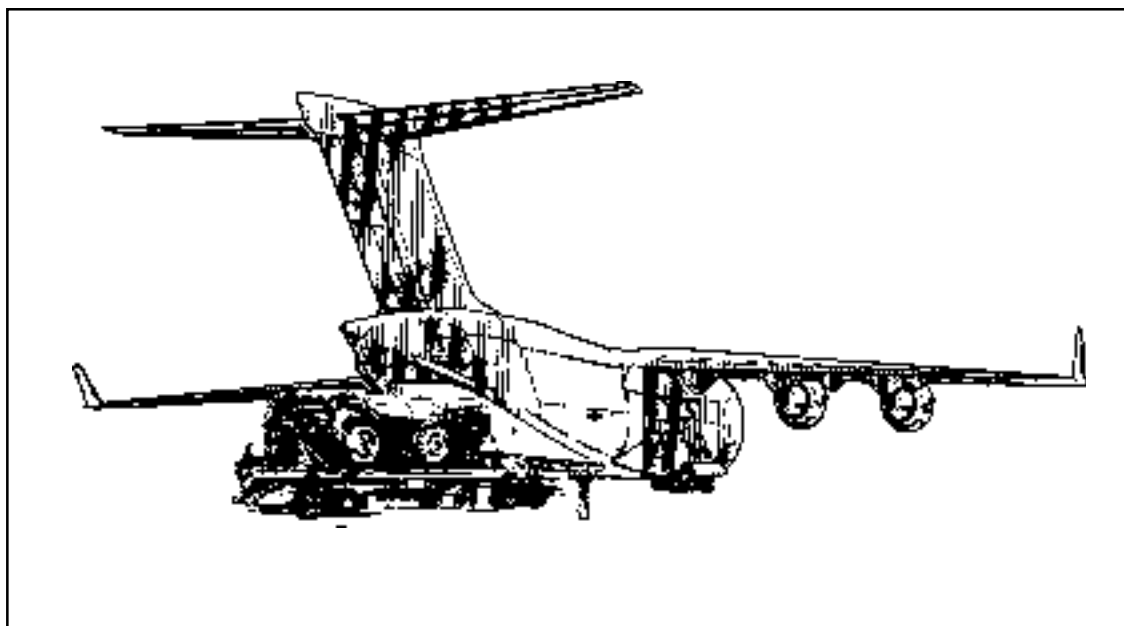


ARMY FM 10-519  
FMFM 7-55  
AIR FORCE TO 13C7-10-31

AIRDROP OF SUPPLIES AND EQUIPMENT:

# Rigging 105-Millimeter Howitzers



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**C4, FM 10-519/FMFM 7-55/TO 13C7-10-31**

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Washington, DC, 11 January 2002

**AIRDROP OF SUPPLIES AND EQUIPMENT:**

**RIGGING 105-MILLIMETER HOWITZERS**

This change adds the procedures for rigging the M119, 105-mm howitzer for low-velocity airdrop on the type V platform.

FM 10-519/TO 13C7-10-31, 29 April 1987, is changed as follows:

1. New or changed material is identified by a vertical bar in the margin opposite the changed material.
2. File this transmittal page in front of the publication.
3. Remove old pages and insert new pages as indicated below:

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Cover  
i, ii, v through viii  
5-37 through 5-38  
7-1 through 7-62  
Reference-1

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i, ii, v through viii  
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*General, United States Army*  
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*Administrative Assistant to the*  
*Secretary of the Army*  
0207112

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FIELD MANUAL  
No. 10-519  
TECHNICAL ORDER  
No. 13C7-1-111

HEADQUARTERS  
DEPARTMENT OF THE ARMY  
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DEPARTMENT OF THE AIR FORCE  
WASHINGTON, DC, 29 APRIL 1987

**AIRDROP OF SUPPLIES AND EQUIPMENT:  
RIGGING 105-MILLIMETER HOWITZERS**

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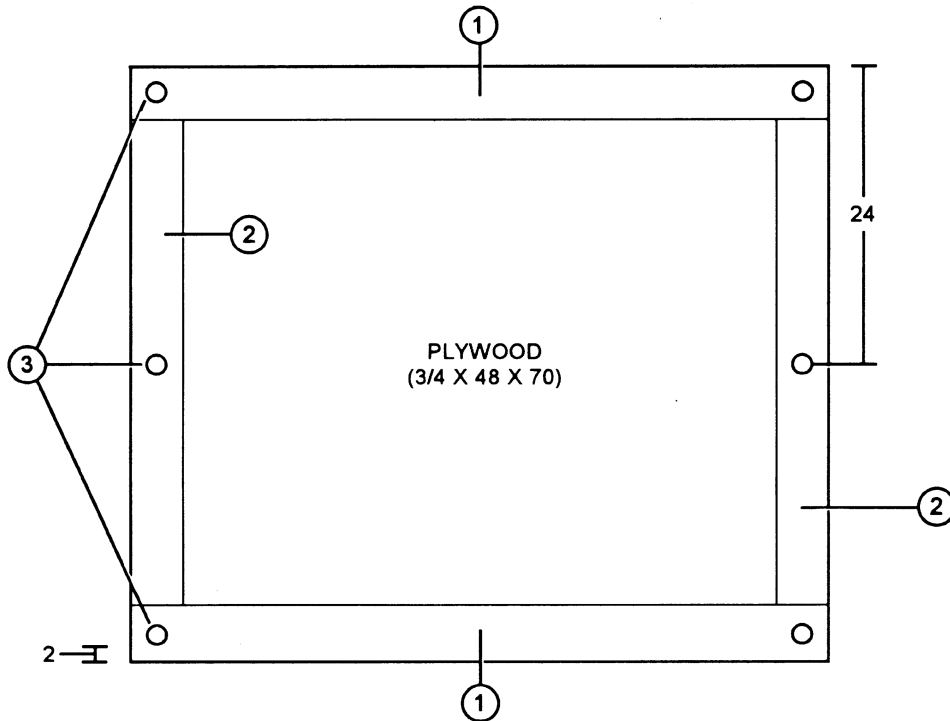


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### 5-10. Stowing Cargo Parachutes

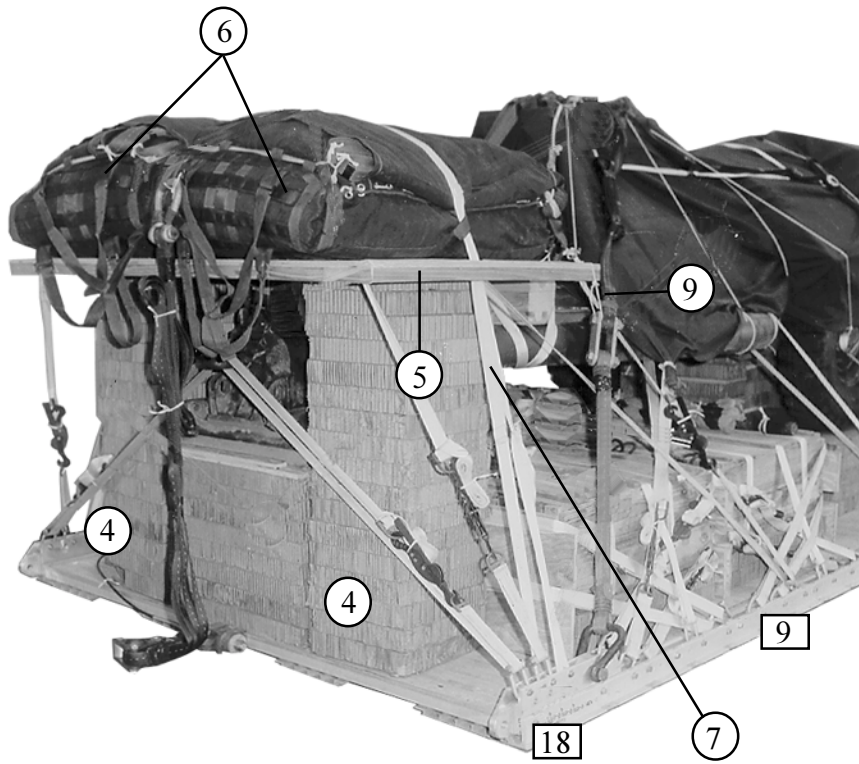
Prepare the parachute stowage platform and stow the cargo parachutes according to FM 10-500-2/TO 13C7-1-5 and as shown in Figure 5-28.

- Note**
1. All measurements are given in inches.
  2. This drawing is not drawn to scale.
  3. 8d common wire nails must be used to join the individual pieces.



- ① Nail a 2- by 6- by 70-inch piece of lumber flush with the front and rear edges of a 3/4- by 48- by 70-inch piece of plywood.
- ② Nail a 2- by 6- by 37-inch piece of lumber to each side of the plywood as shown.
- ③ Make three 2-inch holes in each 48-inch side of the platform.

Figure 5-28. Parachute stowage platform constructed and cargo parachutes stowed



- ④ Set two stacks of 17 layers each of 18- by 18-inch honeycomb flush against the accompanying load and stack 3. Set three 36- by 12-inch pieces of honeycomb on the gun trails 6 inches behind the gun tube support block to support the parachute stowage platform.
- ⑤ Center the parachute stowage platform on the honeycomb stacks. Lash the parachute stowage platform to clevises 9 and 9A and clevises 18 and 18A.
- ⑥ Prepare and install two G-11 cargo parachutes according to FM 10-500-2 (4-20.102)/TO 13C7-1-5.
- ⑦ Tie one length of type VIII nylon webbing over the parachutes and to the second bushing on each rear tandem link to restrain the parachutes.
- ⑧ Tie the plywood and 2- by 6-inch lumber of the parachute stowage platform tightly together through the corner holes with type III nylon cord (not shown).
- ⑨ Tie the two-point link on each rear suspension sling to the front corner hole in the parachute stowage platform with a length of type III nylon cord.

Figure 5-8. Parachute stowage platform constructed and cargo parachutes stowed (continued)

## CHAPTER 7

**RIGGING M119 HOWITZER WITH 1 1/4- TON M1097 HMMWV TRUCK  
AND ACCOMPANYING AMMUNITION**

## Section I

**RIGGING HOWITZER AND TRUCK  
FOR LOW-VELOCITY AIRDROP  
ON TYPE V PLATFORM**

**7-1. Description of Load**

The M119, 105mm Howitzer is rigged with the M1097 1 1/4 ton truck (HMMWV) as its prime mover and accompanying load of ammunition on a 32-foot, Type V platform. A load weighing 800 to 2,000 pounds must be rigged in the truck. This load requires four G-11 parachutes.

**7-2. Preparing Platform**

Prepare a 32-foot, type V airdrop platform as described below.

**a. Inspecting Platform.** Inspect, or assemble and inspect, the platform as outlined in TM 10-1670-268-20&P/TO 13C7-52-22.

**Note: If the platform must be assembled, install the suspension bracket assemblies when assembling the platform. See Figure 7-1 for the location of the suspension bracket assemblies.**

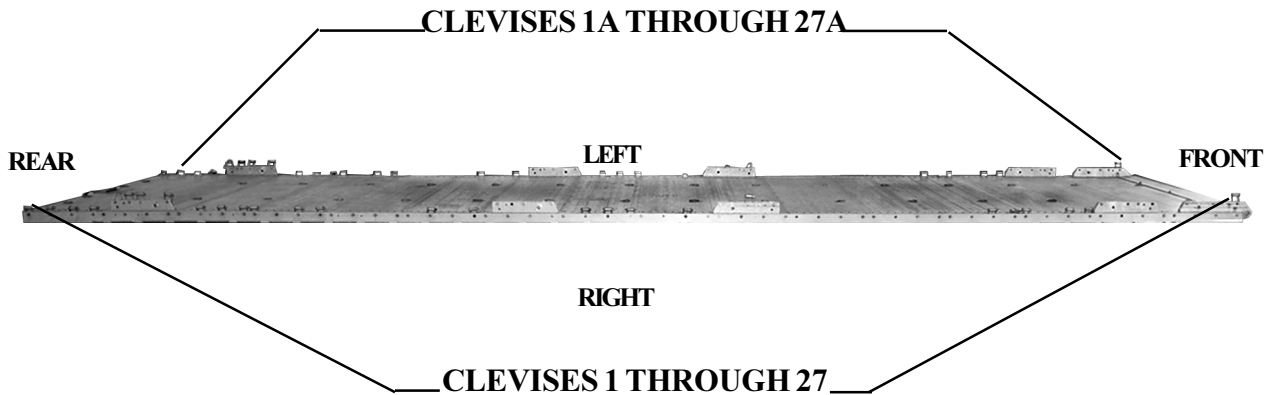
**b. Installing Suspension Bracket Assemblies.** Install the suspension bracket assemblies on assembled platforms according to FM 10-500-2 (FM 4-20.102)/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5, and as shown in Figure 7-1.

**c. Installing Tandem Links.** Install a tandem link on the front of each rail according to FM 10-500-2 (FM 4-20.102)/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5, and as shown in Figure 7-1.

**d. Installing and Numbering Clevises.** Bolt and number 52 clevis assemblies according to FM 10-500-2 (FM 4-20.102)/NAVSEA SS400-AB-MMO-010/TO 13C7-1-5, and as shown in Figure 7-1.

**Note: 1. The nose bumper may or may not be installed.**

**2. Measurements given in this chapter are from the front edge of the platform, not from front edge of the nose bumper.**



**Step:**

1. Inspect, or assemble and inspect a 32-foot Type V platform as outlined in TM 10-1670-268-20&P/TO 13C7-52-22.
2. Install a tandem link to each platform side rail using holes 1, 2, and 3.
3. Install a suspension bracket assembly to each platform side rail using holes 6, 7, and 8.
4. Install a suspension bracket assembly to each platform side rail using holes 26, 27, and 28.
5. Install a suspension bracket assembly to each platform side rail using holes 37, 38, and 39.
6. Install a suspension bracket assembly to each platform side rail using holes 57, 58, and 59.
7. Install a clevis on bushing 1 of each of the tandem links.
8. Install a clevis on bushing 3 of each of the second suspension bracket assemblies.
9. Install a clevis on bushings 1, 2, 3, and 4 of each of the fourth suspension bracket assemblies.
10. Starting at the front of each platform side rail, install clevises on the bushing bolted on holes 9, 10, 12, 14, 30, 33, 34, 35, 41, 43, 49, 50, 52, 53, 54, 55, 61, 62, 63, 64.
11. Starting at the front of the platform number the clevises 1 through 27 on the right side and 1A through 27A on the left side.
12. Label the tie-down rings according to FM 10-500-2 (FM 4-20.102)/ NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.

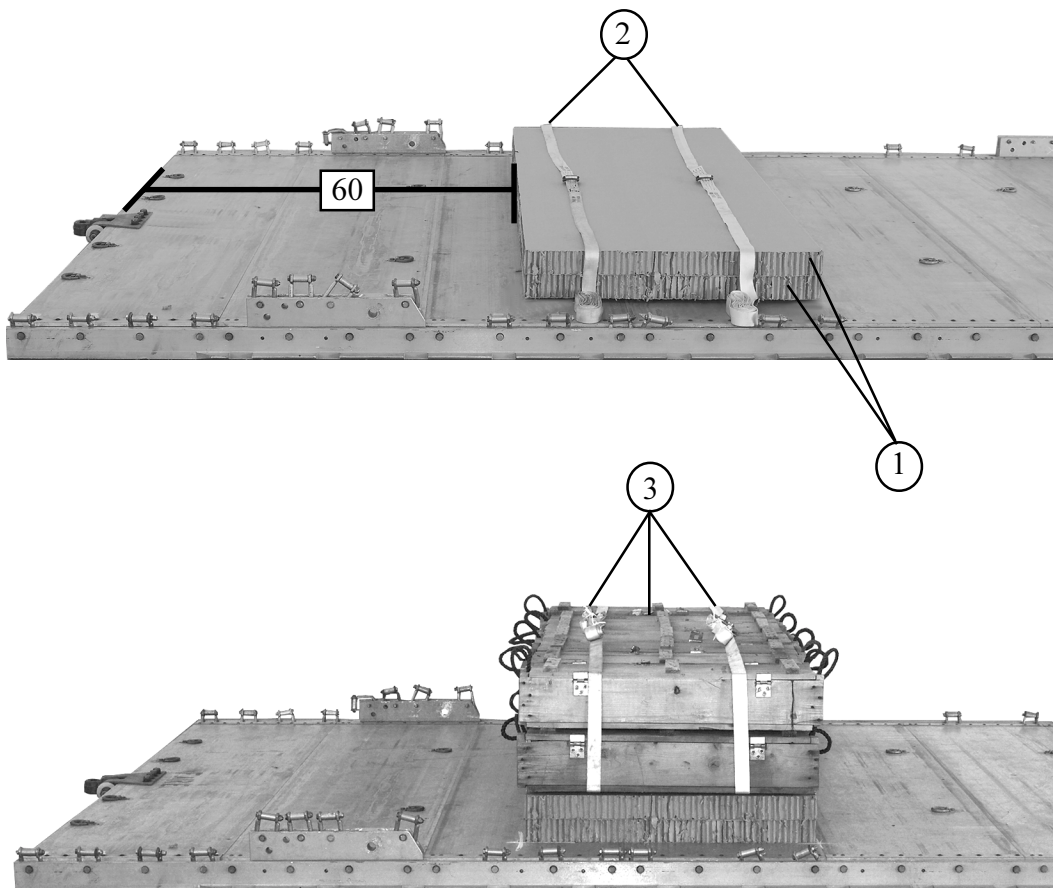
*Figure 7-1. Platform prepared*

### 7-3. Stowing Accompanying Load on Platform

Stow 28 boxes of 105-millimeter ammunition weighing 3,360 pounds on the platform as shown in Figure 7-2. Ammunition will be included in the

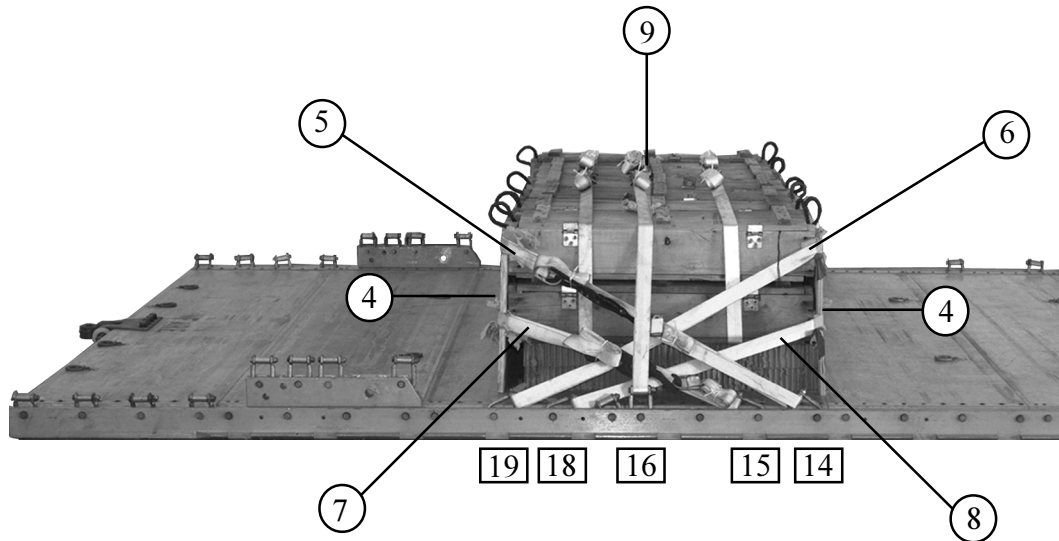
accompanying load stowed in the truck. Also, additional ammunition will be stowed on the platform after the gun and truck are lashed.

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



- ① Center two 84- by 36-inch pieces of honeycomb 60 inches from the rear edge of the platform.
- ② Position two 30-foot lashings 8 inches from the front and rear edges of the honeycomb.
- ③ Position 14 ammunition boxes on the honeycomb and secure the 30-foot lashings.

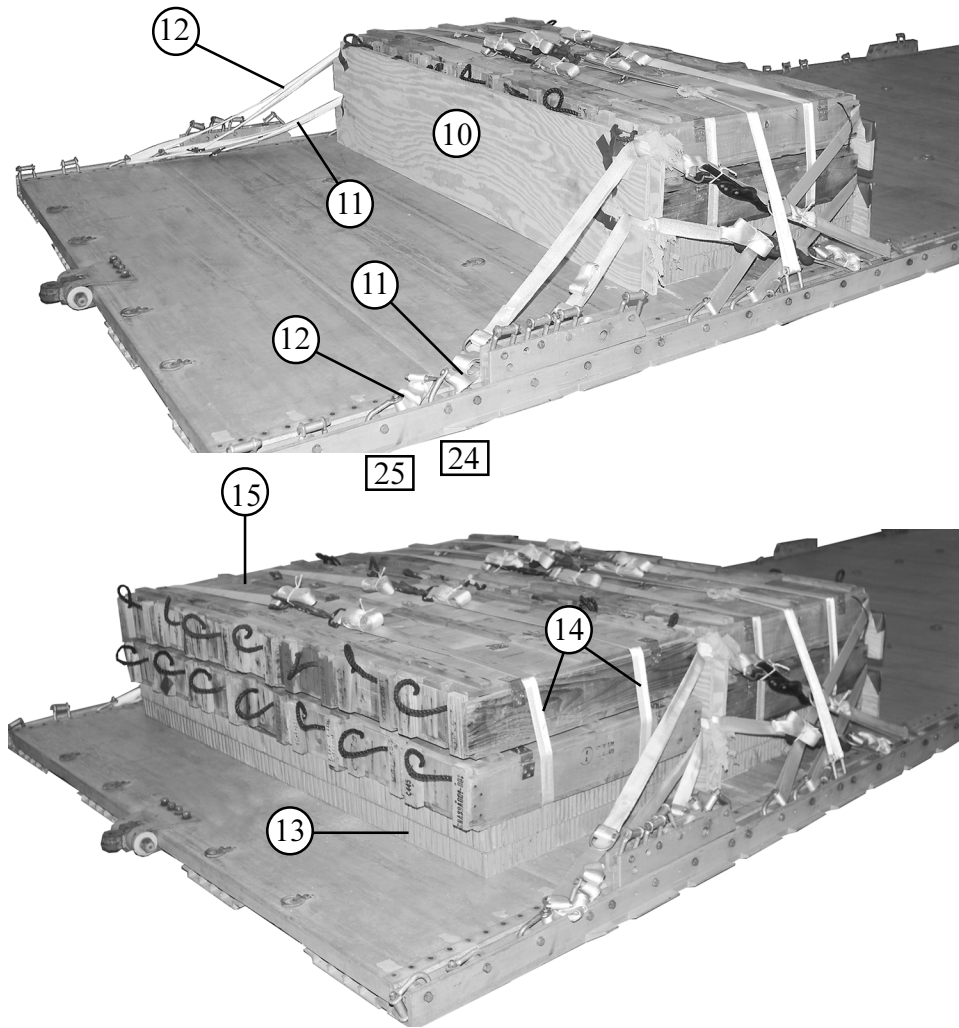
Figure 7-2. Ammunition stowed and lashed to platform



- ④ Cut four endboards as shown in Figure 5-3. Place one endboard to the front and one to the rear of the ammunition boxes.
- ⑤ Route a 30-foot lashing through clevis 14 to the top right rear cutout to the top left rear cutout through clevis 14A back through the same cutouts. Secure the lashing at the side of the load with two D-rings and a load binder.
- ⑥ Route a 30-foot lashing through clevis 19 to the top right front cutout to the top left front cutout through clevis 19A back through the same cutouts. Secure the lashing at the side of the load with two D-rings and a load binder.
- ⑦ Route a 30-foot lashing through clevis 15 to the bottom right rear cutout to the bottom left rear cutout through clevis 15A back through the same cutouts. Secure the lashing at the side of the load with two D-rings and a load binder.
- ⑧ Route a 30-foot lashing through clevis 18 to the bottom right front cutout to the bottom left front cutout through clevis 18A back through the same cutouts. Secure the lashing at the side of the load with two D-rings and a load binder.
- ⑨ Route a 30-foot lashing through clevis 16 over the ammunition boxes through clevis 16A back over the ammunition boxes. Secure the lashing at the top of the load with two D-rings and a load binder.

Figure 7-2. Ammunition stowed and lashed to platform (continued)

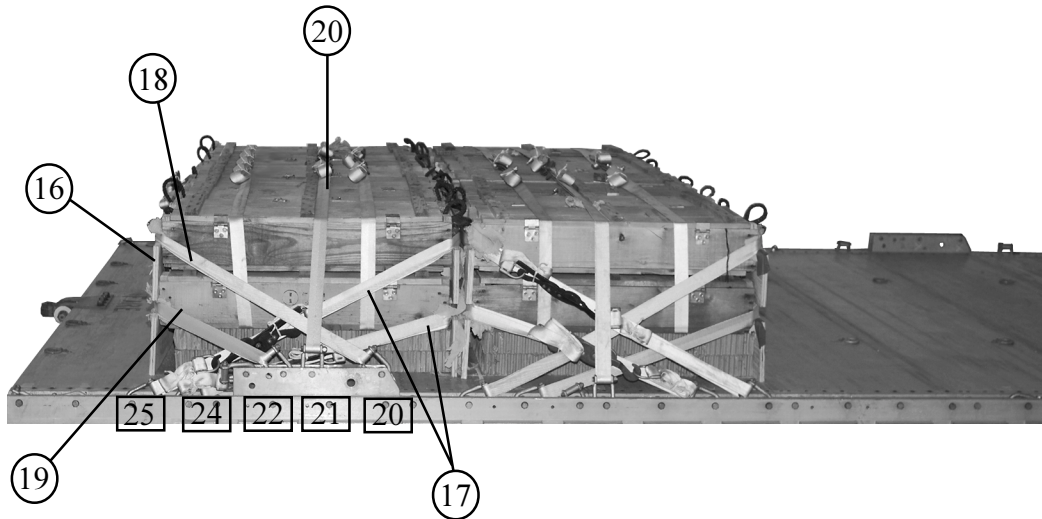




- ⑩ Set a third endboard against the rear of the ammunition boxes.
- ⑪ Route a 30-foot lashing through clevis 24 to the bottom right cutout. Continue to the bottom left cutout through clevis 24A and back through the same cutouts. DO NOT close load binder at this time.
- ⑫ Route a 30-foot lashing through clevis 25 to the top right cutout. Continue to the top left cutout through clevis 25A and back through the same cutouts. DO NOT close load binder at this time.
- ⑬ Center two 84- by 36- inch pieces of honeycomb 17 inches from the rear edge of the platform.
- ⑭ Position two 30-foot lashings 8 inches from the front and rear edges of the honeycomb as shown in step 2.
- ⑮ Position 14 ammunition boxes on the honeycomb and secure the 30-foot lashings.

Figure 7-2. Ammunition stowed and lashed to platform (continued)





- ①⑥ Place the last endboard to the rear of the ammunition boxes.
- ①⑦ Close the load binder and the lashings routed from clevises 24, 24A, 25, and 25A on the side of the ammunition boxes.
- ①⑧ Route a 30-foot lashing through clevis 20 to the top right rear cutout to the top left rear cutout through clevis 20A back through the same cutouts. Secure the lashing at the side of the load with two D-rings and a load binder.
- ①⑨ Route a 30-foot lashing through clevis 22 to the bottom right rear cutout to the bottom left rear cutout through clevis 22A back through the same cutouts. Secure the lashing at the side of the load with two D-rings and a load binder.
- ②⑩ Route a 30-foot lashing through clevis 21 over the ammunition boxes through clevis 21A back over the ammunition boxes. Secure the lashing at the top of the load with two D-rings and a load binder.

Figure 7-2. Ammunition stowed and lashed to platform (continued)

#### 7-4. Building and Positioning Honeycomb Stacks and Placing the Drive-Off Aids

Build and position the honeycomb stacks and place the drive-off aids on the platform as explained below.

a. Build honeycomb stacks 1 through 3 for the 1 1/4-ton HMMWV truck as shown in FM 10-500-2 (FM 4-20.117)/TO 13C7-1-111, Figures 2-3 and 2-4.

b. Build honeycomb stacks 4 through 6 for the M119 howitzer as shown in Figures 5-5 through 5-7.

c. Place drive-off aids to the front of the platform as shown in Figure 7-3.

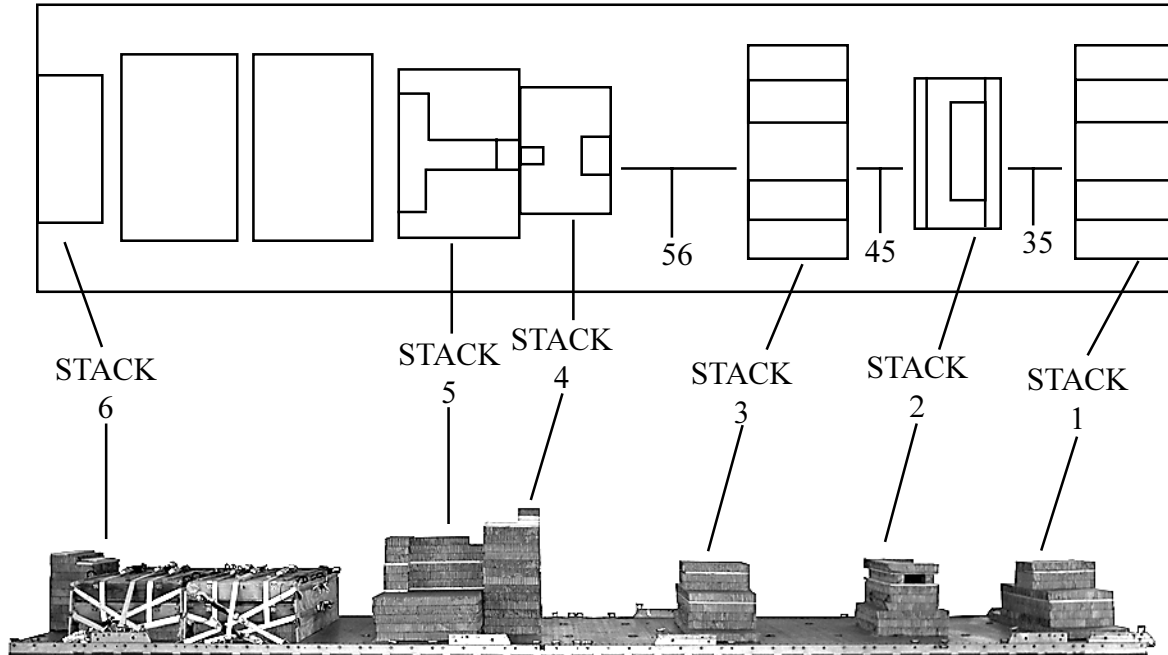
d. Position the honeycomb stacks on the platform as shown in Figure 7-4.



① Attach the drive-off aids in accordance with FM 10-500-2 (FM 4-20.102)/TO 13C7-1-5.

Figure 7-3. Drive-off aids placed on platform

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



Stack Number	Position of Stack on Platform
1	Position stack 1, centered and flush with the front edge of the platform. <b>Note: Place stack 1 over drive-off aids.</b>
2	Position stack 2, centered and 35 inches from stack 1.
3	Position stack 3, centered and 45 inches from stack 2. <b>Note: Drive-off aids go over the sides of stack 3.</b>
4	Position stack 4, centered and 56 inches from stack 3.
5	Position stack 5, centered and flush against stack 4.
6	Position stack 6, centered and flush with the rear edge of the platform.

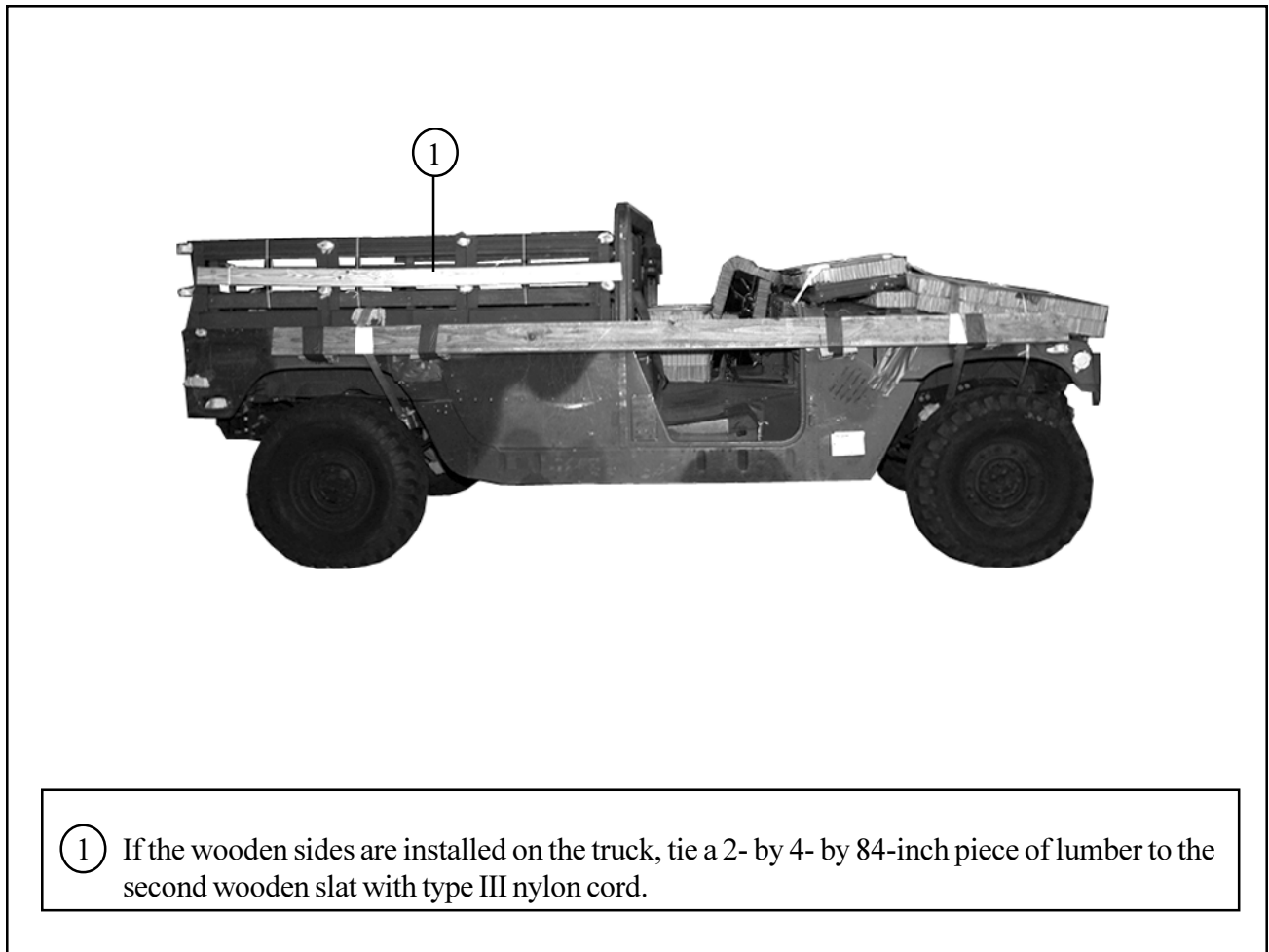
Figure 7-4. Honeycomb stacks placed on platform

## 7-5. Preparing Howitzer and Truck

Prepare the howitzer and truck as explained below.

a. Prepare the howitzer as shown in Figures 5-9 through 5-16.

b. Prepare the truck as explained in FM 4-20.117/TO 13C7-1-111, paragraphs 2-4a through i, and as shown in Figures 2-6 through 2-13. Additionally, prepare the truck as shown in Figure 7-5.

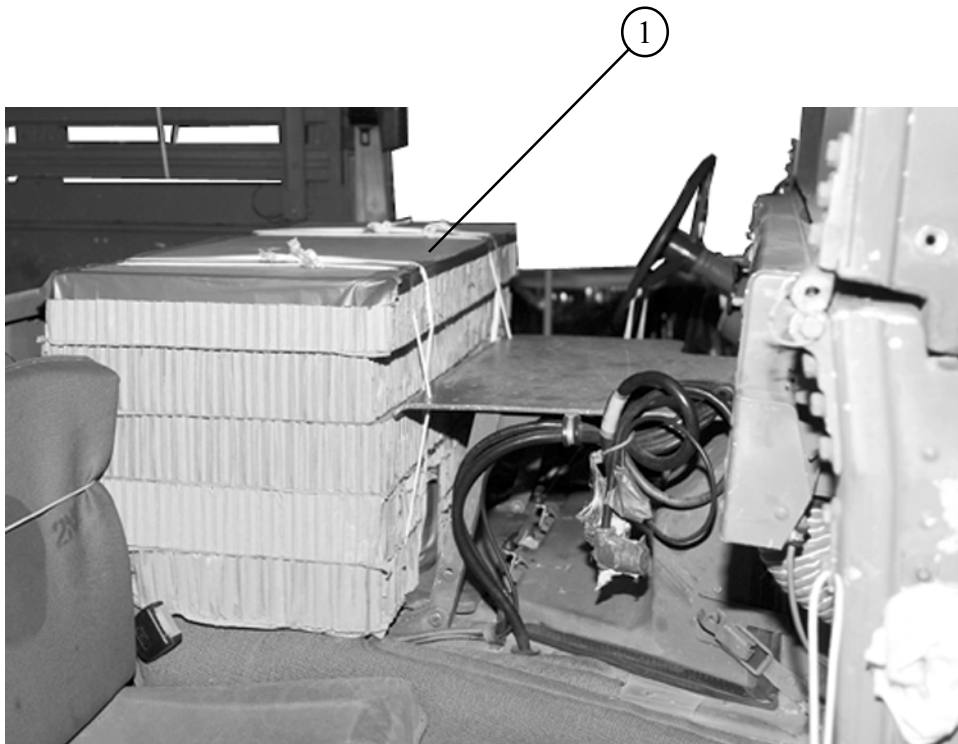


*Figure 7-5. Truck prepared*

### 7-6. Stowing Howitzer Equipment and Ammunition in Truck

Use or adapt the procedures explained in FM 4-20.117/TO 13C7-1-111, Chapter 2, paragraph

2-5, and as shown in Figure 2-14. Additionally, prepare the truck as shown in Figure 7-6.



- ① Set the boxed collimator ( Figure 5-17) between the seats and secure in place with type III nylon cord.

*Figure 7-6. Howitzer equipment stowed in truck*

### 7-7. Setting Howitzer and Truck on Platform and Installing Drive-Off Aids on Truck

Lift the howitzer and set it on the platform as described below. Lift the truck, install the drive-off aids on the wheels, and set the truck on the platform as described below.

**a.** Lift the howitzer as shown in Figure 5-19. Position the howitzer on the honeycomb stacks as shown in Figure 7-7.

**b.** Lift the truck as shown in FM 4-20.117/TO 13C7-1-111, Figure 2-16. Position the truck on the honeycomb stacks and install the drive-off aids to the rear wheels as shown in Figure 7-7.

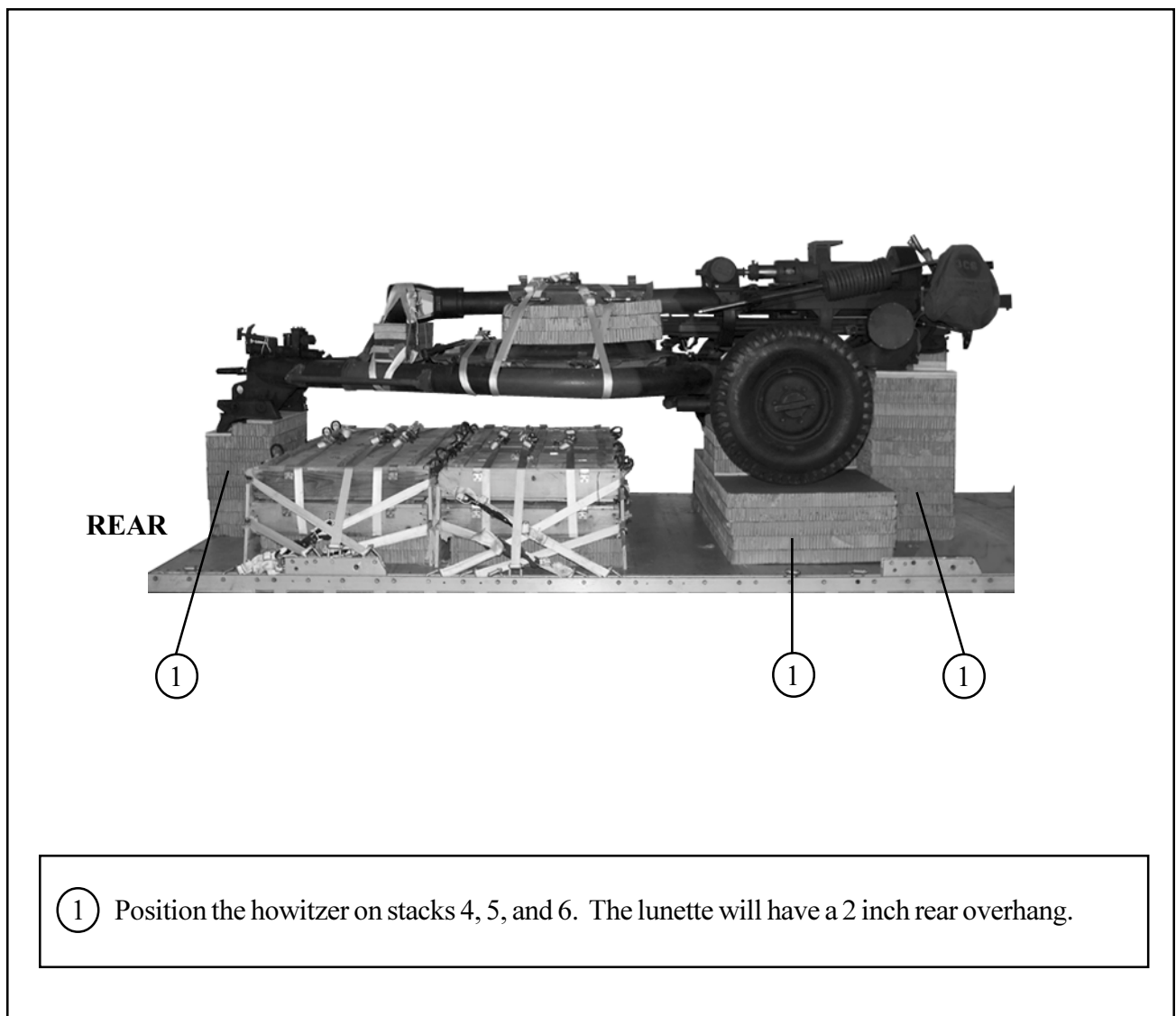
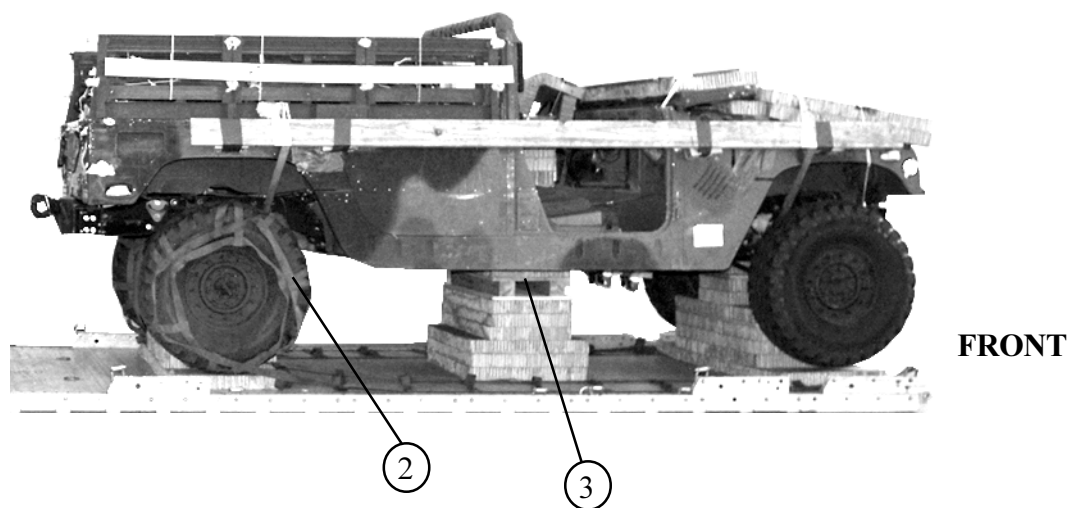


Figure 7-7. Howitzer and truck positioned on platform and drive-off aids installed



- ② Suspend the truck slightly over the honeycomb stacks. Lay a drive-off aid under each rear wheel. Turn the wheel until the webbing is wound around the wheel and under slight tension. Tie the end loop of each drive-off aid to the nearest cross piece with two turns of 1/4-inch cotton webbing.
- ③ Position the truck on stacks 1, 2, and 3 so that the suspension cross members rest squarely on stacks 1 and 3 with a 10 inch overhang in the front as shown. Be sure that the frame cross members rest squarely on the 6 inch piece of the honeycomb at the front of stack 2.

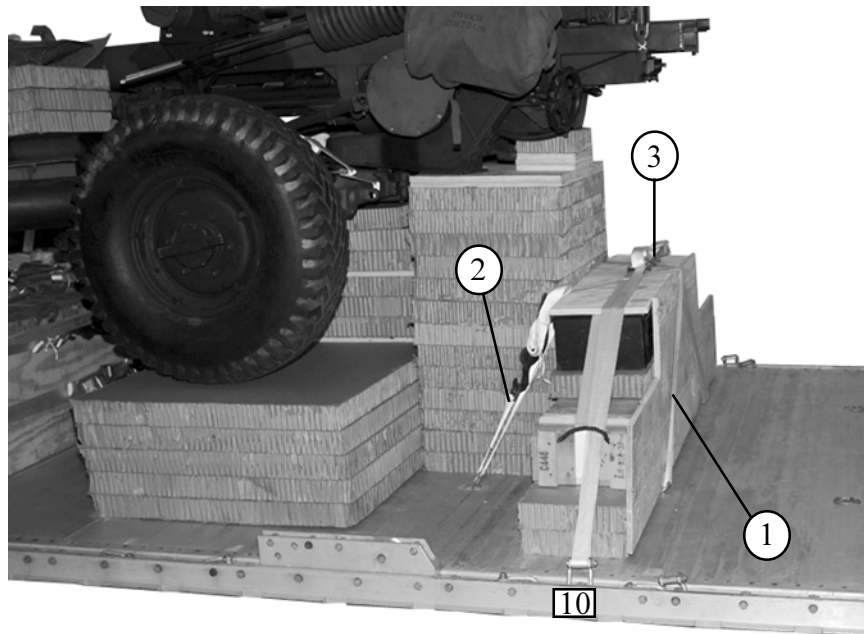
*Figure 7-7. Howitzer and truck positioned on platform and drive-off aids installed (continued)*

## 7-8. Positioning Additional Accompanying Load

Stow two boxes of APERS or HERAP ammunition and seven boxes of fuzes as described below.

b. Lash the ammunition package to the platform as shown in Figure 7-8.

a. Construct the ammunition and fuze package against the front side of stack 4 as shown in Figures 5-22 and 5-23, steps 1 and 2.



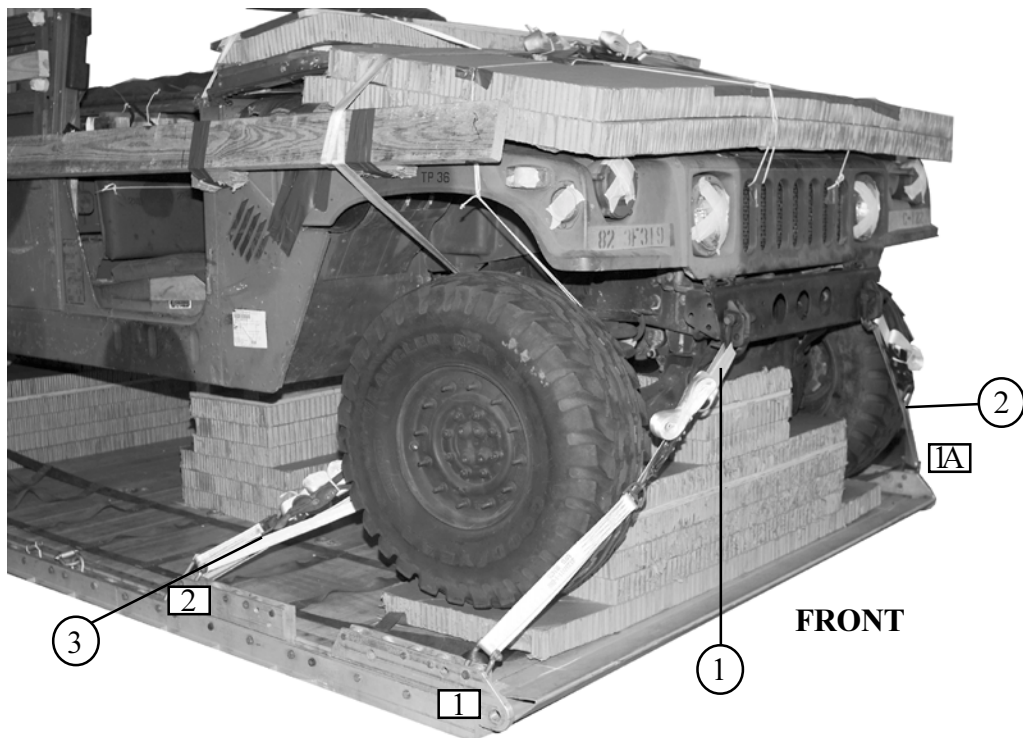
- ① Secure the plywood with a 15-foot lashing from tie-down rings A9 to B10 and load bind in the rear.
- ② Pass a second 15-foot lashing over the plywood between tie-down rings B9 to A10 and load bind in the rear.
- ③ Form a 30-foot lashing according to FM 10-500-2 (FM 4-20.102)/TO 13C7-1-5. Place the lashing over the top of the plywood and pass the ends through clevises 10 and 10A. Secure the lashing with two D-rings and a load binder.

Figure 7-8. Boxes of ammunition and fuzes lashed to platform



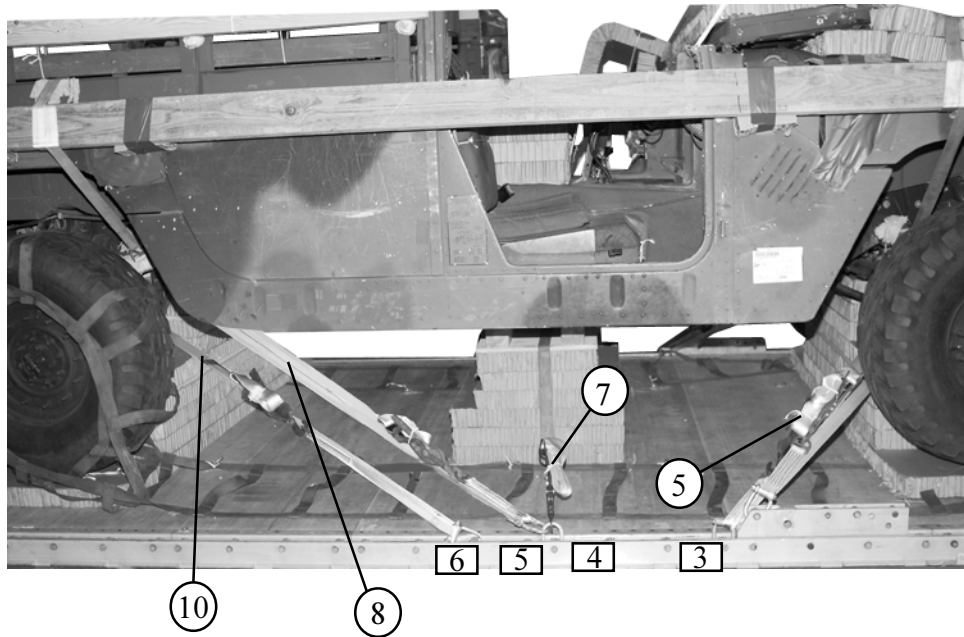
### 7-9. Lashing Howitzer and Truck

Lash the howitzer and truck to the platform with 15-foot lashings as shown in Figure 7-9. Install and safety the lashings according to FM 10-500-2 (FM 4-20.102)/TO 13C7-1-5.



Lashing Number	Tiedown Clevis Number	Instructions
1	1	Pass lashing:
2	1A	Through the right front tie-down.
3	2	Through the left front tie-down.
4	2A	Through the right front lower control arm.
		Through the left front lower control arm.

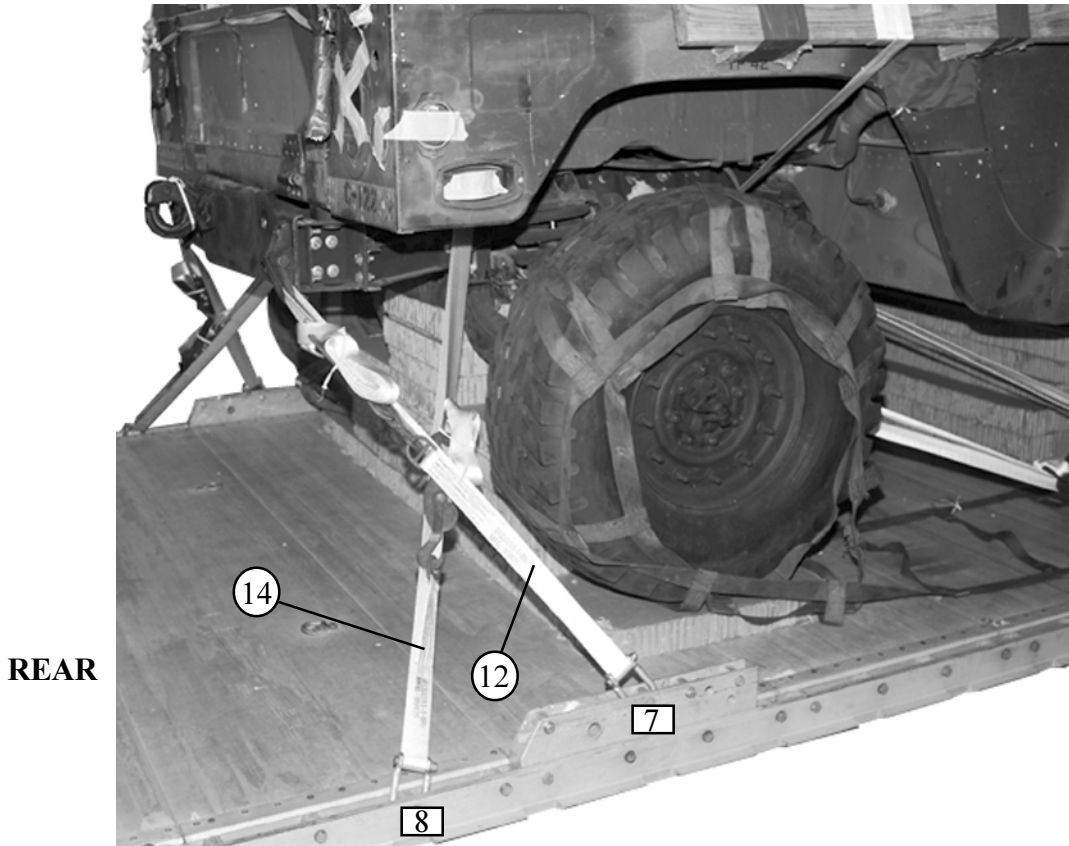
Figure 7-9. Lashings installed



FRONT

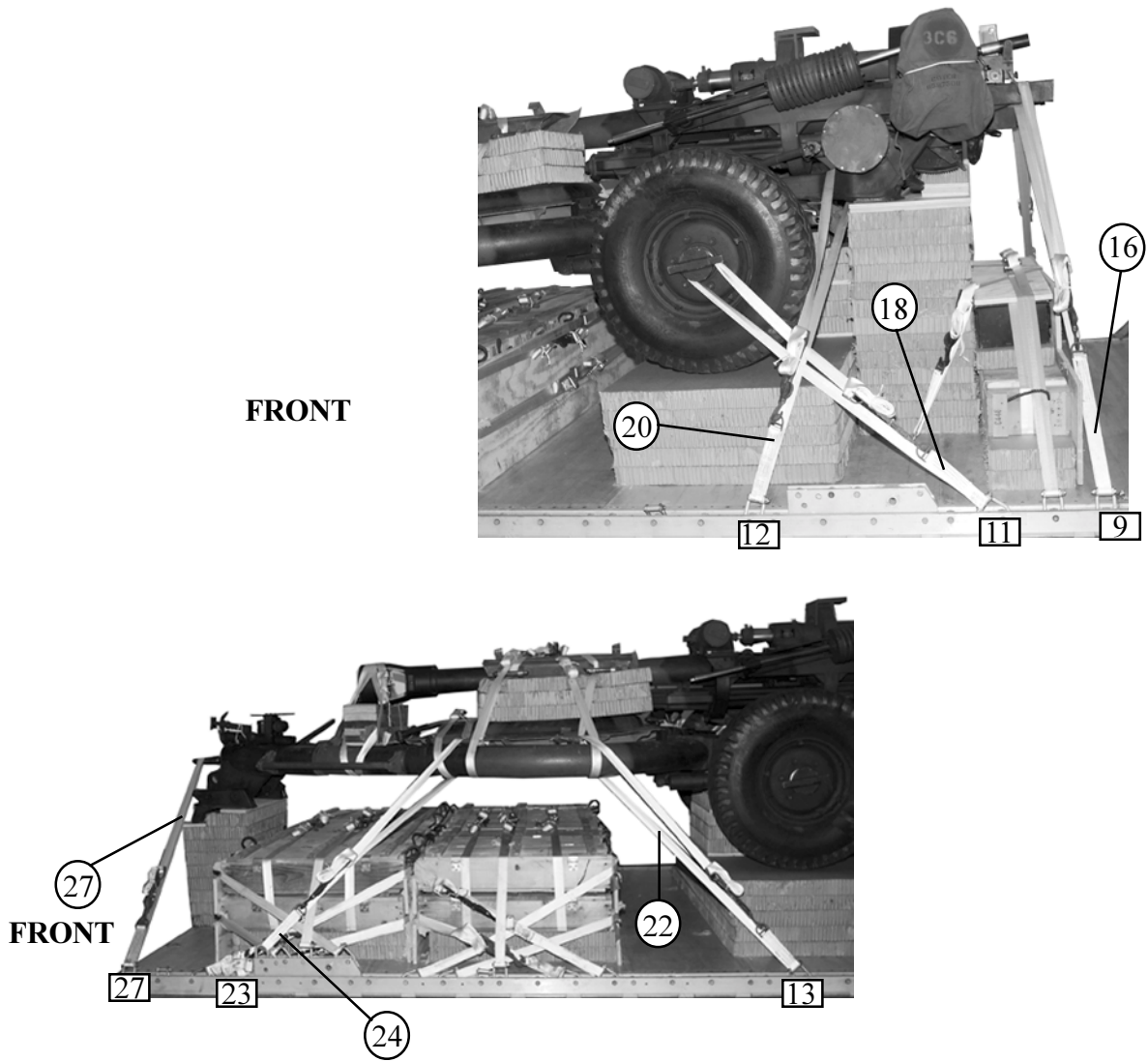
Lashing Number	Tiedown Clevis Number	Instructions
5	3	Pass lashing: Through tie-down bracket behind right front coil spring.
6	3A	Through tie-down bracket behind left front coil spring.
7	4 and 4A	Pass a 15-foot lashing through clevis 4A and through its own D-ring. Pass the lashing through the hole in stack 2. Attach the lashing to clevis 4 with a load binder.
8	5	Through tie-down bracket in front of the right rear coil spring.
9	5A	Through tie-down bracket in front of the left rear coil spring.
10	6	Around right rear lower control arm.
11	6A	Around left rear lower control arm.

Figure 7-9. Lashings installed (continued)



Lashing Number	Tiedown Clevis Number	Instructions
12	7	Pass lashing: Through the right rear lifting shackle.
13	7A	Through the left rear lifting shackle.
14	8	Through tie-down bracket behind the right rear coil spring.
15	8A	Through tie-down bracket behind the left rear coil spring.

Figure 7-9. Lashings installed (continued)

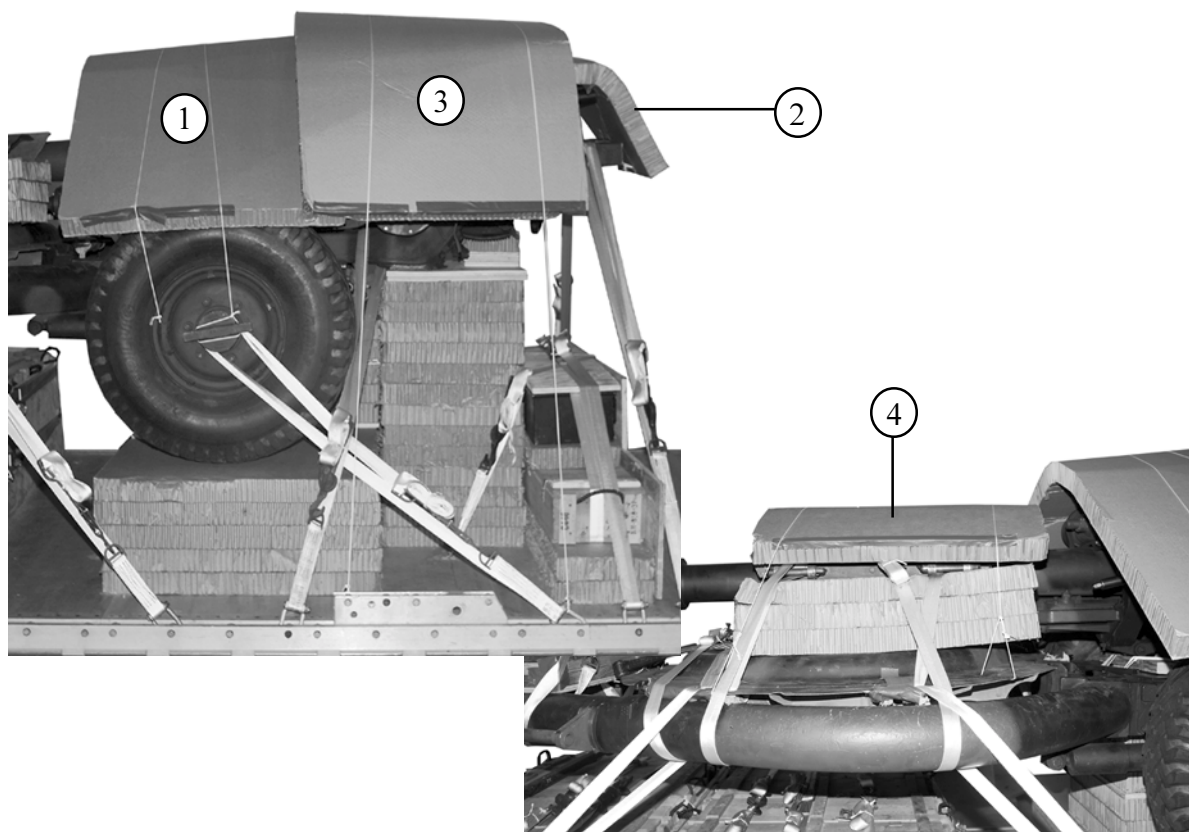


Lashing Number	Tiedown Clevis Number	Instructions
		Pass lashing:
16	9	Around the right gun rail.
17	9A	Around the left gun rail.
18	11	Around the right wheel hub.
19	11A	Around the left wheel hub.
20	12	Around the saddle, behind elevating wheel shaft, right side.
21	12A	Around the saddle, left side.
22	13	Through hole in firing platform and around right trail.
23	13A	Through hole in firing platform and around left trail.
24	23	Through hole in firing platform and around right trail.
25	23A	Through hole in firing platform and around left trail.
26	27	Through the lunette.
27	27A	Through the lunette.

Figure 7-9. Lashings installed (continued)

### 7-10. Covering Howitzer with Honeycomb

Install protective honeycomb covers as shown in Figure 7-10.



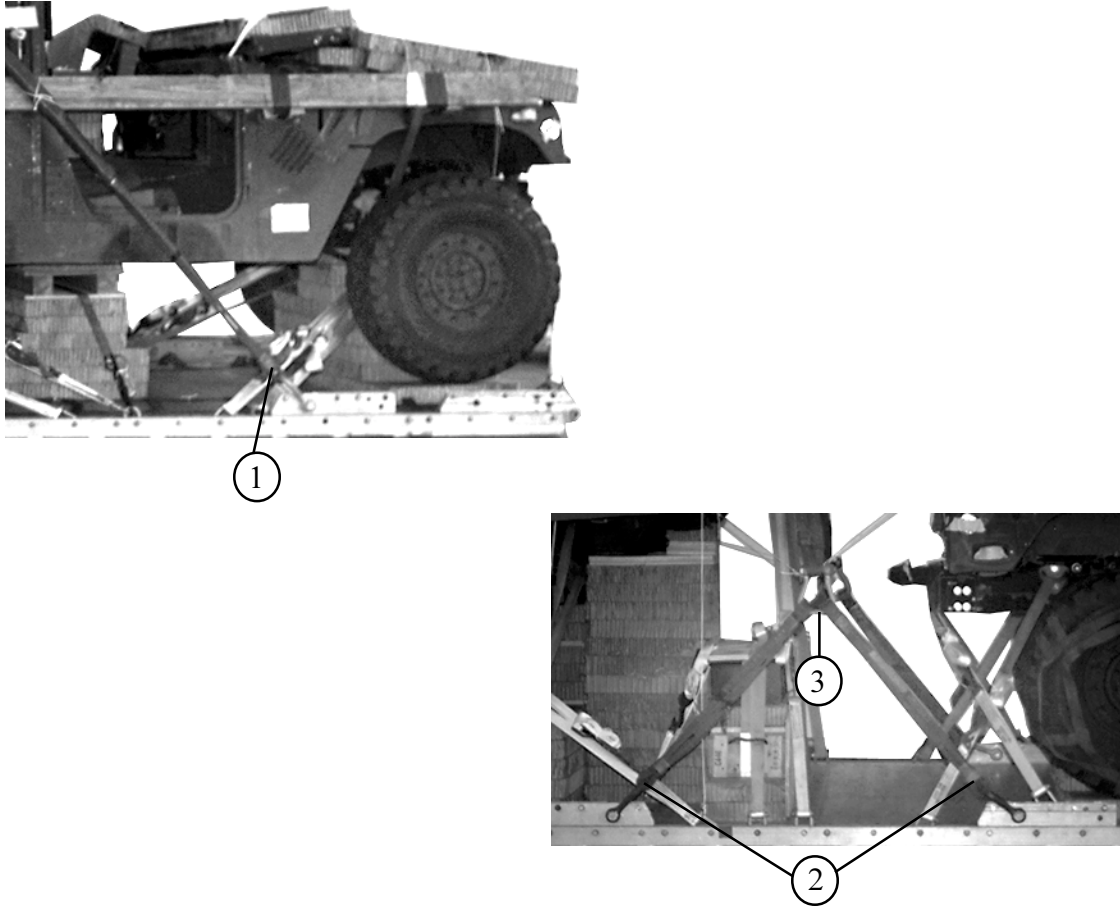
- ① Center a 36- by 96-inch piece of honeycomb over the wheels and bend it over the gun. Secure the honeycomb with type III nylon cord.
- ② Bend a 36- by 30-inch piece of honeycomb over the breech and secure it with type III nylon cord.
- ③ Bend a 36- by 96-inch piece of honeycomb over the sights and the piece of honeycomb placed in step 2 above. Secure the honeycomb with type III nylon cord.
- ④ Place a 36- by 36-inch piece of honeycomb over the gun tube and secure it with type III nylon cord.

*Figure 7-10. Honeycomb covers installed*



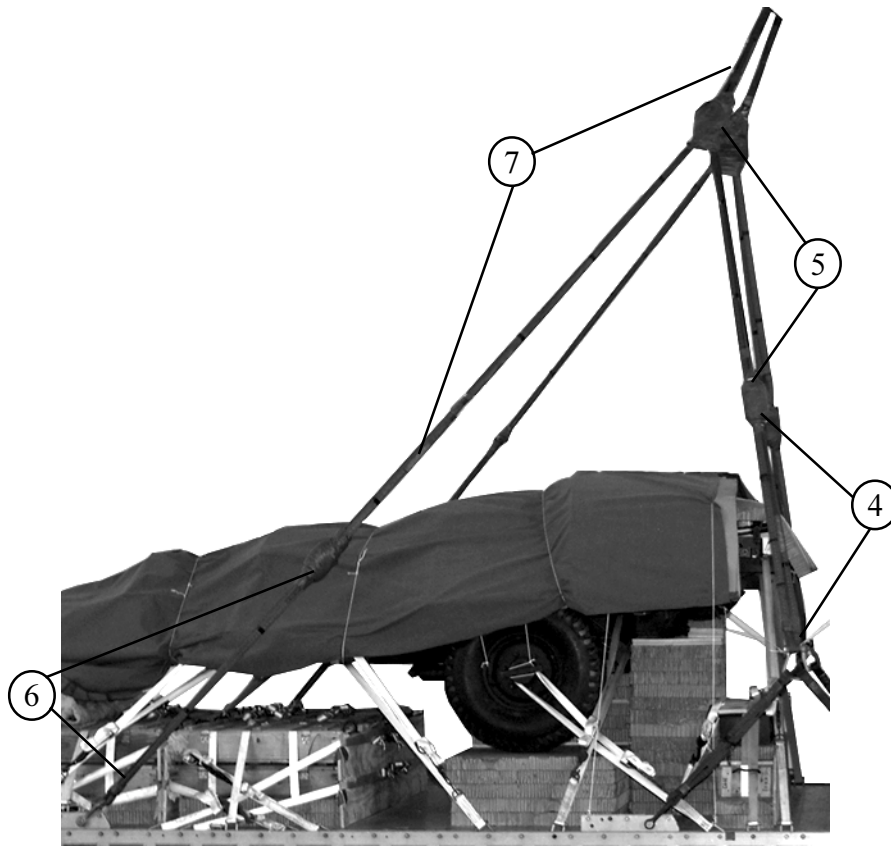
## 7-11. Installing and Safetying Suspension Slings

Install the suspension slings according to FM 10-500-2 (FM 4-20.102)/TO 13C7-1-5 and as shown in Figure 7-11. Pad and safety the suspension slings, and cover the load as shown in Figure 7-12.



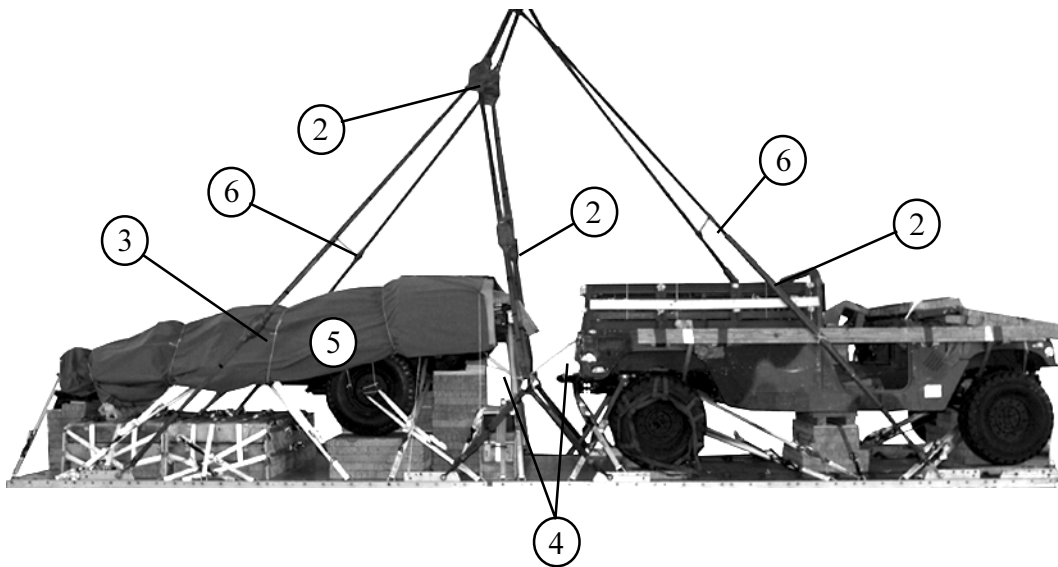
- ① Attach a 20-foot (4-loop), type XXVI nylon webbing sling to each first suspension link with a large clevis.
- ② Attach a 3-foot (4-loop), type XXVI nylon webbing sling to each second and third suspension link with a large clevis.
- ③ Place the 3-foot slings installed in step 2 in the bell portion of a large clevis. Repeat for the left side.

Figure 7-11. Suspension slings installed



- ④ Pass a 9-foot (2-loop), type XXVI nylon webbing sling through a 5 1/2-inch two-point link. Bolt both end loops to the large clevis installed in step 3.
- ⑤ Pass an 11-foot (2-loop), type XXVI nylon webbing sling through the 5 1/2-inch two-point link installed in step 4 and attach both running ends to the same point on the three-point link. Repeat for the left side.
- ⑥ Pass an 11-foot (2-loop), type XXVI nylon webbing sling through a 3 3/4-inch two-point link. Place both end loops in the bell portion of a large clevis and bolt the clevis to the fourth suspension link. Repeat for the left side.
- ⑦ Attach an 11-foot (4-loop), type XXVI nylon webbing sling to the top of the 3 3/4-inch two-point link installed in step 6 and attach the running end to the three-point link installed in step 5. Attach a 3-foot (4-loop), type XXVI nylon webbing sling to the top of the three-point link. Repeat for the left side.

Figure 7-11. Suspension slings installed (continued)



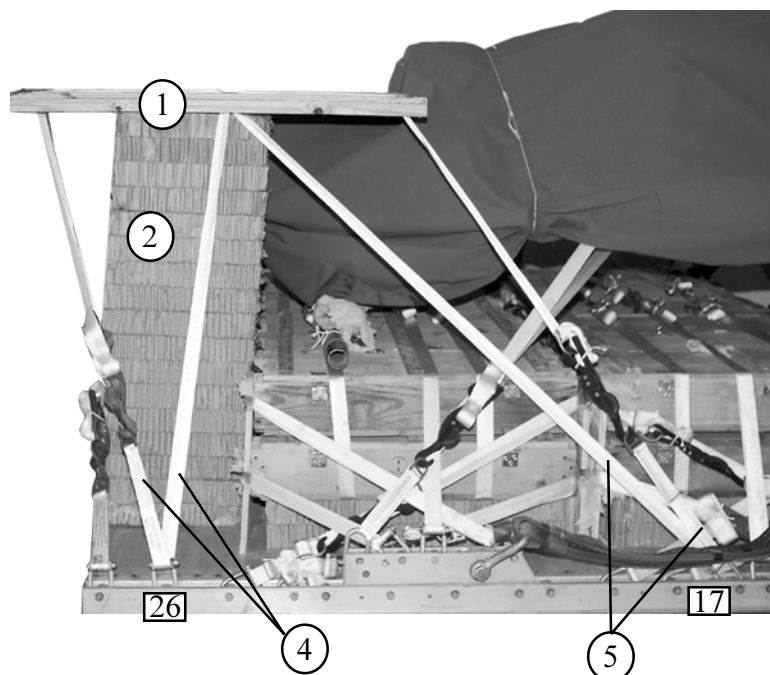
- ① Raise the slings and install the Deadman tie according to FM 10-500-2 (4-20.102)/TO 13C7-1-5.
- ② Wrap all the links with felt and tape.
- ③ Wrap each front suspension sling from 45 to 115 inches above the platform with felt and tape. Secure them to the sideboards of the truck with type III nylon cord.
- ④ Secure the center clevis to the truck and howitzer with type III nylon cord.
- ⑤ Cover the howitzer with a 10- by 15-foot piece of cotton duck and secure with type III nylon cord.
- ⑥ Tie the front slings together 6 to 8 inches above the highest point on the load with a double length of 1/2-inch tubular nylon webbing. Repeat for the rear suspension slings.

*Figure 7-12. Howitzer covered, and suspension slings padded and safetied*



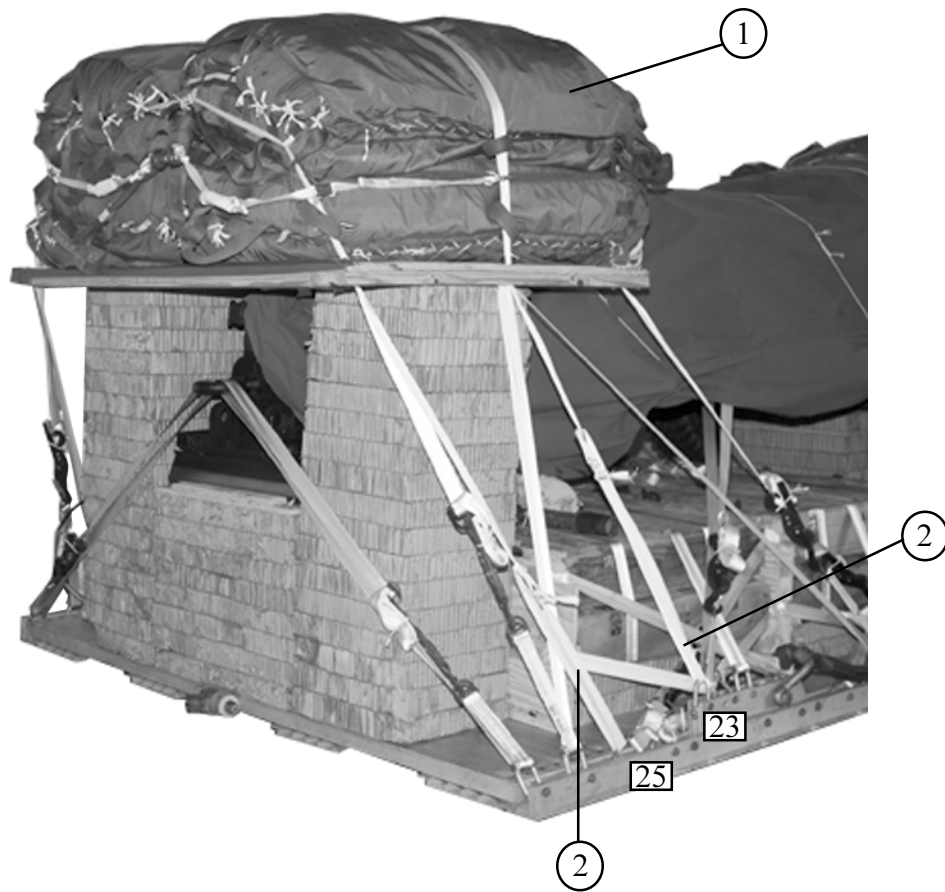
## 7-12. Preparing Stowage Platform and Stowing Cargo Parachutes

Prepare the cargo parachute stowage platform as shown in Figure 7-13. Stow the parachutes as shown in Figure 7-14.



- ① Construct the parachute stowage platform as shown in Figure 5-28.
- ② Set two stacks of 17 layers each of 18- by 18-inch honeycomb flush against the accompanying load and stack 6.
- ③ Center the parachute stowage platform on the honeycomb stacks.
- ④ Route a lashing from clevis 26 through the center right hole in the parachute platform through the rear right hole and load bind. Repeat for the left side using clevis 26A.
- ⑤ Route a lashing from clevis 17 through the center right hole in the parachute platform through the front right hole and load bind. Repeat for the left side using clevis 17A.

Figure 7-13. Stowage platform prepared

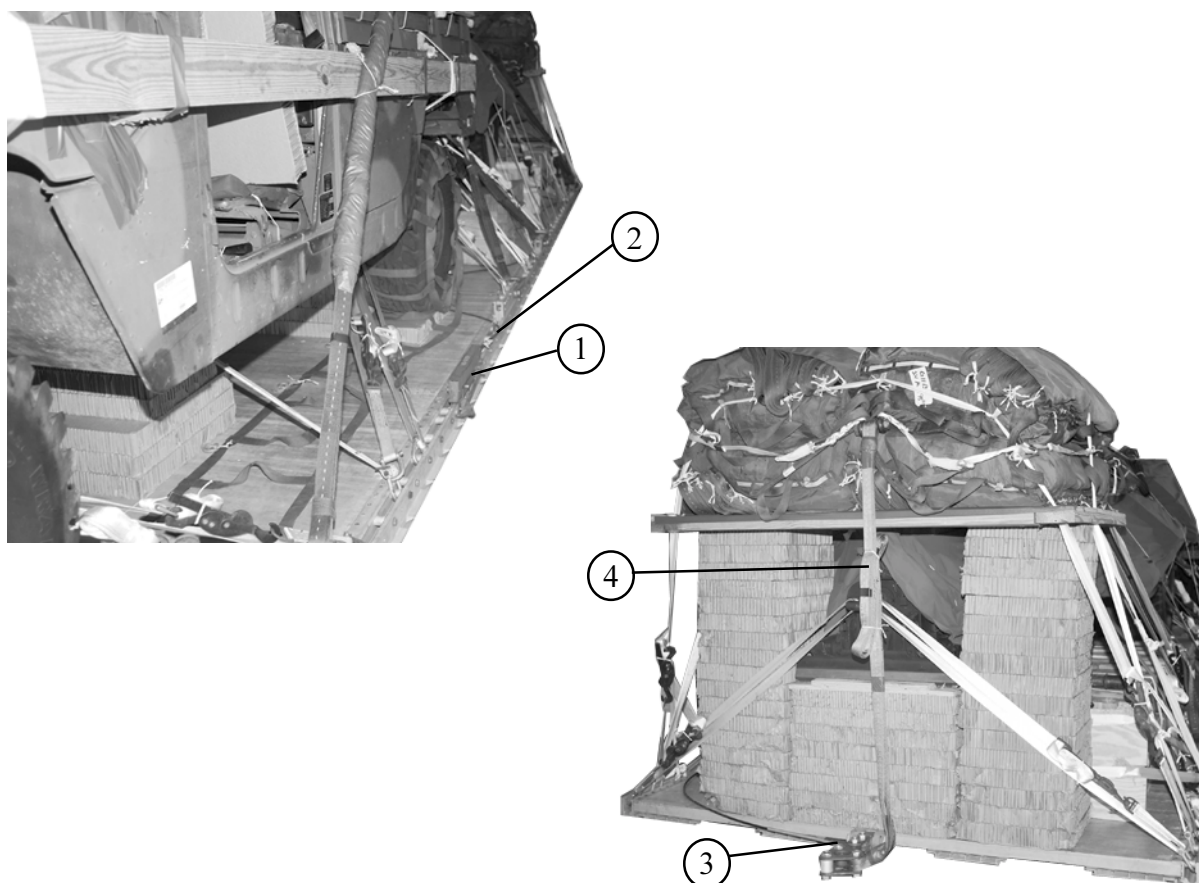


- ① Prepare and install four G-11 cargo parachutes according to FM 10-500-2 (FM 4-20.102)/TO 13C7-1-5.
- ② Restrain the parachutes using clevises 25, 25A, 23 and 23A on the platform.

*Figure 7-14. Cargo parachutes stowed*

### 7-13. Installing Extraction System

Install the EFTC extraction system according to FM 10-500-2 (FM 4-20.102)/TO 13C7-1-5 and as shown in Figure 7-15.

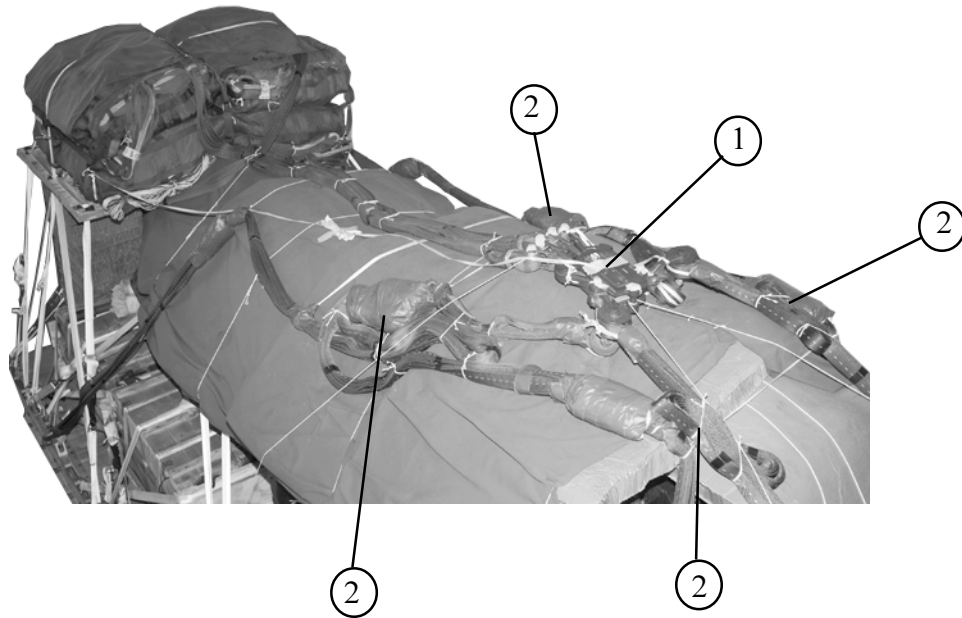


- ① Install the Extraction Force Transfer Coupling (EFTC) mounting brackets in the rear mounting holes on the left platform rail.
- ② Attach a 28-foot release cable to the actuator. Install the actuator to the EFTC mounting brackets.
- ③ Install the latch assembly to the extraction bracket. Attach the release cable to the latch assembly. Safety the release cable as needed using one turn type I 1/4-inch cotton webbing.
- ④ Install a 9-foot (2-loop), type XXVI nylon webbing sling as the deployment line. S-fold the slack and tie the folds.

Figure 7-15. Extraction system installed

## 7-14. Installing Release System

Prepare and install an M-2 cargo parachute release according to FM 10-500-2 (FM 4-20.102)/TO 13C7-1-5 and as shown in Figure 7-16.



- ① Place the M-2 release on the 36- by 96-inch piece of honeycomb protecting the sights and tie the release to convenient points on the load with type III nylon cord.
- ② Fold and tie any slack in the suspension slings with type I 1/4-inch cotton webbing.

*Figure 7-16. Extraction system installed*

**7-15. Installing Provisions for Emergency Restraints**

Select and install provisions for emergency restraints according to the emergency aft restraint requirements table in FM 10-500-2 (FM 4-20.102)/TO 13C7-1-5.

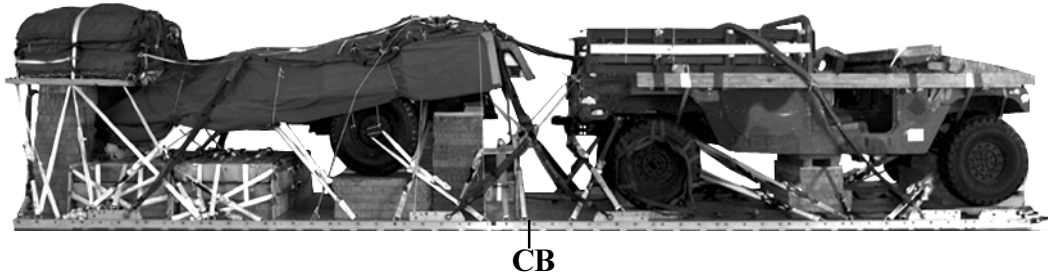
**7-16. Placing Extraction Parachute**

Select the extraction parachute and extraction line needed using the extraction line requirements table in FM 10-500-2 (FM 4-20.102)/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.

**7-17. Marking Rigged Load**

Marked the rigged load according to FM 10-500-2 (FM 4-20.102)/TO 13C7-1-5 and as shown in Figure 7-17. Complete Shipper's Declaration for Dangerous Goods according to AFJMAN 24-204/TM 38-250. If the load varies from the one shown, the weight, height, CB, tip-off curve, and parachute requirements must be recomputed.

**CAUTION:** Make the final rigger inspection required by FM 10-500-2 (FM 4-20.102)/TO 13C7-1-5 before the load leaves the rigging site.



Weight: Minimum load allowed .....	20,339 pounds
Maximum load allowed .....	21,339 pounds
Height: .....	91 inches
Width: .....	108 inches
Length: .....	412 inches
Overhang: Front .....	10 inches
Rear .....	0 inches
Center of Balance (CB) from front edge of platform: .....	201 inches
Extraction system .....	EFTC

*Figure 7-17. M119 howitzer with 1 1/4-ton truck and accompanying ammunition rigged for low-velocity airdrop on a type V platform*

## 7-18. Equipment Requirements

Use the equipment listed in Table 7-1 to rig the load shown.

*Table 7-1. Equipment required for rigging the M119 howitzer with 1 1/4-ton truck and accompanying ammunition rigged for low-velocity airdrop on a type V platform*

National Stock Number	Item	Quantity
1670-00-162-4981	Adapter, coupling, EFTC	2
5365-00-405-9293	Spacer	2
1670-00-157-6527	Coupling, airdrop, extraction force transfer w 28-foot cable	1
8040-00-273-8713	Adhesive paste, 1-gal	As required
4020-00-240-2146	Cord, nylon, type III, 550-lb	As required
8305-00-242-3593	Cloth, cotton duck, 60-in	As required
4030-00-090-5354	Clevis, suspension:	
	Clevis, large	12
4030-00-678-8562	Clevis, medium	6
8135-00-664-6958	Cushioning material, packaging, cellulose wadding	As required
5365-00-937-0147	D-ring, heavy-duty, 10,000-lb	As required
8305-00-958-3685	Felt sheet, 1/2-in	As required
1670-01-183-2678	Leaf, extraction line	2
	Line, extraction, type XXVI nylon webbing:	
	60-foot (3-loop) or	1
	140-foot (3-loop)	1
	Link assembly:	
	Two-point, 3 3/4-in	4
5306-00-435-8994	Bolt, 1-in diam, 4-in long	8
5310-00-232-5165	Nut, 1-in, hexagonal	8
1670-00-003-1953	Plate, side, 3 3/4-in	8
5365-00-007-3414	Spacer, large	8
	Two-point, 5 1/2-in	
5306-00-435-8994	Bolt, 1-in diam, 4-in long	2
5310-00-232-5165	Nut, 1-in, hexagonal	4
1670-00-003-1954	Plate, side, 5 1/2-in	4
5365-00-007-3414	Spacer, large	4
	Lumber:	
5510-00-220-6146	2- by 4-in	As required
5510-00-220-6148	2- by 6-in	As required
5510-00-220-6246	2- by 8-in	As required

Table 7-1. Equipment required for rigging the M119 howitzer with 1 1/4-ton truck and accompanying ammunition rigged for low-velocity airdrop on a type V platform (continued)

National Stock Number	Item	Quantity
5315-00-010-4659	Nail, steel wire, common: 8d	As required
5315-00-164-5121	20d	As required
1670-00-753-3928	Pad, energy dissipating, honeycomb, 3- by 36- by 96-in Parachute:	30 Sheets
1670-01-016-7841	Cargo: G-11B	4
1670-01-063-3715	Cargo extraction: 15-foot	1
1670-00-040-8135	28-foot	1
1670-01-162-2372	Clevis assembly	50
1670-01-097-8817	Release, cargo parachute, M-2	1
	Platform, AD, type V, 32-foot:	1
	Bracket:	
1670-01-162-2375	Inside EFTA	1
1670-01-162-2374	Outside EFTA	1
1670-01-247-2389	Suspension link	4
1670-01-162-2381	Tandem link (multi-purpose)	2
	Plywood:	
5530-00-129-7777	1/2-in	As required
5530-00-128-4981	3/4-in	As required
	Sling, cargo airdrop	
	For suspension:	
1670-01-062-6306	3-ft (4-loop), type XXVI nylon webbing	6
1670-01-062-6304	9-ft (2-loop), type XXVI nylon webbing	2
1670-01-063-7760	11-ft (2-loop), type XXVI nylon webbing	4
1670-01-062-6310	11-ft (4-loop), type XXVI nylon webbing	2
1670-01-064-4453	20-ft (4-loop), type XXVI nylon webbing	2
	For deployment:	
1670-01-062-6304	9-ft (2-loop), type XXVI nylon webbing	1
	For riser extension:	
1670-01-062-6313	60-ft (3-loop), type XXVI nylon webbing	4
	For lifting:	
1670-01-062-6304	9-ft (2-loop), type XXVI nylon webbing	2
1670-01-063-7760	11-ft (2-loop), type XXVI nylon webbing	4
1670-01-062-6303	12-ft (2-loop), type XXVI nylon webbing	2



*Table 7-1. Equipment required for rigging the M119 howitzer with 1 1/4-ton truck and accompanying ammunition rigged for low-velocity airdrop on a type V platform (continued)*

National Stock Number	Item	Quantity
1670-00-040-8219	Strap, parachute release, multicut	2
7510-00-266-5016	Tape, adhesive, 2-in	As required
1670-00-937-0271	Tie-down assembly, 15-ft	77
1670-00-431-8486	Universal drive-off aid	1
8305-00-268-2411	Webbing: Cotton, 1/4-in, type I	As required
8305-00-082-5752	Nylon: Tubular, 1/2-in	As required
8305-00-268-2455	Tubular, 1-in	As required
8305-00-263-3591	Type VIII	8 yds

## REFERENCES

- |   |  |
|---|--|
| <b>AFJMAN 24-204/TM 38-250/<br/>NAVSUP PUB 505/MCO P 4030.19F/<br/>DLAM 4145.3</b>        | Packaging and Materials Handling: Preparing Hazardous Materials for Military Air Shipment. November 1994.  |
| <b>*FM 10-500-2 (4-20.102)/TO 13C7-1-5</b>  | Airdrop of Supplies and Equipment: Rigging Airdrop Platforms. August 2001.   |
| <b>**FM 10-517 (4-20.117)/TO 13C7-1-111</b>   | Airdrop of Supplies and Equipment: Rigging 1 1/4-Ton Utility Truck (HMMWV). October 2001.  |
| <b>FM 10-500-53/MCRP 4-3.8/<br/>TO 13C7-18-41</b>   | Airdrop of Supplies and Equipment: Rigging Ammunition. August 1996.  |
| <b>TM 10-1670-208-20&amp;P</b>  | Organizational Maintenance Manual Including Repair Parts and Special Tools List for Platforms, Types II Modular and LAPES/Airdrop Modular. August 1978.        |
| <b>TM 10-1670-268-20&amp;P</b>  | Organizational Maintenance Manual With Repair Parts and Special Tools List: Type V Platform. June 1986.  |
| <b>TM 10-1670-276-23&amp;P/<br/>TO 13C5-29-2/NAVAIR 13-1-29</b>                           | Unit and Intermediate DS Maintenance Manual Including Repair Parts and Special Tools List for Parachute, Cargo Type 26-ft Diam, High Velocity. September 1990. |
| <b>TM 10-1670-277-23&amp;P/<br/>TO 13C5-28-2/NAVAIR 13-1-30</b>                           | Unit and Intermediate DS Maintenance Manual Including Repair Parts and Special Tools List for Parachute, 28-foot Diam, Extraction. October 1990.               |
| <b>TM 10-1670-278-23&amp;P/<br/>TO 13C5-26-2/NAVAIR 13-1-27/<br/>TM 01109C-23&amp;P/1</b> | Unit and Intermediate DS Maintenance Manual Including Repair Parts and Special Tools List for Parachute, 15-foot Diam, Extraction. November 1989.              |
| <b>TM 10-1670-280-23&amp;P/<br/>TO 13C5-31-2/NAVAIR 13-1-31</b>                           | Unit and Intermediate DS Maintenance Manual Including Repair Parts and Special Tools List for Parachute, Cargo Type, G-11A, G-11B, and G-11C. August 1991.     |

**TM 10-1670-281-23 & P/  
TO 13C5-32-2/NAVAIR 13-1-32**

Unit and Intermediate DS Maintenance Manual Including Repair Parts and Special Tools List for Parachute, Cargo Type, G-12D and G-12E. October 1990.

**TM 10-1670-282-23 & P/  
TO 13C5-30-2/NAVAIR 13-1-33**

Unit and Intermediate DS Maintenance Manual Including Repair Parts and Special Tools List for Parachute, Cargo Type, G-14. September 1991.

**AFTO Form 22**

Technical Order Publication Improvement Report

**DA Form 2028**

Recommended Changes to Publication and Blank Forms. February 1974.

**\*\*\*Shippers Declaration for  
Dangerous Goods**

Locally procured form.

**\*FM 4-20.102/TO 13C7-1-5 has superseded FM 10-500-2. Change 4 reflects this change. The basic manual still references the superseded publication. You may wish to make pen and ink changes to update the old reference citations accordingly.**

**\*\*FM 4-20.117/TO 13C7-1-111 has superseded FM 10-517. Change 4 reflects this change. The basic manual still references the superseded publication. You may wish to make pen and ink changes to update the old reference citations accordingly.**

**\*\*\*Shippers Declaration for Dangerous Goods has superseded DD Form 1387-2 (February 1982). Change 3 reflects this change. The basic manual still references the superseded publication. You may wish to make pen and ink changes to update the old reference citations accordingly.**