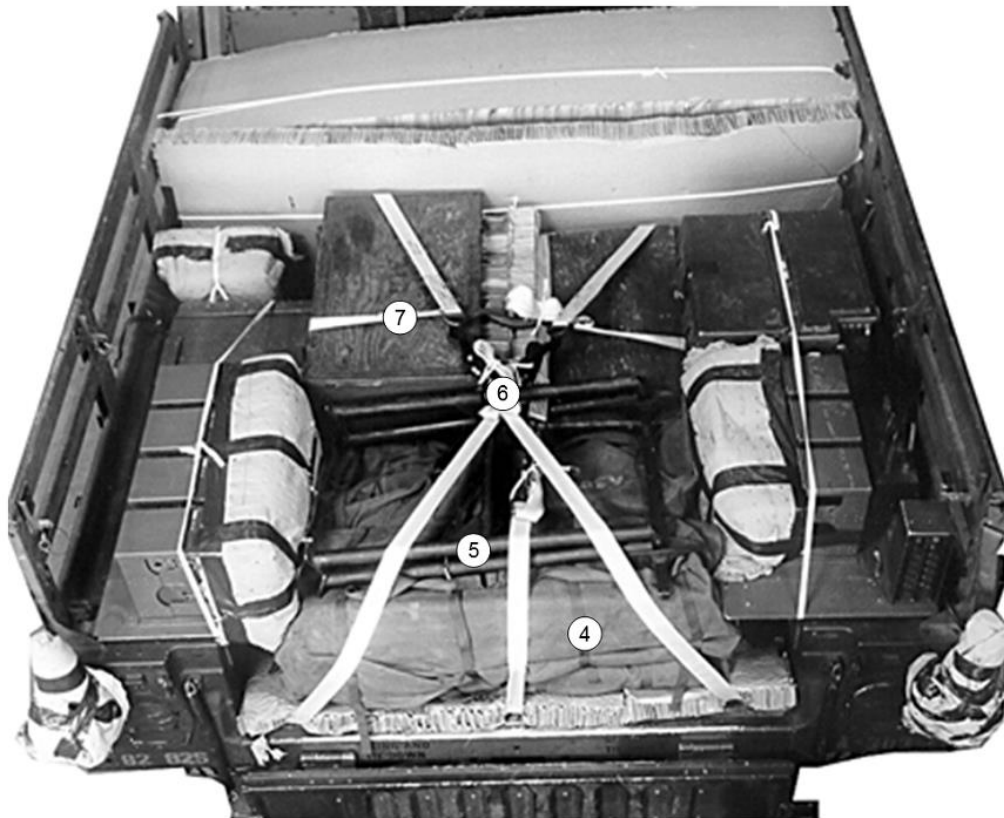
- ⑥ Place a 79- by 21-inch piece of honeycomb over the radios. Secure it with ½-inch tubular nylon webbing.
- ⑦ Place a 79- by 27-inch piece of honeycomb on edge against the tabletops and radios. Secure it with ½-inch tubular nylon webbing.
- ⑧ Place a 15-foot lashing through each of the three pairs of cargo bed tiedown rings in a front-to-rear direction.
- ⑨ Place a 15-foot lashing across the width of the cargo bed 38 inches from the front radio equipment rack.

**Figure 4-15. Division Assault Command Radio System Cargo Area Prepared in M998 Truck (continued)**



- ① Place a 36- by 59-inch piece of honeycomb and a 15- by 59-inch piece of honeycomb side by side to cover the cargo bed.
- ② Place a 7- by 16-inch piece of honeycomb between the left wheel well and the honeycomb placed in Figure 4-15 step 7 (not shown). Pad the GRC-46 radio with cellulose wadding. Tape the wadding in place. Lay the radio on its side on the honeycomb placed above. Tie it to convenient points with ½-inch tubular nylon webbing.
- ③ Place these items in the cargo bed from left to right in order; large radio equipment chest, two 17- by 33-inch pieces of honeycomb placed on edge, and the small radio equipment chest.

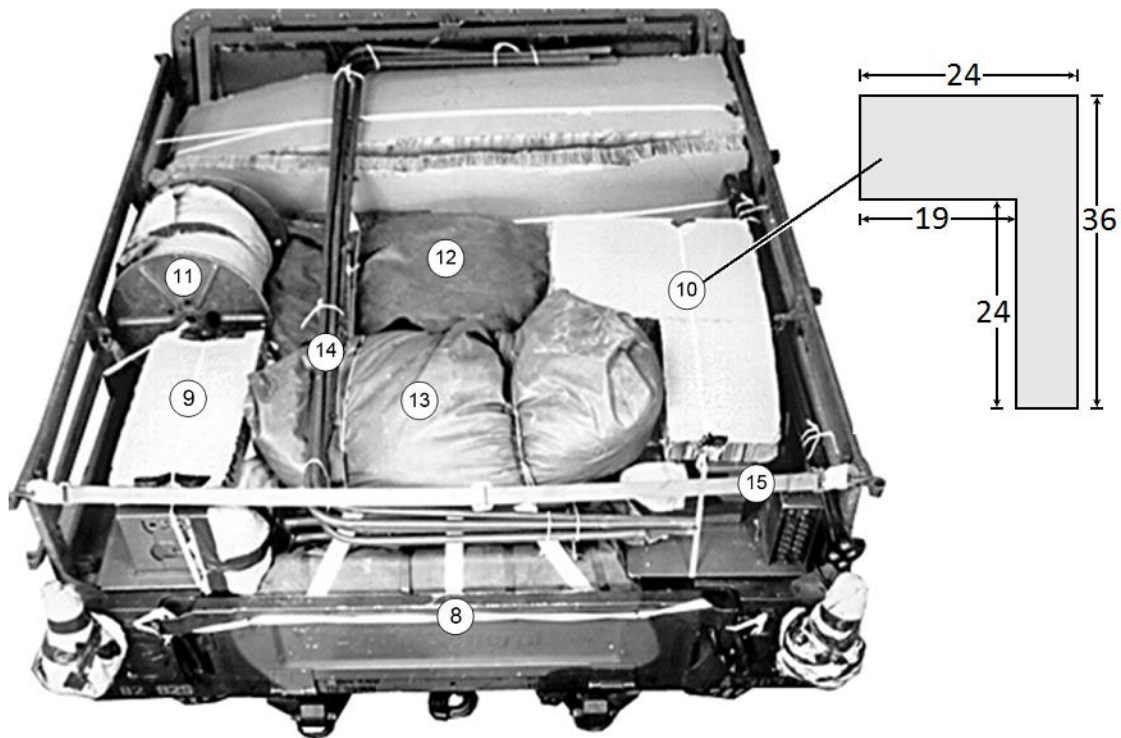
**Figure 4-16. Division Assault Command Radio System Cargo Area Equipment Rigged in M998 Truck**



- ④ Lay four OE 254 antenna sets across the cargo bed.
- ⑤ Place the RL-31 rack on top of the antenna bags.
- ⑥ Fasten the lashings placed in Figure 4-15 step 8 using D-rings and load binders. Cross the outer lashings as shown.
- ⑦ Fasten the lashing placed in Figure 4-15 step 9 over the boxes with a D-ring and load binder.

**Figure 4-16. Division Assault Command Radio System Cargo Area Equipment Rigged in M998 Truck (continued)**

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

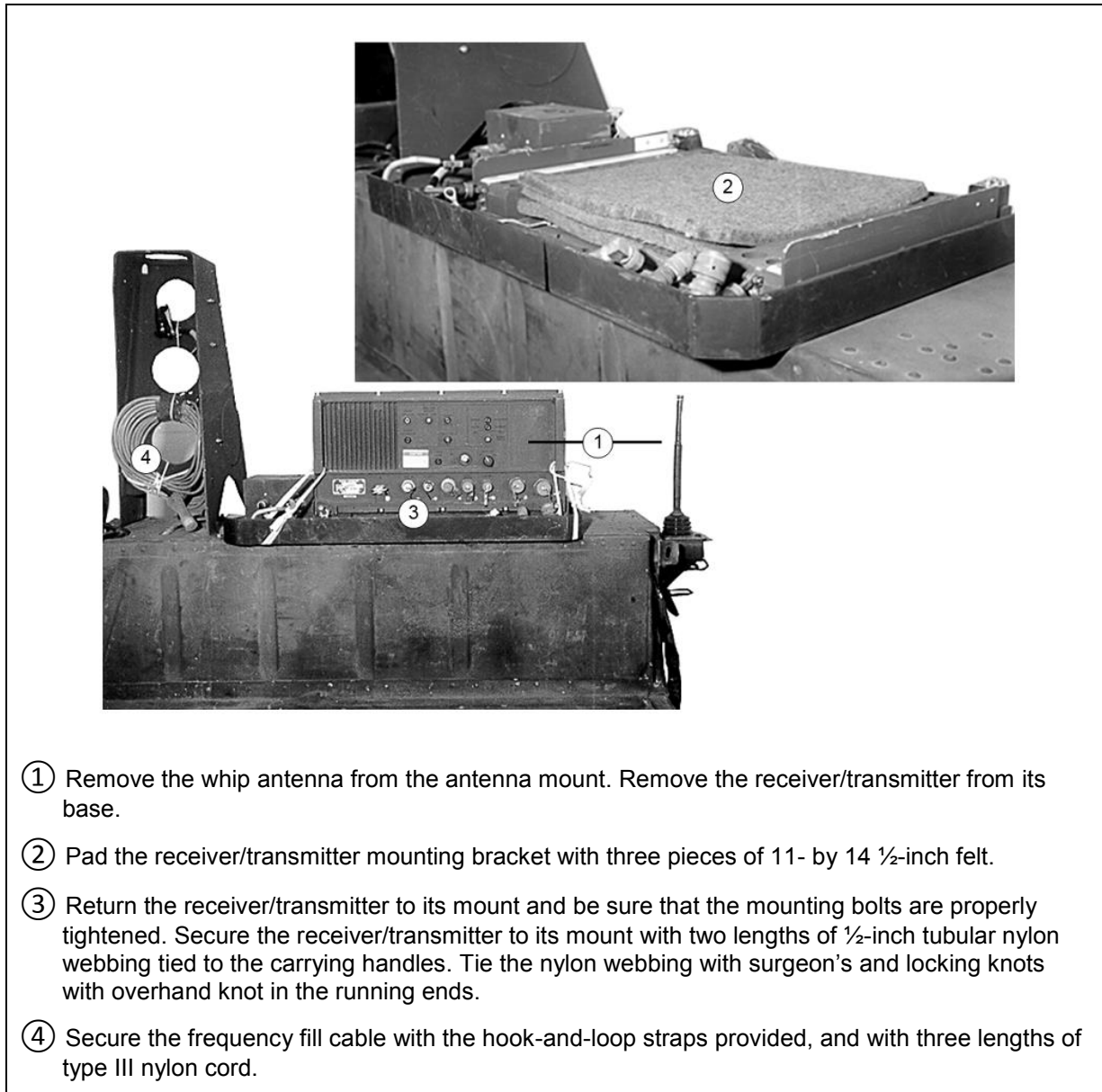


- ⑧ Close and tie the tailgate with ½-inch tubular nylon webbing.
- ⑨ Tie a 12- by 24-inch piece of honeycomb over the left communications security device with type III nylon cord.
- ⑩ Make a cutout in a 24- by 36-inch piece of honeycomb as shown. Cover the right radio and communications security device with the honeycomb.
- ⑪ Place the reel of WD1A wire on the left wheel well. Tie it to the body side rack as shown with ½-inch tubular nylon webbing.
- ⑫ Place the truck cover on top of the equipment chests. Tie them to convenient points with type III nylon cord.
- ⑬ Place the camouflage net bag on top of the rack unit. Tie the bag to convenient points with type III nylon cord.
- ⑭ Tie the bows together and secure them to the load with type III nylon cord.
- ⑮ Install the safety strap and tape the latches.

**Figure 4-16. Division Assault Command Radio System Cargo Area Equipment Rigged in M998 Truck (continued)**

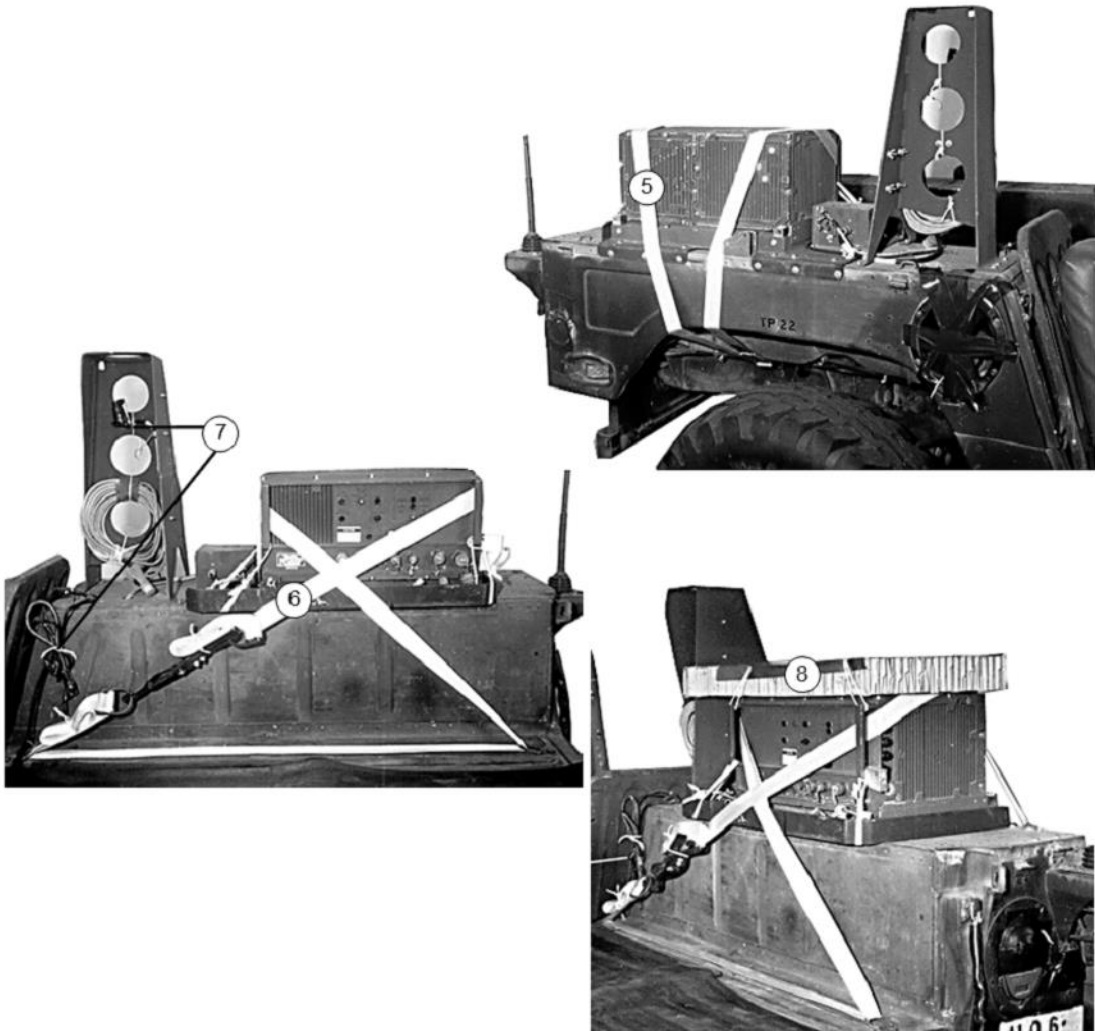
**SECTION VII: RIGGING MOBILE SUBSCRIBER RADIO TELEPHONE IN M998 TRUCK**

4-9. Use the procedures show in Figures 4-17 and 4-18 to rig the Mobile Subscriber Radio Telephone Terminal (AN/VRC-97). Rig equipment in addition to the items shown to meet the weight requirement.



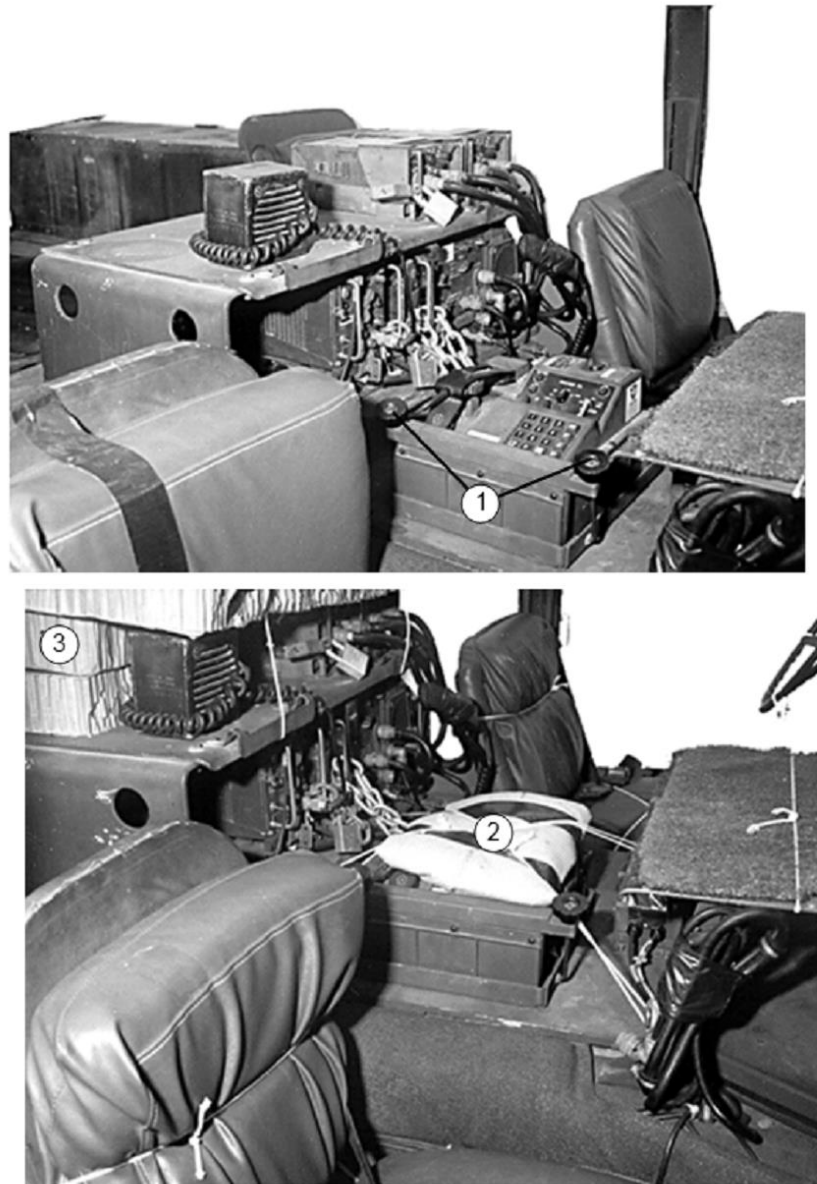
**Figure 4-17. Receiver/Transmitter RT-1539 Prepared and Secured**





- ⑤ Center a 30-foot lashing through the tiedown provision behind the right rear wheel. Pass both ends of the lashing over the receiver/transmitter and through the carrying handles.
- ⑥ Cross the lashing in front of the receiver/transmitter and pass it through the cargo bed tiedown rings. Secure the lashing with two D-rings and a load binder.
- ⑦ Safety tie any cables to convenient stationary points with type III nylon cord.
- ⑧ Place a 15- by 30-inch piece of honeycomb on top of the receiver/transmitter. Tape the upper 30-inch sides of the honeycomb. Secure the honeycomb to the receiver/transmitter with type III nylon cord. Run the cord over the honeycomb from the right carrying handle to the left rear mounting bracket, and from the left carrying handle to the right rear mounting bracket.

**Figure 4-17. Receiver/Transmitters RT-1539 Prepared and Secured (continued)**

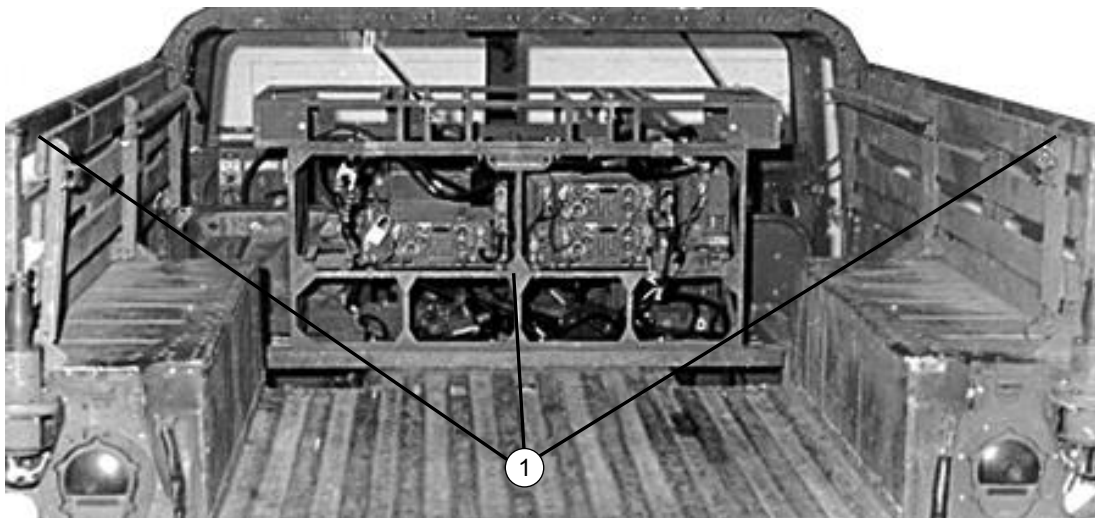


- ① Secure the digital subscriber voice terminal (DSVT) in the bracket between the seats with its mounting bolts.
- ② Make a pad of the upper dimensions of the DSVT with cellulose wadding covered with tape. Secure the pad to the DSVT with two lengths of type III nylon cord tied to convenient stationary points.
- ③ Cut a piece of honeycomb to fit the top of the remaining DSVT components. Cut smaller pieces of honeycomb to support the top piece. Tie the honeycomb to the mounts with type III nylon cord.

**Figure 4-18. Digital Subscriber Voice Terminal (KY-68) Components Prepared and Secured**

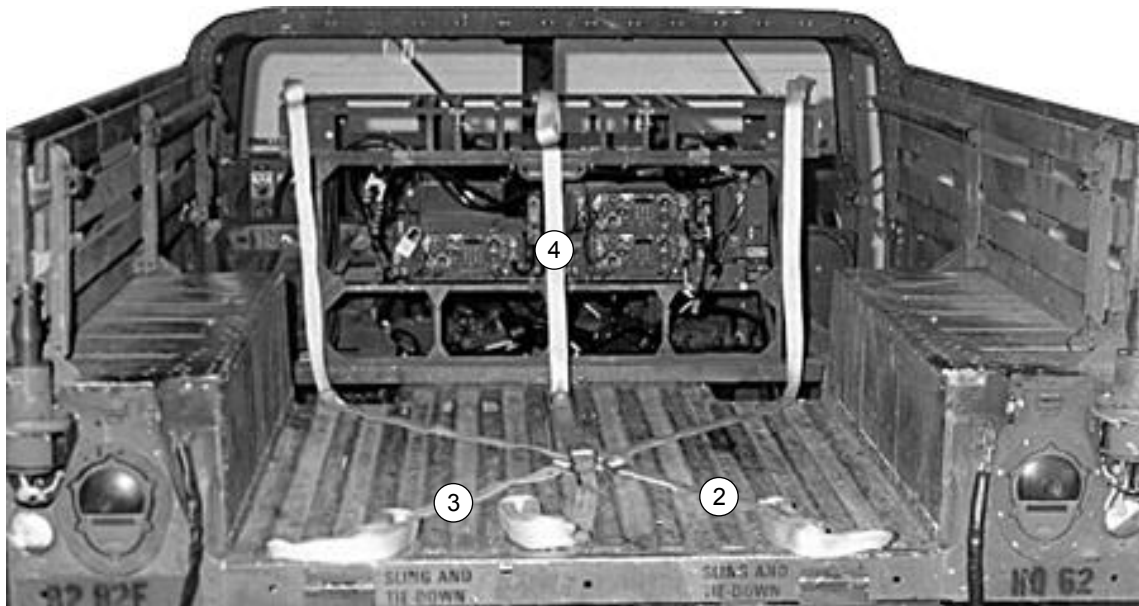
## SECTION VIII: RIGGING LIGHTWEIGHT TACTICAL FIRE DIRECTION CONTROL SYSTEM (LTACFIRE) IN M998 TRUCK

4-10. Use the procedures shown in Figures 4-19 through 4-21 to rig the components of the lightweight tactical fire direction system (LTACFIRE) and accompanying equipment. The LTACFIRE system consists of a SINCGARS (Single Channel Ground and Airborne Radio System) mounted in a rack. The upper rack has a program load unit (PLU), a power distribution box (PDB), and a digitizer mounted in it. The printer and monitor have their own containers. A keyboard requires a container to be made of honeycomb. Miscellaneous items include, but are not limited to, a map board, field desk, footlocker, camouflage net and poles, and two folding chairs.



- ① Remove all components of the lightweight tactical fire direction system (LTACFIRE) system and accompanying equipment from the truck except the SINCGARS mounted in their rack bolted to the bed of the carrier. Raise and secure the left and right side troop seats.

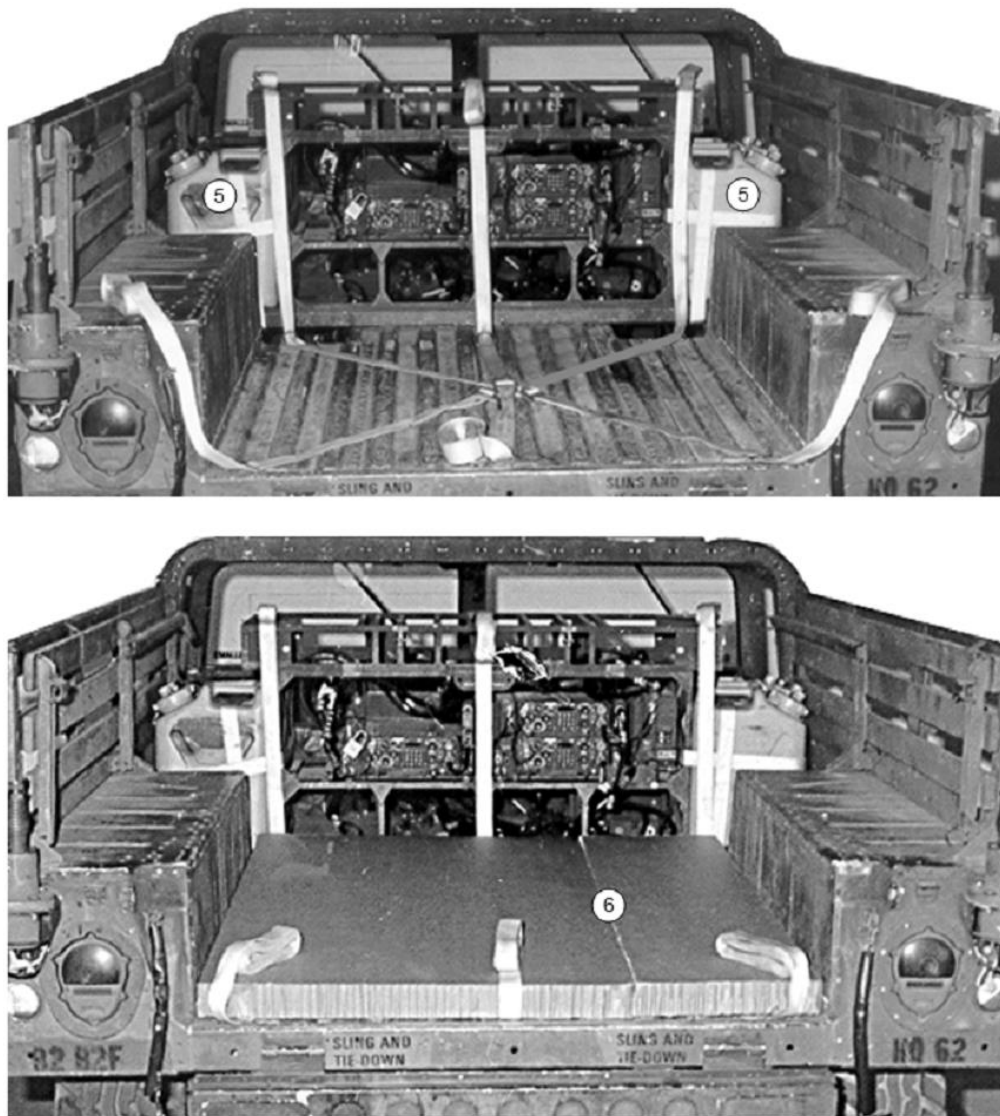
**Figure 4-19. LTACFIRE and Accompanying Equipment Cargo Area Prepared in M998 Truck**



- ② Place a 30-foot lashing through the right rear cargo bed tiedown ring and the left front cargo bed tiedown ring. Place the joined D-rings at the center of the cargo bed.
- ③ Place another 30-foot lashing as outlined in step 2, but from the left rear to the right front cargo bed tiedown ring.
- ④ Place another 30-foot lashing with the joined D-rings in the center of the bed. Run the lashing through the front and rear center tiedown rings, and up over the radio rack.

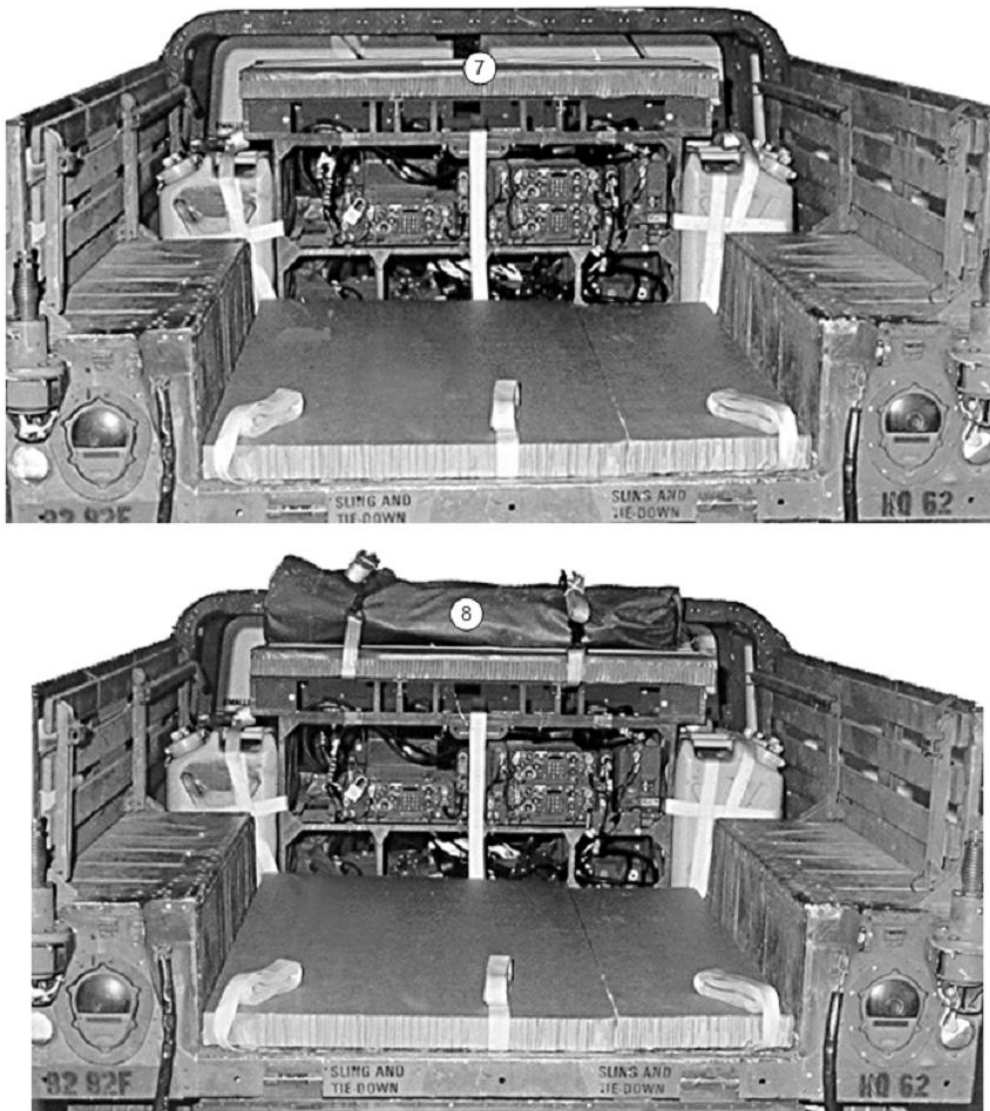
**Figure 4-19. LTACFIRE and Accompanying Equipment Cargo Area Prepared in M998 Truck**  
(continued)

c



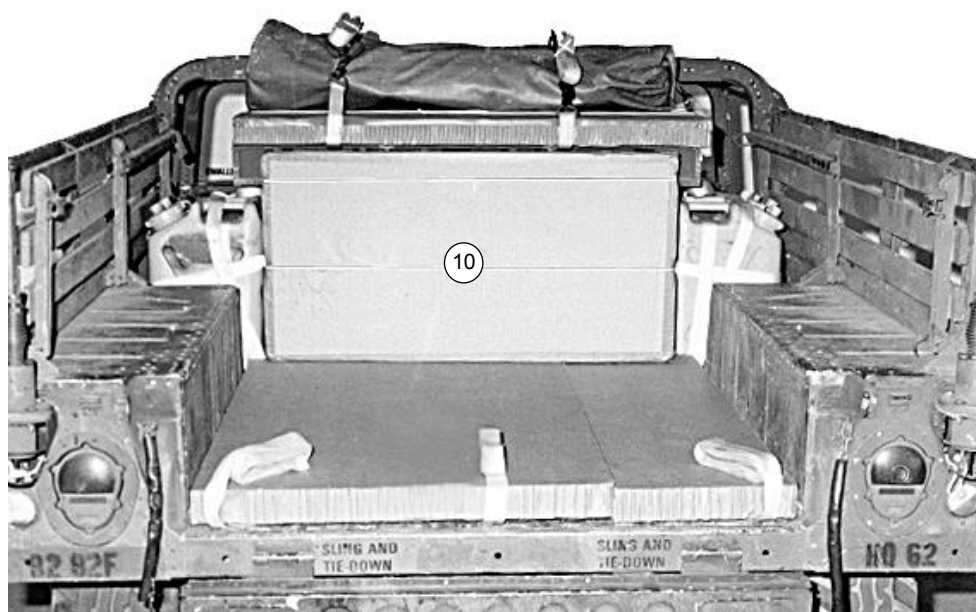
- ⑤ Bind three 5-gallon cans together with 15-foot lashings. Secure a group of three cans to the radio rack on each side with a 15-foot lashing. Place the load binders on the front side.
- ⑥ Cover the cargo bed with a single layer of honeycomb.

**Figure 4-19. LTACFIRE and Accompanying Equipment Cargo Area Prepared in M998 Truck (continued)**



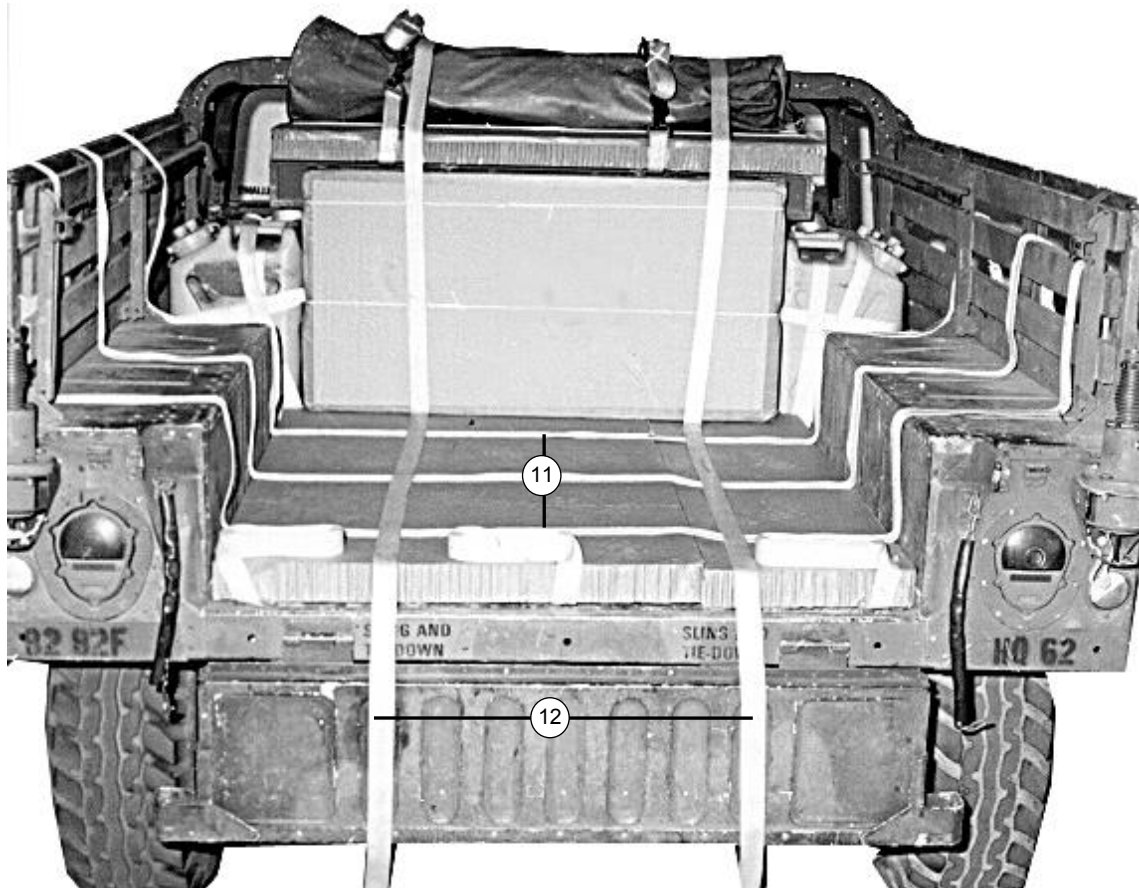
- ⑦ Move any prepositioned lashings aside, and place a 24- by 54-inch piece of honeycomb on top of the radio rack and secure it with type III nylon cord.
- ⑧ Place one camouflage net pole bag on top of the honeycomb placed in step 7 above. Secure the bag to the radio rack with two 15-foot lashings.

**Figure 4-19. LTACFIRE and Accompanying Equipment Cargo Area Prepared in M998 Truck**  
(continued)



- ⑨ Pad the radio with cellulose wadding. Tape the wadding place.
- ⑩ Place a 24 ½- by 47-inch piece of honeycomb against the radio rack and secure it in place with type III nylon cord.

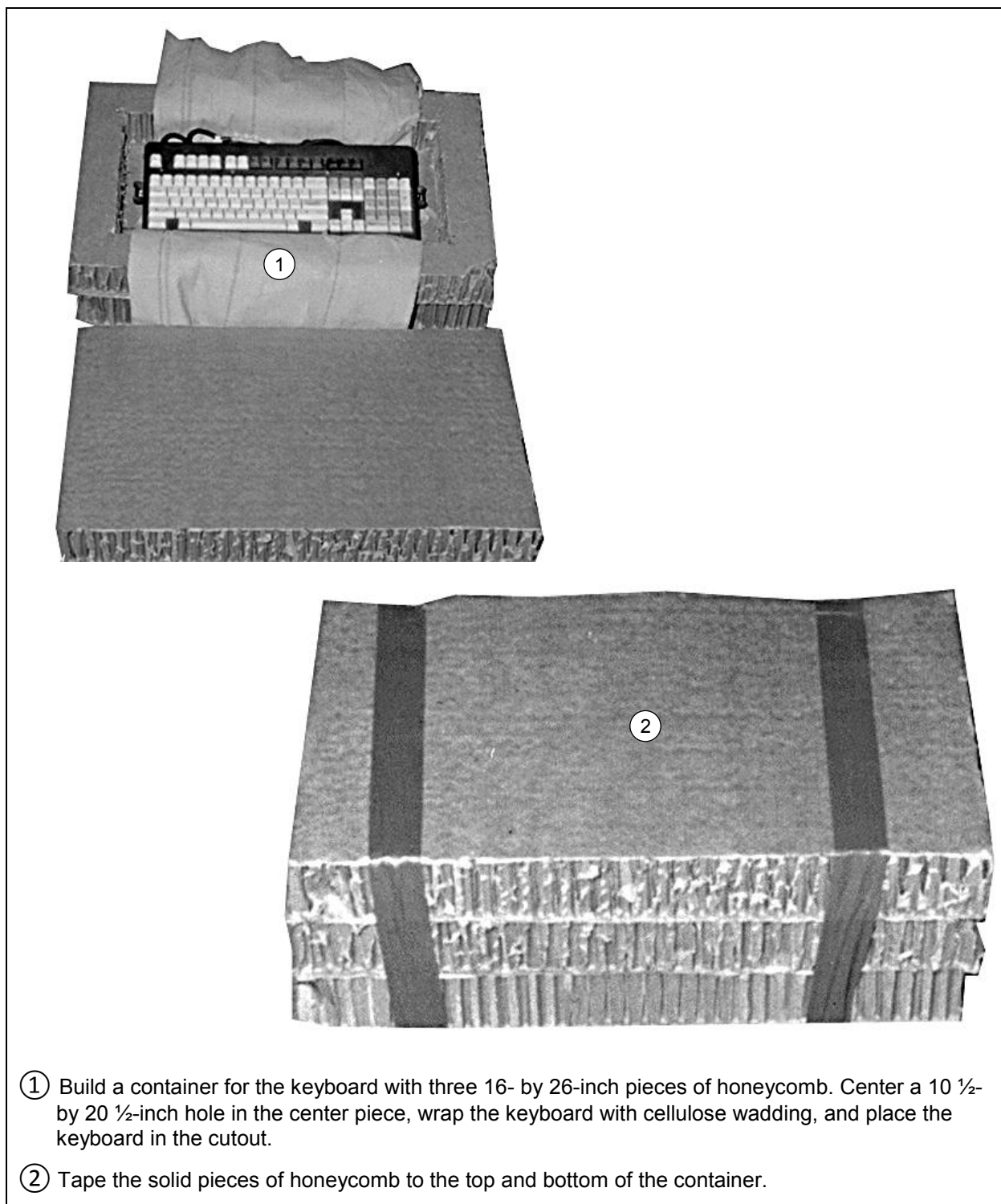
**Figure 4-19. LTACFIRE and Accompanying Equipment Cargo Area Prepared in M998 Truck  
(continued)**



- ⑪ Place three 15-foot lashings evenly spaced from right to left on the honeycomb placed in step 6.
- ⑫ Place two more 15-foot lashings on the honeycomb running from front to rear.

**Figure 4-19. LTACFIRE and Accompanying Equipment Cargo Area Prepared in M998 Truck  
(continued)**





**Figure 4-20. LTACFIRE and Accompanying Equipment Prepared in M998 Truck**



**Figure 4-20. LTACFIRE and Accompanying Equipment Prepared in M998 Truck  
(continued)**

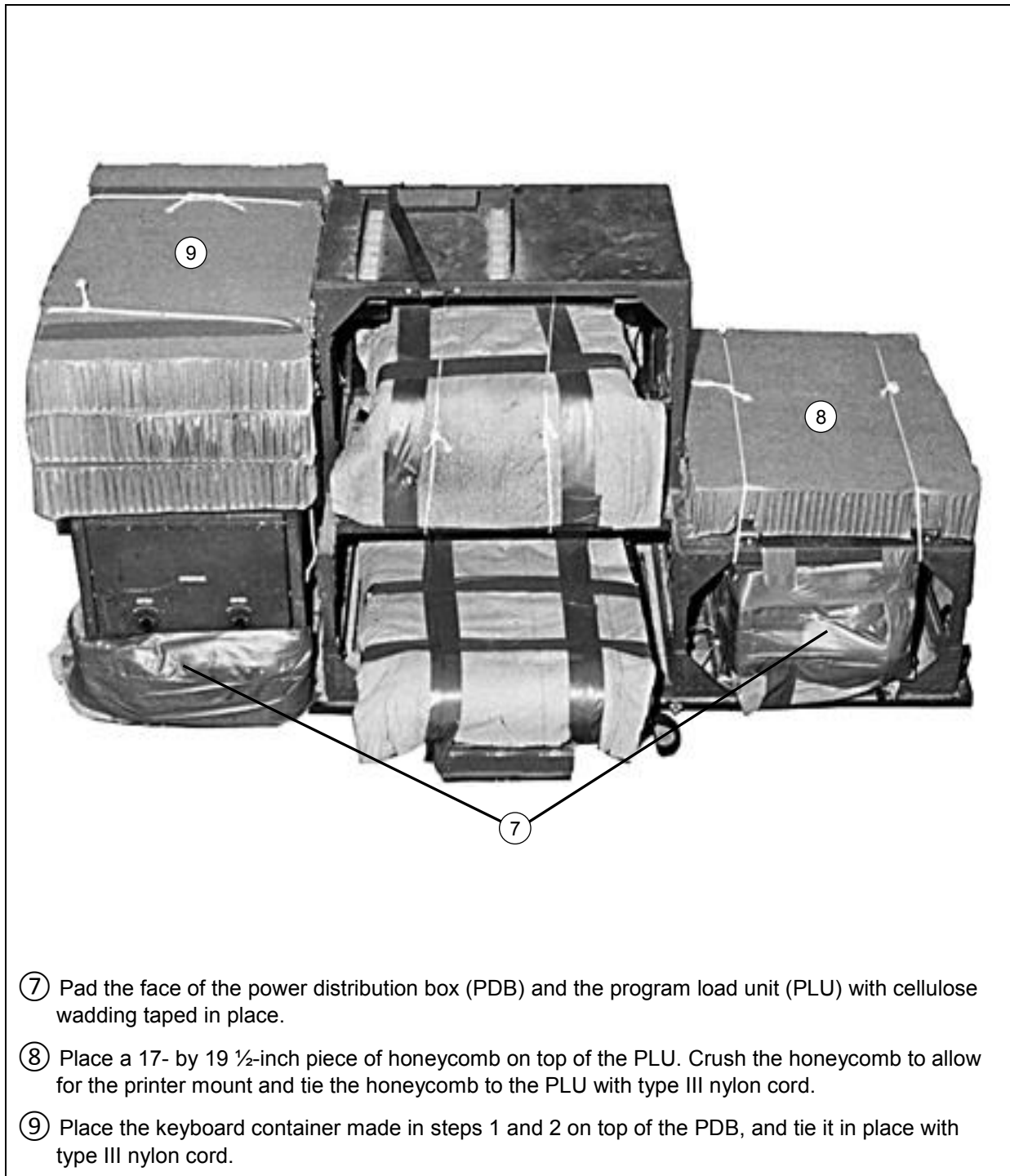


- ⑤ Turn the digitizer around in the upper rack, pad it with cellulose wadding, and secure the wadding with tape.

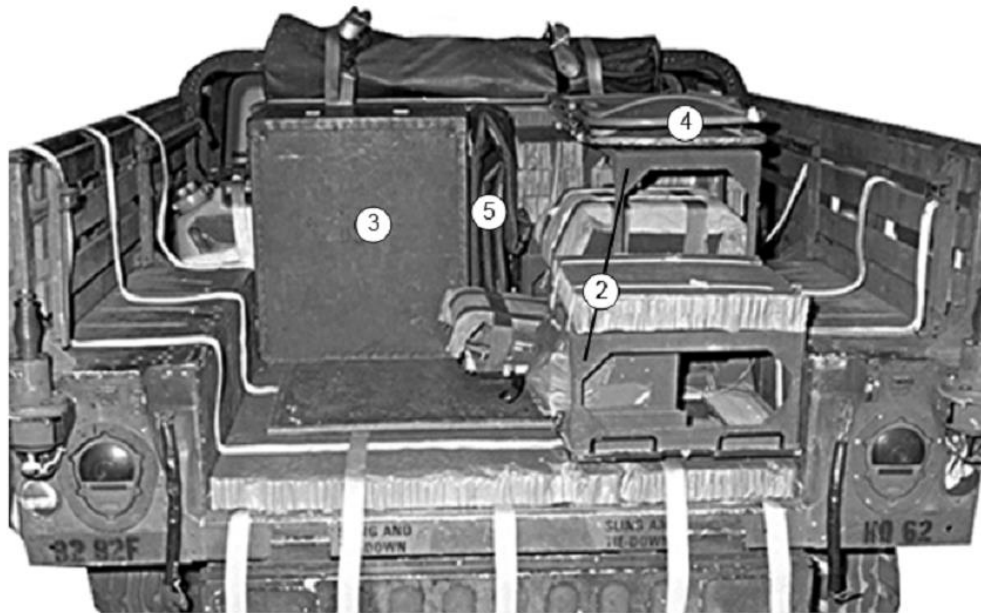
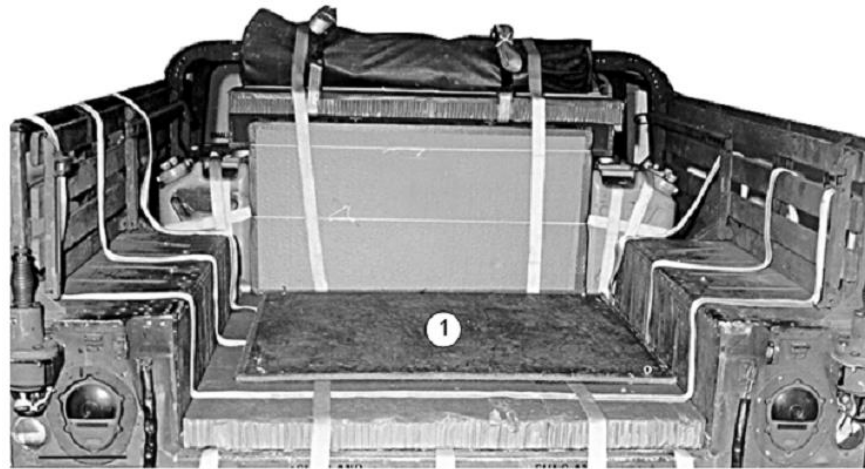
**Note.** This rack is not installed in the truck at this time.

- ⑥ Cover the printer cover with cellulose wadding, and place it in the center space on the rack. Secure it to the rack with type III nylon cord.

**Figure 4-20. LTACFIRE and Accompanying Equipment Prepared in M998 Truck  
(continued)**

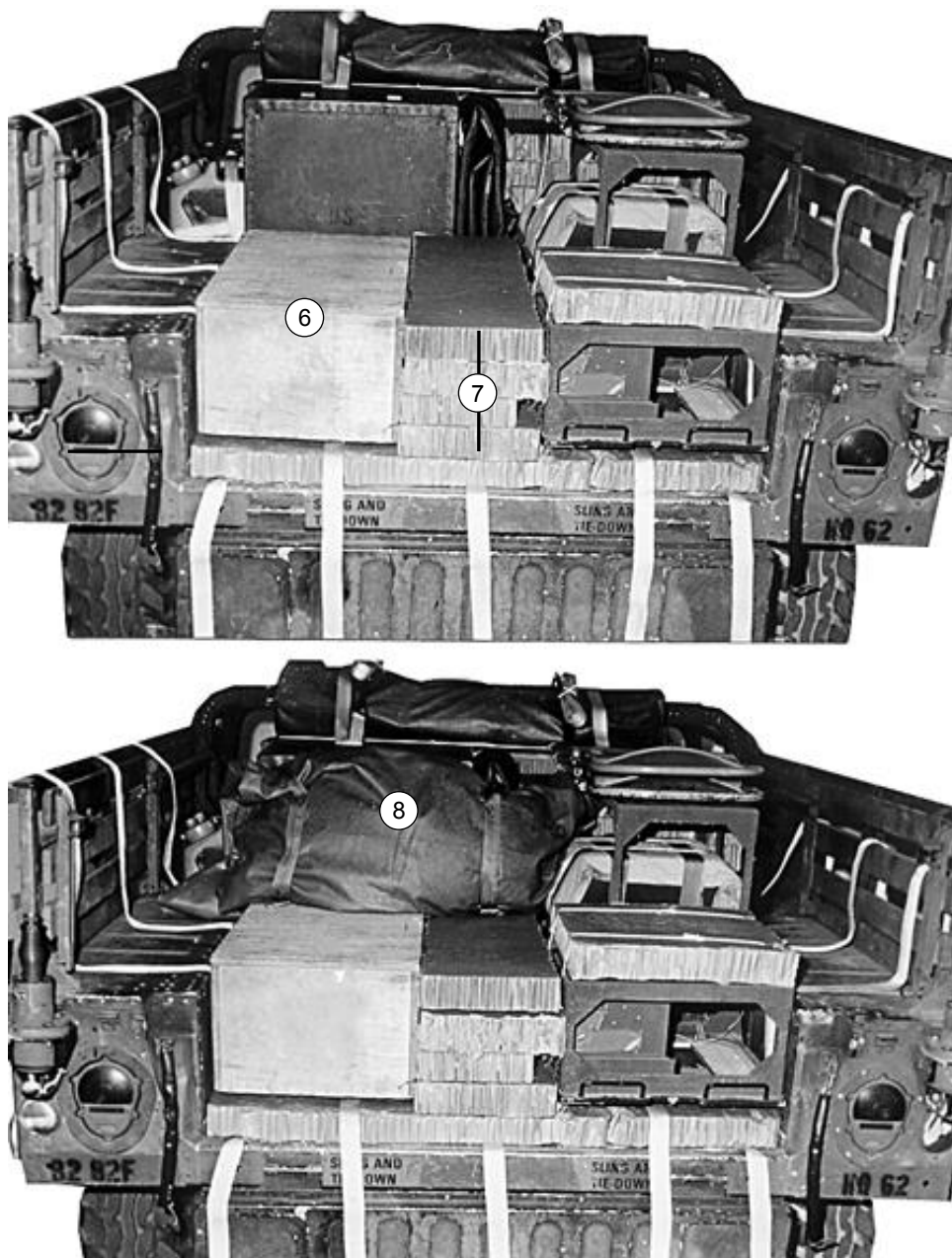


**Figure 4-20. LTACFIRE and Accompanying Equipment Prepared in M998 Truck**  
(continued)



- ① Place the map board face down on the honeycomb in the truck cargo bed.
- ② Place the upper rack in the truck cargo bed as shown.
- ③ Place one field desk in the truck cargo bed.
- ④ Place the two folding chairs on the upper rack.
- ⑤ Place the truck cab cover between the field desk and upper rack.

**Figure 4-21. LTACFIRE and Accompanying Equipment Placed and Secured in M998 Truck**



- ⑥ Place the footlocker (containing antenna mounts and any other small items) in the cargo bed.
- ⑦ Fill the space between the footlocker and the program load unit section of the upper rack with four pieces of honeycomb cut to fit.
- ⑧ Place the camouflage net bag on the footlocker and honeycomb, against the field desk.

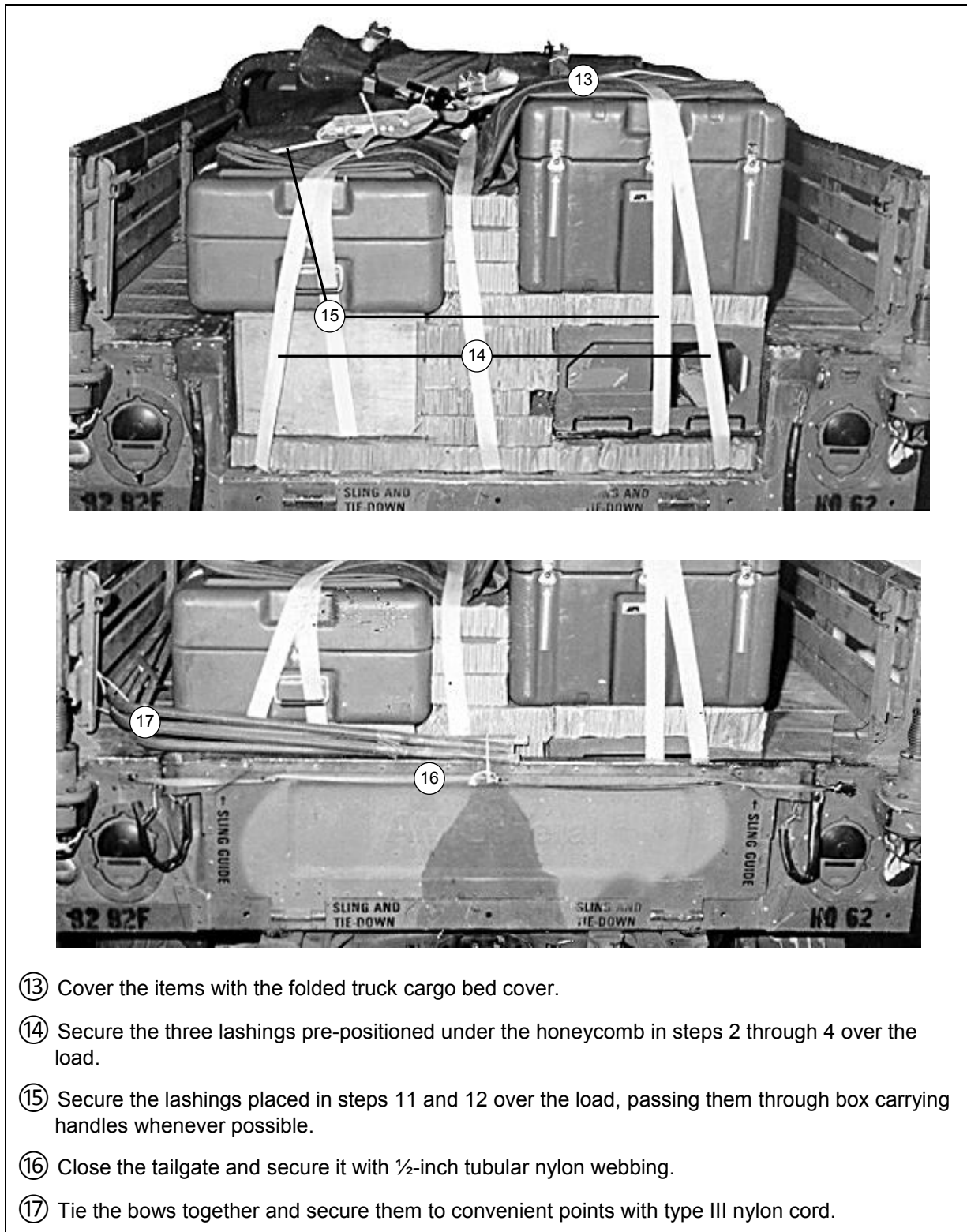
**Figure 4-21. LTACFIRE and Accompanying Equipment Placed and Secured in M998 Truck**  
(continued)



- ⑨ Place the monitor case on the upper rack.
- ⑩ Place the printer case on the footlocker.
- ⑪ Fill the space between the printer and monitor cases with three pieces of honeycomb cut to fit.
- ⑫ Tape the antennas together and tie them to the upper radio rack with type III nylon cord (not shown).

**Figure 4-21. LTACFIRE and Accompanying Equipment Placed and Secured in M998 Truck (continued)**





- ⑬ Cover the items with the folded truck cargo bed cover.
- ⑭ Secure the three lashings pre-positioned under the honeycomb in steps 2 through 4 over the load.
- ⑮ Secure the lashings placed in steps 11 and 12 over the load, passing them through box carrying handles whenever possible.
- ⑯ Close the tailgate and secure it with ½-inch tubular nylon webbing.
- ⑰ Tie the bows together and secure them to convenient points with type III nylon cord.

**Figure 4-21. LTACFIRE and Accompanying Equipment Placed and Secured in M998 Truck (continued)**



## SECTION IX: RIGGING INITIAL FIRE SUPPORT AUTOMATED SYSTEM (IFSAS) IN M998 TRUCK

4-11. Use the procedures shown in Figure 4-22 to rig the initial fire support automated system (IFSAS) in a cargo/troop carrier-configured truck. An additional 500 pounds of equipment must be added to the items shown to meet the minimum weight requirement of 800 pounds for the accompanying load. Boxes of 105-millimeter ammunition are shown here, but other items weighing the same or more may be used.

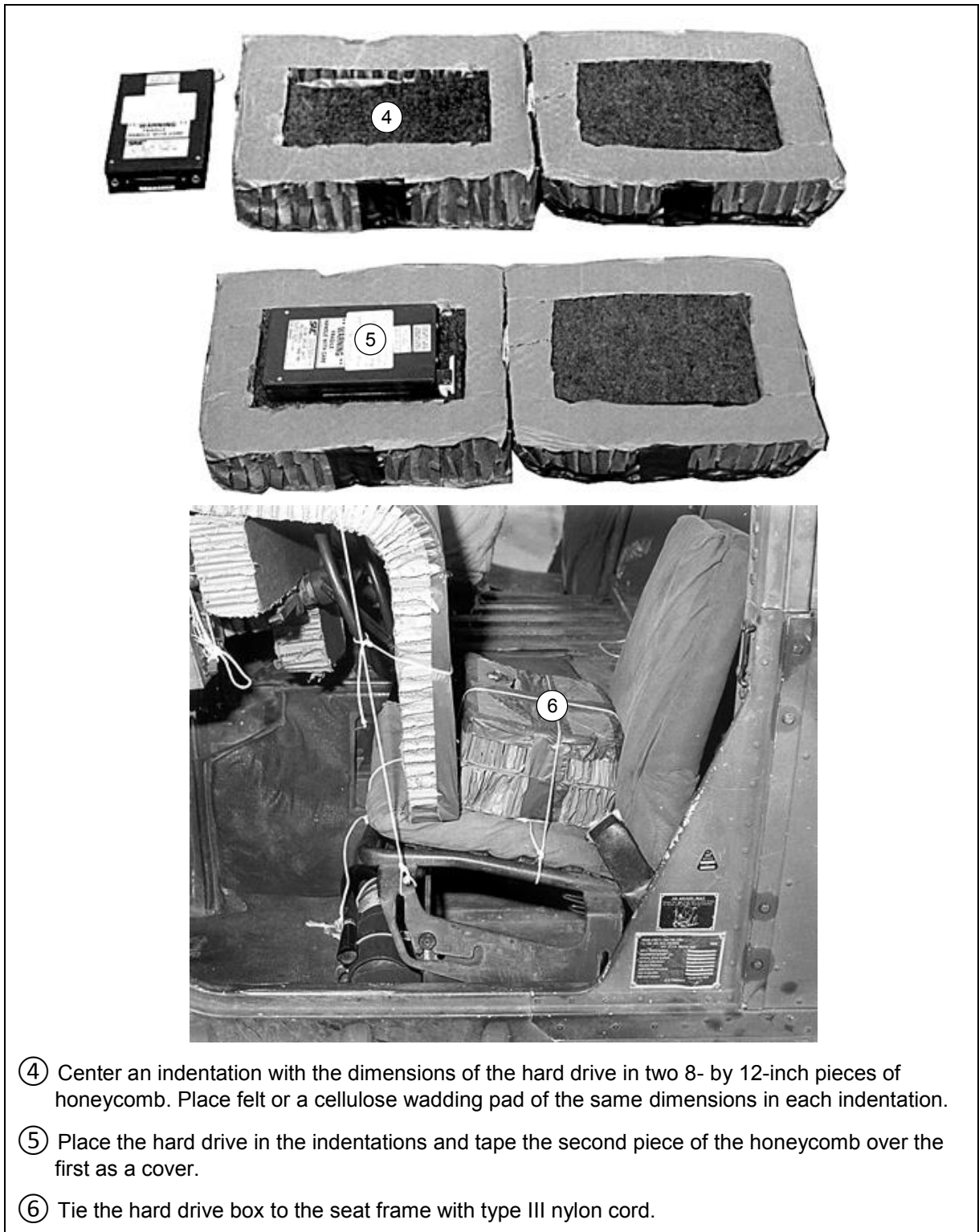


- ① Place the computer unit in its soft carrying bag. Place the bag in the hard case and secure the case.

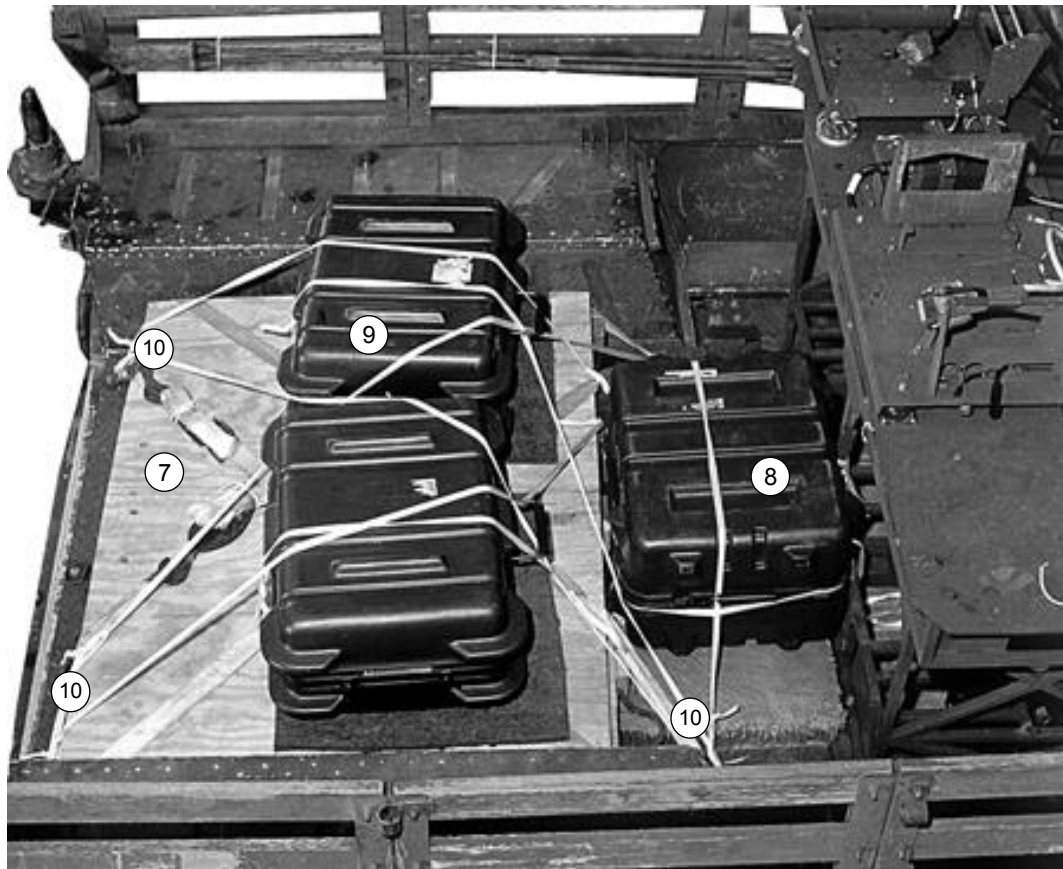
**Figure 4-22. Initial Fire Support Automated System Rigged in M998 Truck**



**Figure 4-22. Initial Fire Support Automated System Rigged in M998 Truck (continued)**



**Figure 4-22. Initial Fire Support Automated System Rigged in M998 Truck (continued)**



- ⑦ Stow unit equipment or ballast sufficient to meet the minimum load weight of 800 pounds. Boxes of ammunition are placed on a layer of honeycomb and under the plywood shown in this figure.
- ⑧ Place a 16- by 36-inch piece of honeycomb on the floor between the ammunition boxes and the front equipment racks. Center the computer case on the honeycomb with the handle facing the front.
- ⑨ Evenly space two 19- by 21-inch pieces of felt 6 inches from the front edge of the plywood. Place the two remaining hard cases on the felt with the carrying handles facing the front.
- ⑩ Secure the cases to tiedown rings and equipment racks with  $\frac{1}{2}$ -inch tubular nylon webbing. Pass the webbing through the case carrying handles whenever possible.
- ⑪ Stow additional unit equipment as the mission dictates and according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5. Cover the load with a canvas load cover secured to convenient points with type III nylon cord (not shown).

**Figure 4-22. Initial Fire Support Automated System Rigged in M998 Truck (continued)**

## SECTION X: RIGGING SEMI-AUTOMATIC METEOROLOGICAL SENSOR (SMS) IN M998 TRUCK

4-12. Use the procedures shown in Figure 4-23 to rig the semi-automatic meteorological sensor (SMS) in a cargo/troop carrier-configured truck. Additional equipment must be added to the items shown to meet the minimum weight requirement of 800 pounds for the accompanying load.



**Figure 4-23. Rigging SMS in Cargo/Troop Carrier**



- ④ Place the semi-automatic meteorological sensor case on the passenger seat with the top carrying handle facing toward the passenger door.
- ⑤ Route two lengths of ½-inch tubular nylon webbing through the carrying handle that is now on the case bottom. Tie each length of webbing to the passenger seat frame on each side.
- ⑥ Tie two lengths of ½-inch tubular nylon webbing to the top case handle. Secure this nylon webbing to the passenger seat frame on each side with a trucker's hitch.

**Figure 4-23. Rigging SMS in Cargo/Troop Carrier (continued)**

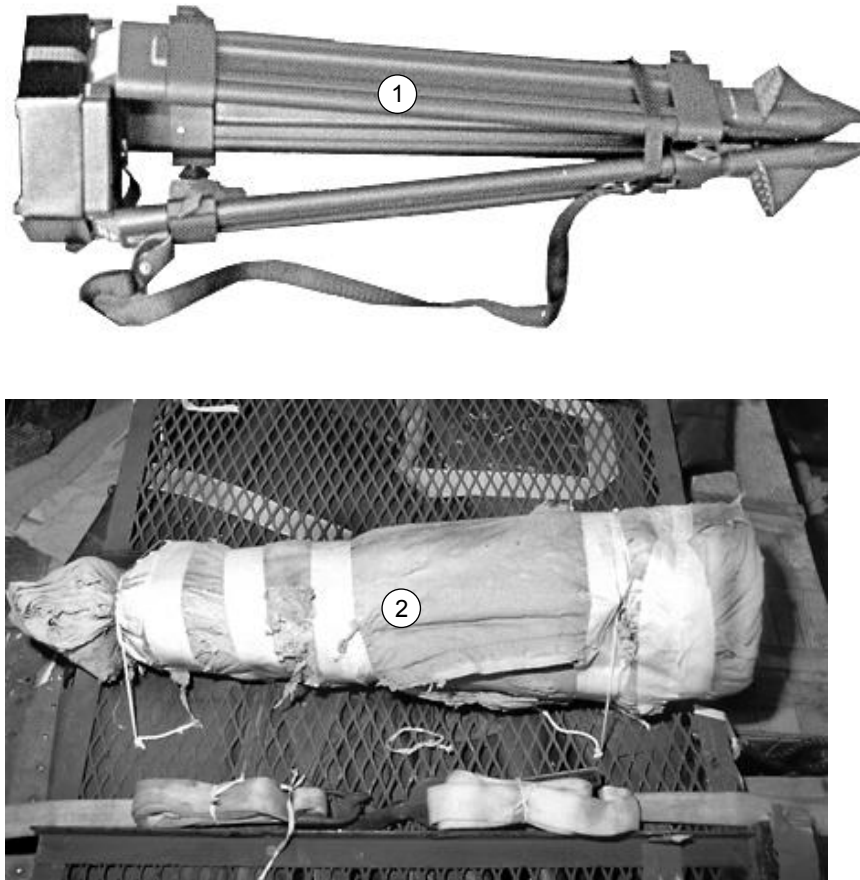


- ⑦ Tie two lengths of ½-inch tubular nylon webbing around the case and the seat back. Tie one length above the outside carrying handle, and tie the other length through the carrying handle.

**Figure 4-23. Rigging SMS in Cargo/Troop Carrier (continued)**

**SECTION XI: RIGGING GUN LAYING POSITIONING SYSTEM (GLPS) IN M998 TRUCK**

4-13. Use the procedures shown in Figures 4-24 to rig the gun laying positioning system (GLPS) in a cargo/troop carrier-configured truck (the M1056 truck outfitted as an artillery prime mover is shown). The gun laying positioning system consists of four components, each in its own case. The components are the gyro, theodolite, charger, and winterization kit. Additional equipment must be added to the items shown to meet the minimum weight requirement of 800 pounds for the accompanying load.



- ① Wrap the tripod with cellulose wadding. Tape the wadding in place.
- ② Tie the tripod to the truck cargo bed rack with type III nylon cord.

**Figure 4-24. Gun Laying Positioning System Rigged in M1056 Truck**



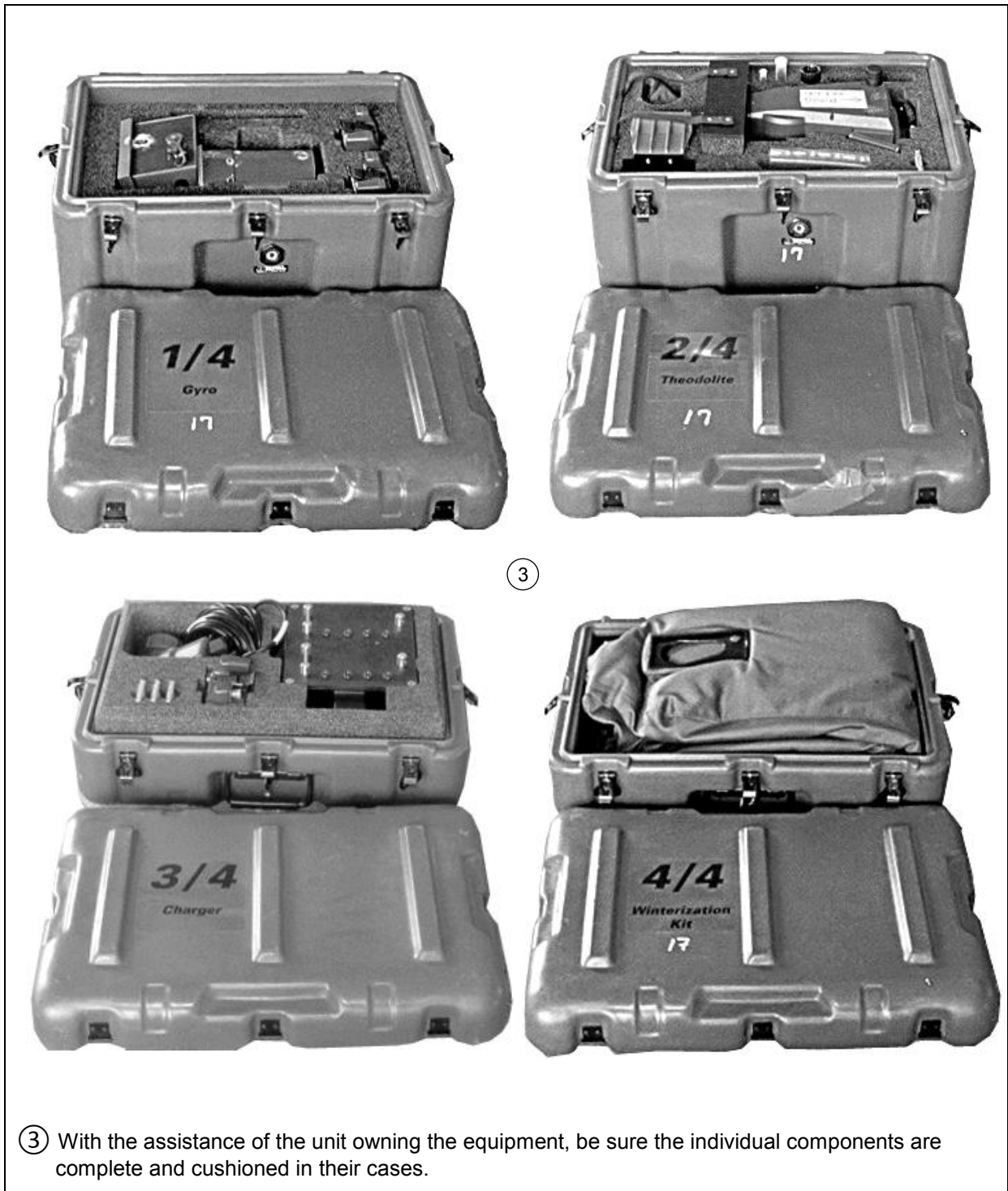
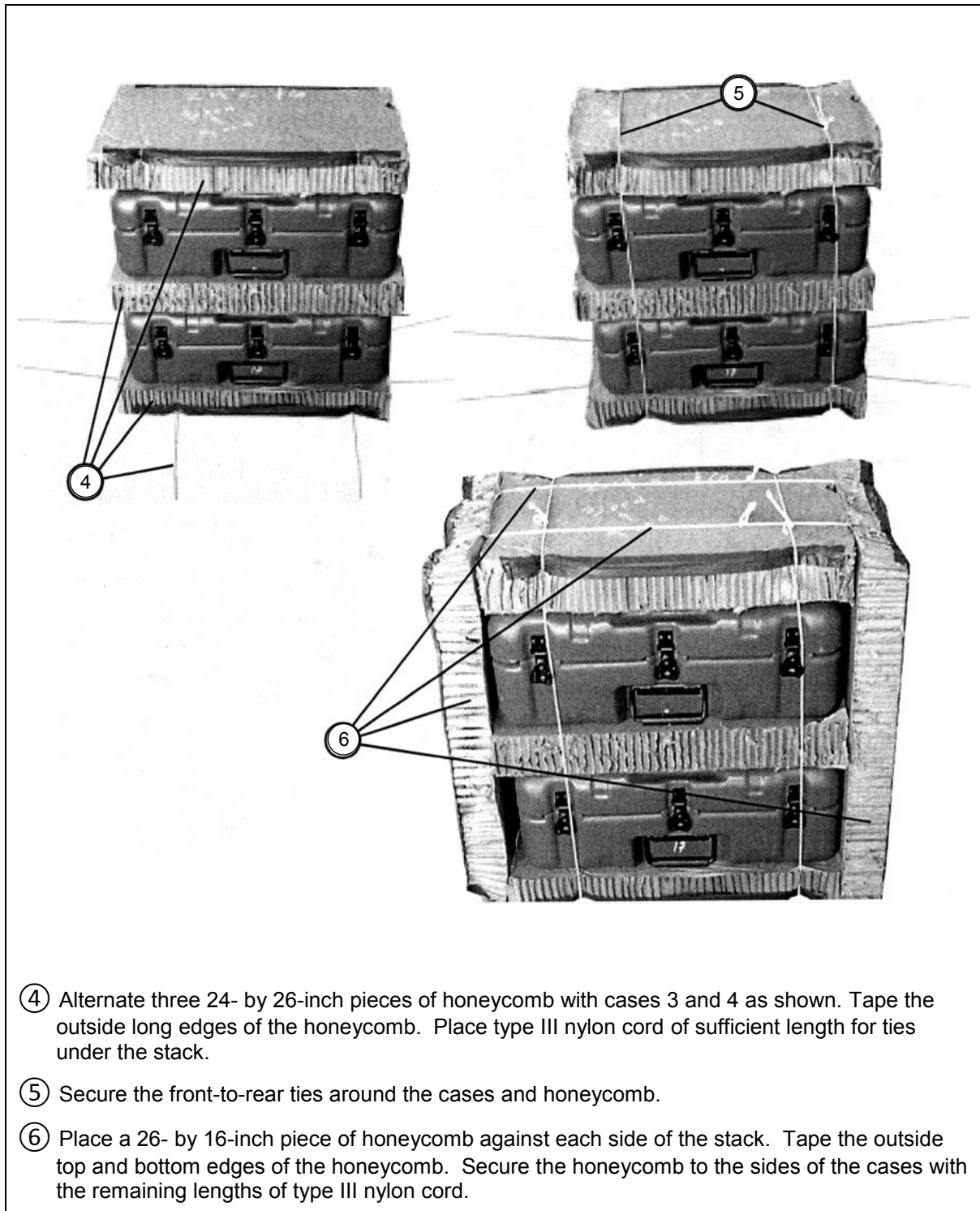
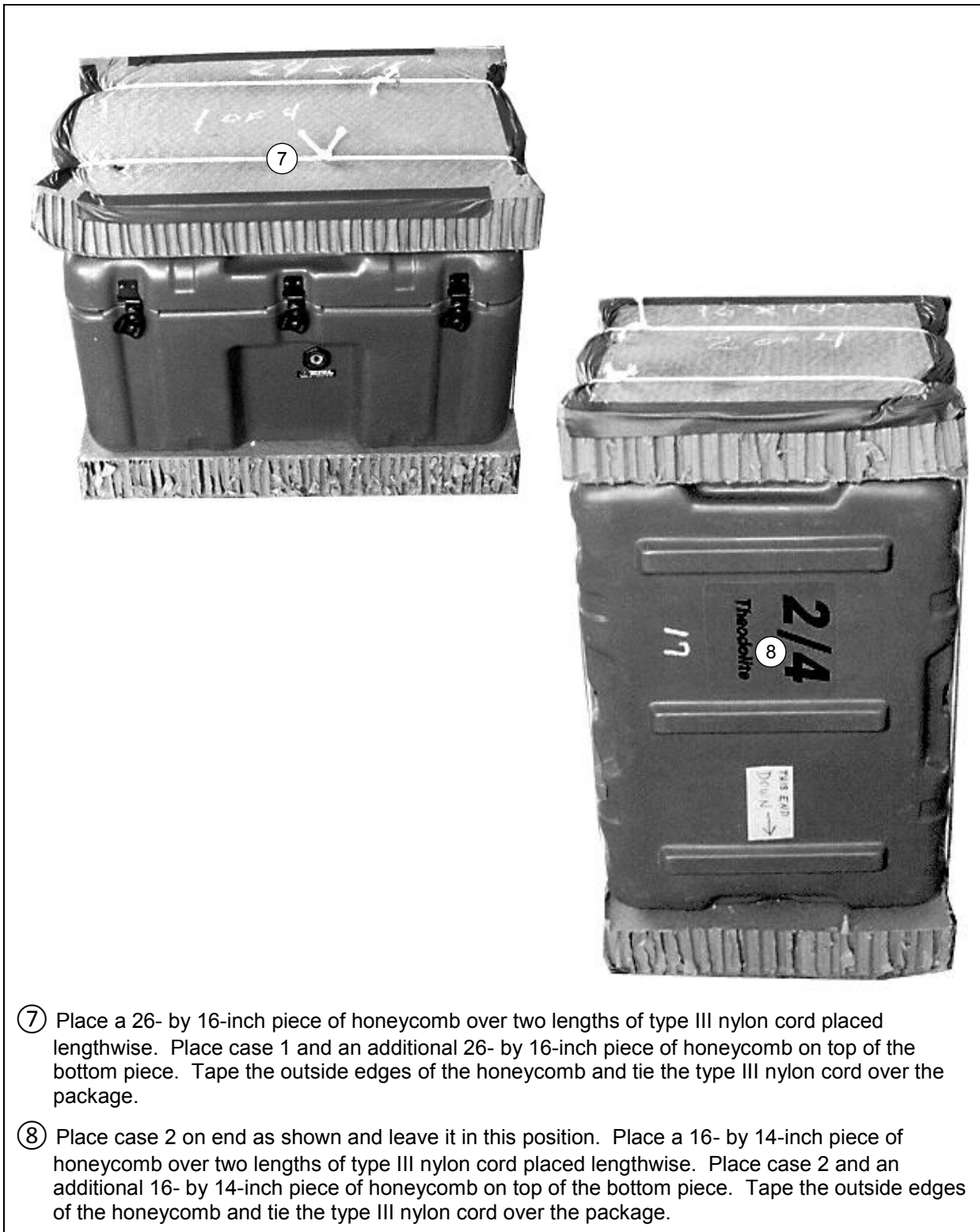


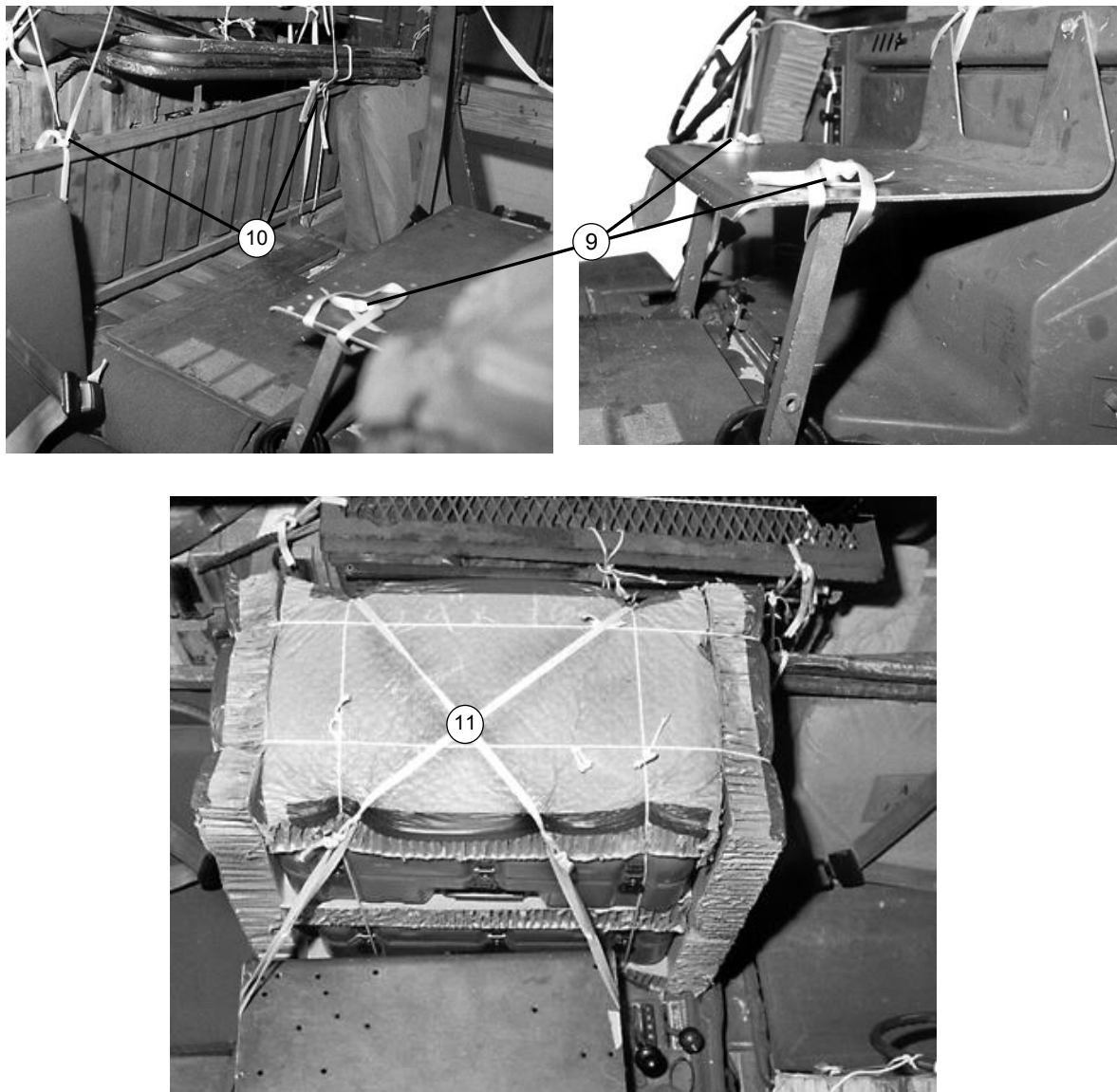
Figure 4-24 Gun Laying Positioning System Rigged in M1056 Truck (continued)



**Figure 4-24. Gun Laying Positioning System Rigged in M1056 Truck (continued)**

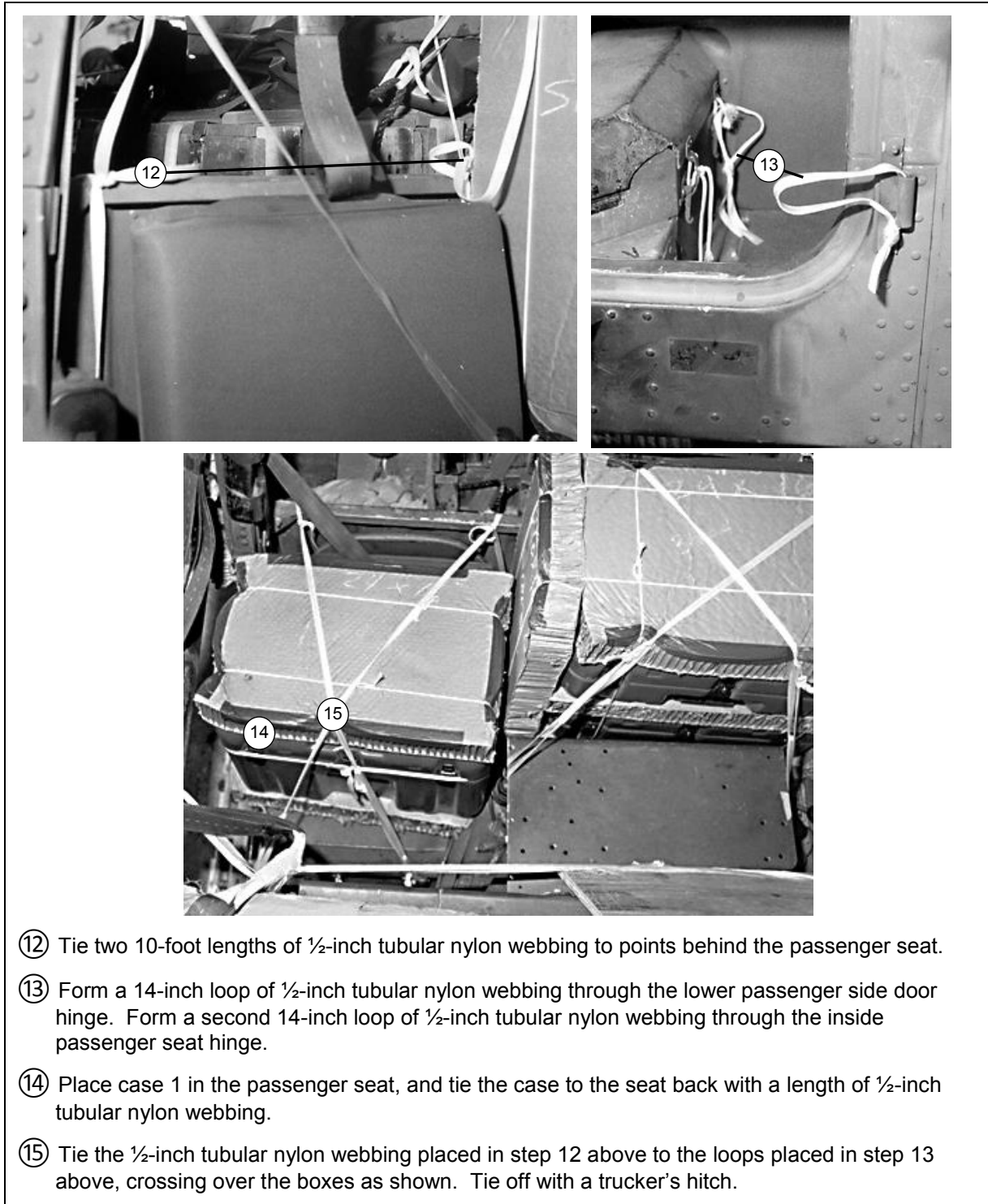


**Figure 4-24. Gun Laying Positioning System Rigged in M1056 Truck (continued)**

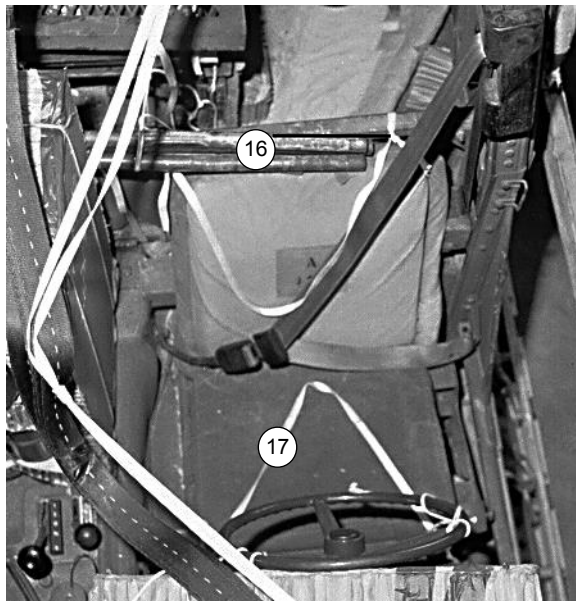


- ⑨ Tie two loops of 14-inch lengths of  $\frac{1}{2}$ -inch tubular nylon webbing to the radio mount supports.
- ⑩ Tie a 10-foot length of  $\frac{1}{2}$ -inch tubular nylon webbing to each of the tie provisions on the front edge of the cargo bed.
- ⑪ Place cases 3 and 4 to the rear of the radio mount. Tie the  $\frac{1}{2}$ -inch tubular nylon webbing placed in step 10 above to the loops placed in step 9 above, crossing over the boxes as shown. Tie off with a trucker's hitch.

**Figure 4-24. Gun Laying Positioning System Rigged in M1056 Truck (continued)**



**Figure 4-24. Gun Laying Positioning System Rigged in M1056 Truck (continued)**



- ①⑥ Tie a length of 1/2-inch tubular nylon webbing to the front cargo bed wall behind the driver's seat in two places, forming a loop as shown.
- ①⑦ Tie a length of 1/2-inch tubular nylon webbing to the front of the seat frame, forming a loop as shown.
- ①⑧ Place case 2 arrow side down in the driver's seat. Place the loops made in steps 16 and 17 above to the outside of the case. Tie case 2 to the driver's seat back with a length of 1/2-inch tubular nylon webbing.
- ①⑨ Run a length of 1/2-inch tubular nylon webbing through both of the loops made in steps 16 and 17 above. Draw the loops taut and tie the webbing using a trucker's hitch.

**Figure 4-24. Gun Laying Positioning System Rigged in M1056 Truck (continued)**

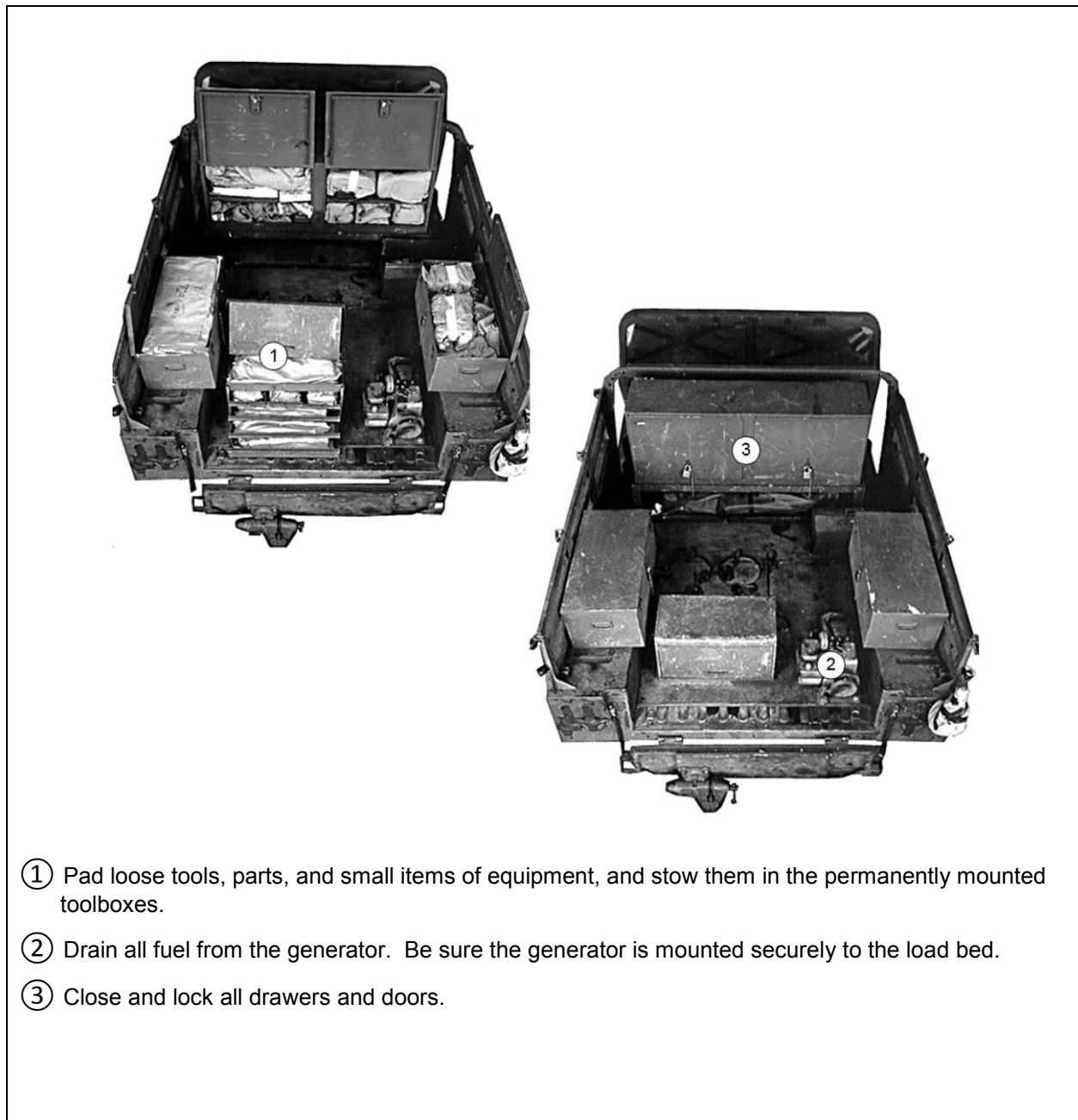


- ② Bend a 44- by 24-inch piece of honeycomb over the steering wheel and case 2. Tape the outside edges of the honeycomb. Tie the honeycomb to convenient points in the truck with type III nylon cord.

**Figure 4-24. Gun Laying Positioning System Rigged in M1056 Truck (continued)**

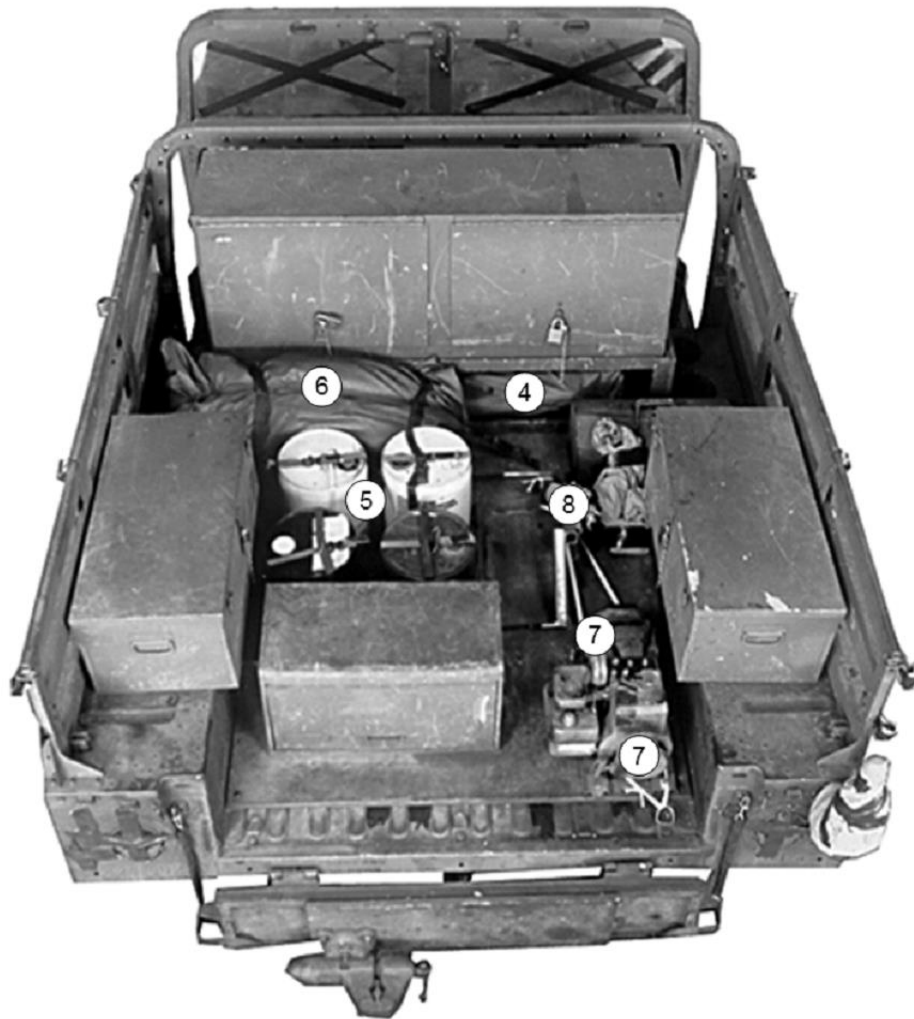
## SECTION XII: RIGGING MECHANIC SHOP KIT IN M998 TRUCK

4-14. Use the procedures shown in Figures 4-25 and 4-26 to rig the Mechanic Shop Kit in a cargo/troop carrier-configured truck. The load shown weighs 980 pounds.



**Figure 4-25. Mechanic Shop Kit Equipment Prepared in M998 Truck**

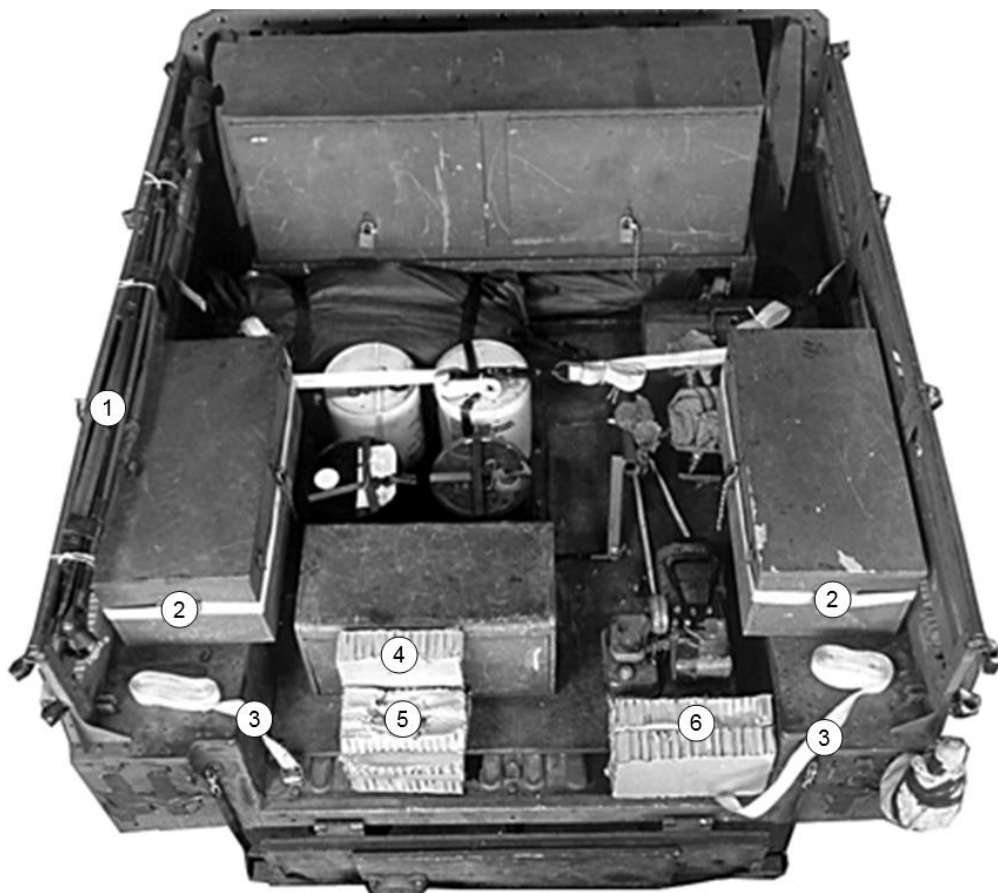




- ④ Lay the sledgehammer and pry bars under the front cabinet. Cover them with the truck tarp and the camouflage net pole bag. Secure them with the straps provided.
- ⑤ Place the four oilcans in the bed cutouts, and secure them with the straps provided.
- ⑥ Place the camouflage net bag between the front cabinet and the oilcans. Secure the bag with the straps provided.
- ⑦ Tie the generator frame to the closest tiedown rings with ½-inch tubular nylon webbing.
- ⑧ Tie the engine lifting sling to the front tiedown ring with type III nylon cord. Pad the sling with cellulose wadding where it touches the toolboxes.

**Note:** If acetylene tanks are included, secure them to the right of the cabinet with the tiedown straps provided.

**Figure 4-25. Mechanic Shop Kit Equipment Prepared in M998 Truck (continued)**

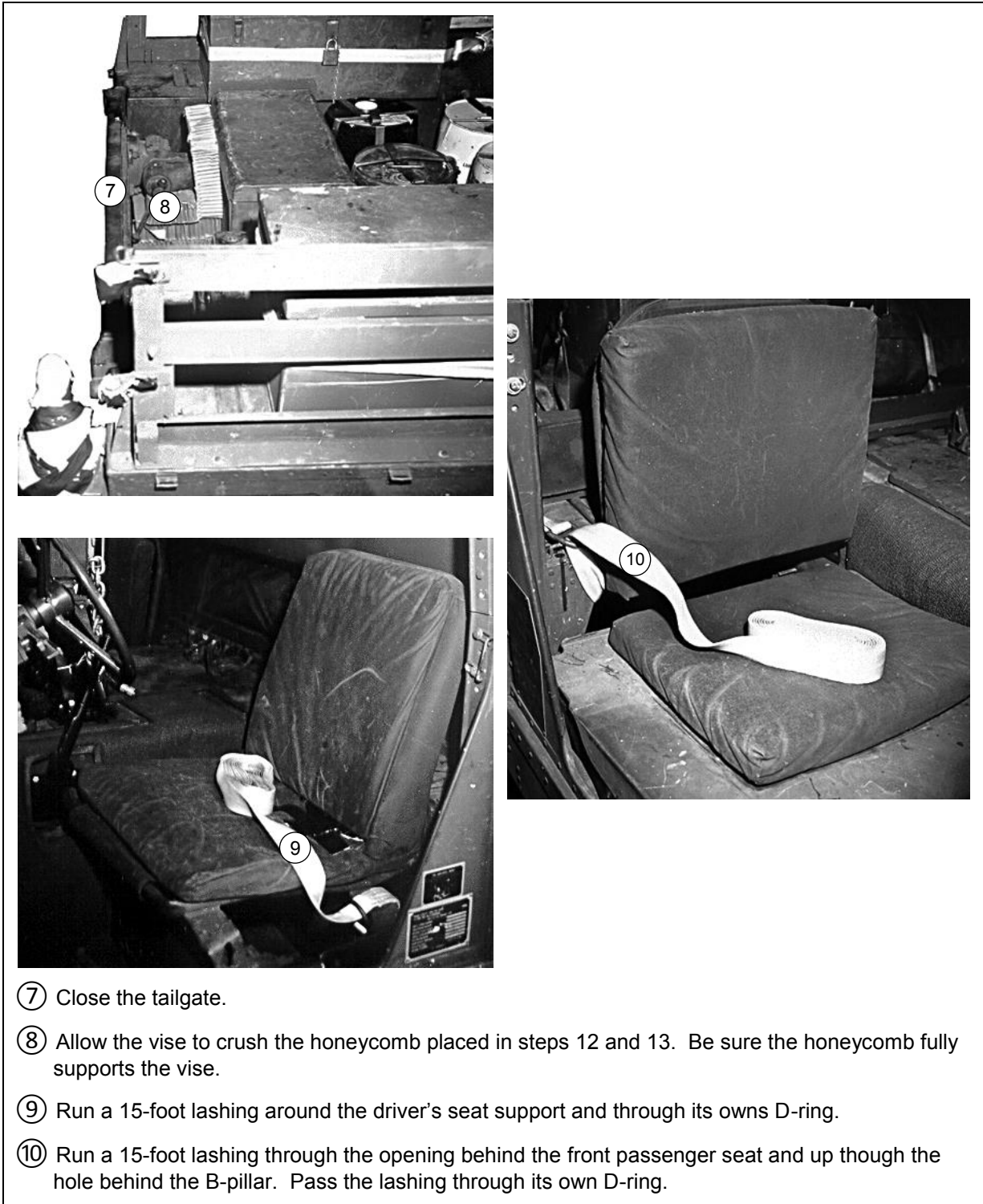


- ① Tape the antenna sections together. Tie them to the left side rail in three places with type III nylon cord.
- ② Pass a 15-foot lashing around each side toolbox and around the second and third vertical side rail supports. Secure each lashing with a D-ring and a load binder.

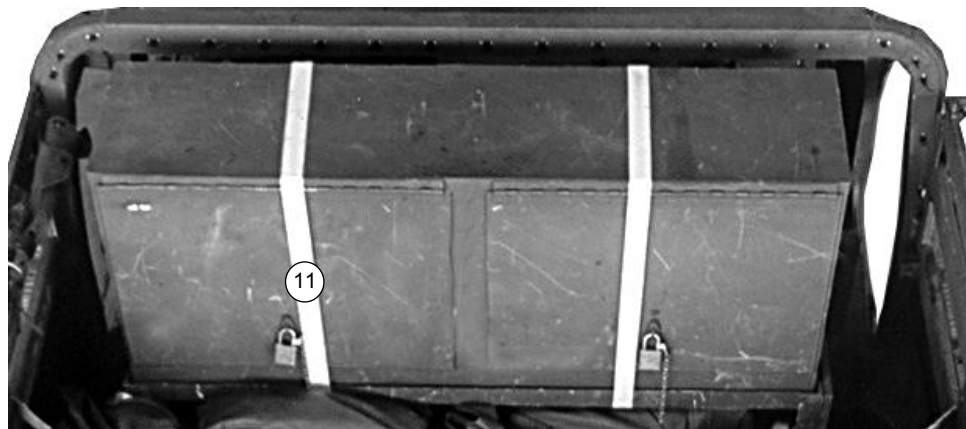
**Note.** The lashing shown running across the cargo body over the oil cans is used to secure the body side boards.

- ③ Pass a 15-foot lashing through each rear tiedown ring and through its own D-ring.
- ④ Set a 10- by 12-inch piece of honeycomb on edge against the rear toolbox with a 12-inch side down.
- ⑤ Center a 12- by 5-inch piece of honeycomb on top to two 12- by 10-inch pieces. Set the stack against the honeycomb placed in step 4 above.
- ⑥ Set two 14- by 11-inch pieces of honeycomb on edge against the generator with the 14-inch sides down.

**Figure 4-26. Mechanic Shop Kit Equipment Secured in M998 Truck**

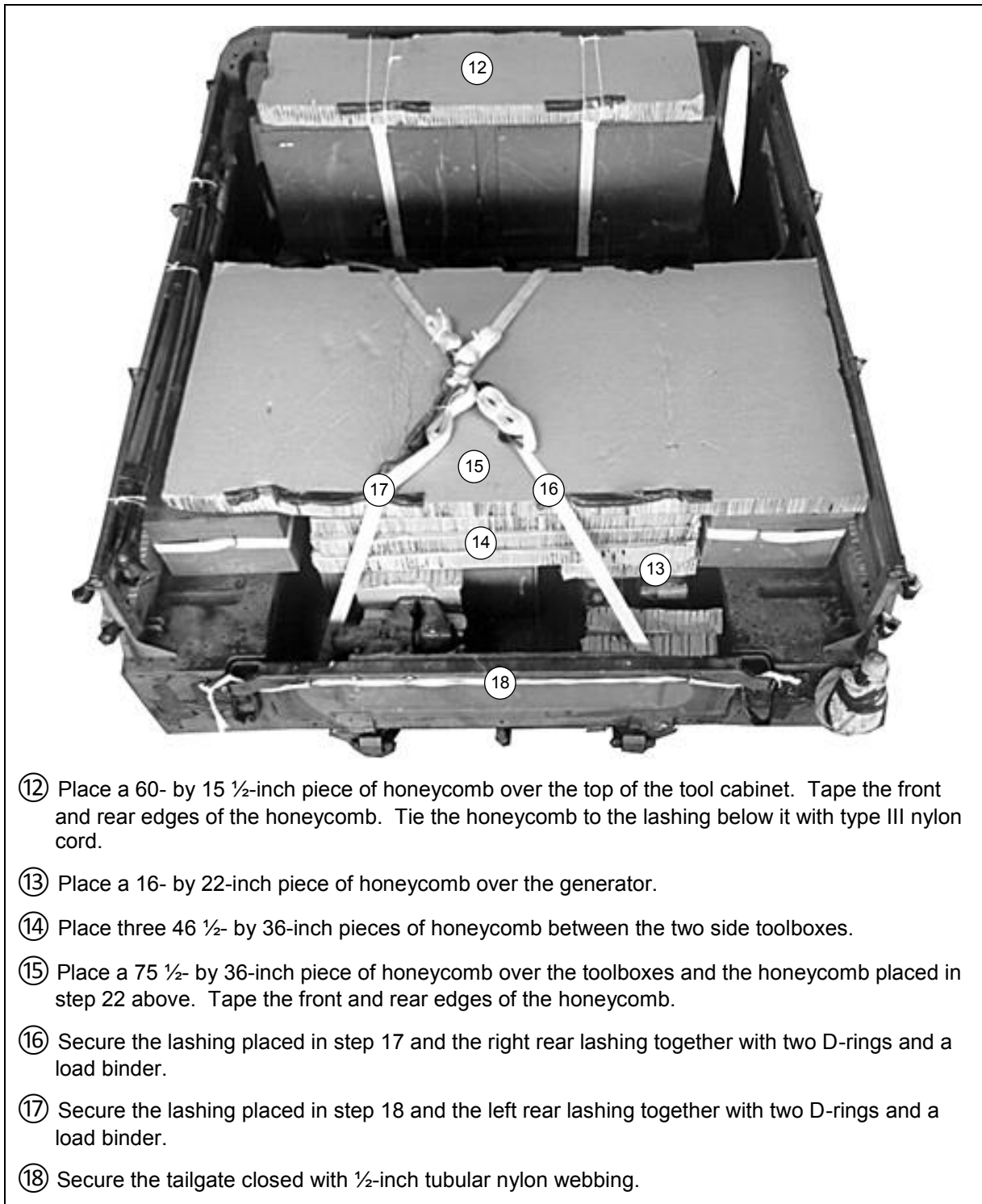


**Figure 4-26. Mechanic Shop Kit Equipment Secured in M998 Truck (continued)**



- ⑪ Pass a 15-foot lashing through each tiedown ring behind the seats. Bring each lashing over the top of the tool cabinet, over the doors, and under the cabinet. Fasten each lashing with a D-ring and a load binder behind the cabinet.

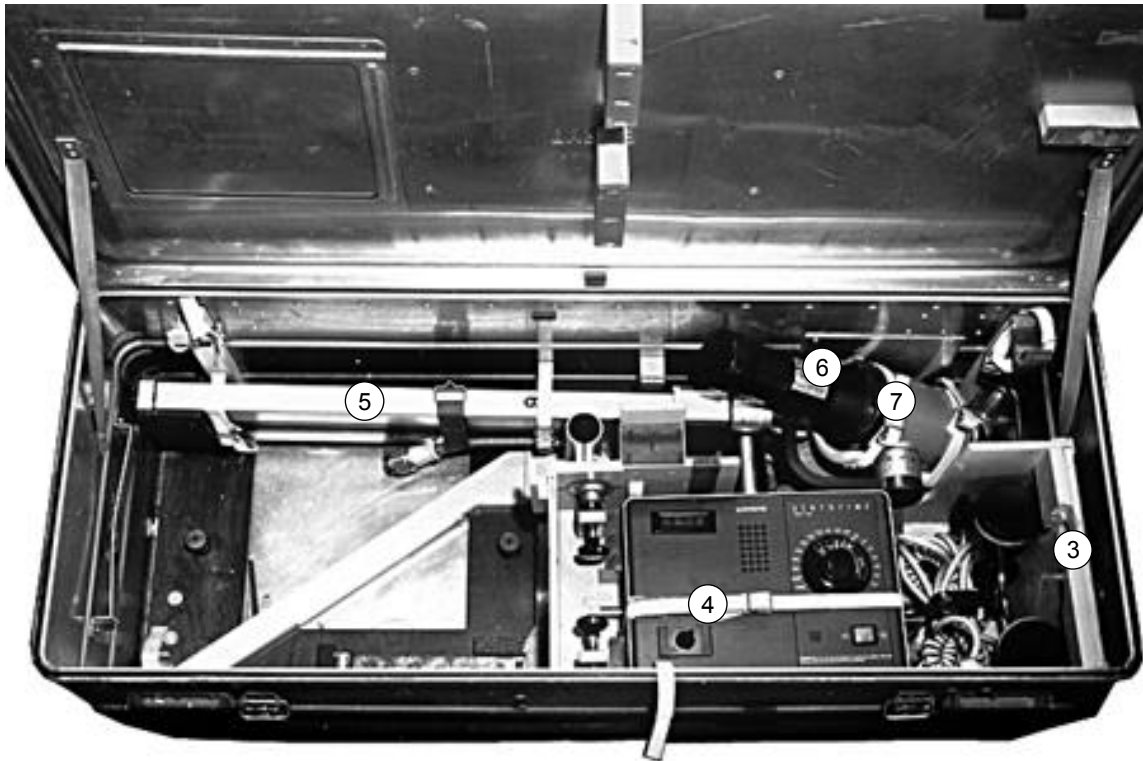
**Figure 4-26. Mechanic Shop Kit Equipment Secured in M998 (continued)**



**Figure 4-26. Mechanic Shop Kit Equipment Secured in M998 Truck (continued)**

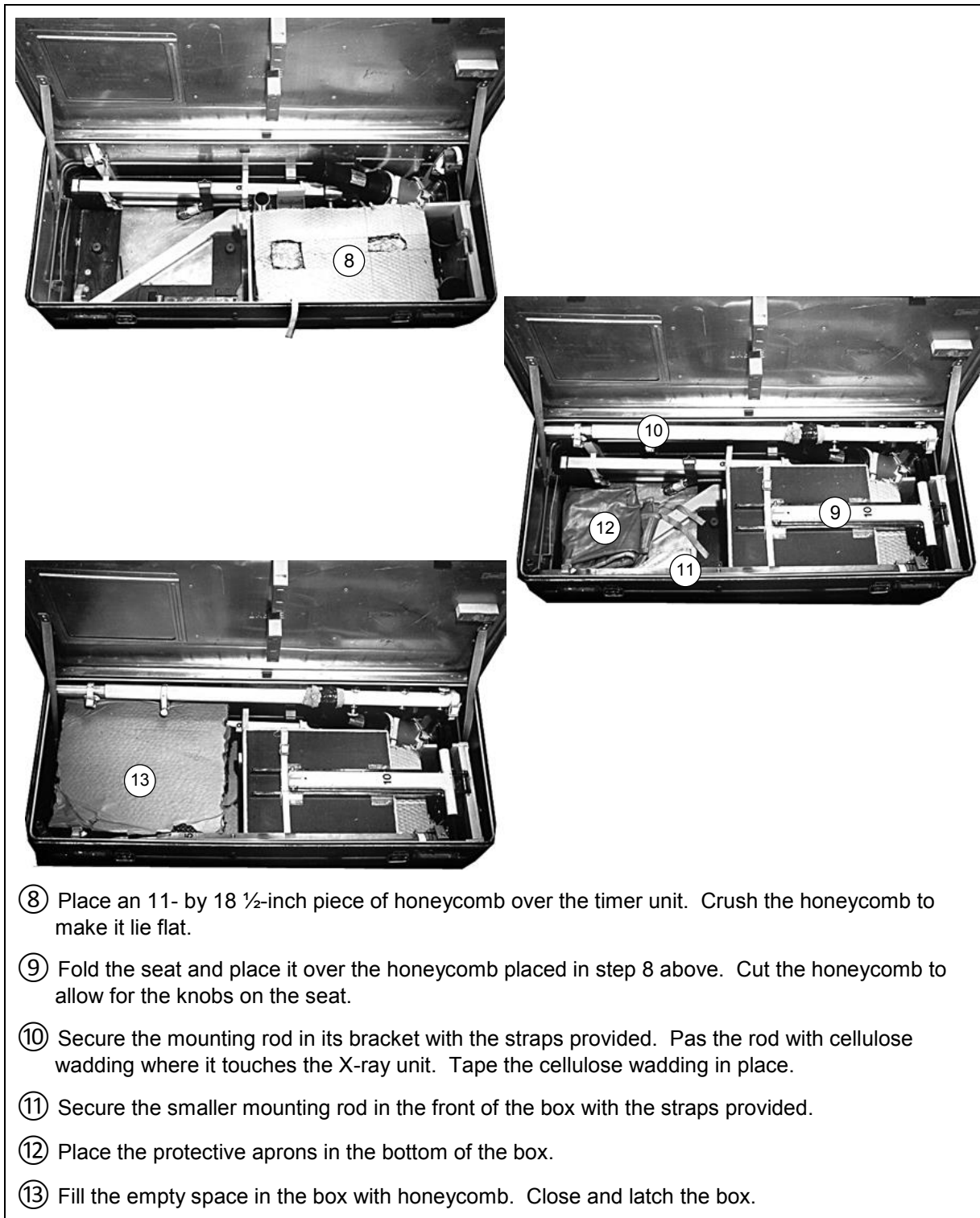
**SECTION XIII: RIGGING DENTAL OPERATIVE FIELD IN M998 TRUCK**

4-15. Use the procedures shown in Figures 4-27 through 4-33 to rig the dental operative field set in a cargo/troop carrier-configured truck. The dental operative field set consists of an X-ray unit, ultrasonic scaler, air compressor, light set, dental equipment cart, and dental chair. Each component fits into its own case. The load shown weighs 834 pounds.

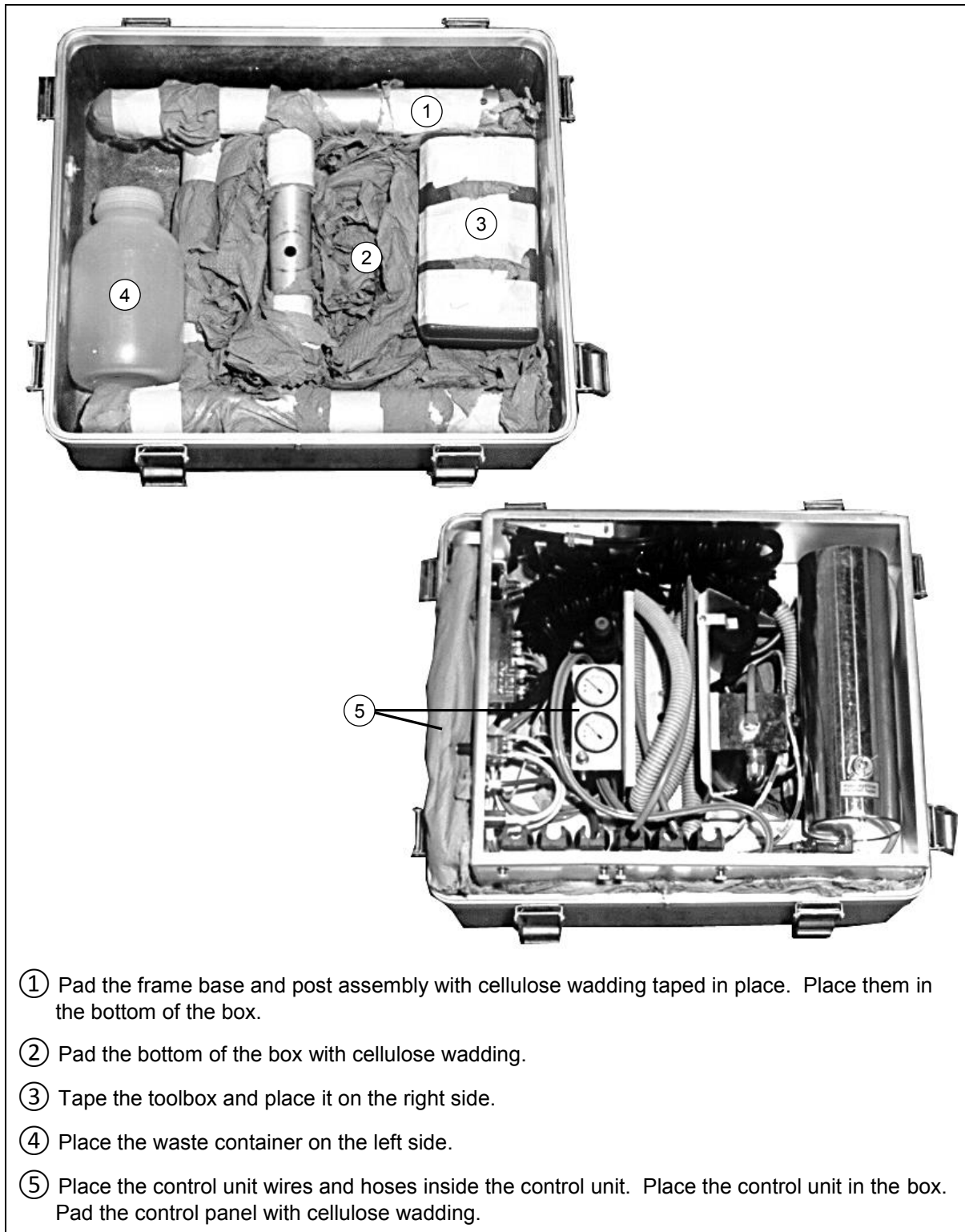


- ① Place the seat support rod in its bracket.
- ② Cover the right half of the bottom of the box with cellulose wadding (not shown).
- ③ Place the wooden insert in the right side of the box. Secure the headrest and foot support in the insert with the fitting provided. Tighten the fitting with light pressure only.
- ④ Secure the timer unit with the strap provided.
- ⑤ Secure the scissor arm of the X-ray unit with the strap provided.
- ⑥ Tape the cap on the end of the X-ray unit.
- ⑦ Place the X-ray unit in the box as shown, and secure it with the straps provided.

**Figure 4-27. Dental Operative Field X-Ray Set Rigged in M998 Truck**

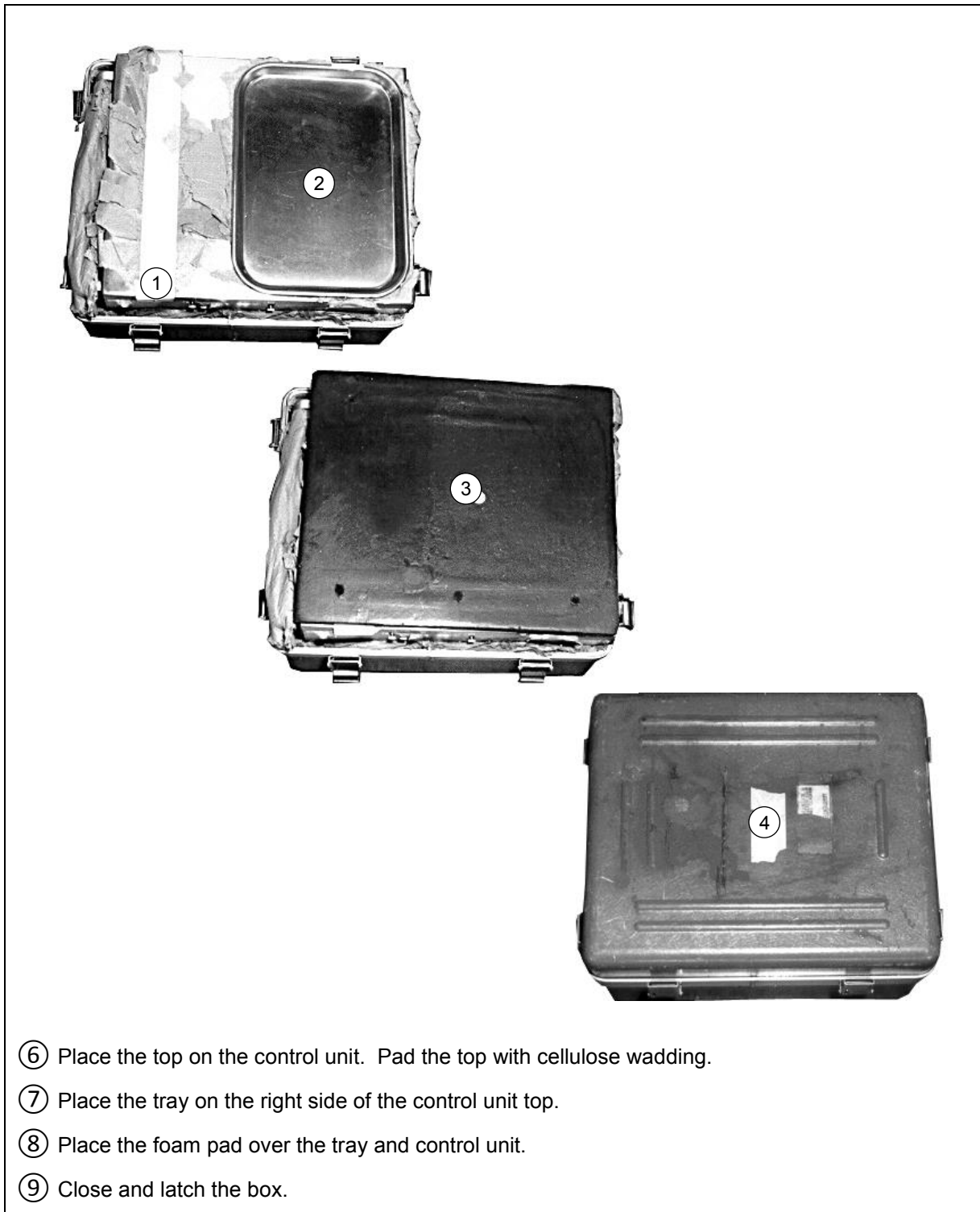


**Figure 4-27. Dental Operative Field X-Ray Set Rigged in M998 Truck (continued)**

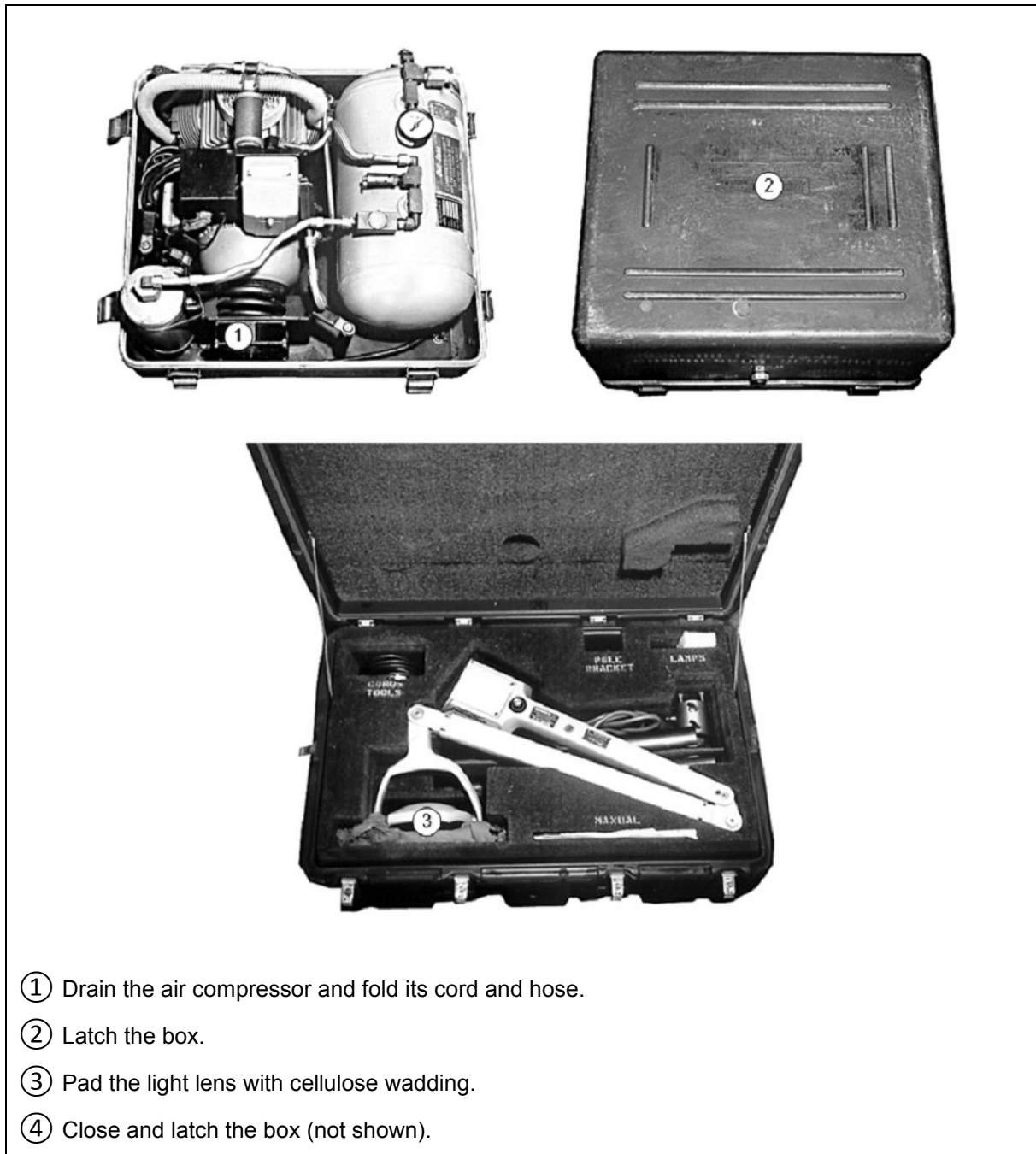


**Figure 4-28. Dental Operative Field Set Toolbox and Control Unit Rigged in M998 Truck**





**Figure 4-28. Dental Operative Field Set Toolbox and Control Unit Rigged in M998 Truck  
(continued)**

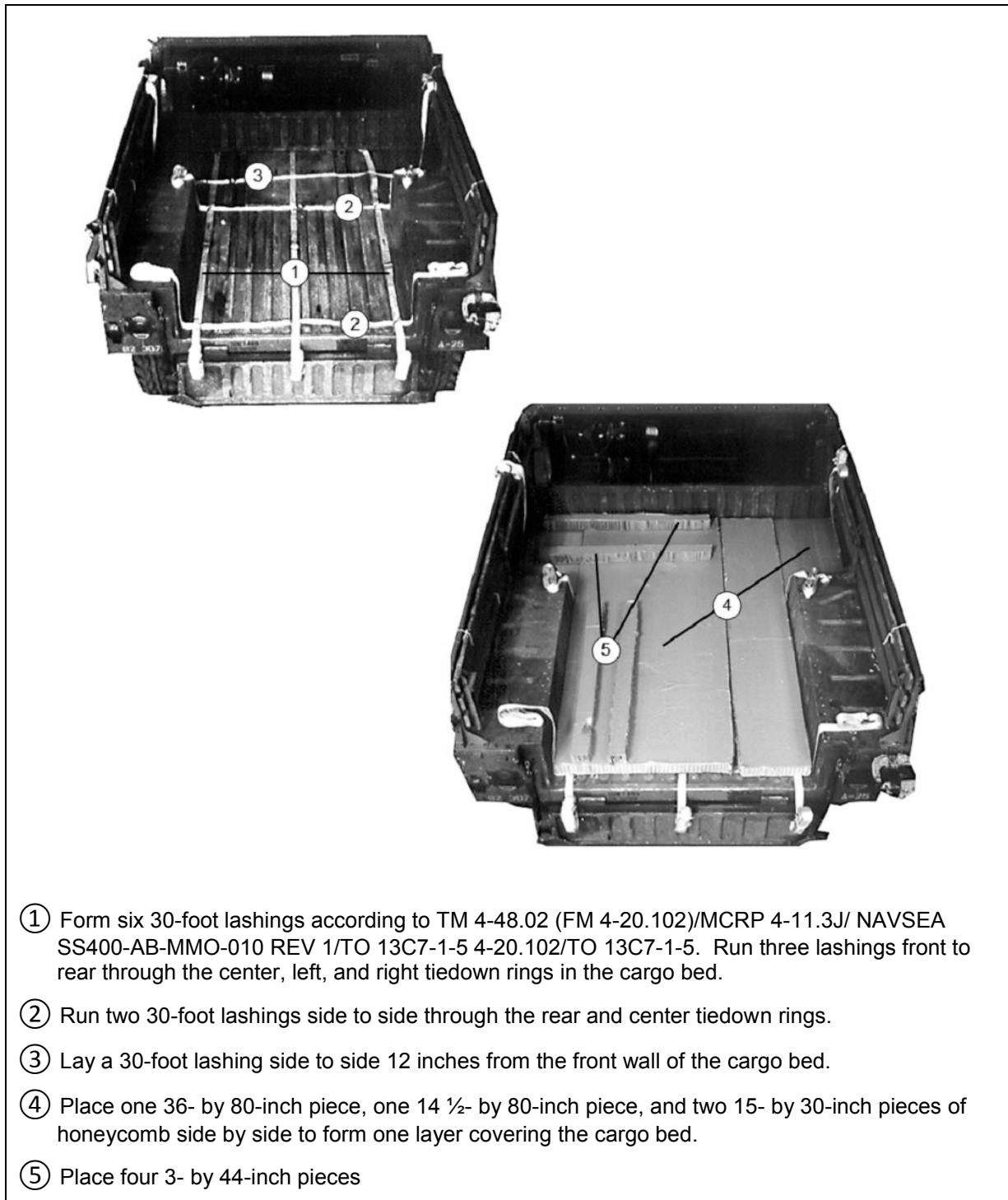


**Figure 4-29. Dental Operative Field Set Air Compressor Rigged in M998 Truck**

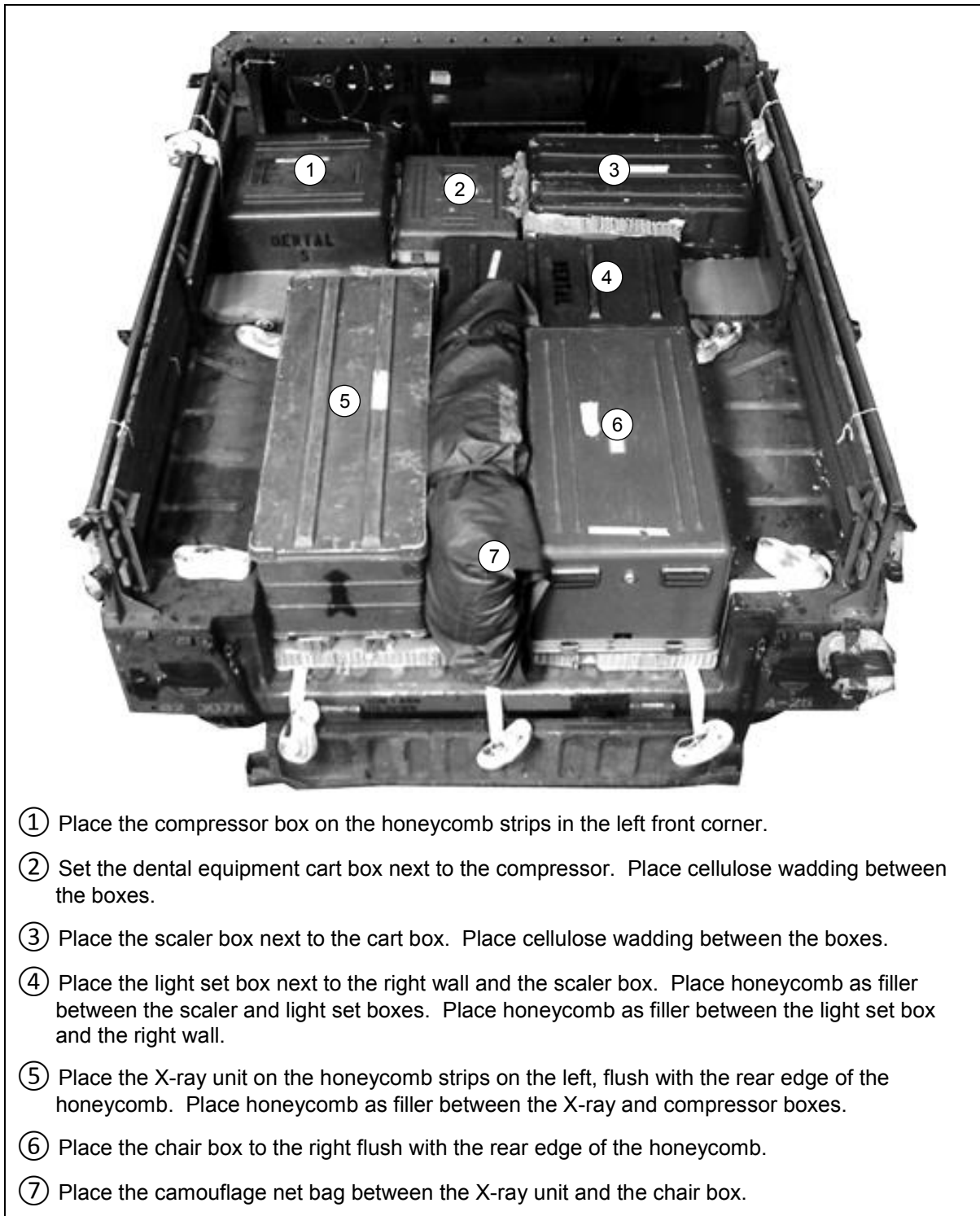


- ① Wrap the chair foot lever with cellulose wadding. Tie it to the chair base with type III nylon cord.
- ② Fold the chair and stool. Secure them together with type III nylon cord.
- ③ Close and latch the box.
- ④ Be sure the scalar unit is surrounded by the foam padding provided. Close and latch the box.

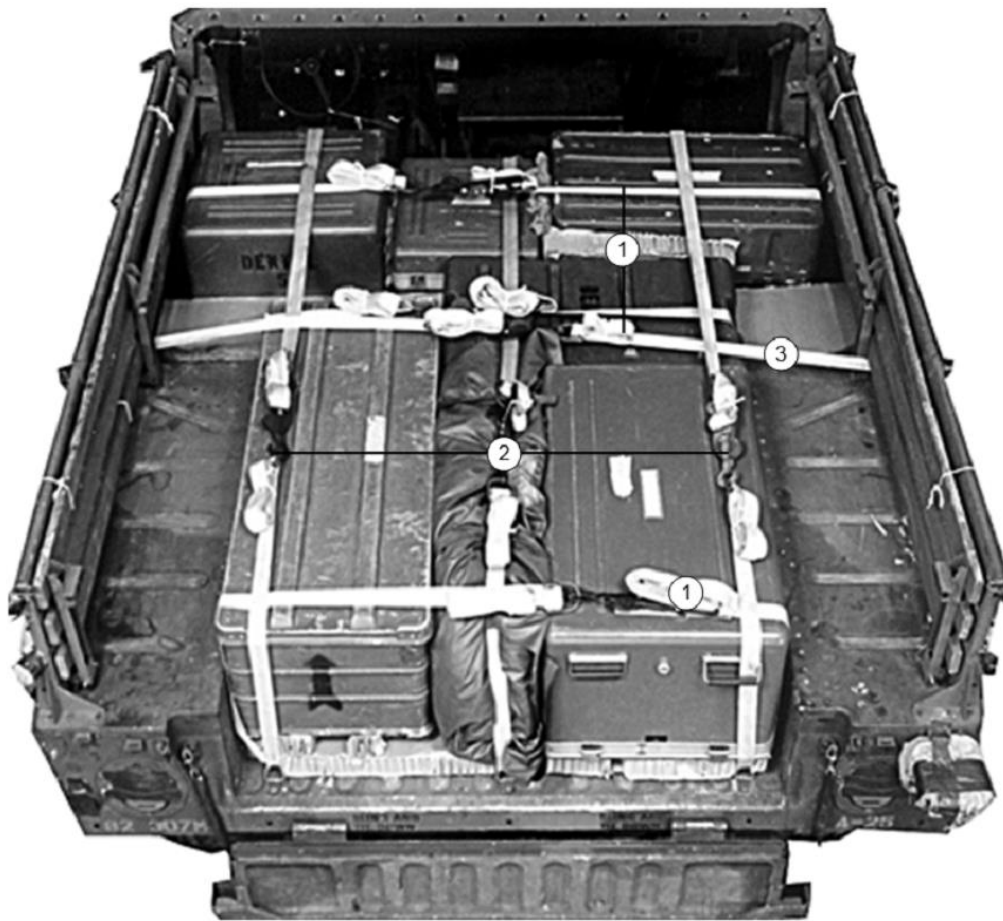
**Figure 4-30. Dental Operative Field Set Chair and Scalar Unit Rigged in M998**



**Figure 4-31. Dental Operative Field Set Cargo Area Prepared in M998 Truck**

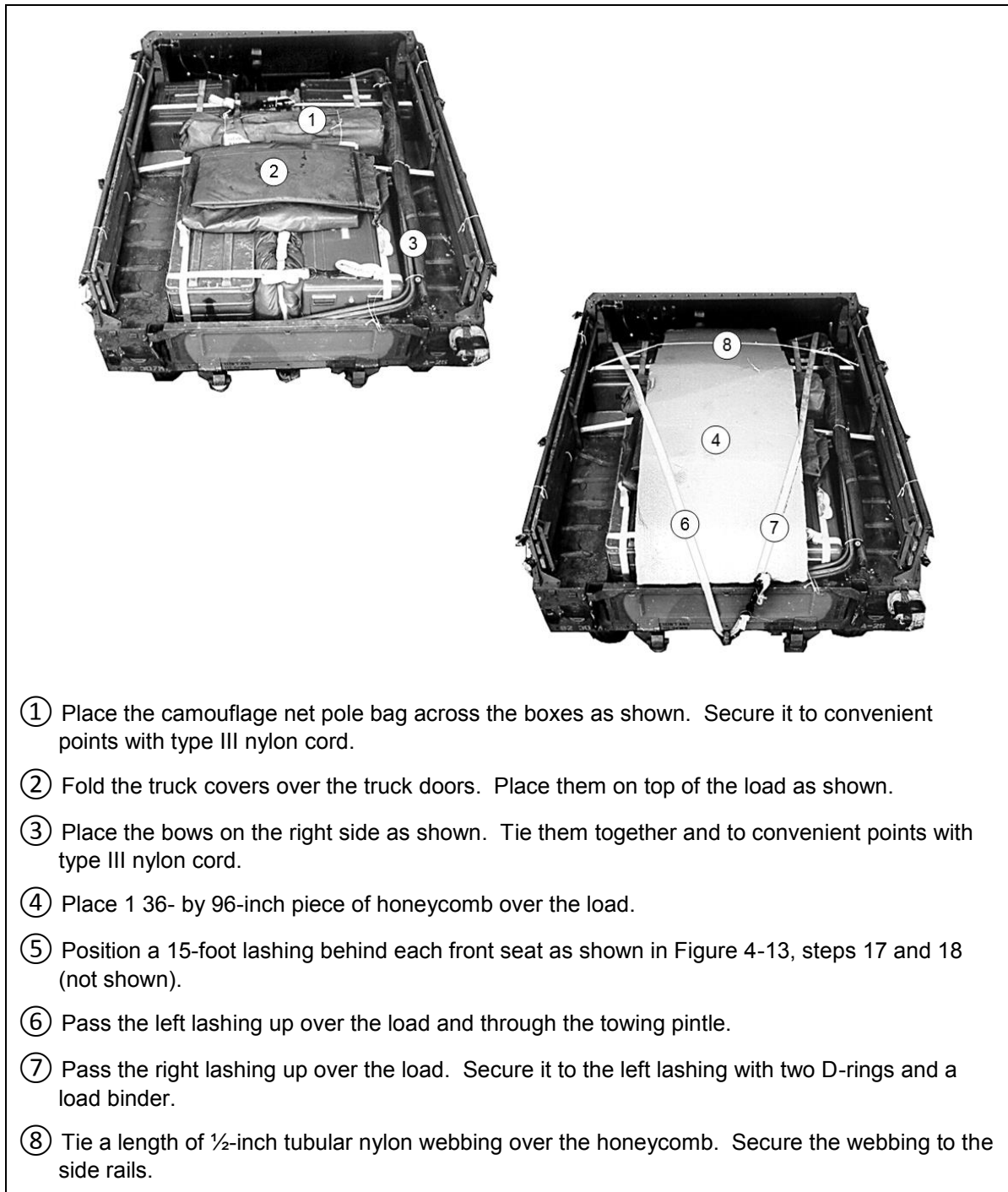


**Figure 4-32. Dental Operative Field Set Placed in Cargo Area in M998 Truck**



- ① Secure the lashings placed in steps 32 and 33 on top of the load with D-rings and load binders.
- ② Secure the lashings placed in step 31 on top of the load with D-rings and load binders.
- ③ Install the body side boards as shown in Figure 2-13. The lashing supporting the body side boards is shown.

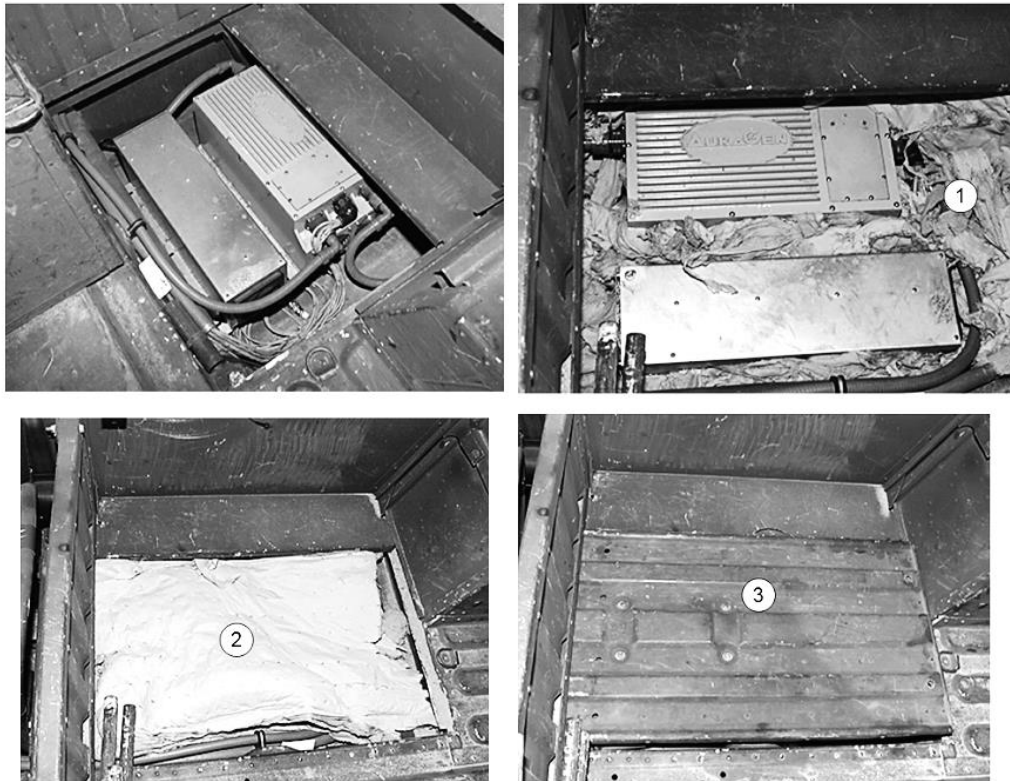
**Figure 4-33. Dental Operative Field Set Secured in M998 Truck**



**Figure 4-33. Dental Operative Field Set Secured in M998 Truck (continued)**

## SECTION XIV: RIGGING VIPER GENERATOR SYSTEM IN HMMWV-SERIES TRUCK

4-16. Use the procedures shown in Figure 4-39 to rig the Viper generator system in HMMWV-series trucks. The Viper consists of an under-the-hood engine-driven generator, control switches on the truck's instrument panel, and control boxes located under the rear seat. The generator and instrument panel switches require no preparation. Prepare the control boxes as shown in Figure 4-39.



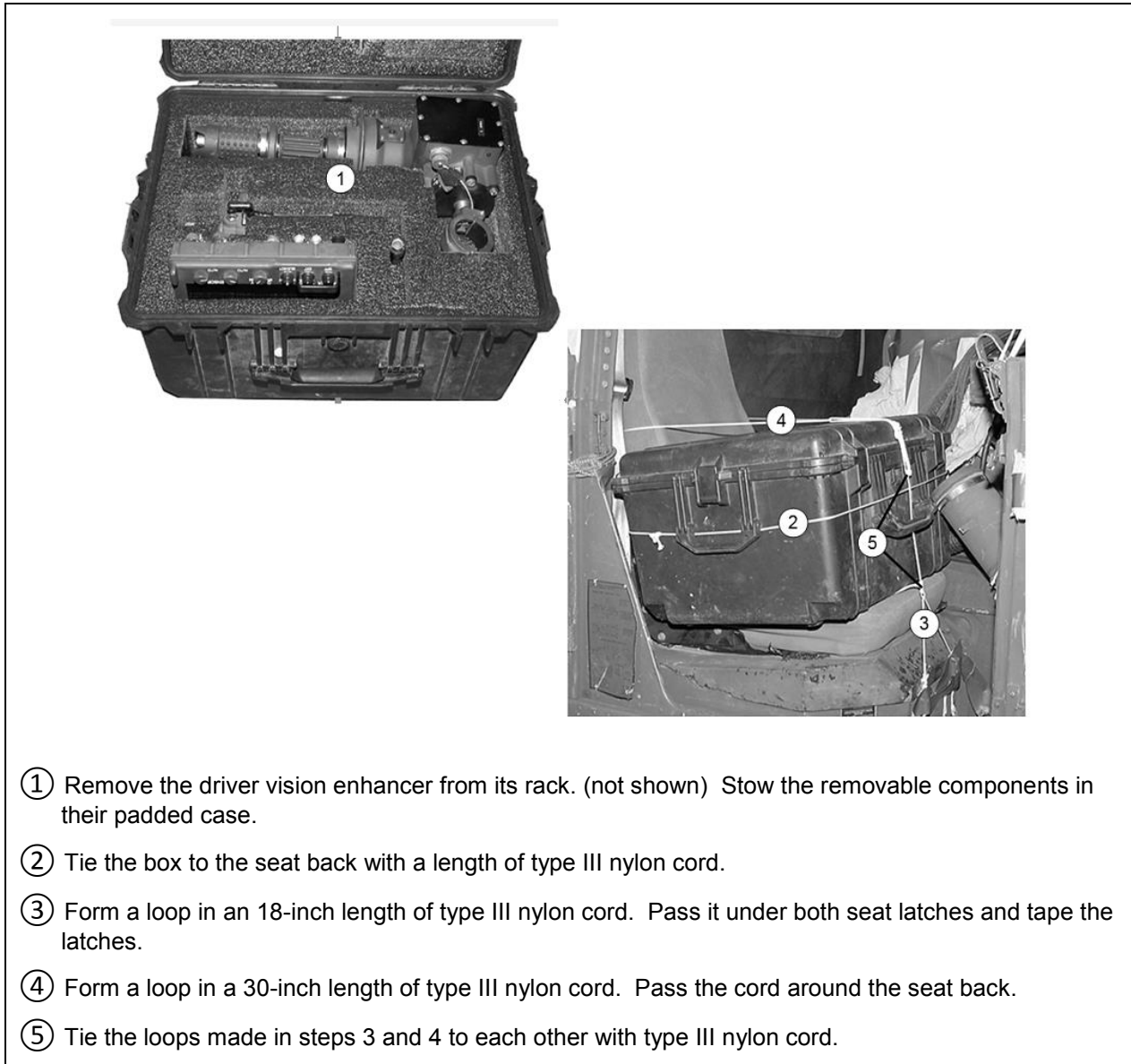
- ① Pad the spaces around the control boxes with cellulose wadding.
- ② Place full sheets of cellulose wadding over the control boxes to fill the space.
- ③ Fold the rear seat over the control boxes and latch them in place.

**Figure 4-39. Viper Generator System Control Boxes Prepared**

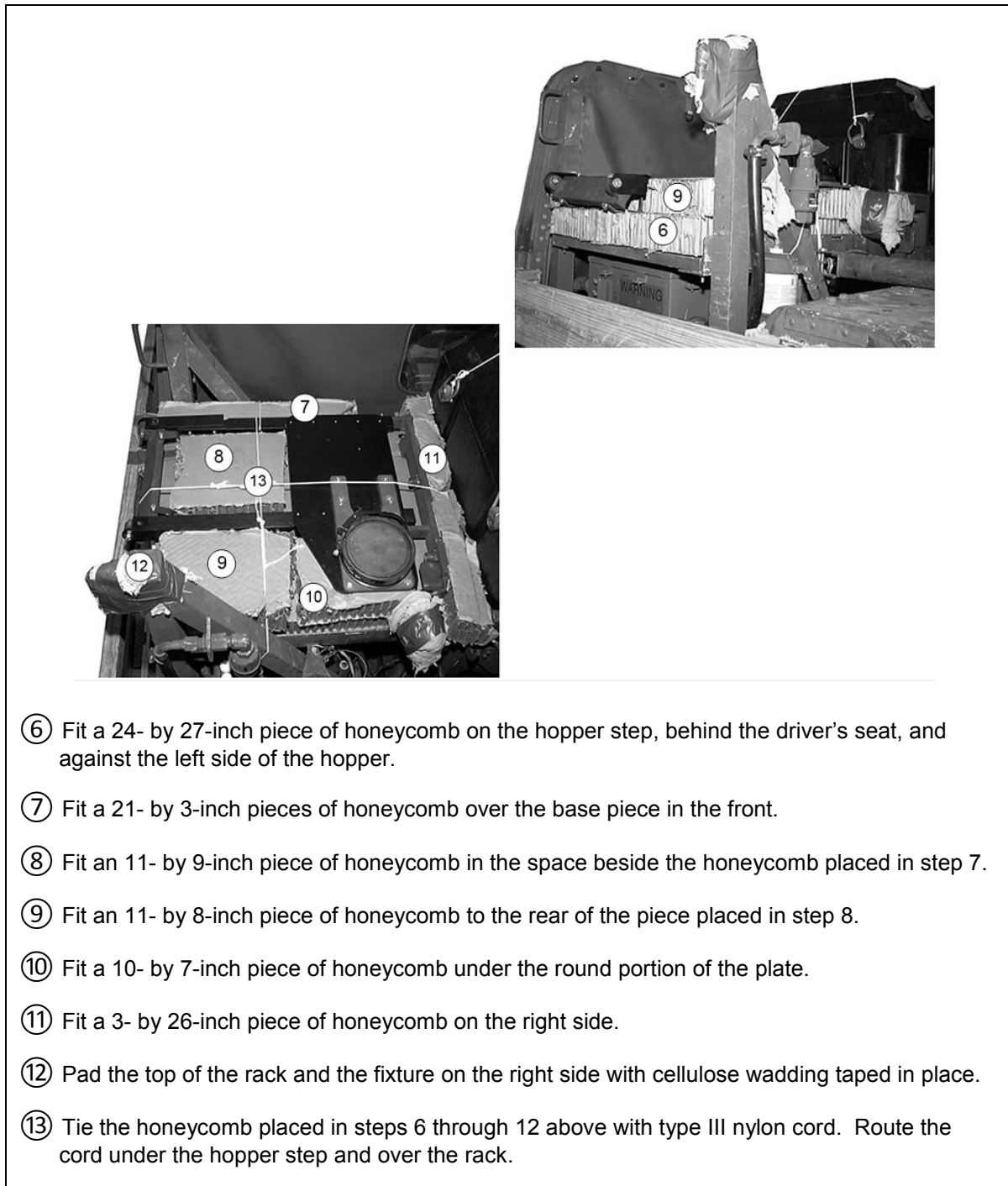


## SECTION XV: RIGGING DRIVER VISION ENHANCER IN HMMMV-SERIES TRUCK

4-17. Use the procedures shown in Figure 4-40 to rig the driver vision enhancer in HMMWV-series trucks. The optical components fit into their own padded case. The rest of the system fits into a rack mounted behind the driver's seat.



**Figure 4-40. Driver Vision Enhancer Rigged in Cargo/Troop Carrier**



**Figure 4-40. Driver Vision Enhancer Rigged in Cargo/Troop Carrier (continued)**

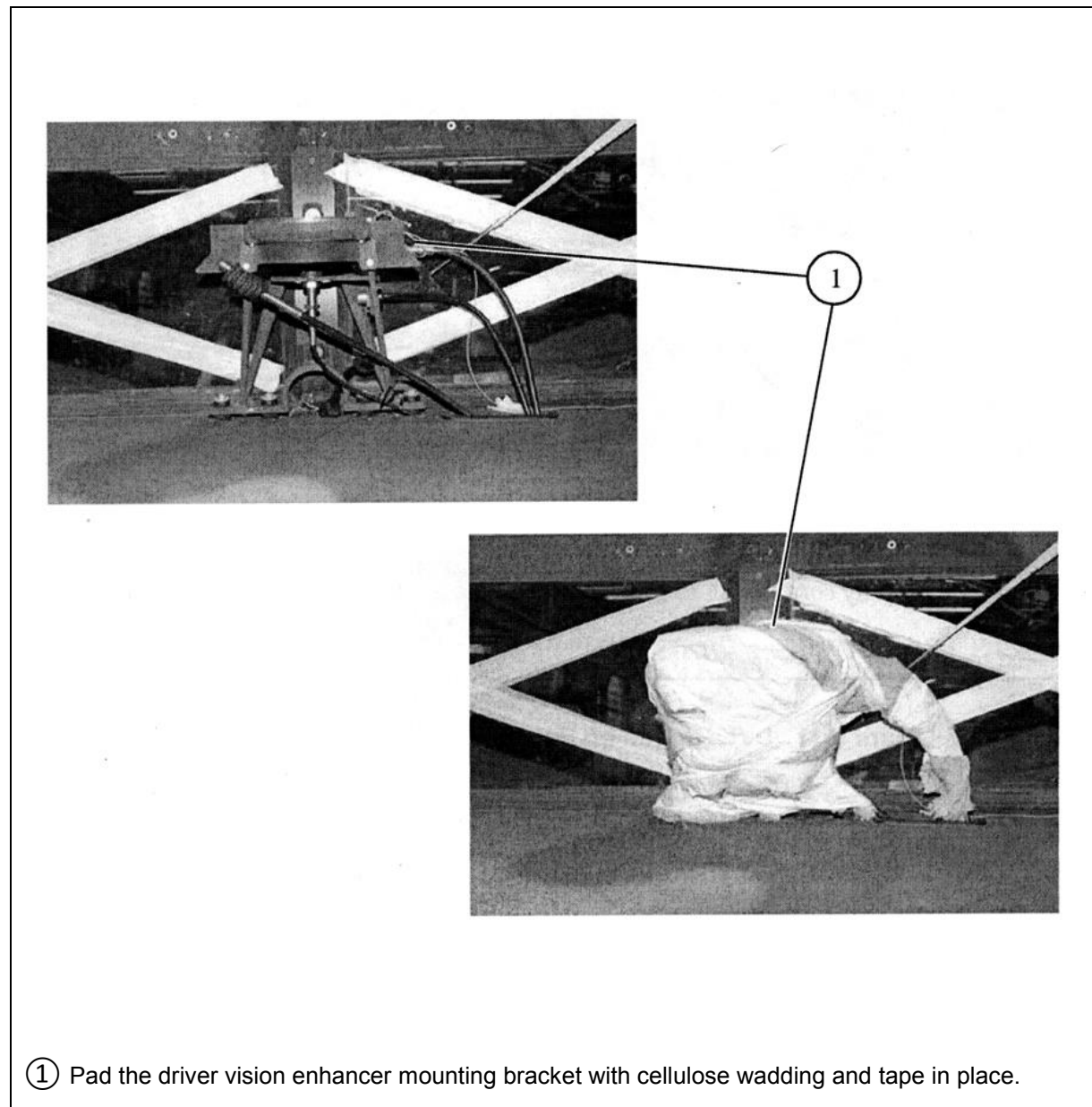


- ⑭ Make an 8 ½- by 11 ½-inch cutout in a 27- by 24-inch piece of honeycomb. Place the honeycomb over the rack with the cutout clearing the round mount.
- ⑮ Tape the upper edges of the honeycomb. Tie the honeycomb cover the rack with ½-inch tubular nylon webbing. Route the webbing under the hopper step.

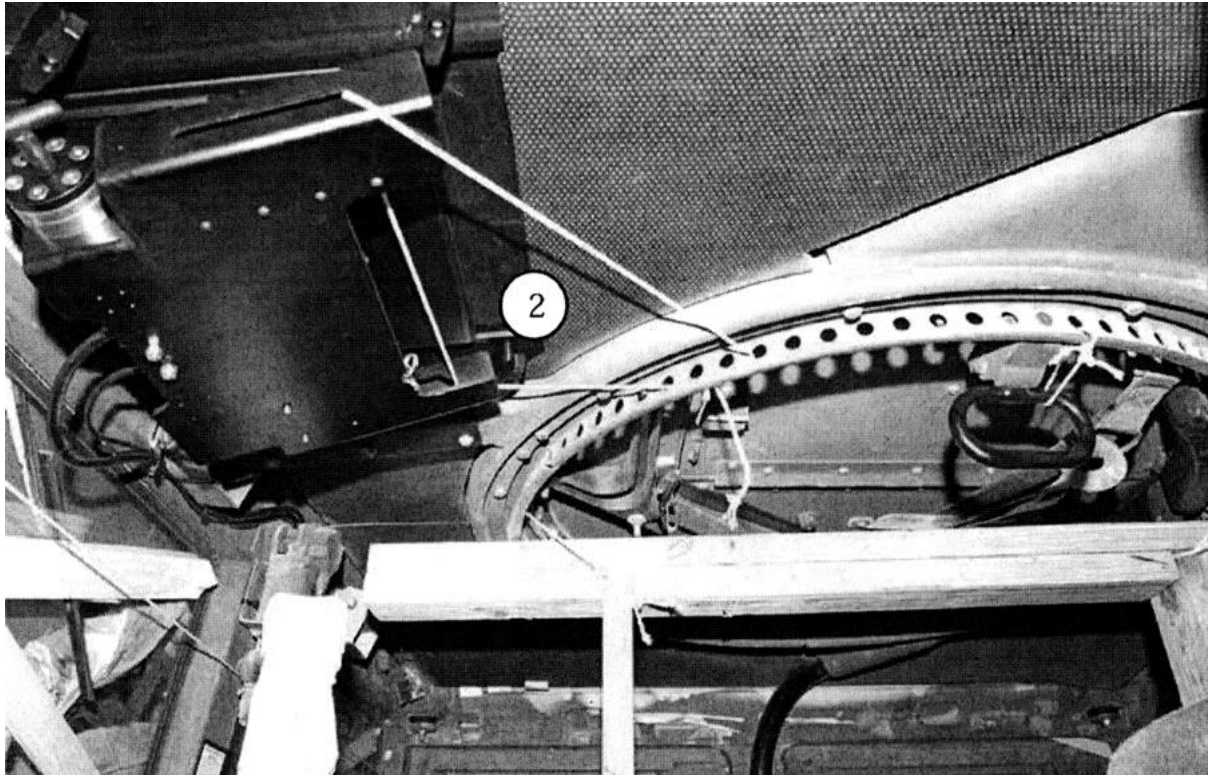
**Figure 4-40. Driver Vision Enhancer Rigged in Cargo/Troop Carrier (continued)**

**SECTION XVI: RIGGING THE AN/VAS-5 DRIVER VISION ENHANCER MOUNTED ON HMMWV-SERIES TRUCK**

4-18. The AN/VAS-5 Driver Vision Enhancer can be rigged on the following model HMMWV's: M966, M966A1, M1025, M1025A1, M1025A2, M1026 modified, M1026A1, M1121 and M1151. Use the procedures shown in Figure 4-18 to rig the ANVAS-5 Driver Vision Enhancer mounted on HMMWV-series trucks.

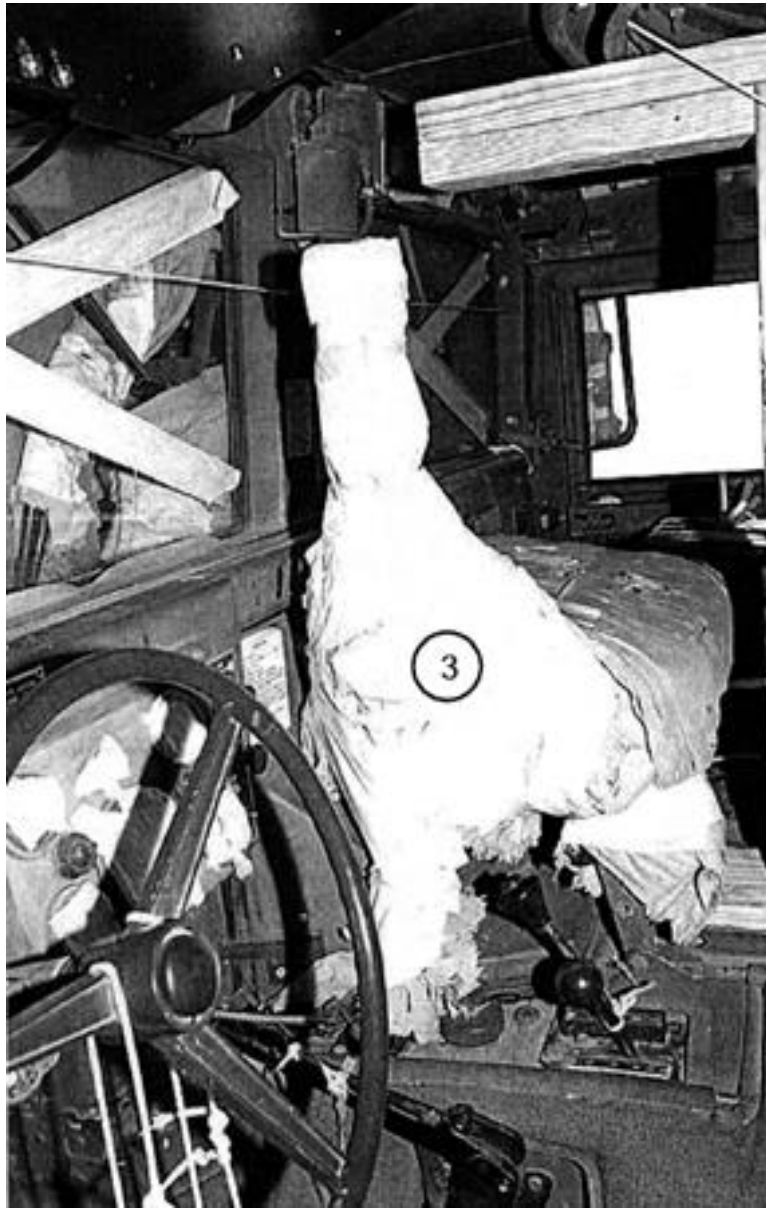


**Figure 4-41. Driver Vision Enhancer Rigged on Hard Top HMMWV**



- ② Secure the display control module bracket to the turret ring with type III nylon cord.

**Figure 4-41. Driver Vision Enhancer Rigged on Hard Top HMMWV (continued)**



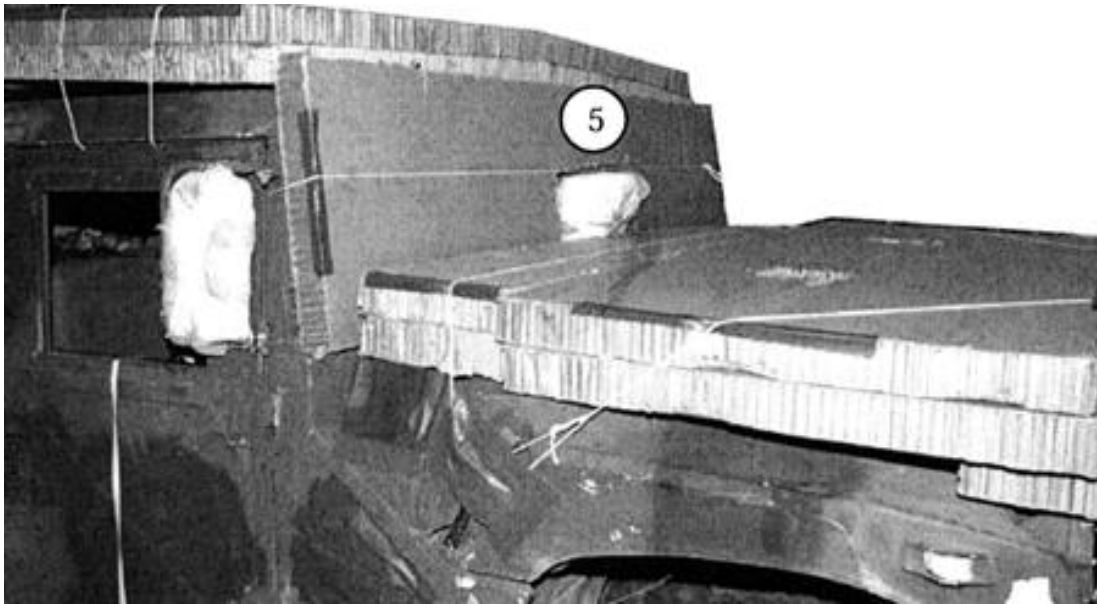
- ③ Pad the pan and tilt module with cellulose wadding and tape in place.

**Figure 4-41. Driver Vision Enhancer Rigged on Hard Top HMMWV (continued)**



- ④ Place the transit case in the passenger seat and secure to the seat with ½-inch tubular nylon webbing.

**Figure 4-41. Driver Vision Enhancer Rigged on Hard Top HMMWV (continued)**



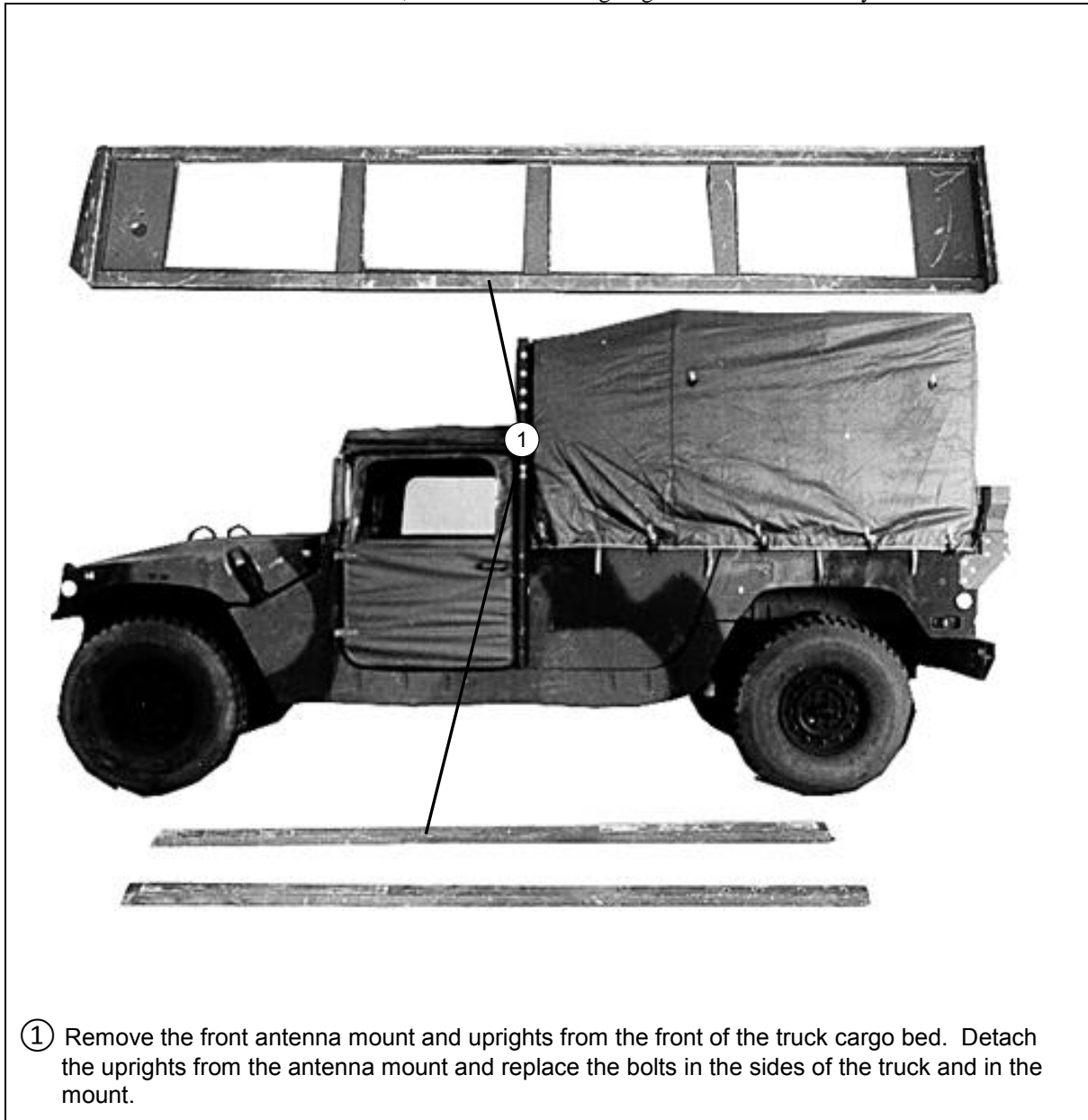
- ⑤ Make a cut out for the driver vision enhancer mounting bracket on the honeycomb placed on the windshield.

**Figure 4-41. Driver Vision Enhancer Rigged on Hard Top HMMWV (continued)**

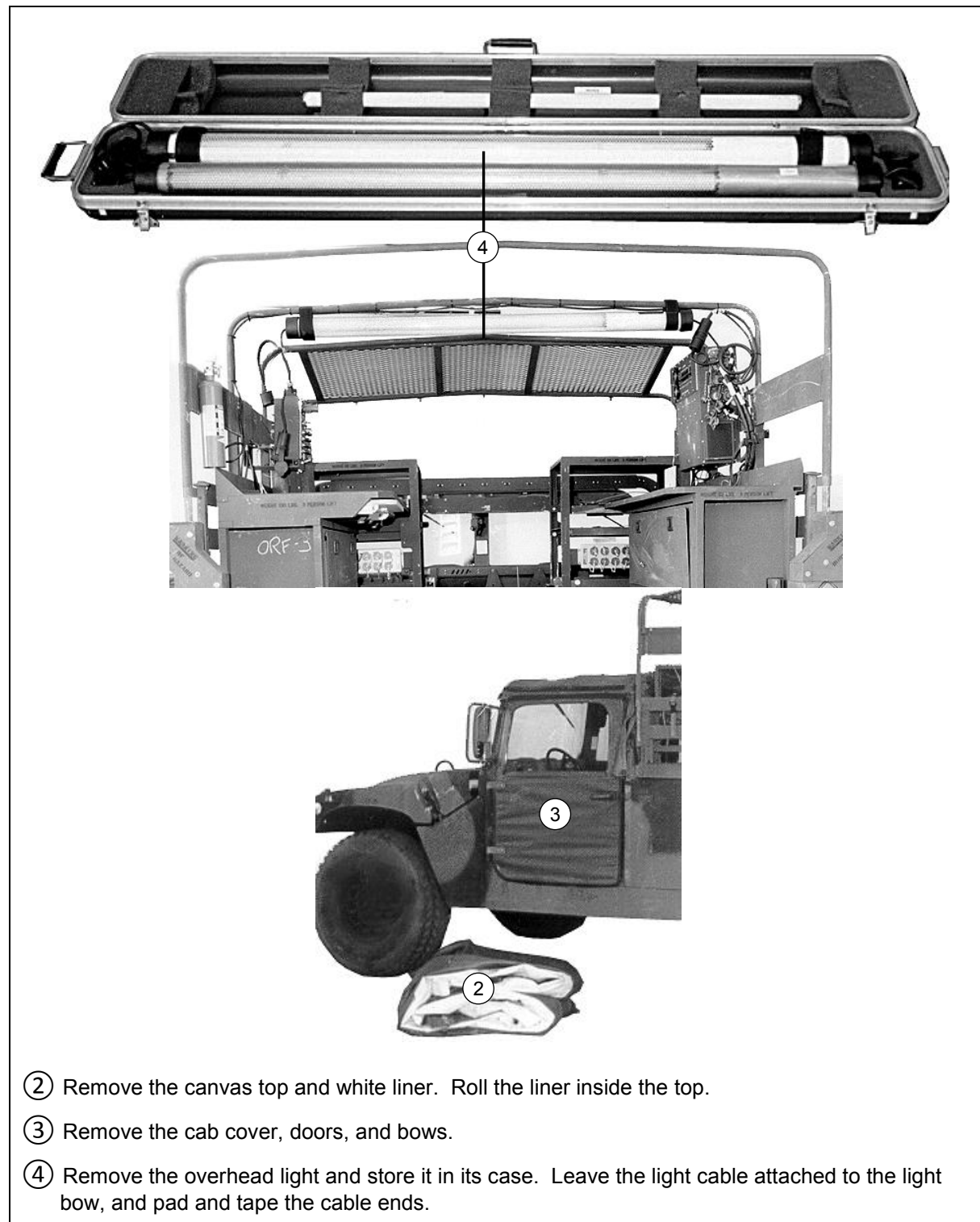


## SECTION XVII: RIGGING SOFT TOP INSTALLATION KIT IN M998 TRUCK

4-19. Use the procedures shown in Figure 4-34 to rig the soft top installation kit and accompanying equipment in a cargo/troop carrier-configured truck. An additional 300 pounds must be added to the items shown to meet the minimum weight requirement of 800 pounds for the accompanying load. Three boxes of 105-mm ammunition are shown here, but other items weighing the same or more may be used.

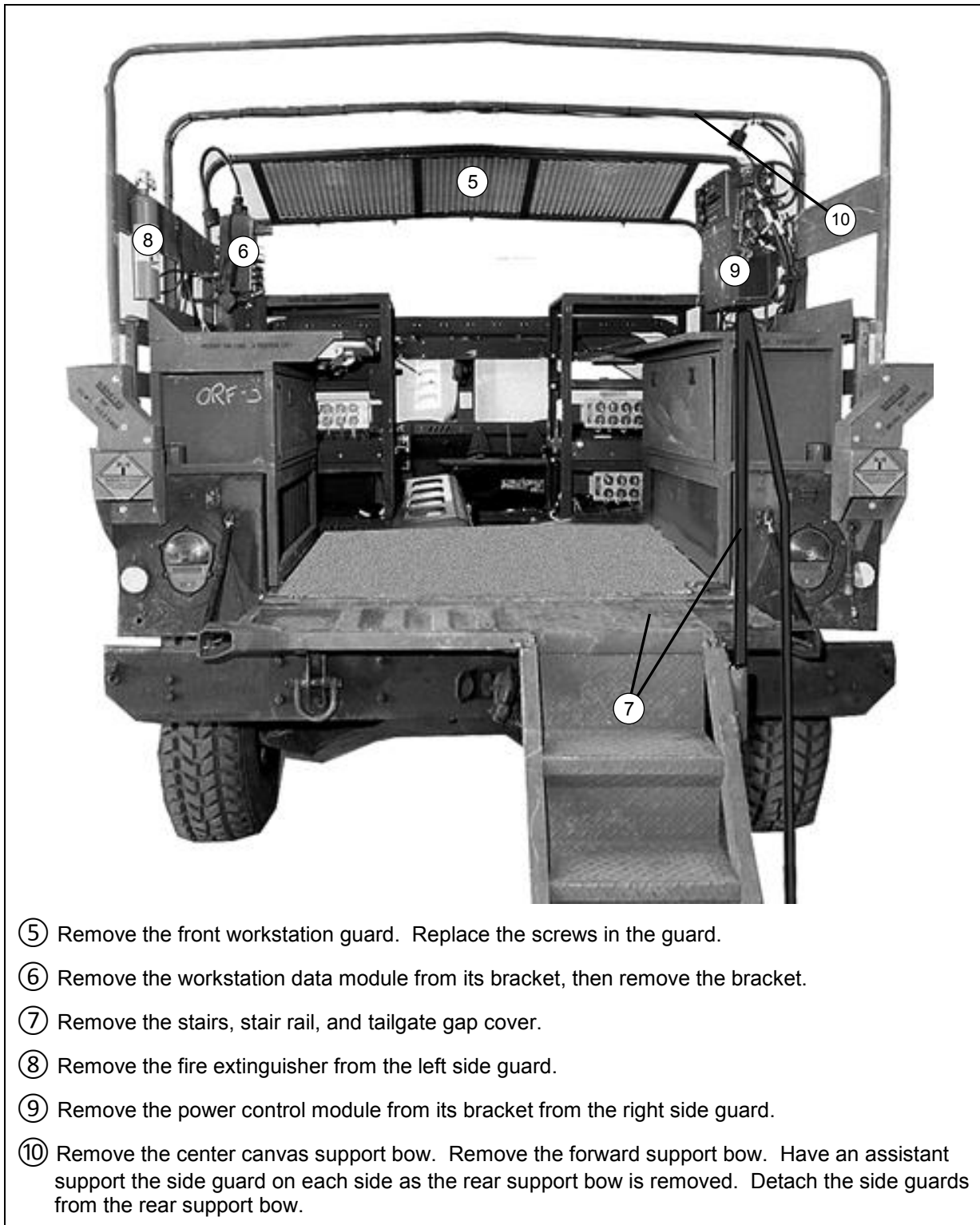


**Figure 4-34. Soft Top Installation Kit Rigged in M998 Truck**



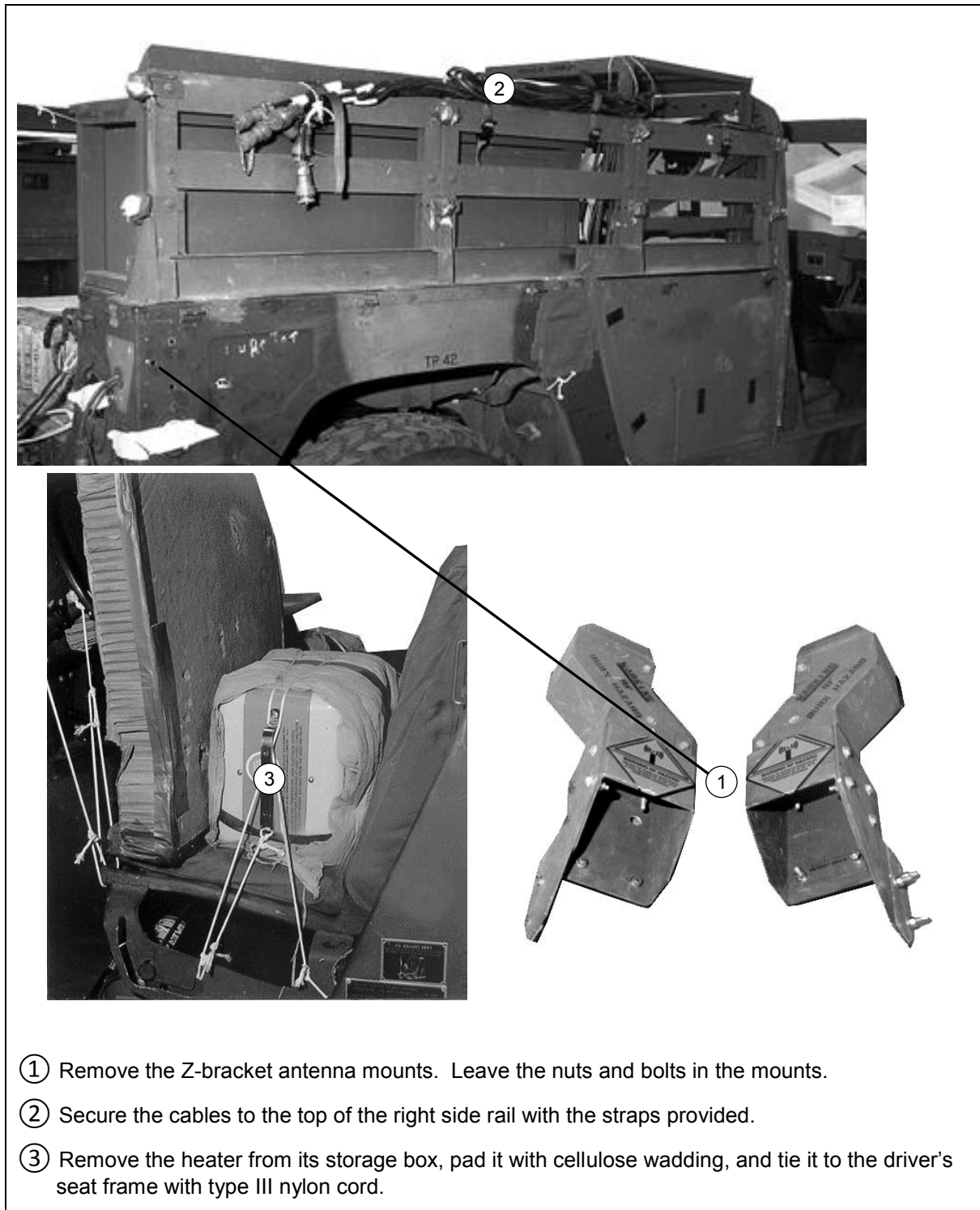
- ② Remove the canvas top and white liner. Roll the liner inside the top.
- ③ Remove the cab cover, doors, and bows.
- ④ Remove the overhead light and store it in its case. Leave the light cable attached to the light bow, and pad and tape the cable ends.

**Figure 4-34. Soft Top Installation Kit Rigged in M998 Truck (continued)**

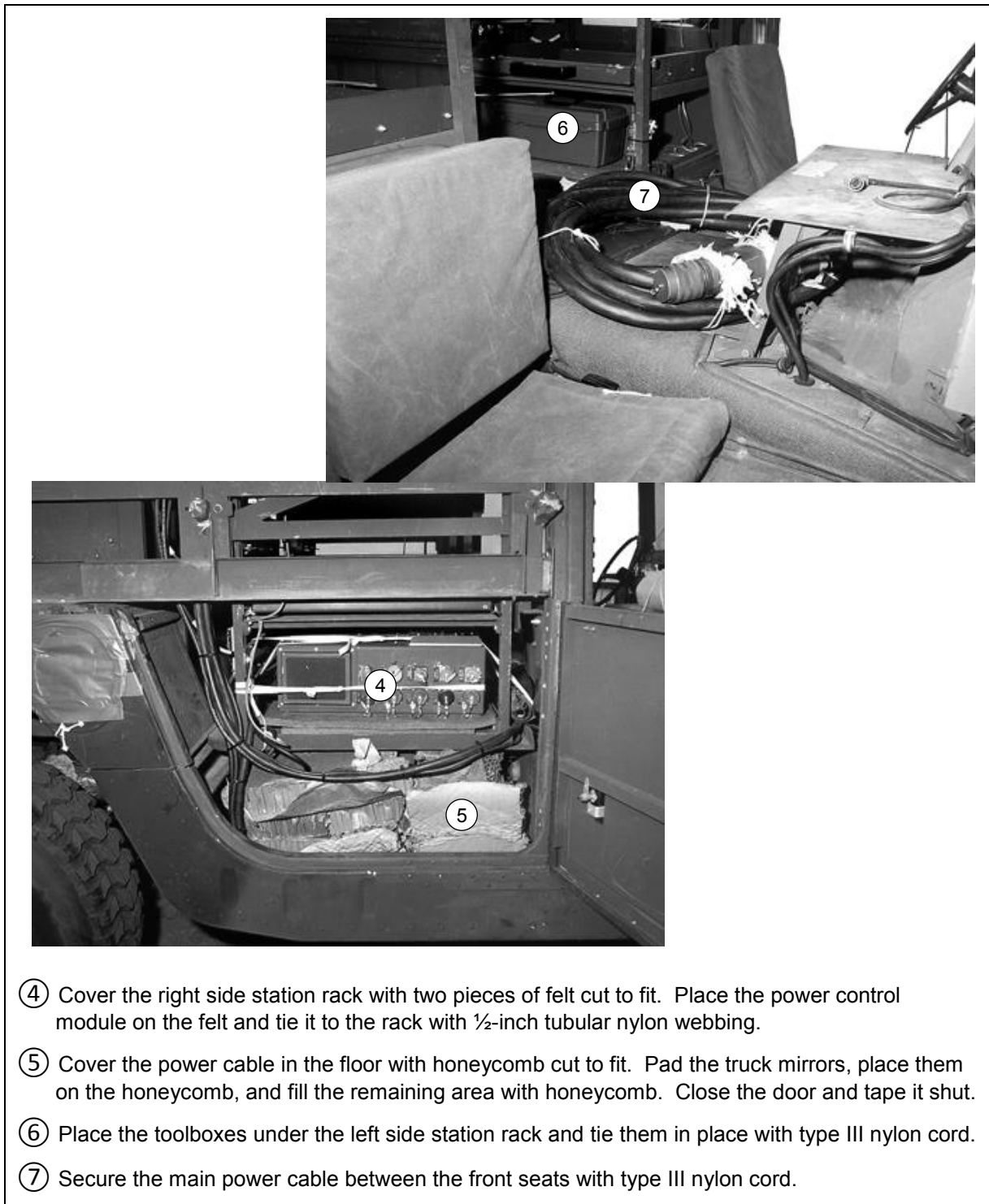


- ⑤ Remove the front workstation guard. Replace the screws in the guard.
- ⑥ Remove the workstation data module from its bracket, then remove the bracket.
- ⑦ Remove the stairs, stair rail, and tailgate gap cover.
- ⑧ Remove the fire extinguisher from the left side guard.
- ⑨ Remove the power control module from its bracket from the right side guard.
- ⑩ Remove the center canvas support bow. Remove the forward support bow. Have an assistant support the side guard on each side as the rear support bow is removed. Detach the side guards from the rear support bow.

**Figure 4-34. Soft Top Installation Kit Rigged in M998 Truck (continued)**



**Figure 4-35. Soft Top Installation Kit Rigged in Cab of M998 Truck**

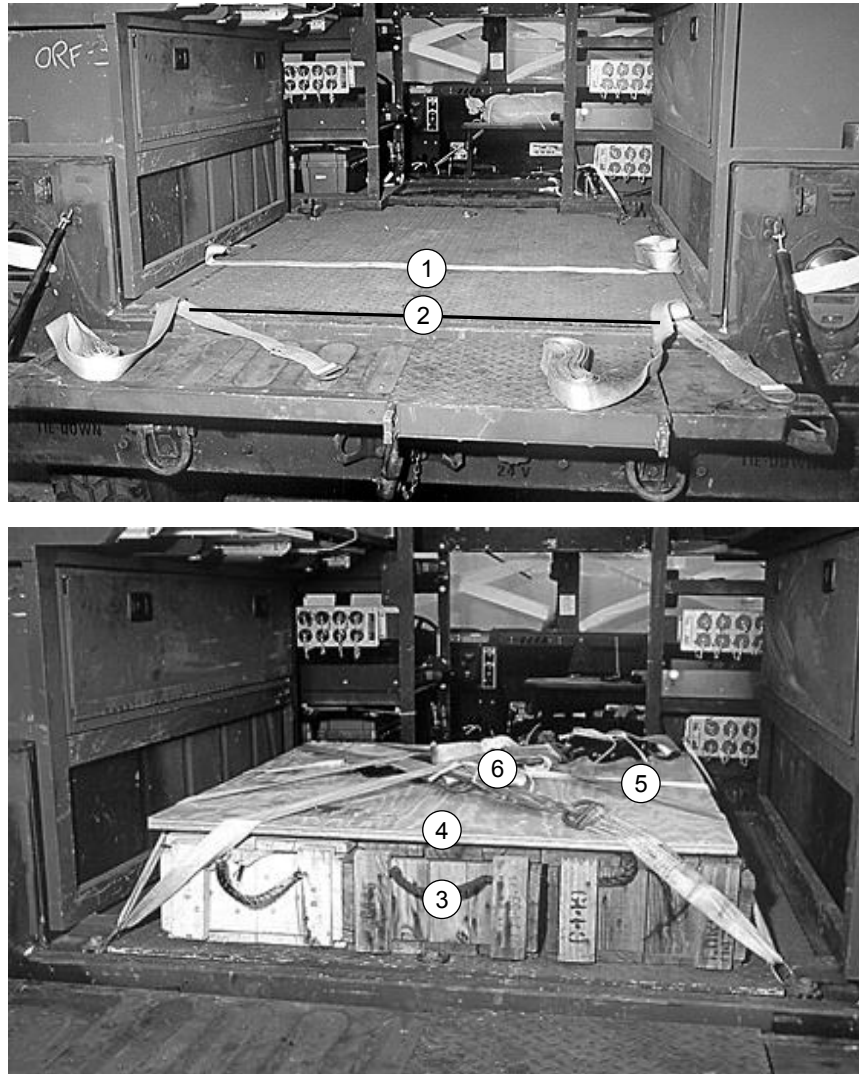


**Figure 4-35. Soft Top Installation Kit Rigged in Cab of M998 Truck**  
(continued)



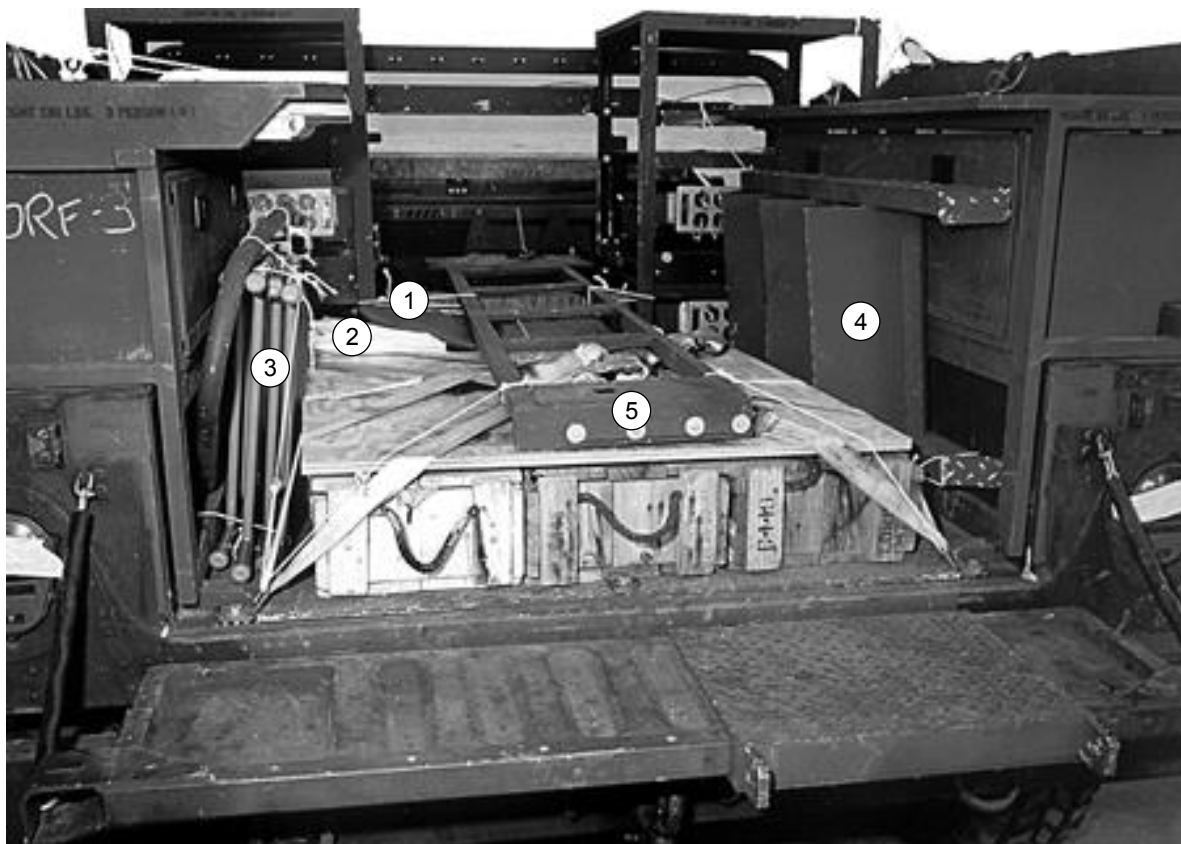
- ① Secure the left side worktables with type III nylon cord.
- ② Pad both antenna brackets with cellulose wadding taped in place. Roll loose cables and place them with the antenna brackets in the left side storage box. Fill empty space with honeycomb.
- ③ Pad the communications module, work station data module, their mounting brackets, and the fire extinguisher with cellulose wadding taped in place. Place these items in the right side storage box. Fill empty space with honeycomb.
- ④ Close and secure the doors of both storage compartments (not shown).

**Figure 4-36. Soft Top Installation Kit Equipment Stowed in M998 Truck**



- ① Lay a 15-foot lashing from side to side 18 inches from the rear edge of the truck bed.
- ② Place one 15-foot lashing in the right rear tiedown ring, and another in the left rear tiedown ring.
- ③ Place three 105-mm ammunition boxes or a similarly configured load weighing at least 300 pounds over the lashing placed in step 22.
- ④ Place a 36- by 36-inch piece of  $\frac{3}{4}$ -inch plywood over the load.
- ⑤ Secure the lashing placed in step 22 over the plywood.
- ⑥ Pass the lashing in the left rear tiedown ring through the right front tiedown ring. Secure the lashing over the load. Pass the lashing in the right rear tiedown ring through the left front tiedown ring. Secure the lashing over the load.

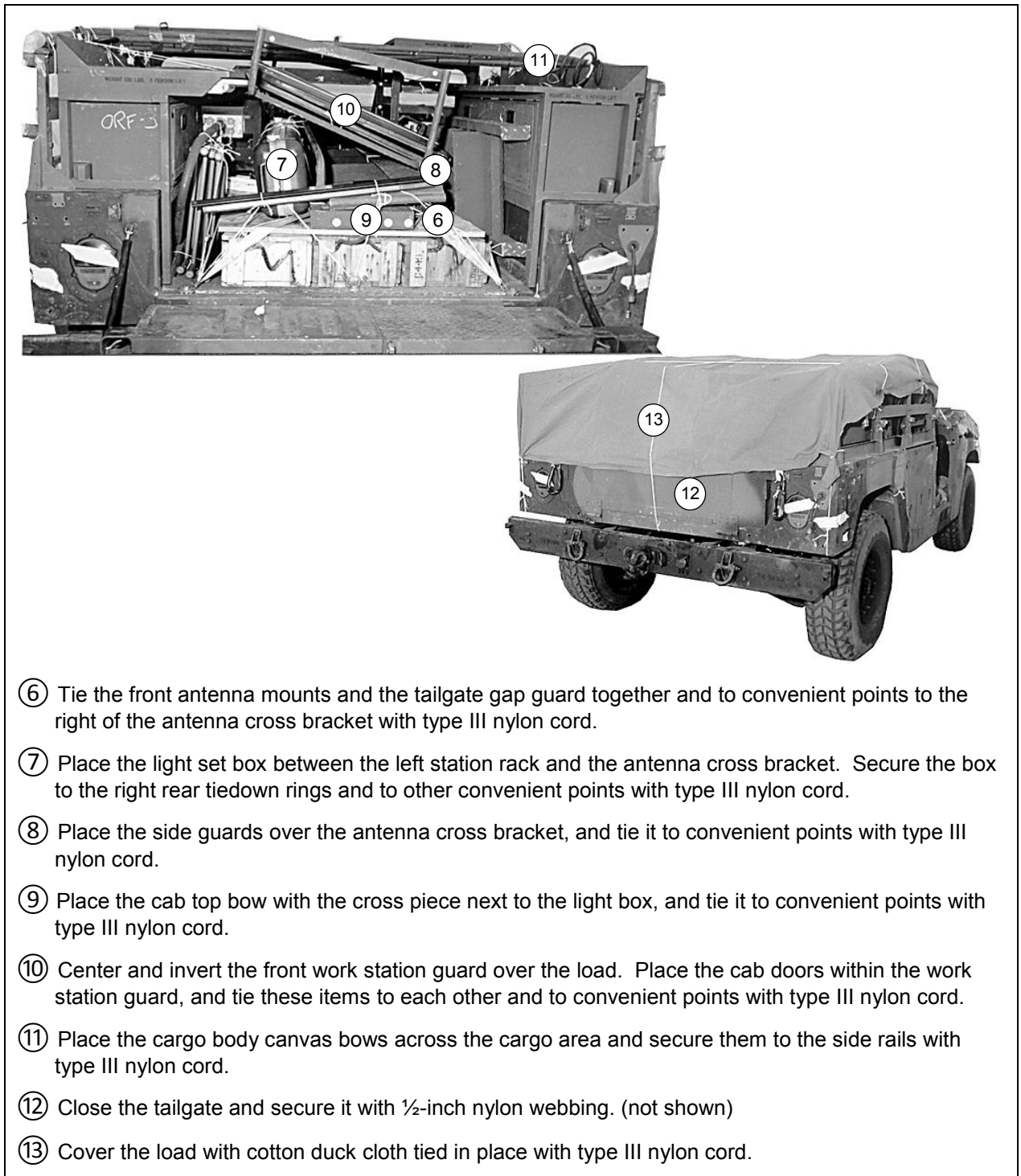
**Figure 4-37. Soft Top Installation Kit Ammunition Placed and Secured in M998 Truck**



- ① Place three 24- by 24-inch pieces of honeycomb between the left and right work station racks.
- ② Lay the folded cab and cargo body covers and the white liner in front of the ammunition boxes and tie them to convenient points with type III nylon cord.
- ③ Place the folding chairs and stair handrail against the left cabinet and tie them to convenient points with type III nylon cord.
- ④ Place the stairs against the right cabinet, and tie them to convenient points with type III nylon cord.
- ⑤ Center the front antenna mount cross bracket over the honeycomb placed in step 28 and the ammunition boxes. Secure the bracket to tiedown rings and to the racks with type III nylon cord.

**Figure 4-38. Soft Top Installation Kit Equipment Secured in M998 Truck**





**Figure 4-38. Soft Top Installation Kit Equipment Secured in M998 Truck (continued)**

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## **Chapter 5**

# **Rigging Two HMMWV Trucks on a 32-Foot Platform for Low-Velocity Airdrop**

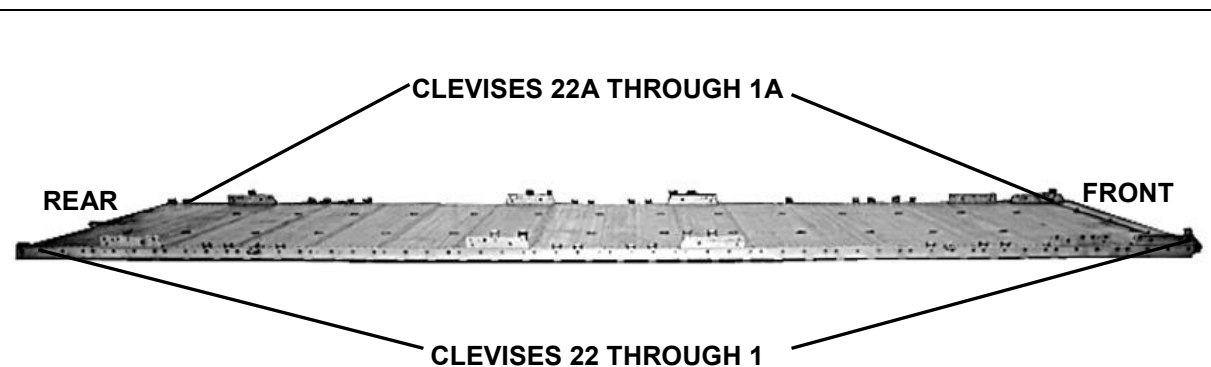
### **DESCRIPTION OF LOAD**

5-1. The unrigged M998 cargo/troop carriers are described in Chapter 1. Two HMMWV trucks are rigged on a 32-foot type V platform for low-velocity airdrop. An accompanying load is rigged on the platform. The load requires five G-11 cargo parachutes.

The following trucks can be rigged using the procedures given in this chapter: the M998A1, M1038 and M1038A1, M1037 and M1037 modified, M1042, M1097, M1097A, and the M1097A2

### **PREPARING PLATFORM**

5-2. Prepare a 32-foot, type V airdrop platform according to TM 10-1670-268-20&P/TO 13C7-52-22. Install two tandem links and eight suspension links to the platform as shown in Figure 5-1. Attach and number 44 clevis assemblies as shown in Figure 5-1.



## Steps:

1. Install a tandem link on the front of each platform side rail using holes 1, 2, and 3.
2. Install a suspension link to each platform side rail using holes 6, 7, and 8.
3. Install a suspension link to each platform side rail using holes 26, 27, and 28.
4. Install a suspension link to each platform side rail using holes 37, 38, and 39.
5. Install a suspension link to each platform side rail using holes 57, 58, and 59.
6. Install a clevis on bushing 1 of each front tandem link.
7. Install a clevis on bushing 3 and 4 of each second suspension link.
8. Install a clevis on bushing 1 and 2 of each third suspension link.
9. Install a clevis on bushing 2 of each fourth suspension link.
10. Starting at the front of the platform, install clevises on each platform side rail using the bushings bolted on holes 11, 12, 15, 30, 31, 34, 35, 50, 53, 54, 63, and 64.
11. Install a clevis on bushings 14 and 51 in an inverted position. Install clevises on bushings 14A and 51A in the normal position. Bolt an additional clevis to each of these clevises.
12. Starting at the front of the platform, number the clevises bolted to the right side of the platform from 1 through 22, and those bolted to the left side from 1A through 22A. Number the clevises on the 14<sup>th</sup> and 51<sup>st</sup> bushings 4 and 4A, and 17 and 17A respectively. Number the clevises bolted to 4 and 4A as 5 and 5A. The clevises bolted to 17 and 17A are to be numbered 16 and 16A.
13. Label the tiedown rings according to TM 4-48.02/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO13C7-1-5.

Figure 5-1. Platform Prepared

## PREPARING AND POSITIONING HONEYCOMB STACKS

5-3. Prepare honeycomb stacks 1, 3, 5, and 7 as shown in Figure 1-3. Prepare honeycomb stacks 2 and 6 as shown in Figure 1-4. Position the stacks on the platform as shown in Figure 5-2.

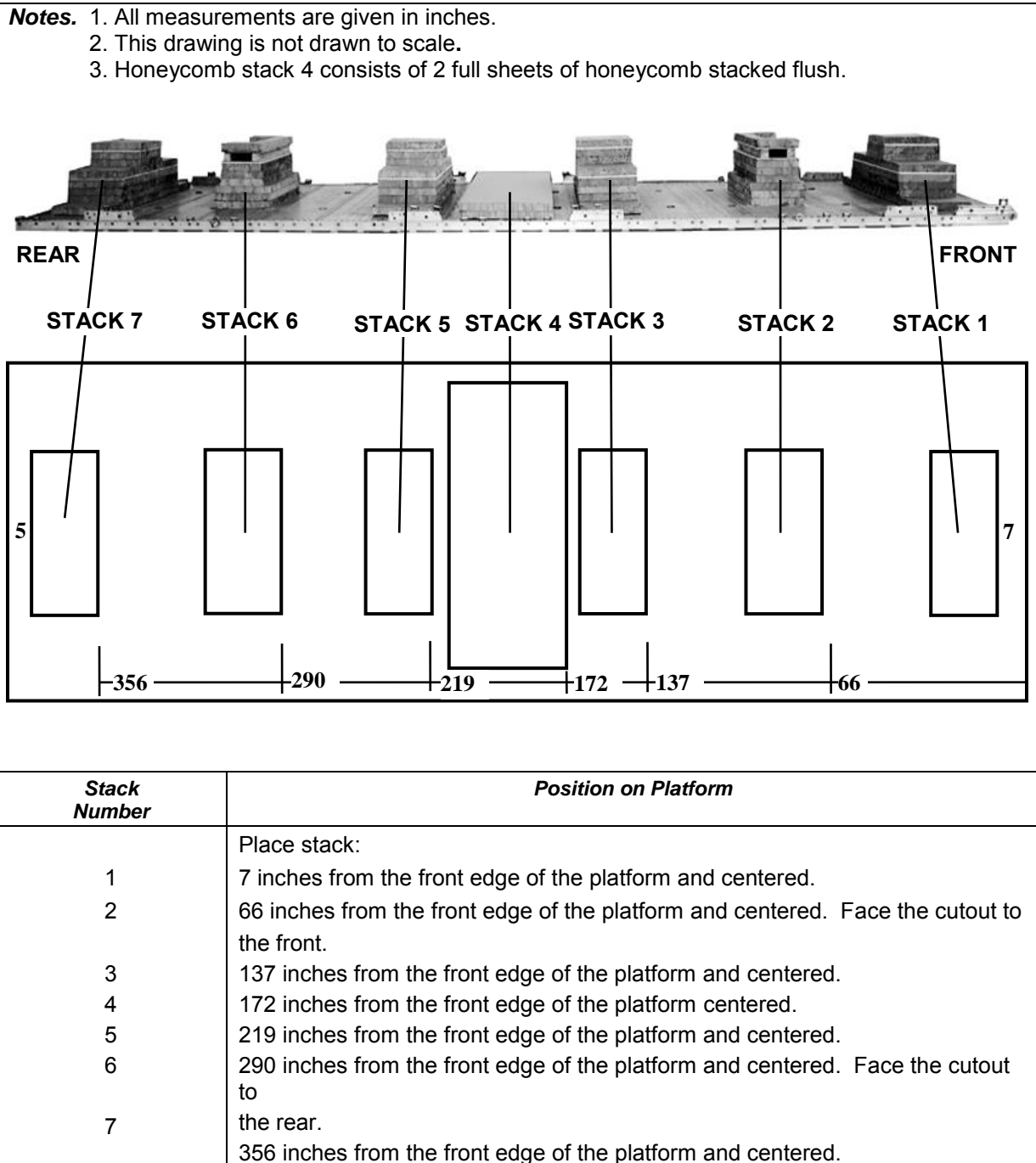
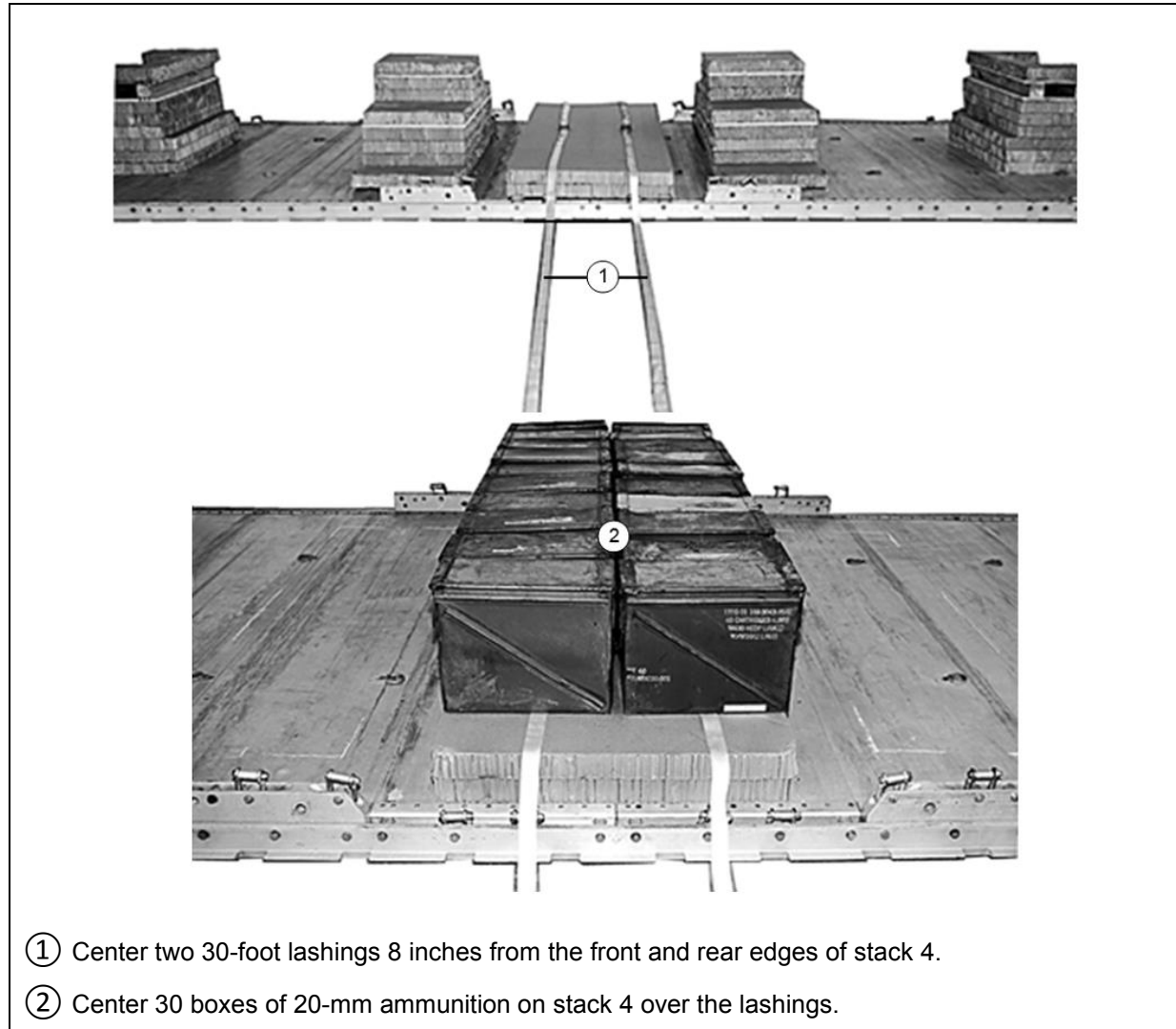


Figure 5-2. Honeycomb Stacks Positioned on Platform

## PLACING AND SECURING ACCOMPANYING LOAD

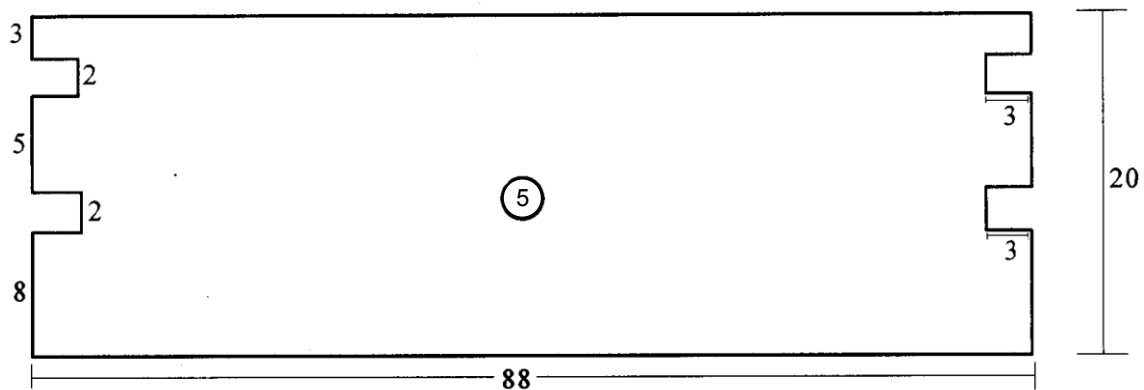
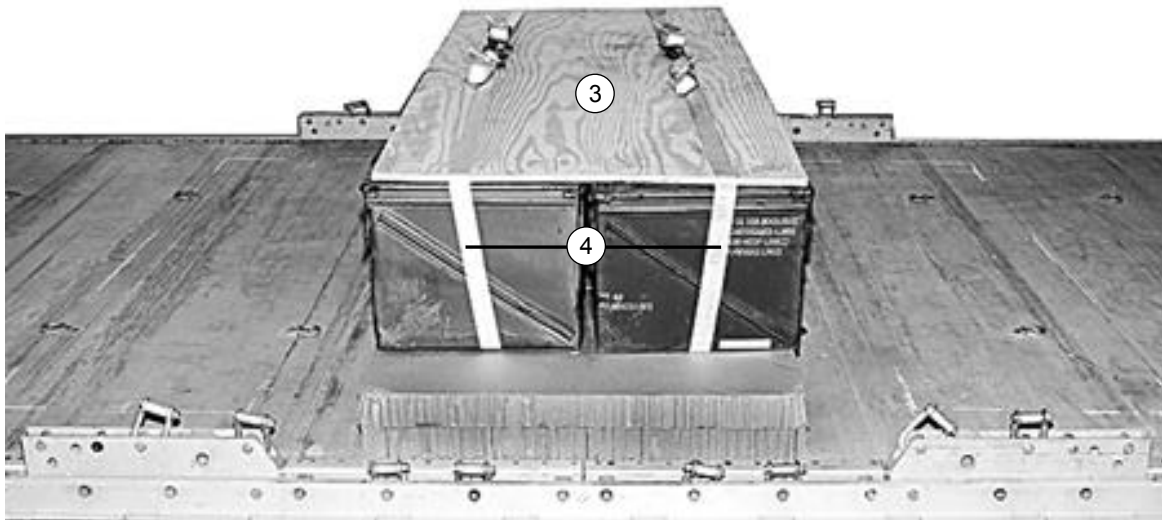
5-4. Place the ammunition boxes on stack 4, place a plywood cove, lash the boxes together (step 4), and construct two end boards as shown in Figure 5-3. Lash the accompanying load and endboards to the platform as shown in Figure 5-4.

*Note.* Adapt these procedures to accommodate other accompanying loads.



**Figure 5-3. Ammunition Boxes Placed and Secured**

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



- ③ Place a  $\frac{3}{4}$ - by 36- by 82-inch piece of plywood flush over the ammunition boxes.
- ④ Secure the 30-foot lashings placed in step 1 over the ammunition boxes.
- ⑤ Construct two endboards from  $\frac{3}{4}$ - by 20- by 88-inch plywood. Place an endboard at each end of the stack of boxes (shown in Figure 5-4).

**Figure 5-3. Ammunition Boxes Placed and Secured (continued)**

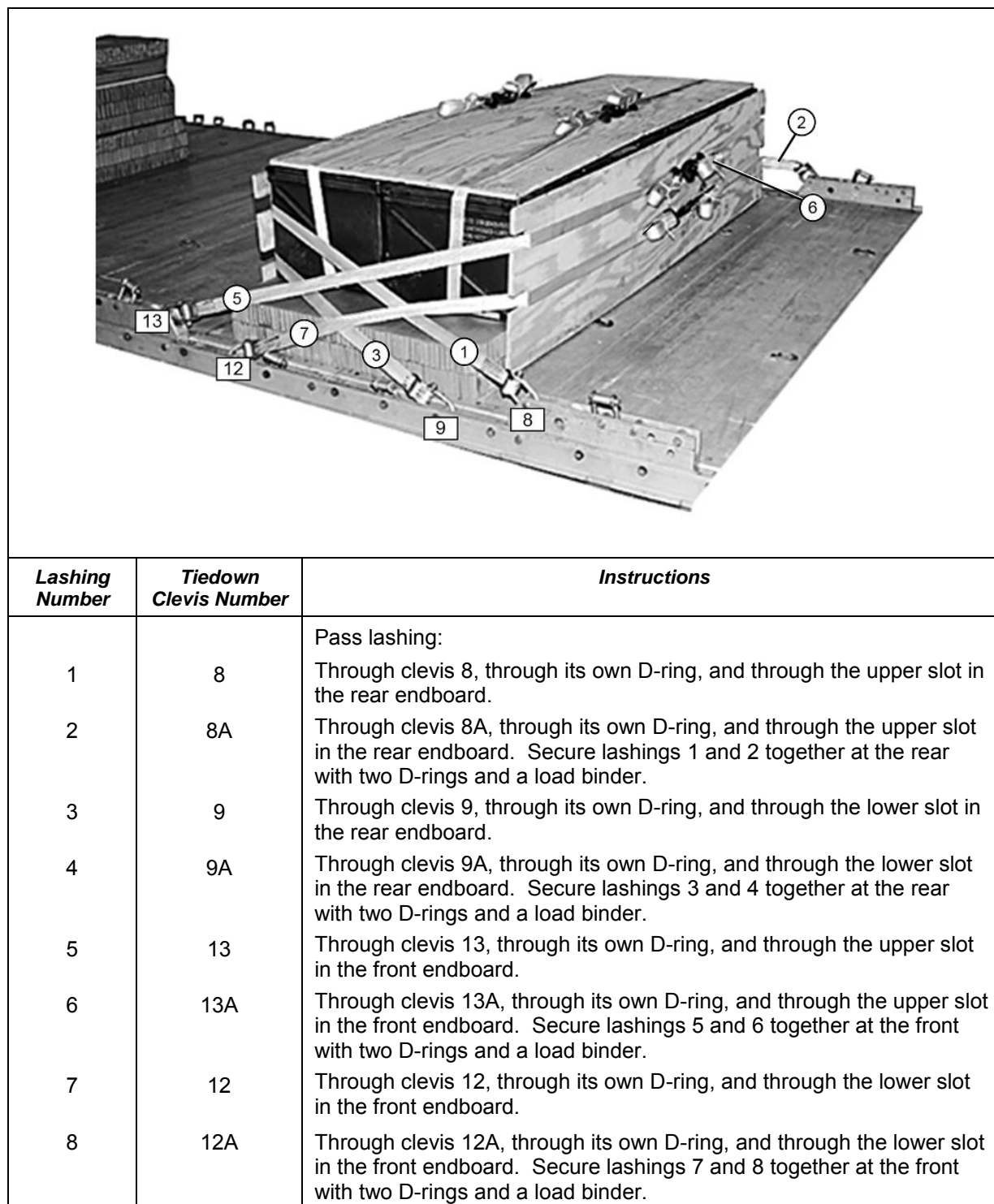
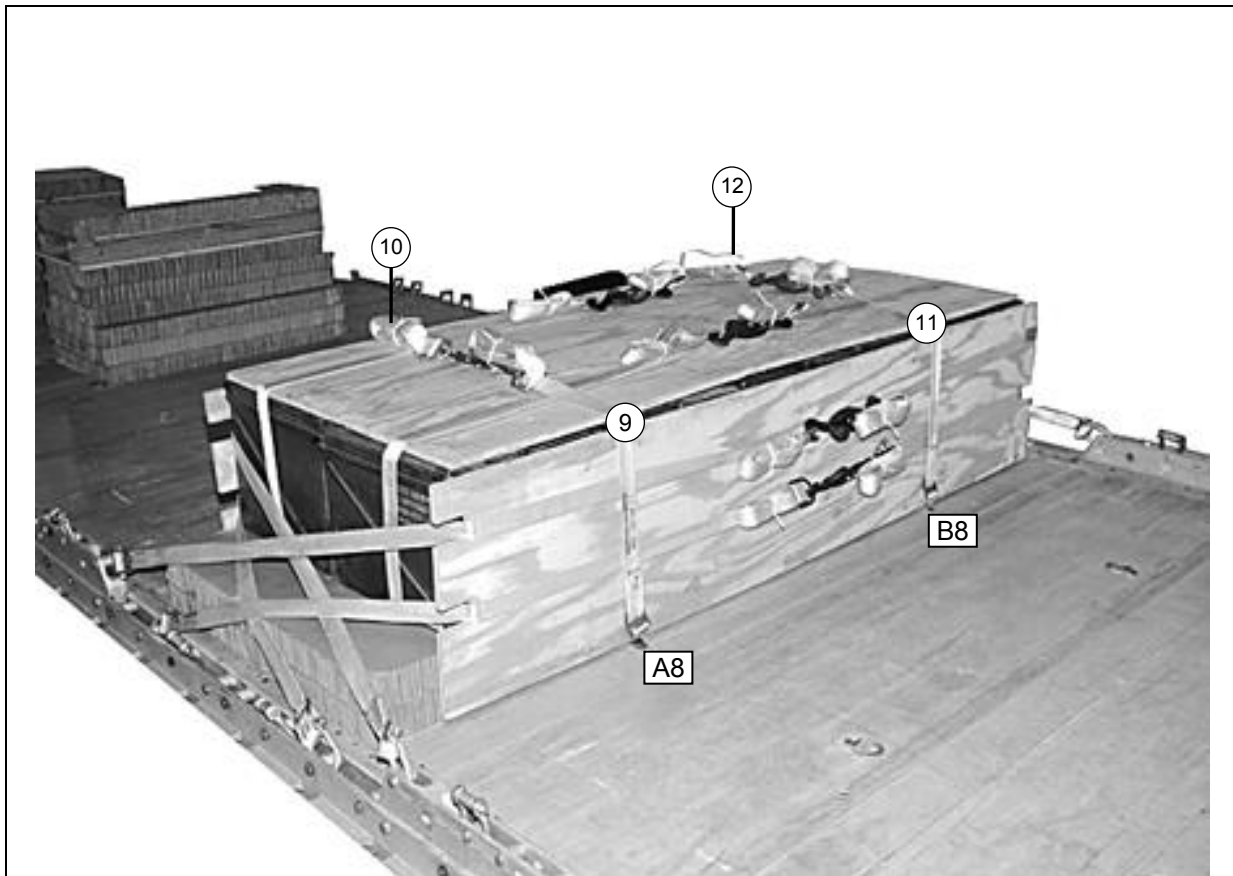


Figure 5-4. Ammunition and Endboards Lashed to Platform



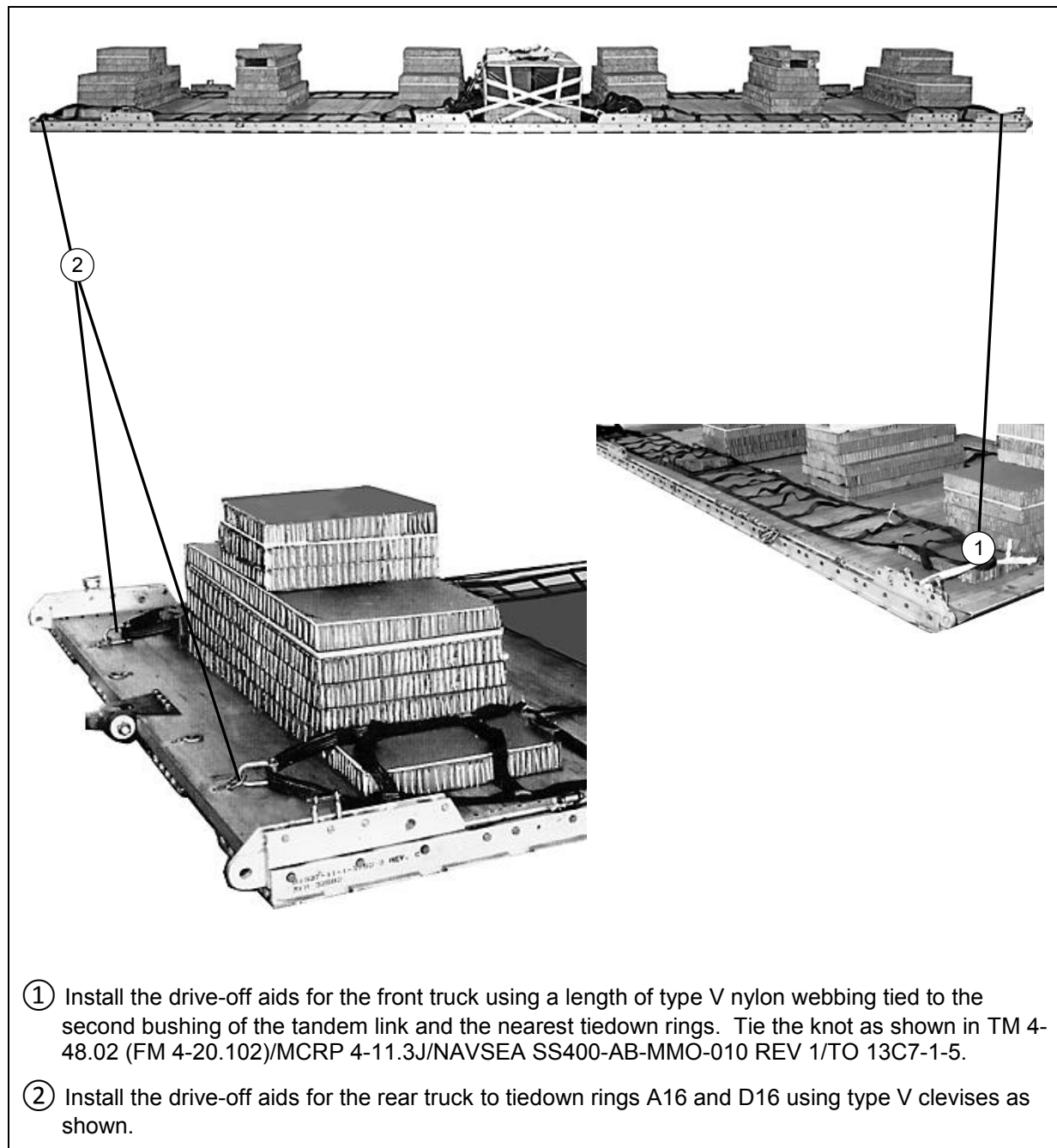


<i><b>Lashing Number</b></i>	<i><b>Tiedown Clevis Number</b></i>	<i><b>Instructions</b></i>
9	A8	Pass lashing:
10	A10	Through deck tiedown ring A8 and through its own D-ring.
11	B8	Through deck tiedown ring A10 and through its own D-ring. Secure lashings 9 and 10 together on top of the boxes with two D-rings and a load binder.
12	B10	Through deck tiedown ring B8 and through its own D-ring.
		Through deck tiedown ring B10 and through its own D-ring. Secure lashings 11 and 12 together on top of the boxes with two D-rings and a load binder.

**Figure 5-4. Ammunition and Endboards Lashed to Platform (continued)**

## INSTALLING OPTIONAL DRIVE-OFF AIDS ON PLATFORM

5-5. Install the operation drive-off aids in the direction in which the truck is to be driven off the platform as shown in Figure 5-5, and according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.

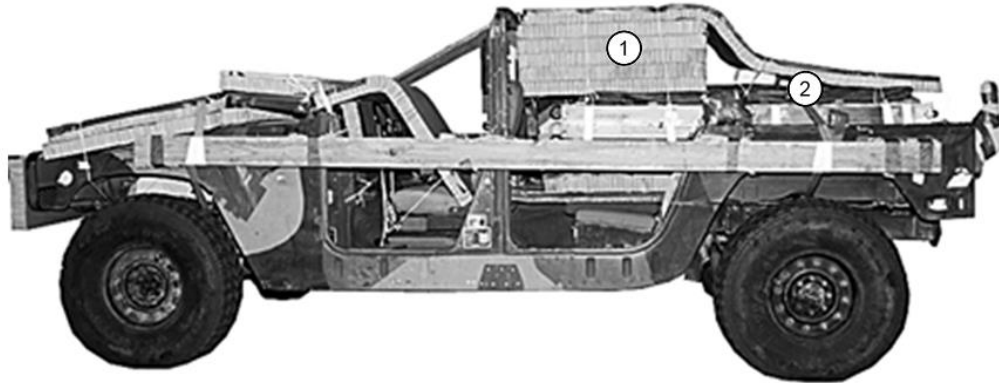


**Figure 5-5. Drive-off Aids Installed on Platform**

## PREPARING AND LOADING TRUCKS

5-6. Prepare and load the trucks as described below:

- Prepare both trucks according to the preparation procedures in Chapter 1 of this manual.
- Omit step 6, Figure 1-10 for both trucks.
- Omit the parachute release platform for the front truck (Figure 1-13, step 1).
- Prepare the parachute release platform and place it on the rear truck as shown in Figure 5-6.
- Use or adapt the procedures in Figure 1-14 of this manual to rig loads in the trucks. For this load, the trucks may be left empty.



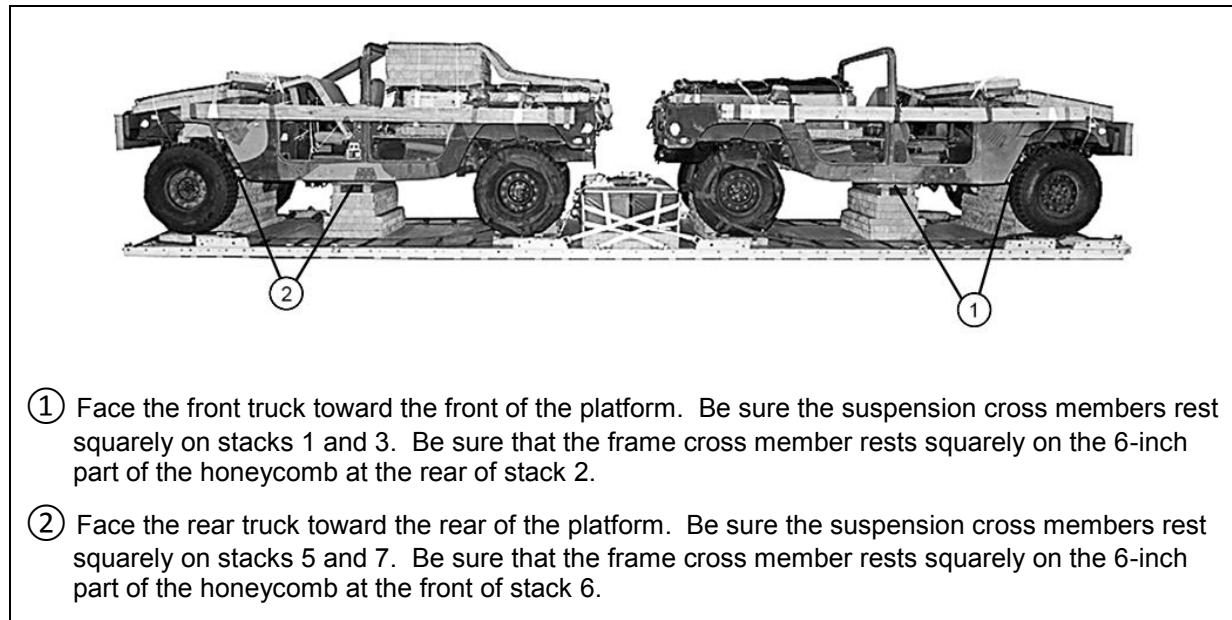
- ① Glue as many pieces of 36- by 24-inch honeycomb flush together as necessary to bring the honeycomb to 3 inches below the height of the B-pillar.
- ② Place a full sheet of honeycomb flush over the stack, extending it to the rear of the truck. Tie all the honeycomb to convenient points on the load with type III nylon cord. Tape the honeycomb where the cord passes over it.

**Note.** It may be necessary to level the accompanying load to allow for the parachute release platform.

**Figure 5-6. Parachute Release Platform Installed on Rear Truck**

## LIFTING AND POSITIONING TRUCK AND INSTALLING OPTIONAL DRIVE-OFF AIDS

5-7. Install the lifting slings as shown in Figure 1-16 of this manual. Position the trucks on the platform as shown in Figure 5-7 below. Attach the optional drive-off aids to the wheels of the trucks according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5, and as shown in Figure 1-17 of this manual.

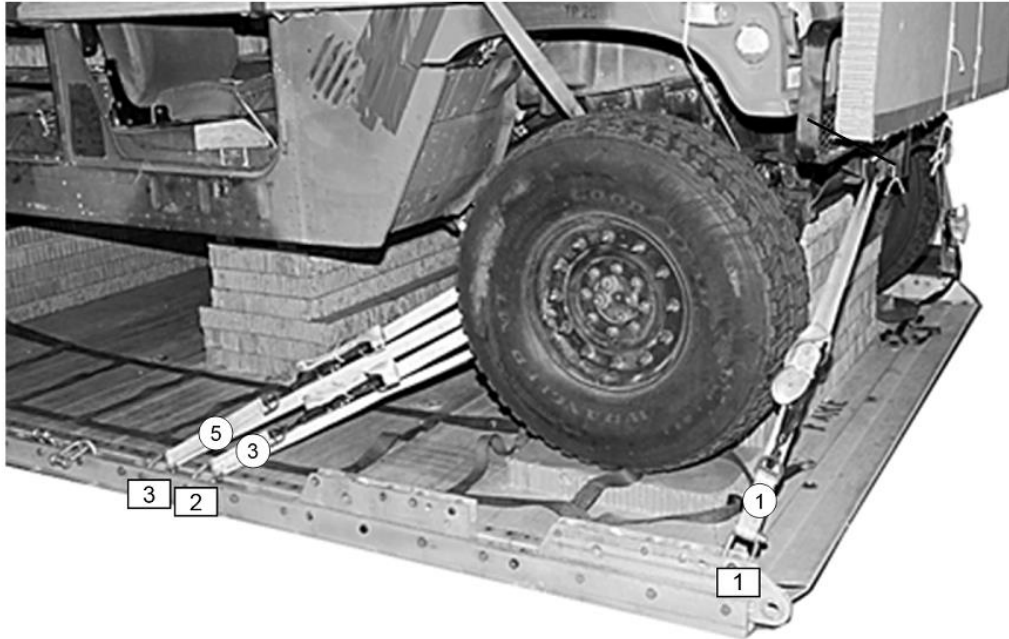


**Figure 5-7. Lifting Slings Installed and Trucks Positioned**

## LASHING TRUCKS

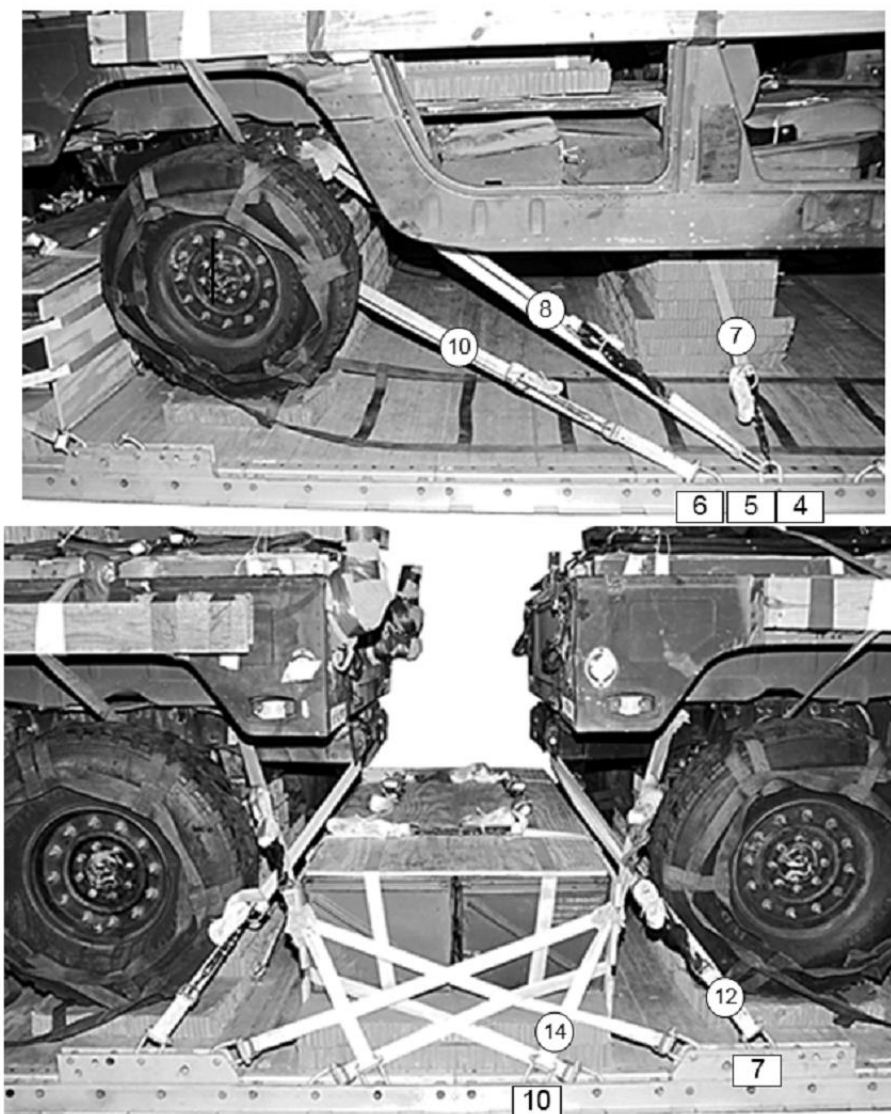
5-8. Lash the trucks to the platform as shown in Figure 5-8 through 5-11, and according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.

*Note.* Right and left in this figure refer to the right and left sides of the trucks. .



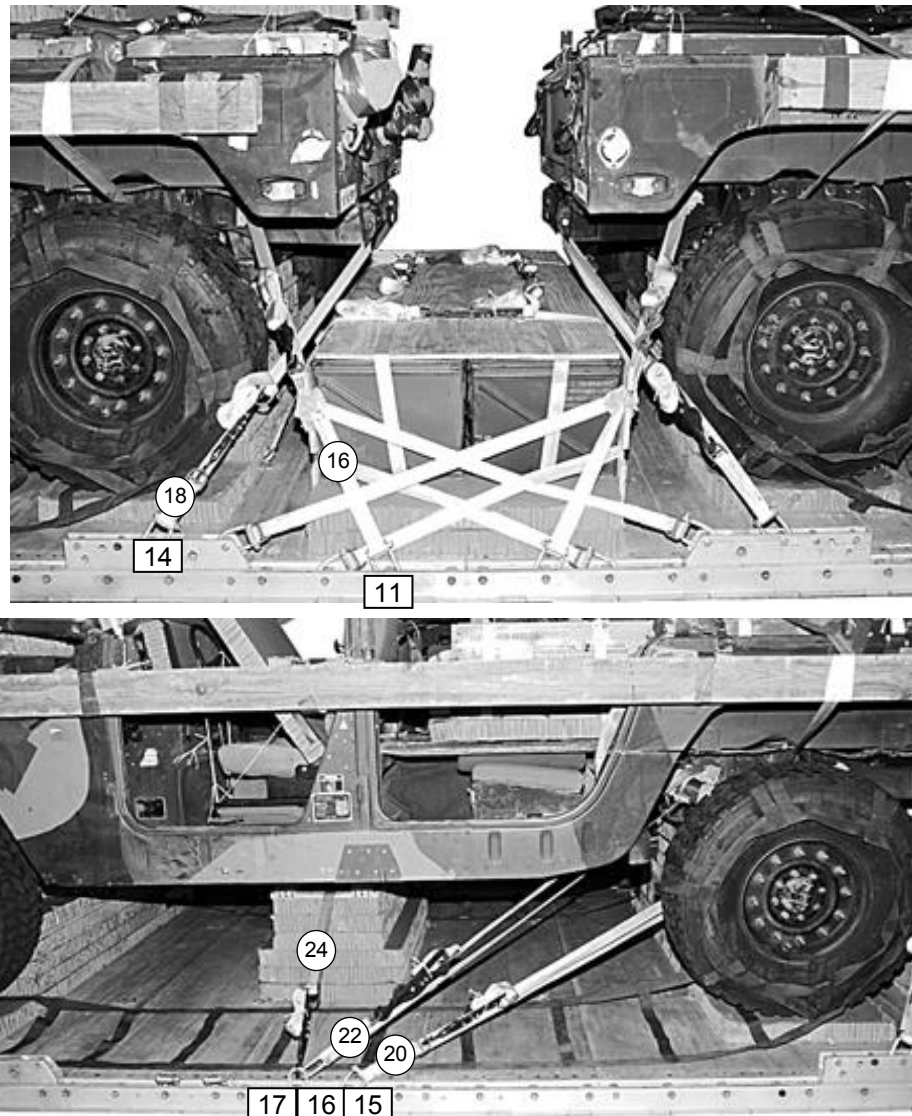
<i>Lashing Number</i>	<i>Tiedown Clevis Number</i>	<i>Instructions</i>
1	1	Pass lashing:
2	1A	Through right lifting shackle on front bumper.
3	2	Through left lifting shackle on front bumper.
4	2A	Around right front lower control arm.
5	3	Around right front lower control arm.
6	3A	Through tiedown bracket behind right front coil spring.
		Through tiedown bracket behind right front coil spring.

**Figure 5-8. Lashings 1 Through 6 Installed.**



<b>Lashing Number</b>	<b>Tiedown Clevis Number</b>	<b>Instructions</b>
7	4 and 4A	Pass lashing: Pass a 15-foot lashing through clevis 4A and through its own D-ring. Pass the lashing through the hole in stack 2. Attach the lashing to clevis 4 with a load binder.
8	5	Around the right upper control arm.
9	5A	Around the left upper control arm.
10	6	Around the right lower control arm.
11	6A	Around the left lower control arm.
12	7	Through the right rear tiedown shackle.
13	7A	Through the left rear tiedown shackle.
14	10	Through the tiedown bracket behind the right rear coil spring.
15	10A	Through the tiedown bracket behind the left rear coil spring.

**Figure 5-9. Lashings 7 Through 15 Installed.**



<b>Lashing Number</b>	<b>Tiedown Clevis Number</b>	<b>Instructions</b>
16	11	Pass lashing:
17	11A	Through tiedown bracket behind left rear coil spring.
18	14	Through tiedown bracket behind right rear coil spring.
19	14A	Through left lifting shackle on rear bumper.
20	15	Through right lifting shackle on rear bumper.
21	15A	Around left lower control arm.
22	16	Around right lower control arm.
23	16A	Around left upper control arm.
24	17 and 17A	Around right upper control arm.
		Pass a 15-foot lashing through clevis 17A and through its own D-ring.
		Pass the lashing through the hole in stack 6. Attach the lashing to clevis 17 with a load binder.

Figure 5-10. Lashings 16 Through 24 Installed

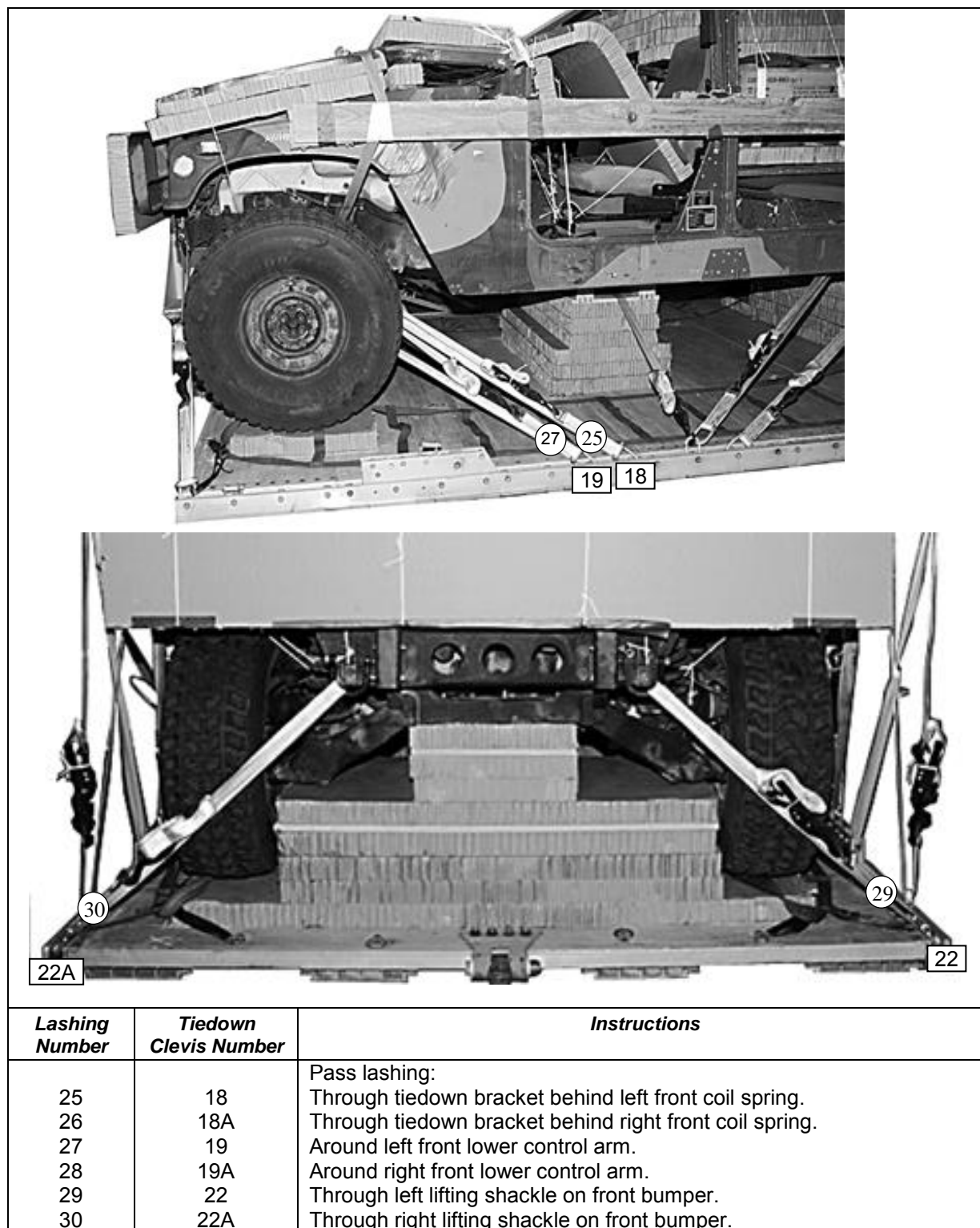
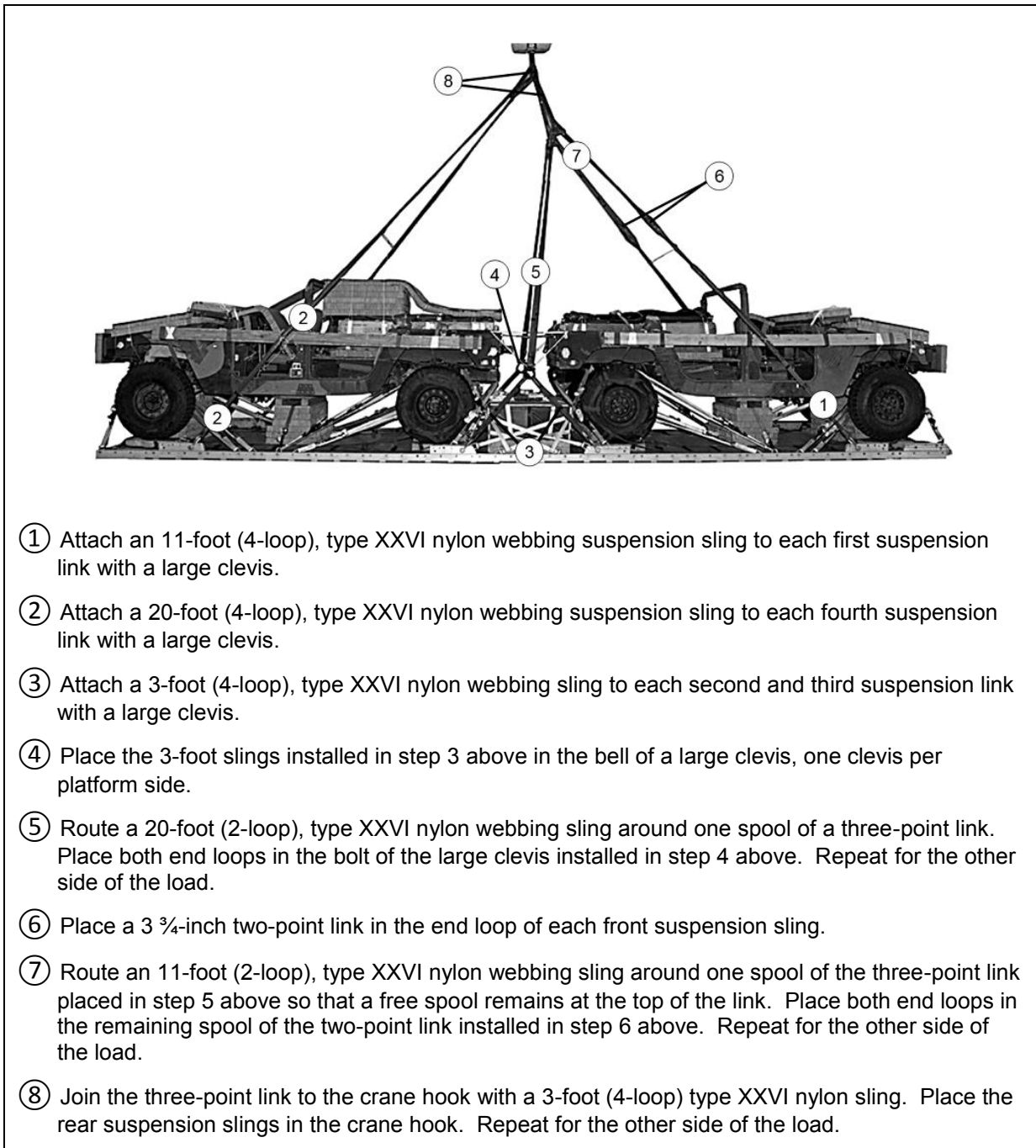


Figure 5-11. Lashings 25 Through 30 Installed

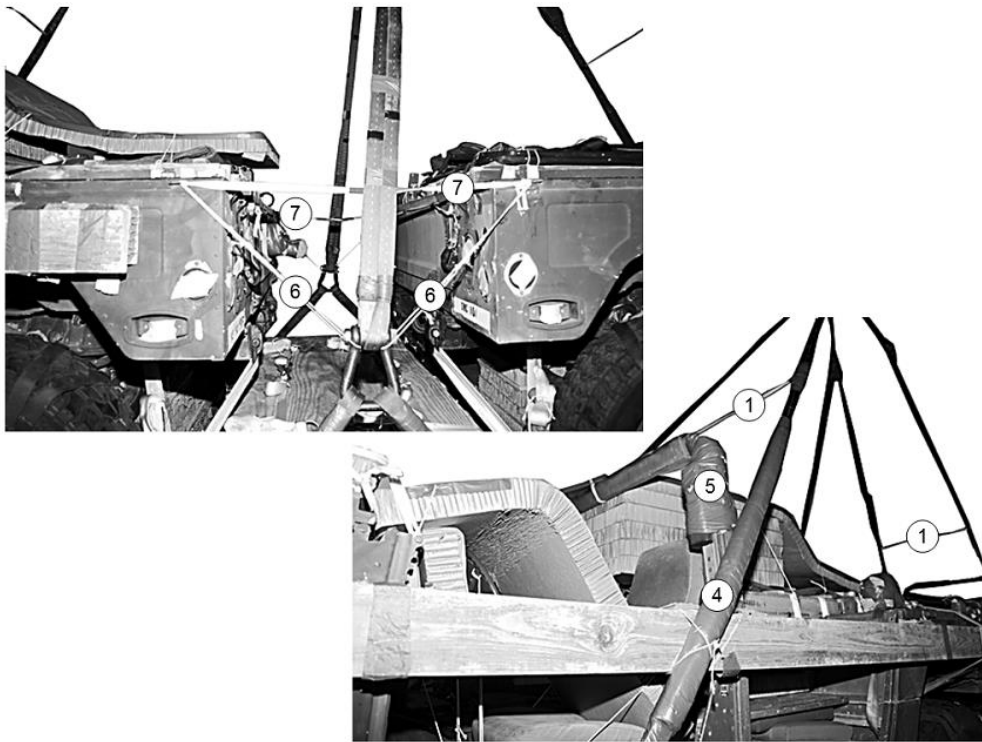


## INSTALLING AND SAFETY TIEING SUSPENSION SLINGS

5-9. Install the suspension slings according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5, and as shown in Figure 5-12. Pad and safety tie the suspension slings as shown in Figure 5-13.



**Figure 5-12. Suspension Slings Installed**



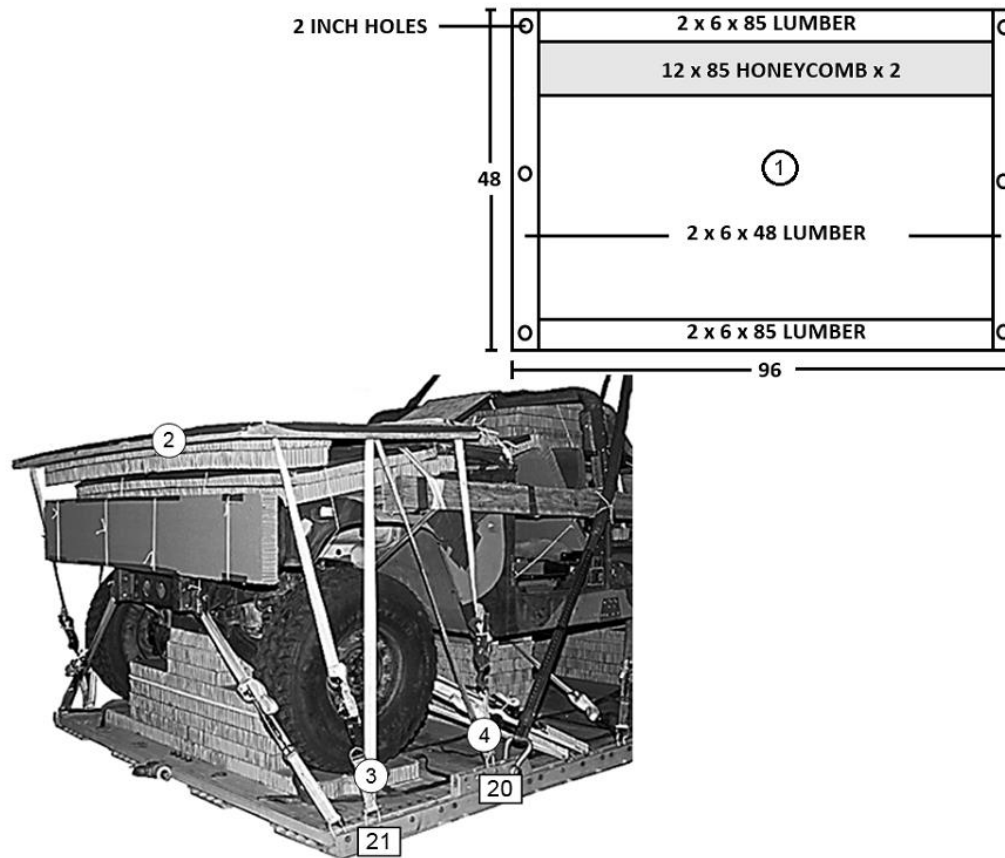
- ① Make the modified deadman tie on the front and rear suspension slings using the instructions in TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.
- ② Wrap all links with felt taped in place (not shown).
- ③ Wrap the front suspension slings between 50 and 104 inches along the slings with felt taped in place. Secure the slings to the truck sideboards with type III nylon cord (not shown).
- ④ Wrap the rear suspension slings between 47 and 97 inches along the slings with felt taped in place. Secure the slings to the truck sideboards with type III nylon cord.
- ⑤ Pad both truck B-pillars with cellulose wadding and tape in place.
- ⑥ Support the large clevises on both center suspension slings with ½-inch tubular nylon webbing tied to convenient points on the trucks.
- ⑦ Tie an additional length of ½-inch tubular nylon webbing between convenient points on the two trucks to safety tie the suspension slings to the outside.

**Figure 5-13. Suspension Slings Padded and Safety Tied**

## BUILDING AND INSTALLING PARACHUTE STOWAGE PLATFORM

5-10. Build and install the parachute stowage platform as shown in Figure 5-14.

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

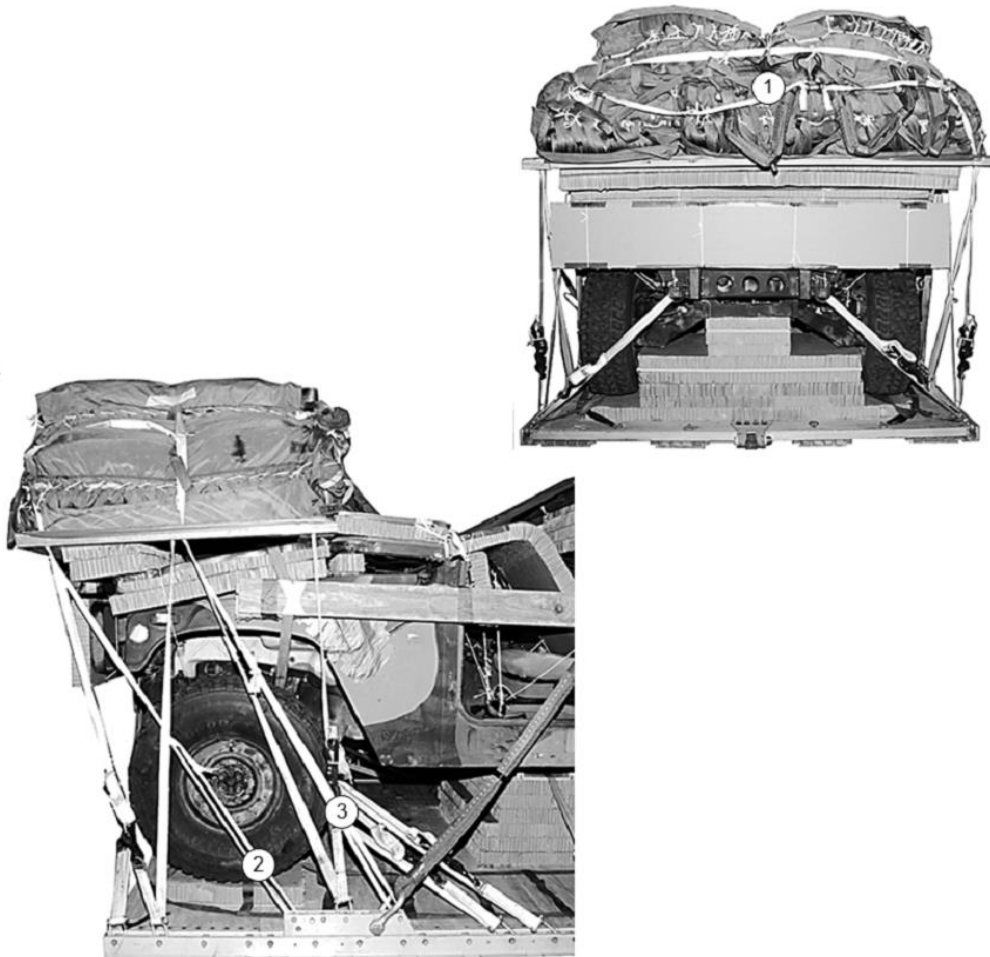


- ① Construct the parachute stowage platform using a 96- by 48-inch piece of  $\frac{3}{4}$ -inch plywood and 2- by 6- by 85 inch and 2- by 6- by 48 inch lumber as shown. Glue two 85-by 12-inch pieces of honeycomb to the underside flush against the outside piece of 2- by 6-inch lumber.
- ② Place the parachute stowage platform on the hood of the rear truck with the honeycomb placed in step 1 above facing the rear.
- ③ Lash the two rear holes in the platform to clevises 21 and 21A.
- ④ Lash the two front holes in the platform to clevises 20 and 20A.

**Figure 5-14. Parachute Stowage Platform Constructed and Installed**

## STOWING CARGO PARACHUTES

5-11. Use five G-11 parachutes on this load. Prepare and stow the cargo parachutes as shown in Figure 5-15.

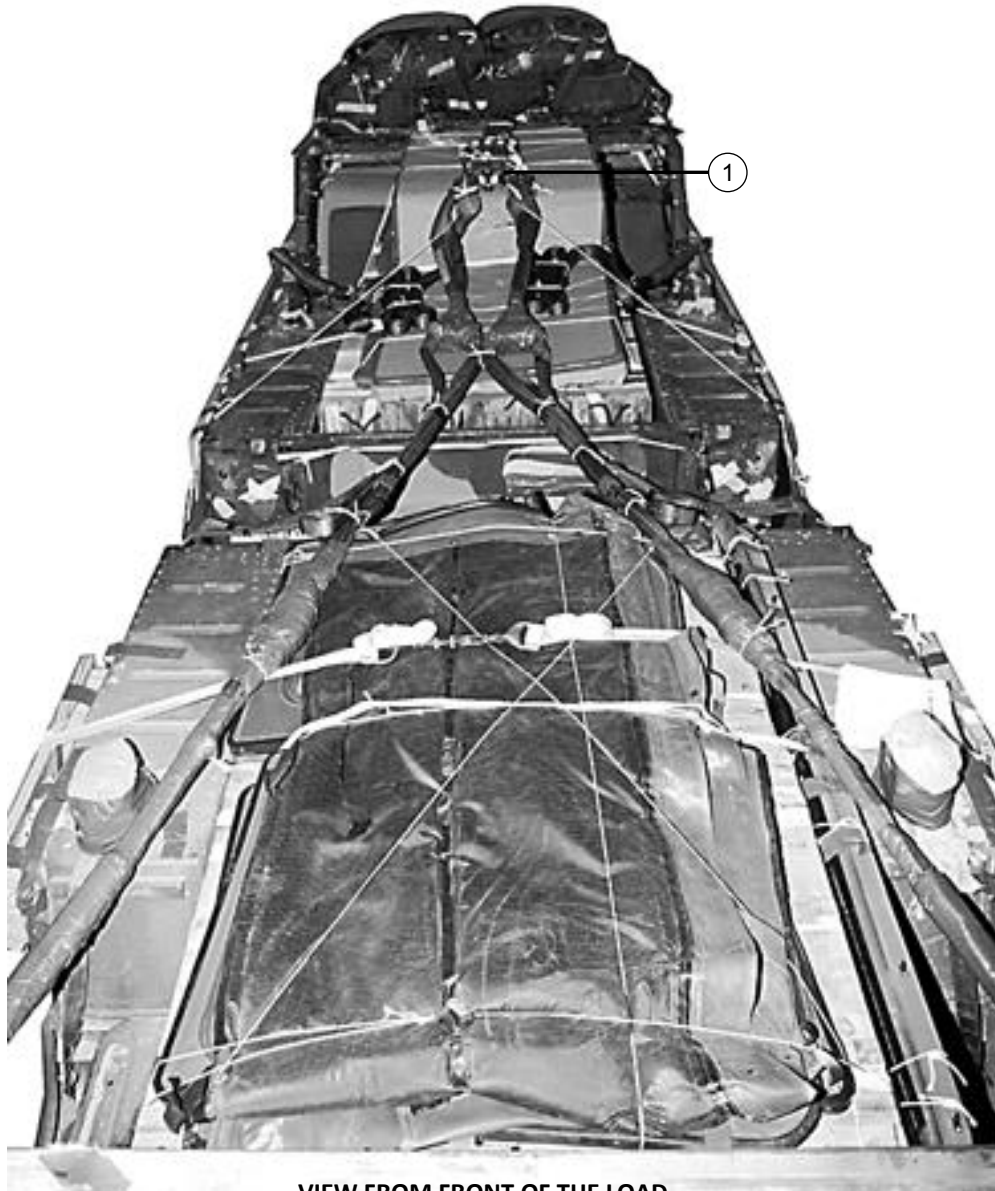


- ① Prepare five G-11 cargo parachutes and stow them on the parachute stowage platform. Prepare and stow the parachutes according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.
- ② Tie the rear parachute restraint strap to the fourth bushing on the fourth suspension link on each side.
- ③ Tie the front parachute restraint strap to the first bushing on the fourth suspension link on each side.

**Figure 5-15. Cargo Parachutes Stowed**

## INSTALLING PARACHUTE RELEASE

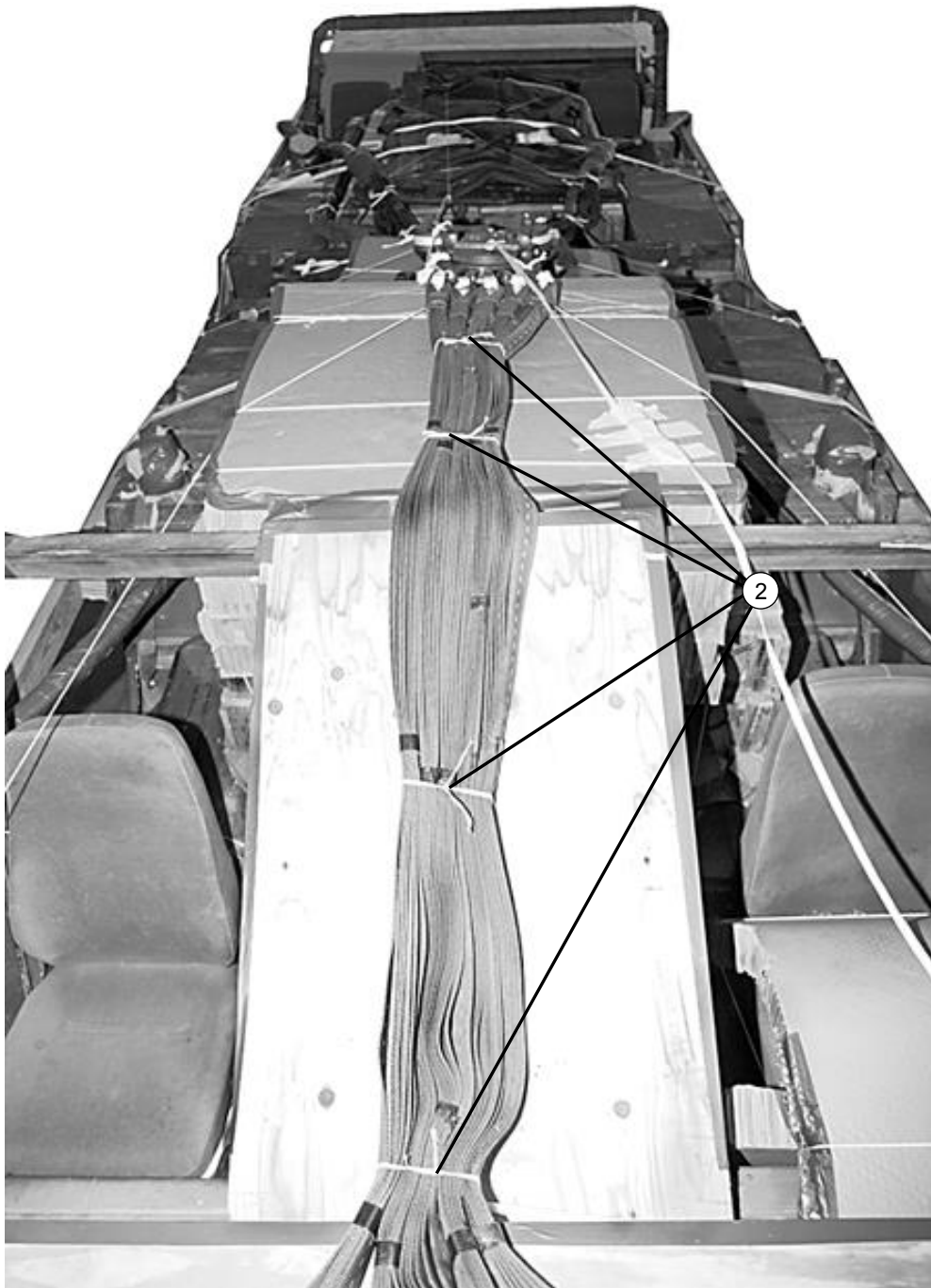
5-12. Prepare and install an M-2 cargo-parachute release according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5, and as shown in Figure 5-16.



VIEW FROM FRONT OF THE LOAD

- ① Place the M-2 release on the parachute release platform. Tie it to convenient points on the load with type III nylon cord.

**Figure 5-16. M-2 Cargo Parachute Release Installed**

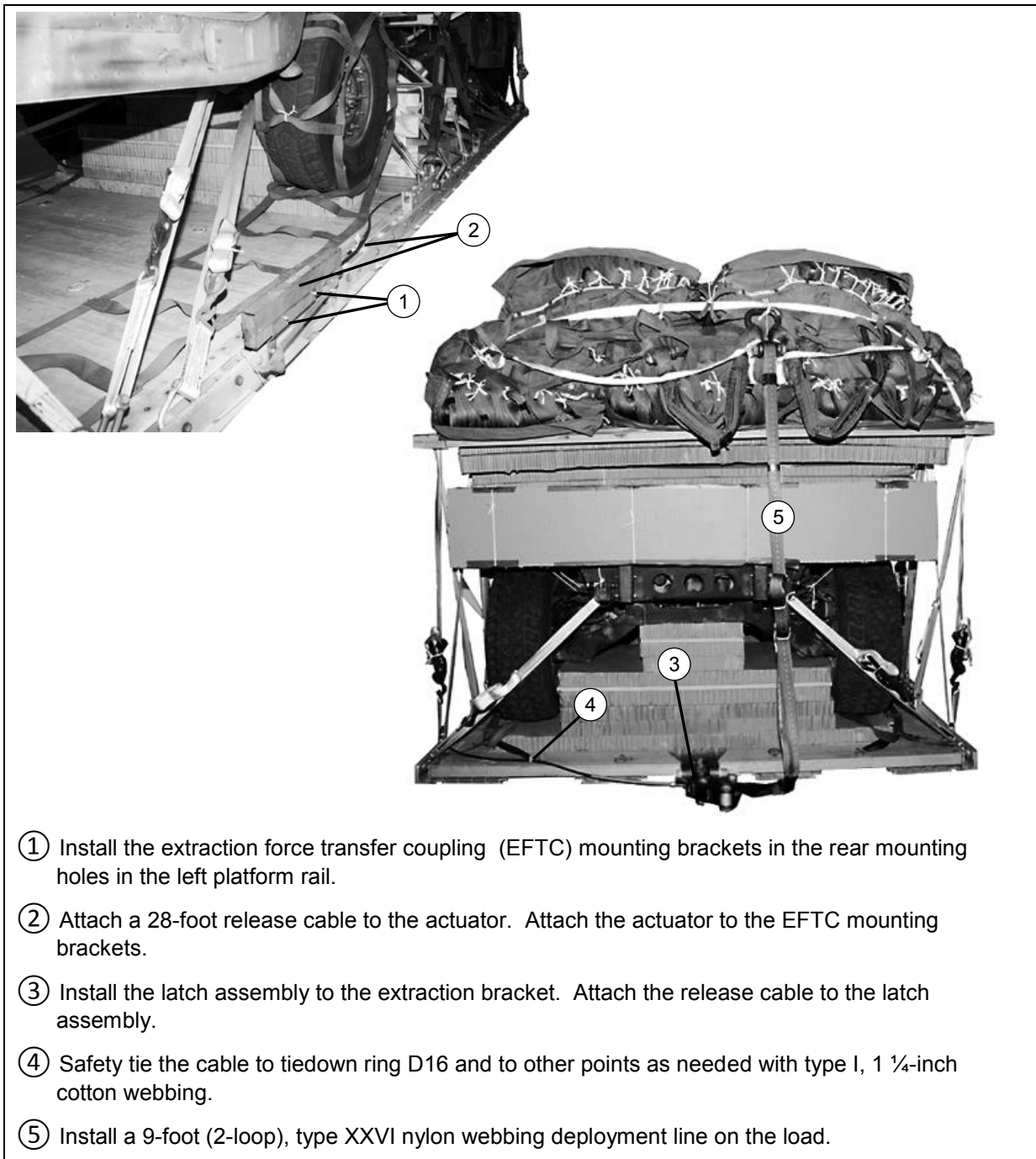


- ② Tie the riser extensions in four places, equally spaced, with type I, 1/4-inch cotton webbing.

**Figure 5-16. M-2 Cargo Parachute Release Installed (continued)**

## INSTALLING EXTRACTION SYSTEM

5-13. Install the EFTC according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5, and as shown in Figure 5-17.



**Figure 5-17. Extraction Force Transfer Coupling (EFTC) Installed**

## **INSTALLING PROVISIONS FOR EMERGENCY RESTRAINTS**

5-14. Select and install provisions for emergency restraint according to the emergency aft restraint requirements table in TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.

## **PLACING EXTRACTION PARACHUTE**

5-15. Select the extraction parachute and extraction line needed using the extraction line requirements table in TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5. Rig the extraction line in an extraction line bag according to TM 10-1670-286-20/TO 13C5-2-41. Place the extraction parachute and extraction line on the load for installation in the aircraft.

## **MARKING RIGGED LOAD**

5-16. Mark the rigged load according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figure 5-18. Complete Shipper's Declaration for Dangerous Goods according to AFMAN 24-204/TM 38-250/NAVSUP PUB505/MCO P4030.19H/DLAI 4145.3. If the load varies from the one shown, the weight, height, CB, tip-off curve, and parachute requirements must be recomputed.

## **EQUIPMENT REQUIRED**

5-17. Use the equipment listed in Table 5-1 to rig this load. The equipment for rigging an accompanying load in the trucks is NOT given in Table 5-1.



### CAUTION

Make the final rigger inspection required by AR 59-4 (using DD Form 1748 Joint Airdrop Inspection Record (Platforms) or appropriate DD Form 1748 series).



### RIGGED LOAD DATA

Weight.....	21,200 pounds
Maximum Load Allowed .....	26,250 pounds
Height With Five G-11 Parachute.....	96 inches
Width.....	108 inches
Length.....	409 inches
Overhang: Front (vehicle) .....	0 inches
Rear (extraction force transfer coupling ) .....	18 inches
Center of Balance (CB) (from front edge of platform) .....	207 inches

**Figure 5-18. Two M998 Trucks and Ammunition Rigged on a 32-Foot Type V Platform**

**Table 5-1. Equipment Required for Rigging Two M998 Trucks and Ammunition for Low-Velocity Airdrop**

<b>National Stock Number</b>	<b>Item</b>	<b>Quantity</b>
8040-00-273-8713	Adhesive, paste, 1-gallon	As required
4030-00-090-5354	Clevis, suspension, 1-in (large)	18
4020-00-240-2146	Cord, nylon type III, 550-lb	As required
1670-01-326-7309	Coupling assembly, airdrop, extraction force transfer with cable, 28-ft	1
	Cover:	
1670-00-360-0328	Clevis, large	5
8135-00-664-6958	Cushioning material, packaging, cellulose wadding	As required
8305-00-958-3685	Felt, ½-in thick	As required
1670-01-183-2678	Leaf, extraction line (line bag)	2
	Line, drogue (for C-17)	
1670-01-062-6313	60-ft (3-loop), type XXVI	1
	Line, extraction:	
1670-01-062-6313	For C-130: 60-ft (3-loop), type XXVI	1
1670-01-107-7651	For C-141: 140-ft (3-loop), type XXVI	1
	For C-5:	
1670-01-062-6313	60-ft, (3-loop), type XXVI and	1
1670-01-107-7651	140-ft, (3-loop), type XXVI	1
	For C-17:	
1670-01-107-7651	140-ft (3-loop), type XXVI	1
	Link Assembly:	
	Two-point:	3
5306-00-435-8994	Bolt, 1-in diam, 4-in long	(6)
5310-00-232-5165	Nut, 1-in, hexagonal	(6)
1670-00-003-1953	Plate, side, 3 ¾-in	(6)
5365-00-007-3414	Spacer, large	(6)
	Lumber:	
5510-00-220-6448	2- by 6-in	As required
5510-00-220-6274	4- by 4-in	As required
5315-00-010-4659	Nail, steel wire, 8d	As required

**Table 5-1. Equipment Required for Rigging Two M998 Trucks and Ammunition for Low-Velocity Airdrop (continued)**

National Stock Number	Item	Quantity
1670-00-753-3928	Pad, energy-dissipating (honeycomb) 3- by 36- by 96-in	28 Sheets
	Parachute:	
	Cargo:	
1670-01-016-7841	G-11B	5
	Cargo extraction:	
1670-00-040-8135	28-ft (Add H-block for use with C-17 aircraft)	1
	Drogue (for C-17)	
1670-01-063-3715	15-ft	1
	Platform, airdrop, type V, 32'	
1670-01-353-8425	Bracket assembly, extraction force transfer coupling	(1)
1670-01-162-2372	Clevis assembly, type V	(46)
1670-01-162-2376	Bracket assembly, extraction	(1)
1670-01-247-2389	Link, suspension bracket, type V	(8)
1670-01-162-2381	Tandem link assembly (Multipurpose link)	(2)
5530-00-128-4981	Plywood, ¾-in	7
1670-01-097-8817	Release, cargo parachute, M-2	1
	Sling, cargo, airdrop	
	For suspension:	
1670-01-062-6306	3-ft (4-loop), type XXVI nylon webbing	6
1670-01-063-7760	11-ft (2-loop), type XXVI nylon webbing	2
1670-01-062-6310	11-ft (4-loop), type XXVI nylon webbing	2
1670-01-062-6302	20-ft (2-loop), type XXVI nylon webbing	2
1670-01-064-4453	20-ft (4-loop), type XXVI nylon webbing	2
	For lifting:	
1670-01-062-6304	9-ft (2-loop), type XXVI nylon webbing	2
1670-01-062-6303	12-ft (2-loop), type XXVI nylon webbing	2
	For deployment:	
1670-01-062-6304	9-ft (2-loop), type XXVI nylon webbing	1
	For riser extension:	
1670-01-062-6311	120-ft (2-loop), type XXVI nylon webbing	5
5340-00-040-5319	Strap, parachute release, multi-cut, comes w/ 3 knives	2
7510-00-266-5016	Tape, adhesive, 2-in	As required
1670-01-344-0825	Tiedown assembly, 15-foot	58
	Vehicle drive-off aid	2
	Webbing:	
8305-00-268-2411	Cotton, ¼-in, type I	As required
8305-00-082-5752	Nylon, tubular, ½-in	As required
No NSN	Type V	As required
8305-00-263-3591	Type VIII	As required
Legend		
ft	foot	
lb	pound	
in	inch	

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## Chapter 6

# Rigging Ground Mobility Vehicle on a 16-Foot Platform for Low-Velocity Airdrop

### DESCRIPTION OF LOAD

6-1. The Ground Mobility Vehicle is a modified M1025 HMMWV-series truck is shown in Figure 6-1. It has a winch, a rigid roof, and a turret to support weapons. It is rigged the same as the M998 truck except as noted. The truck is rigged on a 16-foot, type V airdrop platform for low-velocity airdrop. The truck is configured to carry a special operations load. The accompanying load shown weighs 2, 140 pounds. The load shown requires three G-11 cargo parachutes

### PREPARING PLATFORM

6-2. Prepare a 16-foot, type V airdrop platform according to TM 10-1670-268-20&P/TO 13C7-52-22. Install four tandem links and 18 load tiedown clevises according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5, and as show in Figure 6-2.

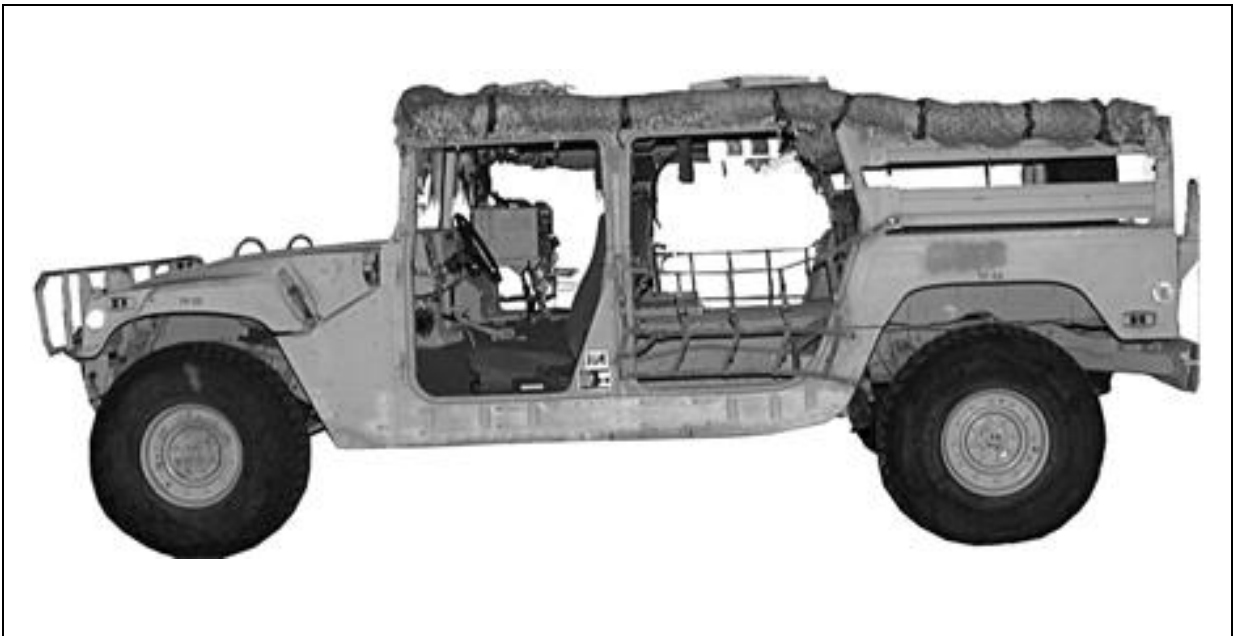
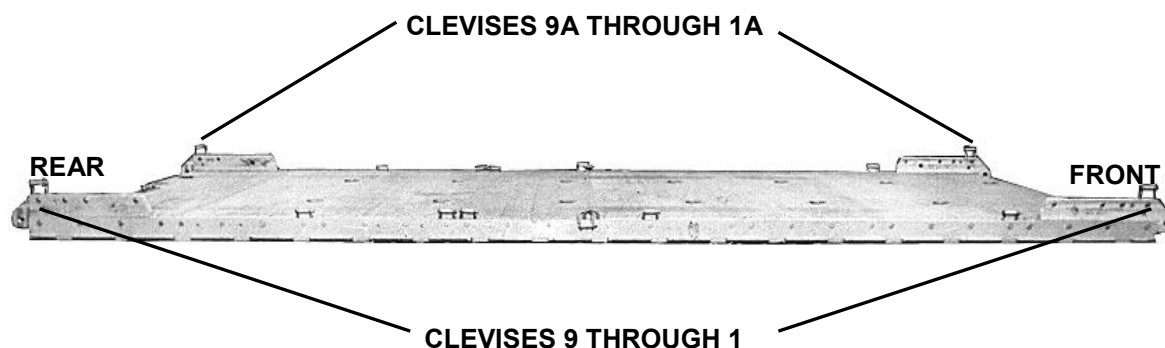


Figure 6-1. Ground Mobility Vehicle



Steps:

1. Install a tandem link on the front of each platform side rail using holes 1, 2, and 3.
2. Install a tandem link on the rear of each platform side rail using holes 30, 31, and 32.
3. Install a clevis on bushing 1 of each front tandem link.
4. Install a clevis on bushing 4 of each rear tandem link.
5. Starting at the front of the platform, install clevises on each platform side rail using the bushings bolted on holes 5, 15, 20, 21, and 25.
6. Install clevis on bushing 17 in an inverted position. Install a bushing on clevis 17A in the normal position. Bolt an additional clevis to each of these clevises.
7. Starting at the front of the platform, number the clevises bolted to the right side of the platform from 1 through 9, and those bolted to the left side from 1A through 9A. Number the clevises on the 17<sup>th</sup> bushings 5 and 5A. Number the clevises bolted to these clevises, clevises 4 and 4A.
8. Label the tiedown rings according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.

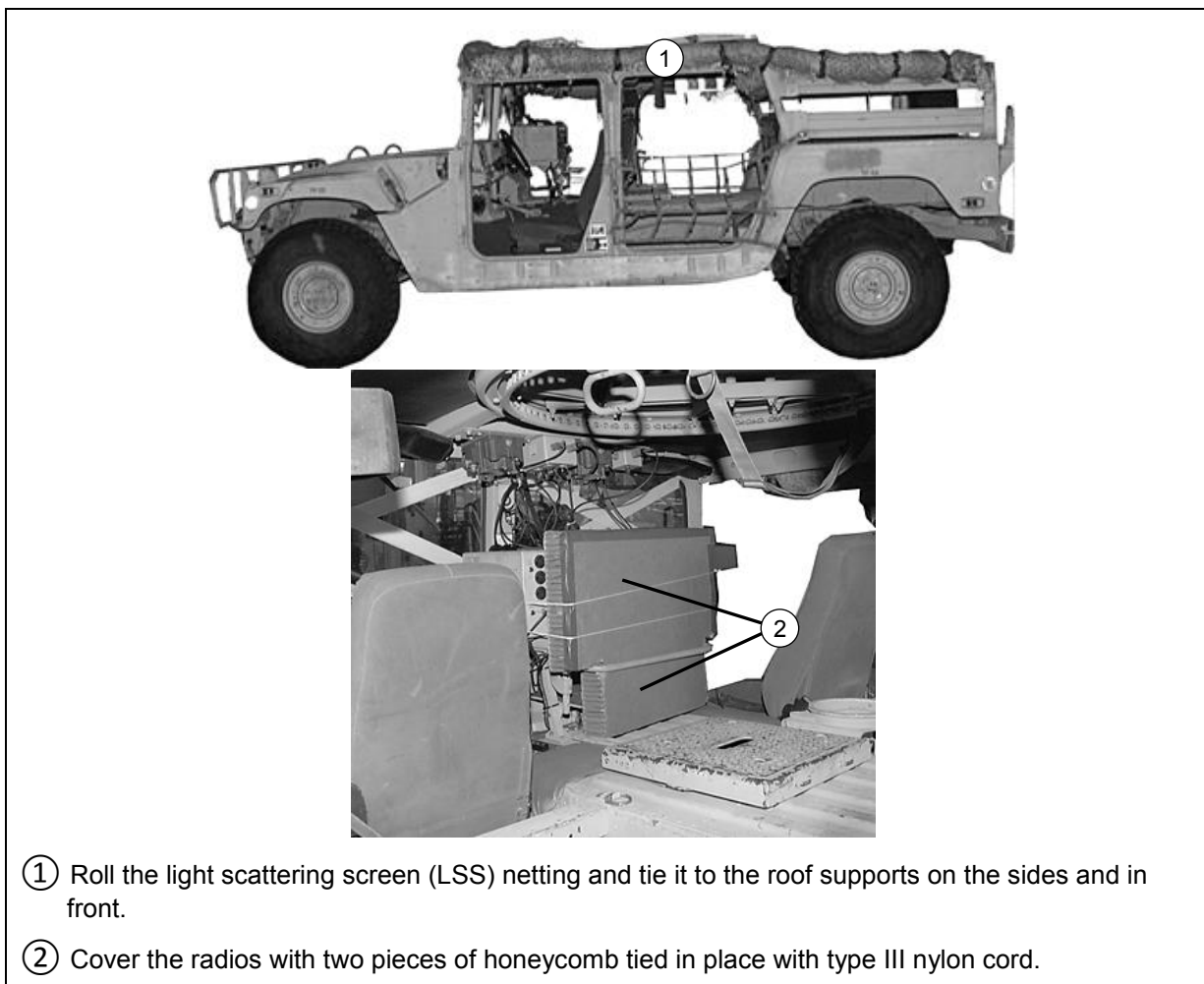
**Figure 6-2. Platform Prepared**

## PREPARING AND POSITIONING HONEYCOMB STACKS

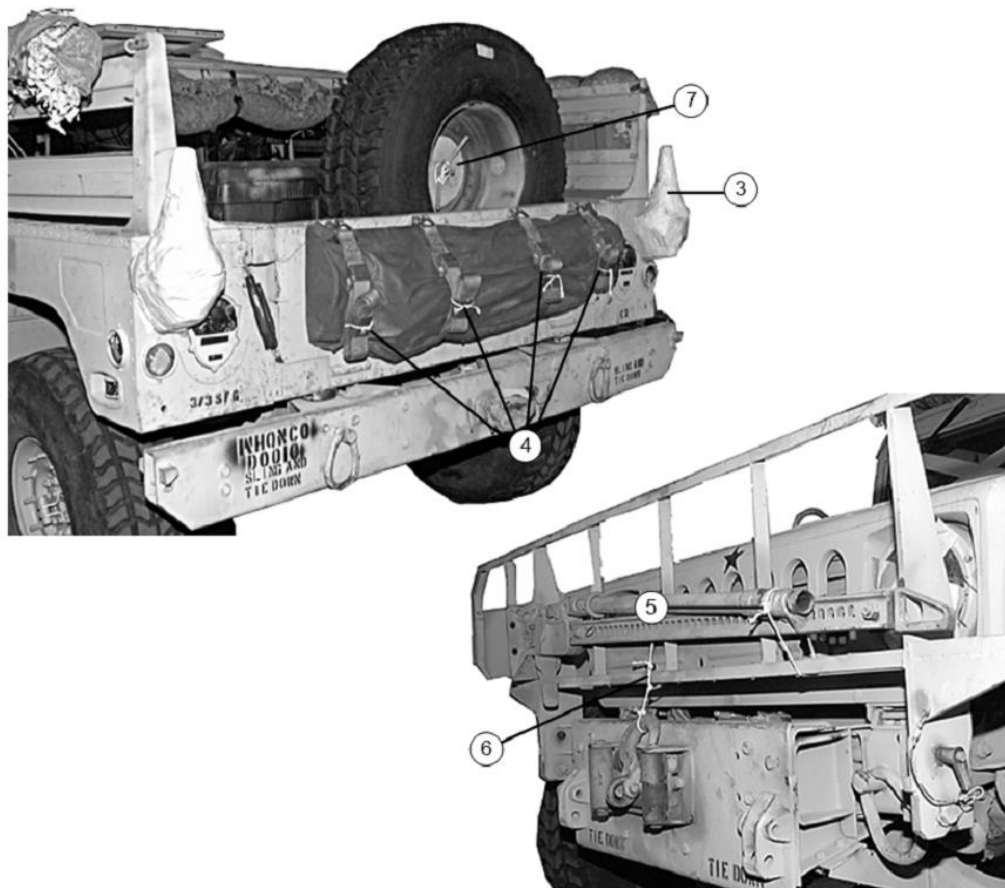
6-3. Prepare three honeycomb stacks as shown in Figures 1-3 and 1-4. Position the stacks on the platform as shown in Figure 1-5, and according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.

## PREPARING TRUCK AND STOWING LOAD

6-4. Prepare the truck as described in paragraphs Figure 1-6, 1-7 omit step 1, and Figure 1-11. Use Figures 6-3 through 6-10 to rig the specialized load and to further prepare the truck.



**Figure 6-3. Truck Prepared**

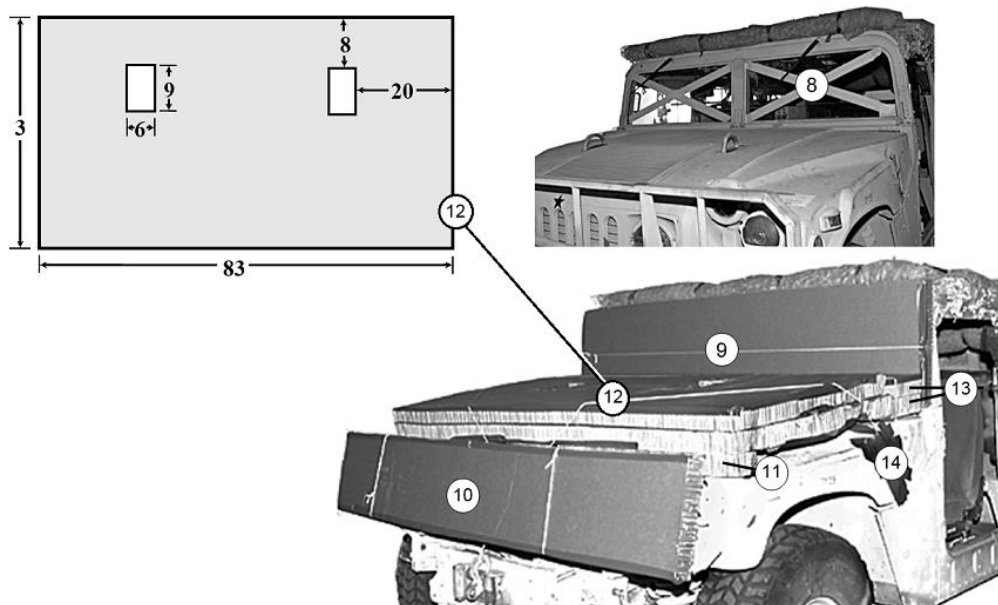


- ③ Pad the antenna mounts at the rear of the truck with cellulose wadding and tape in place.
- ④ Secure the light-scattering screen (LSS) pole bag on the tailgate with straps provided. Secure the strap fasteners and excess strap with type III nylon cord.
- ⑤ Secure the jack and its handle to the brush guard with type III nylon cord.
- ⑥ Tie the winch hook to the brush guard with type III nylon cord.
- ⑦ Be sure the spare wheel is securely bolted to its mount.

**Figure 6-3. Truck Prepared (continued)**

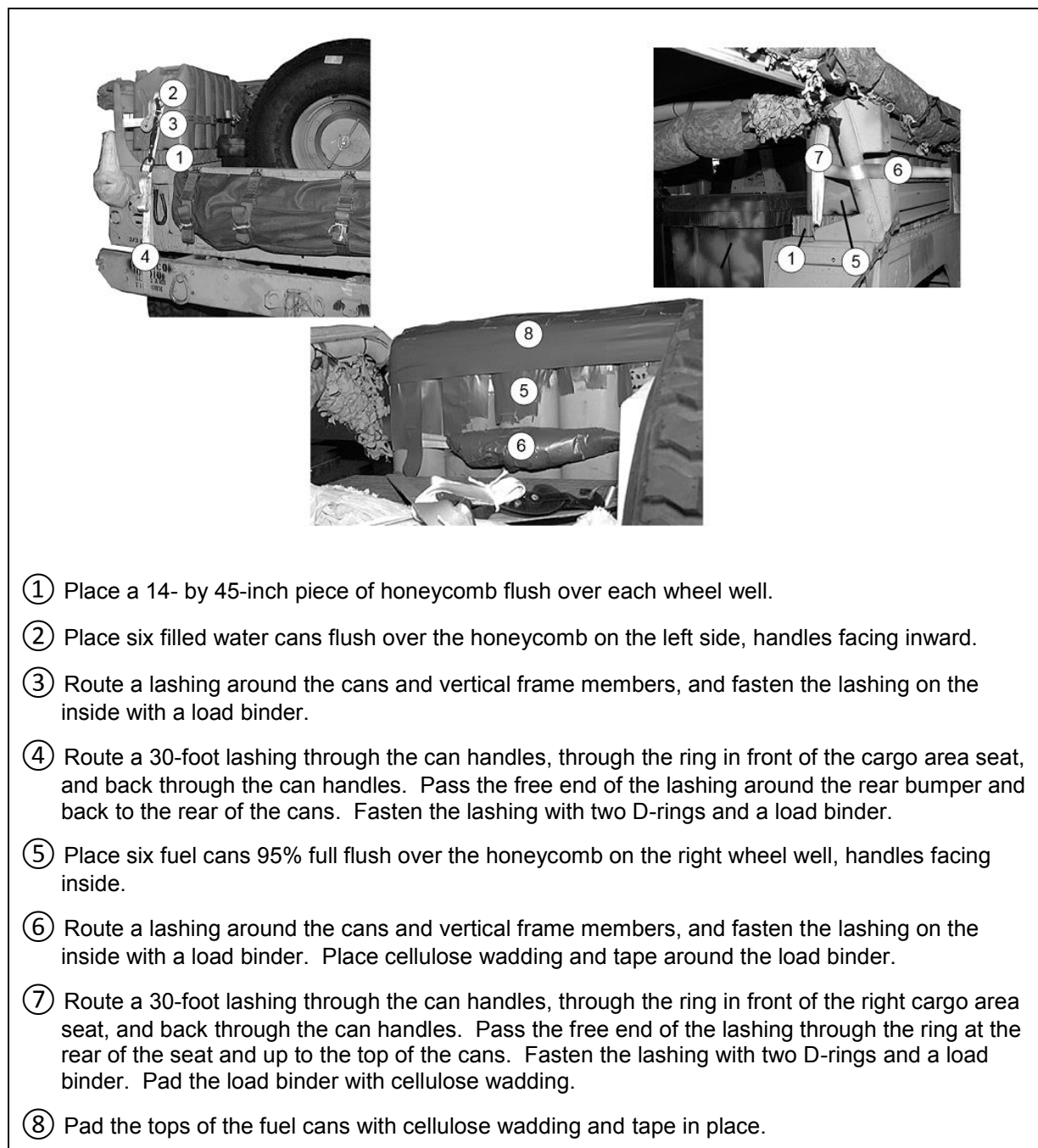


- Notes.** 1. All measurements are given in inches.  
2. This drawing is not drawn to scale.

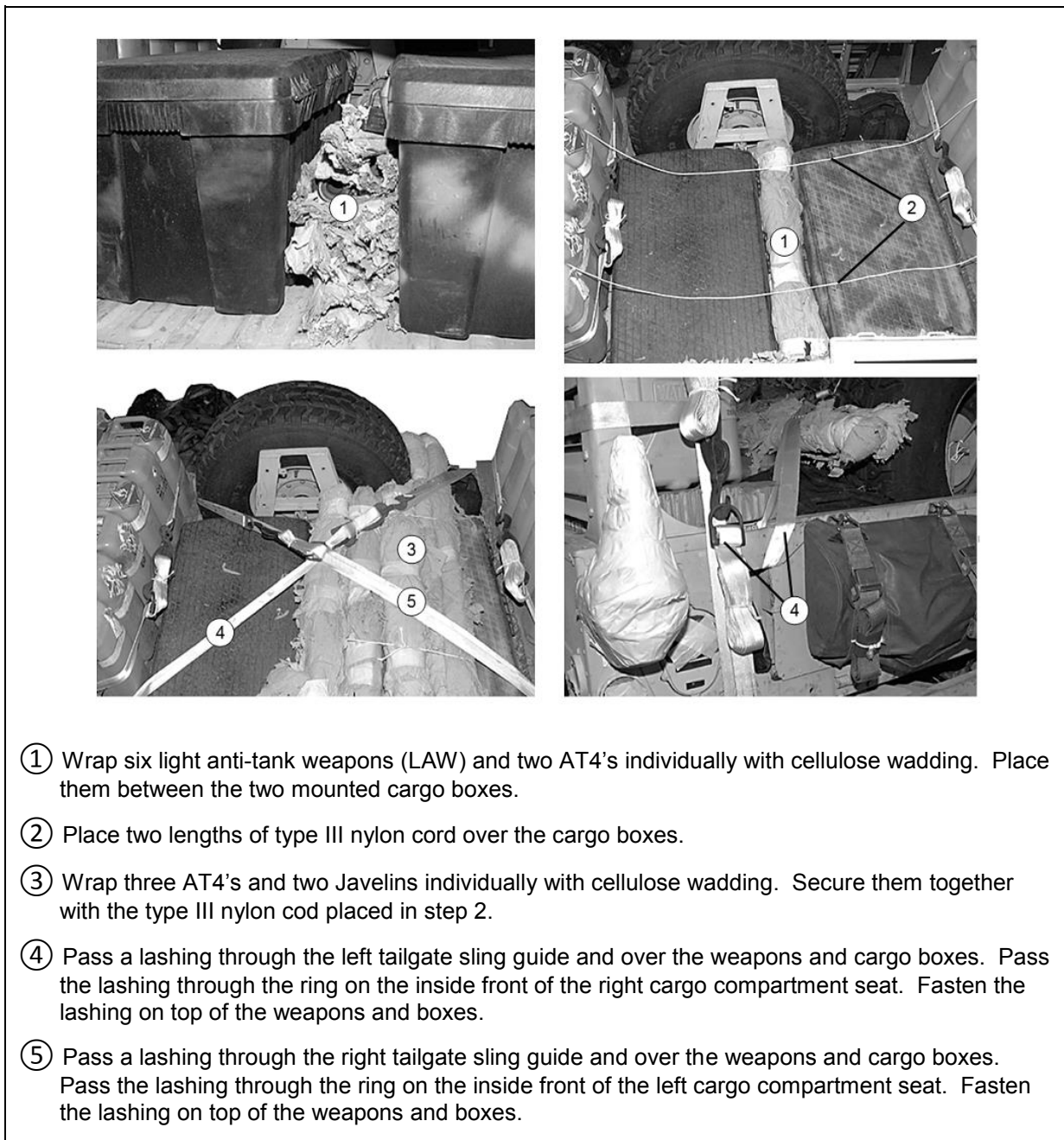


- ⑧ Tape the windshield inside and outside as shown.
- ⑨ Cover the windshield with an 83- by 21-inch piece of honeycomb. Tape the short edges and tie the honeycomb around the windshield with type III nylon cord.
- ⑩ Tie an 83- by 14-inch piece of honeycomb over the brush guard and the items tied to it with type III nylon cord.
- ⑪ Place a 78- by 4-inch piece of honeycomb along the front edge of the hood.
- ⑫ Place two 36- by 83-inch pieces of honeycomb, with cutouts as shown, over the hood. Tape the upper edges of the top piece. Tie the honeycomb in place with a length of type III nylon cord. Tie the cord to an airlift bracket, pass it through the grille, and tie it off to the other airlift bracket.
- ⑬ Place two 12- by 83-inch pieces of honeycomb just behind the honeycomb placed in step 12. Tape the top outside edges. Secure the honeycomb to the hood latch brackets with type III nylon cord.
- ⑭ Tape the hood latches.

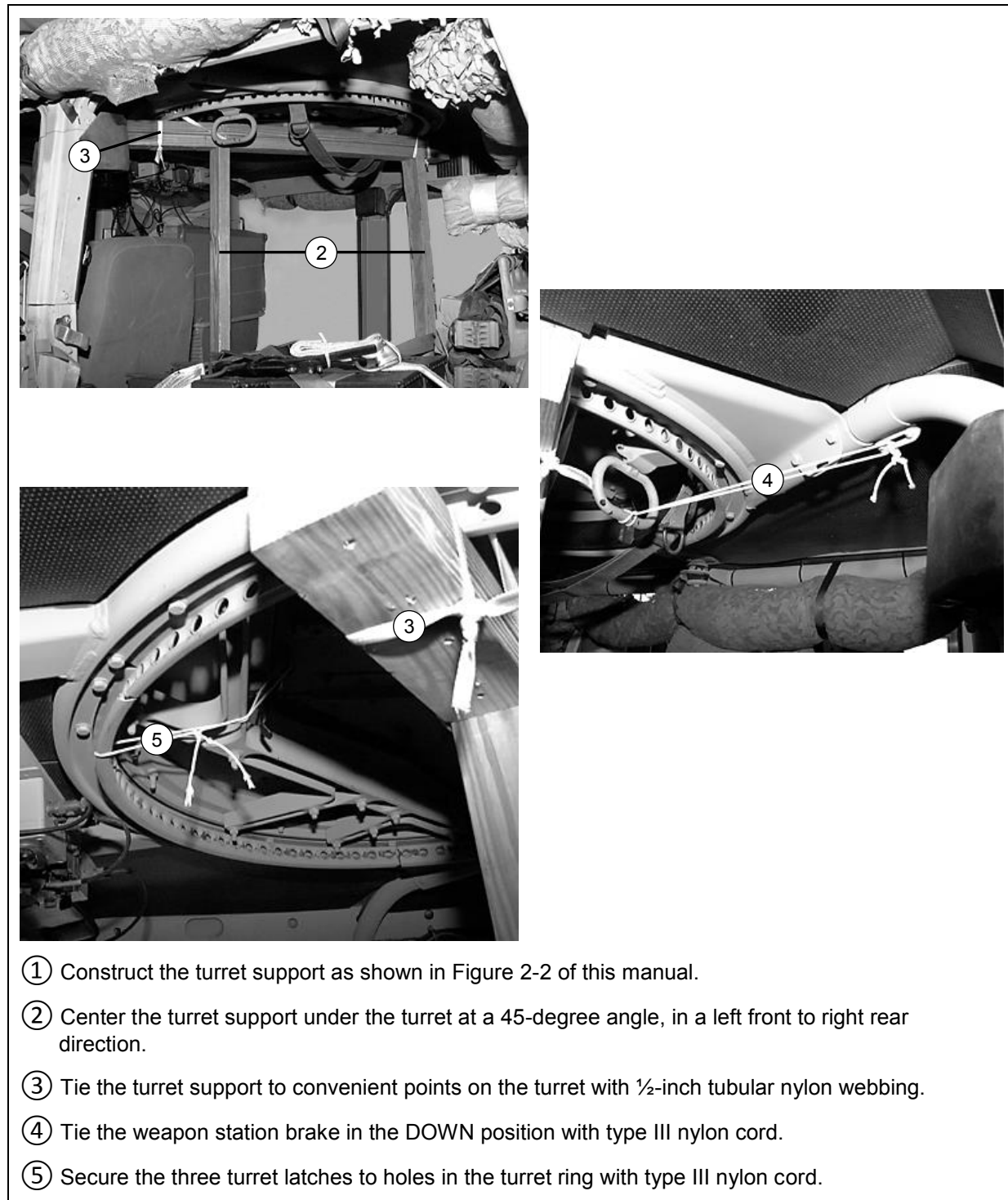
**Figure 6-3. Truck Prepared (continued)**



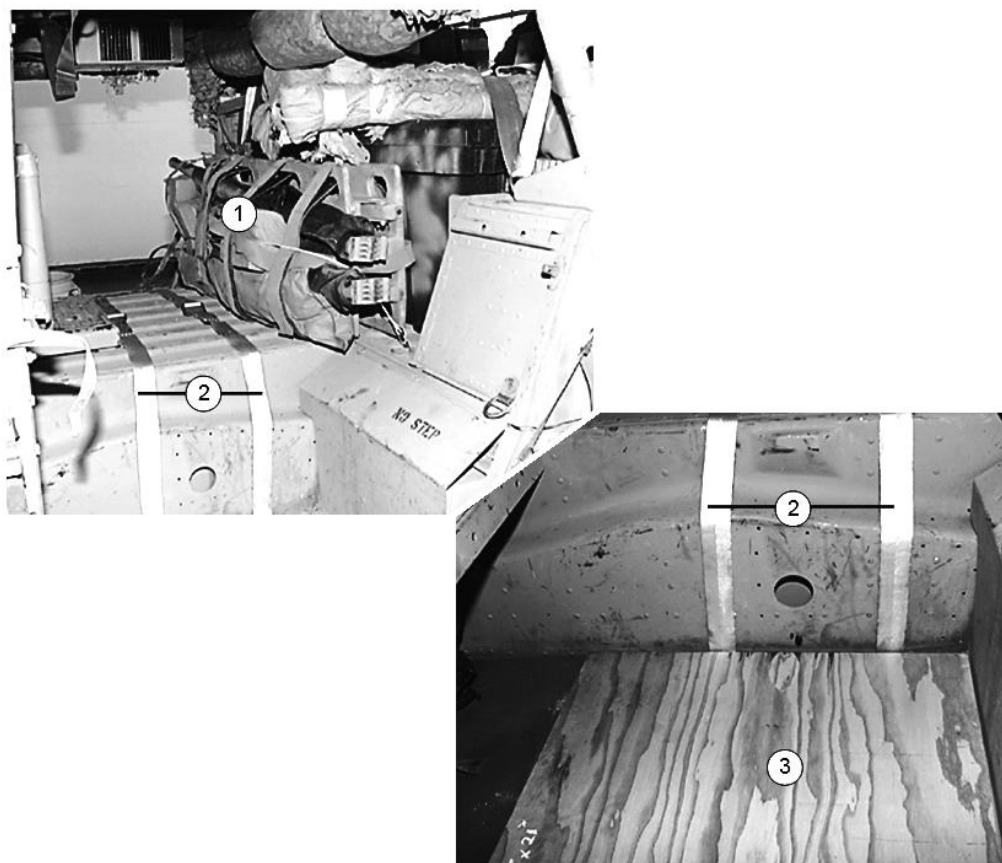
**Figure 6-4. Water and Fuel Cans Stowed and Secured**



**Figure 6-5. Stowing Weapons Between and Over Cargo Boxes**

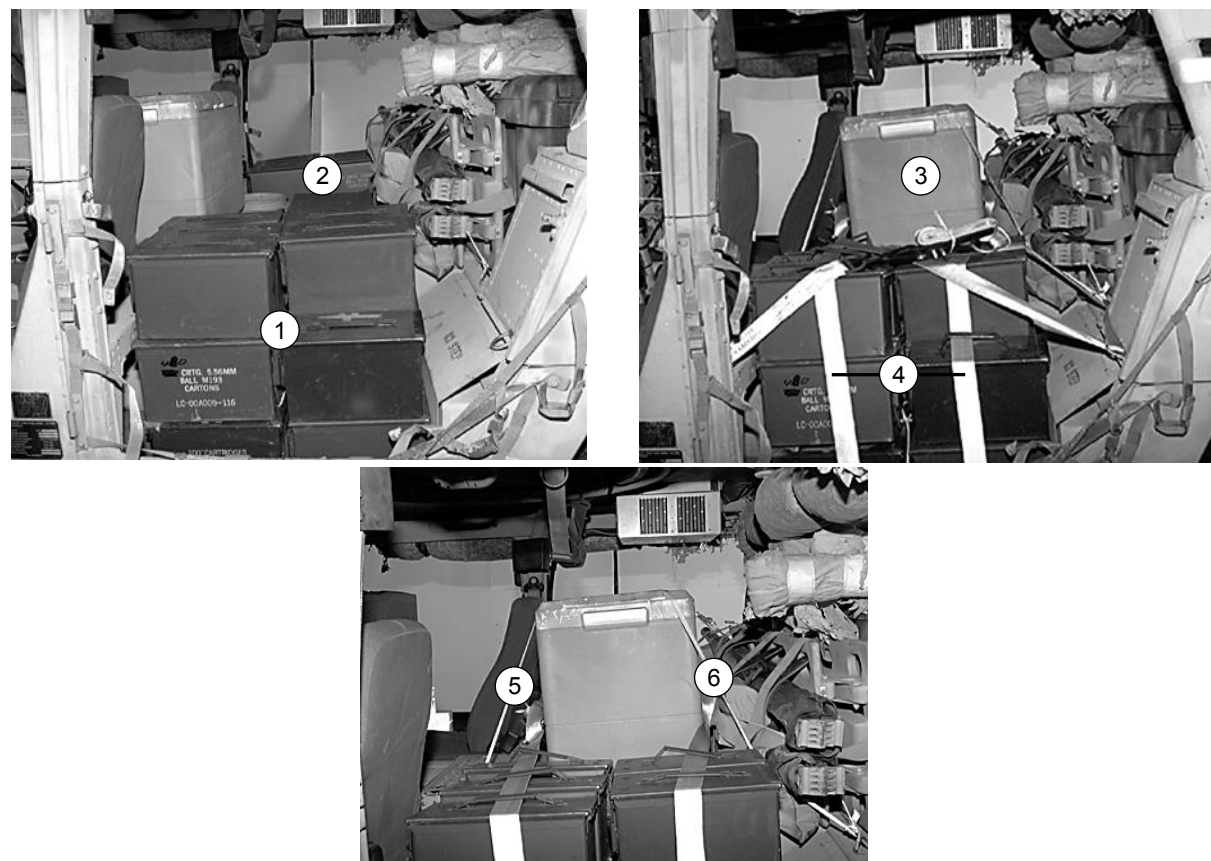


**Figure 6-6. Turret Support Placed and Secured**



- ① Place the stretcher in front of the cargo bed boxes and secure it to the front cargo bed rings with type III nylon cord.
- ② Place two 30-foot lashing across the truck bed in front of the stretcher. Extend the lashings down into the passenger seat foot wells.
- ③ Place a  $\frac{3}{4}$ - by 21- by 25-inch piece of plywood in the left rear passenger seat foot well.
- ④ Place a  $\frac{3}{4}$ - by 21- by 30-inch piece of plywood in the right rear passenger seat foot well (not shown).

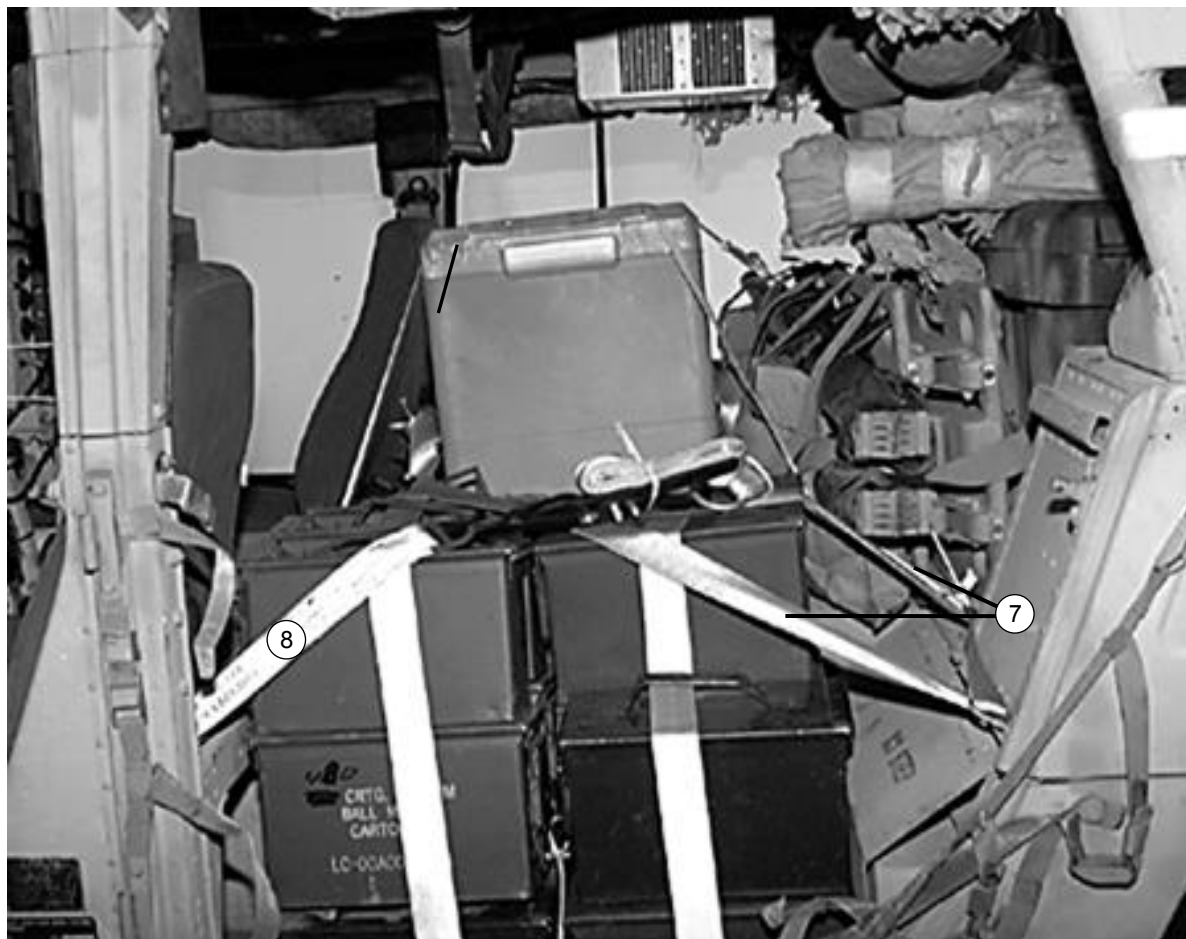
**Figure 6-7. Ammunition and Refrigerator Area Prepared**



**Note:** Ammunition boxes should be well padded with felt or cellulose wadding. Padding is not shown here for purposes of clarity.

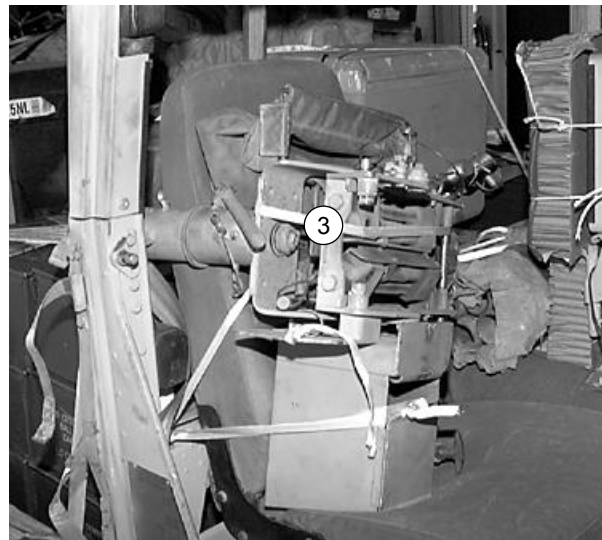
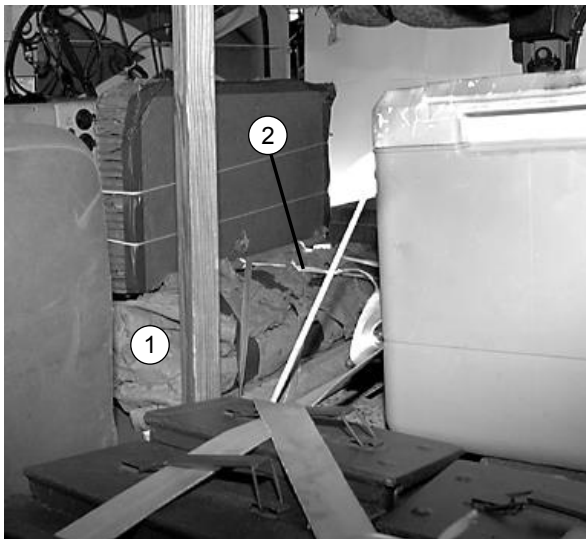
- ① Place seventeen 5.56-mm ammunition cans in the left foot well over the plywood.
- ② Place eighteen 5.56-mm ammunition cans in the right foot well over the plywood.
- ③ Set the refrigerator on an 11- by 22- inch piece of honeycomb in front of the stretcher and between the stacks of ammunition boxes.
- ④ Pass the lashings placed in Figure 6-6, step 2 over the ammunition boxes. Pass the lashings through the box carrying handles whenever possible. Secure the lashings with load binders in the front and rear of the refrigerator.
- ⑤ Tie a length of ½-inch tubular nylon webbing to the ring behind and inside the driver's seat. Pass the webbing over the refrigerator, and tie it securely to the ring on the inside front of the right rear passenger seat.
- ⑥ Tie a length of ½-inch tubular nylon webbing to the ring behind and inside the front passenger seat. Pass the webbing over the refrigerator, and tie it securely to the ring on the inside front of the left rear passenger seat.

**Figure 6-8. Ammunition and Refrigerator Stowed**



- ⑦ Pass a lashing through both rings behind the right passenger seat, up over the ammunition boxes, and through both rings behind the left rear passenger seat. Secure the lashing with a load binder on top of the boxes.
- ⑧ Pass a lashing through both rings behind the driver's seat, up over the ammunition boxes, and through both rings behind the right rear passenger seat. Secure the lashing with a load binder on top of the boxes.

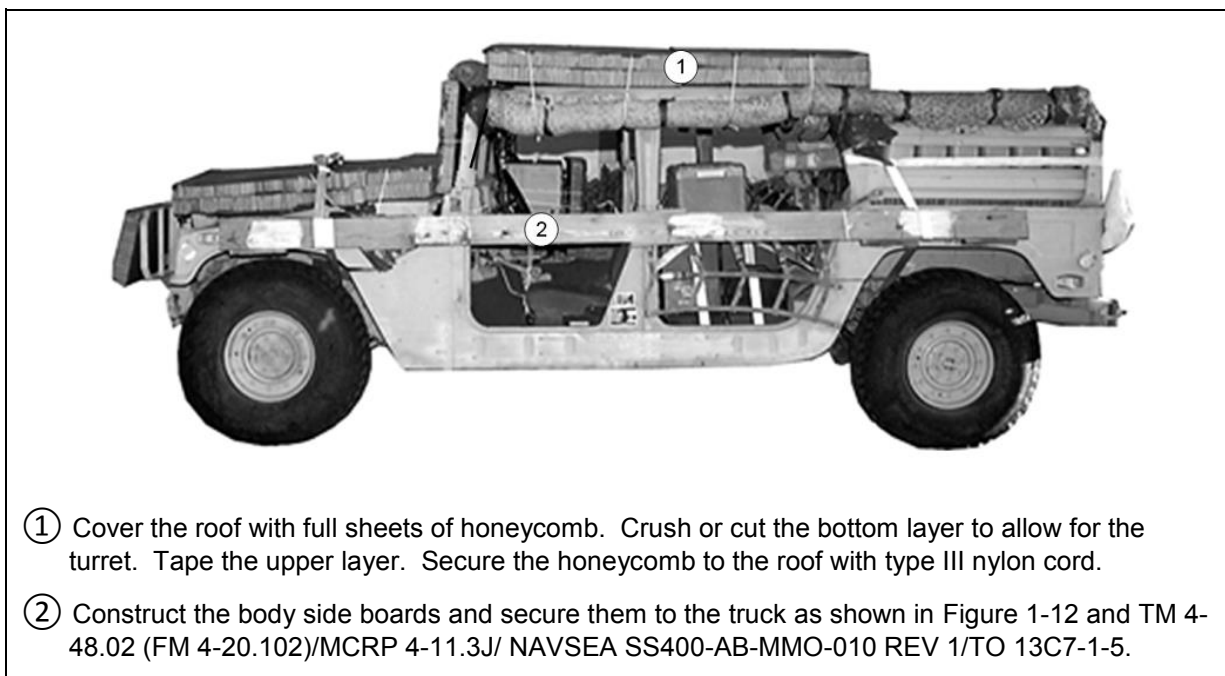
**Figure 6-8. Ammunition and Refrigerator Stowed (continued)**



- ① Remove the barrel from the 50-caliber machine gun (not shown). Wrap the barrel and the gun with cellulose wadding and tape in place.
- ② Secure the machine gun and barrel to the radio mount with ½-inch tubular nylon webbing.
- ③ Place the machine gun mount in the front passenger seat with the post facing the rear on the outboard side. Pass ½-inch tubular nylon webbing around the top of the mount, and cross the two ends of the webbing above the post. Bring the ends of the webbing through the rings beside the seat, and tie the webbing to the box in the front.

**Figure 6-9. Machine Gun and Mount Stowed and Secured**





**Figure 6-10. Honeycomb Roof Cover and Body Sideboards Installed**

## **LIFTING AND POSITIONING TRUCK AND INSTALLING OPTIONAL DRIVE-OFF AIDS**

6-5. Install lifting slings on the truck and position the truck on the platform as shown in Figure 1-15 and Figure 1-16. Install the optional drive-off aids on the platform as shown in Figure 1-17.

## LASHING TRUCK

Lash the truck to the platform with fifteen 15-foot tiedown assemblies. Install the lashings according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5, and as shown in Figures 6-11 and 6-12.

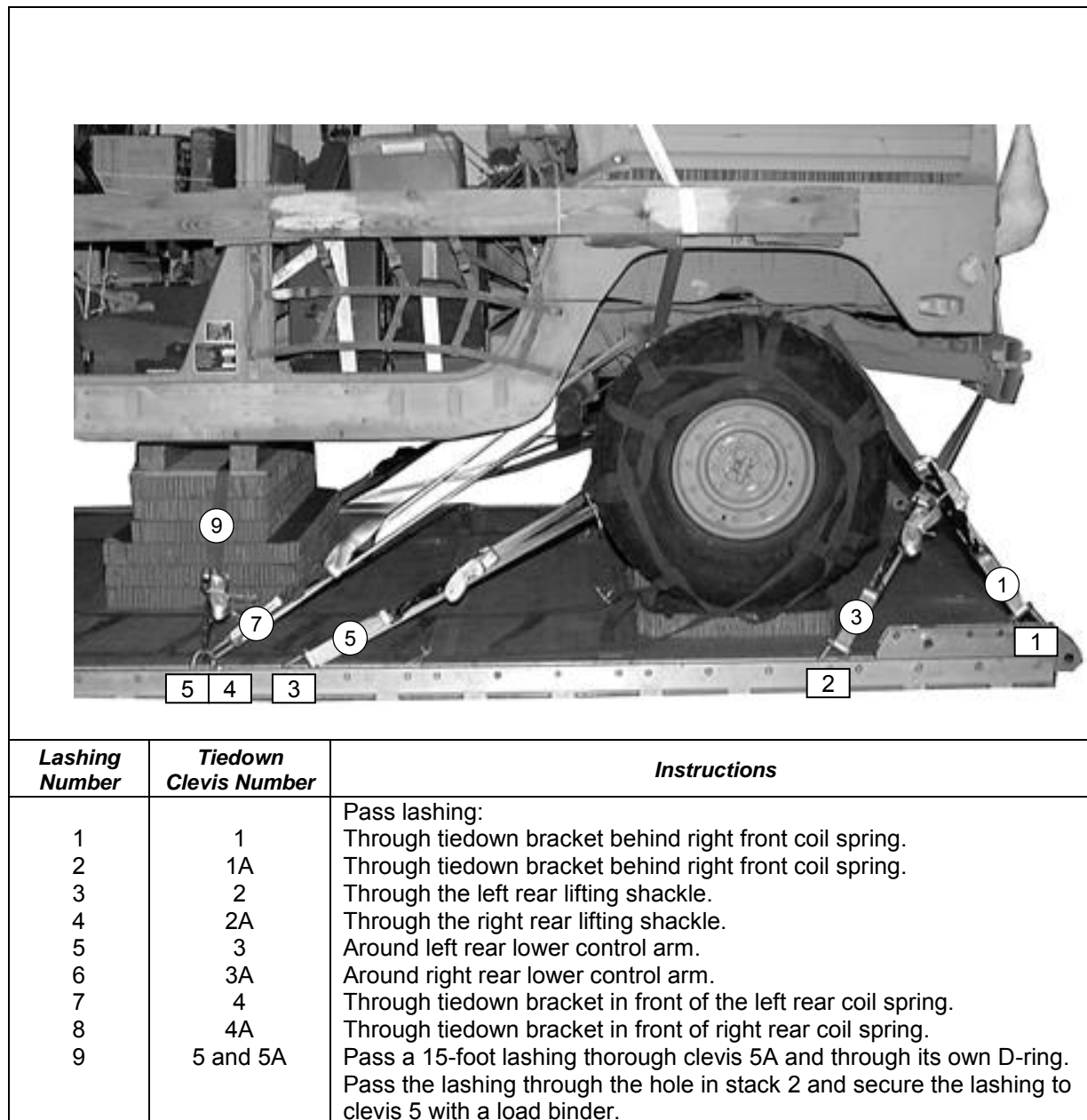
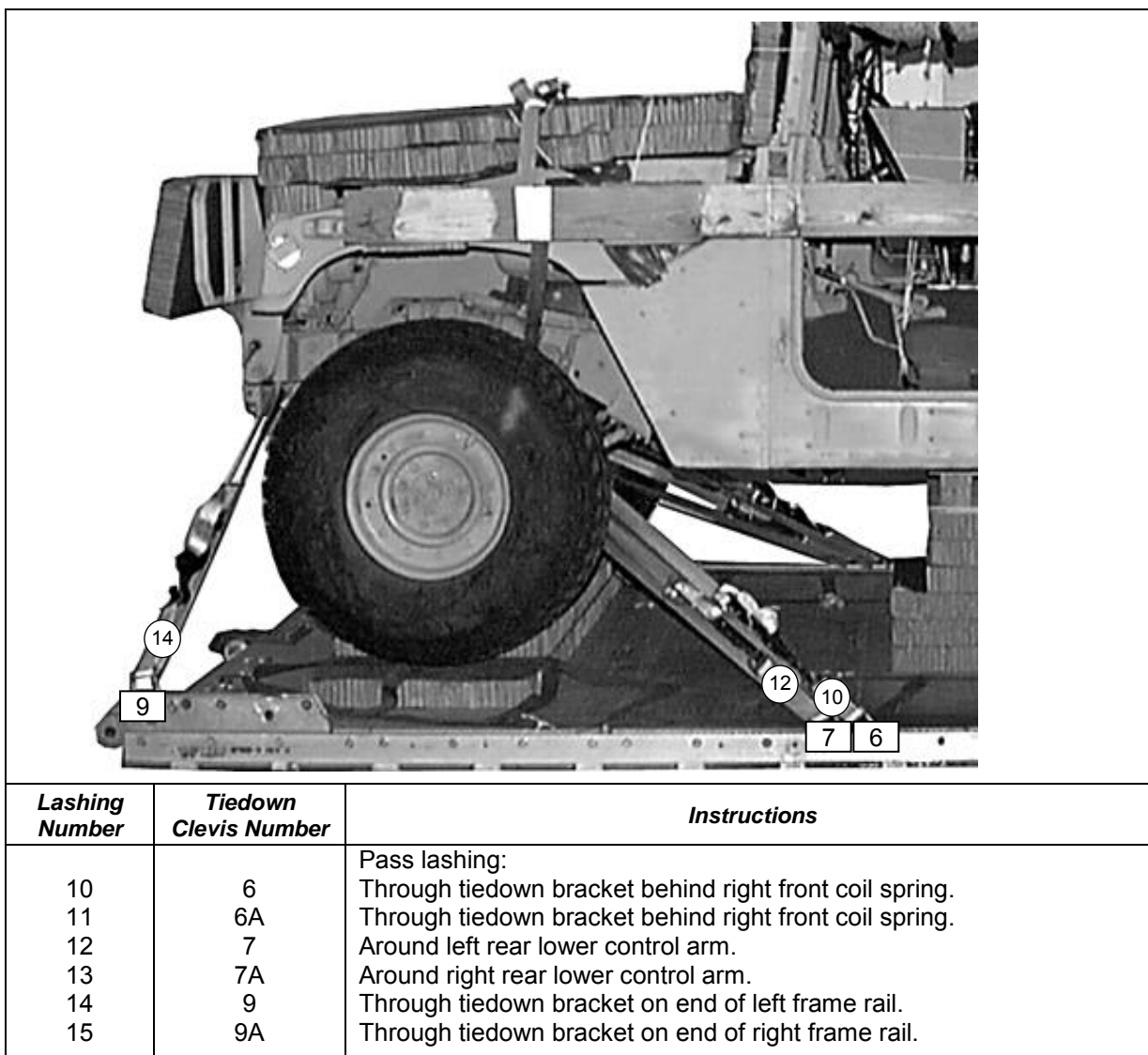


Figure 6-11. Lashings 1 Through 9 Installed.



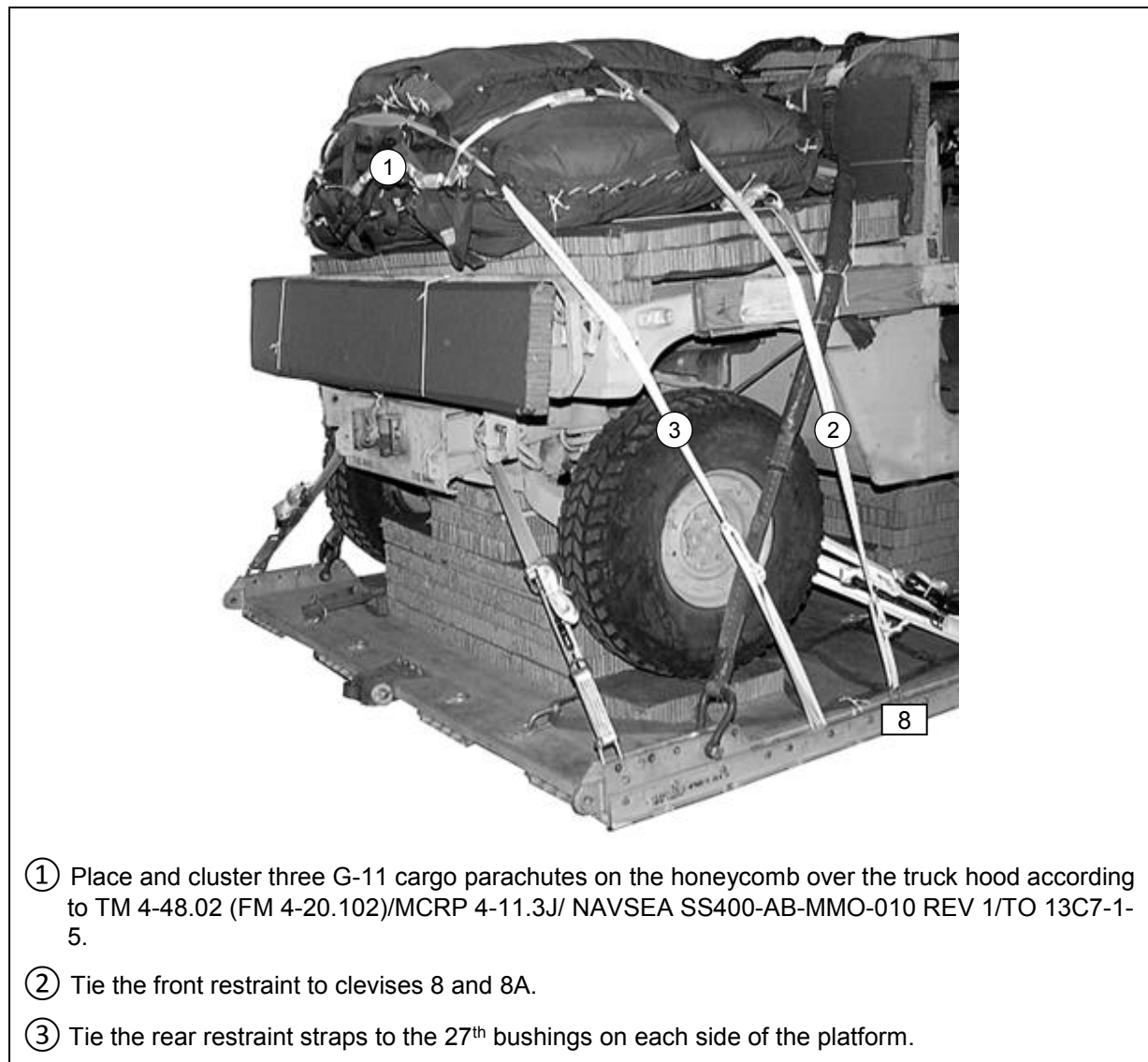
**Figure 6-12. Lashings 10 Through 15 Installed.**

## INSTALLING AND SAFETY TIEING SUSPENSION SLINGS

6-6. Install and safety tie four 16-foot (2-loop), type XXVI nylon suspension slings according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5, and as shown in Figure 1-20.

## STOWING CARGO PARACHUTES

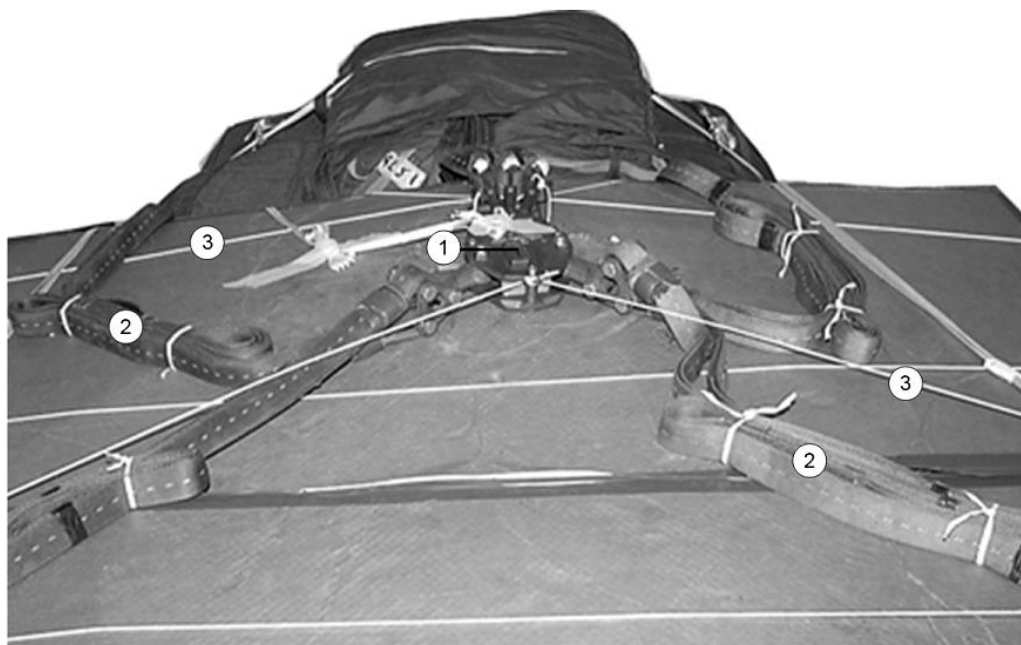
6-7. Use three G-11 cargo parachutes on this load. Stow the cargo parachutes according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5, and as shown in Figure 6-13.



**Figure 6-13. Cargo Parachute Installed**

## INSTALLING PARACHUTE RELEASE

6-8. Prepare and install an M-1 cargo parachute release according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5, and as shown in Figure 6-14.



- ① Place the M-1 release on the roof honeycomb in front of the parachutes.
- ② S-fold the slack in the suspension slings. Tie the folds with type I, 1/4-inch cotton webbing.
- ③ Attach the suspension slings and the riser extensions to the release. Tie the release to convenient points on the load with type III nylon cord.

**Figure 6-14. Cargo Parachute Release Installed**

## **INSTALLING EXTRACTION SYSTEM**

Install the EFTC extraction system with a 20-foot release cable according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5, and as shown in Figure 1-23.

## **INSTALLING PROVISIONS FOR EMERGENCY RESTRAINTS**

6-9. Install the provisions for emergency restraints on the load according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.

## **PLACING EXTRACTION PARACHUTE**

6-10. Select the extraction parachute and extraction line needed using the extraction line requirements table in TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5. Rig the extraction line in an extraction line bag according to TM 10-1670-286-20/TO 13C5-2-41. Place the extraction parachute and extraction line on the load for installation in the aircraft.

## **MARKING RIGGED LOAD**

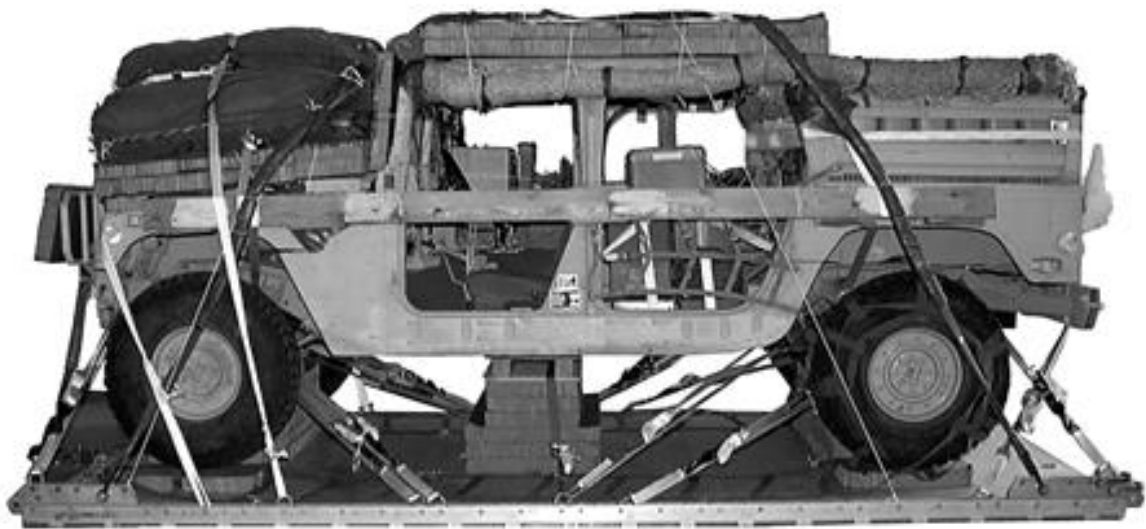
6-11. Mark the rigged load according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5, and as shown in Figure 6-15. Complete Shipper's Declaration for Dangerous Goods. If the load varies from the one shown, the weight, height, CB, and parachute requirements must be recomputed.

## **EQUIPMENT REQUIRED**

6-12. Use the equipment listed in Table 6-1 on page 6-20 to rig the load.

**CAUTION**

Make the final rigger inspection required by TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 before the load leaves the rigging site.



**RIGGED LOAD DATA**

Weight .....	12,420 pounds
Maximum Load Allowed .....	14,750 pounds
Height With Three G-11 Parachute.....	94 inches
Width.....	108 inches
Length .....	210inches
Overhang: Front (vehicle).....	0 inches
Rear (extraction force transfer coupling ).....	18 inches
Center of Balance (CB) (from front edge of platform) .....	96 inches

**Figure 6-15. Ground Mobility Vehicle Rigged for Low-Velocity Airdrop**

**Table 6-1. Equipment Required for Rigging Ground Mobility Vehicle for Low-Velocity Airdrop**

<b>National Stock Number</b>	<b>Item</b>	<b>Quantity</b>
8040-00-273-8713	Adhesive, paste, 1-gallon	As required
4030-00-090-5354	Clevis, suspension, 1-in (large)	5
4020-00-240-2146	Cord, nylon type III, 550-lb	As required
1670-00-434-5785	Coupling assembly, airdrop, extraction force transfer with cable, 16-ft	1
	Cover:	
1670-00-360-0328	Clevis, large	1
8135-00-664-3958	Cushioning material, packaging, cellulose wadding	As required
8305-00-958-3685	Felt, ½-in thick	As required
1670-01-183-2678	Leaf, extraction line (line bag)	2
	Line, drogue (for C-17)	
1670-01-064-4452	60-ft (1-loop), type XXVI	1
	Line, extraction:	
1670-01-062-6313	For C-130: 60-ft (3-loop), type XXVI	1
1670-01-107-7651	For C-141: 140-ft (3-loop), type XXVI	1
	For C-5:	
1670-01-062-6313	60-ft, (3-loop), type XXVI and	1
1670-01-107-7651	140-ft (3-loop), type XXVI	1
	For C-17:	
1670-01-107-7651	140-ft, (3-loop), type XXVI	1
	Link Assembly:	4
5306-00-435-8994	Two-point:	(8)
5310-00-232-5165	Bolt, 1-in diam, 4-in long	(8)
1670-00-003-1953	Nut, 1-in, hexagonal	(8)
5365-00-007-3414	Plate, side, 3 ¾-in	(8)
	Spacer, large	
	Lumber:	
5510-00-220-6146	2- by 4-in	As required
5510-00-220-6448	2- by 6-in	As required
5510-00-220-6274	4- by 4-in	As required
5315-00-010-4659	Nail, steel wire, 8d	As required



**Table 6-1. Equipment Required for Rigging Ground Mobility Vehicle for Low-Velocity Airdrop  
(Continued)**

<b>National Stock Number</b>	<b>Item</b>	<b>Quantity</b>
1670-00-753-3928	Pad, energy-dissipating (honeycomb) 3- by 36- by 96-in	13 Sheets
1670-01-016-7841	Parachute: Cargo: G-11B	2
1670-00-063-3716	Cargo extraction: 22-ft (Add H-block for use with C-17)	1
1670-01-063-3715	Drogue (for C-17) 15-ft	1
1670-01-353-8425	Platform, airdrop, type V, 16-ft	
1670-01-162-2372	Bracket assembly, extraction force transfer coupling	(1)
1670-01-162-2376	Clevis assembly, type V	(20)
1670-01-162-2381	Bracket assembly, extraction	(1)
5530-00-128-4981	Tandem link assembly (Multipurpose link)	(4)
1670-01-097-8816	Plywood, 3/4-in	3 Sheets
	Release, cargo parachute, M-1	
	Sling, cargo, airdrop	
	For suspension:	
1670-01-063-7761	16-ft (2-loop), type XXVI nylon webbing	4
	For lifting:	
1670-01-062-6304	9-ft (2-loop), type XXVI nylon webbing	2
1670-01-062-6303	12-ft (2-loop), type XXVI nylon webbing	2
	For deployment	
1670-01-062-6304	9-ft (2-loop), type XXVI nylon webbing	1
	For riser extension:	
1670-01-062-6302	20-ft (4-loop), type XXVI nylon webbing	6
5340-00-040-8219	Strap, parachute release, multi-cut, comes w/ 3 knives	2
7510-00-266-5016	Tape, adhesive, 2-in	As required
1670-00-937-0271	Tiedown assembly, 15-foot	28
1670-01-344-0825	Vehicle drive-off aid	1
	Webbing:	
8305-00-268-2411	Cotton, 1/4-in, type I	As required
8305-00-082-5752	Nylon, tubular, 1/2-in	As required
8305-00-263-3591	Type V	As required
Legend		
ft	Foot	
in	Inch	
lb	pound	

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## Chapter 7

# Rigging the M996 Ambulance on a 20-Foot Type V Airdrop Platform for Low-Velocity Airdrop

## DESCRIPTION OF LOAD

7-1. The M996 ambulance (shown in Figure 7-1) is rigged on a 20-foot, type V airdrop platform for low-velocity airdrop. The load requires two or three G11 cargo parachutes, depending upon the accompanying load in the vehicle.

## PREPARING PLATFORM

7-2. Prepare a 20-foot, type V platform as described below and as shown in Figure 7-2.

- **Inspecting Platform.** Inspect, or assemble and inspect, the platform according to TM 10-1670-268-20&TO 13C7-52-22.
- **Installing Tandem Links.** Install tandem links as shown in Figure 7-2.
- **Installing Suspension Links.** Install the suspension links as described in Figure 7-2.
- **Attaching and Numbering Clevises.** Attach and number 28 clevis assemblies as shown in Figure 7-2.

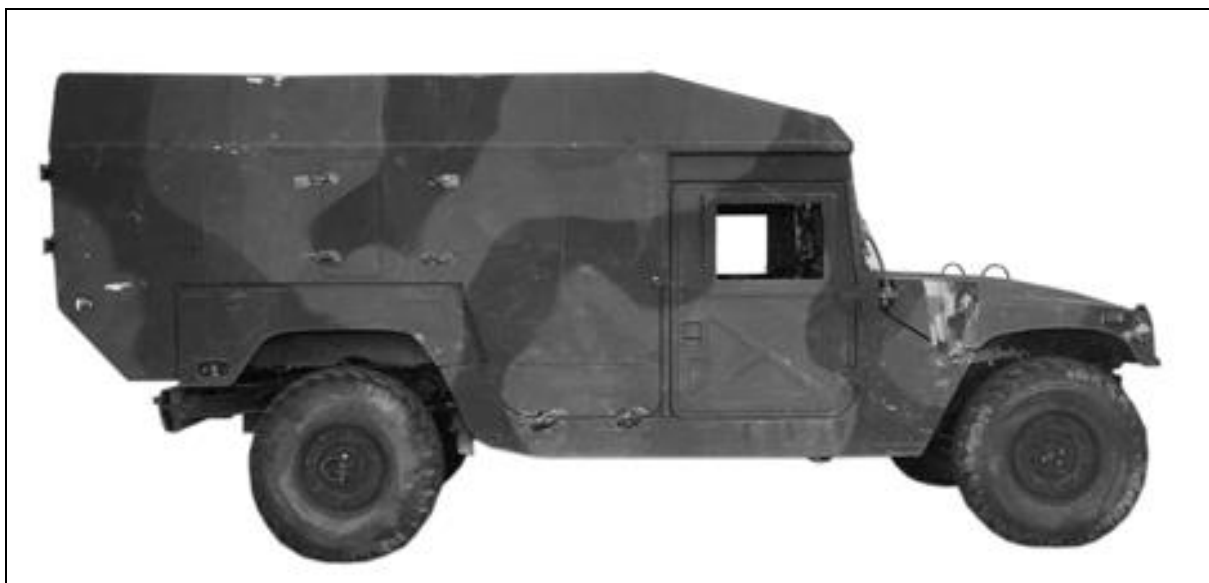
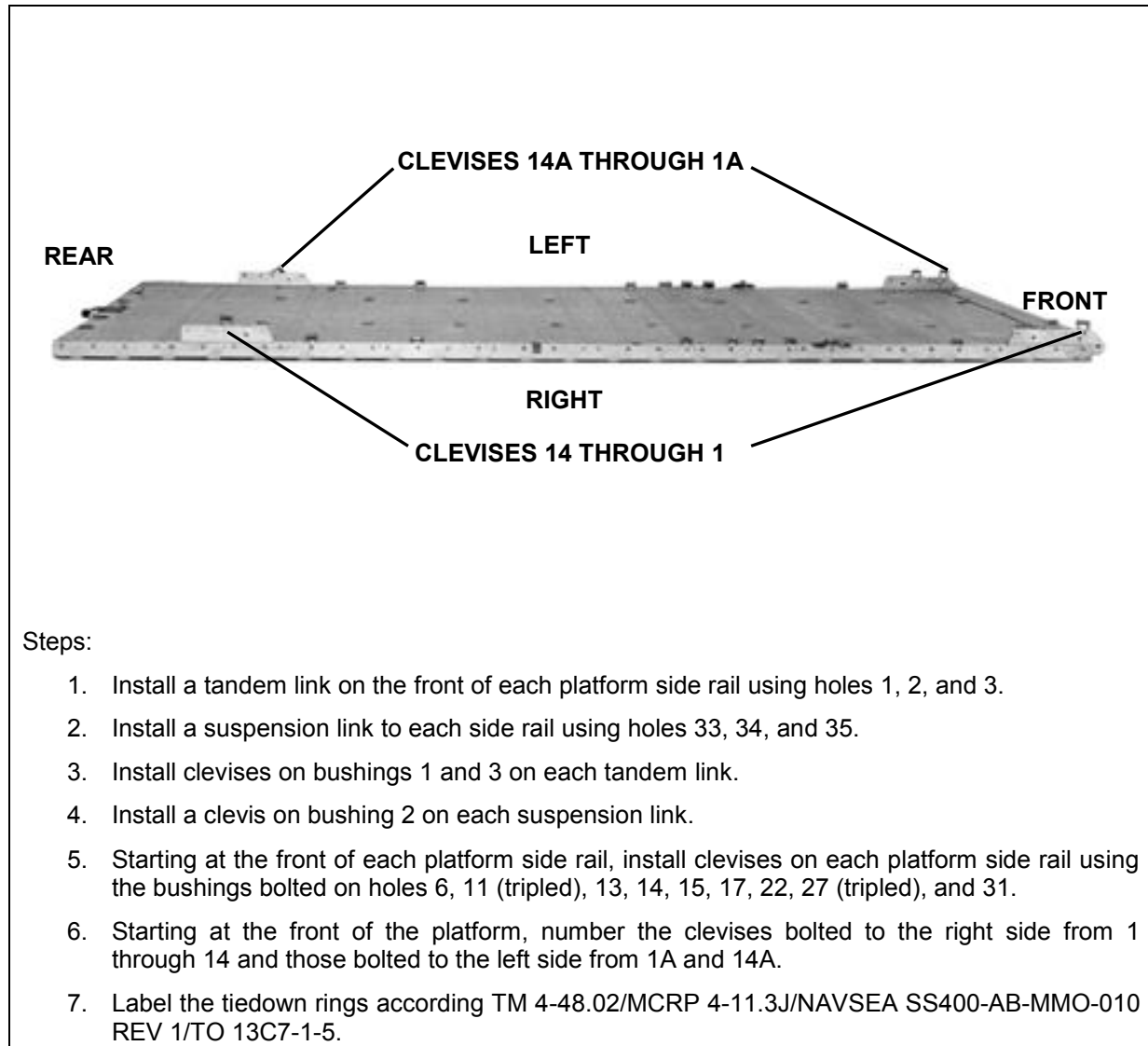


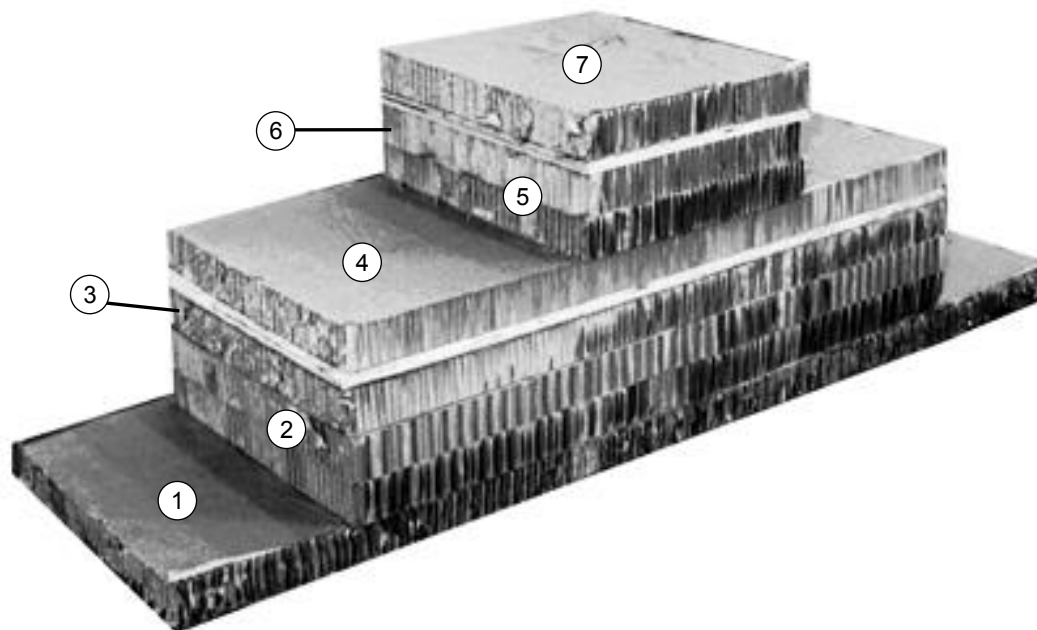
Figure 7-1. M996 2-Litter Armored Ambulance



**Figure 7-2. Platform Prepared**

## BUILDING AND POSITIONING HONEYCOMB STACKS

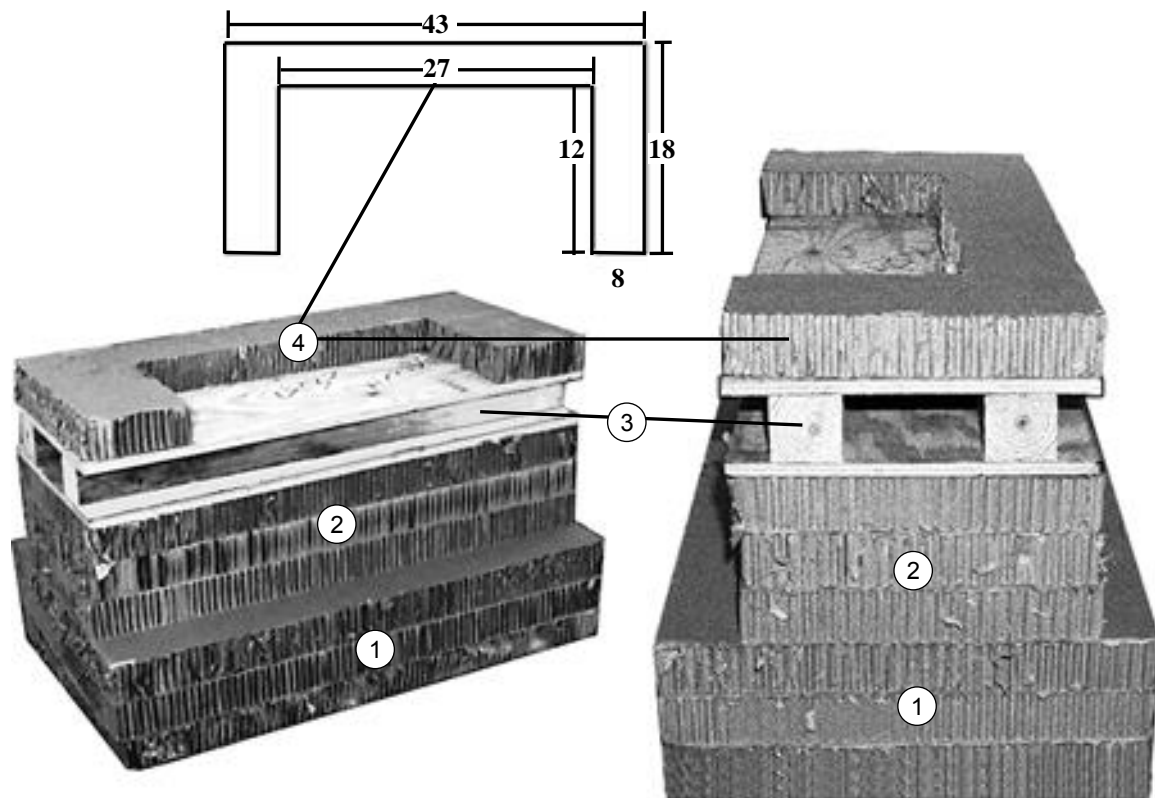
7-3. Build the honeycomb stacks as shown in Figures 7-3 and 7-4. Position the honeycomb stacks as shown in Figure 7-5.



- ① Use an 80- by 24-inch piece of honeycomb to form a base.
- ② Center and glue three 54- by 24-inch pieces of honeycomb on the base.
- ③ Glue a  $\frac{3}{4}$ - by 54- by 24-inch piece of plywood over the honeycomb placed in step 2 above.
- ④ Glue one 54- by 24-inch piece of honeycomb on top of the plywood placed in step 3 above.
- ⑤ Center and glue two 20- by 24-inch pieces of honeycomb on top of the honeycomb placed in step 4 above.
- ⑥ Glue a  $\frac{3}{4}$ - by 20- by 24-inch piece of plywood over the honeycomb placed in step 5 above.
- ⑦ Glue one 20- by 24-inch piece of honeycomb on top of the plywood placed in step 6 above.
- ⑧ Repeat to make a second stack.

**Figure 7-3. Stacks 1 and 3 Prepared**

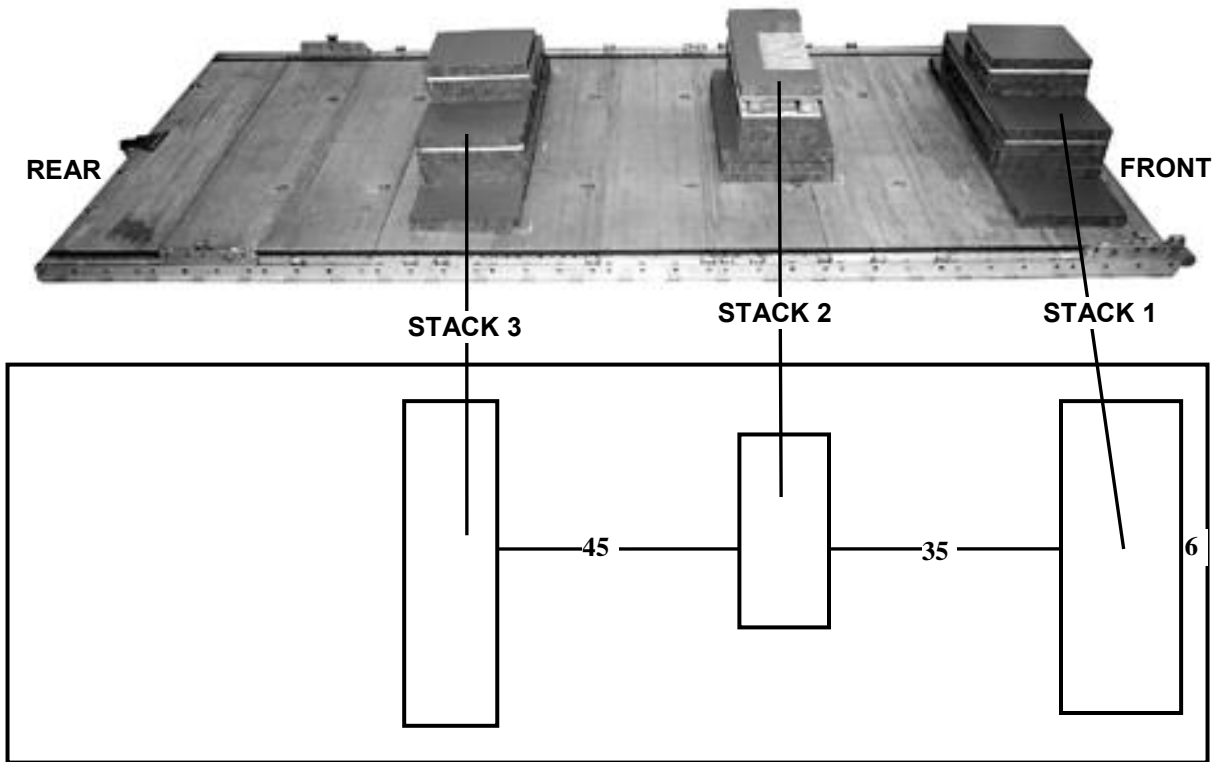
**Notes.** 1. All measurements are given in inches.  
2. This drawing is not drawn to scale.



- ① Glue three 43- by 26-inch pieces of honeycomb flush together to form a base.
- ② Center and glue three 43- by 18-inch pieces of honeycomb flush on the base.
- ③ Nail a 43-inch piece of 4- by 4-inch lumber parallel to each long side and 1 ½ inches from each long edge of a ¾- by 43- by 18-inch piece of plywood. Nail a second ¾- by 43- by 18-inch piece of plywood to the lumber and flush with the bottom piece of plywood. Glue the wooden section of the stack flush on the honeycomb placed in step 2 above.
- ④ Make the cutout as shown in a 43- by 18-inch piece of honeycomb. Glue the honeycomb flush over the plywood.

**Figure 7-4. Stack 2 Prepared**

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



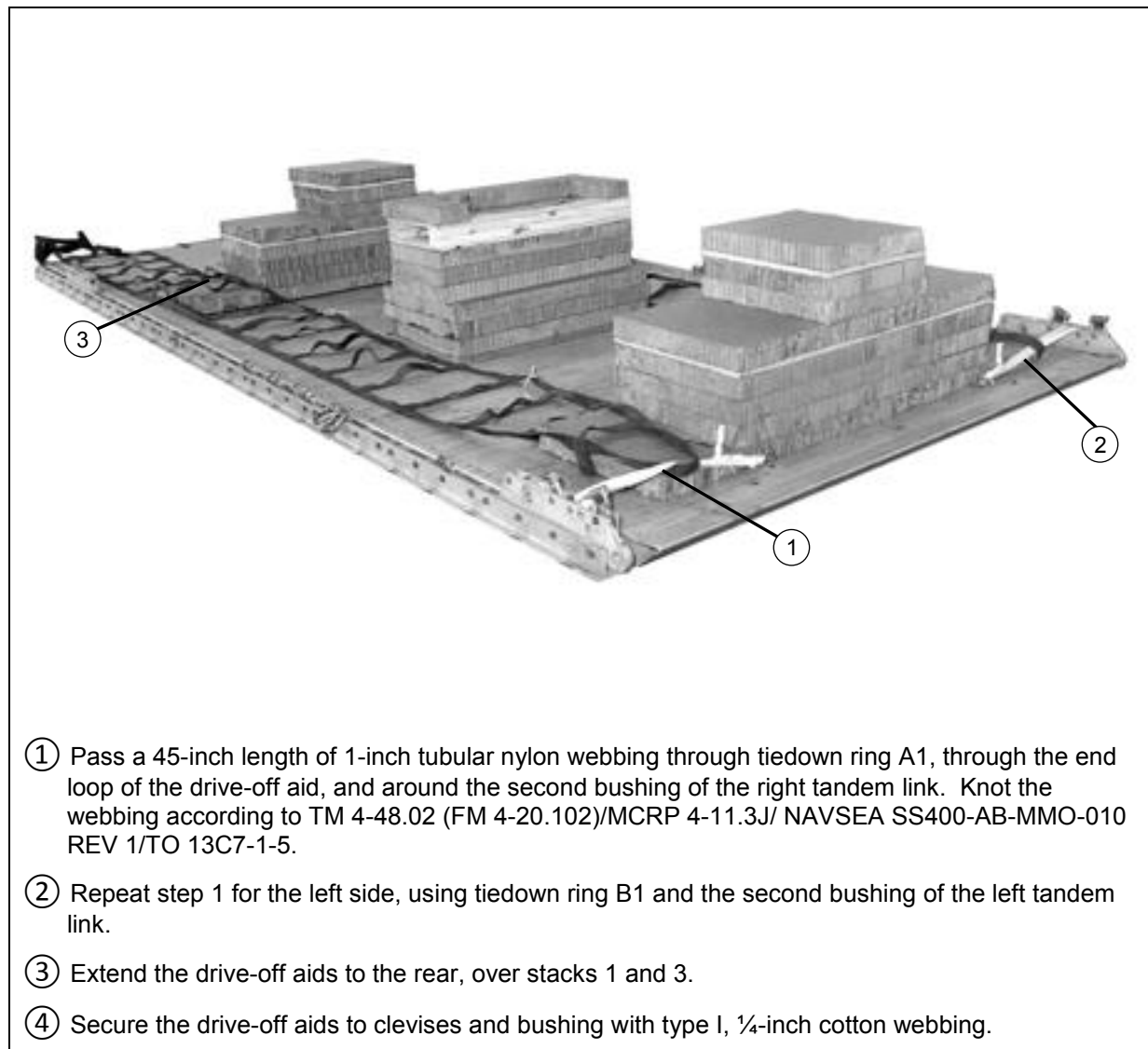
Stack Number	Position on Platform
1	Place stack: 6 inches from the front edge of the platform and centered.
2	35 inches from the rear of stack one and centered. Face the cutout to the front.
3	45 inches from the rear edge stack 2 and centered.

**Figure 7-5. Honeycomb Stacks Positioned on Platform**

## INSTALLING OPTIONAL DRIVE-OFF AIDS ON PLATFORM

7-4. Install the drive-off aid on the platform as shown in Figure 7-6.

*Note.* The use of the drive-off aids are optional.



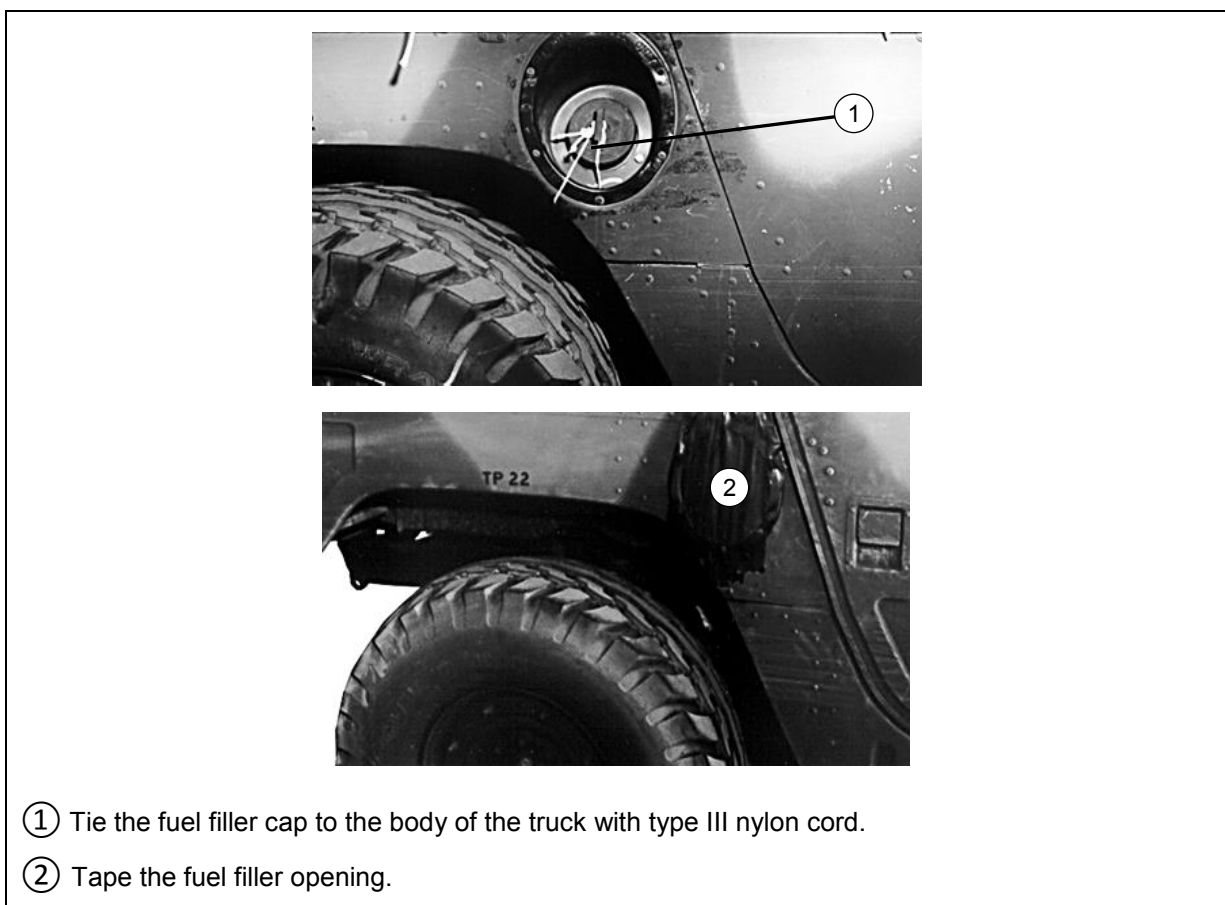
**Figure 7-6. Drive-Off Aids Installed on Platform**



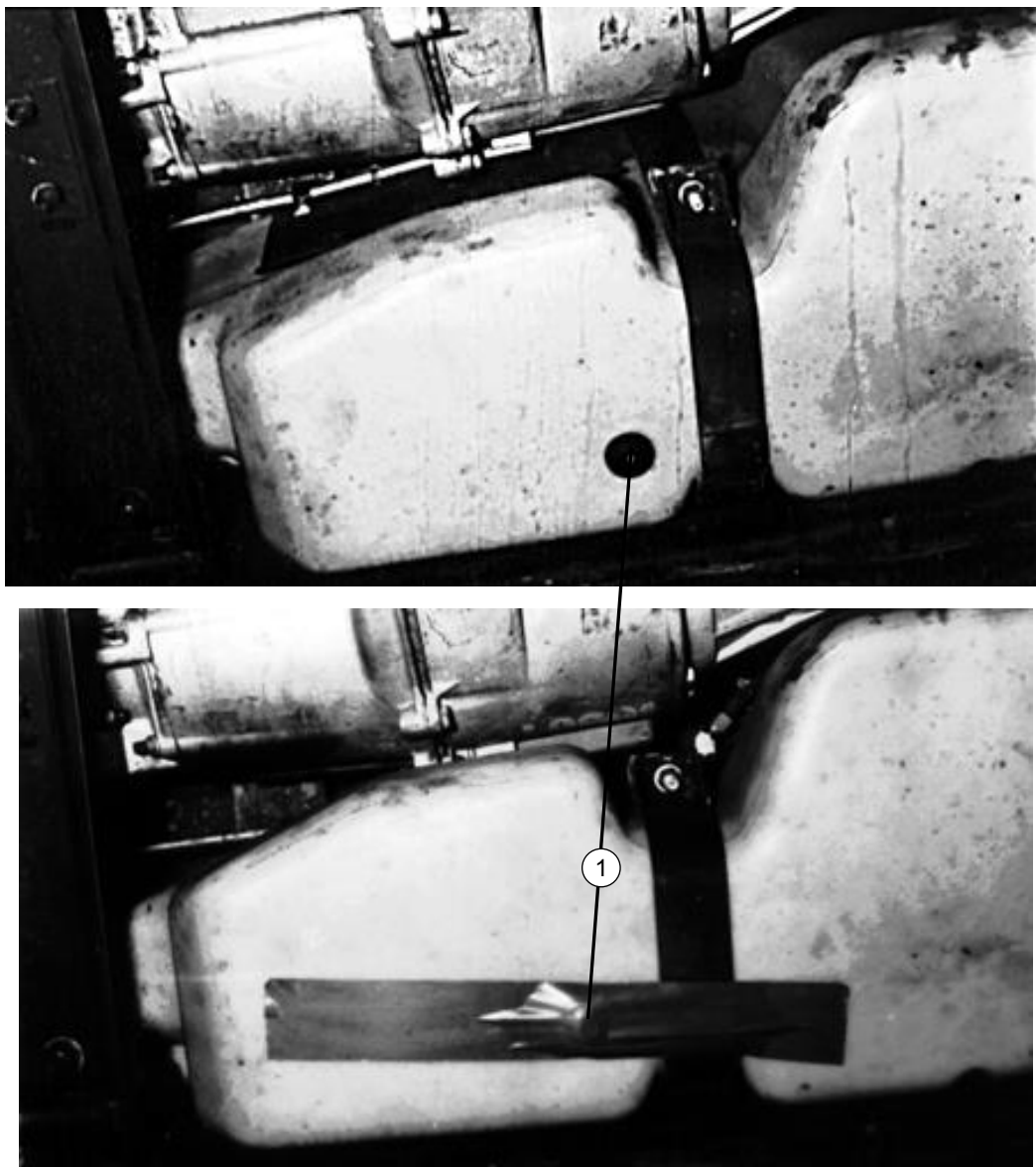
## PREPARING AMBULANCE

7-5. Prepare the truck as described below:

- Make sure the fuel tank is now more than  $\frac{3}{4}$  full. Prepare the fuel tank filler cap fuel filler opening as shown in Figure 7-7.
- Prepare the fuel tank drain plug as shown in Figure 7-8.
- Make sure the batteries and battery compartment comply with AFMAN 24-204(I)/TM 38-250/NAVSUP PUB 505/MCO P4030.19H/DLAI 4145.3.
- Stow the ambulance on-vehicular equipment (OVE) in the compartment behind the driver's door. Fill the empty space with honeycomb and close the compartment door. Tape the latches (not shown).
- Prepare the cab of the ambulance as shown in Figure 7-9.
- Prepare the underside of the truck as shown in Figure 7-10.
- Prepare the front of the ambulance as shown in Figure 7-11.
- Prepare and secure the pioneer tool kit according to TM 9-2320-280-10/TO 36A12-1A-2091-1/TM 2320-10/6, and as shown in Figure 7-12.
- Prepare the ambulance body as shown in Figures 7-13 and 7-14.

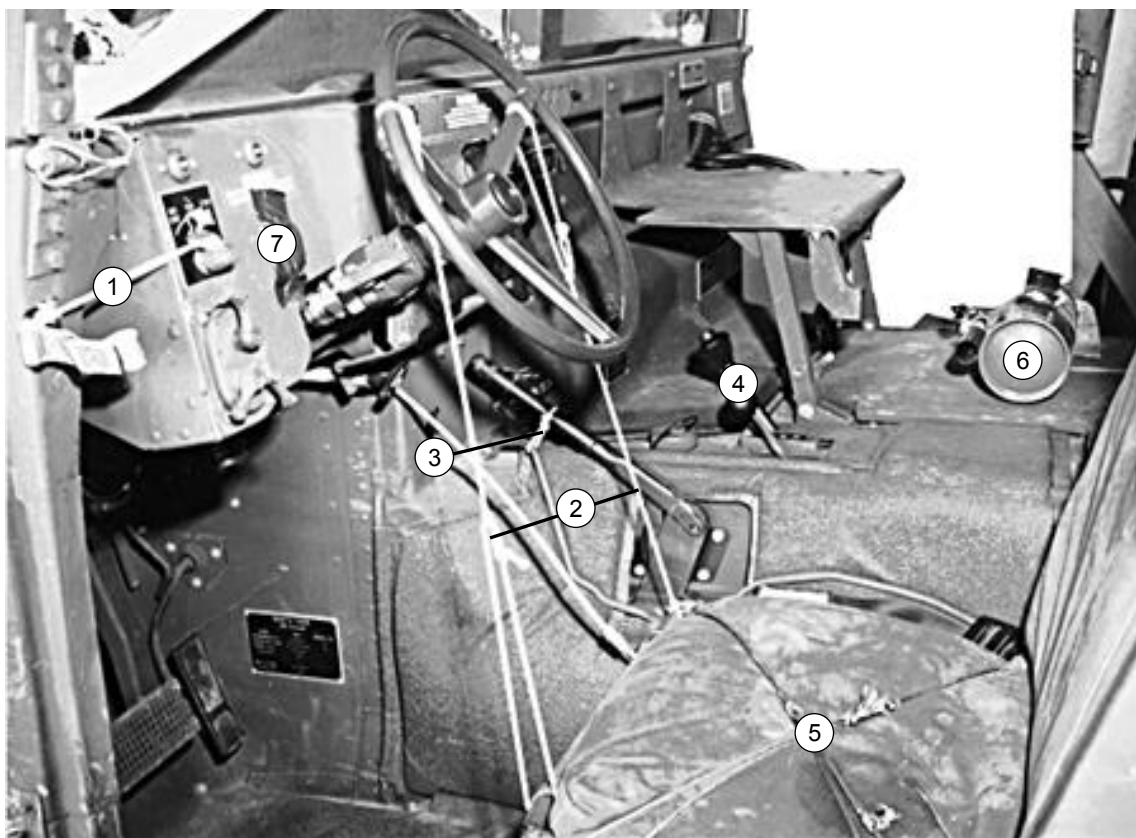


**Figure 7-7. Fuel Tank Filler Cap and Opening Prepared**



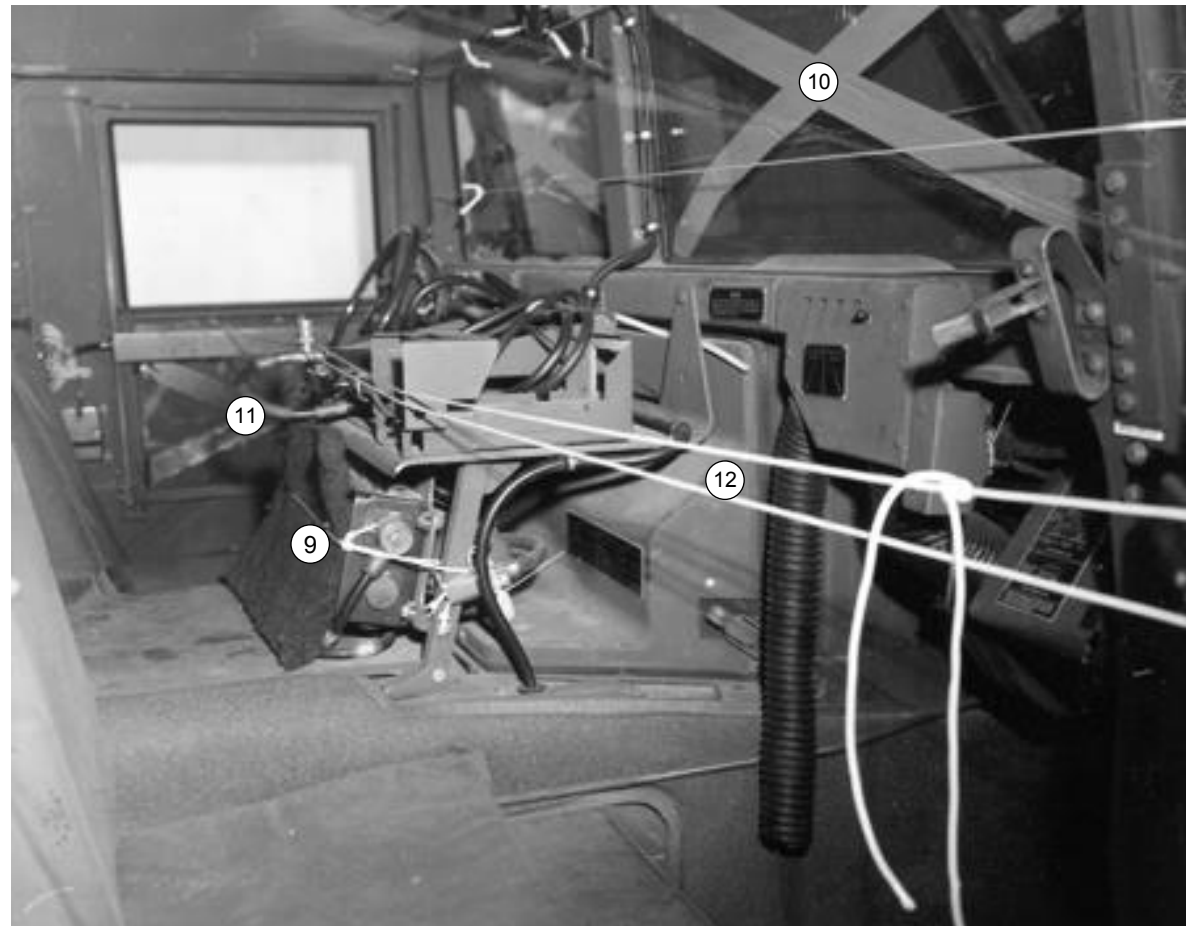
- ① Place a 12-inch length of cloth-backed tape over the fuel tank drain plug.

**Figure 7-8. Fuel Tank Drain Plug Prepared**



- ① Tie the engine start switch in the engine stop position with type I, ¼-inch cotton webbing.
- ② Tie the steering wheel to the seat frame in two places with type III nylon cord, or use the retractable steering wheel locking cable. If the locking cable is used, secure it to the steering wheel with type III nylon, not a padlock.
- ③ Tie the emergency brake handle in the off position with type III nylon cord.
- ④ Place the transmission and four-wheel drive levers in the neutral position.
- ⑤ Tie the seat cushions to the seat frames with type III nylon cord.
- ⑥ Tie the fire extinguisher in place with two lengths of type III nylon cord.
- ⑦ Tape all instrument panel gauges.
- ⑧ If equipped with an antenna, remove the antenna and tape over the hole with a length of 2-inch cloth-backed tape. Wrap the mount with cellulose wadding and tape. Secure the antenna mount in the equipment storage box (not shown).

**Figure 7-9. Cab Prepared**

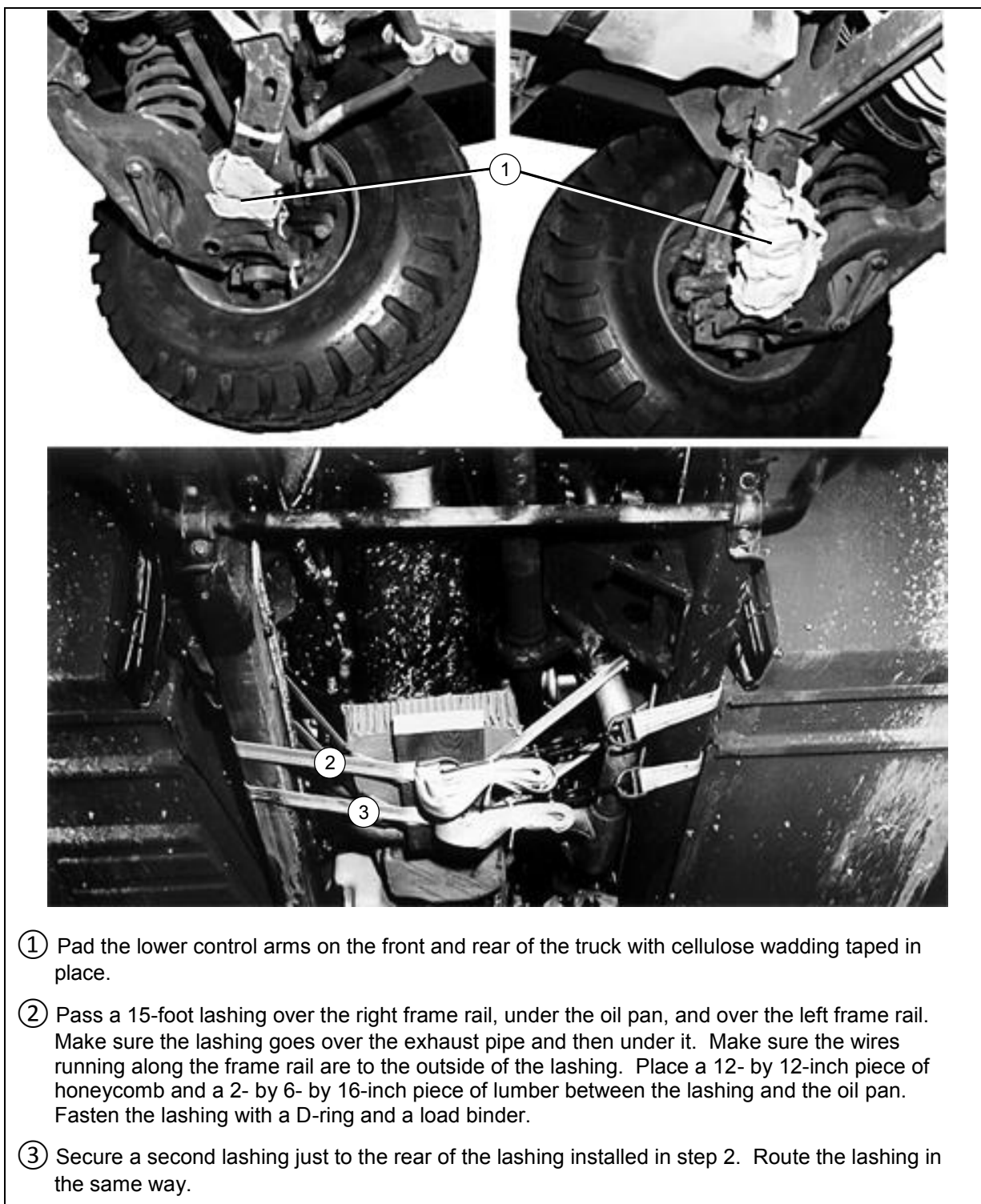


- ⑨ Pad the face of the radio with felt. Tie the felt to the radio mount supports with type III nylon cord.

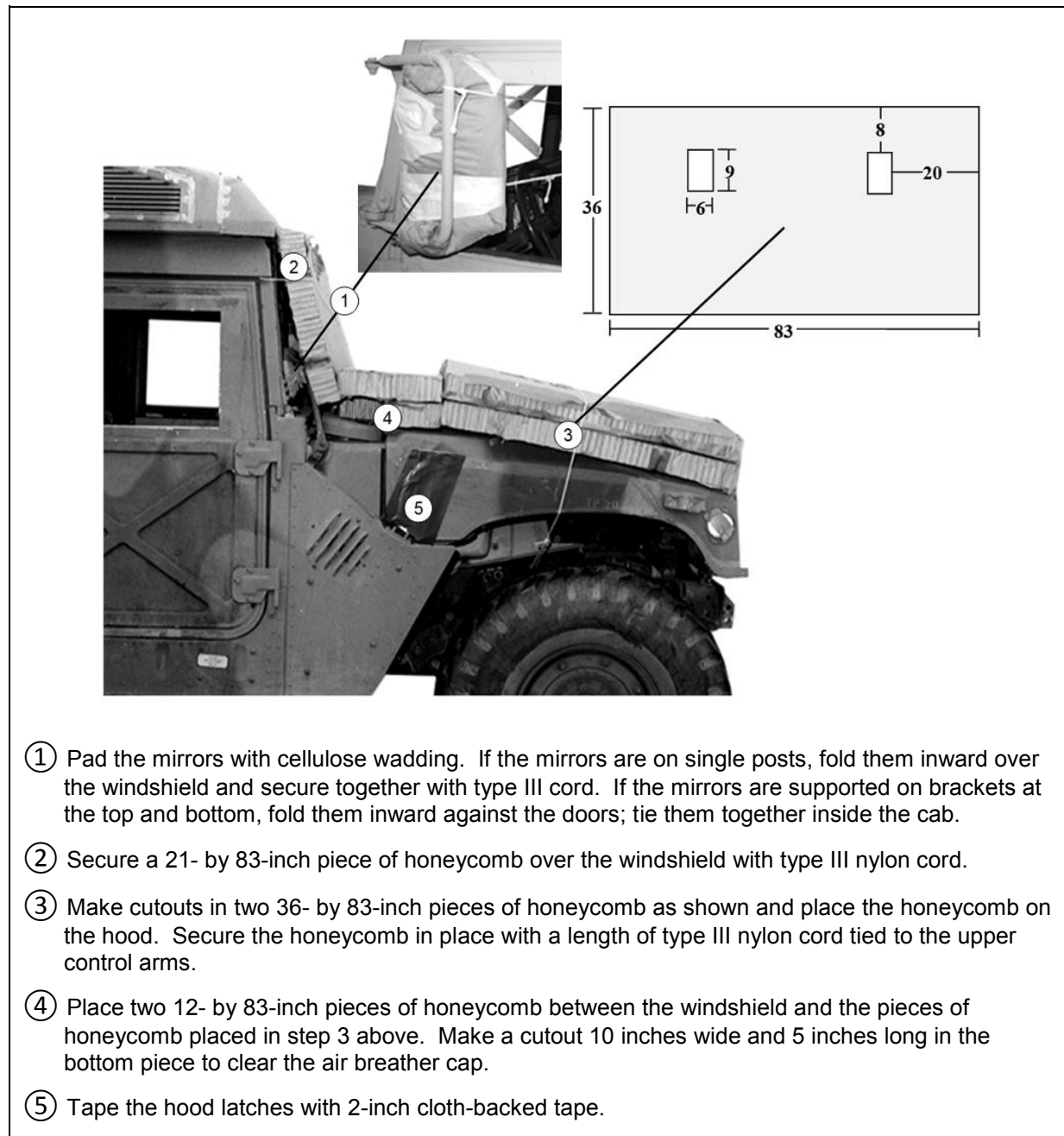
**Note.** Pad the control of any other radio equipment in the same way. Tie larger radios to their mounts with ½-inch tubular nylon webbing.

- ⑩ Tape the windshield glass on both sides in an X using 2-inch masking tape.
- ⑪ Tape the side windows on both sides in an X using 2-inch masking tape and lower them.
- ⑫ Secure both doors of the cab with a length of type III nylon cord from door-to-door.

**Figure 7-9. Cab Prepared (continued)**



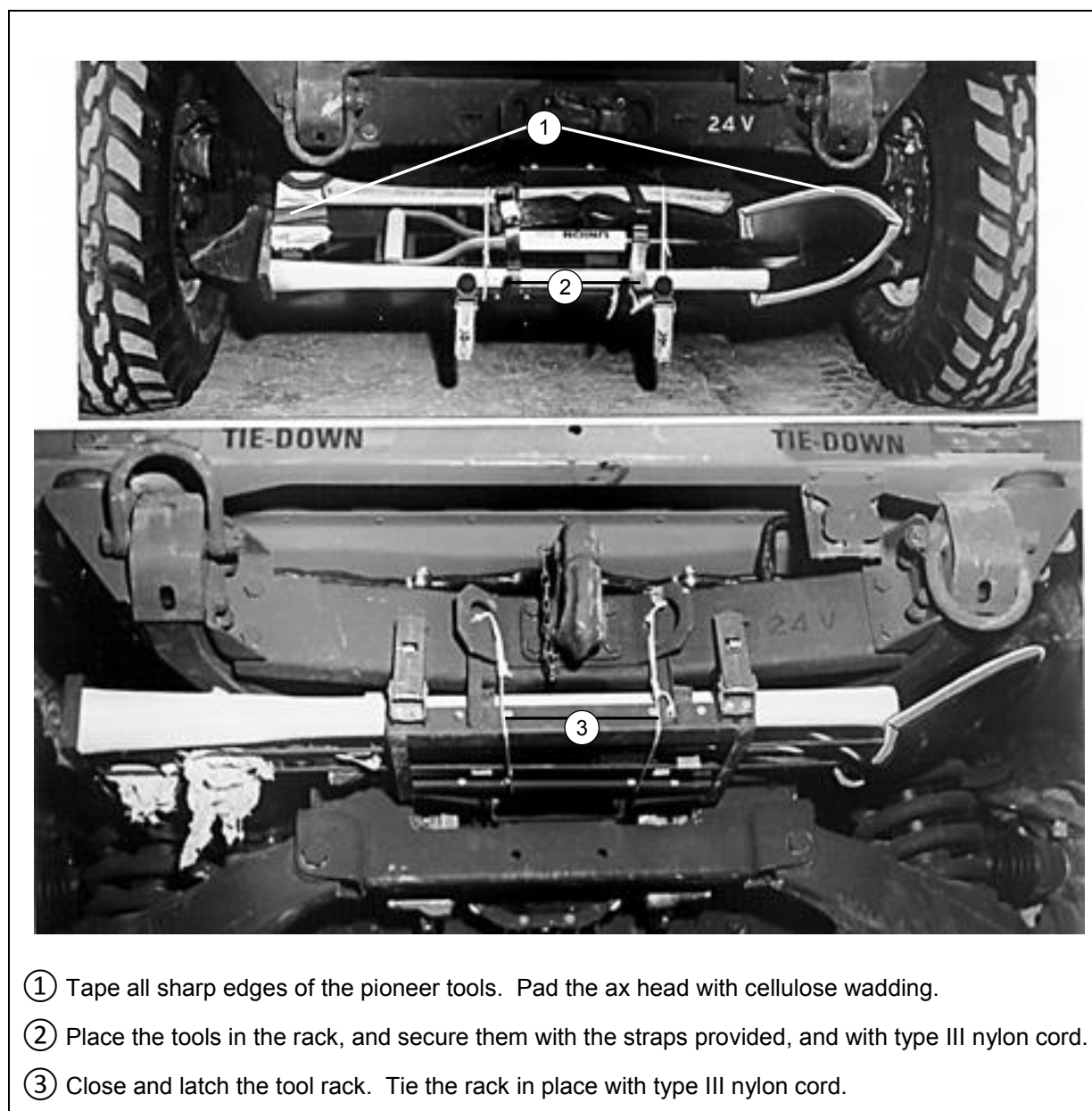
**Figure 7-10. Underside of Ambulance Prepared**



**Figure 7-11. Honeycomb Placed on Front of Ambulance and Mirrors Folded**

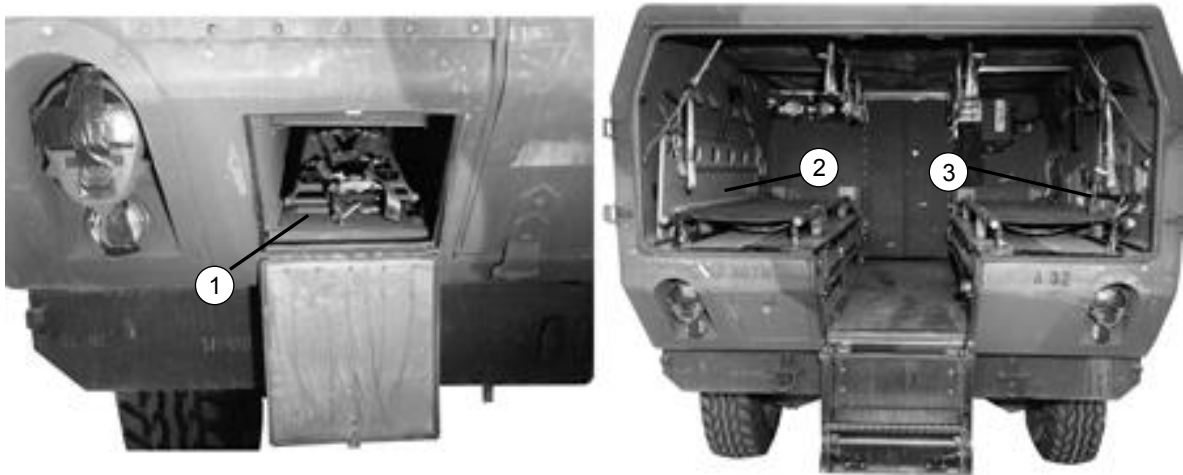


**Figure 7-11. Honeycomb Placed on Front of Ambulance and Mirrors Folded (continued)**



**Figure 7-12. Pioneer Tool Kit Secured**





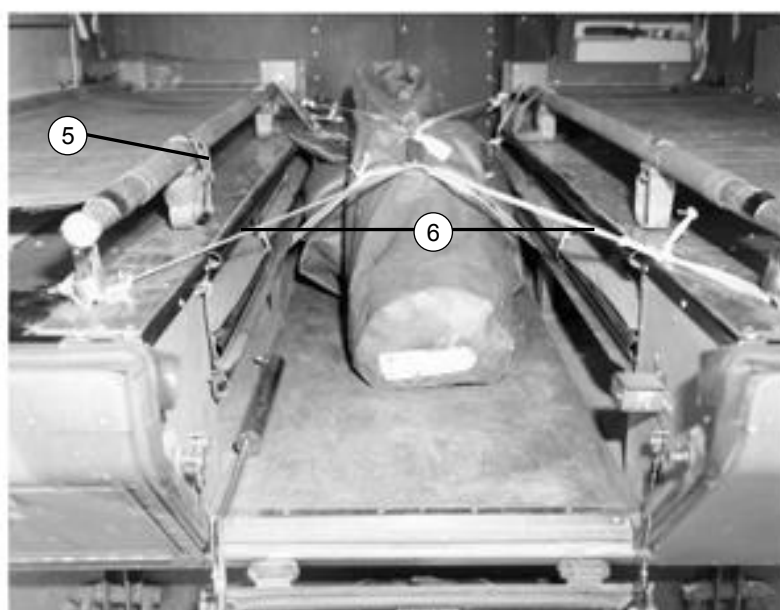
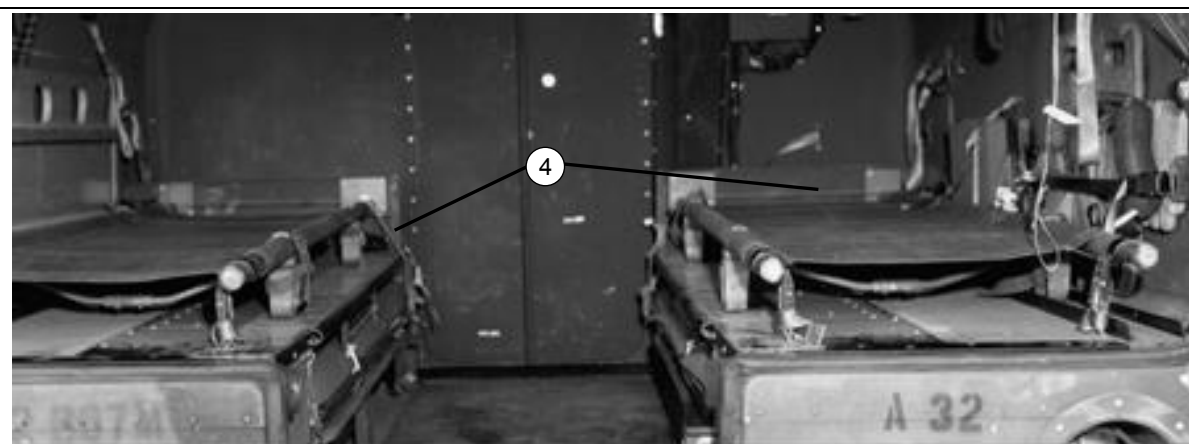
### WARNING

Lowering the steps at the rear of the ambulance from inside may cause serious injury. Lower the steps from outside the ambulance. Use one hand to activate the release, and control the descent of the steps assembly with the other hand.

- ① Secure the splints in their storage compartment. Use the securing straps provided.
- ② Secure the long backboard against the left wall with the straps provided.
- ③ Secure the short backboard and traction splint against the right wall with the straps provided.

**Note.** Reinforce the straps with type III nylon cord.

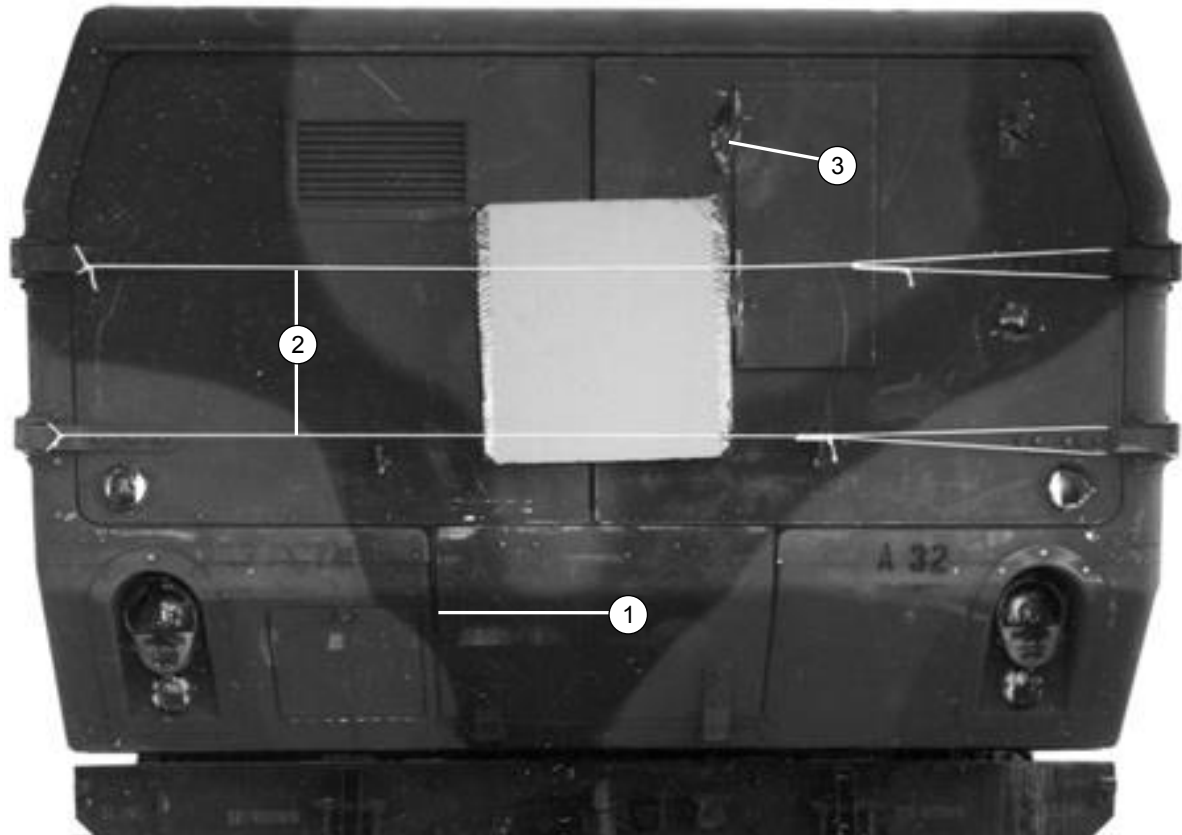
**Figure 7-13. Medical Equipment Secured**



- ④ Secure the blanket set in the left front compartment and the resuscitator kit box in the right front compartment. Use the straps provided.
- ⑤ Secure the two litters with the straps provided.
- ⑥ Place the camouflage net and pole bags in the center of the floor. Secure them to the litter tiedown brackets and to the shelf supports with ½-inch tubular nylon webbing.

**Note.** Medical equipment may be different, depending upon the needs of the medical unit. Tie additional equipment, such as water cans, securely to stationary points in the ambulance with ½-inch tubular nylon webbing.

**Figure 7-13. Medical Equipment Secured (continued)**

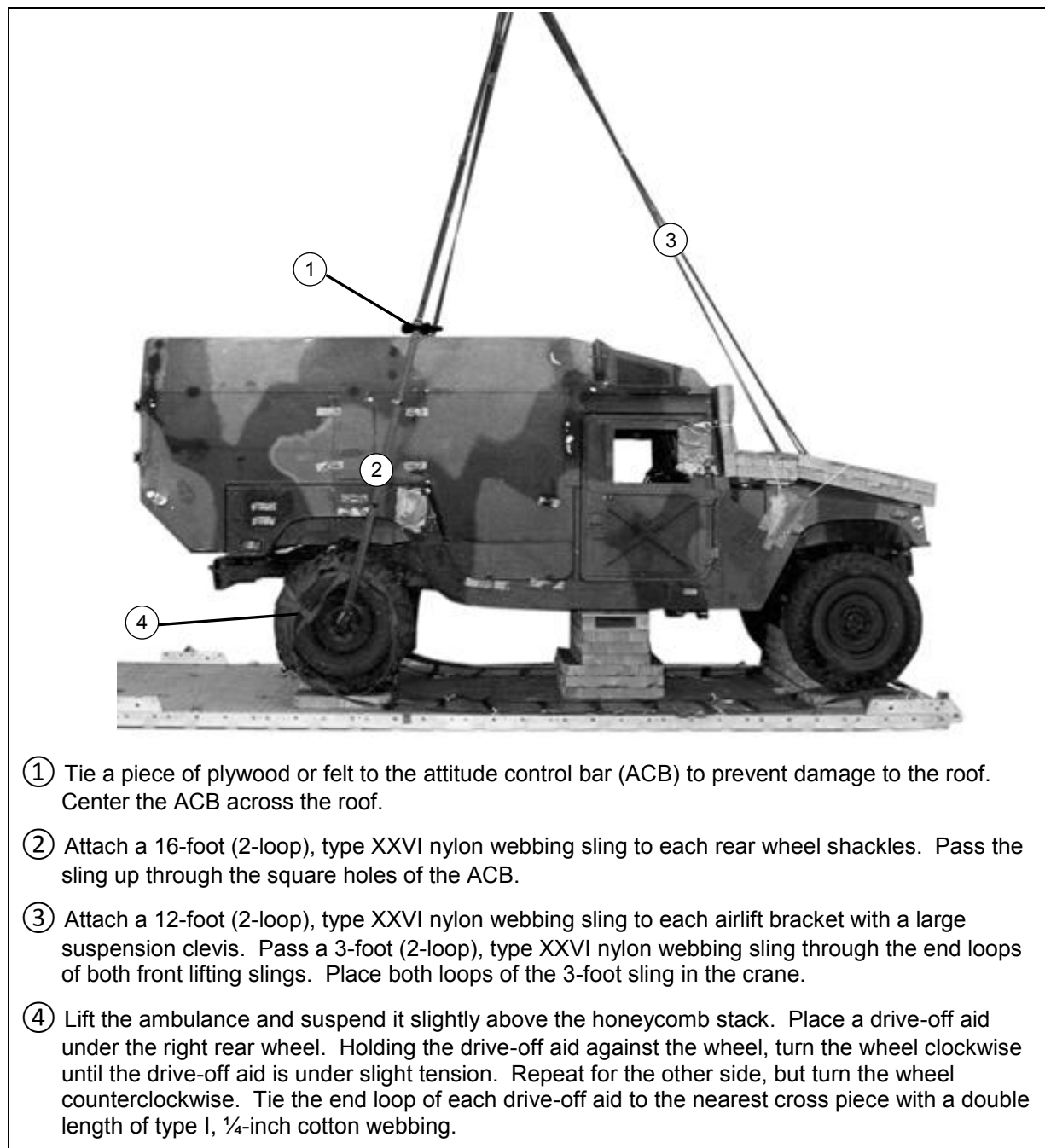


- ① Close and latch the doors.
- ② Make an indentation in the center of an 18- by 18-inch piece of honeycomb to fit the door handle. Tape the edges with 2-inch cloth-backed tape and secure the honeycomb to the door handle with two lengths of type III nylon cord.
- ③ Tape the medical identification panel latches on the rear and side of the ambulance.

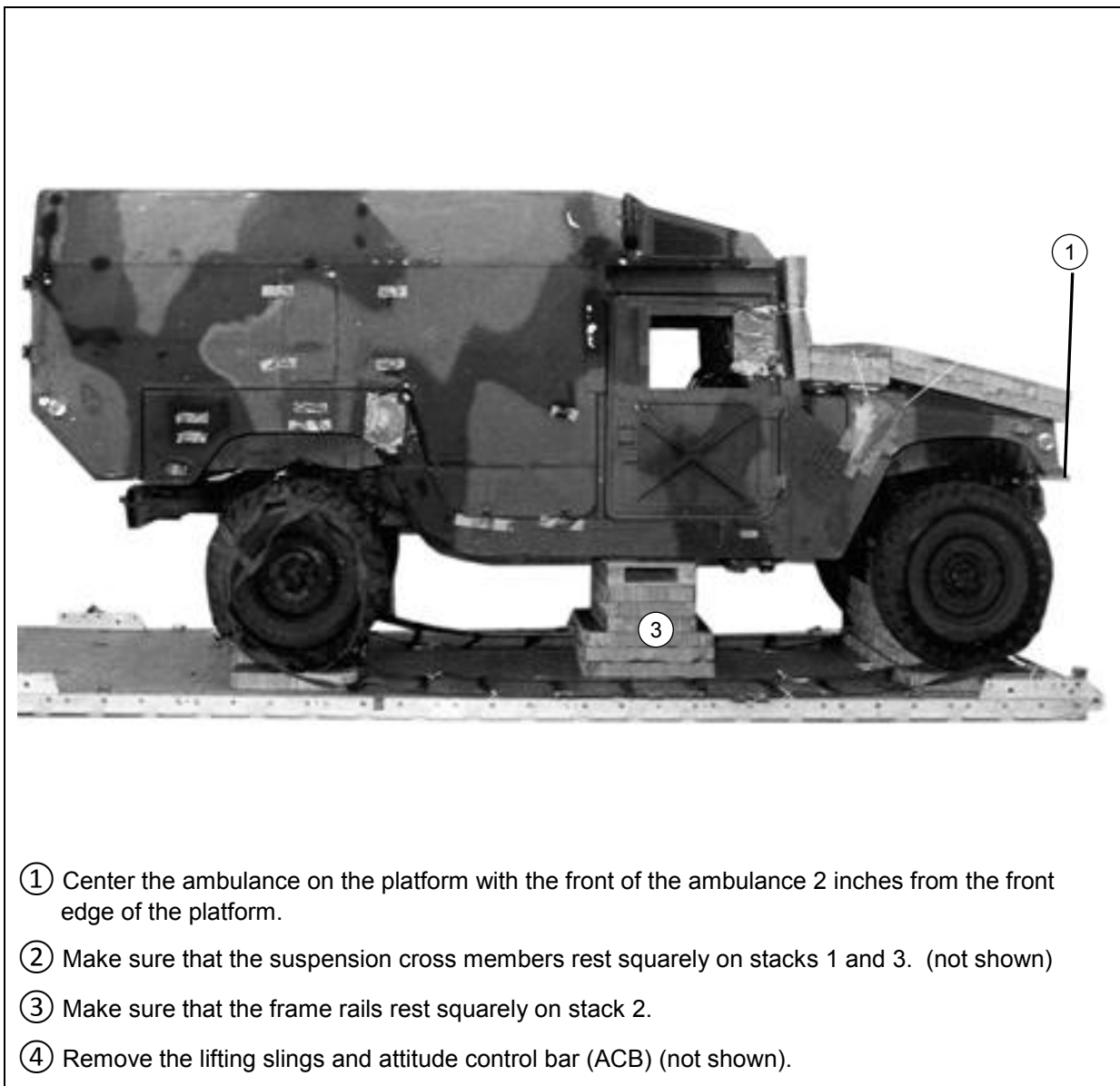
**Figure 7-14. Doors Secured and Latches Covered**

## LIFTING AND POSITIONING AMBULANCE

7-6. Install slings for lifting the ambulance and an attitude control bar (ACB) for the rear lifting slings as shown in Figure 7-15. Position the ambulance on the honeycomb stacks as shown in Figure 7-16.



**Figure 7-15. Lifting Slings Installed, and Drive-off Aids Installed**



**Figure 7-16. Ambulance Positioned**

## LASHING AMBULANCE

7-7. Lash the ambulance to the platform as shown in Figures 7-17 and 7-18.

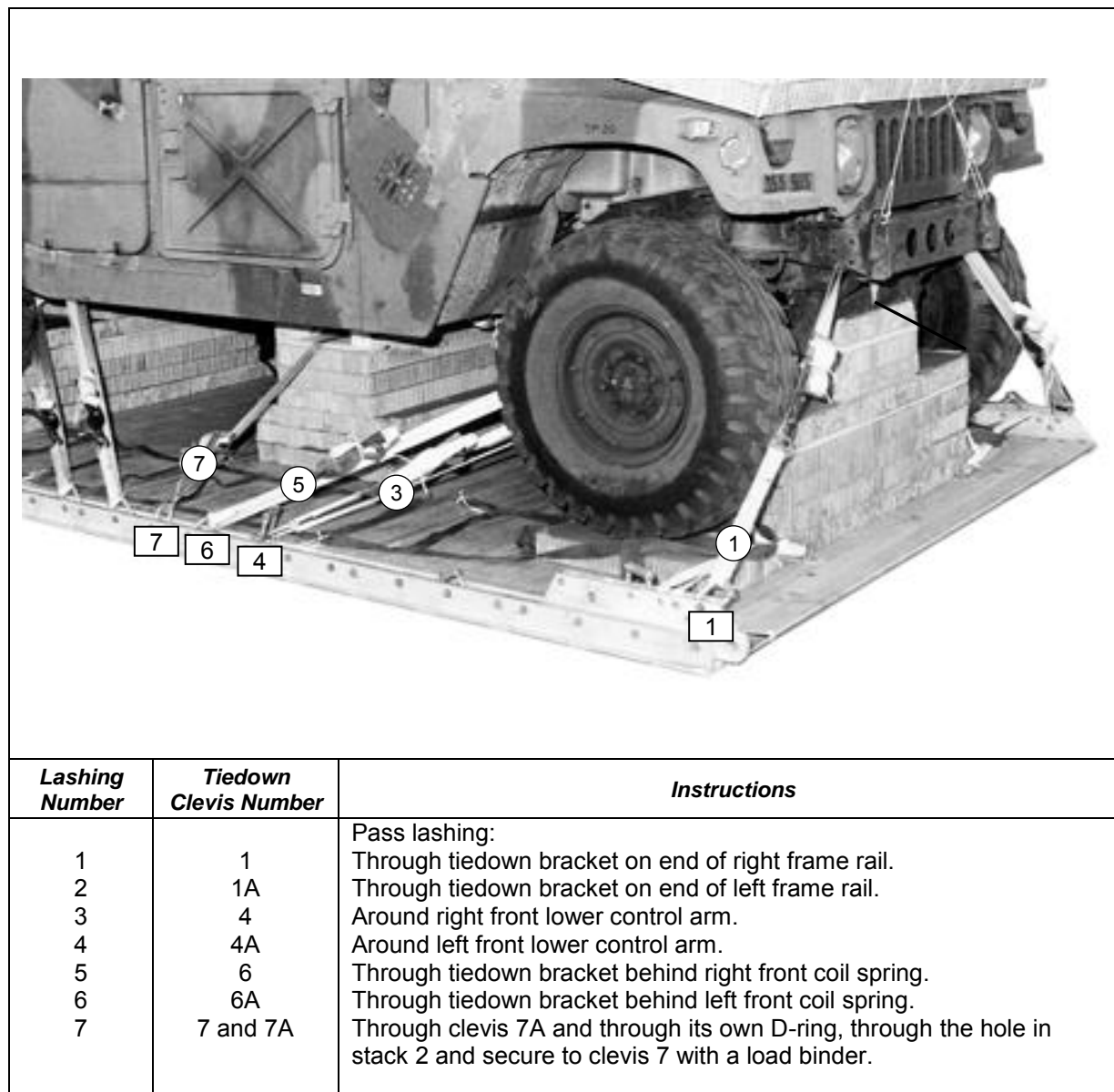
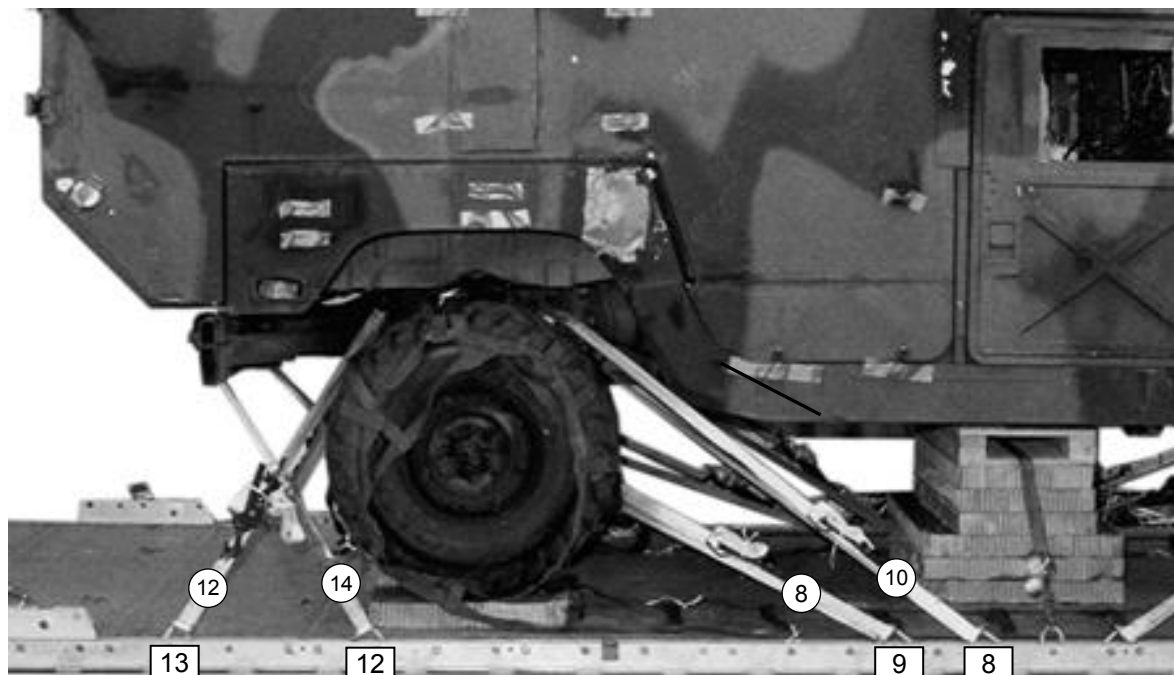


Figure 7-17. Lashings 1 Through 7 Installed.

**Note.** The lashing order deviates from normal order to allow for easier installation of lashings.



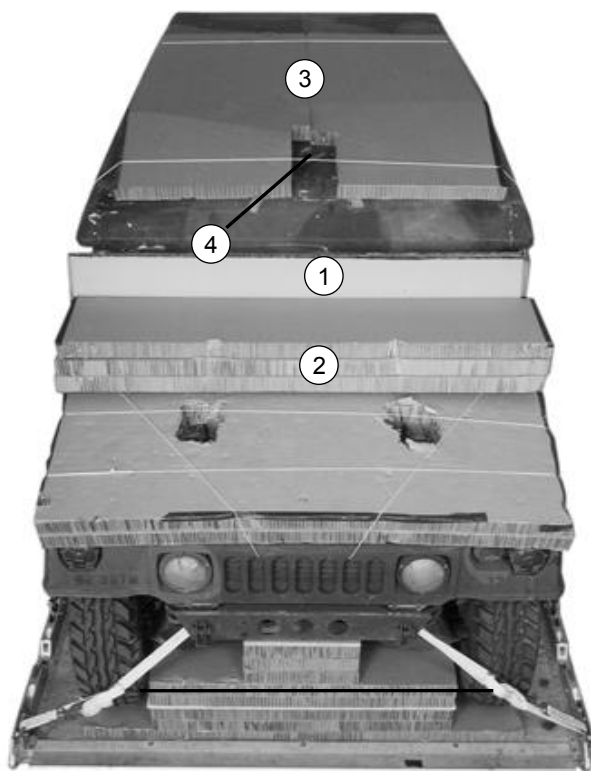
<i><b>Lashing Number</b></i>	<i><b>Tiedown Clevis Number</b></i>	<i><b>Instructions</b></i>
8	9	Pass lashing:
9	9A	Around right rear lower control arm.
10	8	Around left rear lower control arm.
11	8A	Through tiedown bracket in front of the right rear coil spring.
12	13	Through tiedown bracket in front of left rear coil spring.
13	13A	Through tiedown bracket behind right rear coil spring.
14	12	Through tiedown bracket behind left rear coil spring.
15	12A	Through tiedown shackle on right side of bumper.
		Through tiedown shackle on left side of bumper.

**Figure 7-18. Lashings 8 Through 15 Installed.**

## INSTALLING SUSPENSION SYSTEM

7-8. Install the suspension as given below:

- Install the roof covers and ACB supports as shown in Figure 7-19.
- Install the attitude control bar (ACB) to the front of the ambulance as shown in Figure 7-20.
- Lash the front ACB to the platform as shown in Figure 7-21.
- Lash the rear ACB to the platform as shown in Figure 7-22.
- Install the suspension slings and the deadman's tie as shown in Figure 7-23.



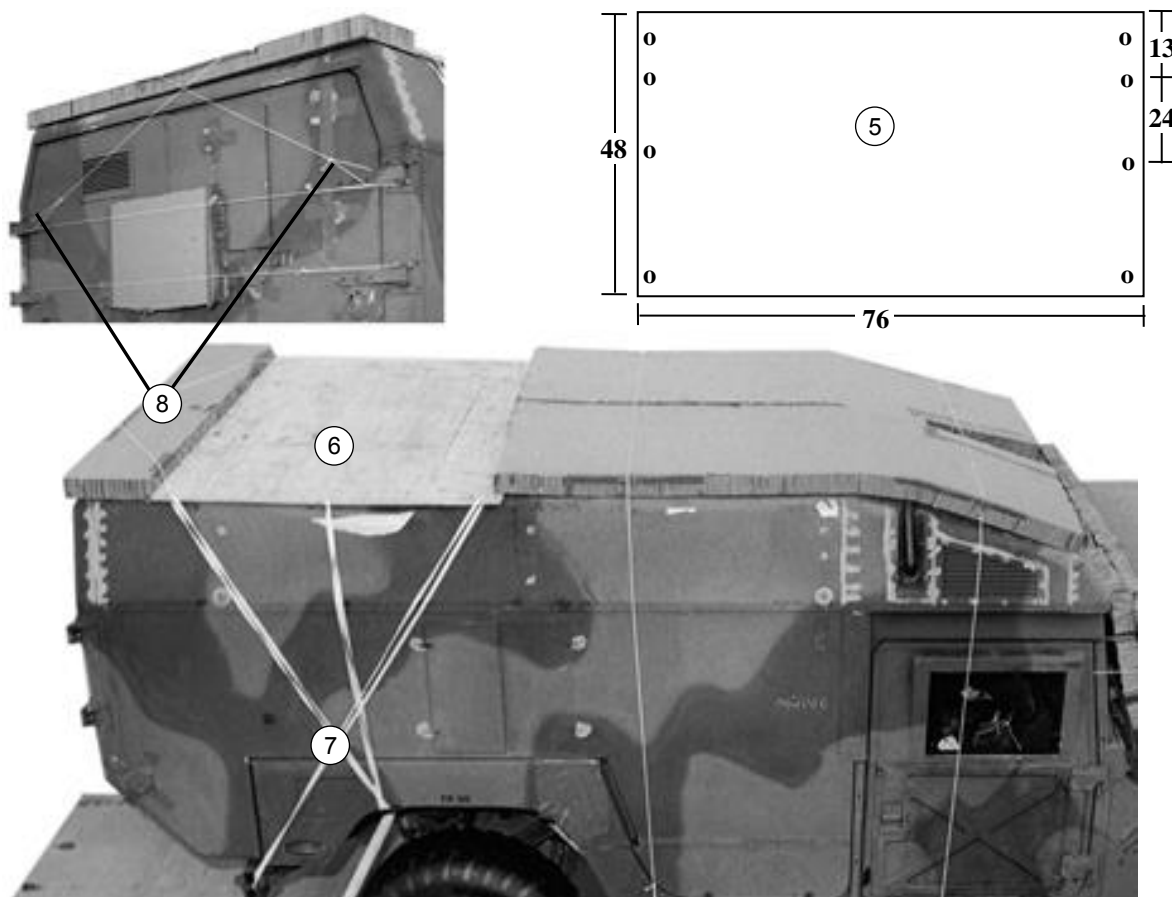
- ① Place a 16- by 82-inch piece of honeycomb over the piece of honeycomb covering the windshield. Tie the honeycomb in place with type III nylon cord.
- ② Stack three 18- by 82-inch pieces of honeycomb against the piece of honeycomb placed in step 1 above.
- ③ Cover the front of the roof with two 36- by 96-inch pieces of honeycomb, with the front edge of the honeycomb 6 inches from the front edge of the roof.
- ④ Make a 10- by 20-inch cutout in the honeycomb as shown to allow for fixtures on the roof. Tie the honeycomb to convenient points on the load with type III nylon cord.

**Note.** Tape the edges of the honeycomb where the type III nylon cord passes over it.

**Figure 7-19. Roof Cover and ACB Supports Installed**



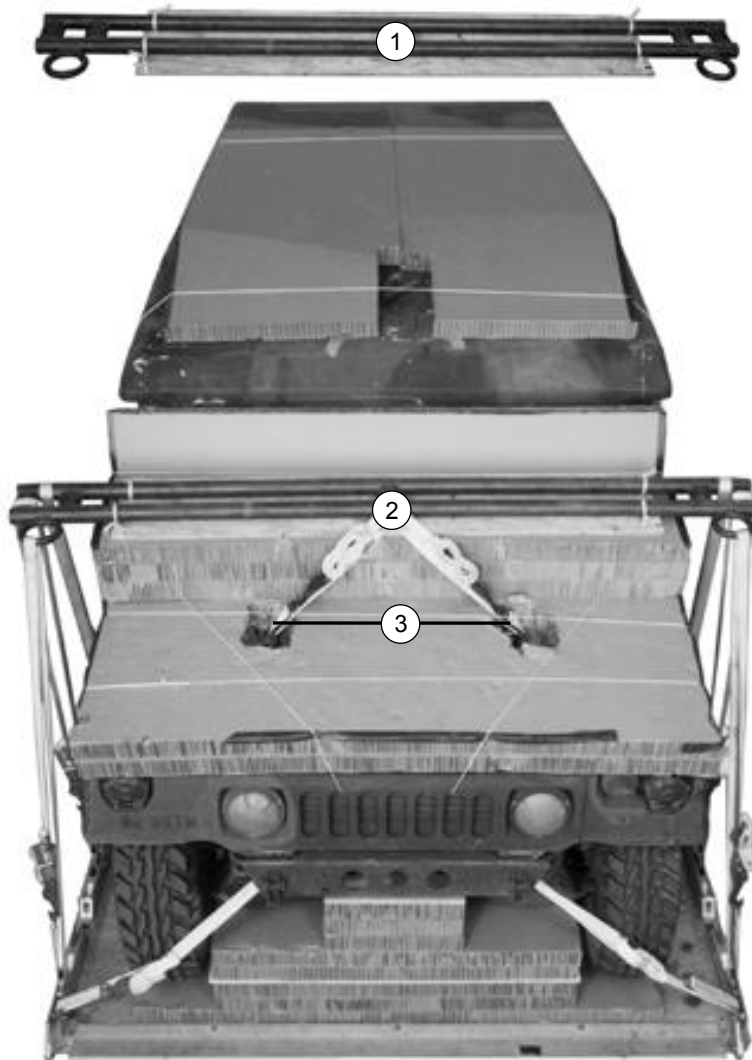
- Notes.** 1. All measurements are given in inches.  
2. This drawing is not drawn to scale.



- ⑤ Drill eight 1/2-inch holes 2 inches from the edges in a 3/4- by 48- by 76-inch piece of plywood as shown.
- ⑥ Cover the rear of the ambulance roof with the plywood so the front edge of the plywood extends under the honeycomb and the rear edge is 12 inches from the rear edge of the roof.
- ⑦ Secure the plywood to the roof on both sides with 1/2-inch tubular nylon webbing as follows: From the front holes in the plywood to the rear bumpers, from the rear holes to the tiedown brackets in front of the rear coils springs, and from the center holes to the tiedown brackets behind the rear coil springs.
- ⑧ Place a 76- by 12-inch piece of honeycomb across the roof against the rear edge of the plywood. Tape the edges and secure the honeycomb to the rear door hinges and to the rear holes in the plywood with type III nylon cord.

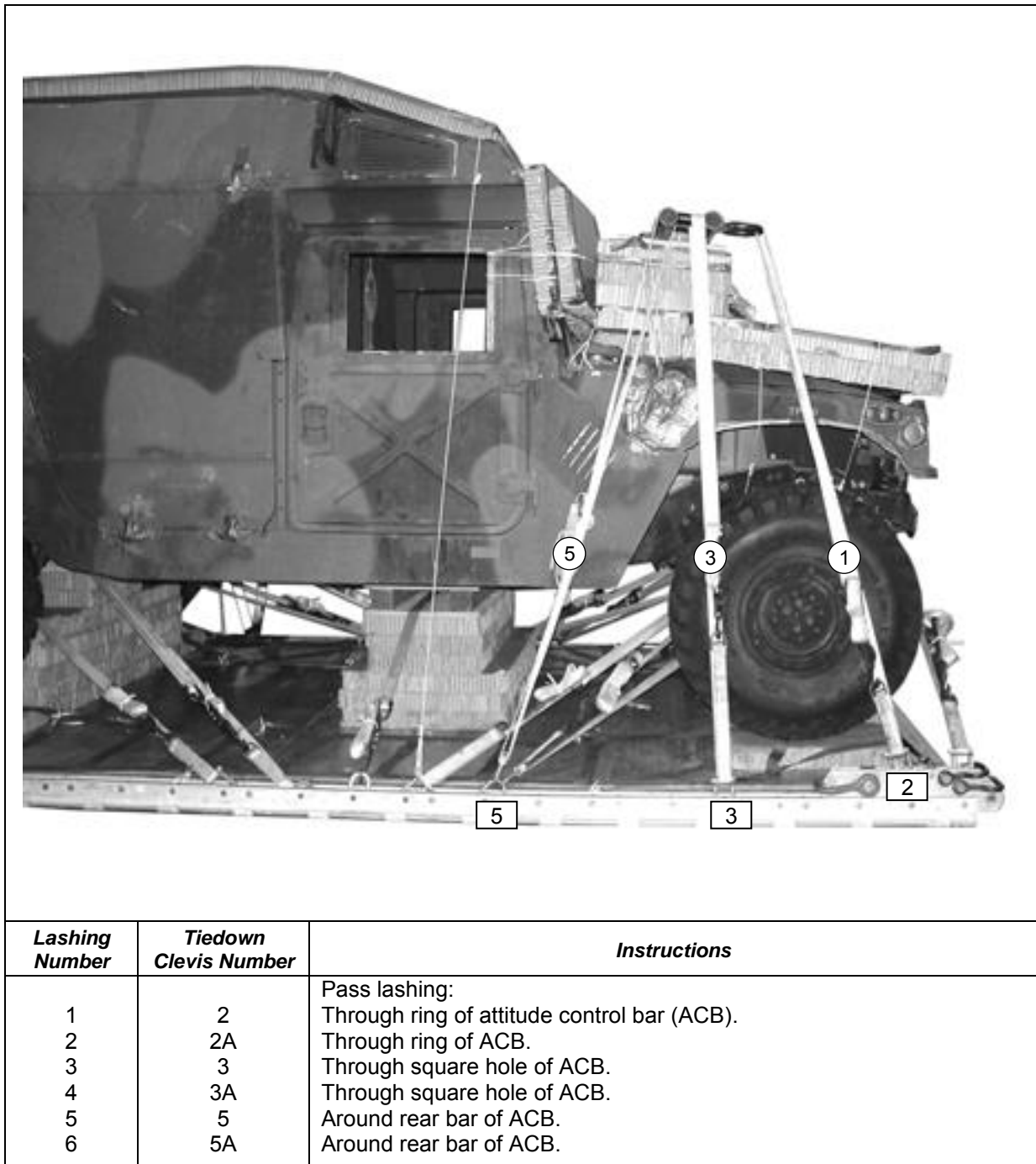
**Figure 7-19. Roof Cover and ACB Supports Installed (continued)**

**Note.** Do NOT use the suspension sling spreader bar on the front of the ambulance. Use only the attitude control bar (ACB).

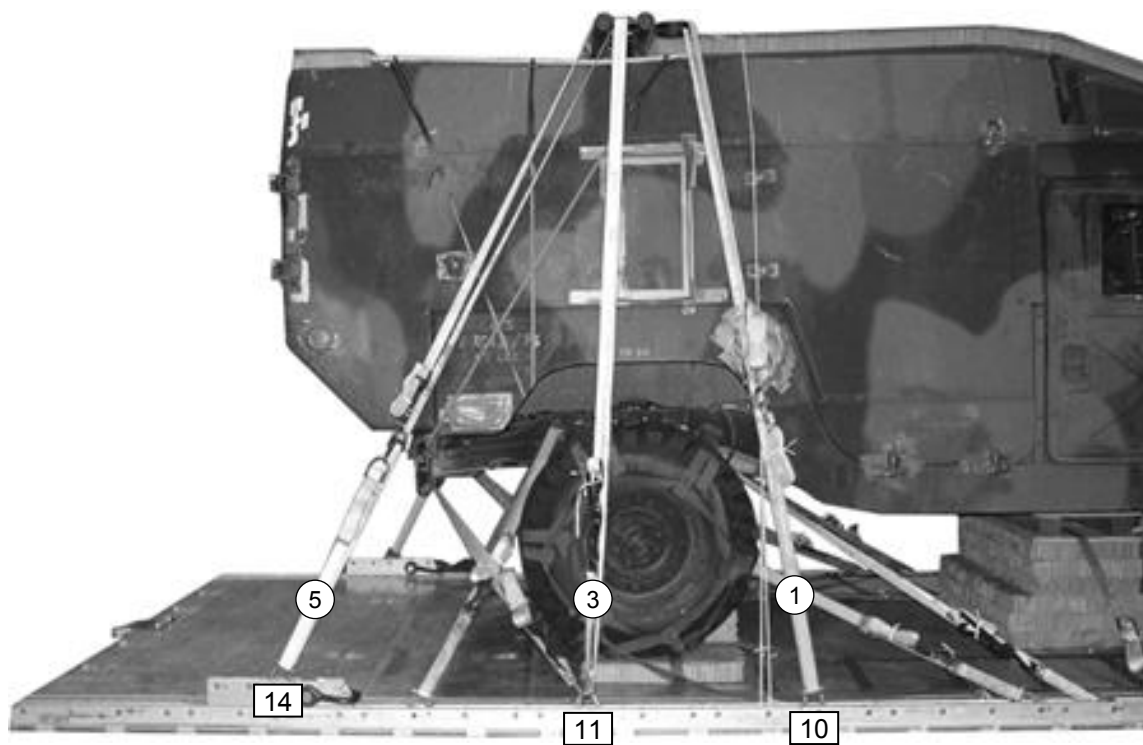


- ① Drill a ½-inch hole 1 inch from each corner of a ¾- by 15- by 76-inch piece of plywood. Tie an ACB to the plywood with ½-inch tubular nylon webbing. Repeat this step to make the rear ACB.
- ② Center the ACB and plywood on the honeycomb stack on the front of the ambulance with the rings facing the front.
- ③ Run a 15-foot lashing from each lifting bracket around the center bar of the ACB.

**Figure 7-20. ACB Installed on Front of Ambulance**



**Figure 7-21. Front ACB Lashed to Platform**

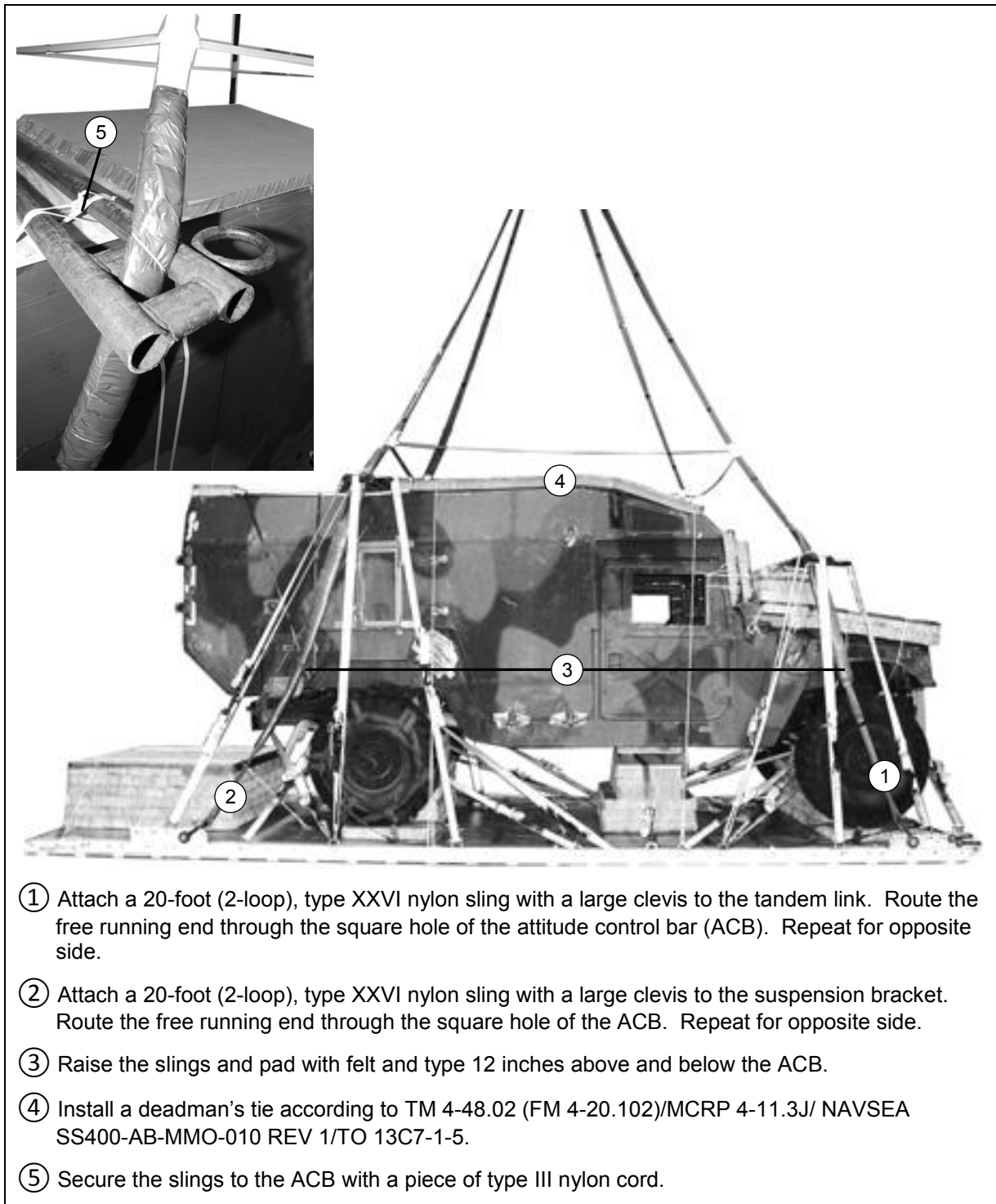


**Note.** Center the attitude control bar (ACB) made in Figure 7-20 with the rings facing front. Tie the attitude control bar (ACB) to the plywood through the second and third holes with ½ inch tubular nylon webbing. (not shown)

**Note:** Do not over tighten the lashings because it will cause the roof to buckle.

<i>Lashing Number</i>	<i>Tiedown Clevis Number</i>	<i>Instructions</i>
1	10	Pass lashing:
2	10A	Through ring of ACB.
3	11	Through ring of ACB.
4	11A	Through square hole of ACB.
5	14	Through square hole of ACB.
6	14A	Around rear bar of ACB.

**Figure 7-22. Rear ACB Lashed to Platform**



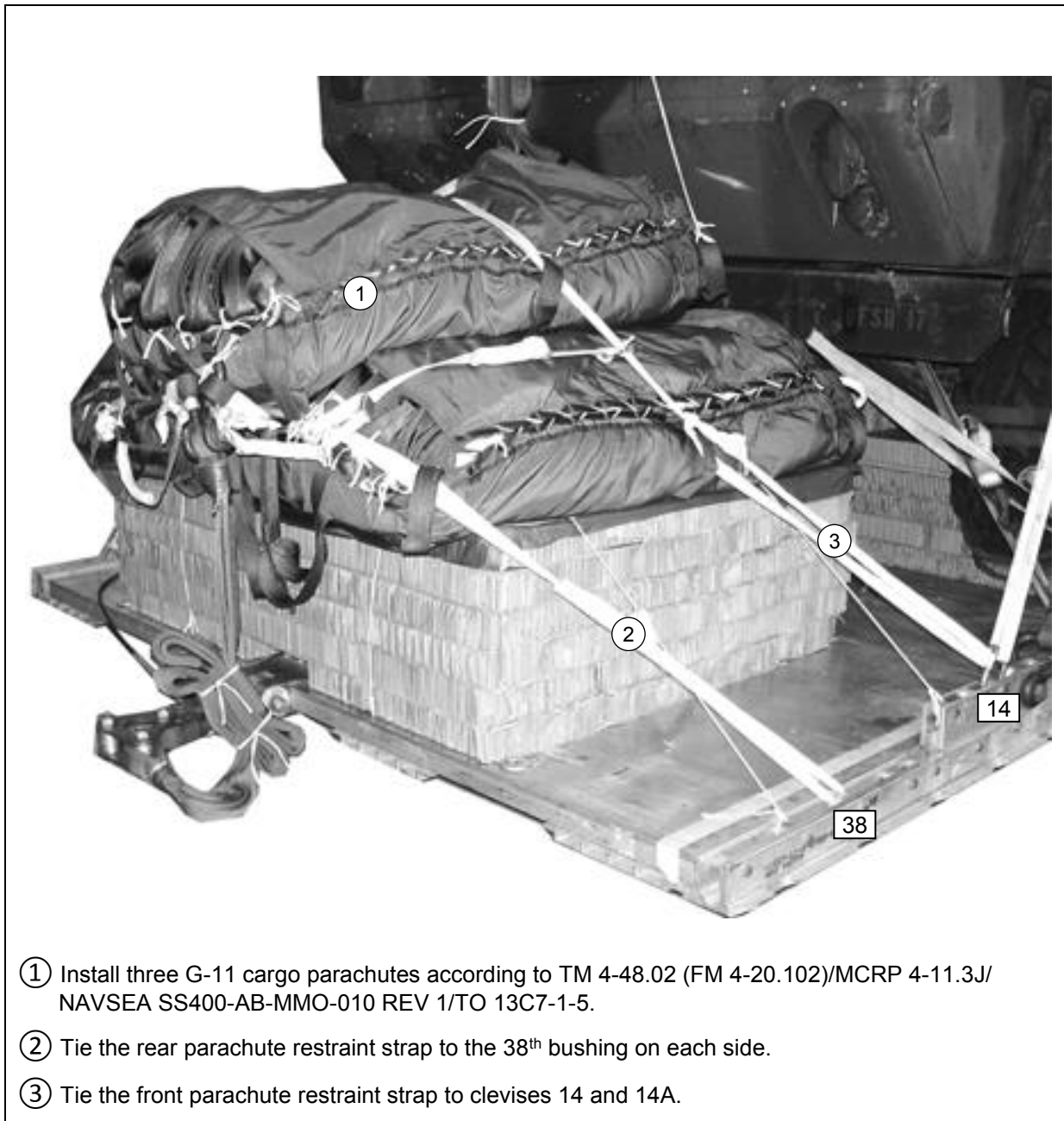
**Figure 7-23. Suspension Slings and Deadman's Tie Installed**

## STOWING CARGO PARACHUTES

7-9. Prepare and install the parachute stowage platform as shown in Figure 7-24. Weigh the load and install the correct number of parachutes according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5. The load shown in Figure 7-25 requires three G-11 parachutes.



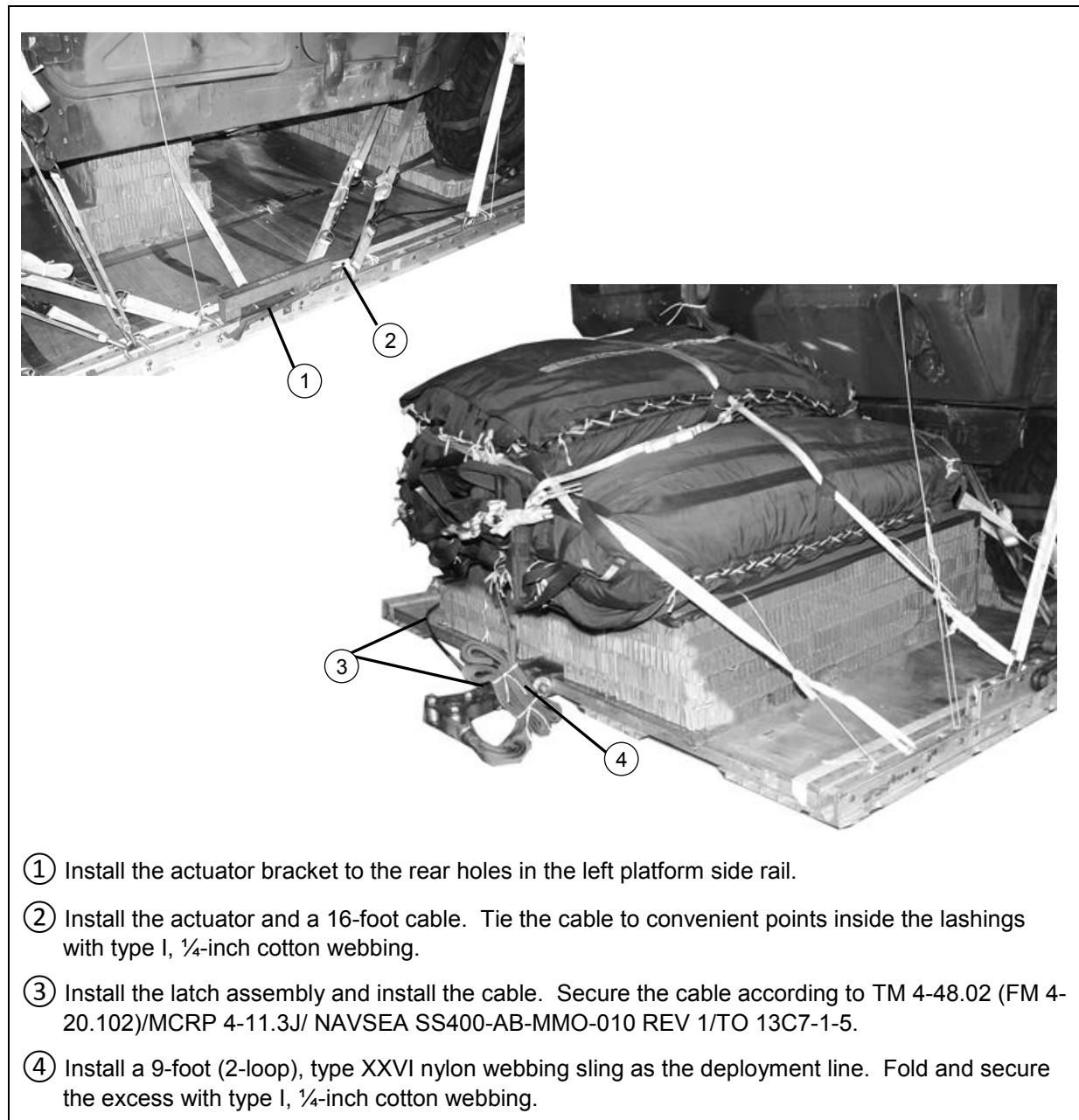
**Figure 7-24. Parachute Stowage Platform Prepared and Installed**



**Figure 7-25. Parachutes Installed**

## INSTALLING EXTRACTION SYSTEM

7-10. Install the EFTC according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figure 7-26.



**Figure 7-26. Extraction Force Transfer Coupling (EFTC) Installed**

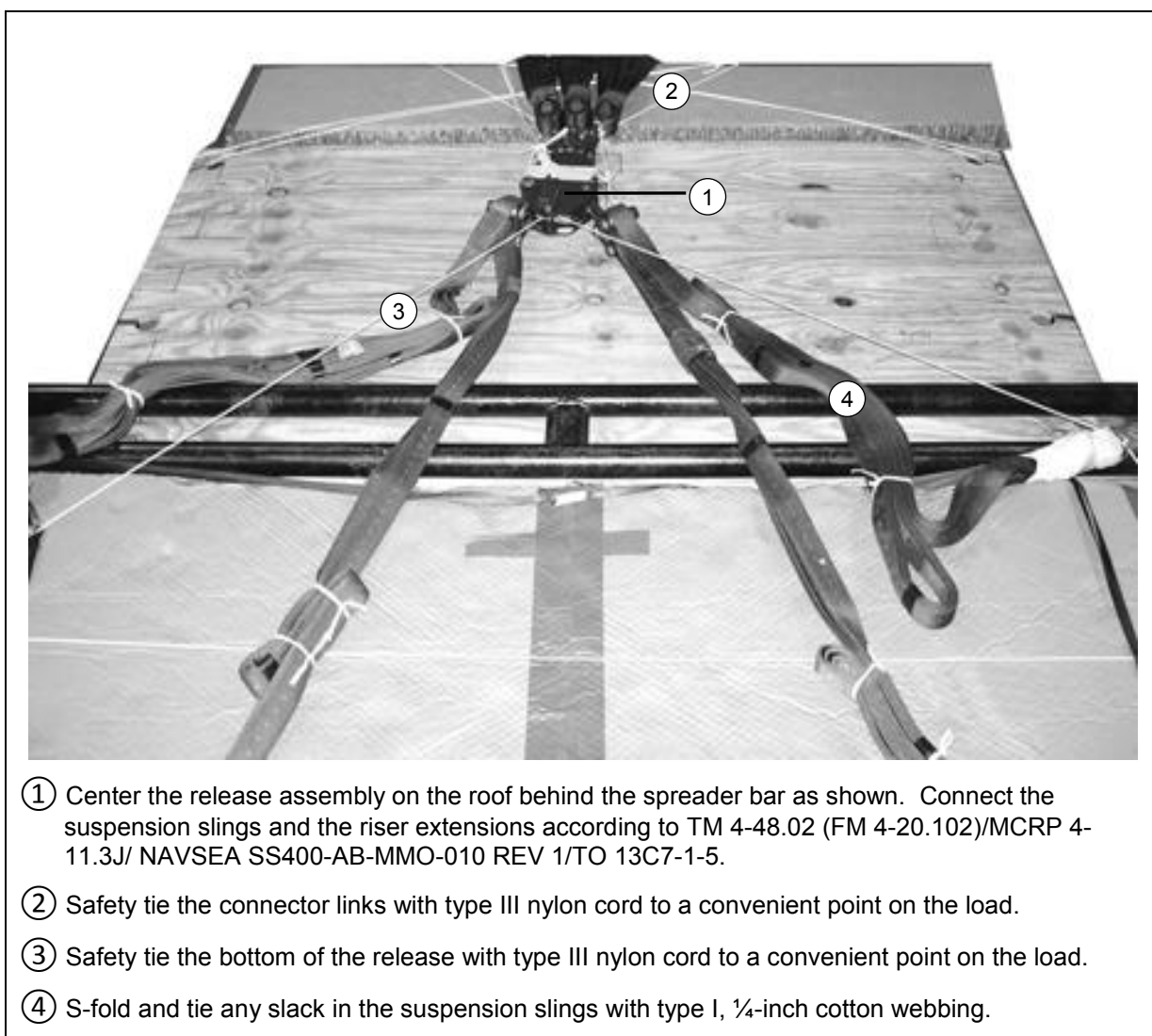


## INSTALLING PARACHUTE RELEASE

7-11. Install a M-1 cargo parachute release according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figure 7-27.

## INSTALLING PROVISIONS FOR EMERGENCY RESTRAINTS

7-12. Install provisions for emergency restraints on the front of the platform according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.



**Figure 7-27. M-1 Release Installed**

## **PLACING EXTRACTION PARACHUTE**

7-13. Select the extraction parachute and extraction line needed using the extraction line requirements table in TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5. Rig the extraction line in an extraction line bag according to TM 10-1670-286-20/TO 13C5-2-41. Place the extraction parachute and extraction line on the load for installation in the aircraft. If a drogue parachute and drogue line are required, place them on the platform for installation in the aircraft as well.

## **MARKING RIGGED LOAD**

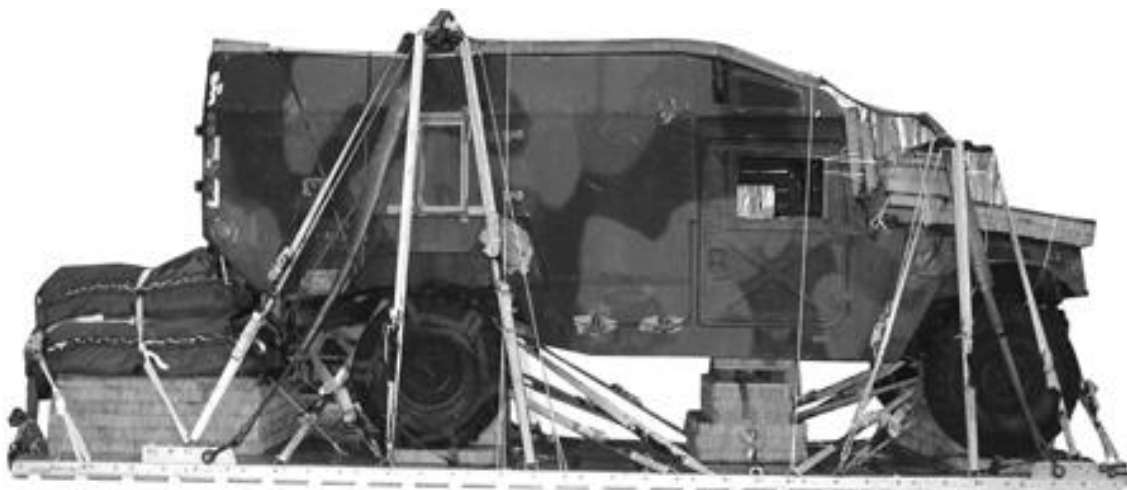
7-14. Mark the rigged load according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figure 7-28. Complete the Shipper's Declaration for Dangerous Goods. If the load varies from the one shown, the weight, height, CB, and parachute requirements must be recomputed.

## **EQUIPMENT REQUIRED**

7-15. Use the equipment listed in Table 7-1 on page 7-34 to rig this load.

### CAUTION

Make the final rigger inspection required by TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 before the load leaves the rigging site.



### RIGGED LOAD DATA

Weight.....	11,680 pounds
Maximum Load Allowed .....	13,500 pounds
Height With Three G-11 Parachute.....	100 inches
Width.....	108 inches
Length.....	258inches
Overhang: Front (vehicle).....	0 inches
Rear (extraction force transfer coupling) .....	18 inches
Center of Balance (CB) (from front edge of platform).....	110 inches

Figure 7-28. M996, 2-Litter Armored Ambulance (HMMWV) Rigged for Low-Velocity Airdrop

**Table 7-1. Equipment Required for Rigging M996 Ambulance for Low-Velocity Airdrop**

<b>National Stock Number</b>	<b>Item</b>	<b>Quantity</b>
8040-00-273-8713	Adhesive, paste, 1-gallon	As required
1670-00-003-4389	Bar, attitude control	2
4030-00-090-5354	Clevis, suspension, 1-inch (large)	5
4020-00-240-2146	Cord, nylon type III, 550-pound	As required
1670-00-434-5785	Coupling, airdrop, extraction force transfer with cable, 16-foot	1
1670-00-360-0328	Cover, clevis, large	3
8135-00-664-6958	Cushioning material, packaging, cellulose wadding	As required
8305-00-958-3685	Felt, ½-inch thick	As required
1670-01-183-2678	Leaf, extraction line (line bag)	2
1670-01-064-4452	Line, drogue, 60-foot (1-loop), type XXVI (for C-17)	1
	Line, extraction	
1670-01-062-6313	60-foot (3-loop), type XXVI (for C-130)	1
1670-01-107-7651	140-foot (3-loop) type XXVI (for C-17)	1
	Link assembly, two-point	
1670-00-003-1953	3 ¾-inch	2
	Lumber:	
5510-00-220-6148	2- by 6-inch	As required
5510-00-220-6274	2- by 4-inch	As required
5315-00-010-4659	Nail, steel wire, 8d	As required
1670-00-753-3928	Pad, energy-dissipating (honeycomb)	20 sheets
	Parachute:	
	Cargo:	
1670-01-016-7841	G-11	3
	Cargo extraction:	
1670-01-063-3716	22-foot	1
1670-01-063-3715	15-foot (drogue for C-17)	1
	Platform, airdrop, type V, 20-foot	
1670-01-353-8425	Bracket assembly, coupling	(1)
1670-01-162-2372	Clevis assembly, type V	(28)
1670-01-353-8424	Extraction bracket assembly	(1)
1670-01-247-2389	Suspension link	(2)
1670-01-162-2381	Tandem link assembly (multipurpose link)	(2)
5530-00-128-4981	Plywood, ¾-inch	4 sheets
1670-01-097-8816	Release, cargo parachute, M-1	1

**Table 7-1. Equipment Required for Rigging M996 Ambulance for Low-Velocity Airdrop  
(continued)**

<i>National Stock Number</i>	<i>Item</i>	<i>Quantity</i>
	Sling, cargo, airdrop:	
	For suspension:	
1670-01-062-6302	20-foot (2-loop), type XXVI nylon webbing	4
	For lifting:	
1670-01-062-6301	3-foot (2-loop), type XXVI nylon webbing	1
1670-01-062-6303	12-foot (2-loop), type XXVI nylon webbing	2
1670-01-063-7761	16-foot (2-loop), type XXVI nylon webbing	2
	For deployment:	
1670-01-062-6304	9-foot (2-loop), type XXVI nylon webbing	1
	For riser extension:	
1670-01-062-6302	20-foot (2-loop), type XXVI nylon webbing	2
1670-01-062-6313	60-foot (3-loop), type XXVI nylon webbing	3
4910-01-313-8839	Spreader bar assembly	1
5340-00-040-8219	Strap, parachute release multi-cut, with 3 knives	2
7510-00-266-5016	Tape, adhesive, 2-inch	As required
1670-00-937-0271	Tiedown assembly, 15-foot	34
1670-01-483-8259	Tow release mechanism (H-Block for C-17)	1
1670-01-344-0825	Vehicle drive-off aid	1
	Webbing:	
8305-00-268-2411	Cotton, ¼-inch, type I	As required
8305-00-082-5752	Nylon, tubular, ½-inch	As required
8305-00-263-3591	Type VIII	As required

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## Chapter 8

# Rigging the M997 Ambulance on a 20-Foot Type V Airdrop Platform for Low-Velocity Airdrop

## DESCRIPTION OF LOAD

8-1. The M997 ambulance (shown in Figure 8-1) is rigged on a 20-foot, type V airdrop platform for low-velocity airdrop. The load requires three G-11 cargo parachutes, depending upon the accompanying load in the vehicle.

### CAUTION

This load may be dropped from C-17 aircraft only.

## PREPARING PLATFORM

8-2. Prepare a 20-foot, type V platform as described below and as shown in Figure 8-2.

- **Inspecting Platform.** Inspect, or assemble and inspect the platform according to TM 10-1670-268-20&P/TO 13C7-52-22.
- **Installing Tandem Links.** Install tandem links as shown as Figure 8-2.
- **Installing Suspension Links.** Install the suspension links as described in Figure 8-2.
- **Attaching and Number Clevises.** Attach and number 28 clevis assemblies as shown in Figure 8-2.

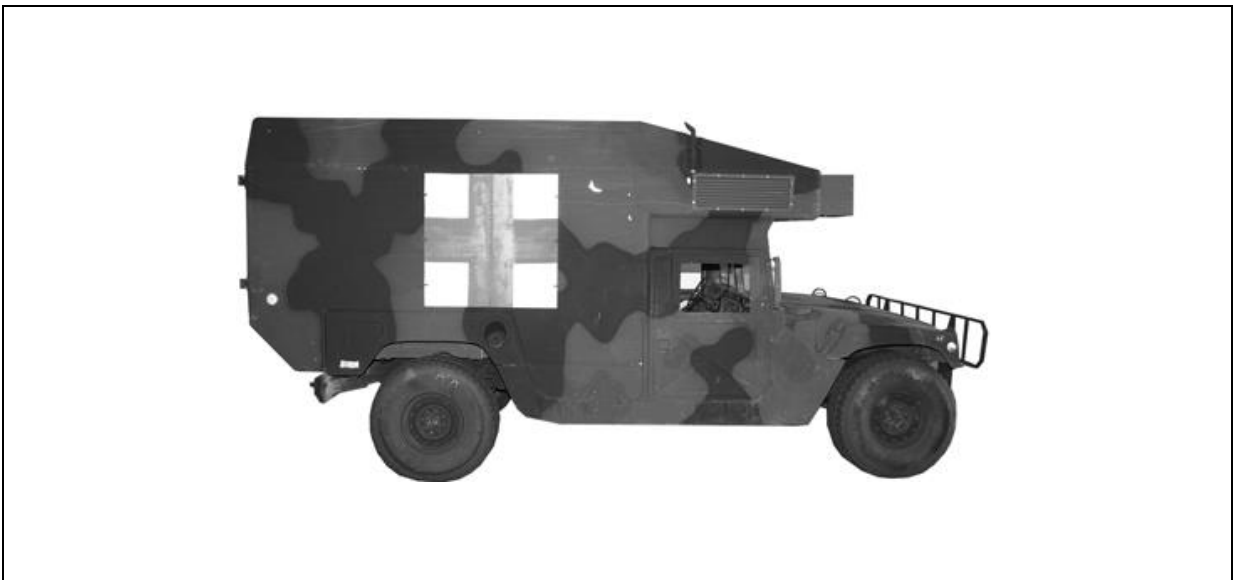
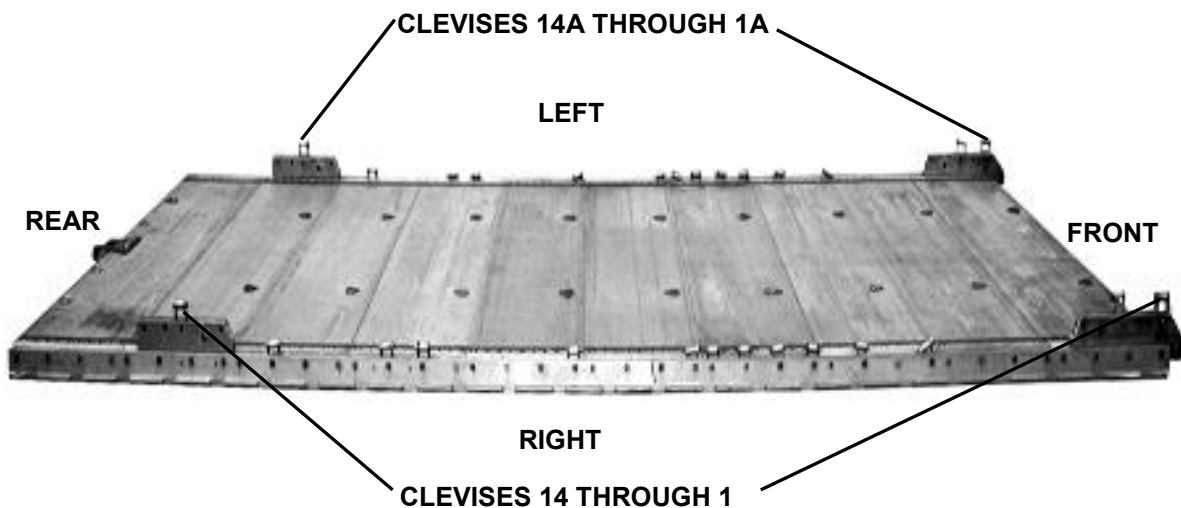


Figure 8-1. M997 4-Litter Ambulance



Steps:

1. Install a tandem link on the front of each platform side rail using holes 1, 2, and 3.
2. Install a suspension link to each side rail using holes 33, 34, and 35.
3. Install clevises on bushings 1 and 3 on each tandem link assembly.
4. Install a clevis on bushing 2 on each suspension link assembly.
5. Starting at the front of each platform side rail, install clevises on each platform side rail using the bushings bolted on holes, 9, 11, 13, 14, 15, 16, 17, 21, 26, 27, and 31.
6. Starting at the front of the platform, number the clevises bolted to the right side from 1 through 14 and those bolted to the left side from 1A and 14A.

**Note.** Position clevis 6 in an inverted position.

7. Label the tiedown rings according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.

**Figure 8-2. Platform Prepared**



## **BUILDING AND POSITIONING HONEYCOMB STACKS**

8-3. Build the honeycomb stacks as shown in Figures 7-3 and 7-4. Position the honeycomb stacks as shown in Figure 8-3.

## **INSTALLING OPTIONAL DRIVE-OFF AIDS ON PLATFORM**

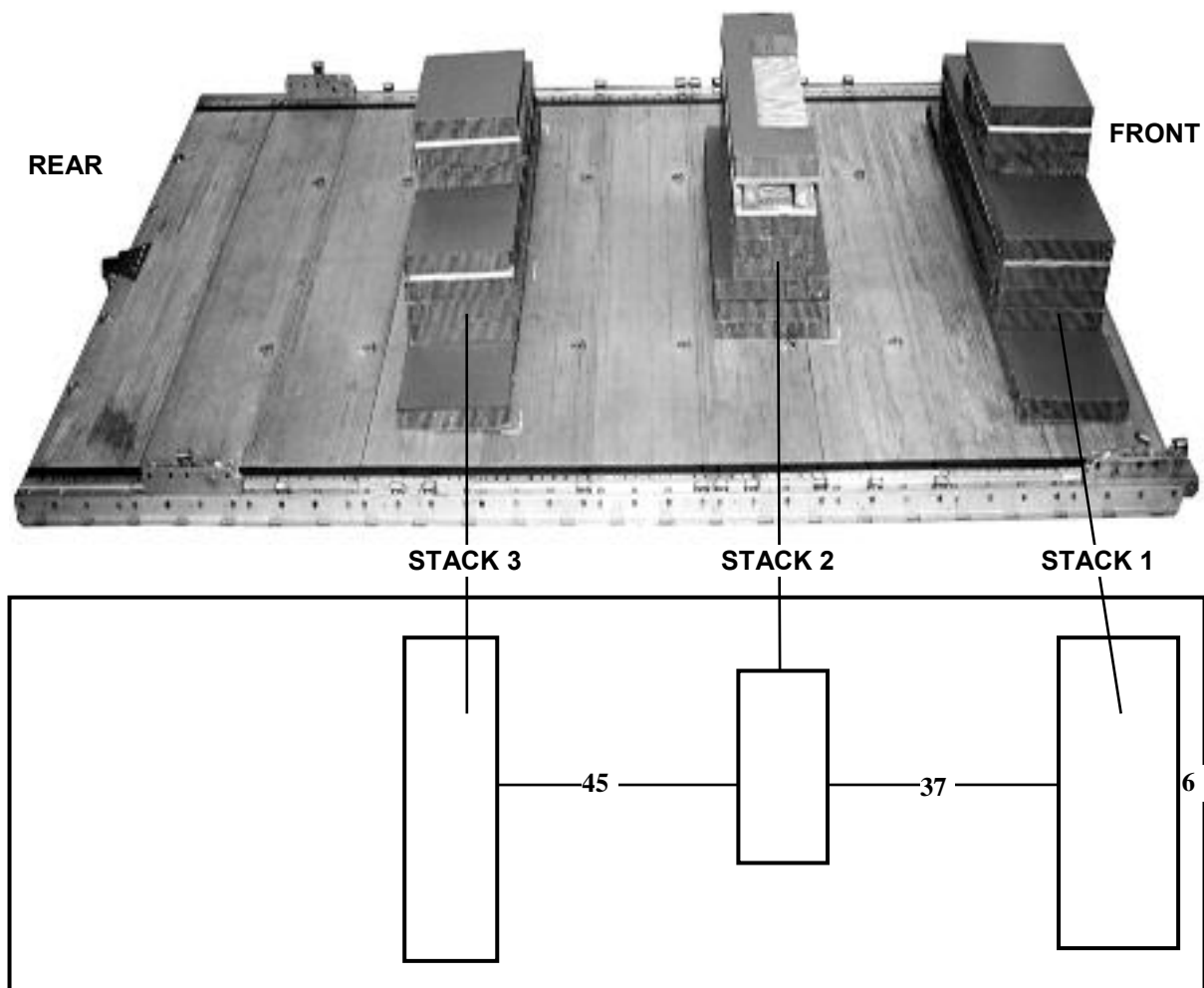
8-4. Installation of the drive-off aids is optional and not shown in this chapter. Refer to Figure 7-6 for installation.

## **PREPARING AMBULANCE**

8-5. Prepare the ambulance as described below:

- Make sure the fuel tank is no more than  $\frac{3}{4}$  full. Prepare the fuel tank filler cap and fuel filler opening as shown in Figure 7-7. Prepare the fuel tank drain plug as shown in Figure 7-8.
- Make sure the batteries and battery compartment comply with AFMAN 24-204(I)/TM 38-250/NAVSUP PUB 505/MCO P4030.19H/DLAI 4145.3/NAVSUP PUB 505/MCO P4030.19H/DLAI 4145.3.
- Stow the ambulance on-vehicular equipment (OVE) in the compartment behind the driver's door. Fill the empty space with honeycomb and close the compartment door. Tape the latches (not shown).
- Tape all lights and reflectors.
- Prepare the underside of the truck as shown in Figure 7-10.
- Prepare and secure the pioneer tool kit according to TM 9-2320-280-10/TO 36A12-1A-2091-1/TM 2320-10/6 and as shown in Figure 7-12.
- Construct and position inner door support frame as shown in Figures 8-4 and 8-5.
- Prepare the cab of the ambulance as shown in steps 1 through 10 of Figure 7-9 and Figure 8-6.
- Prepare the transport area of the ambulance as shown in Figures 8-7 through 8-19.
- Prepare the body of the ambulance as shown in Figures 8-10 through 8-12.

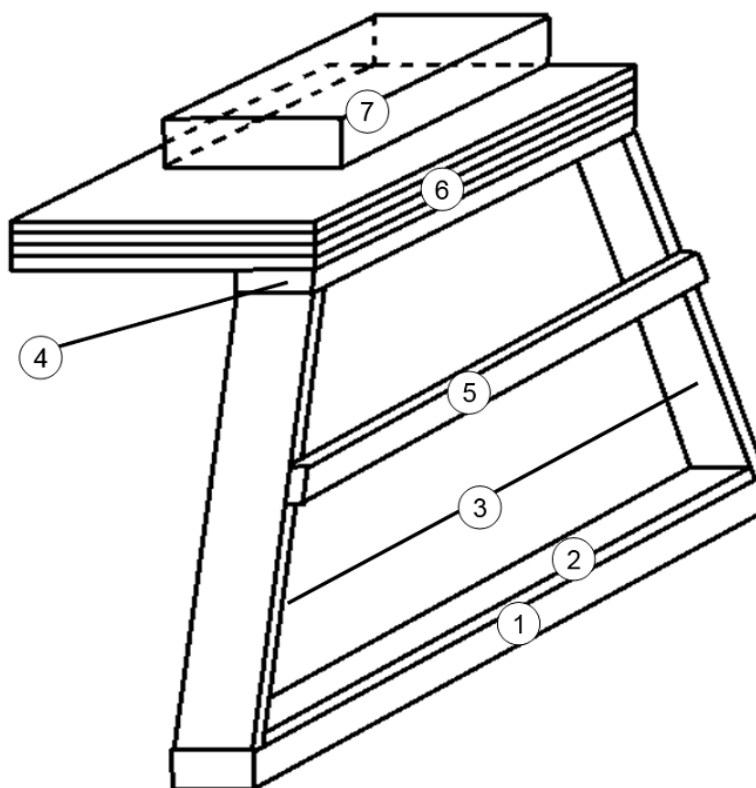
**Notes.** 1. All measurements are given in inches.  
2. This drawing is not drawn to scale.



Stack Number	Position on Platform
1	Place stack: 6 inches from the front edge of the platform and centered.
2	37 inches from the rear of stack one and centered. Face the cutout to the front.
3	45 inches from the rear edge stack 2 and centered.

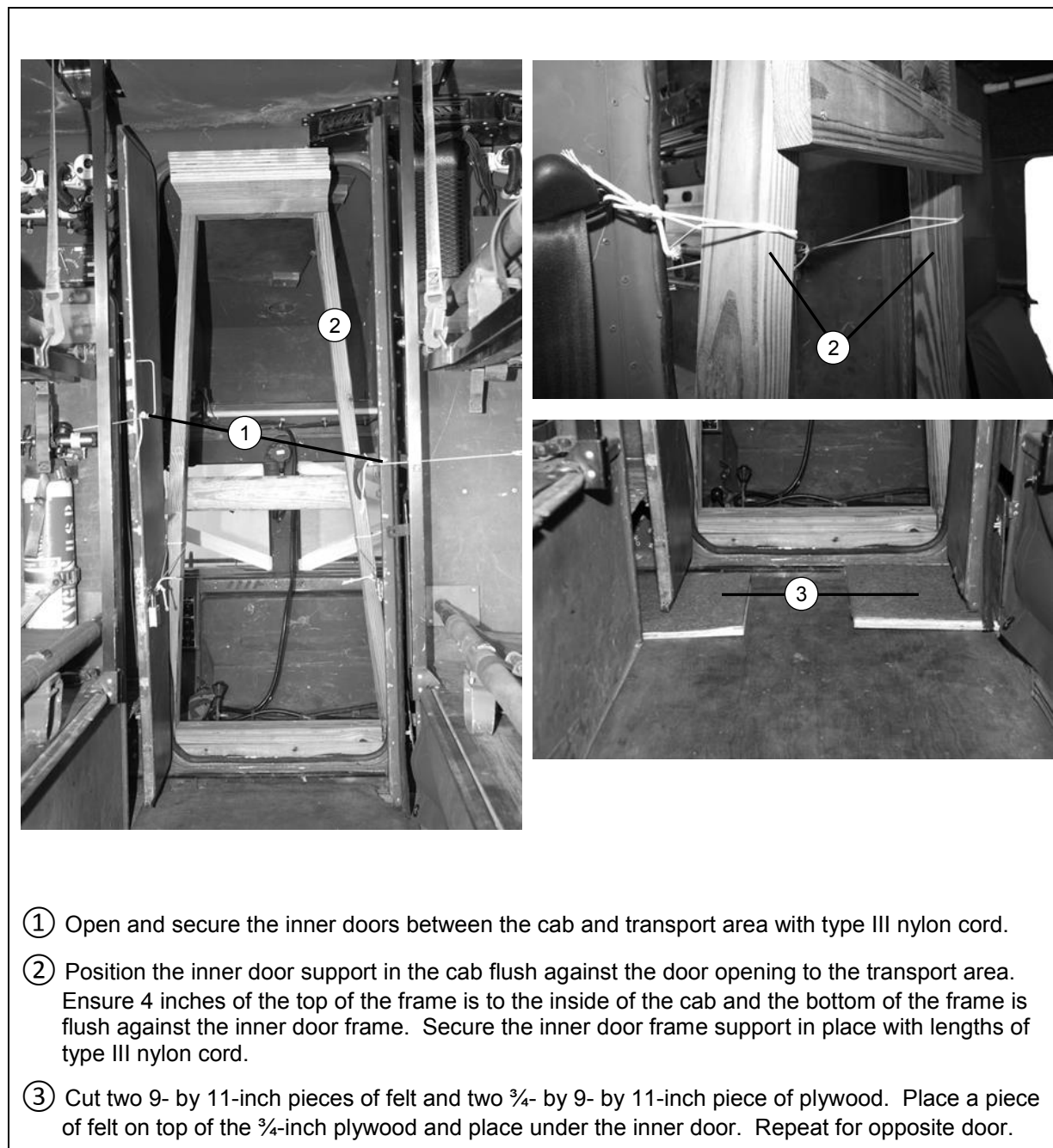
**Figure 8-3. Honeycomb Stacks Positioned on Platform**

- Notes.** 1. All measurements are given in inches.  
2. This drawing is not drawn to scale.  
3. Glue the honeycomb after the frame is positioned.



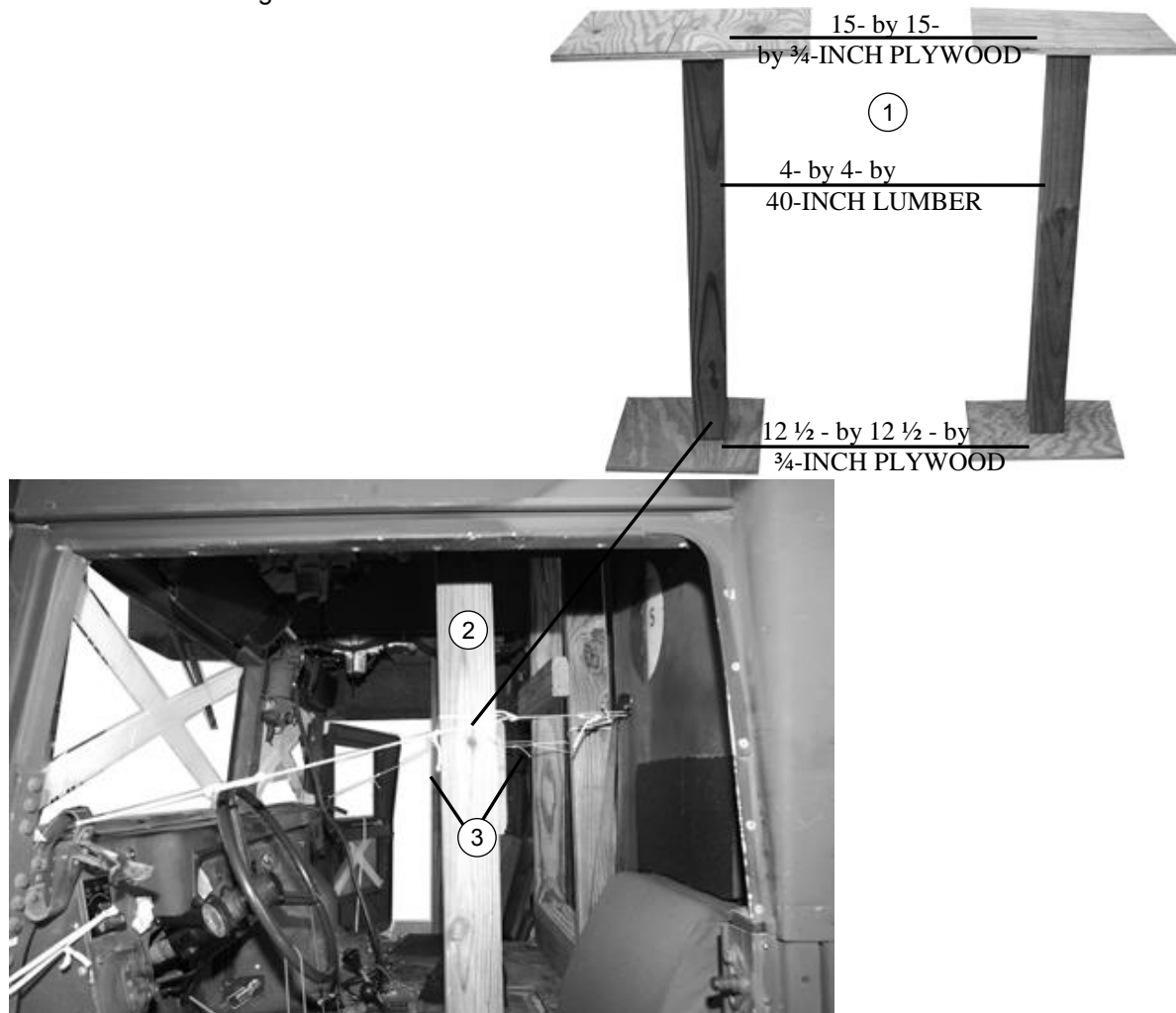
- ① Cut one 4- by 4- by 24-inch piece of lumber for a base.
- ② Cut and center a 2- by 4- by 21-inch piece of lumber on the base.
- ③ Cut a two 2- by 4- 54-inch pieces of lumber and nail upright against the 2- by 4 nailed to the base.
- ④ Cut a 2- by 4- by 15-inch piece of lumber and nail flush on the top the 54 inch pieces of lumber.
- ⑤ Cut a 2- by 4- by 20-inch piece of lumber and nail on the side of the 54 inch lumber 22½ inches above the base.
- ⑥ Cut 4 pieces of 12- by 15- by ¾-inch plywood and nail to the top of the 2- by 4- by 15-inch lumber in step 4.
- ⑦ Cut one 4- by 13-inch piece of honeycomb and glue the honeycomb 4 inches from the front edge the ¾-inch plywood and flush against the 12-inch side of the ¾-inch plywood after the support frame is positioned.

**Figure 8-4. Inner Door Support Constructed**



**Figure 8-5. Inner Door Support Positioned**

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

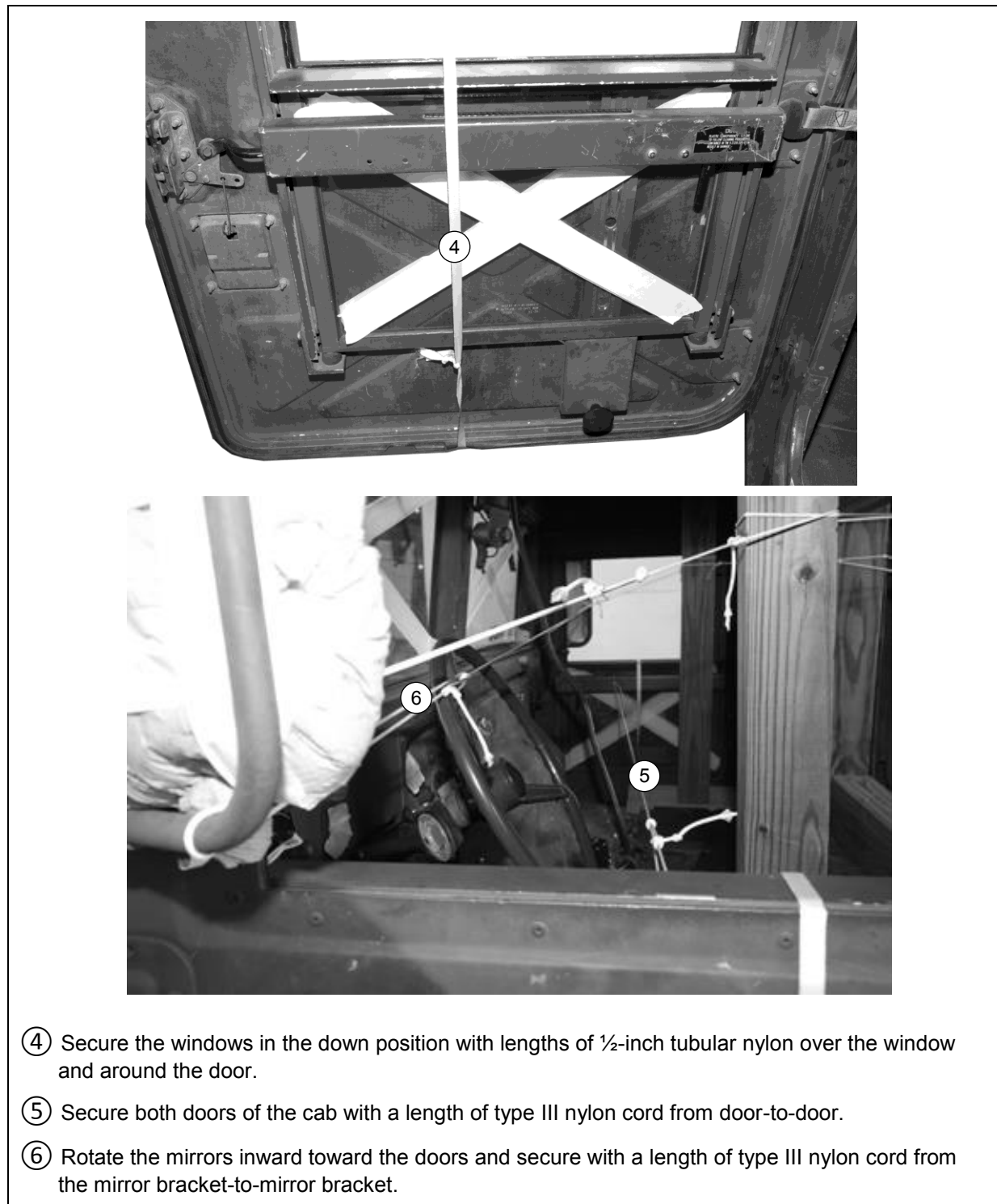


- ① Construct two cab supports as shown.
- ② Position the driver's side and passenger side cab support on the respective seat. Ensure the supports do not make contact with the air and heat elements running along the inside of the cab roof.

**Note.** If the seats are worn additional wood shims may be needed to make contact with the top of the cab and the seat.

- ③ Secure the cab supports in place with a length of type III nylon cord horizontally to convenient places within the cab.

**Figure 8-6. Cab Prepared**



**Figure 8-6. Cab Prepared (continued)**

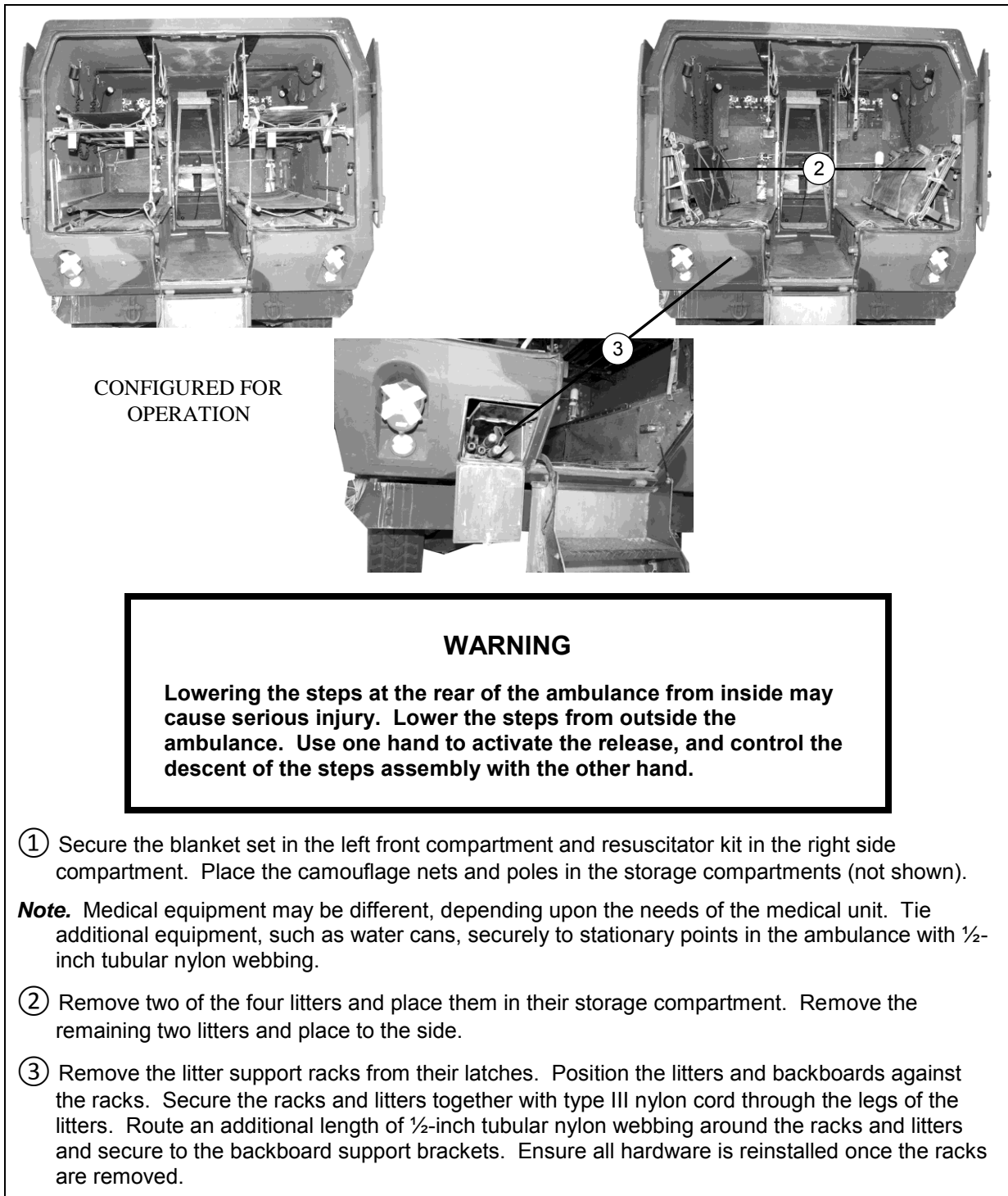
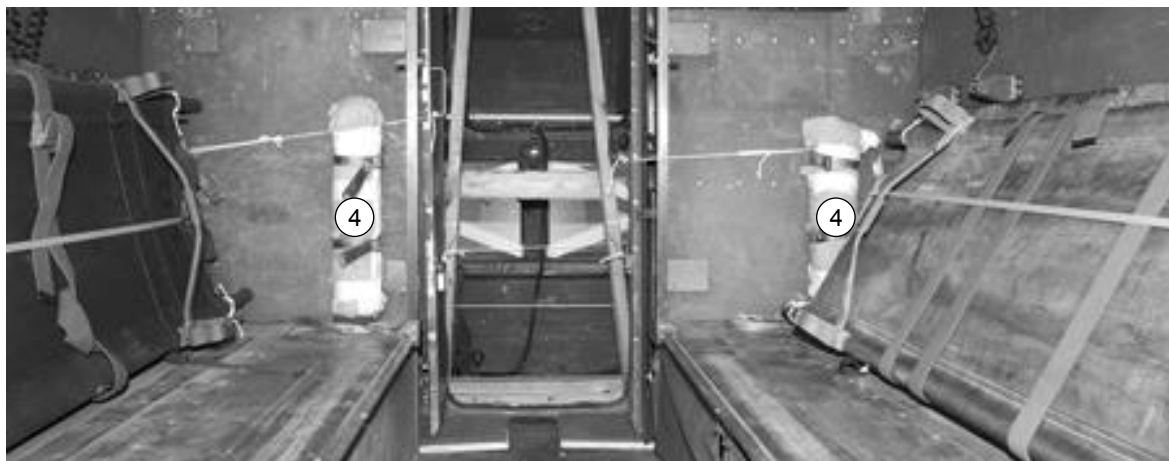
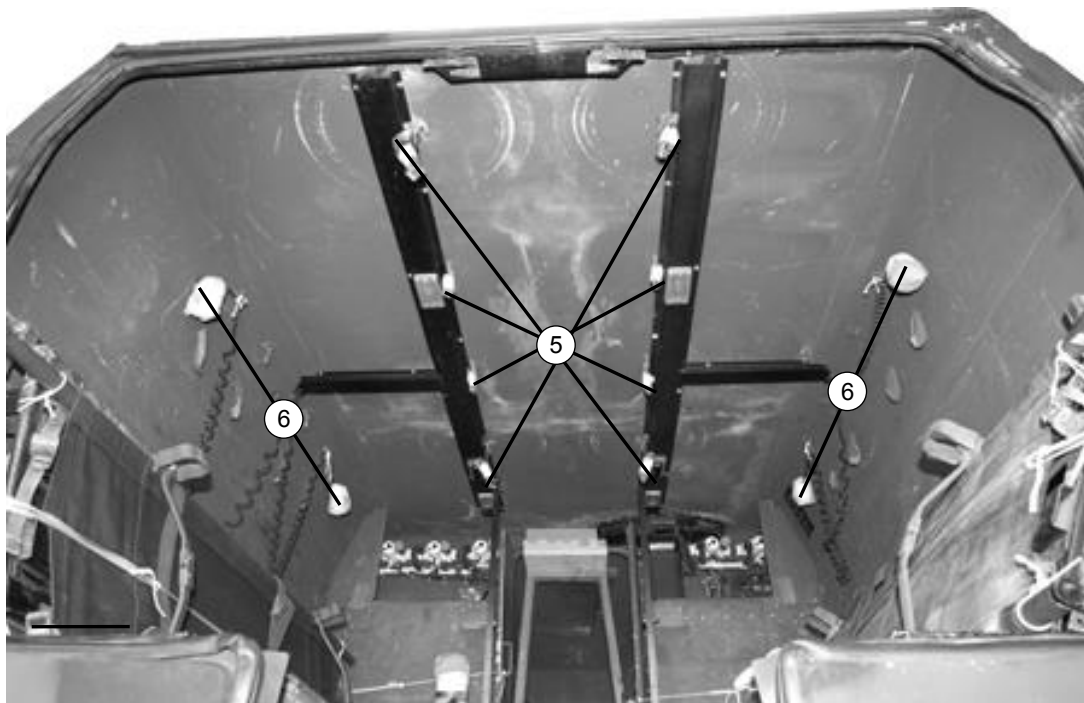


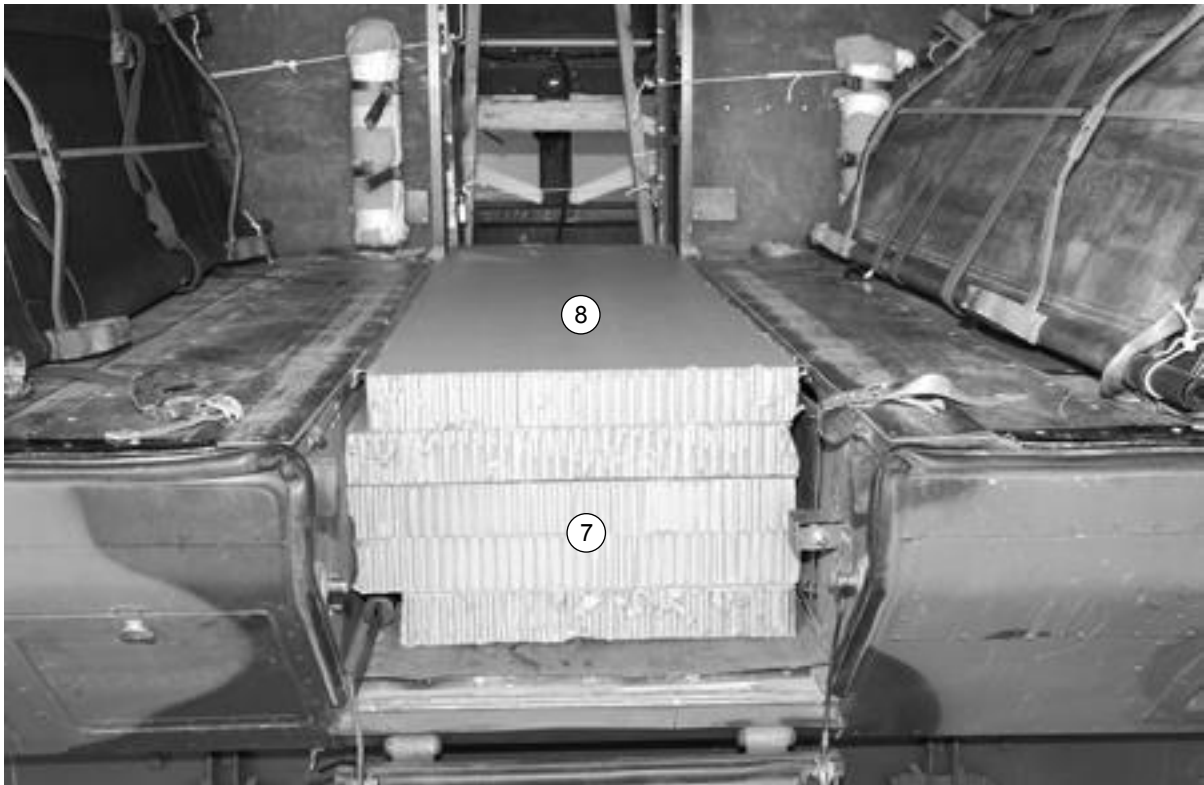
Figure 8-7. Transport Area Prepared



- ④ Remove the oxygen tanks from the designed racks. Pad the tanks with cellulose wadding and return them to the designated racks.
- ⑤ Tape all straps in the transport area.
- ⑥ Remove the inner lights from their mounting brackets and wrap with cellulose wadding and tape. Return the lights to their brackets and secure the light wiring to a convenient point with type III cord.

**Figure 8-7. Transport Area Prepared (continued)**

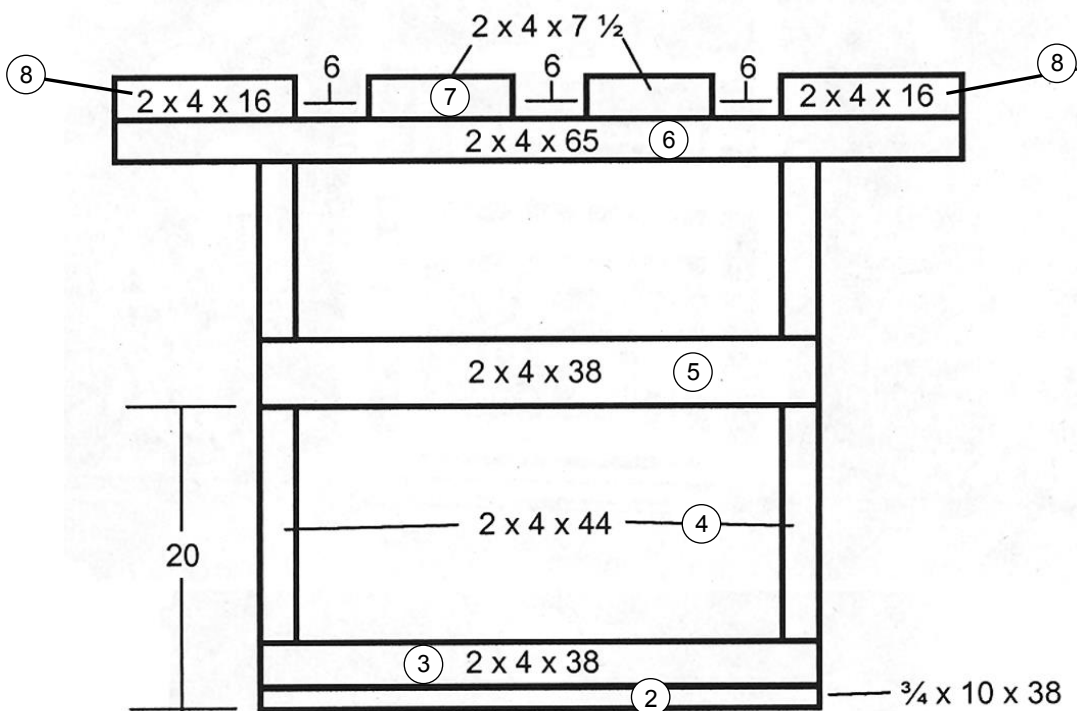




- ⑦ Cut four 77- by 24-inch pieces of honeycomb. Position the pieces on the floor of the transport area and flush against the opened inner doors. Cutouts on the bottom piece may be necessary to fit on the floor.
- ⑧ Cut and position a 77- by 23-inch piece of honeycomb on top of the pieces from step 7.

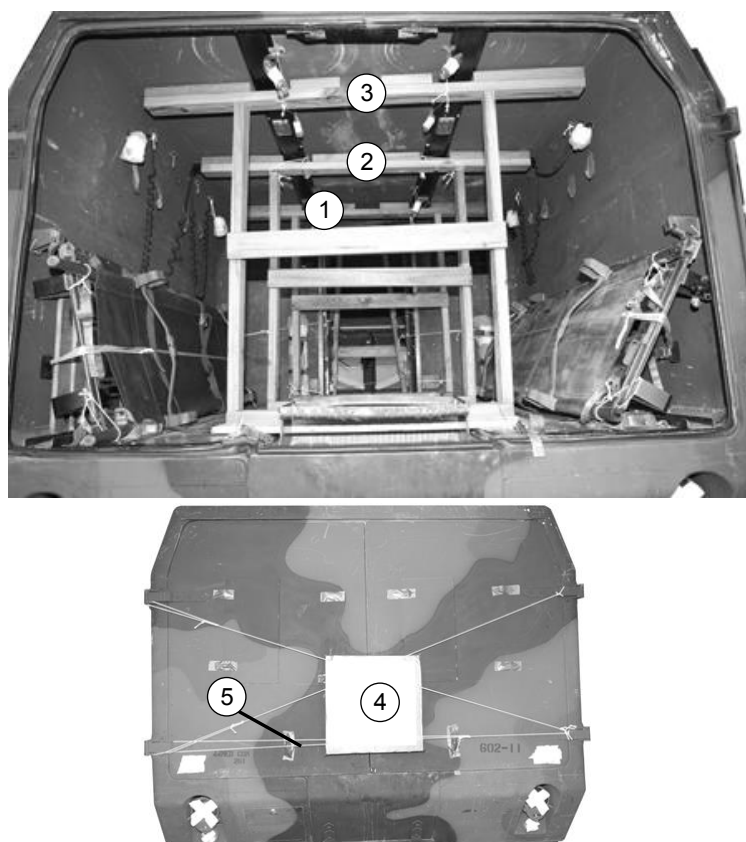
**Figure 8-7. Transport Area Prepared (continued)**

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



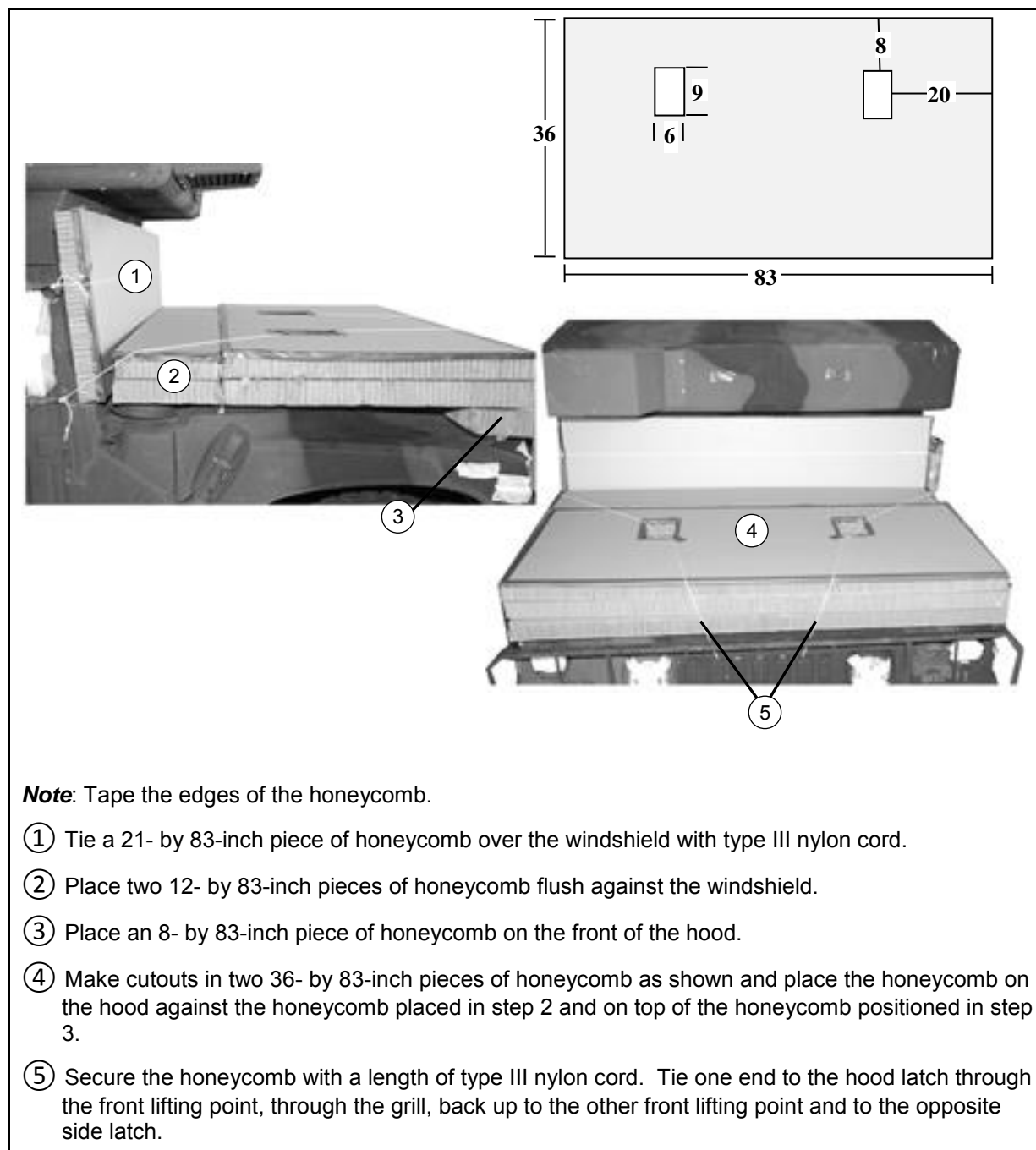
- ① Build three transport area supports as shown above.
- ② Cut 1 piece of 10- by 38- by 3/4-inch plywood to form a base.
- ③ Cut a 2- by 4- 38-inch piece of lumber and nail it centered on the base.
- ④ Cut two a 2- by 4- by 44-inch piece of lumber and nail them upright on the base on both sides.
- ⑤ Cut a 2- by 4- by 38-inch piece of lumber and nail to the uprights 20 inches above the base.
- ⑥ Cut a 2- by 4- by 65-inch piece of lumber and nail centered on the uprights.
- ⑦ Cut 2 pieces of 2- by 4- by 16-inch lumber and nail to the flush with the ends.
- ⑧ Cut 2 pieces of 2- by 4- by 7 1/2-inch lumber and nail to 6 inches in from the 16-inch pieces.

**Figure 8-8. Transport Area Supports Constructed.**



- ① Position the first transport area roof support on the forward edge of the 77- by 23-inch piece of honeycomb. Secure the support in place with type III nylon cord to convenient places on the top and bottom of the support.
- ② Position the second transport area roof support centered on the 77- by 23-inch piece of honeycomb. Secure the support in place with type III nylon cord to convenient places on the top and bottom of the support.
- ③ Position the third transport area roof support on the rear edge of the 77- by 23-inch piece of honeycomb. Secure the support in place with type III nylon cord to convenient places on the top and bottom of the support.
- ④ Close the transport area doors. Close the exposed “Red Cross” Markers on the outside of the vehicle. Cut an 18- by 18-inch piece of honeycomb. Make an indentation on one side to fit the handles of the door.
- ⑤ Secure the honeycomb to the doors with two lengths of type III nylon cord in an “X” from the door hinges. Secure the bottom of the honeycomb with a length of type III nylon cord from hinge to hinge.

**Figure 8-9. Transport Area Support Positioned**



**Figure 8-10. Honeycomb Placed on Front of Ambulance**

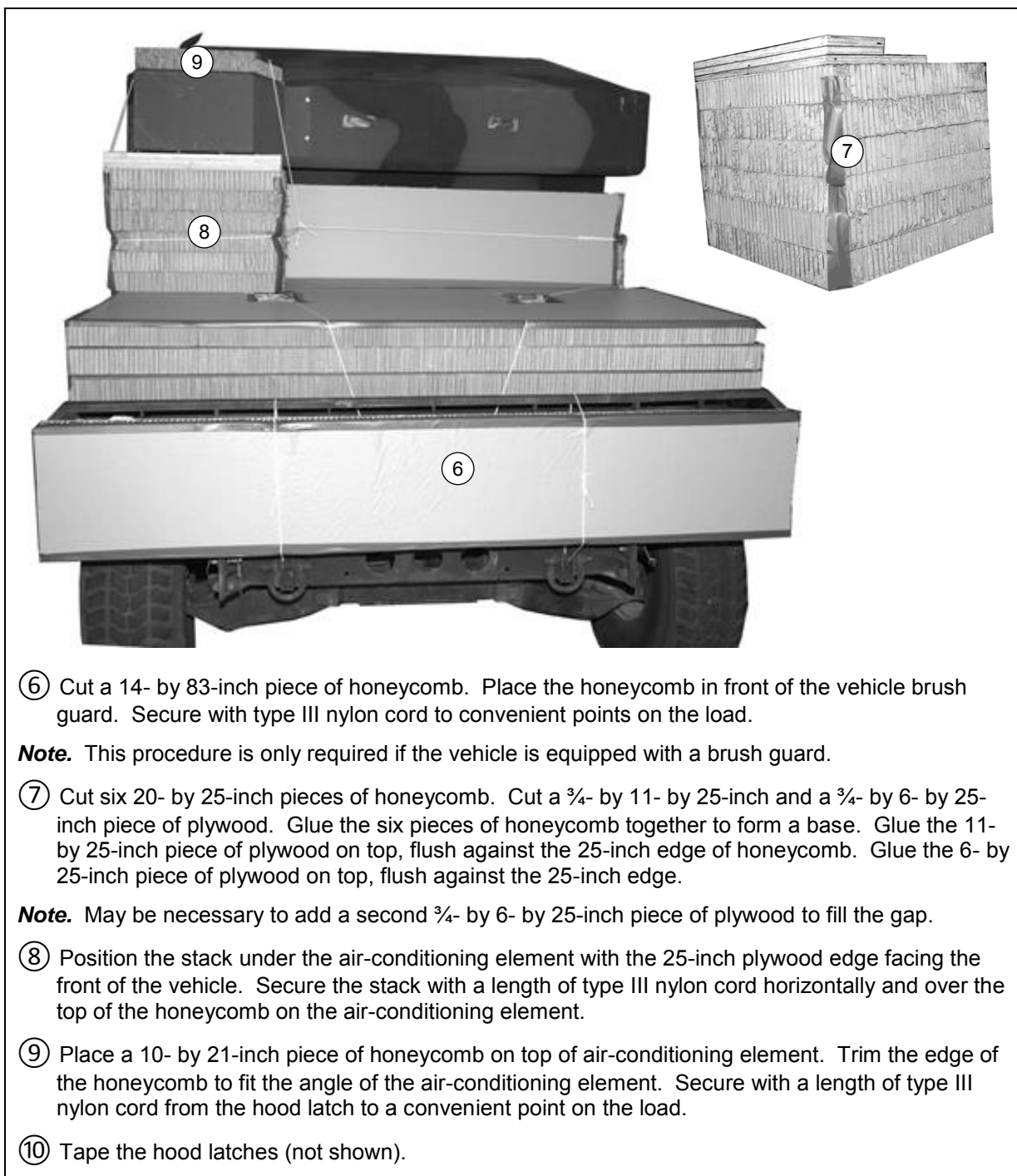
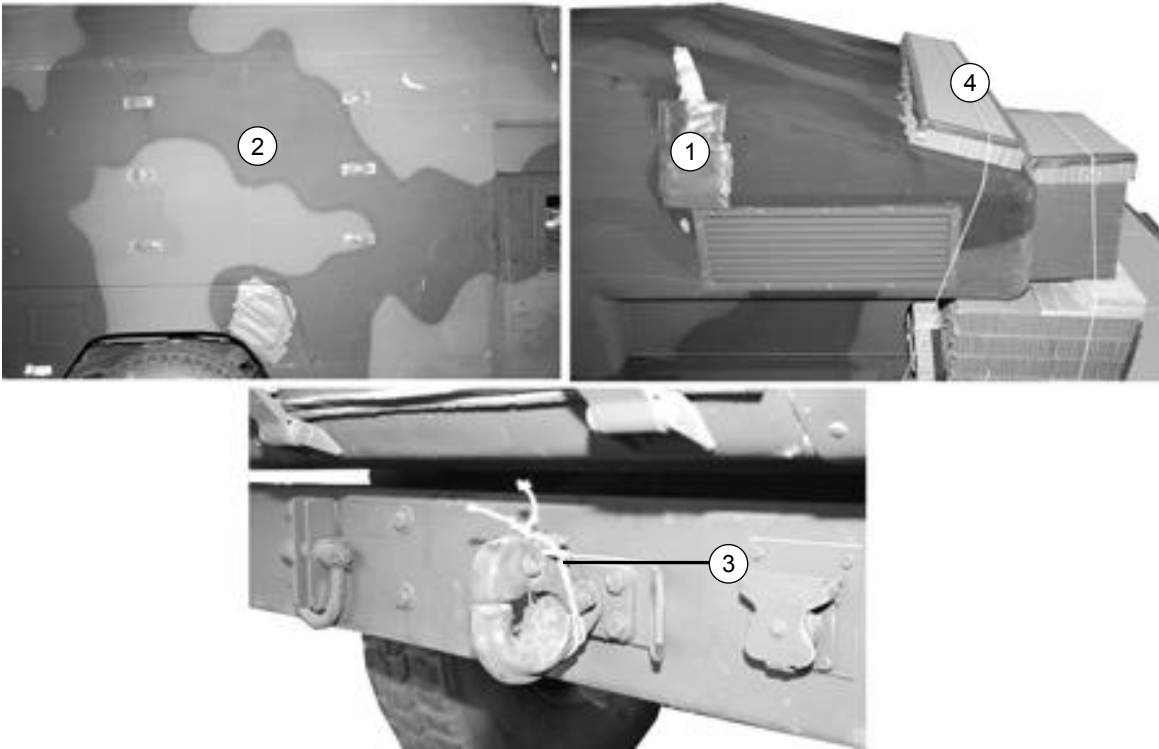


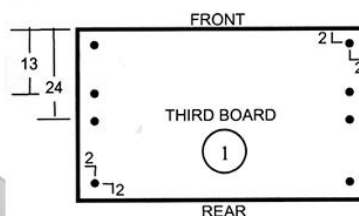
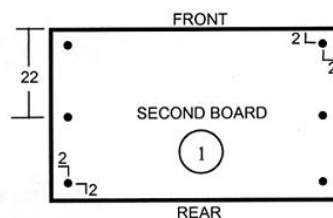
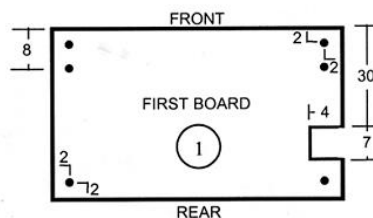
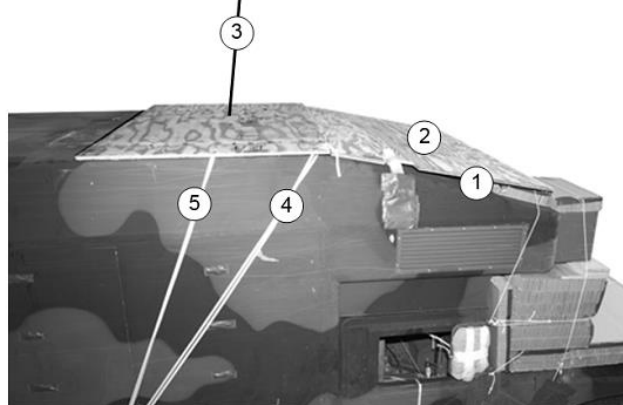
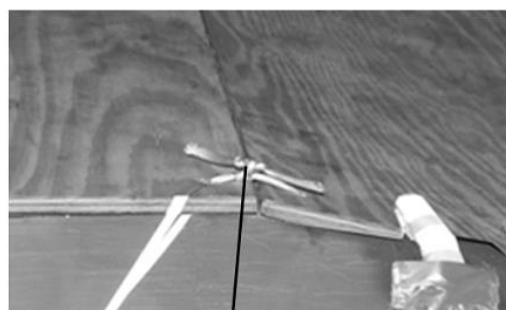
Figure 8-10. Honeycomb Placed on Front of Ambulance (continued)



- ① Pad the air-conditioning exhaust with cellulose wadding and tape.
- ② Close all exposed “Red Cross” markers on both sides of the vehicle and tape exposed latches with 2-inch cloth-backed tape.
- ③ Secure the pintle hook with type III nylon cord.
- ④ Cut a 12- by 78-inch piece of honeycomb. Position it on top of the forward part of the roof. Tape the edges with cloth-backed tape. Secure in place with a length of type III nylon cord.

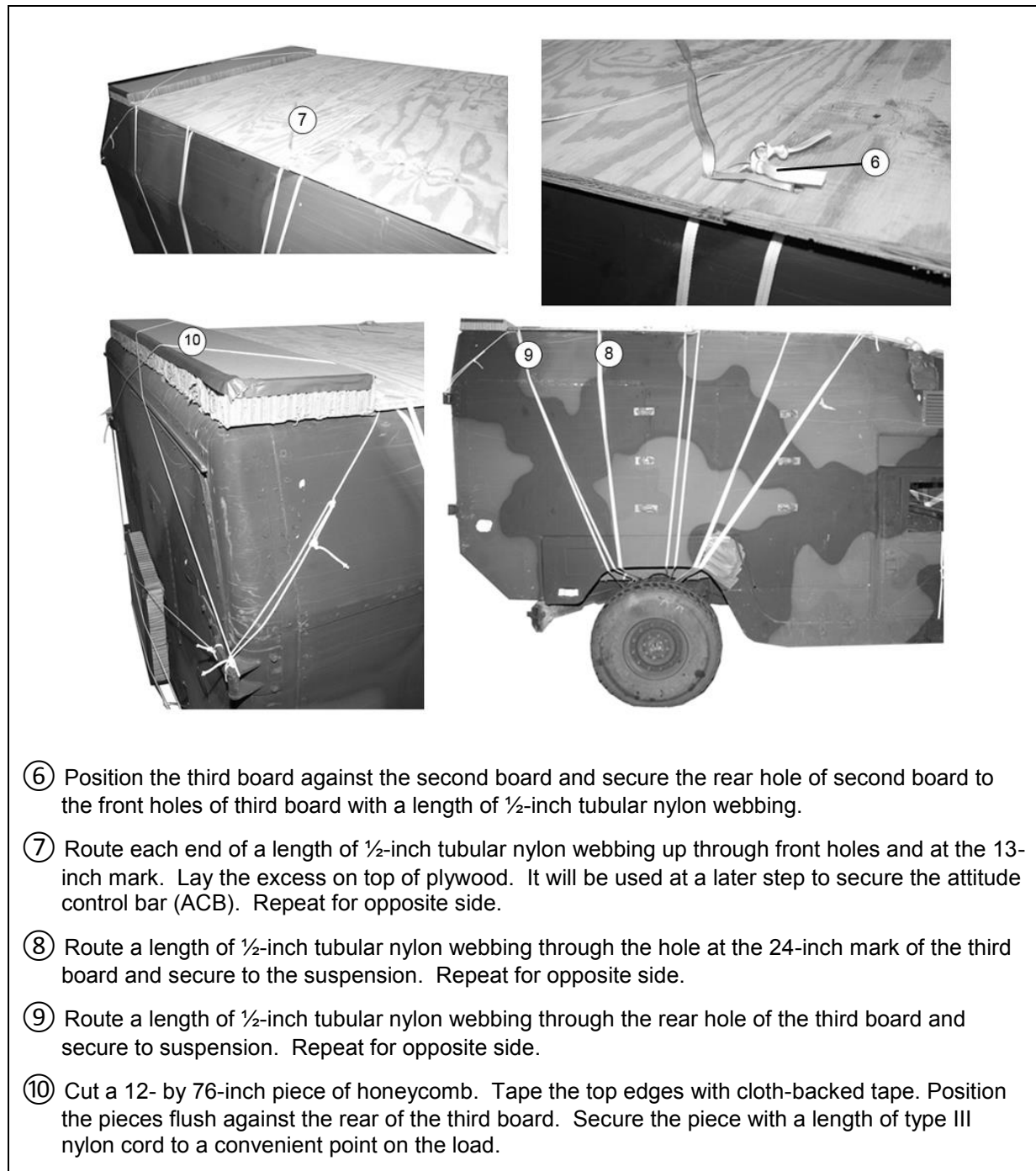
**Figure 8-11. Vehicle Body Prepared**

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



- ① Prepare three 48- by 76-inch  $\frac{3}{4}$ -inch pieces of plywood as shown.
- ② Position first board with the cutout around the air-conditioning exhaust. Place the front end of the board on top of the piece of honeycomb from Figure 8-11, step 4.
- ③ Position second board flush against the previous board. Secure the rear holes of first board to the front holes of second board with a piece of  $\frac{1}{2}$ -inch tubular nylon webbing on each side.
- ④ Route a length of  $\frac{1}{2}$ -inch tubular nylon webbing up through the front hole of second board and secure to the suspension. Repeat for opposite side.
- ⑤ Route a length of  $\frac{1}{2}$ -inch tubular nylon webbing up through the center hole of second board and secure to the suspension. Repeat for opposite side.

**Figure 8-12. Roof Cover Installed**

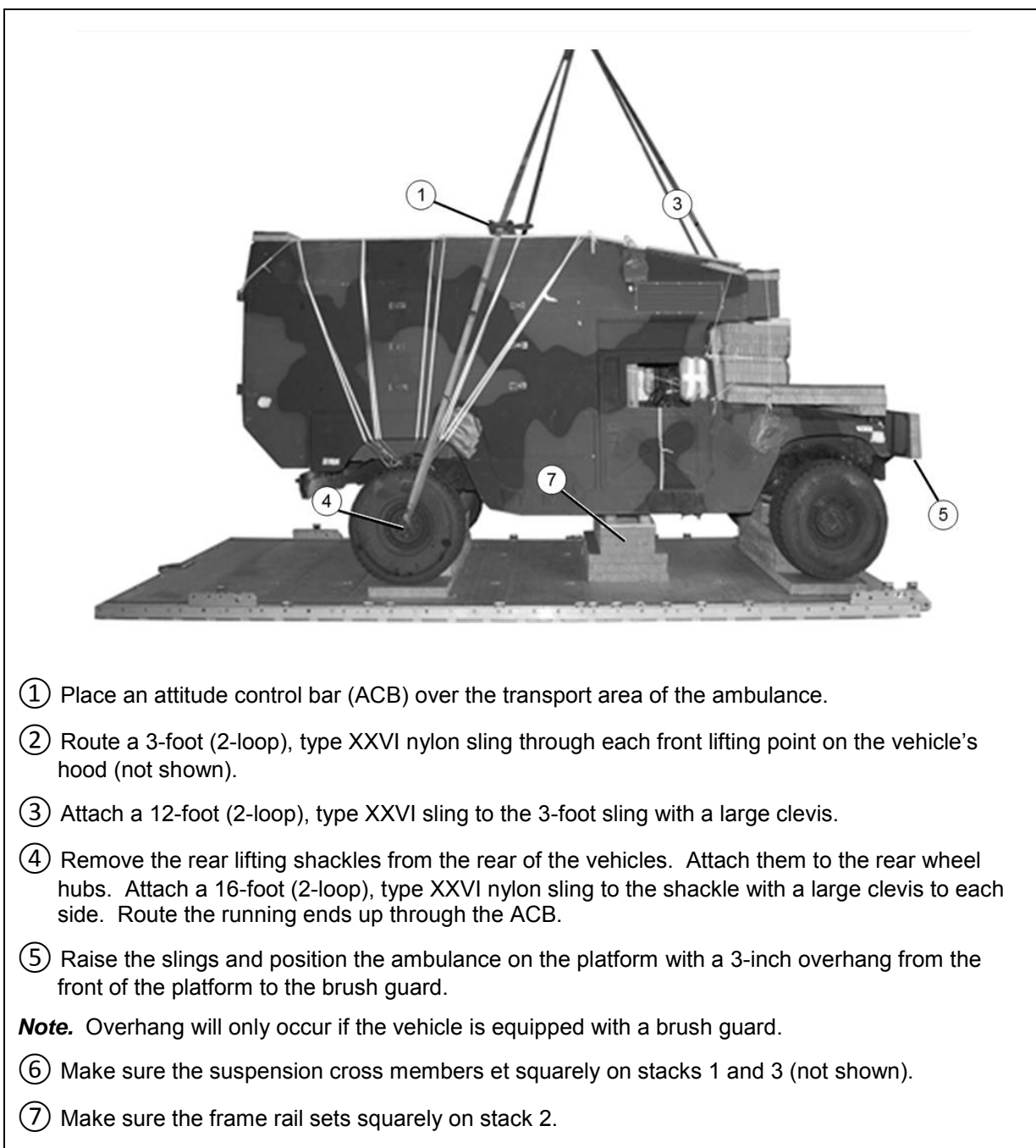


**Figure 8-12. Roof Cover Installed (continued)**



## LIFTING AND POSITIONING AMBULANCE

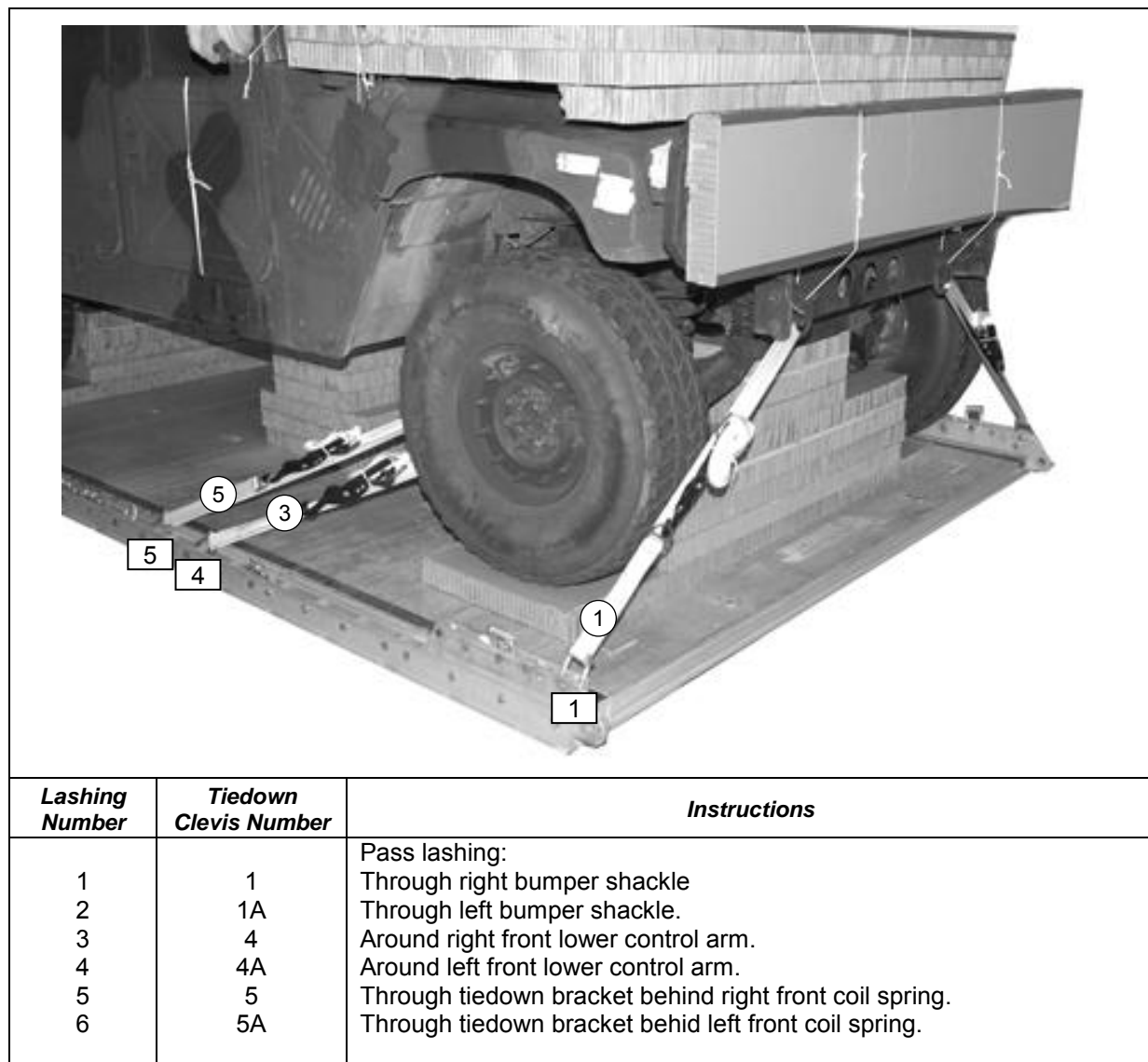
8-6. Lift and position the vehicle as shown in Figure 8-13.



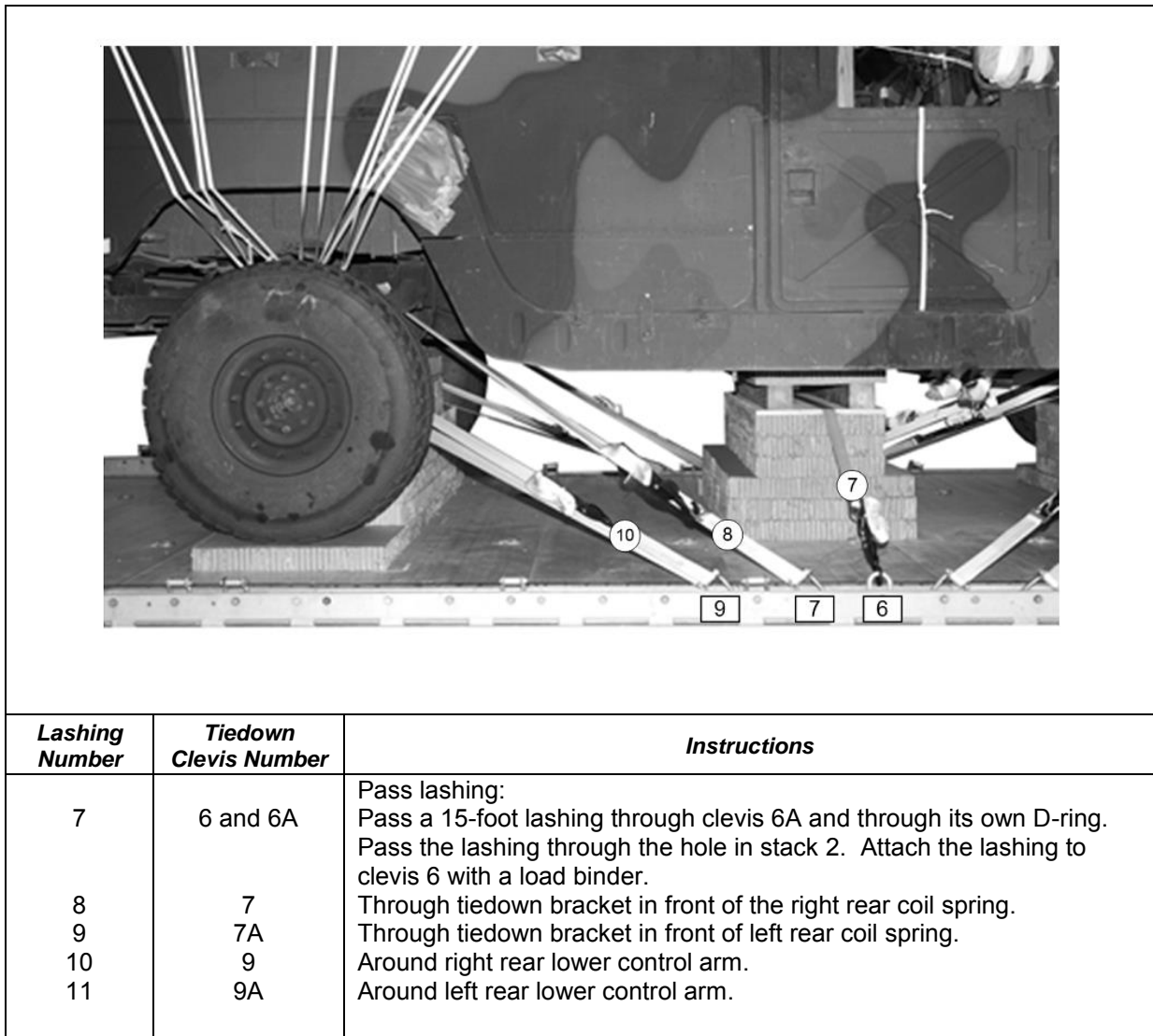
**Figure 8-13. Ambulance Positioned**

## LASHING AMBULANCE

8-7. Lash the ambulance to the platform as shown in Figures 8-14 and 8-16.



**Figure 8-14. Lashings 1 Through 6 Installed**



**Figure 8-15. Lashings 7 Through 11 Installed**

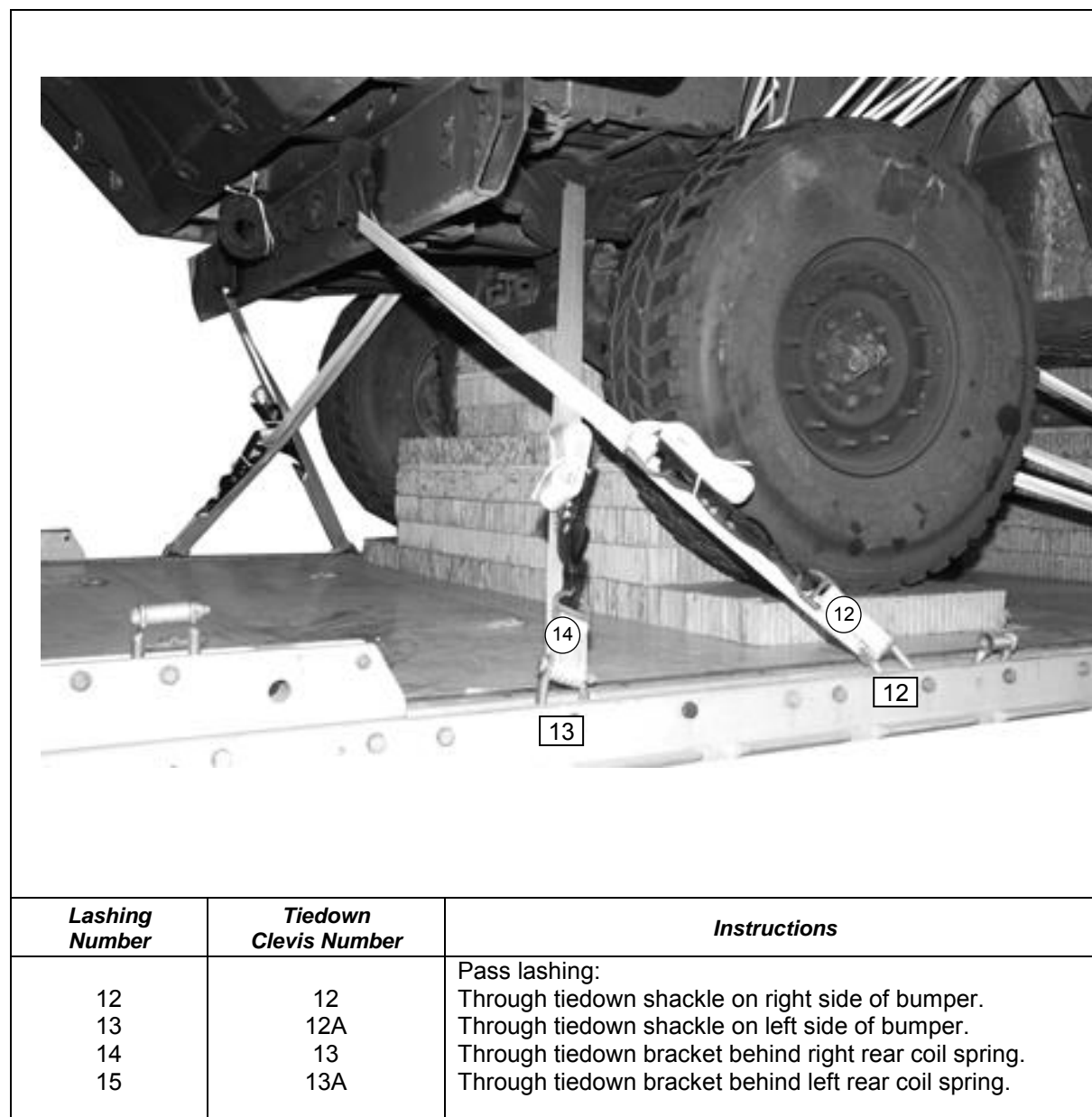
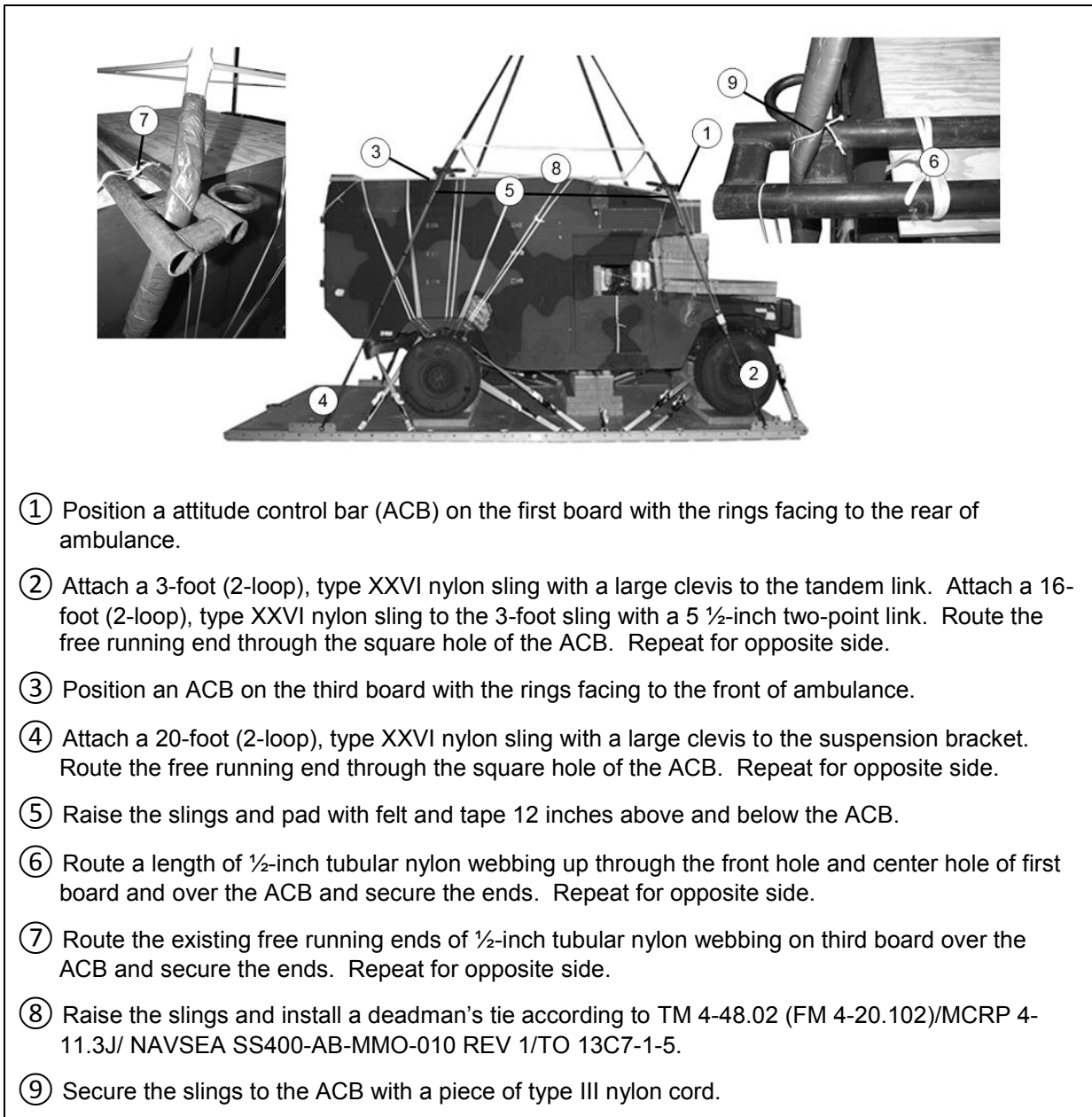


Figure 8-16. Lashings 12 Through 15 Installed

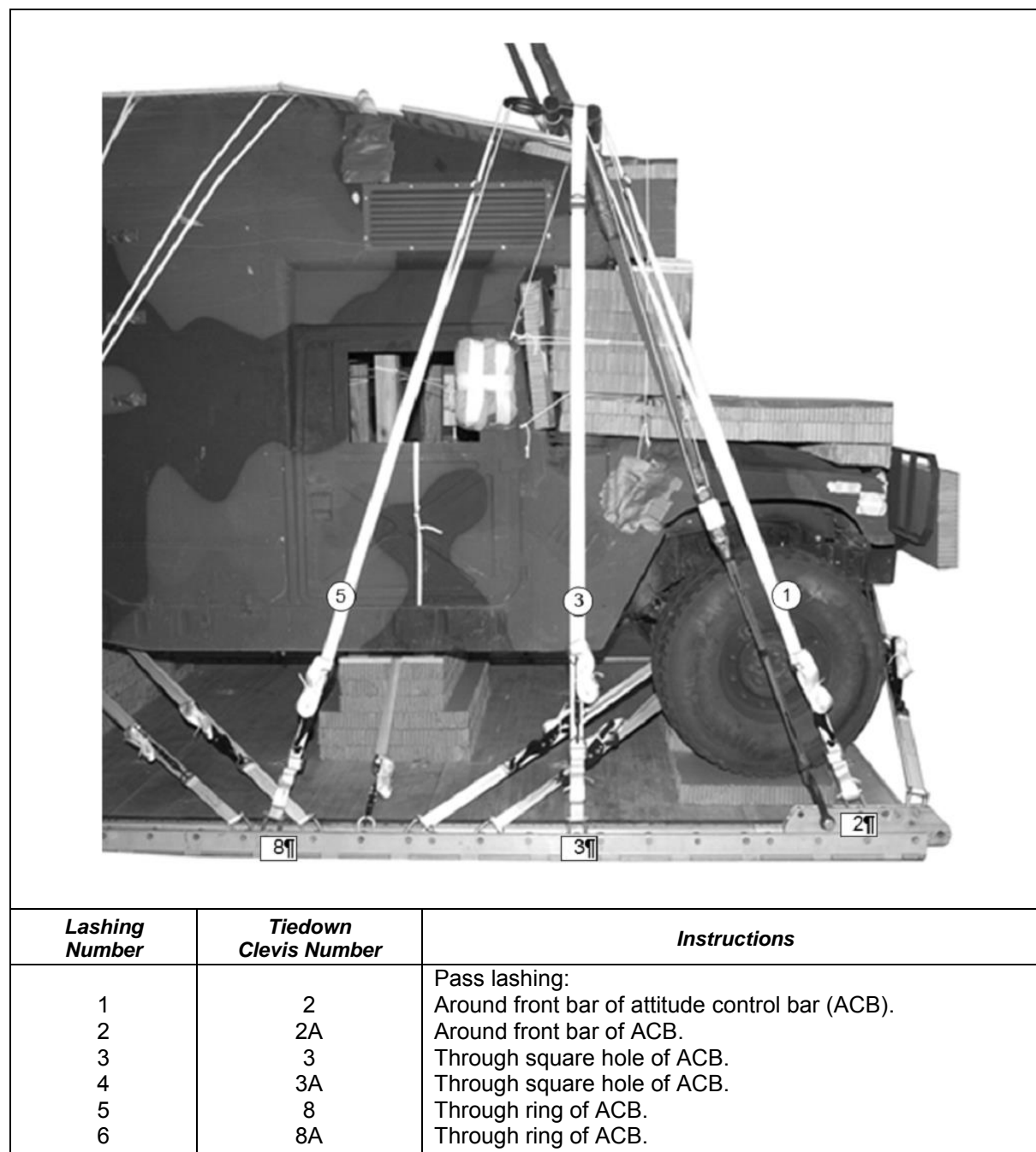
## INSTALLING SUSPENSION SYSTEM

8-8. Install the suspension system as given below:

- Install the suspension slings and the deadman's tie as shown in Figure 8-17.
- Lash the front and rear ACB to the ambulance as shown in Figures 8-18 and Figure 8-19.



**Figure 8-17. Suspension Slings and Deadman's Tie Installed**



**Figure 8-18. Front ACB lashed to Platform**

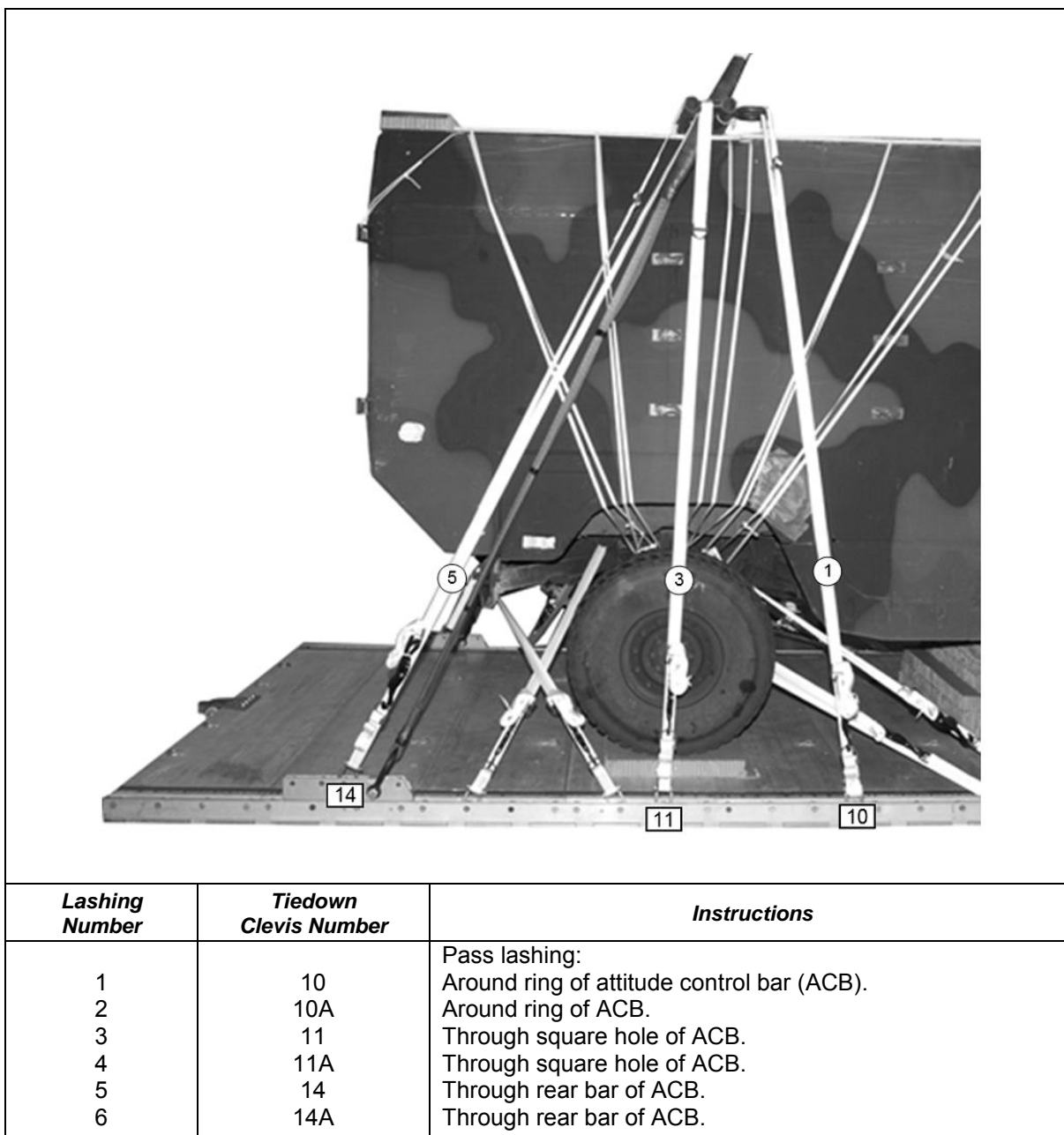
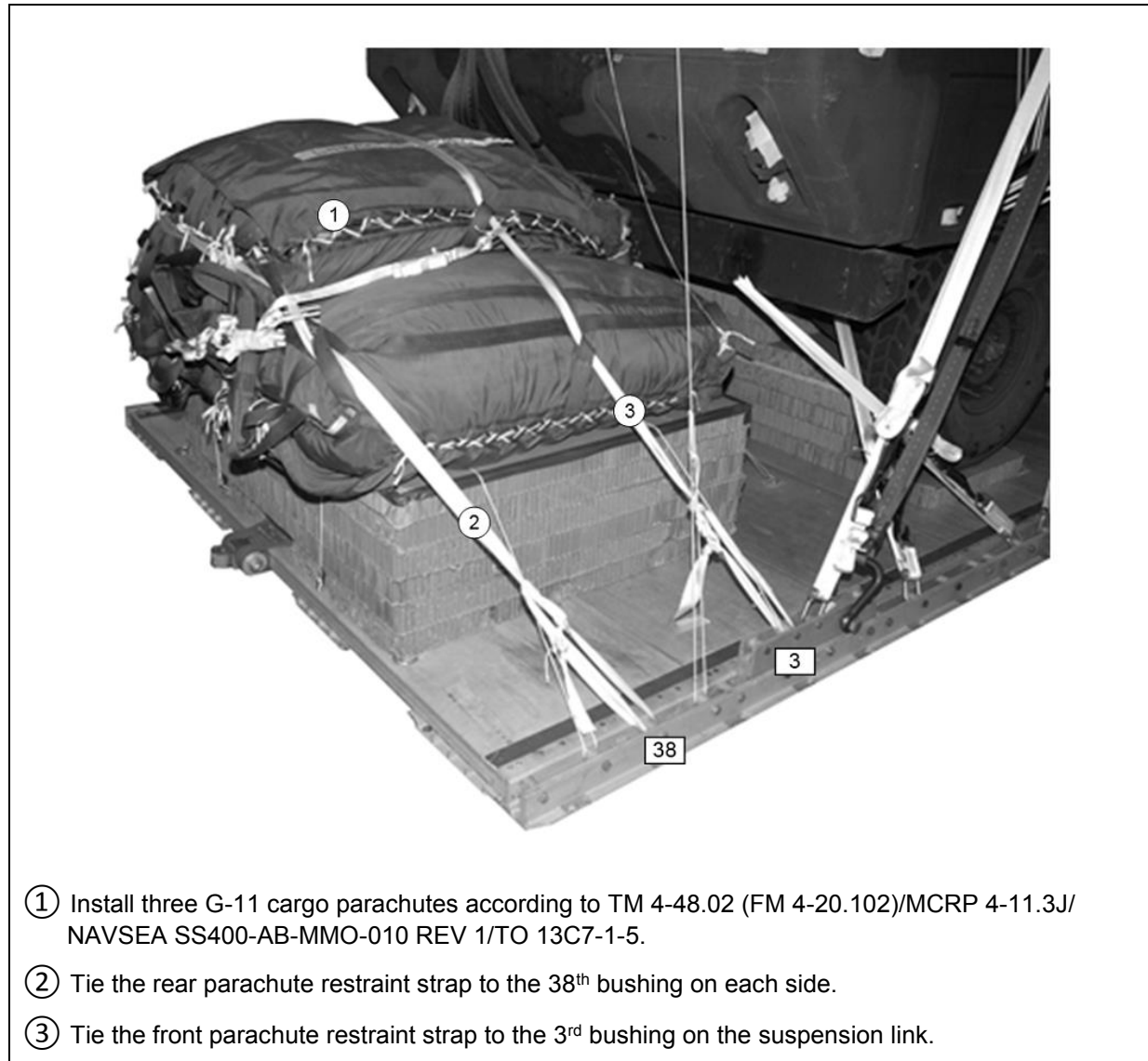


Figure 8-19. Rear ACB lashed to Platform

## STOWING CARGO PARACHUTES

8-9. Prepare and install the parachute stowage platform according to Figure 7-24. Prepare and install three G-11 cargo parachutes according to Figure 8-20.



**Figure 8-20. Parachutes Installed**



## **INSTALLING EXTRACTION SYSTEM**

8-10. Install the EFTC extraction system according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figure 7-26. If applicable, install the extraction parachute jettison system (EPJS) according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.

## **INSTALLING PARACHUTE RELEASE**

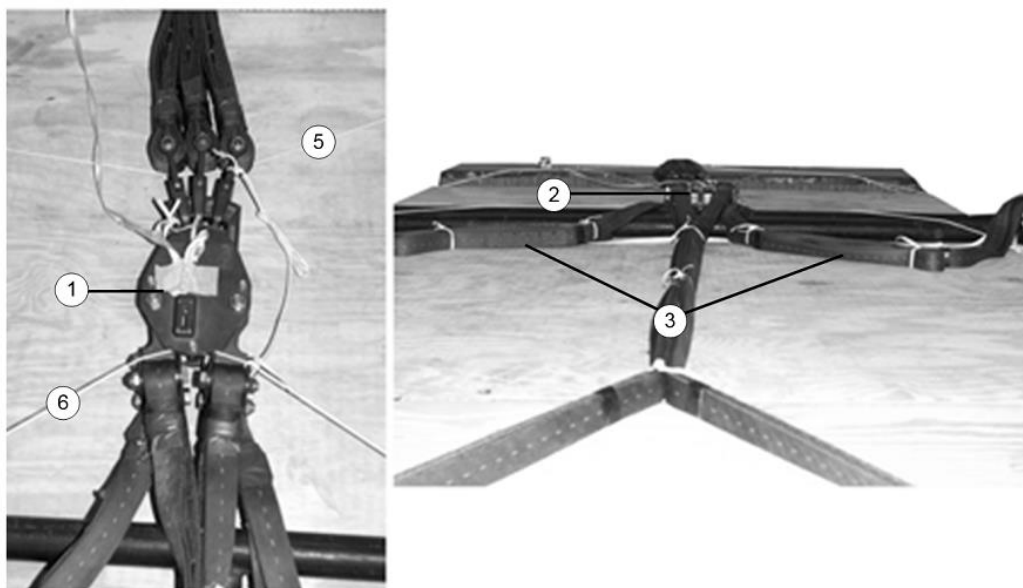
8-11. Install an M-1 cargo parachute release according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figure 8-21.

## **INSTALLING PROVISIONS FOR EMERGENCY RESTRAINTS**

8-12. Install provisions for emergency restraints on the front of the platform according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.

## **PLACING EXTRACTION PARACHUTE**

8-13. Select the extraction parachute and extraction line needed using the extraction line requirement table in TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5. Rig the extraction line in an extraction line bag according to TM 10-1670-286-20/TO 13C5-2-41. Place the extraction parachute and extraction line on the load for installation in the aircraft. If a drogue parachute and drogue line are required, place them on the platform for installation in the aircraft as well.



- ① Prepare and install the M-1 cargo parachute release according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5. Install a 25-foot arming wire lanyard.
- ② Position the release on top of the ambulance roof on board number 3 to the rear of the attitude control bar (ACB).
- ③ Attach the suspension slings and riser extensions according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5. Fold the excess and secure with type I, ¼-inch cotton webbing. Secure the riser extension together at three places between the release and the parachutes with type I, ¼-inch cotton webbing.
- ④ Tape the loose deadman's tie to the plywood with masking tape (not shown).
- ⑤ Safety tie the connector links to a convenient point on the load with type III nylon cord.
- ⑥ Safety tie the bottom of the release to a convenient point on the load.

**Figure 8-21. M-1 Release Installed**

## MARKING RIGGED LOAD

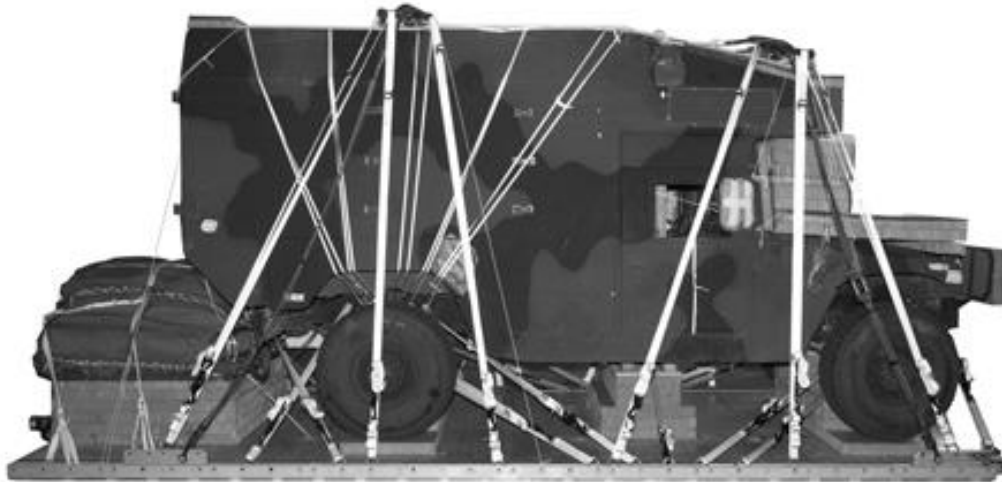
8-14. Mark the rigged load according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figure 8-22. Complete the Shipper's Declaration for Dangerous Goods. If the load varies from the one shown, the weight, height, CB, and parachute requirements must be recomputed.

## EQUIPMENT REQUIRED

8-15. Use the equipment listed in Table 8-1 on page 8-30 to rig this load.

### CAUTION

Make the final rigger inspection required by AR 59-4 and TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 before the load leaves the rigging site.



### RIGGED LOAD DATA

Weight .....	11,480 pounds
Maximum Load Allowed .....	13,500 pounds
Height With Three G-11 Parachute.....	115 inches
Width.....	108 inches
Length.....	261 inches
Overhang: Front (vehicle).....	3 inches
Rear (extraction force transfer coupling ).....	18 inches
Center of balance (CB) (from front edge of platform.....	107 inches

**Figure 8-22. M997, 4-Litter Ambulance Rigged for Low-Velocity Airdrop**

**Table 8-1. Equipment Required for Rigging M997 4-Litter Ambulance Rigged for Low-Velocity Airdrop**

<i>National Stock Number</i>	<i>Item</i>	<i>Quantity</i>
8040-00-273-8713	Adhesive, paste, 1-gallon	As required
1670-00-003-4389	Bar, attitude control	2
4030-00-090-5354	Clevis, suspension, 1-inch (large)	8
4020-00-240-2146	Cord, nylon type III, 550-pound	As required
1670-00-434-5785	Coupling, airdrop, extraction force transfer with cable, 16-foot	1
1670-00-360-0328	Cover, clevis, large	3
8135-00-664-6958	Cushioning material, packaging, cellulose wadding	As required
8305-00-958-3685	Felt, ½-inch thick	As required
1670-01-183-2678	Leaf, extraction line (line bag)	2
1670-01-064-4452	Line, drogue, 60-foot (1-loop), type XXVI	1
1670-01-107-7651	Line, extraction, 140-foot (3-loop) type XXVI	1
	Link assembly, two-point	1
1670-00-003-1953	3 ¾-inch	2
1670-00-003-1954	5 ½-inch	2
	Lumber:	
5510-00-220-6274	2- by 4-inch	As required
5510-00-220-6274	4- by 4-inch	As required
	Nail, steel wire,	
5315-00-010-4659	8d	As required
5315-00-753-3885	16d	As required
1670-00-753-3928	Pad, energy-dissipating (honeycomb)	25 sheets
	Parachute:	
	Cargo:	
1670-01-016-7841	G-11	3
	Cargo extraction:	
1670-01-063-3716	22-foot	1
1670-01-063-3715	15-foot (drogue)	1
	Platform, airdrop, type V, 20-foot	
1670-01-353-8425	Bracket assembly, coupling	(1)
1670-01-162-2372	Clevis assembly, type V	(28)
1670-01-353-8424	Extraction bracket assembly	(1)
1670-01-247-2389	Suspension link	(2)
1670-01-162-2381	Tandem link assembly (multipurpose link)	(2)
5530-00-128-4981	Plywood, ¾-inch	7 sheets
1670-01-097-8816	Release, cargo parachute, M-1	1

**Table 8-1. Equipment Required for Rigging M997, 4-Litter Ambulance Rigged for Low-Velocity Airdrop (continued)**

<i>National Stock Number</i>	<i>Item</i>	<i>Quantity</i>
	Sling, cargo, airdrop:	
	For suspension:	
1670-01-062-6301	3-foot (2-loop), type XXVI nylon webbing	2
1670-01-063-7761	16-foot (2-loop), type XXVI nylon webbing	2
1670-01-062-6302	20-foot (2-loop), type XXVI nylon webbing	2
	For lifting:	
1670-01-062-6301	3-foot (2-loop), type XXVI nylon webbing	2
1670-01-062-6303	12-foot (2-loop), type XXVI nylon webbing	2
1670-01-063-7761	16-foot (2-loop), type XXVI nylon webbing	2
	For deployment:	
1670-01-062-6304	9-foot (2-loop), type XXVI nylon webbing	2
	For riser extension:	
1670-01-062-6313	60-foot (3-loop), type XXVI nylon webbing	3
5340-00-040-8219	Strap, parachute release multi-cut, with 3 knives	2
7510-00-266-5016	Tape, adhesive, 2-inch	As required
1670-00-937-0271	Tiedown assembly, 15-foot	34
1670-01-483-8259	Tow release mechanism (H-Block for C-17)	1
8305-00-268-2411	Webbing:	
8305-00-082-5752	Cotton, ¼-inch, type I	As required
8305-00-263-3591	Nylon, tubular, ½-inch	As required
	Type VIII	As required

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## Chapter 9

# Rigging Communication Control Vehicles With Mobile Microwave Landing System For Airdrop

### DESCRIPTION OF LOAD

9-1. The Mobile Microwave Landing System (MMLS) is packed in 11 hard-shell protective cases. The cases are rigged with four 3kw generators and four fuel cans in the beds of an M998 HMMWV truck and an M116A2 ¾-ton trailer. The load is rigged on a 24-foot, type V platform with three G-11 cargo parachutes for low-velocity airdrop.

### PREPARING PLATFORM

9-2. Prepare a 24-foot, type V airdrop as shown in Figure 9-1.

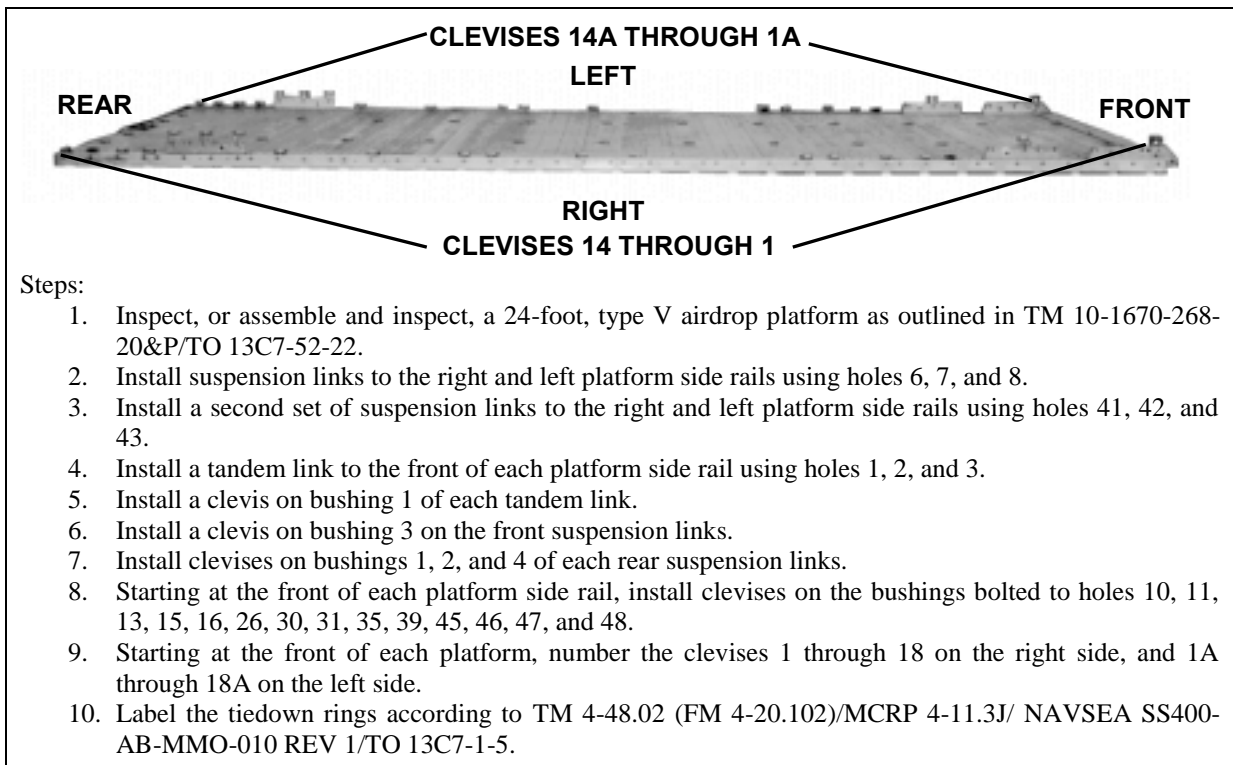
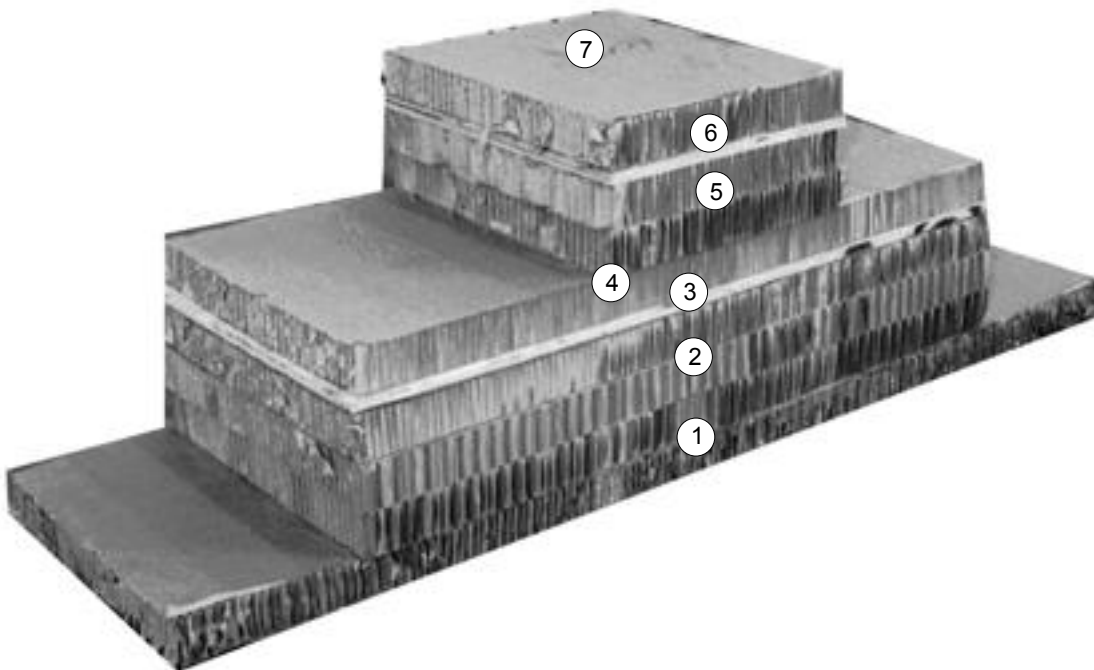


Figure 9-1. Platform Prepared

## BUILDING THE HONEYCOMB STACKS

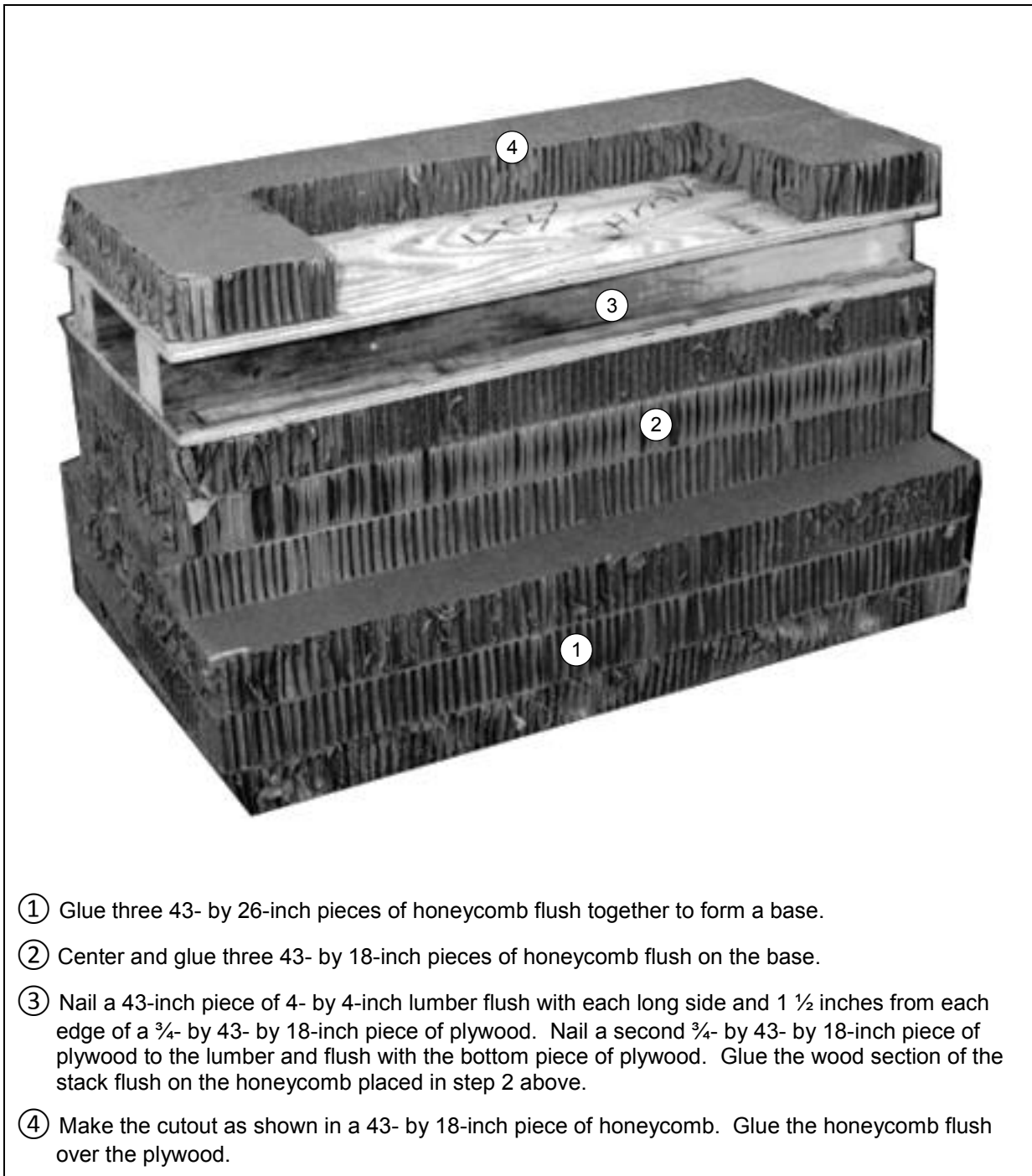
9-3. Build the honeycomb stacks as shown in Figures 9-2 through 9-6.



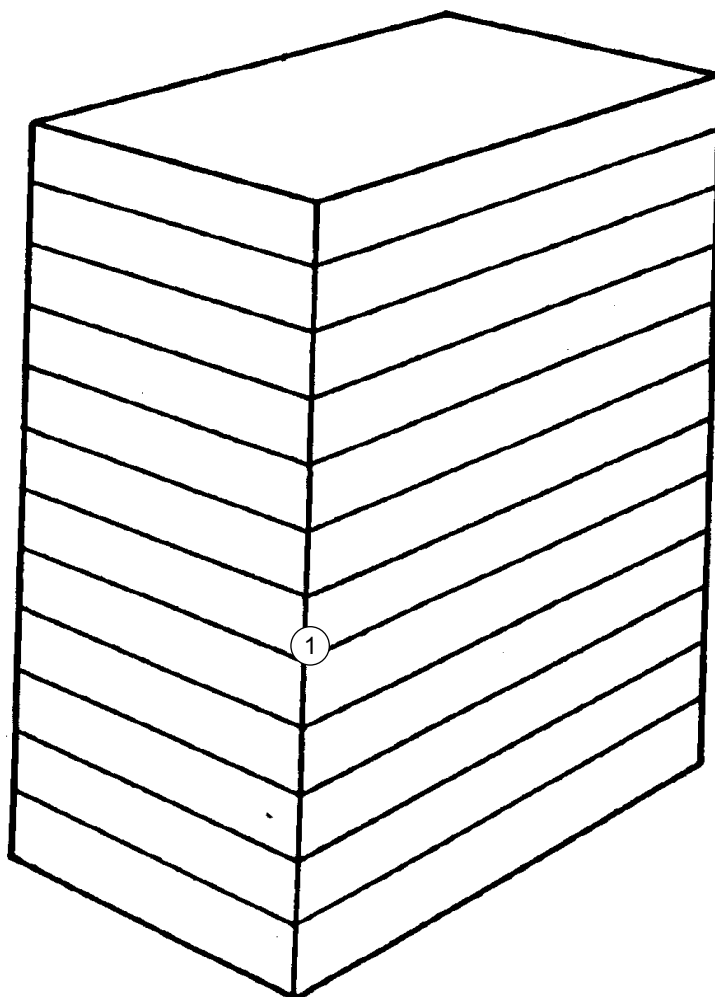
- ① Use an 80-by 24-inch piece of honeycomb to form a base.
- ② Center and glue three 54- by 24-inch pieces of honeycomb on the base.
- ③ Place and glue a  $\frac{3}{4}$ - by 54- by 24-inch piece of plywood over the honeycomb placed in step 2 above.
- ④ Place and glue one 54- by 24-inch piece of honeycomb on top of the plywood placed in step 3 above.
- ⑤ Center and glue two 20- by 24-inch pieces of honeycomb on top of the honeycomb placed in step 4 above.
- ⑥ Place and glue a  $\frac{3}{4}$ - by 20- by 24-inch piece of plywood over the honeycomb placed in step 5 above.
- ⑦ Place and glue one 20- by 24-inch piece of honeycomb on top of the plywood placed in step 6 above.

**Figure 9-2. Stacks 1 and 3 Prepared**



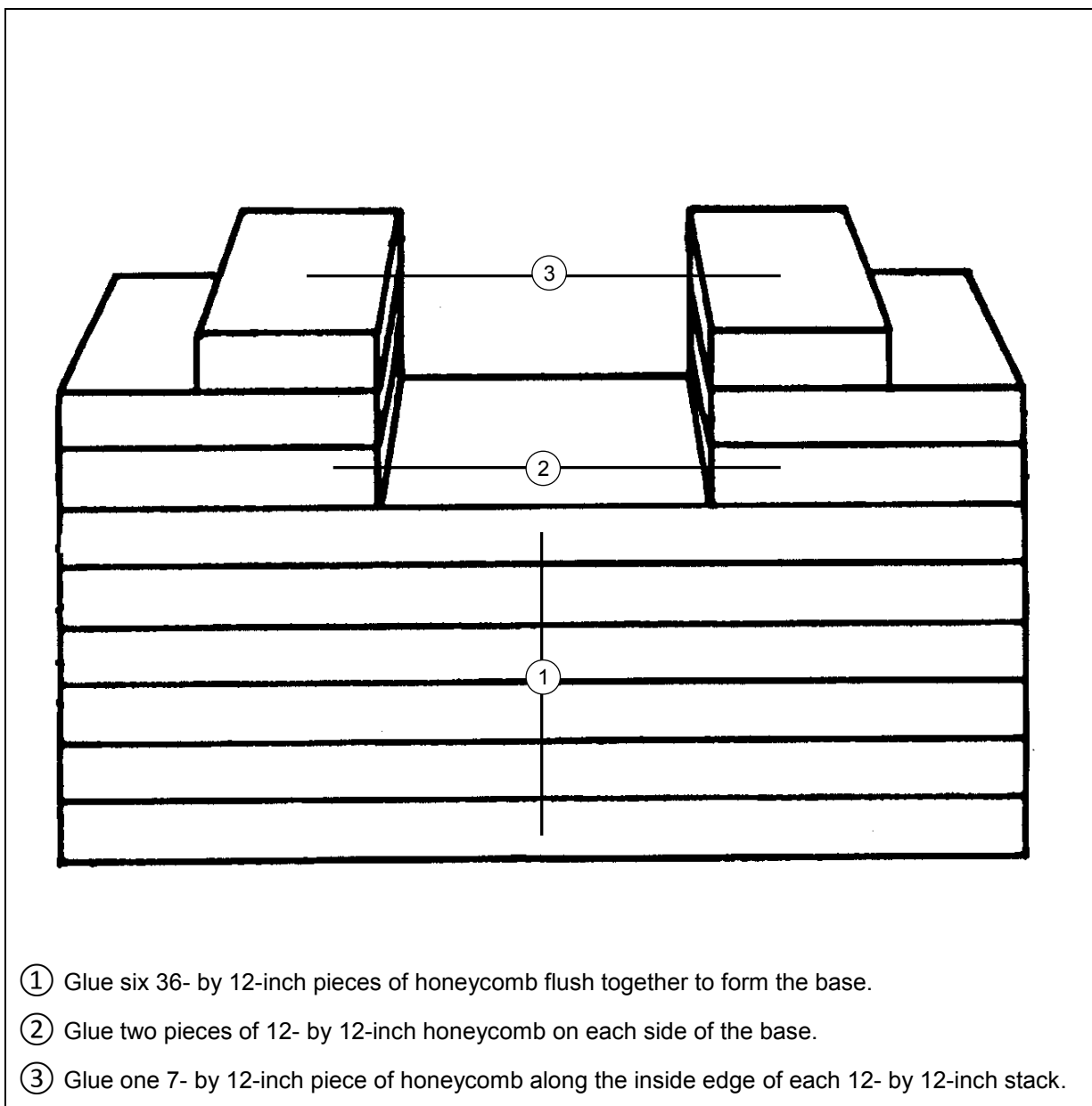


**Figure 9-3. Stack 2 Prepared**

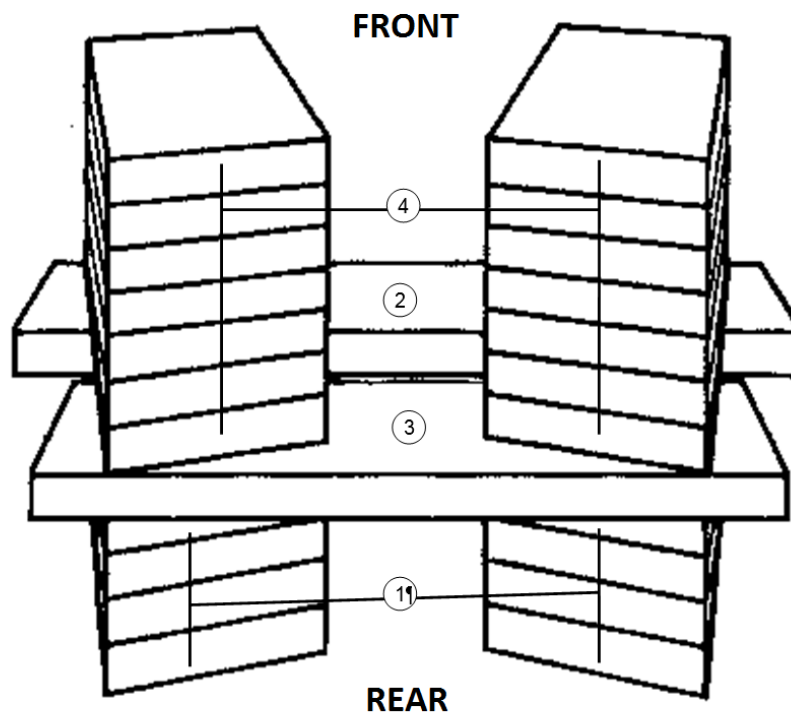


- ① Glue twelve 36- by 12-inch pieces of honeycomb flush together.

**Figure 9-4. Stack 4 Prepared**



**Figure 9-5. Stack 5 Prepared**



- ① Use eight 12- by 32-inch pieces of honeycomb to form two base stacks of four layers each in a "V" shape. Place the stacks 25 inches apart in the front and 11 inches apart in the rear.
- ② Place one 48- by 12-inch piece of honeycomb over the front of the base stacks to form a bridge. Position the honeycomb so that the front edge of the bridge is aligned with the front outside corners of the base stacks.
- ③ Place one 36- by 12-inch piece of honeycomb over the rear of the base stacks to form a bridge. Position the honeycomb so that the rear edge of the bridge is aligned with the rear outside corners of the base stacks.
- ④ Use fourteen 12- by 32-inch pieces of honeycomb to form two stacks of seven layers each. Place each stack on top of the bridge and align with each base stack.

**Figure 9-6. Stack 6 Prepared**

## INSTALLING HDDS AND POSITIONING HONEYCOMB STACKS

9-4. Install the HDDS and position the honeycomb stacks as shown in TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and in Figure 9-7 below.

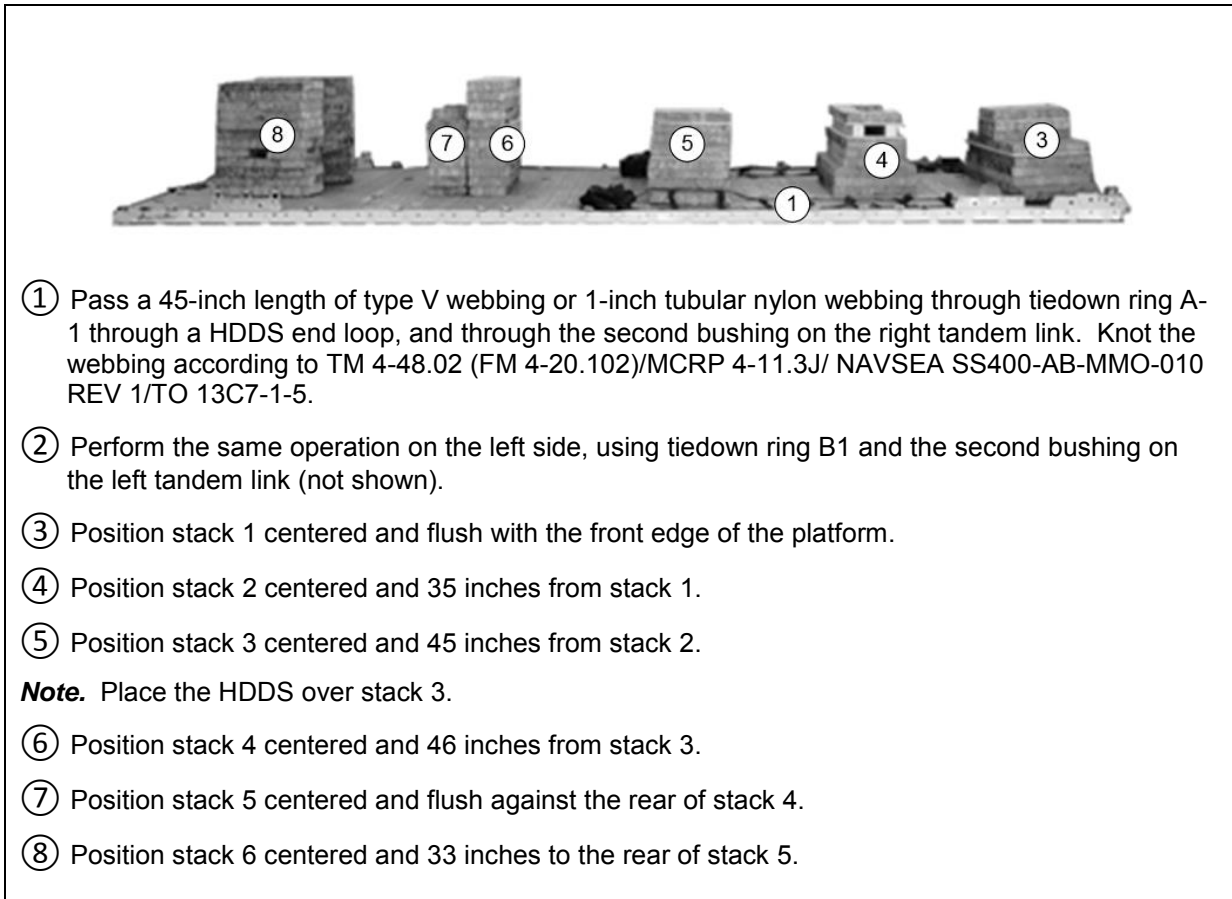


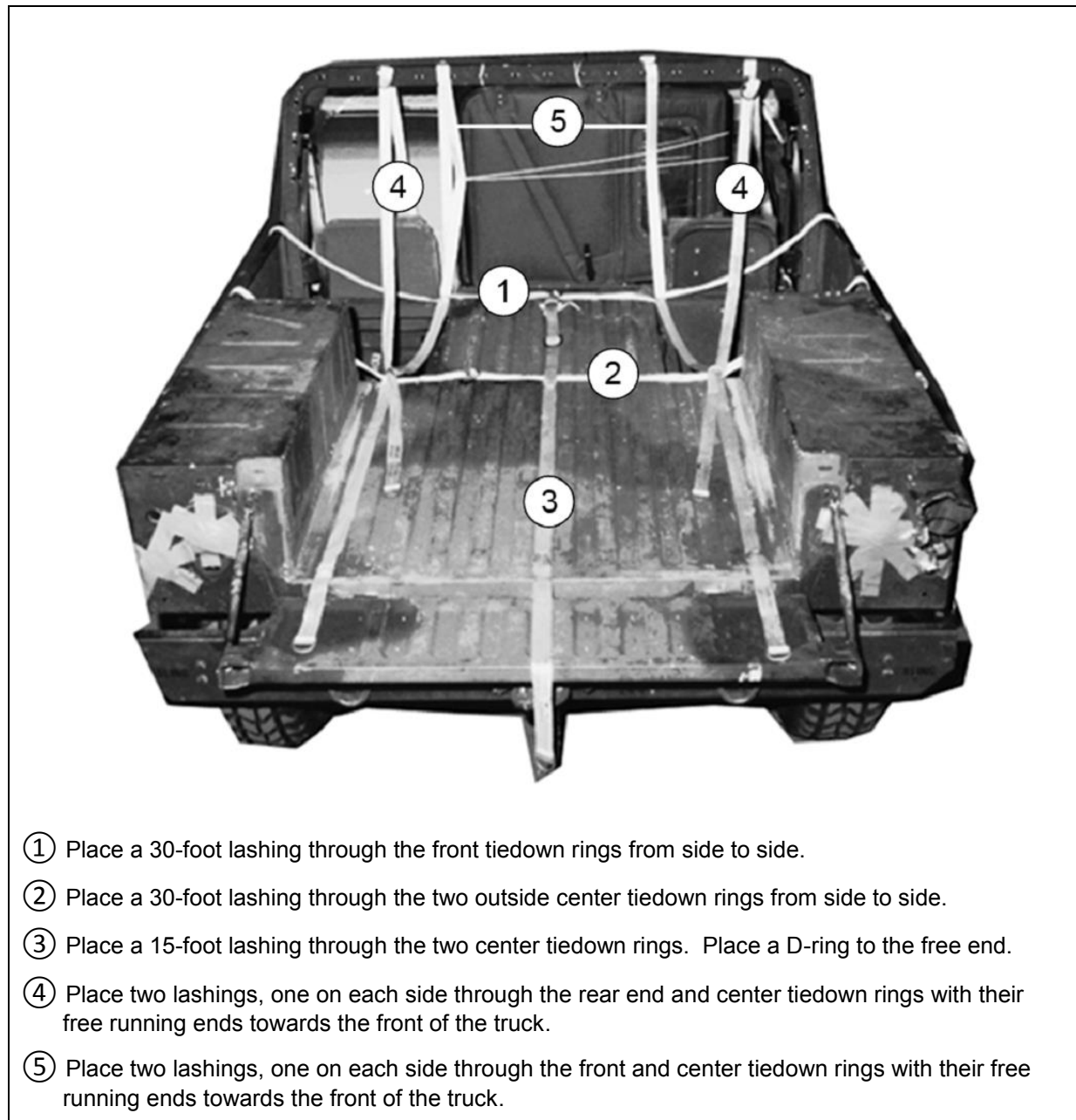
Figure 9-7. HDDS Installed and Honeycomb Stacks Positioned

## PREPARING HMMWV

- 9-5. Prepare the HMMWV truck according to Figures 1-6 through 1-12 with the following exception:
- Tie the mirrors and cab bows firmly to the seats. Tie the cab doors against the seat backs.

## PREPARING THE TRUCK CARGO BED

- 9-6. Prepare the truck cargo bed as shown in Figure 9-8.



**Figure 9-8. Truck Cargo Bed Prepared**



- ⑥ Cover the cargo bed to the rear center tiedown rings with a 36- by 52-inch and a 14- by 52-inch piece of honeycomb.

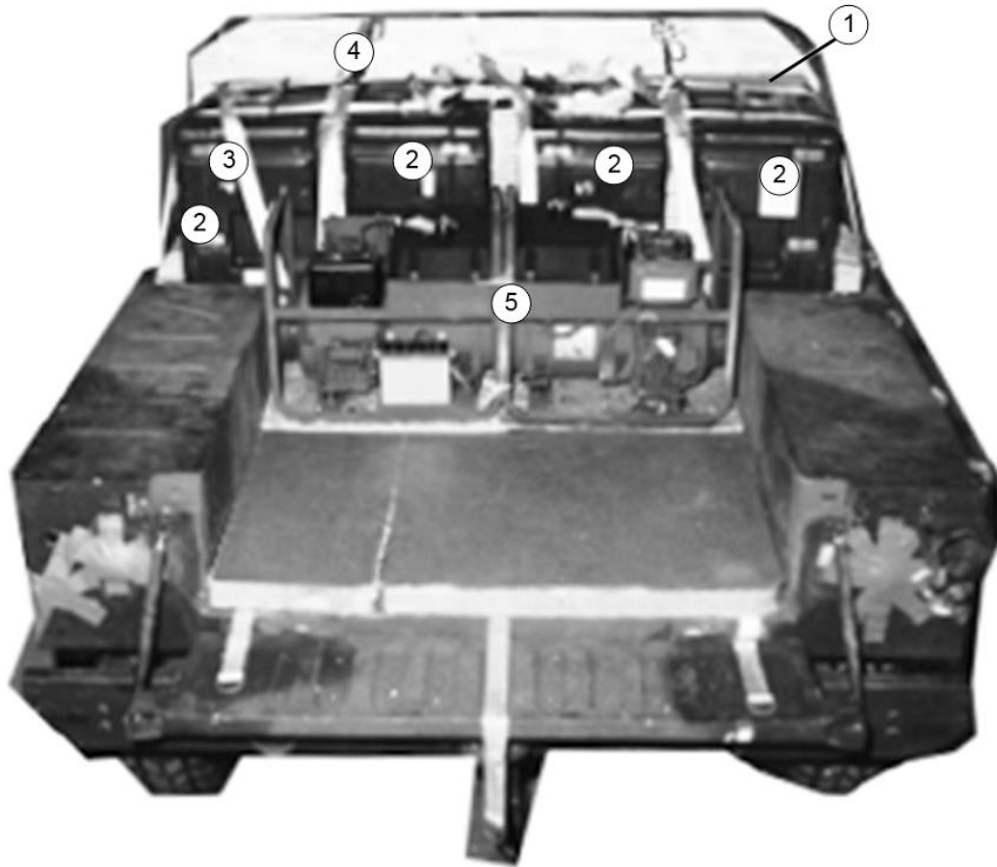
**Note.** Be sure the 15-foot lashings placed earlier extend under the honeycomb and to the front and rear.

- ⑦ Cover the remainder of the cargo bed and lashings with an 81- by 31 ½-inch piece of honeycomb.
- ⑧ Stand a ¾- by 81- by 34-inch piece of plywood against the front of the cargo bed after beveling the upper corners to conform to the curves of the B-pillar. Drill a ½-inch hole 5 inches in from each upper corner. Secure with ½-inch tubular nylon.
- ⑨ Stand a 31 ½-inch by 9-inch piece of honeycomb along the bed wall in front of the wheel well on each side.

Figure 9-8. Truck Cargo Bed Prepared (continued)

## LOADING THE TRUCK CARGO BED

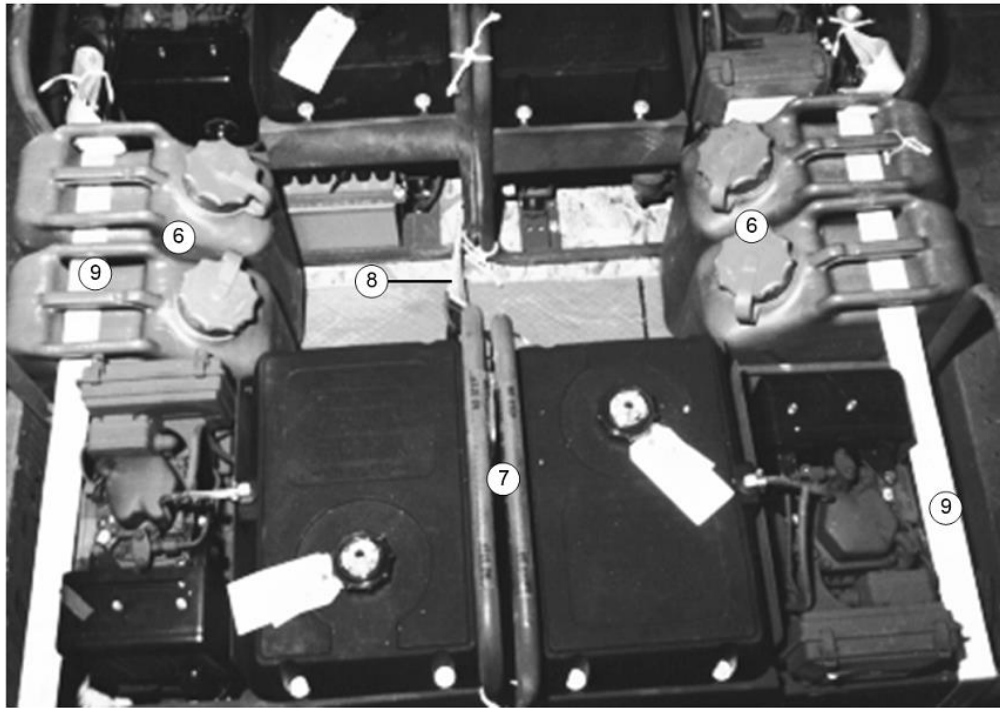
9-7. Load the truck cargo bed as shown in Figure 9-9.



- ① Place a 77- by 27 ½-inch piece of honeycomb on edge in front of the cargo bed.
  - ② Place the four identically sized hard cases across the front of the cargo bed with three pieces of 26- by 27 ½-inch honeycomb in between.
- Note.** Place the cases as shown to ensure proper alignment of handles for lashing.
- ③ Fasten the 30-foot lashings over boxes, passing them through the box carrying handles.
  - ④ Fasten the 15-foot lashings over the boxes and the plywood at the front of the load.
  - ⑤ Place two generators, with fuel tanks facing, behind the cases. Pad between the cases and the generators with honeycomb cut to fit. Tie the generator frames together at their corners with type III nylon cord.

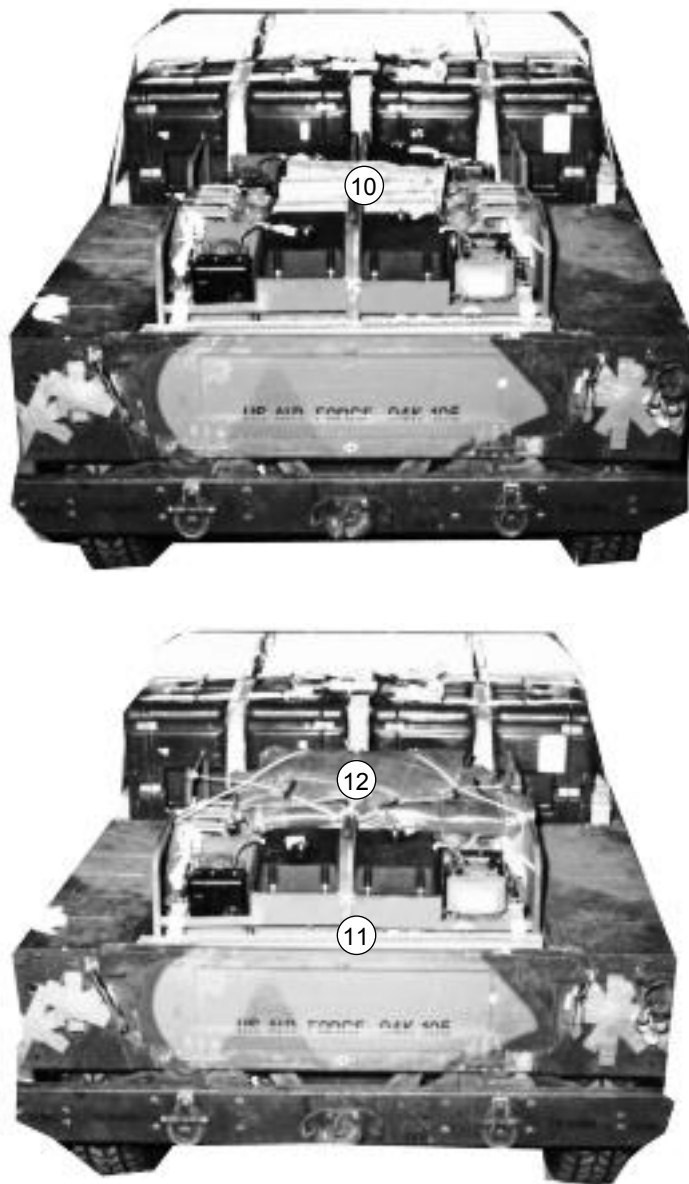
**Figure 9-9. Truck Cargo Bed Loaded**





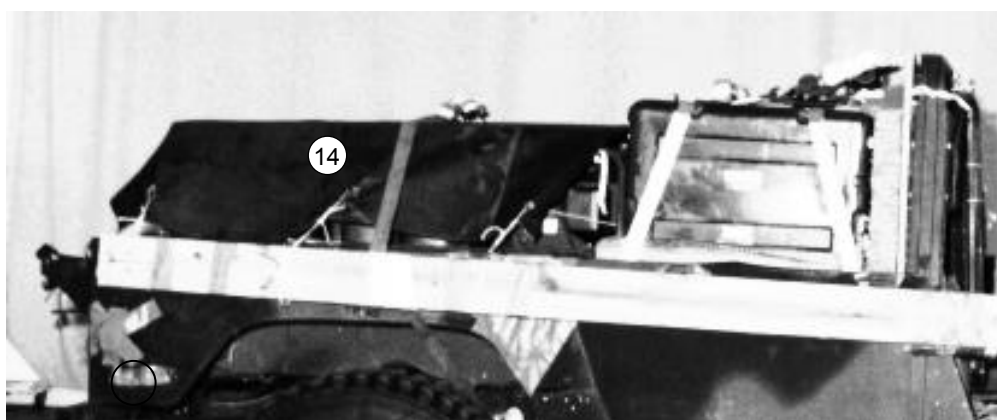
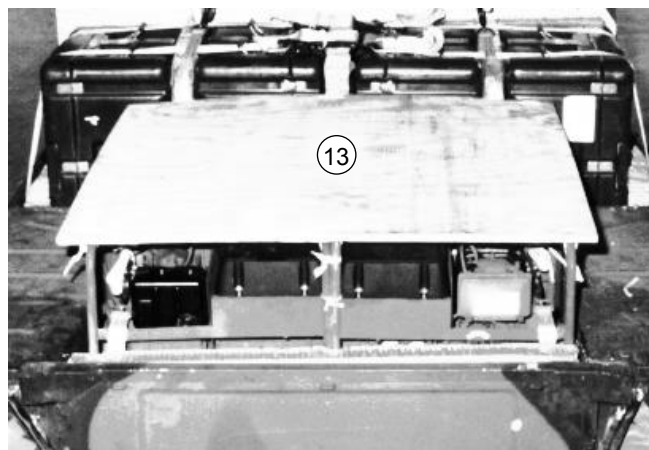
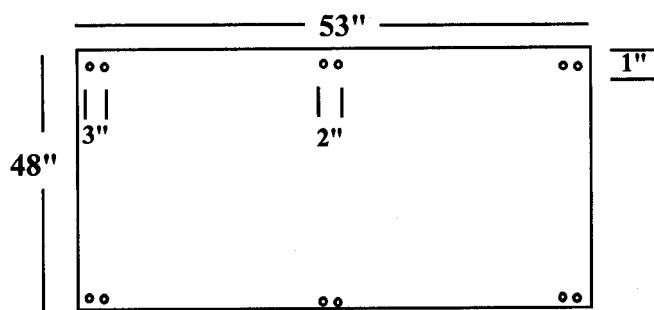
- ⑥ Place two fuel cans behind each generator, carrying handles to the outside.
- ⑦ Place two more generators behind the fuel cans, facing and tied together as in step 5.
- ⑧ Pass the center lashing through the generator frames at the bottom, alternating frame one generator to the other. Fasten the lashing with a load binder between the two sets of generators.
- ⑨ Pass the two remaining 15-foot lashings over generators and through the can handles. Fasten them just ahead of the rear generators.

**Figure 9-9. Truck Cargo Bed Loaded (continued)**



- ⑩ Place four 22- by 18-inch pieces of honeycomb between the sets of generators.
- ⑪ Place a 51- by 10 ½-inch piece of honeycomb between the closed tailgate and the generators.
- ⑫ Tie the folded canopy cover to the tops of the generator frames with type III nylon cord.

**Figure 9-9. Truck Cargo Bed Loaded (continued)**

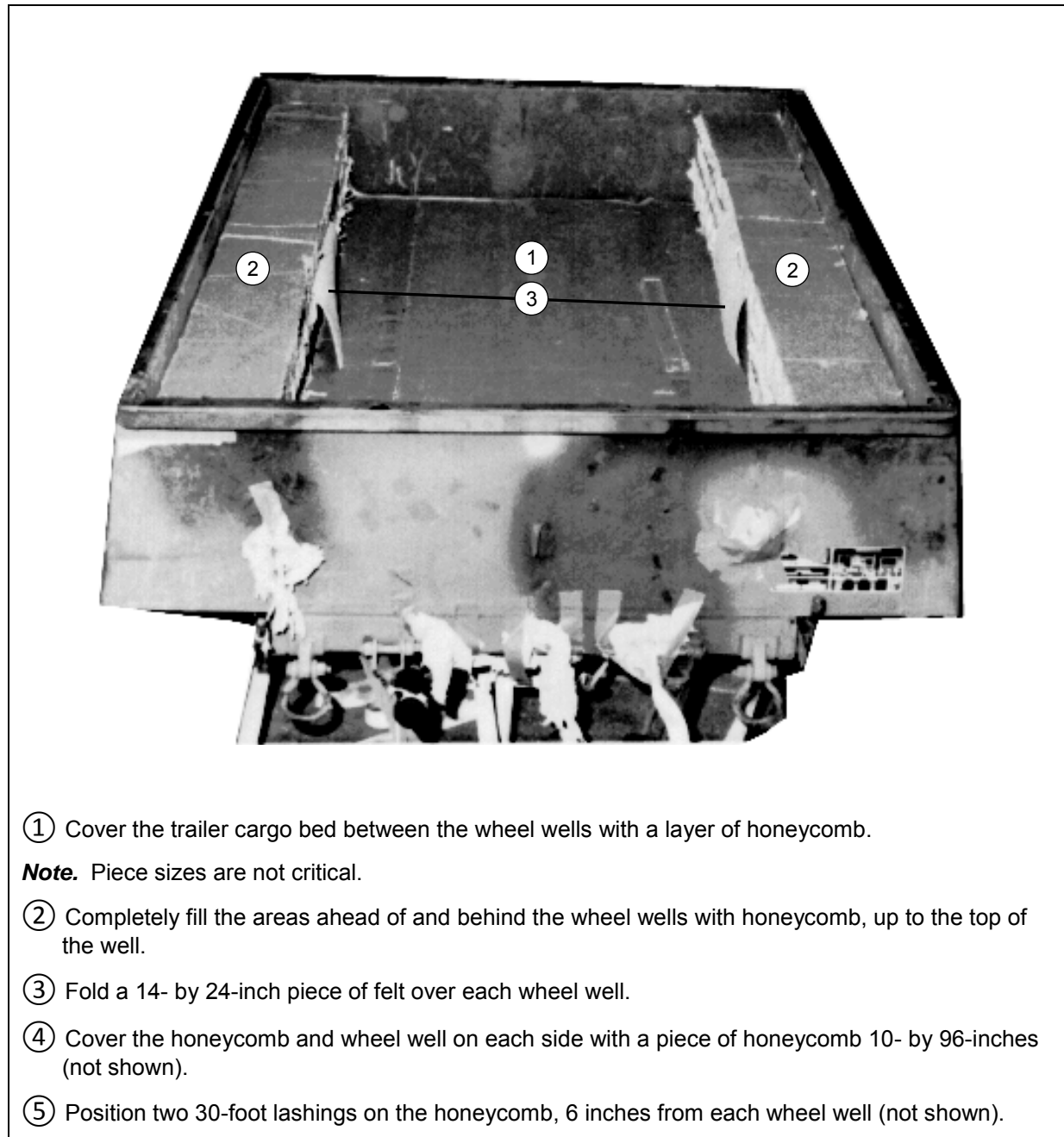


- ⑬ Tie a  $\frac{3}{4}$ - by 48- by 53-inch piece of plywood, with holes drilled as shown above over the generators with  $\frac{1}{2}$ -inch tubular nylon.
- ⑭ Tie a piece of cotton duck cloth, cut to fit over the plywood, to convenient points with type III nylon cord.

**Figure 9-9. Truck Cargo Bed Loaded (continued)**

## PREPARING TRAILER CARGO BED

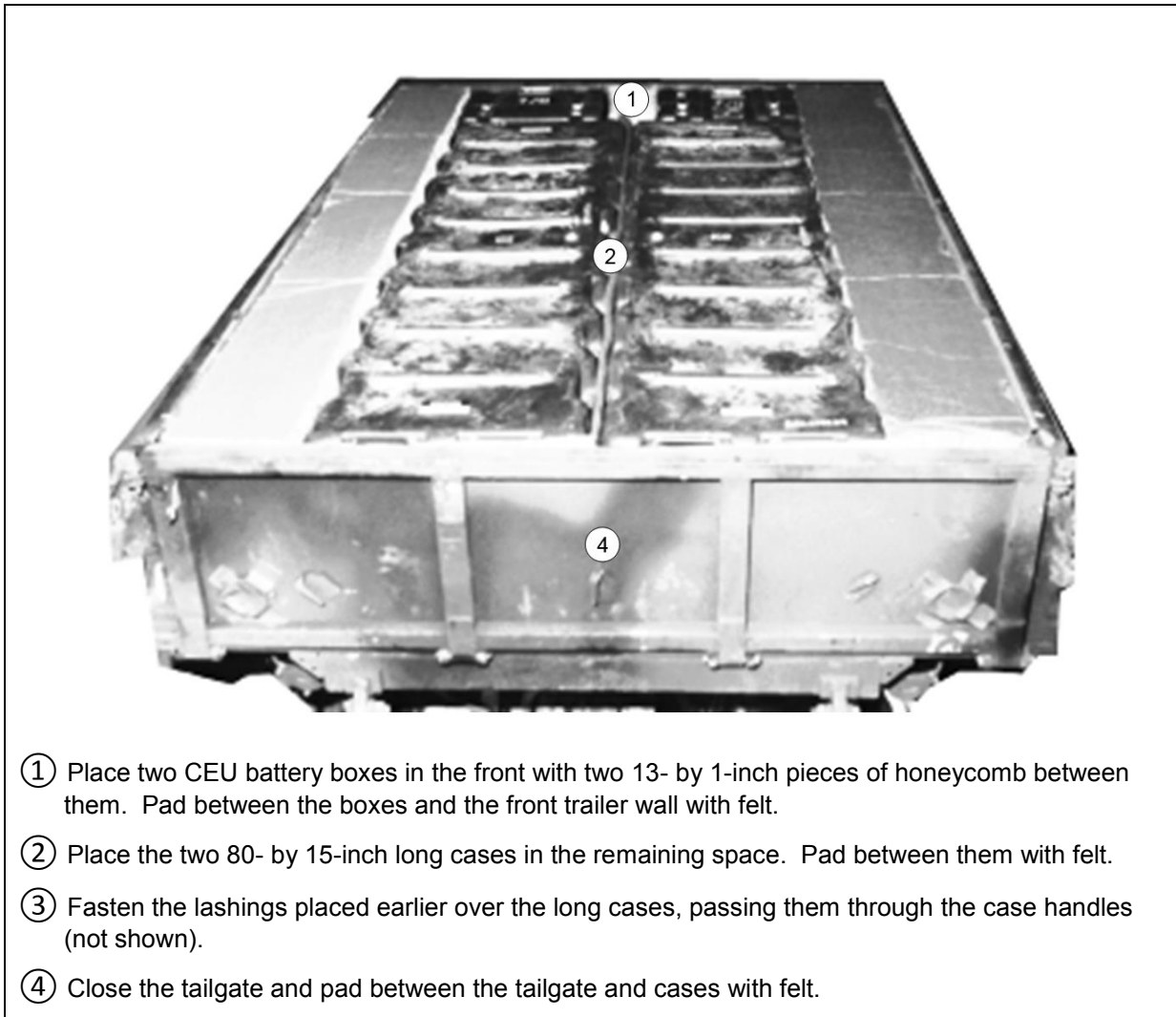
9-8. Prepare the trailer cargo bed as shown in Figure 9-10.



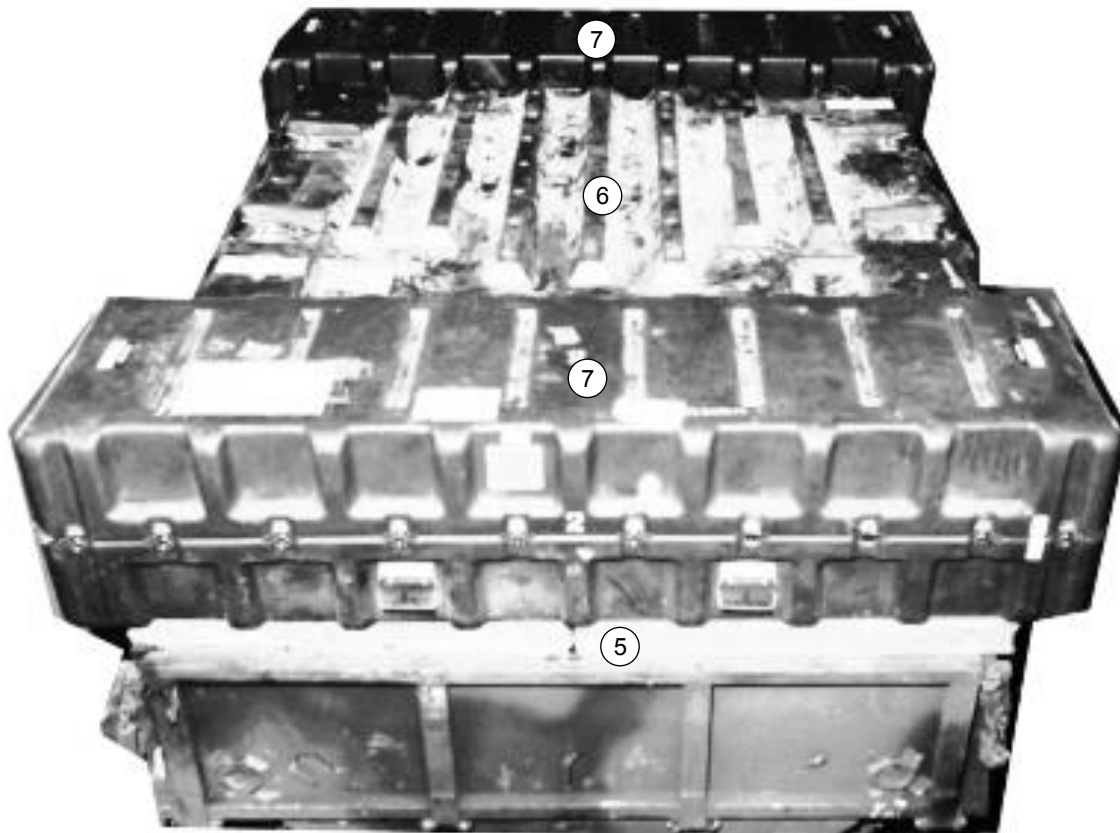
**Figure 9-10. Trailer Cargo Bed Prepared**

## **PLACING LOAD IN TRAILER**

9-9. Place the load in the trailer as shown in Figure 9-11.



**Figure 9-11. Load Placed in Trailer**



- ⑤ Cover the load in the trailer with two full sheets of honeycomb side by side.
- ⑥ Center the largest MMLS case on the trailer.
- ⑦ Place the two remaining long cases to the front and rear of the large case. Pad between them with felt.

**Figure 9-11. Load Placed in Trailer (continued)**

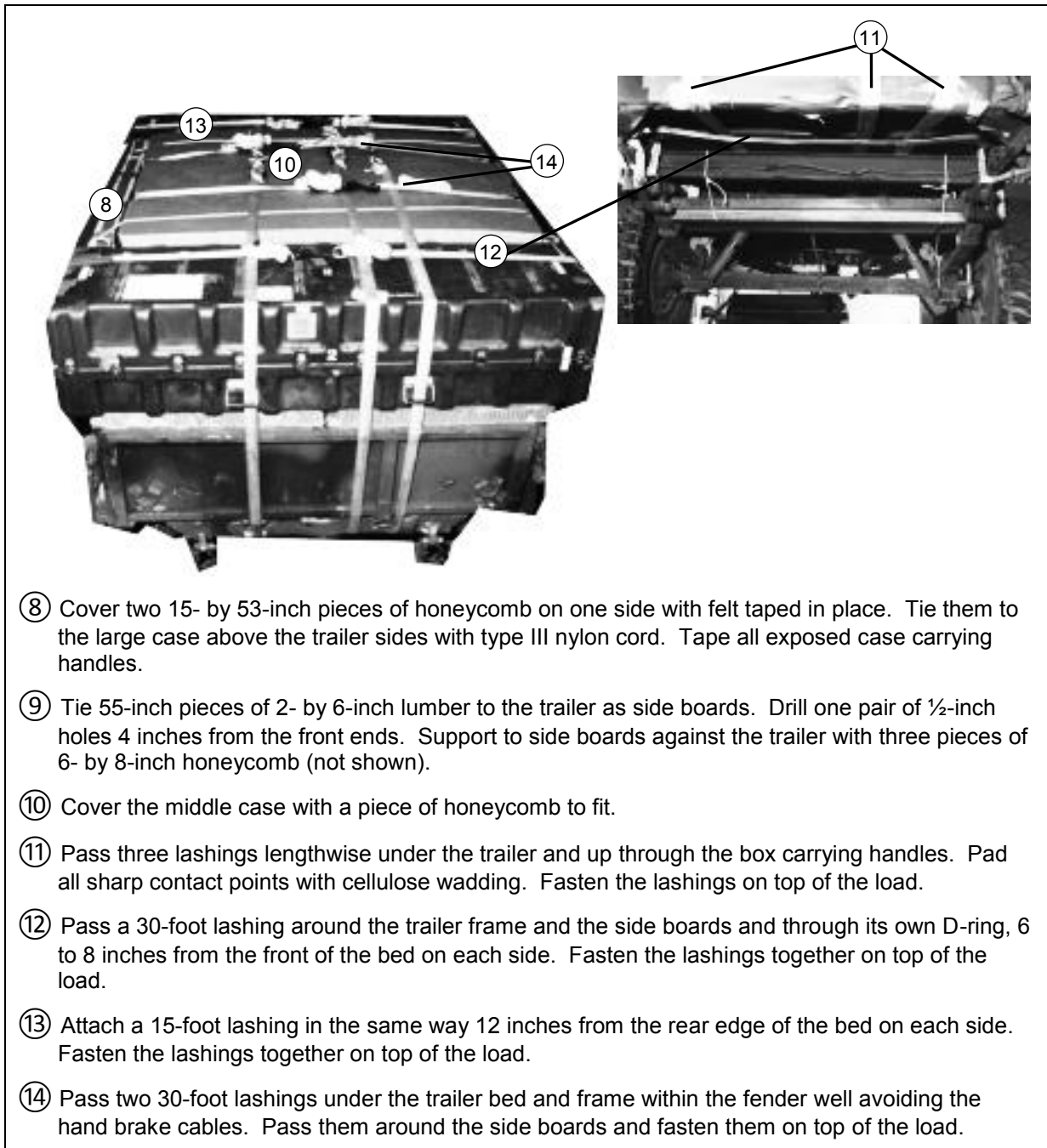
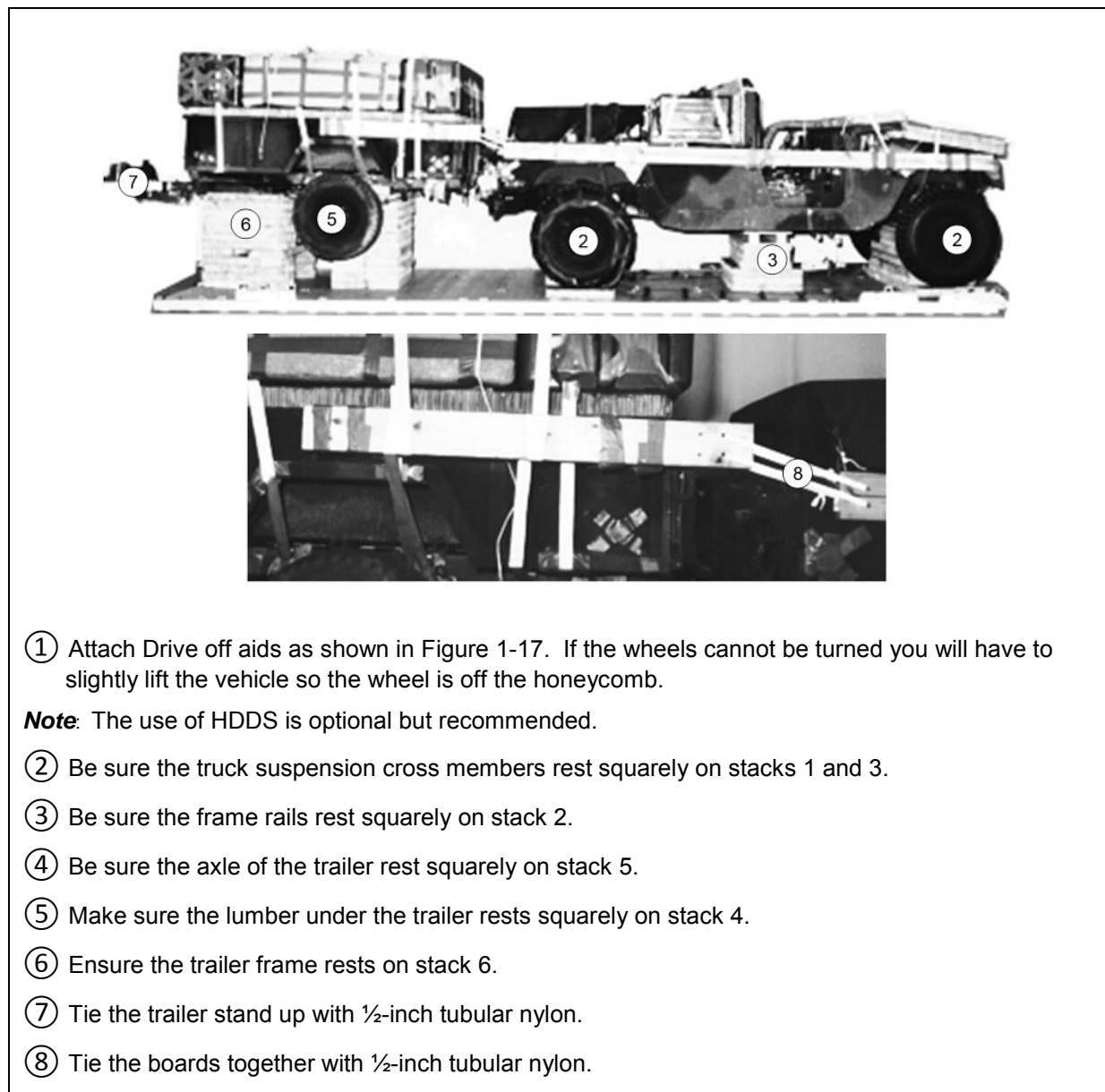


Figure 9-11. Load Placed in Trailer (continued)

## PLACING TRUCK AND TRAILER ON PLATFORM

9-10. Place the truck and trailer on the platform as shown Figure 9-12.



**Figure 9-12. Truck and Trailer Placed on Platform**



## LASHING TRUCK AND TRAILER TO PLATFORM

9-11. Lash the truck and trailer to the platform as shown in Figure 9-13.

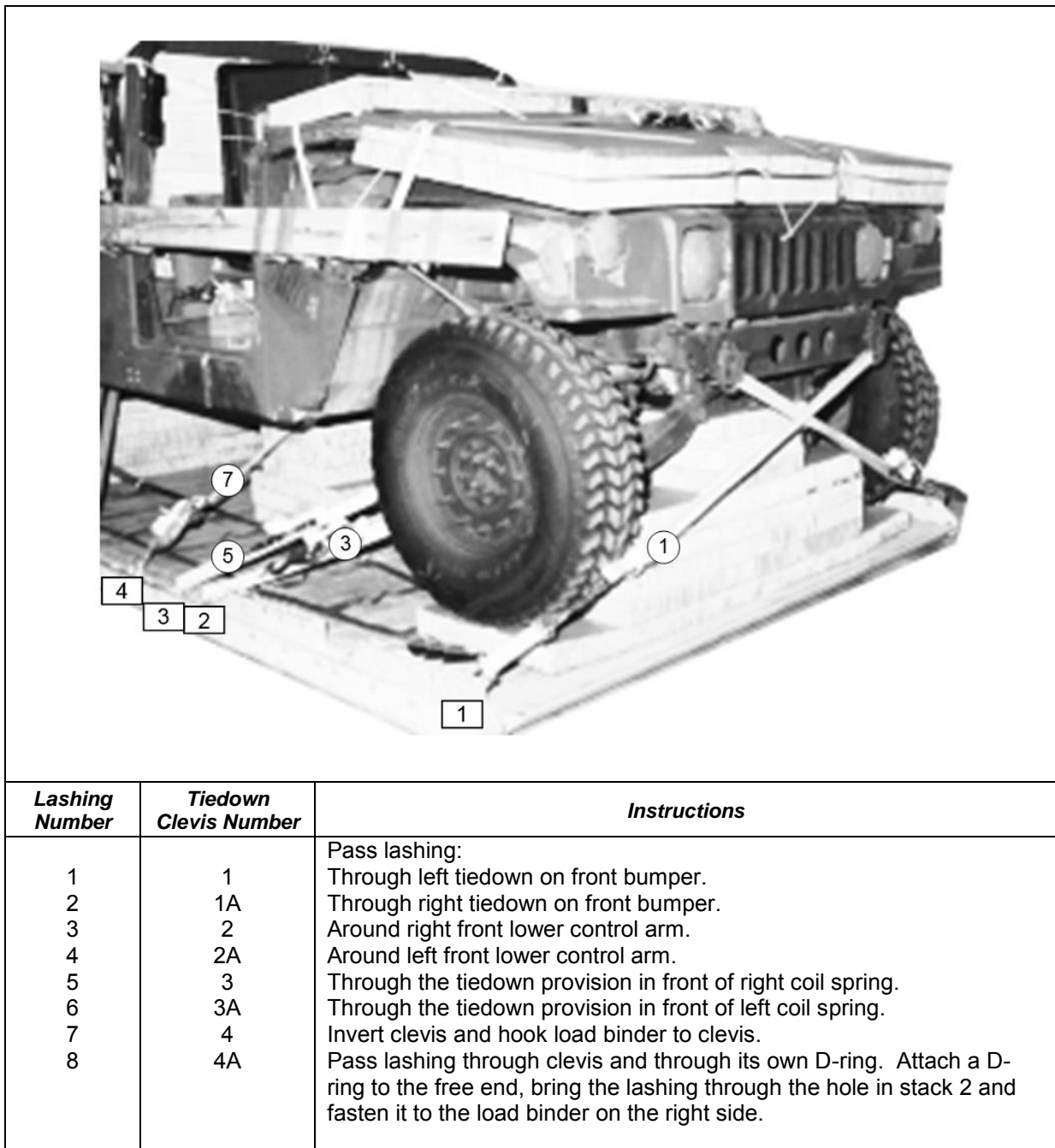
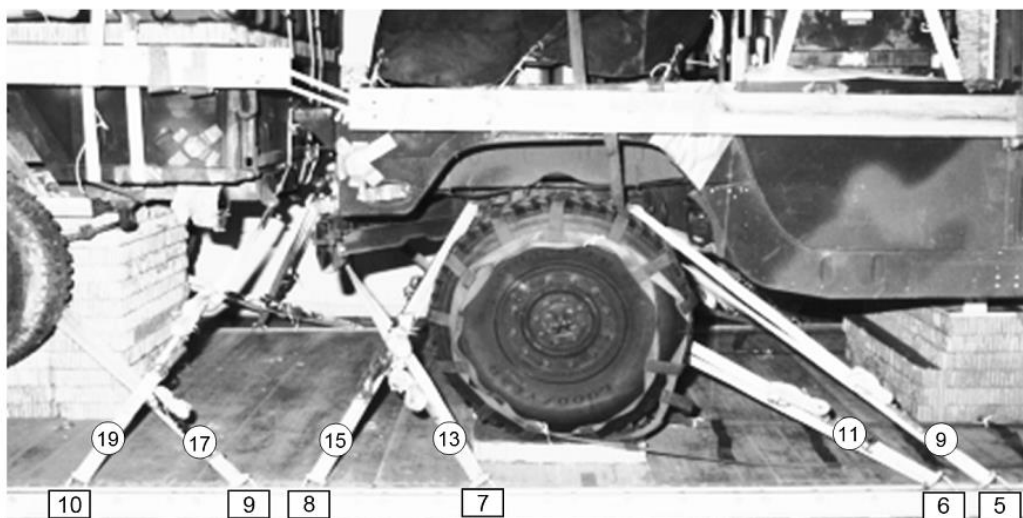
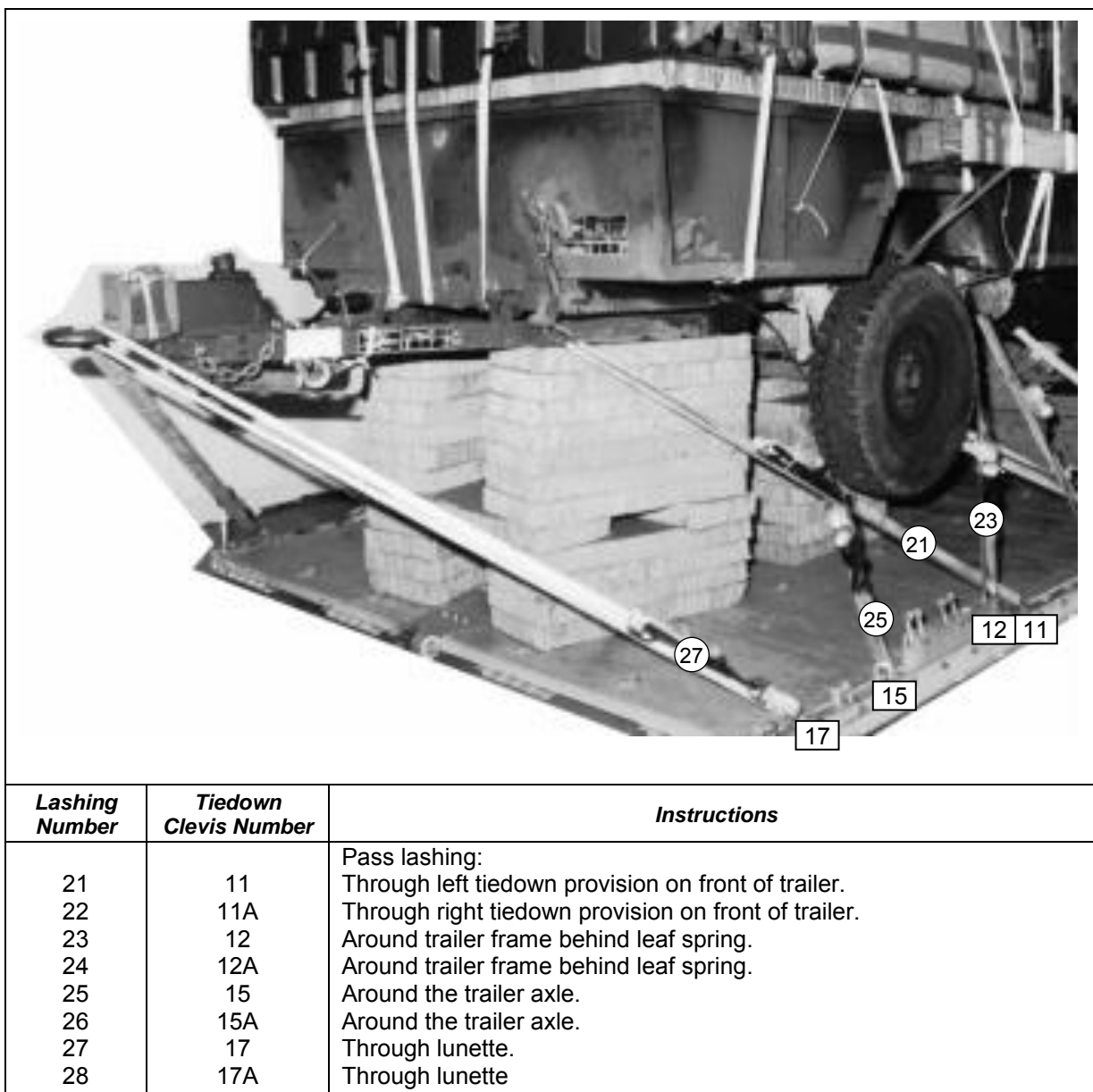


Figure 9-13. Truck and Trailer Lashed to Platform



<b>Lashing Number</b>	<b>Tiedown Clevis Number</b>	<b>Instructions</b>
9	5	Pass lashing:
10	5A	Through tiedown provision in front of right rear coil spring.
11	6	Through tiedown provision in front of left rear coil spring.
12	6A	Around right rear lower control arm.
13	7	Around left rear lower control arm.
14	7A	Through right tiedown on rear bumper.
15	8	Through left tiedown on rear bumper.
16	8A	Through tiedown provision behind right rear coil spring.
17	9	Through tiedown provision behind left coil spring.
18	9A	Around the trailer axle.
19	10	Around the trailer axle.
20	10A	Through left tiedown provision on rear of trailer.
		Through right tiedown provision on rear of trailer.

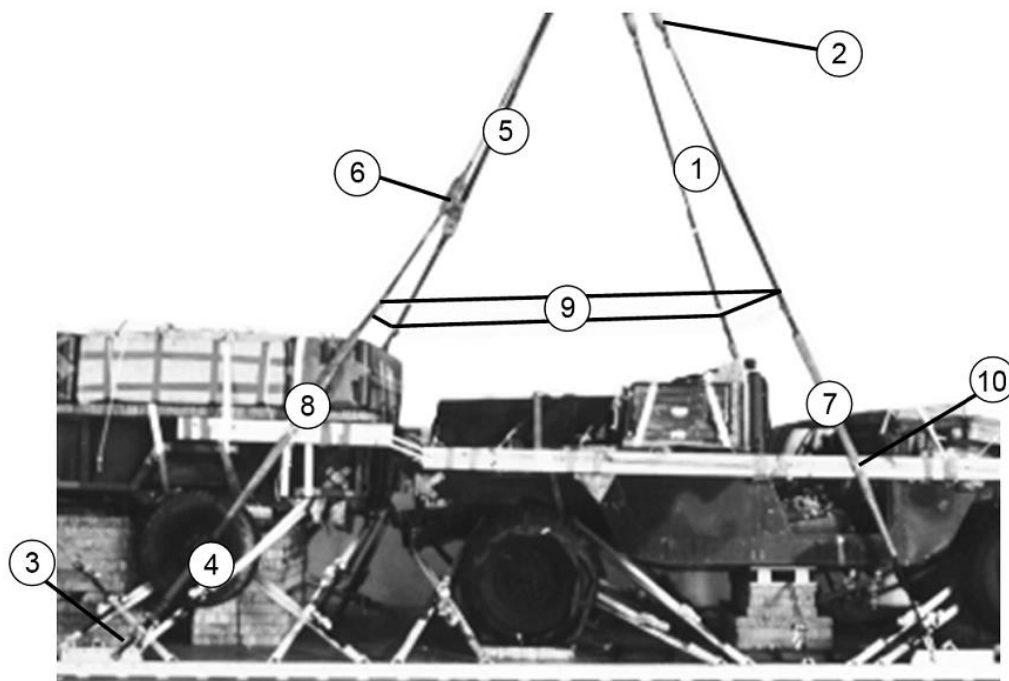
Figure 9-13. Truck and Trailer Lashed to Platform (continued)



**Figure 9-13. Truck and Trailer Lashed to Platform (continued)**

## INSTALLING SUSPENSION SLINGS AND DEADMAN TIE

9-12. Install the suspension slings and deadman tie as shown in Figure 9-14.

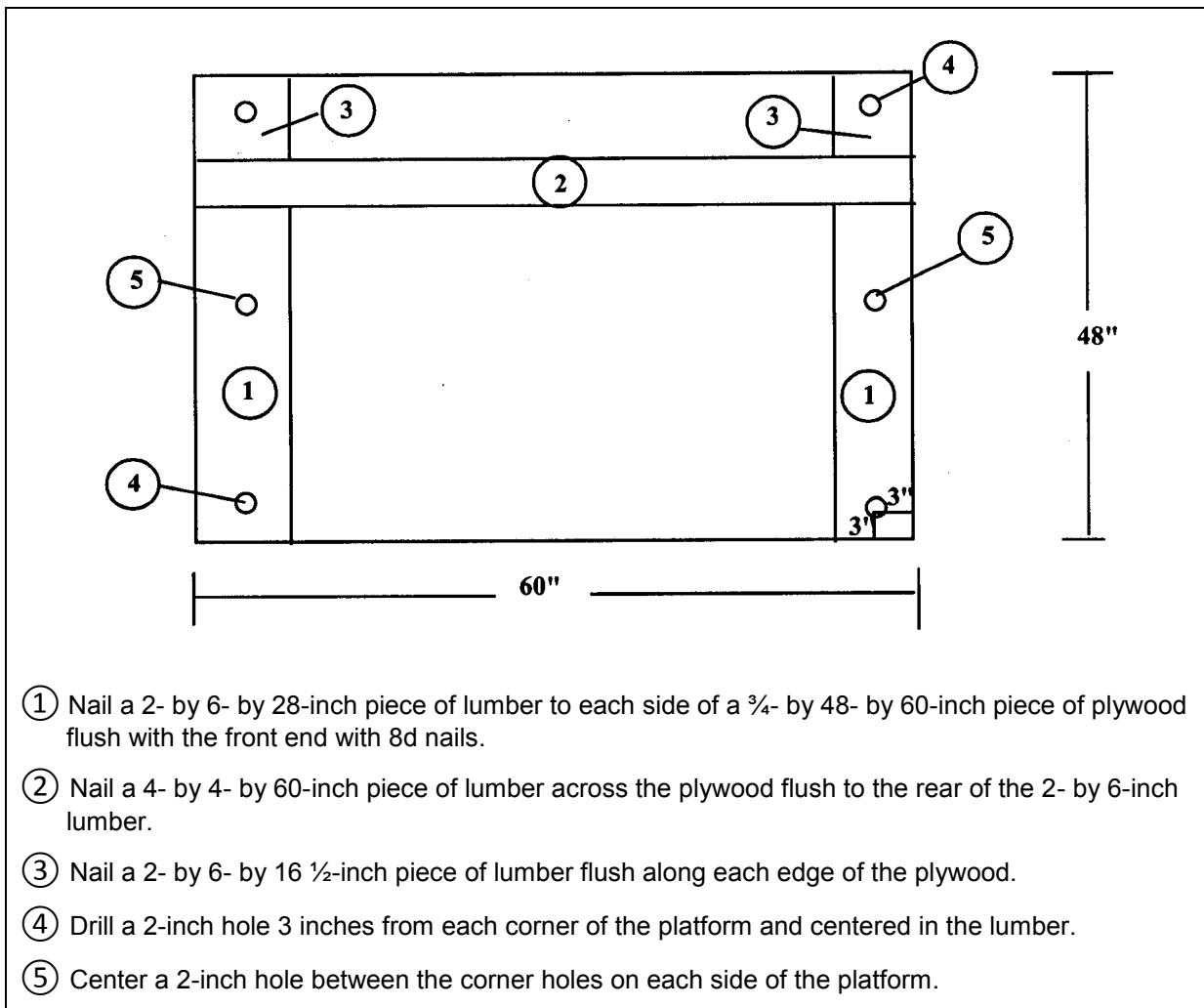


- ① Attach a 16-foot (2-loop), type XXVI nylon sling to each front suspension link with a large clevis.
- ② Attach a 3-foot (2-loop), type XXVI nylon sling to each 16-foot sling with a 3 ¾-inch two-point link.
- ③ Attach a large clevis to each rear suspension link.
- ④ Attach an 11-foot (2-loop), type XXVI nylon sling to each of these large clevises with an additional large clevis.
- ⑤ Attach a 9-foot (2-loop), type XXVI nylon sling to each 11-foot sling with a 5 ½-inch two-point link.
- ⑥ Pad the two-point links with cellulose wadding and tape.
- ⑦ Wrap the front suspension slings 21 inches from the clevis with a 6- by 48-inch piece of felt and tape.
- ⑧ Wrap the rear suspension slings 33 inches from the clevis with felt as in step 7.
- ⑨ Install the deadman tie according to TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.
- ⑩ Tie the suspension slings to the truck and trailer side boards with type III nylon cord.

**Figure 9-14. Suspension Slings and Deadman Tie Installed**

## BUILDING PARACHUTE STOWAGE PLATFORM

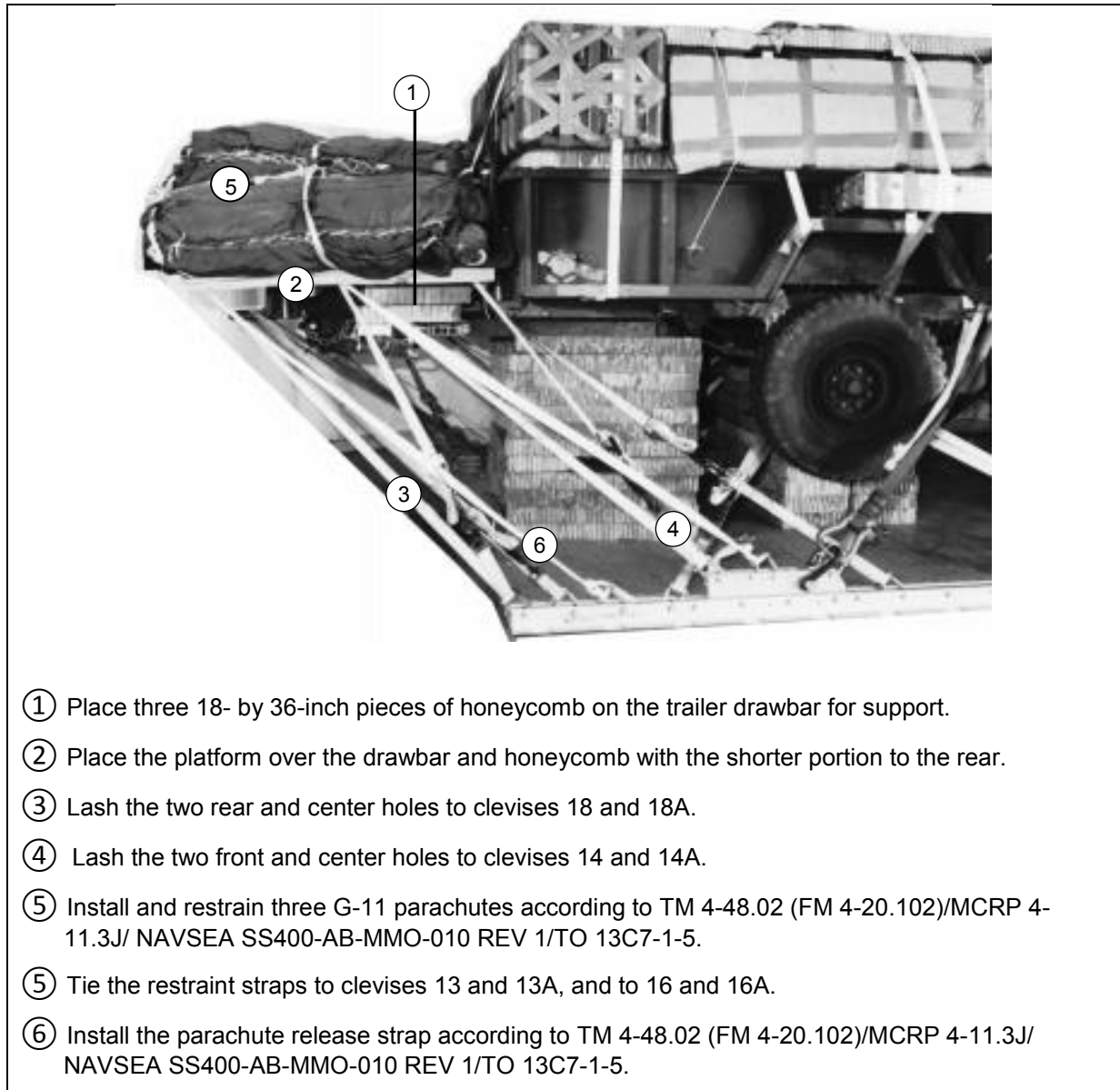
9-13. Build parachute stowage platform as shown in Figure 9-15.



**Figure 9-15. Parachute Stowage Platform Built**

## INSTALLING PARACHUTE STOWAGE PLATFORM, PREPARING AND STOWING CARGO PARACHUTES

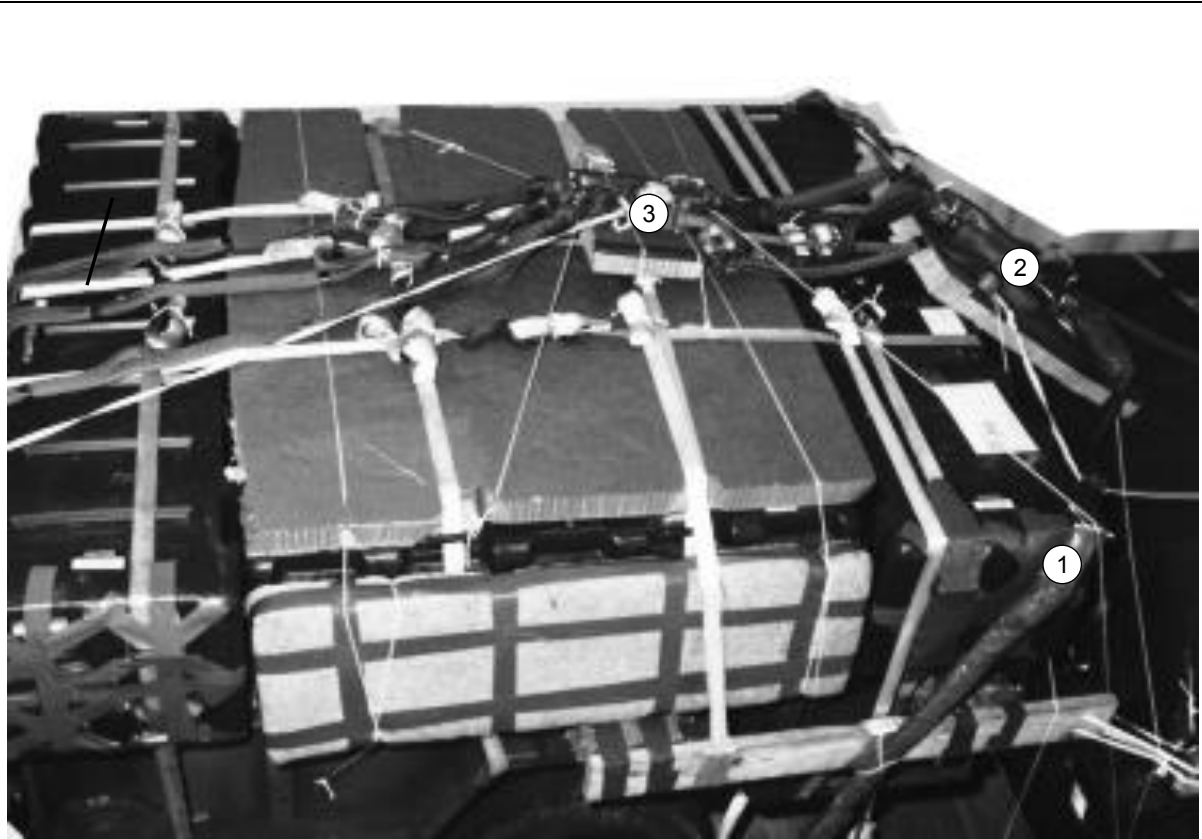
9-14. Install the parachute stowage platform on top of the support stacks. Prepare and stow the cargo parachutes as shown in Figure 9-16.



**Figure 9-16. Parachute Stowage Platform Installed and Cargo Parachutes Prepared and Stowed**

## **INSTALLING PARACHUTE RELEASE**

9-15. Prepare, attach, and safety an M-1 release according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figure 9-17.

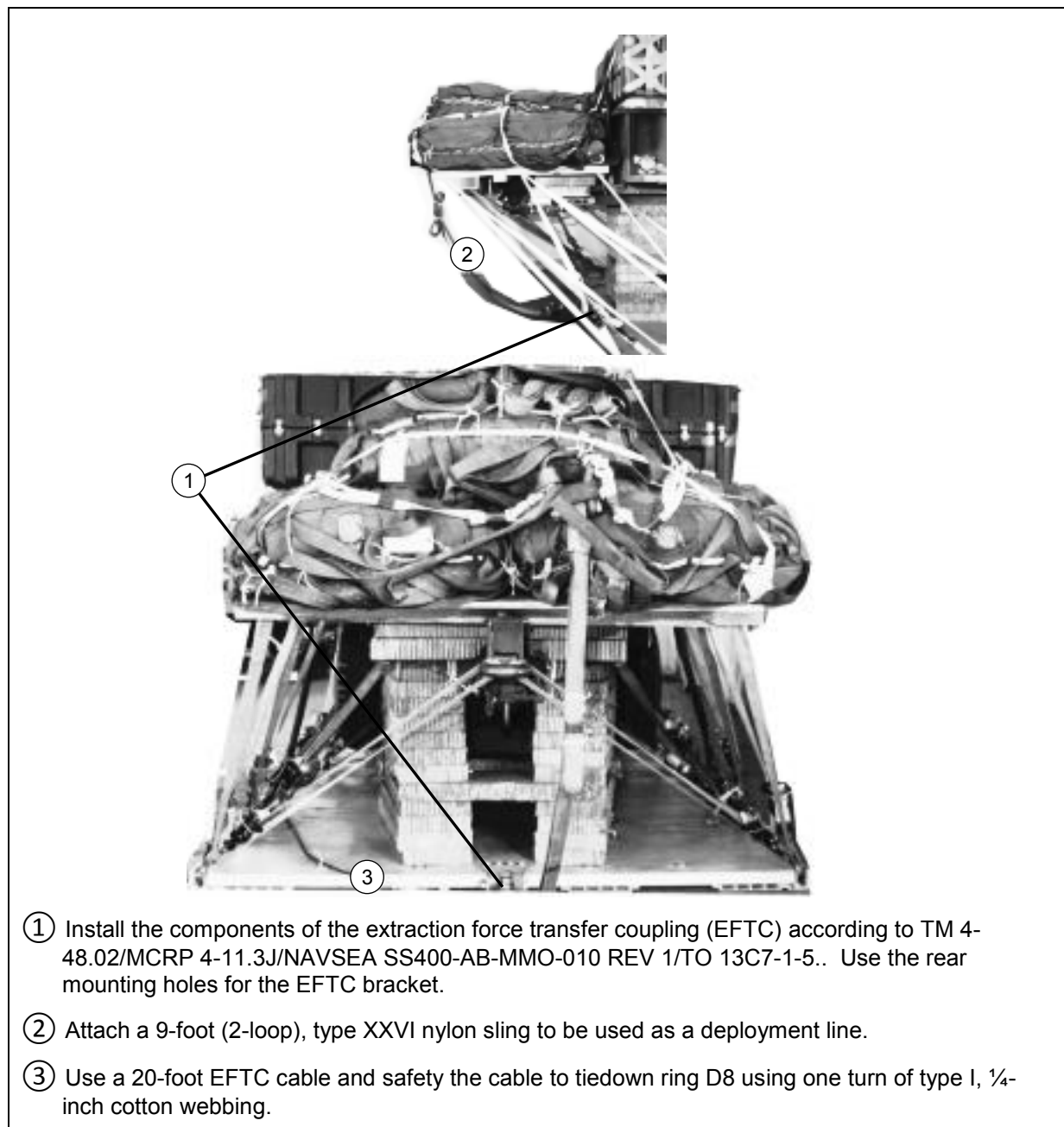


- ① Safety the front suspension slings to the truck B-pillar (roll bar) (not shown).
- ② Center a 26- by 36-inch piece of honeycomb between the truck and the trailer and tie it to convenient points with type III nylon cord. Rest the 2-point links on the honeycomb.
- ③ Place the M-1 release on an 18- by 12-inch of honeycomb. Tie it to convenient points with type III nylon cord. Connect the riser extensions and suspension slings according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.

**Figure 9-17. M-1 Cargo Parachute Release Installed**

## INSTALLING EXTRACTION SYSTEM

9-16. Install the EFTC as shown in Figure 9-18.



**Figure 9-18. Extraction System Installed**



## **PLACING EXTRACTION PARACHUTE**

9-17. Select the extraction parachute and extraction line needed using the extraction line requirements table in TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5. Place the extraction line on the load for installation in the aircraft.

## **INSTALLING PROVISIONS FOR EMERGENCY RESTRAINTS**

9-18. Select and install the provisions for the emergency aft restraints according to the emergency aft restraint requirements table in TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5.

## **MARKING RIGGED LOAD**

9-19. Mark the rigged load according to TM 4-48.02/MCRP 4-11.3J/NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 and as shown in Figure 9-19. Complete Shipper's Declaration for Dangerous Goods and affix to load. If the load varies from the one shown, the weight, height, CB, tip off curve, and parachute requirements must be recomputed.

## **EQUIPMENT REQUIRED**

9-20. Use the equipment listed in Table 9-1 on page 9-29 to rig the load shown in Figure 9-19.

### CAUTION

Make the final rigger inspection required by TM 4-48.02 (FM 4-20.102)/MCRP 4-11.3J/ NAVSEA SS400-AB-MMO-010 REV 1/TO 13C7-1-5 before the load leaves the rigging site.



### RIGGED LOAD DATA

Weight.....	13,289 pounds
Height .....	99 inches
Width.....	108 inches
Length.....	338 inches
Overhang: Front (vehicle).....	5 inches
Rear (extraction force transfer coupling).....	45 inches
Center of Balance (CB) (from front edge of platform).....	140 inches

**Figure 9-19. MMLS in an M998 HMMWV and a ¾-Ton Trailer Rigged on a 24-Foot Type V Platform for Low-Velocity Airdrop**

**Table 9-1. Equipment Required for Rigging the MMLS in an M998 HMMWV and a ¾-Ton Trailer  
Rigged on a 24-Foot, Type V Airdrop Platform for Low-Velocity Airdrop**

<b>National Stock Number</b>	<b>Item</b>	<b>Quantity</b>
8040-00-273-8713 1670-01-035-6054	Adhesive, paste, 1-gallon Bridle (for line bag) Clevis, suspension:	As required 1
4030-00-090-5354	1-in (large)	7
4030-00-678-8562	¾-in (medium)	6
8305-00-242-3593	Cloth, cotton duck, 60-in	As required
4020-00-240-2146	Cord, nylon, type III, 550-lb	As required
1670-00-434-5787	Coupling, airdrop extraction force transfer cable, 20-ft Cover:	1
1670-00-360-0328	Clevis, large	3
1670-00-360-0329	Link, type IV	3
8135-00-664-6958	Cushioning material, packaging, cellulose wadding	As required
8305-00-958-3685	Felt, ½-in thick	As required
1670-01-183-2678	Leaf, extraction line (line bag) Line extraction:	3
1670-01-062-6313	60-ft (3-loop), type XXVI (C-130)	1
1670-01-107-7651	140-ft (3-loop), type XXVI (for C-141, C-5 or C-17)	1
1670-01-064-4452	60-ft (1-loop), type XXVI with towplate link (for C-17) Drogue Line	1
1670-00-783-5988	Link assembly: Type IV Two-point:	6
5306-00-435-8994	Bolt, 1-in diam, 4-in long	2
5310-00-232-5165	Nut, 1-in, hexagonal	2
1670-00-003-1953	Plate, side 3 ¾-in	2
5365-00-007-3414	Spacer, large	2
5315-00-010-4659	Nail, steel wire, 8d	As required
1670-00-753-3928	Pad, energy-dissipating, (honeycomb), 3- by 36- by 96-in:	27 sheets
1670-01-016-7841	Parachute, cargo G-11B	3
1670-01-063-3716	Parachute, cargo extraction 22-ft	1
1670-01-063-3715	Drogue (for C-17) 15-ft	1
1670-01-162-2372	Platform, airdrop, type V, 24-ft: Clevis assembly (type V)	1 (30)

**Table 9-1. Equipment Required for Rigging the MMLS in an M998 HMMWV and a ¾-Ton Trailer Rigged on a 24-Foot, Type V Airdrop Platform for Low-Velocity Airdrop (continued)**

1670-01-353-8424	Extraction bracket assembly	(1)
1670-01-353-8425	Bracket assembly, coupling	(1)
1670-01-247-2389	Suspension link	(2)
1670-01-162-2381	Tandem link assembly (multipurpose link)	(2)
	Lumber:	
5510-00-220-6146	2- by 4-	As required
5510-00-220-6274	4- by 4-	As required
5510-00-220-6148	2- by 6-	As required
5530-00-128-4981	Plywood, ¾-in	4 sheets
1670-01-097-8816	Release, cargo parachute, M-1	1
	Sling, cargo, airdrop:	
	For suspension:	
5340-01-062-7761	16-ft (2-loop), type XXVI	2
1670-01-062-6301	3-ft (2-loop), type XXVI	2
1670-01-062-6304	9-ft (2-loop), type XXVI	2
1670-01-063-7760	11-ft (2-loop), type XXVI	2
	For lifting:	
1670-01-062-6304	9-ft (2-loop), type XXVI	2
1670-01-062-6303	12-ft (2-loop), type XXVI	2
	For deployment:	
1670-01-062-6304	9-ft (2-loop), type XXVI	1
	For riser extension:	
1670-01-062-6302	20-ft (2-loop), type XXVI	6
1670-00-040-8219	Strap, parachute release, multi-cut, comes with 3 knives	2
7501-00-266-5016	Tape, adhesive, 2-in	As required
1670-01-344-0825	Vehicle drive-off aid (HDDS)	1
1670-00-937-0271	Tiedown assembly, 15-ft	36
	Webbing:	
8305-00-268-2411	Cotton, ¼-inch, type I	As required
5305-00-082-5752	Nylon, tubular, ½-in	As required
8305-00-263-3591	Type VIII	As required
Legend		
ft	Foot	
in	Inch	
lb	pound	

# Glossary

<b>CB</b>	center of balance
<b>EFTC</b>	extraction force transfer coupling
<b>FM</b>	field manual
<b>HMMWV</b>	high-mobility, multipurpose, wheeled vehicle
<b>IAP</b>	integrated armor package
<b>LTACFIRE</b>	lightweight tactical fire direction system
<b>MCRP</b>	Marine Corps Reference Publication
<b>NSN</b>	National Stock Number
<b>PADS</b>	position and azimuth determining system
<b>TM</b>	technical manual
<b>TO</b>	technical order
<b>TRADOC</b>	U.S. Army Training and Doctrine Command

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

ADRP 1-02. *Terms and Military Symbols*. 7 December 2015.

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(FM 10-500-23/TO 13C7-14-461; FM 4-20.117/  
MCRP 4-11.3M/TO 13C7-1-111; FM 4-20.166/  
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**15 March 2016**

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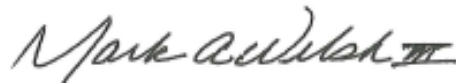
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