ARMY FM 4-20.108 (FM 10-508)
AIR FORCE TO 13C7-2-491

AIRDROP OF SUPPLIES AND EQUIPMENT:

RIGGING MILITARY UTILITY VEHICLE (M-GATOR)

DISTRIBUTION RESTRICTION: Approved for public release; distribution is unlimited.

HEADQUARTERS
DEPARTMENT OF THE ARMY
DEPARTMENT OF THE AIR FORCE

This publication is available on the General Dennis J. Reimer Training and Doctrine Digital Library at www.adtl.army.mil

Field Manual
No 4-20.108
Tecnical Order
No 13C-2-491

Headquarters
Department of the Army
and the Air Force
Washington, DC, 29 June, 2001

Airdrop of Supplies and Equipment: Rigging Military Utility Vehicle (M-Gator)

Contents

Page

Preface ..... **iv**

Introduction
Description of Items ..... **v**
Special Considerations ..... **v**

Chapter 1 **Rigging One Military Utility Vehicle (M-Gator) on an 8-Foot Platform for Low-Velocity Airdrop**

Description of Load **1-1**
Preparing Platform **1-1**
Building and Placing Honeycomb Stack **1-3**
Preparing the M-Gator **1-5**
Positioning Load **1-8**
Lashing M-Gator **1-9**
Building M-Gator Box **1-12**
Positioning M-Gator Box **1-15**
Lashing M-Gator Box **1-16**
Installing Suspension Slings **1-18**
Stowing Cargo Parachute **1-19**
Installing Extraction System **1-20**
Installing Parachute Release **1-21**
Positioning Extraction Parachute **1-22**

Distribution Restrictions: Approved for public release; distribution is unlimited.

*This publication supercedes FM 10-508/TO13C7-2-491, 16 August 1985.

Page

Installing Provisions for Emergency Restraints 1-22
Marking Rigged Load 1-23
Equipment Required 1-23

Chapter 2 Rigging Two Military Utility Vehicles (M-Gator) and Equipment Box on a 20-Foot Platform for Low-Velocity Airdrop
Description of Load 2-1
Preparing Platform 2-1
Building M-Gator Boxes 2-1
Building Honeycomb Stacks 2-3
Positioning Honeycomb Stack 2 2-3
Preparing the M-Gators 2-4
Building Equipment Box 2-5
Positioning and Lashing the Equipment Box 2-6
Positioning M-Gator Honeycomb Stacks 2-9
Positioning Load 2-10
Lashing M-Gators 2-11
Positioning M-Gator Boxes 2-18
Lashing M-Gator Boxes 2-19
Installing Suspension Slings 2-23
Stowing Cargo Parachutes 2-24
Installing Extraction System 2-25
Installing Parachute Release 2-26
Positioning Extraction Parachute 2-27
Installing Provisions for Emergency Restraints 2-27
Marking Rigged Load 2-28
Equipment Required 2-28

Chapter 3 Rigging One Military Utility Vehicle (M-Gator) and an A-22 Cargo Bag on a 12-Foot Platform for Low-Velocity Airdrop
Description of Load 3-1
Preparing Platform 3-1
Building M-Gator Box 3-1
Preparing M-Gator 3-1
Building Honeycomb Stacks 3-3
Positioning Honeycomb Stack 1 3-3
Positioning Load 3-4
Positioning Honeycomb Stack 2 3-5
Rigging and Positioning the A-22 Cargo Bag 3-6
Lashing the A-22 Cargo Bag 3-7
Lashing M-Gator 3-9
Positioning M-Gator Box 3-12
Lashing M-Gator Box 3-13
Installing Suspension Slings 3-15
Stowing Cargo Parachute 3-16
Installing Extraction System 3-17
Installing Parachute Release 3-18
Positioning Extraction Parachute 3-19

Page

Installing Provisions for Emergency Restraints **3-20**
Marking Rigged Load **3-21**
Equipment Required **3-21**

Glossary Glossary-1
References References-1

Preface

This manual tells and shows how to prepare and rig the following configurations of the Military Utility Vehicle (M-Gator) for low-velocity airdrop from a C-130, C-141, C-17, and C-5 aircraft:

a. One M-Gator on an 8-foot platform.
b. Two M-Gators and equipment box on a 20-foot platform.
c. One M-Gator and A-22 Cargo Bag on a 12-foot platform.

User Information

The proponent of this publication is HQ TRADOC. You are encouraged to report any errors or omissions and to suggest ways of making this a better manual. Army personnel, send your comments on DA Form 2028 directly to:

Director
Aerial Delivery and Field Services Department
USA Quartermaster Center and School
1010 Shop Road
Fort Lee, Virginia 23801-1502

Air Force personnel, send your reports on AFTO Form 22 through:

Headquarters
Air Mobility Command (AMC/DOKT)
402 Scott Drive
Scott AFB, Illinois 62225-5302

Air Force personnel in Special Operations Command, send your reports on AFTO Form 22 through:

HQ AFSOC/DOXT
100 Bartley Street, Suite 260
Hurlburt Field, Florida 32544-5273

to:

Director
Aerial Delivery and Field Services Department
USA Quartermaster Center and School
1010 Shop Road
Fort Lee, Virginia 23801-1502

Also send information copy of AFTO Form 22 to:

WR-ALC/LKCB
460 Richard Ray Blvd.
Robins AFB, Georgia 31098-1640

Introduction

Description of Items

The description of the items rigged in this manual is given below:

a. Military Utility Vehicle (M-Gator): The M-Gator is 108 inches long, 60 inches wide and 43.6 inches high. The weight of the M-Gator is 1,450 pounds, including fuel and fluids. Maximum payload for the M-Gator is 1,400 pounds to include passengers.

b. A-22 Cargo Bag Assembly: The A-22 cargo bag assembly is an adjustable cotton duck cloth/nylon and nylon webbing container. For this application, the A-22 bag assembly will not exceed a maximum rigged weight of 1,000 pounds due to the M-Gator payload restrictions. The minimum rigged weight is 800 pounds. Maximum height for the rigged A-22 is 83 inches.

Special Considerations

CAUTION
Only ammunition listed in FM 10-500-53/MCRP 4-3.8/
TO 13C7-18-41 may be airdropped.

The loads covered in this manual may include hazardous materials as defined in AFJMAN 24-204/TM 38-250. If included, the hazardous material must be packaged, marked, and labeled as required by AFJ MAN 24-204/TM 38-250.

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

CHAPTER 1

Rigging One Military Utility Vehicle (M-Gator) on an 8-Foot Platform for Low-Velocity Airdrop

DESCRIPTION OF LOAD

1-1. This load consists of one John Deere Diesel, which has been named the Military Utility Vehicle (M-Gator)(Figure1-1). It is rigged on an 8-foot platform. The load shown has a rigged weight of 3120 pounds. It has a length of 125 inches, width of 108 inches, and height of 78 inches, with a center of balance of 49 inches. The load is rigged with one G-11 cargo parachute.

PREPARING PLATFORM

1-2. Inspect, or assemble and inspect, an 8-foot platform as outlined in TM 10-1670- 268-20&P/TO 13C7-52-22. Prepare an 8-foot platform using 14 tiedown clevises as shown in Figure1-2.

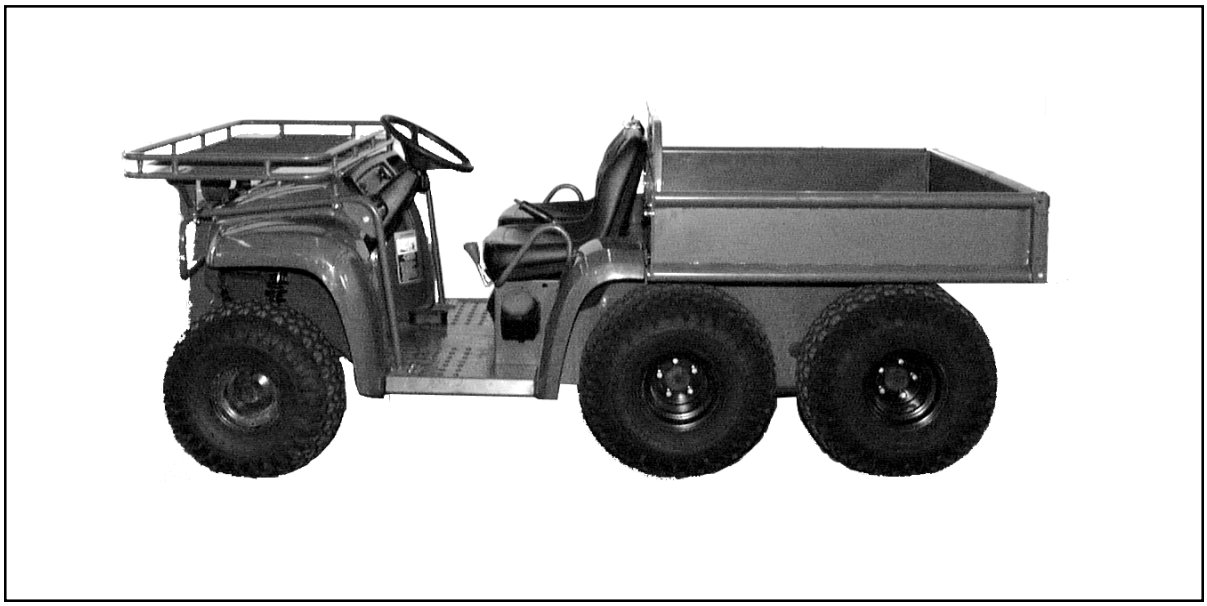
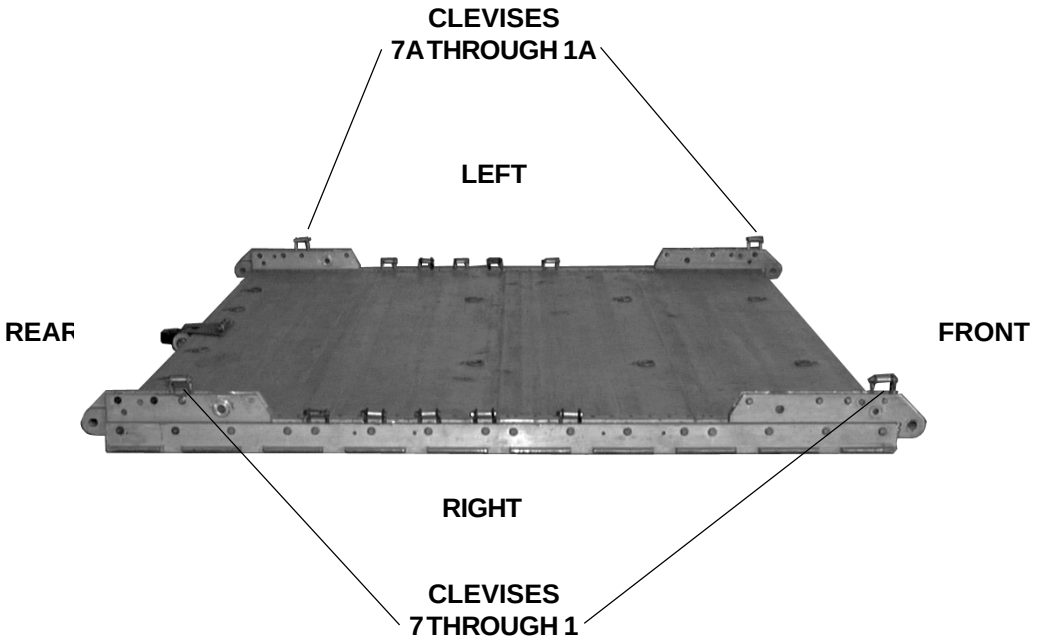


Figure 1-1. Military Utility Vehicle (M-Gator)



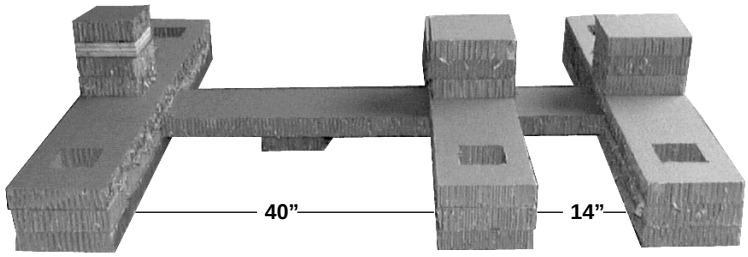
Step:

1. Install a tandem link to the front of each platform side rail using holes 1,2, and 3.
2. Install a tandem link to the rear of each platform side rail using holes 14, 15, and 16.
3. Install a clevis on bushing 1 of each front tandem link.
4. Install a clevis on bushing 2 of each rear tandem link.
5. Starting at the front of each platform side rail, install clevises on the bushings bolted on holes 7, 9, 10, 11, and 12.
6. Starting at the front of the platform, number the clevises 1 through 7 on the right side and 1A through 7A on the left side.
7. Label the tie-down rings according to FM 10-500-2/TO 13C7-1-5.

Figure 1-2. Platform Prepared

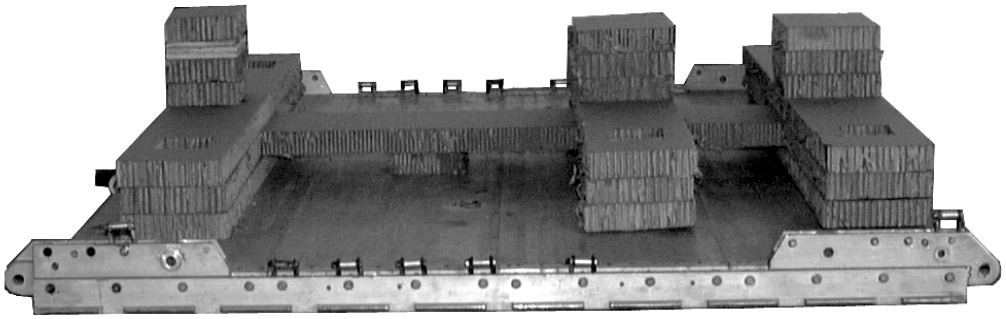
BUILDING AND PLACING HONEYCOMB STACK

1.3. Prepare the honeycomb stack for the M-Gator as shown in Figure1-3. Position the honeycomb stack as shown in Figure1-4.



Stack Number	Pieces	Width (inches)	Length (inches)	Material	Instructions
1	3	72	12	Honeycomb	Position on floor with the second piece 14 inches from the first and the third piece 40 inches from the second. Cut a 6-inch by 6-inch hole in each piece of honeycomb 6 inches from the sides and centered.
	1	9	9	Honeycomb	Centered and 16 inches from the rear of the second piece of honeycomb.
	1	12	90	Honeycomb	Center and glue across first four pieces of honeycomb.
	6	30	12	Honeycomb	Cut 6-inch by 6-inch holes, 6 inches from one side, in the center of each piece. Line holes up on base and glue in place.
	3	72	12	Honeycomb	Cut 6-inch by 6-inch holes on each side of honeycomb, 6 inches from the side and centered. Line holes up on base and glue in place.
	6	12	12	Honeycomb	Center and glue three pieces on the first and second sections.
	2	9	9	Honeycomb	Center and glue on the third sections rear edge.
	3	9	9	3/4-inch Plywood	Glue on the 9-inch by 9-inch honeycomb stack.
	1	9	9	Honeycomb	Glue on the 9-inch by 9-inch honeycomb and plywood stack.

Figure1-3. Honeycomb Stack Prepared

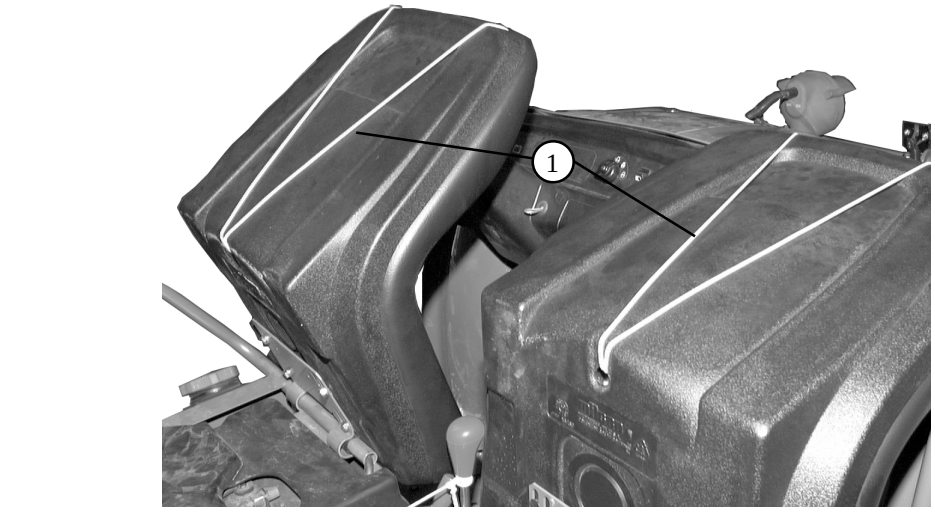


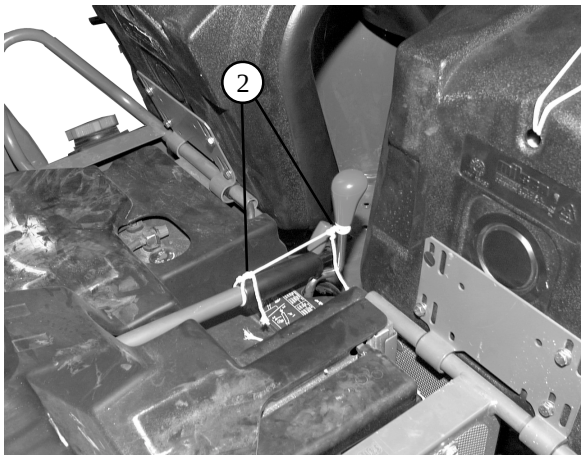
Stack Number	Position of Stack on Platform
1	Place stack: Centered on platform and even with front edge of platform.

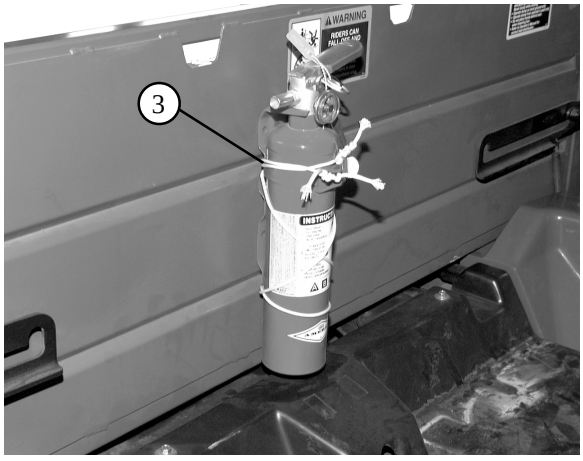
Figure1-4. Honeycomb Stack Positioned on Platform

PREPARING THE M-GATOR

1-4. Prepare the M-Gator according to Figure1-5.





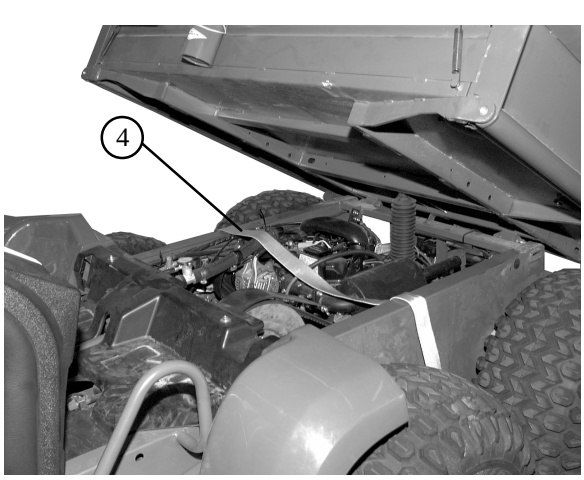


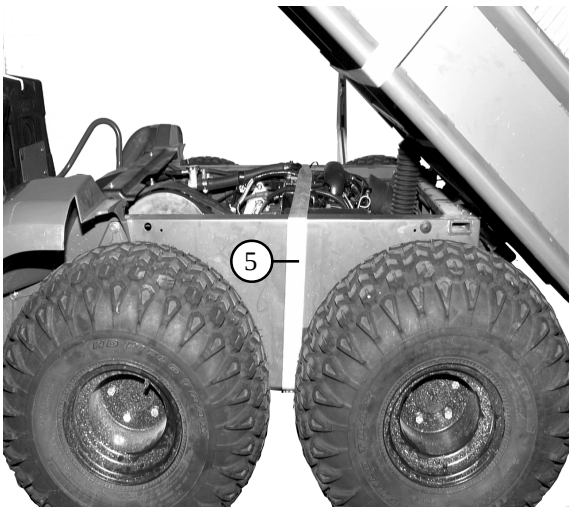
(1) Bring the seats forward and secure them with Type III nylon cord.

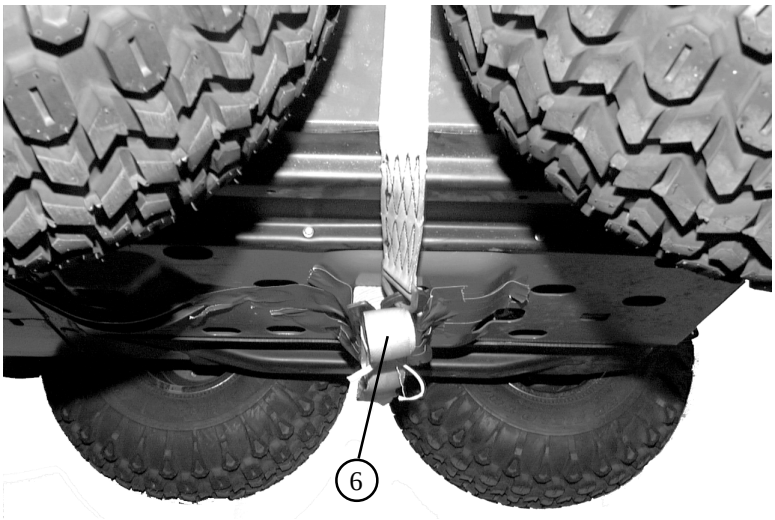
(2) Secure the gear stick to the emergency brake with Type III nylon cord.

(3) Secure the fire extinguisher to the mounting bracket with Type III nylon cord.

Figure1-5. M-Gator Prepared





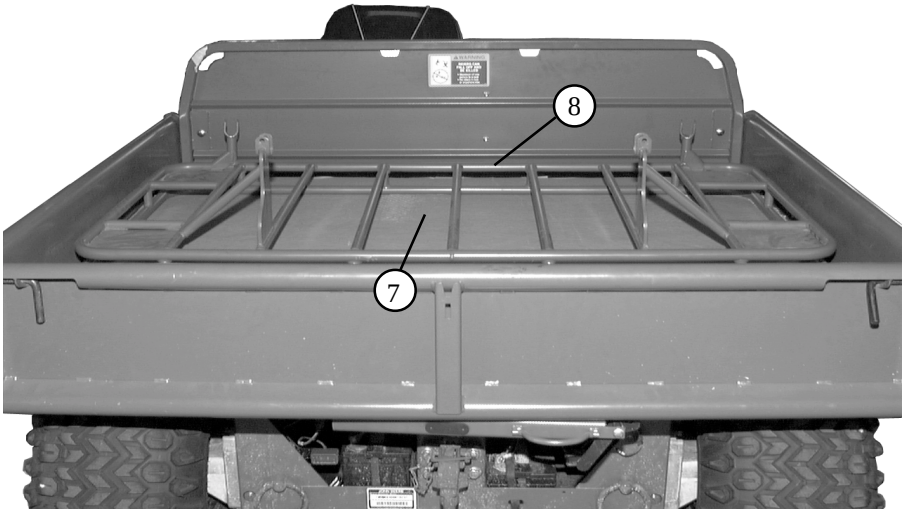


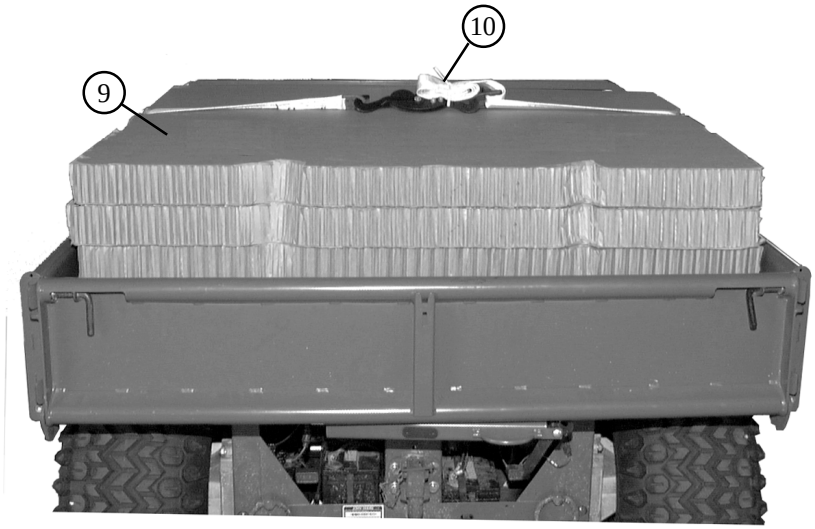
(4) Raise the bed and position a lashing across the frame, centered between the rear tires.

(5) Route lashing around the frame and the engine.

(6) Secure a piece of 2-inch by 4-inch by 8 1/2-inch lumber, laterally, under the engine. Lumber may be temporarily secured using cloth backed tape. Position the load binder against the lumber. Preposition another lashing across the top of the frame to be used in step 10 (not shown).

Figure 1-5. M-Gator Prepared (Continued)





7 Lower the bed and place one layer of 36-inch by 56-inch honeycomb in it.

8 Remove the litter from the M-Gator and place the litter upside down and centered on the honeycomb.

9 Place three more 36-inch by 56-inch honeycomb pieces on the litter and force them all the way down.

10 Secure the litter and honeycomb to the bed with the prepositioned lashing.

Figure 1-5. M-Gator Prepared (Continued)

POSITIONING LOAD

1-5. Using four 12-foot (2-loop), type XXVI, nylon suspension slings, lift and position the M-Gator. Attach large clevis assemblies to each sling. Using two front and two rear lifting points, attach one clevis to each lifting point. Position the M-Gator with the rear of the vehicle facing the front of the platform. Align the rear edge of the M-Gator frame with the front edge of the honeycomb stack and center. Each tire will be centered over a cutout in the honeycomb stack according to Figure1-6.

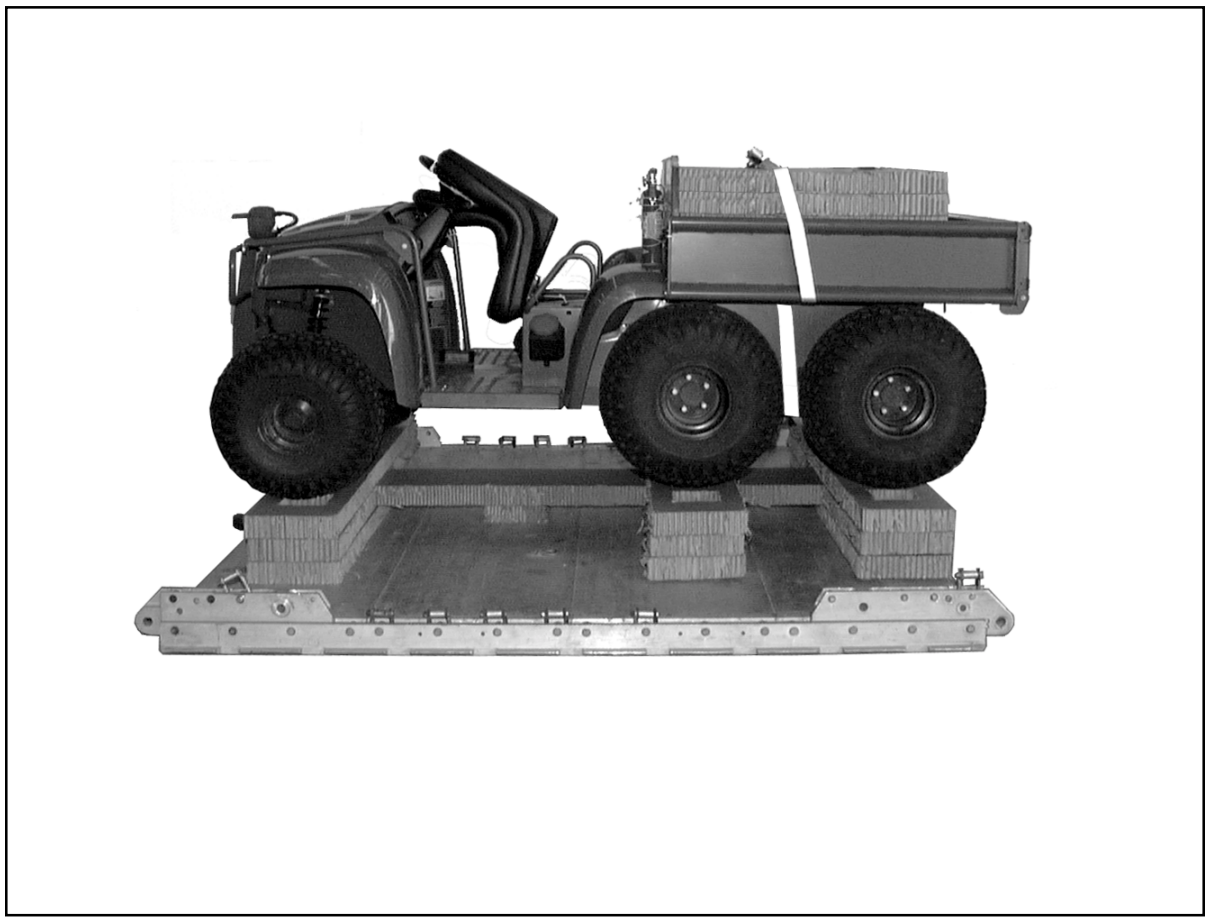
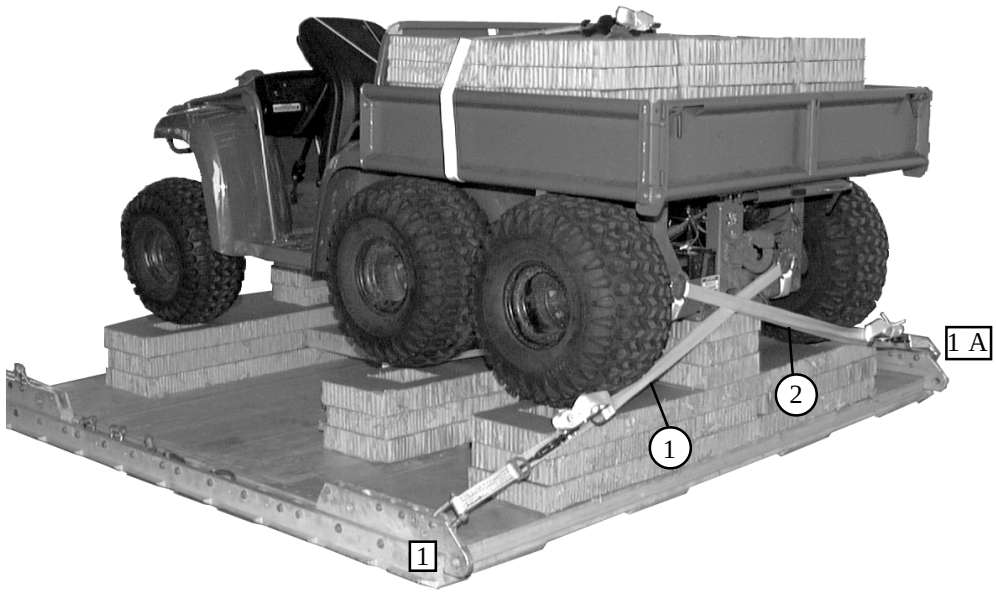


Figure1-6. M-Gator Positioned

LASHING M-GATOR

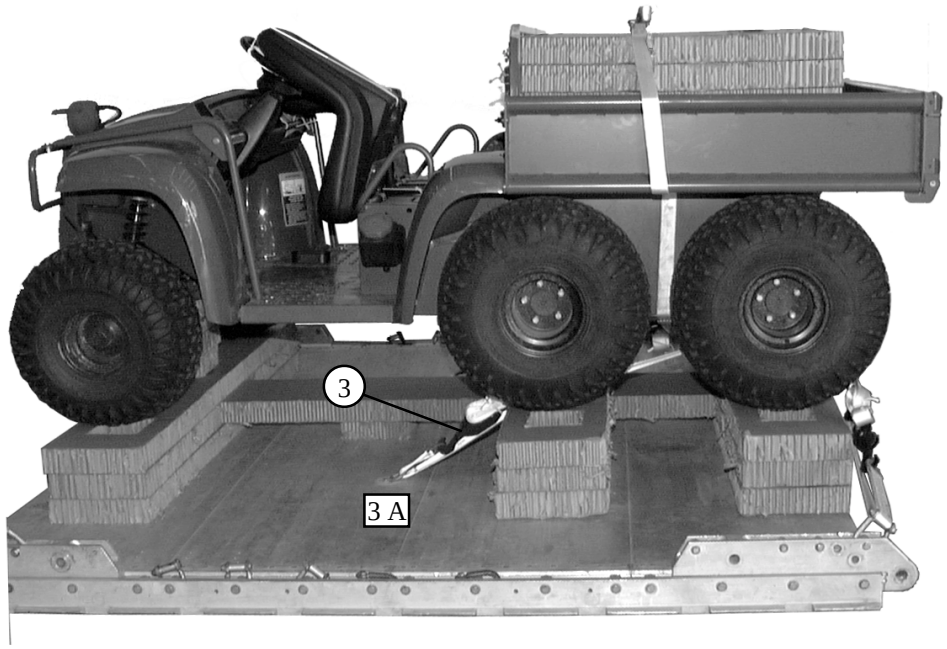
1-6. Lash the M-Gator to the platform according to FM 10-500-2/TO 13C7-1-5 and as shown in Figures 1-7 through 1-9.

NOTE: Place all load binders near the platform in case adjustments to the lashings are needed.



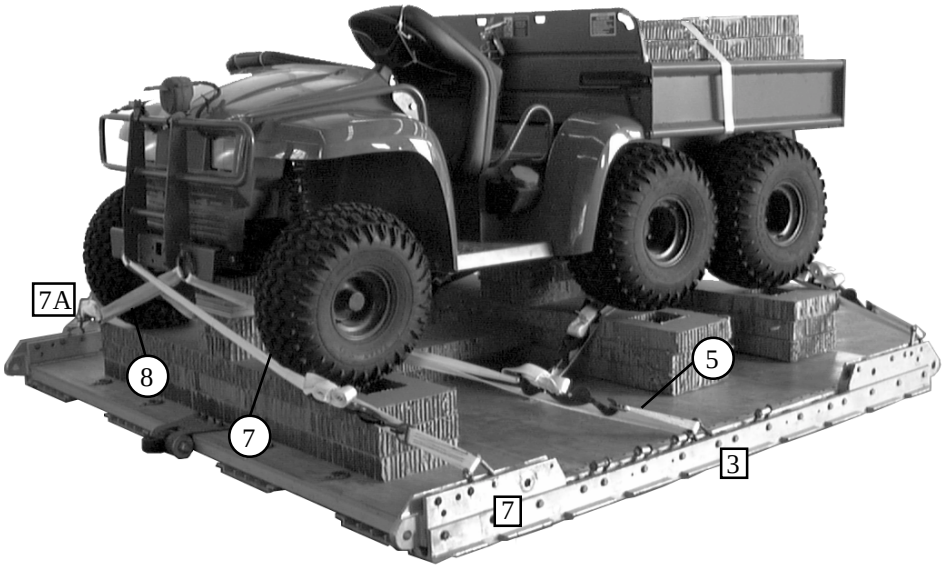
Lashing Number	**Tiedown** Clevis Number	**Instructions**
		Pass lashing through:
1	1	Right rear tiedown point.
2	1A	Left rear tiedown point.

Figure1-7. Lashings 1 and 2 Installed



Lashing Number	**Tiedown** Clevis Number	**Instructions**
		Pass lashing through:
3	Tiedown-ring 3A	Left rear tiedown point
4	Tiedown-ring 3B	Right rear tiedown point

Figure 1-8. Lashings 3 and 4 Installed



Lashing Number	**Tiedown** Clevis Number	**Instructions**
		Pass lashing through:
5	3	Front left tiedown point
6	3A	Front right tiedown point
7	7	Front right tiedown point
8	7A	Front left tiedown point

Figure 1-9. Lashings 5, 6, 7, and 8 Installed

BUILDING M-GATOR BOX

1-7. Build the M-Gator box using 8d common nails as shown in Figure 1-10.

NOTE: Use wood glue and 1 1/2 inch long, #4 wood screws to sturdy box for multiple airdrop use.

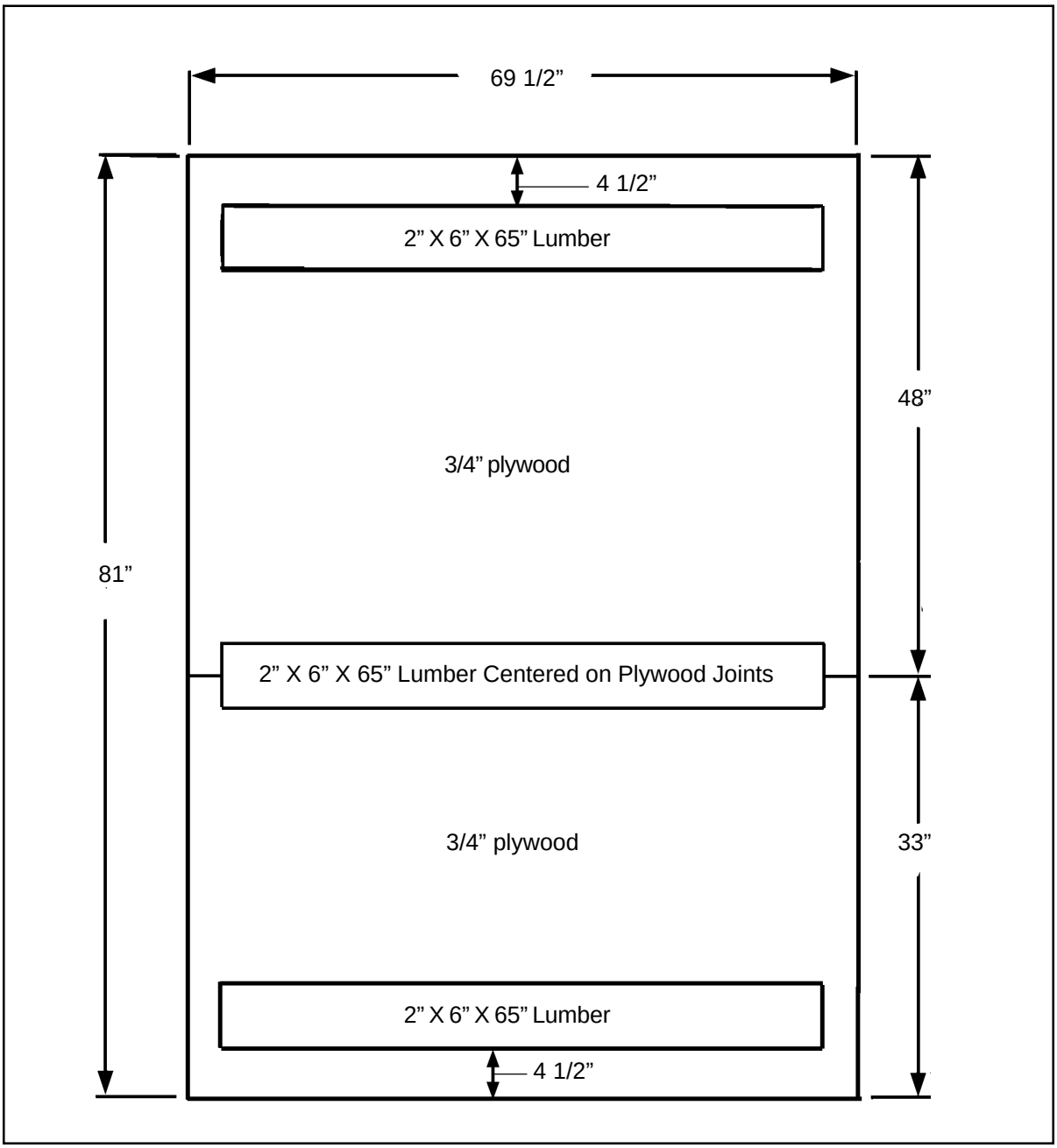


Figure 1-10. M-Gator Box Built (Top Board)

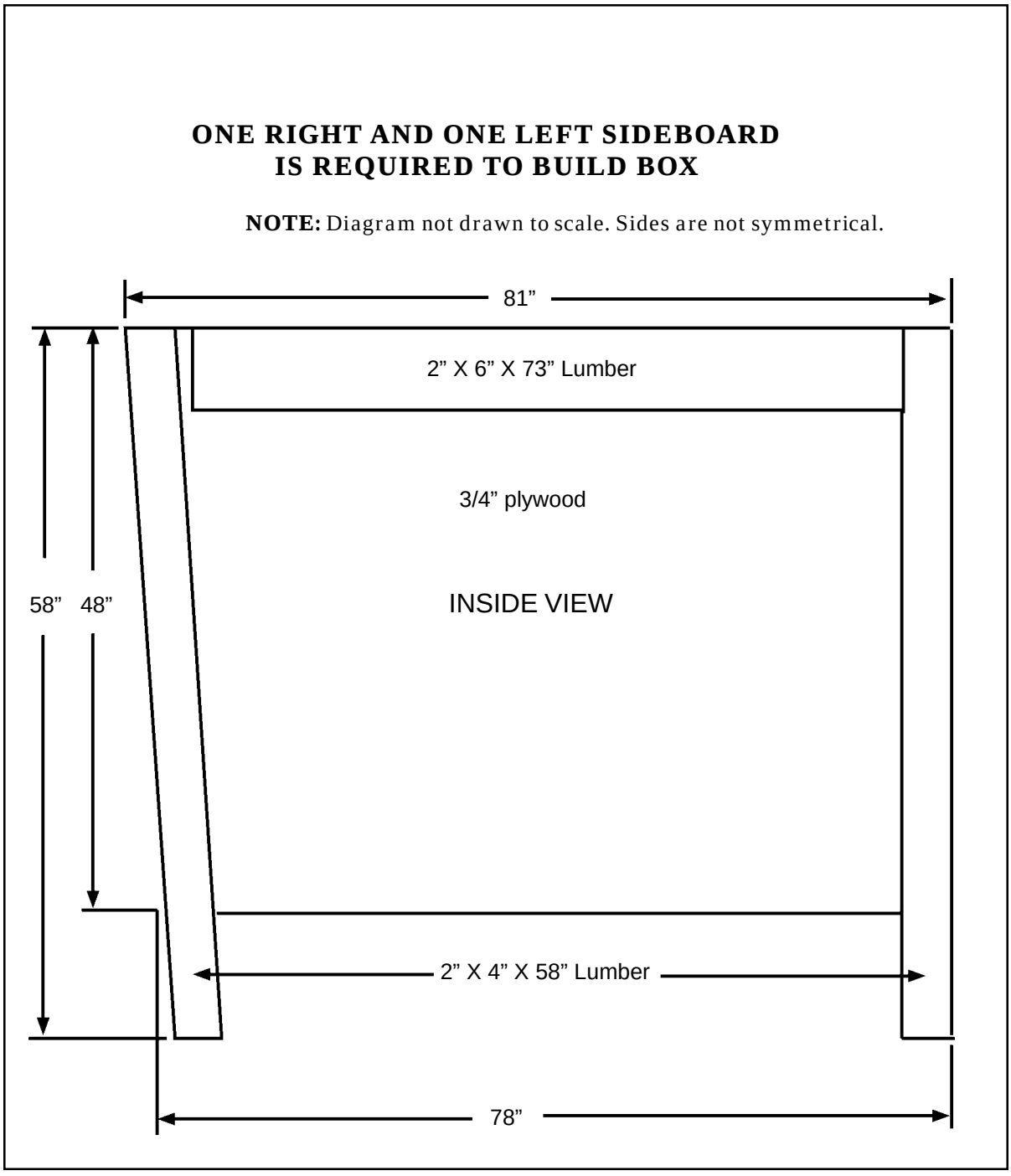


Figure 1-10. M-Gator Box Built (Side Boards) (Continued)

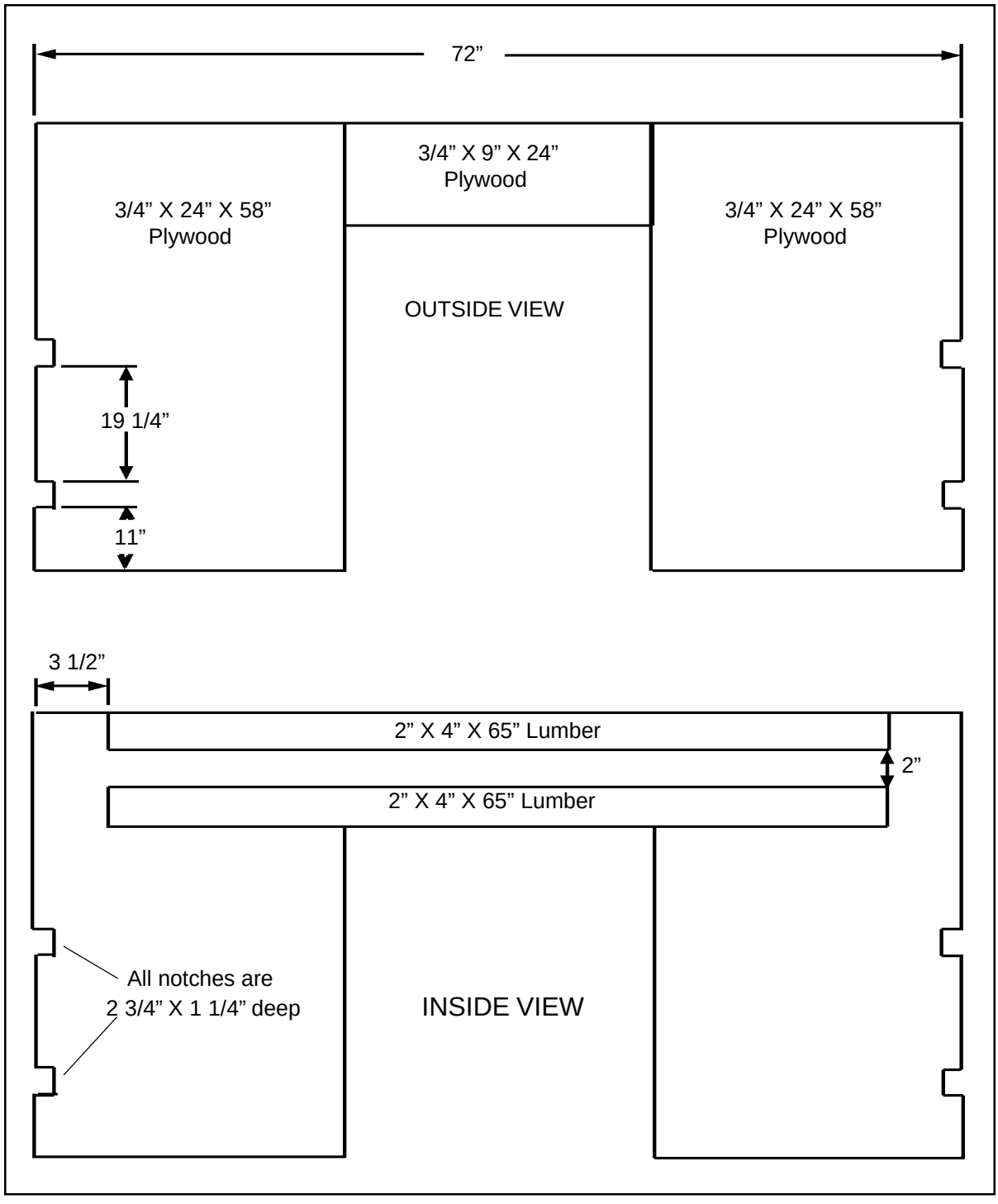
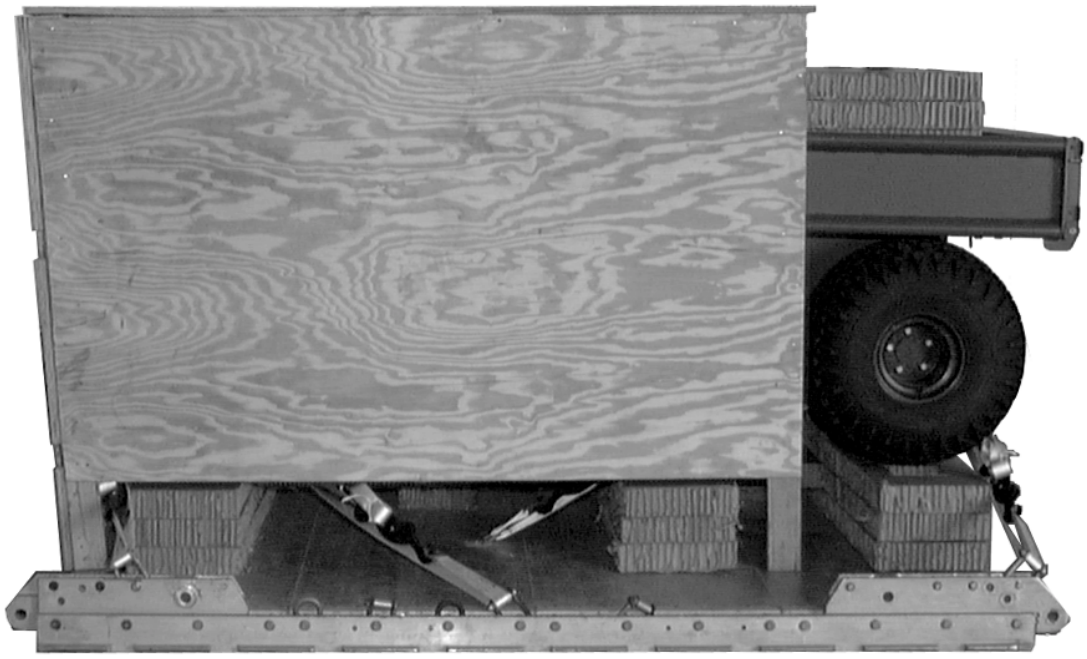


Figure 1-10. M-Gator Box Built (Front Board) (Continued)

POSITIONING M-GATOR BOX

1-8. Position M-Gator box as shown in Figure 1-11.

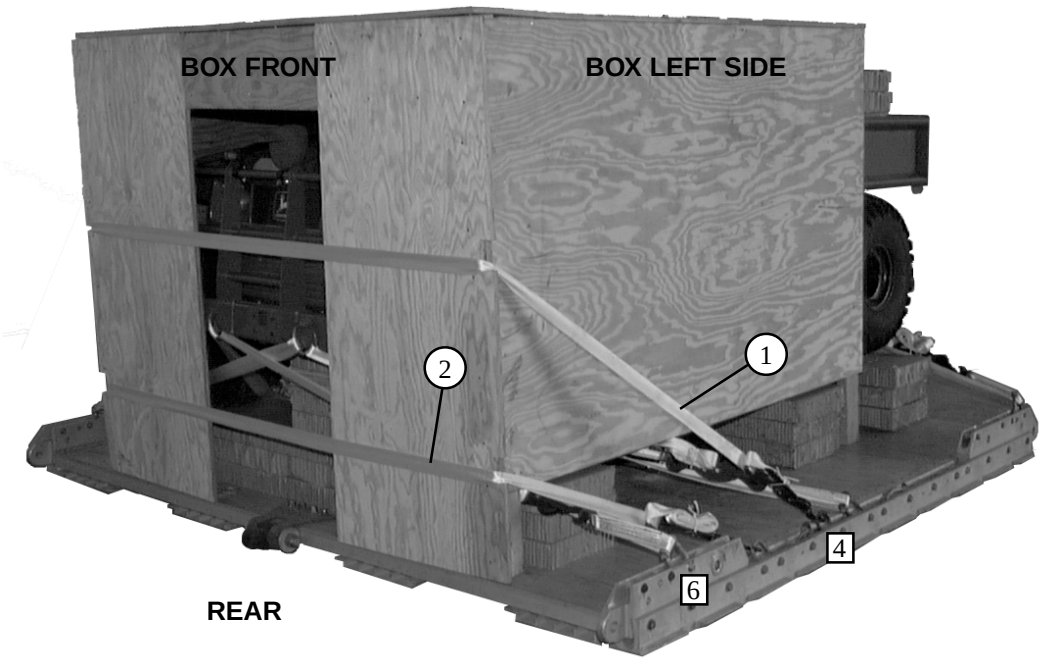


Position the box on the platform, aligning the front bottom edge of the box with the platform rear edge.

Figure 1-11. M-Gator Box Positioned

LASHING M-GATOR BOX

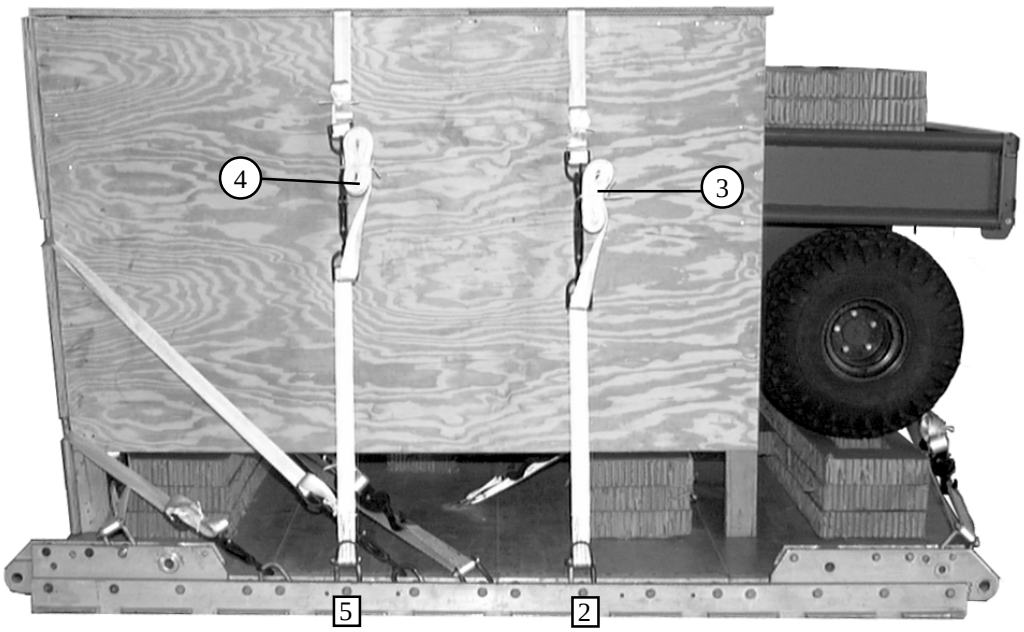
1-9. Lash the M-Gator box to the platform according to FM 10 500-2/TO 13C7-1-5 and as shown in Figure 1-12.



Route a lashing through clevis 4A and back through it's own D-ring, and pull the strap taut. Repeat the same steps for clevis 6A.

Lashing Number	**Tiedown** Clevis Number	**Instructions**
		Pass lashing through:
1	4A and 4	Top front cutouts of box
2	6A and 6	Bottom front cutouts of box

Figure 1-12. M-Gator Box Lashed



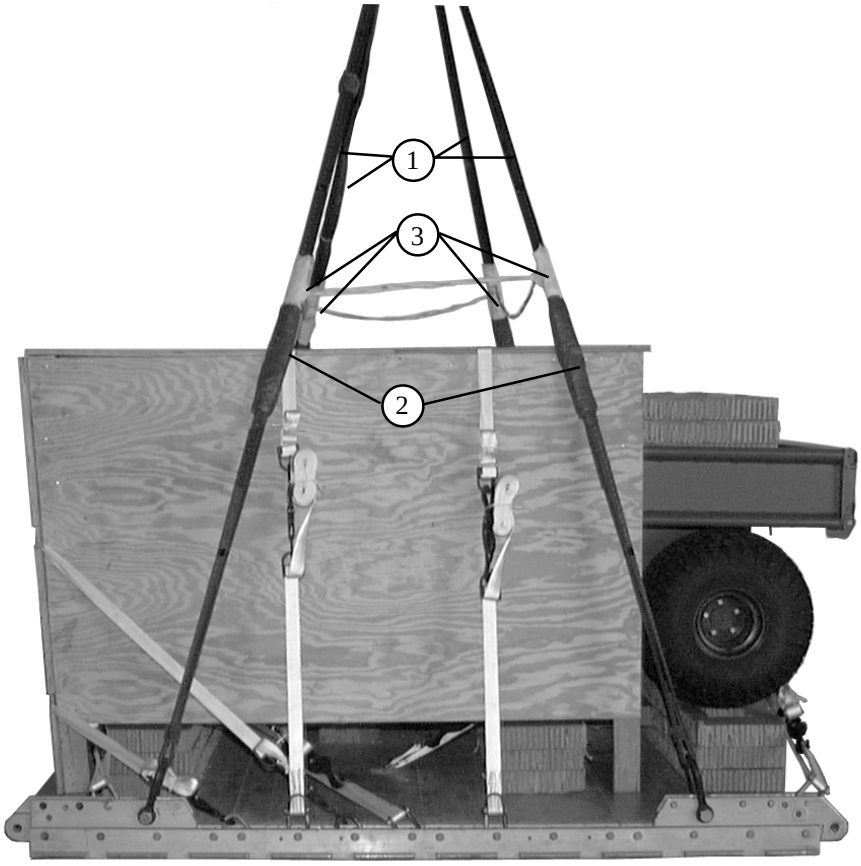
Route a lashing through clevis 2 and back through it's own D-ring, and pull strap taut. Repeat the same steps for clevises 2A, 5, and 5A.

Lashing Number	**Tiedown** Clevis Number	**Instructions**
		Pass lashing:
3	2 and 2A	Over top of box and bind on left side of box.
4	5 and 5A	Over top of box and bind on left side of box.

Figure 1-12. M-Gator Box Lashed (Continued)

INSTALLING SUSPENSION SLINGS

1-10. Install four 12-foot (2 loop), type XXVI nylon slings as suspension slings according to FM 10-500-2/TO 13C7-1-5 and as shown in Figure1-13.



(1) Attach a 12-foot (2-loop), type XXVI nylon sling to each of the four tandem links using a large clevis.

(2) Felt and tape each sling where they make contact with the box.

(3) Raise the slings above the load and install the deadman's tie as outlined in FM 10-500-2/ TO 13C7-1-5.

Figure 1-13. Suspension Slings Installed

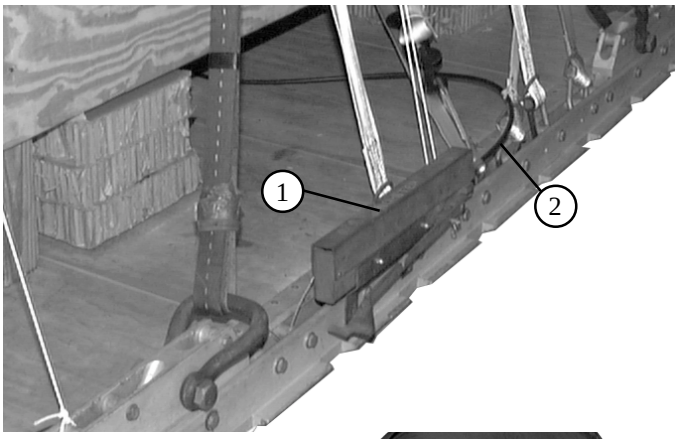
STOWING CARGO PARACHUTE

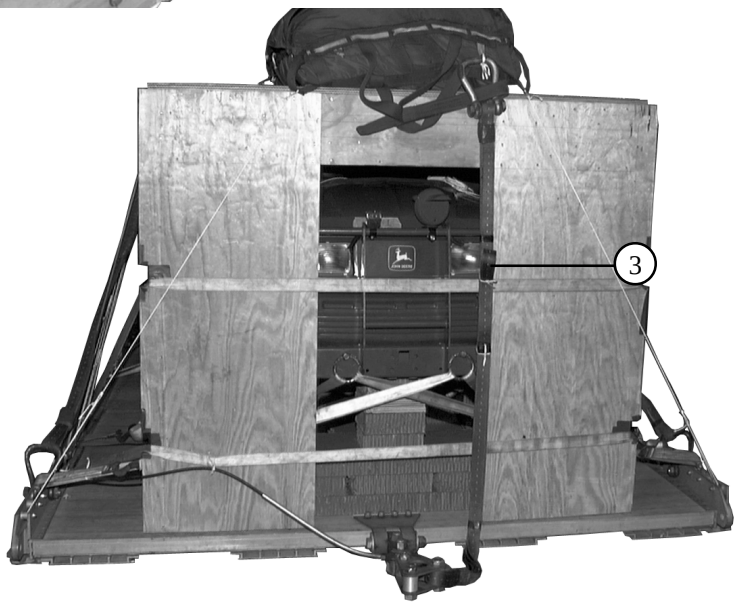
1-11. Prepare, stow, and restrain one G-11 cargo parachute on the front edge of the M-Gator box according to FM 10-500-2/TO 13C7-1-5 and as shown in Figure 1-14.

Figure 1-14. Cargo Parachute Stowed

INSTALLING EXTRACTION SYSTEM

1-12. Install the Extraction Force Transfer Coupling (EFTC) according to FM 10-500-2/TO13C7-1-5 and as shown in Figure1-15.





(1) Install EFTC actuator mounting bracket using front mounting holes.

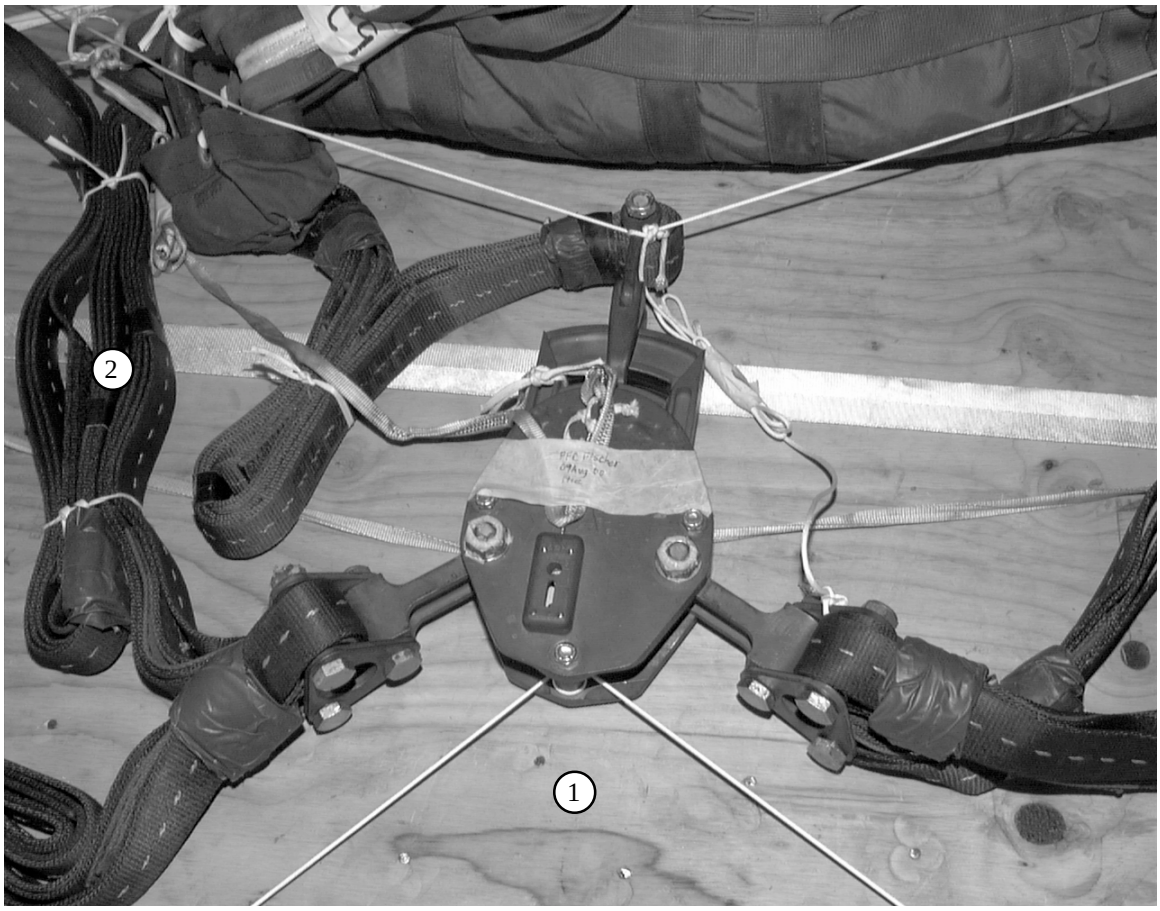
(2) Install a 12-foot cable.

(3) Attach a 9-foot (2-loop), type XXVI nylon sling for the deployment line.

Figure 1-15. Extraction System Installed

INSTALLING PARACHUTE RELEASE

1-13. Prepare and install an M-1 cargo parachute release system according to FM 10-500-2/TO 13C7-1-5, and as shown in Figure1-16.



(1) Place the M-1 release on the M-Gator box, and safety it to a convenient place on the load.

(2) Fold and secure any slack in the suspension slings.

Figure 1-16. Parachute Release System Installed

POSITIONING EXTRACTION PARACHUTE

1-14. Select the extraction parachute and extraction line needed using the extraction line requirements table in FM 10-500-2/TO 13C7-1-5. Place the extraction parachute and extraction line on the load for installation inside aircraft.

INSTALLING PROVISIONS FOR EMERGENCY RESTRAINTS

1-15. Select and install provisions for emergency restraints according to the emergency aft restraints requirements in FM 10-500-2/TO 13C7-1-5.

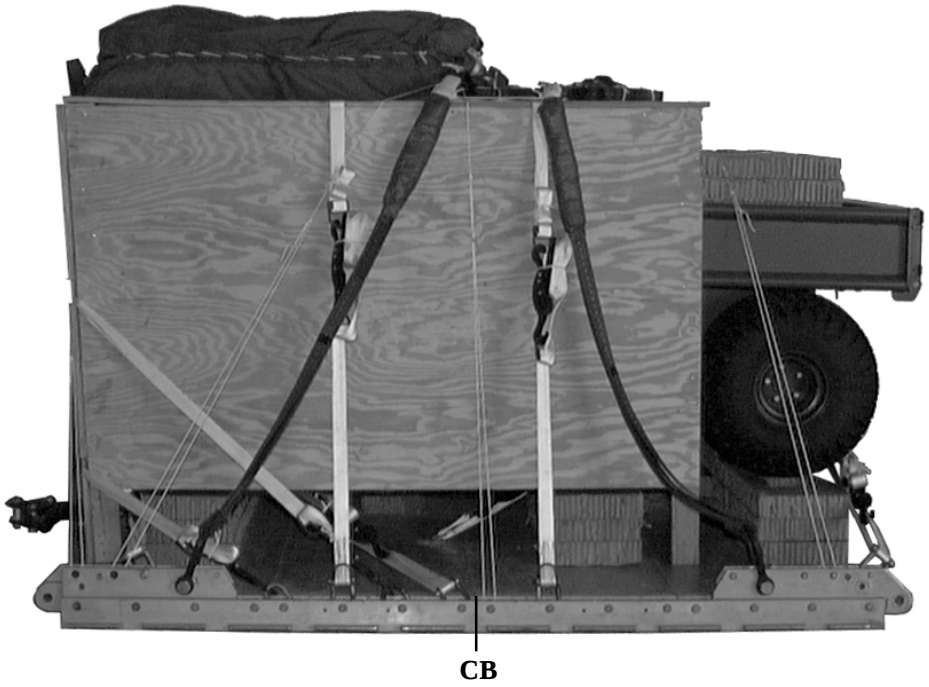
MARKING RIGGED LOAD

1-16. Mark the rigged load according to FM 10-500-2/TO 13C7-1-5 and as shown in Figure1-17. Complete the Shipper's Declaration for Dangerous Goods. If the load varies from the one shown, the weight, height, tip-off curve, CB, and parachute requirements must be recomputed.

EQUIPMENT REQUIRED

1-17. The equipment required to rig this load is listed in Table 1-1.

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



RIGGED LOAD

Weight	3,120 pounds
Height	78 inches
Width	108 inches
Overall Length	125 inches
Overhang: Front (bed)	11 inches
Rear (EFTC)	18 inches
Center of Balance (from front edge of platform)	49 inches

Figure 1-17. M-Gator Rigged on a 8-Foot Platform for Low- Velocity Airdrop

Table1-1. Equipment required for rigging M-Gator on an 8-foot platform for low-velocity airdrop

National Stock Number	Item	Quantity
8040-00-273-8713	Adhesive paste, 1-gal	As required
1670-01-035-6054	Bridle, extraction line bag (C-17)	1
4030-00-090-5354	Clevis, suspension, 1-in (large)	5
4020-00-240-2146	Cord, nylon, type III, 550-lb	As required
1670-00-434-5783	Coupling, airdrop, extraction force transfer with cable, 12-ft	1
	Cover:	
1670-00-360-0328	Clevis, large	1
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:	
1670-01-064-4452	For C-130: 60-ft (1-loop), type XXVI	1
1670-01-107-7652	For C-141: 160-ft (1-loop), type XXVI	1
1670-01-107-7652	For C-5: 160-ft (1-loop), type XXVI	1
1670-01-107-7652	For C-17: 160-ft (1-loop), type XXVI	1
	Link assembly:	
	Two-point, 3 3/4-in	1
5306-00-435-8994	Bolt, 1-in diam, 4-in long	(2)
5310-00-232-5165	Nut, 1-in, hexagonal	(2)
1670-00-003-1954	Plate, side, 3 3/4-in	(2)
5365-00-007-3414	Spacer, large	(2)
	Two-point, 3 3/4-in (for C-17)	1
5306-00-435-8994	Bolt, 1-in diam, 4-in long	(2)
5310-00-232-5165	Nut, 1-in, hexagonal	(2)
1670-00-003-1954	Plate, side, 3 3/4-in	(2)
5365-00-007-3414	Spacer, large	(2)
N/A	Link, towed mechanized release (H-Block), C-17 aircraft	1
	Lumber:	
5510-00-220-6146	2- by 4-in	As required
5510-00-220-6148	2- by 6-in	As required
5315-00-010-4659	Nail, steel wire, common, 8d	As required
1670-00-753-3928	Pad, energy dissipating, honeycomb, 3- by 36- by 96-in	9 sheets

Table 1-1. Equipment required for rigging M-Gator on an 8-foot platform for low-velocity airdrop (continued)

National Stock Number	Item	Quantity
	Parachute:	
1670-01-016-7841	Cargo, G-11B	1
1670-01-063-3715	Cargo, extraction, 15ft	1
1670-01-063-3715	Drogue, 15ft (for C-17)	1
	Platform, airdrop, type V, 8-foot:	
1670-01-353-8425	Bracket assembly, coupling	(1)
1670-01-162-2372	Clevis assembly, type V	(14)
1670-01-353-8424	Extraction bracket assembly	(1)
1670-01-162-2381	Link, tandem, suspension link assembly	(4)
5530-00-128-4981	Plywood, 3/4- by 48- by 96-in	6 sheets
1670-01-097-8816	Release, cargo parachute, M-1	1
	Sling, cargo airdrop	
	For suspension:	
1670-01-062-6303	12-ft (2-loop), type XXVI nylon webbing	4
	For deployment:	
1670-01-062-6304	9-ft (2-loop), type XXVI nylon webbing	1
	For riser extention:	
1670-01-062-6301	3-ft (2-loop), type XXVI nylon webbing	1
7510-00-266-5016	Tape, adhesive, 2-in	As required
1670-00-937-0271	Tie-down assembly, 15-ft	16
	Webbing:	
8305-00-268-2411	Cotton, 1/4-in, type I	As required
8305-00-082-5725	Nylon, tubular, 1/2-in	As required

CHAPTER 2

Rigging Two Military Utility Vehicles (M-Gator) And Equipment Box on a 20-Foot Platform for Low-Velocity Airdrop

DESCRIPTION OF LOAD

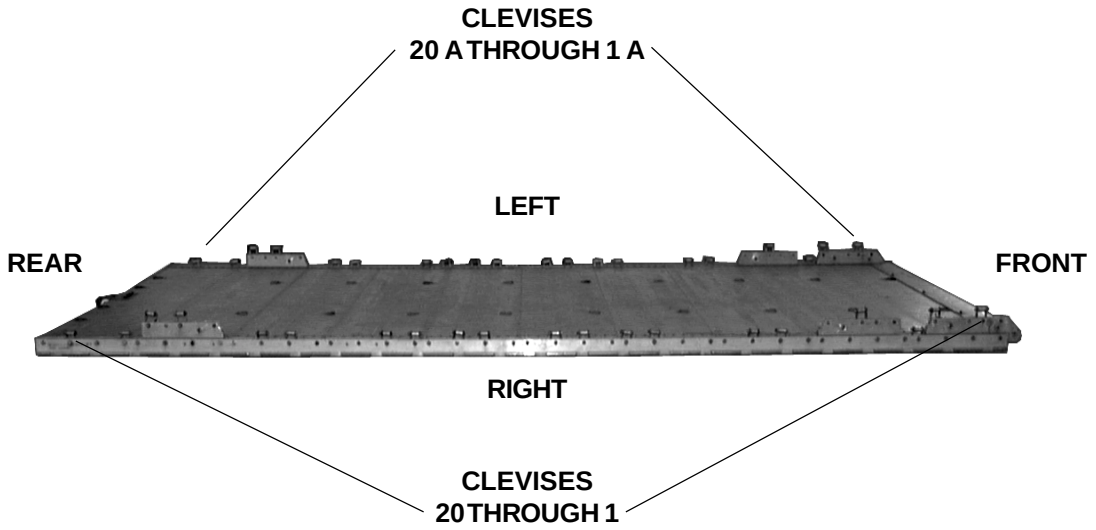
2-1. This load consists of two John Deere Diesels, which have been named M-Gator and an equipment box weighing 1,600 pounds minimum or 2000 pounds maximum of unit specific equipment. It is rigged on a 20-foot platform. The load shown has a rigged weight of 8,520 pounds. It has a length of 258 inches, width of 108 inches, and height of 78 inches, with a center of balance of 124 inches. The load is rigged with two G-11 cargo parachutes.

PREPARING PLATFORM

2-2. Inspect, or assemble and inspect, a 20-foot platform as outlined in TM 10-1670- 268-20&P/TO 13C7-52-22. Prepare a 20-foot platform using 40 tiedown clevises as shown in Figure 2-1.

BUILDING M-GATOR BOXES

2-3. Build two M-Gator boxes as outlined in chapter 1, paragraph 1-7.



Step:

1. Install a tandem multi-purpose link to 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 33, 34, and 35.
4. Install a clevis on bushings 2 and 4 of each tandem link.
5. Install a clevis on bushing 3 of each front suspension link.
6. Install a clevis on bushings 2 and 4 of each rear suspension link.
7. Starting at the front of each platform side rail, install clevises on the bushings bolted on holes 4, 10, 11, 15, 16, 18, 19, 22, 23, 25, 26, 30,31, 37, and 39.
8. Starting at the front of the platform, number the clevises 1 through 20 on the right side and 1A through 20A on the left side.
9. Label the tie-down rings according to FM 10-500-2/TO 13C7-1-5.

Figure 2-1. Platform Prepared

BUILDING HONEYCOMB STACKS

2-4. Refer to paragraph 1-3 for building honeycomb stacks 1 and 3. Build honeycomb stack 2 as in Figure 2-2.

Stack Number	Pieces	Width (inches)	Length (inches)	Material	Instructions
2	2	96	36	Honeycomb	Glue and place one on top of the other.

Figure 2-2. Honeycomb Stack Prepared

POSITIONING HONEYCOMB STACK 2

2-5. Position honeycomb stack 2 centered on platform and as shown in Figure 2-3.

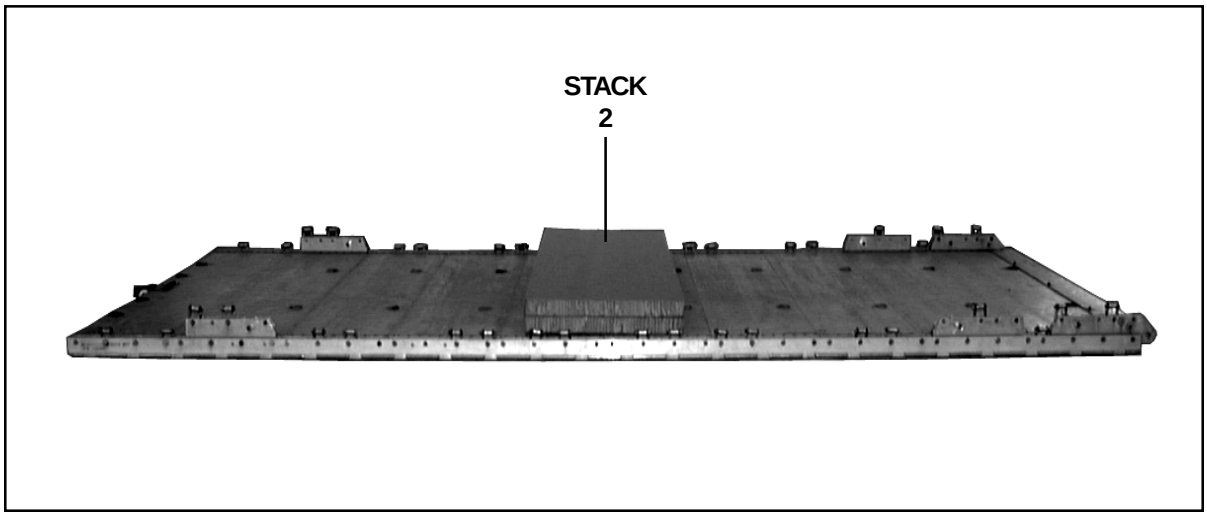
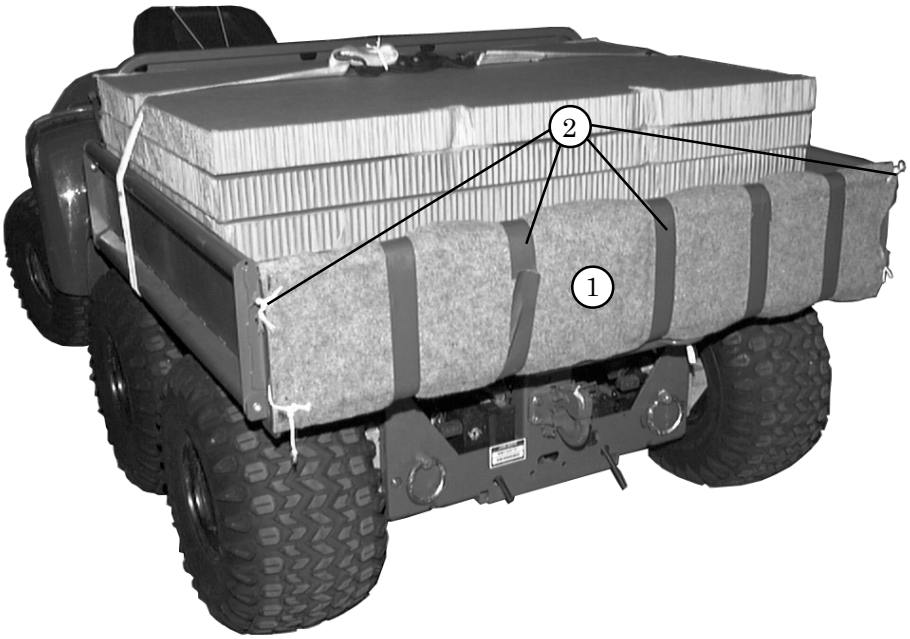


Figure 2-3. Honeycomb Stack 2 Positioned

PREPARING THE M-GATORS

2-6. Prepare the M-Gators according to chapter 1, paragraph 1-4 with the exception of padding the tailgate as shown in Figure 2-4.



(1) Pad the tailgate with a 1/2-inch by 11 1/2-inch by 57-inch piece of felt.

(2) Secure the felt with pressure sensitive tape and Type III nylon cord.

Figure 2-4. M-Gators Prepared

BUILDING EQUIPMENT BOX

2-7. Build the equipment box as shown in Figure 2-5.

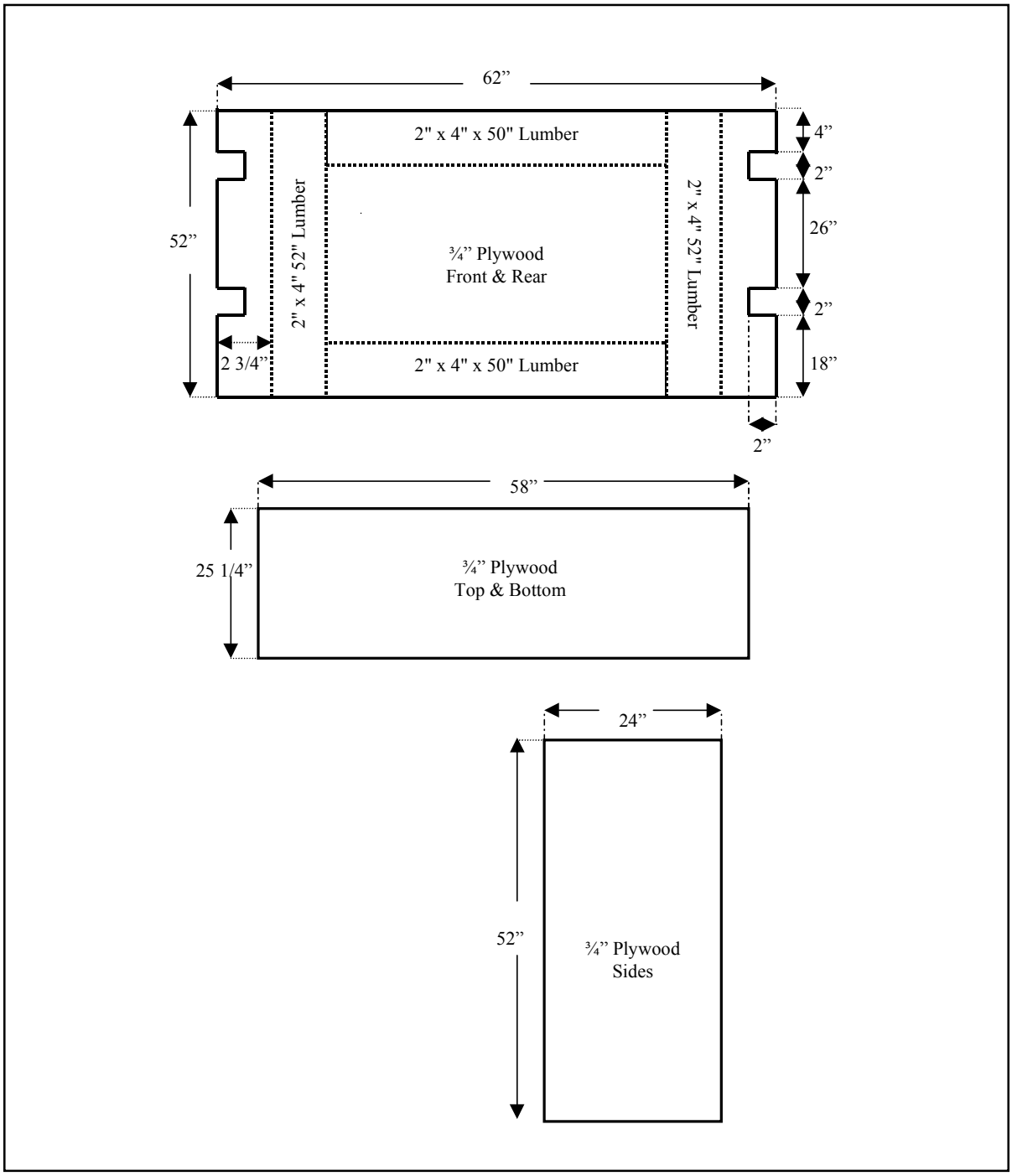
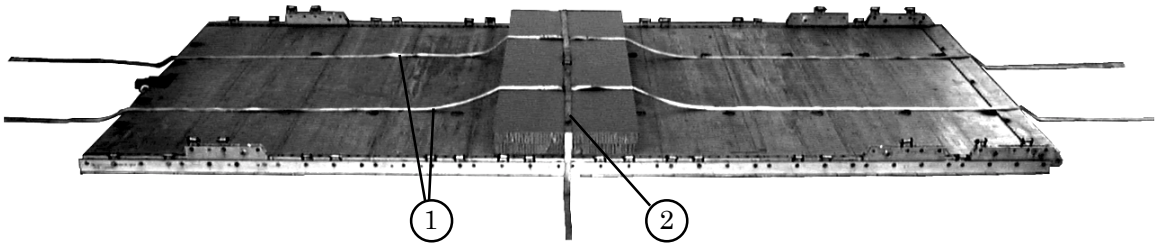


Figure 2-5. Equipment Box Built

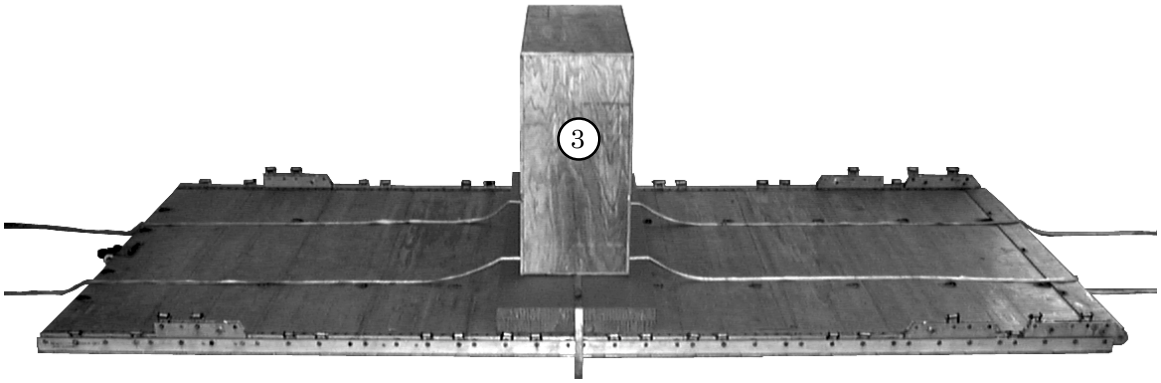
POSITIONING AND LASHING THE EQUIPMENT BOX

2-8. Position the lashings and the equipment box as shown in Figure 2-6.



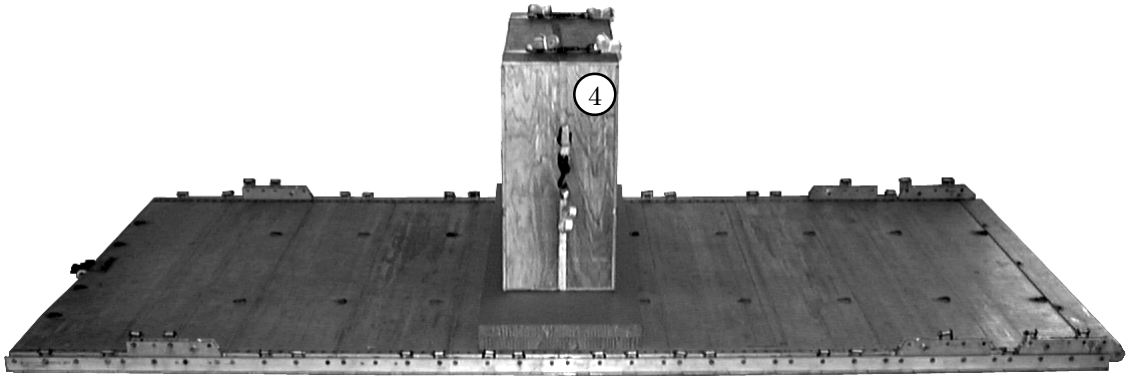
(1) Position two 30 foot lashings 28 inches from each edge on stack 2, running the length of the platform.

(2) Position a 30 foot lashing centered on stack 2, running the width of the platform.

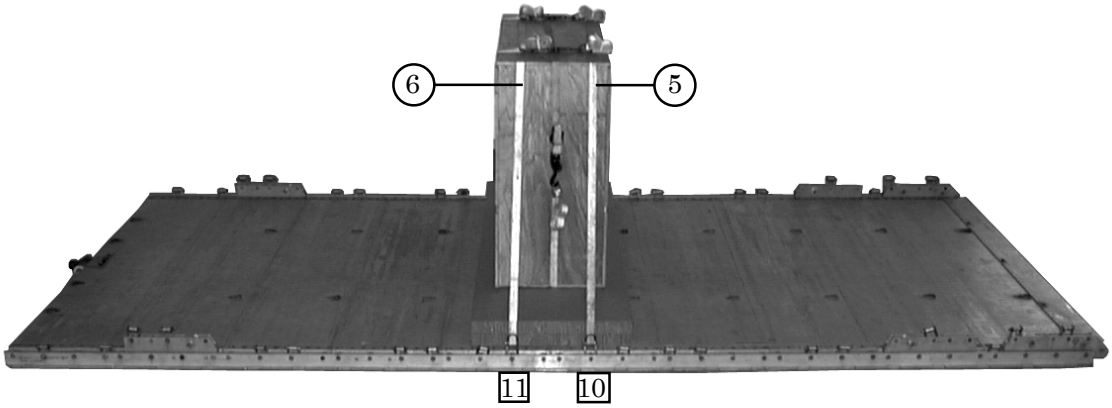


(3) Position the box centered on stack 2.

Figure 2-6. Equipment Box Positioned and Lashed



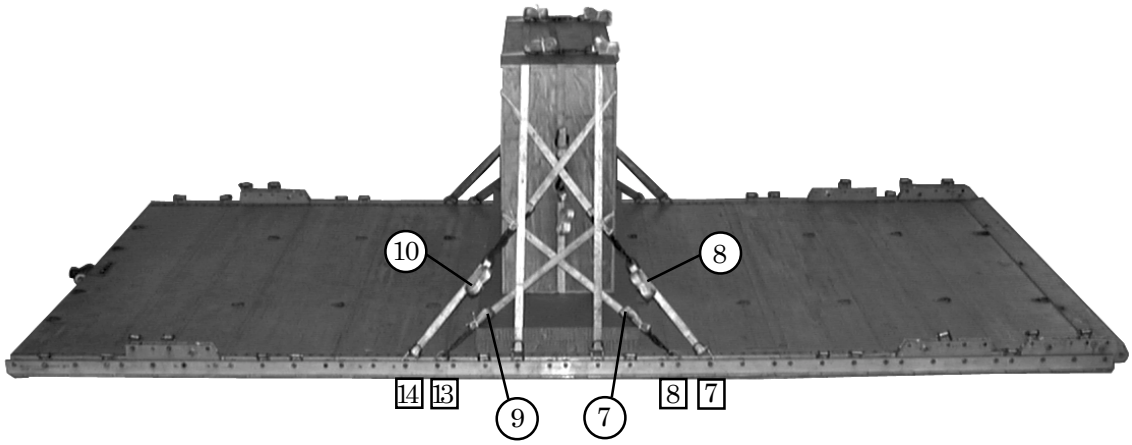
(4) Secure the previously positioned lashings on top and side of the box.



(5) Route a lashing through clevis 10 and back through it's own D-ring, over the box and load bind to clevis 10A.

(6) Route a lashing through clevis 11 and back through it's own D-ring, over the box and load bind to clevis 11A.

Figure 2-6. Equipment Box Positioned and Lashed (Continued)



(7) Route a lashing through clevis 8A and back through it's own D-ring, through the lower rear cutouts of the box, load bind to clevis 8.

(8) Route a lashing through clevis 7A and back through it's own D-ring, through the upper rear cutouts of the box, route a lashing through 7 and back through it's own D-ring and load bind the lashings together.

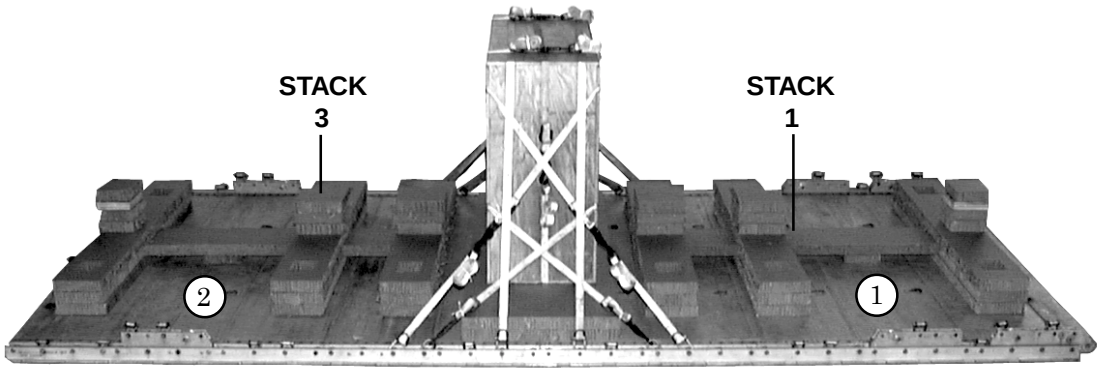
(9) Route a lashing through clevis 13A and back through it's own D-ring, through the lower front cutouts of the box, load bind to clevis 13.

(10) Route a lashing through clevis 14A and back through it's own D-ring, through the upper front cutouts of the box. Route a lashing through clevis 14 and back through it's own D-ring. Load bind the lashings together.

Figure 2-6. Equipment Box Positioned and Lashed (Continued)

POSITIONING M-GATOR HONEYCOMB STACKS

2-9. Position honeycomb stacks 1 and 3 on the platform as shown in Figure 2-7.



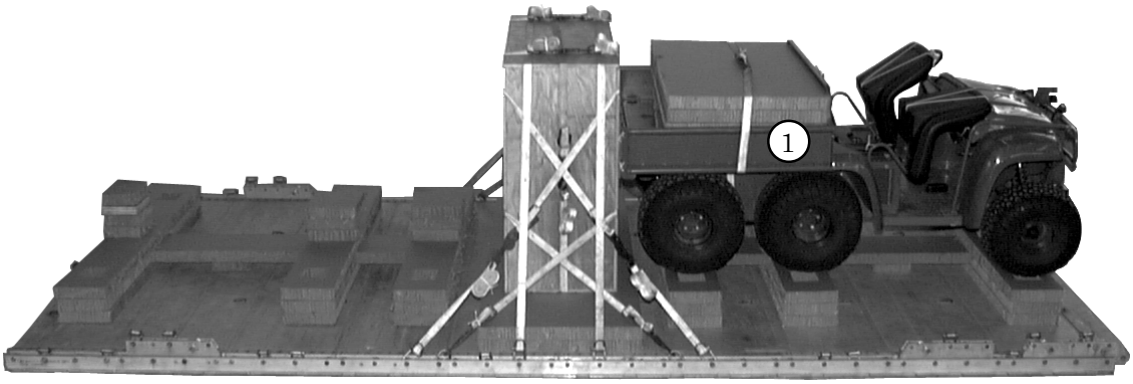
(1) Pre-position honeycomb stack 1 behind the tiedown rings on the front panel and cen tered left to right.

(2) Pre-position honeycomb stack 3 in front of extraction bracket bolts on the rear edge of the platform and centered left to right.

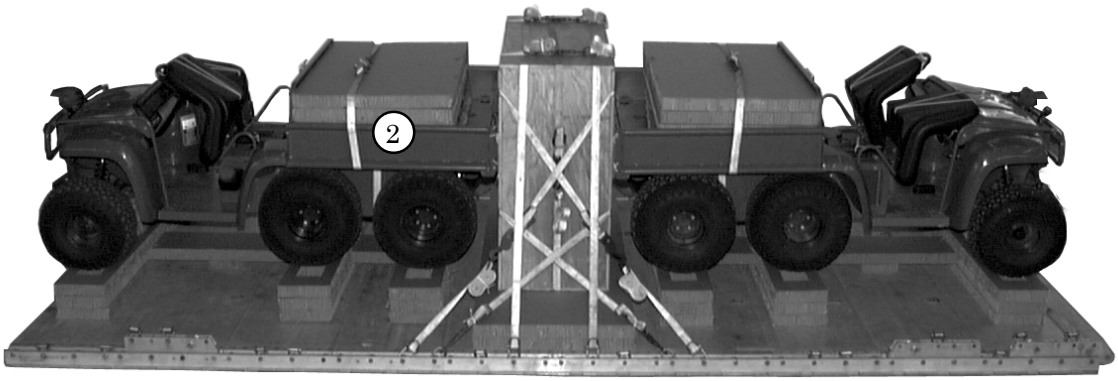
Figure 2-7. Honeycomb Stacks 1 and 3 Positioned on Platform

POSITIONING LOAD

2-10. Use four 12-foot (2-loop), type XXVI, nylon slings to lift and position the M-Gator. Attach large clevis assemblies to each sling. Using two front and two rear lifting points, attach one clevis to each lifting point. Position the M-Gators as shown in Figure 2-8.



(1) Position the front M-Gator on honeycomb stack 1 ensuring the felt tailgate is against the center equipment box. Adjust the honeycomb stack so each tire will be centered over a cutout in the honeycomb stack.



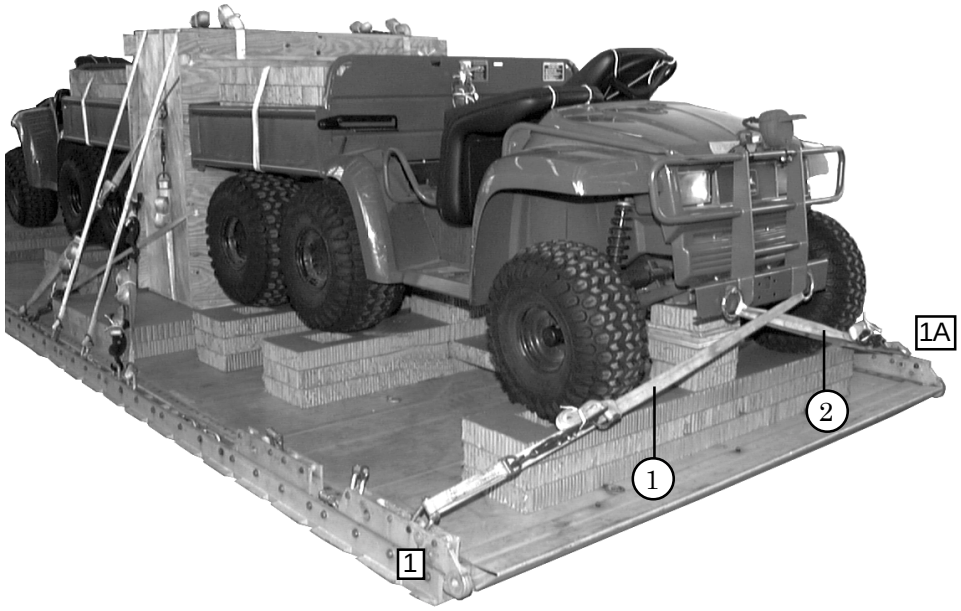
(2) Position the rear M-Gator on honeycomb stack 3 ensuring the felt tailgate is against the center equipment box. Each tire will be centered over a cutout in the honeycomb stack.

Figure 2-8. M-Gators Positioned

LASHING M-GATORS

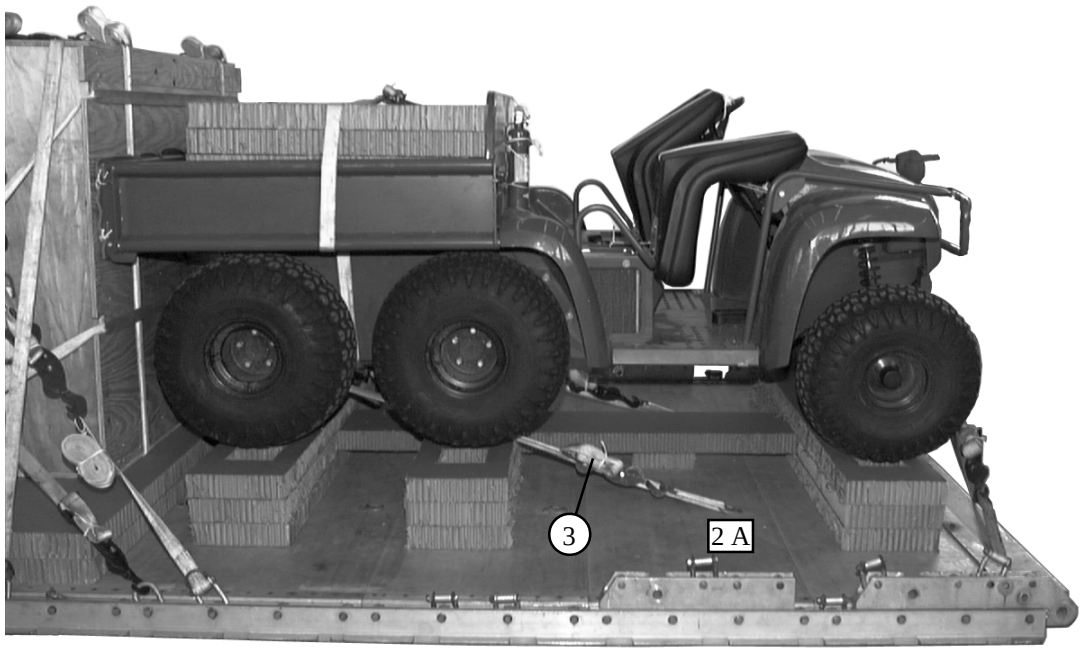
2-11. Lash the M-Gators to the platform according to FM 10-500-2/TO 13C7-1-5 and as shown in Figures 2-9 through 2-15.

NOTE: Place all load binders near the platform in case adjustments to the lashings are needed.



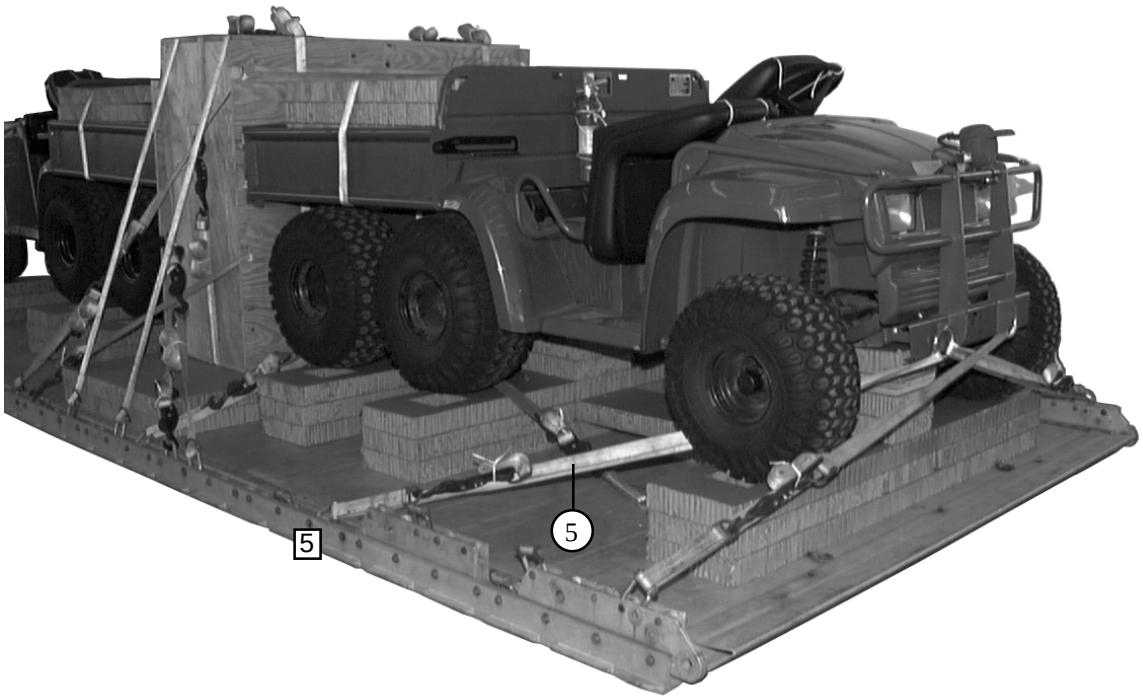
Lashing Number	**Tiedown** Clevis Number	**Instructions**
		Pass lashing through:
1	1	Front left tiedown point
2	1A	Front right tiedown point

Figure 2-9. Lashings 1 and 2 Installed



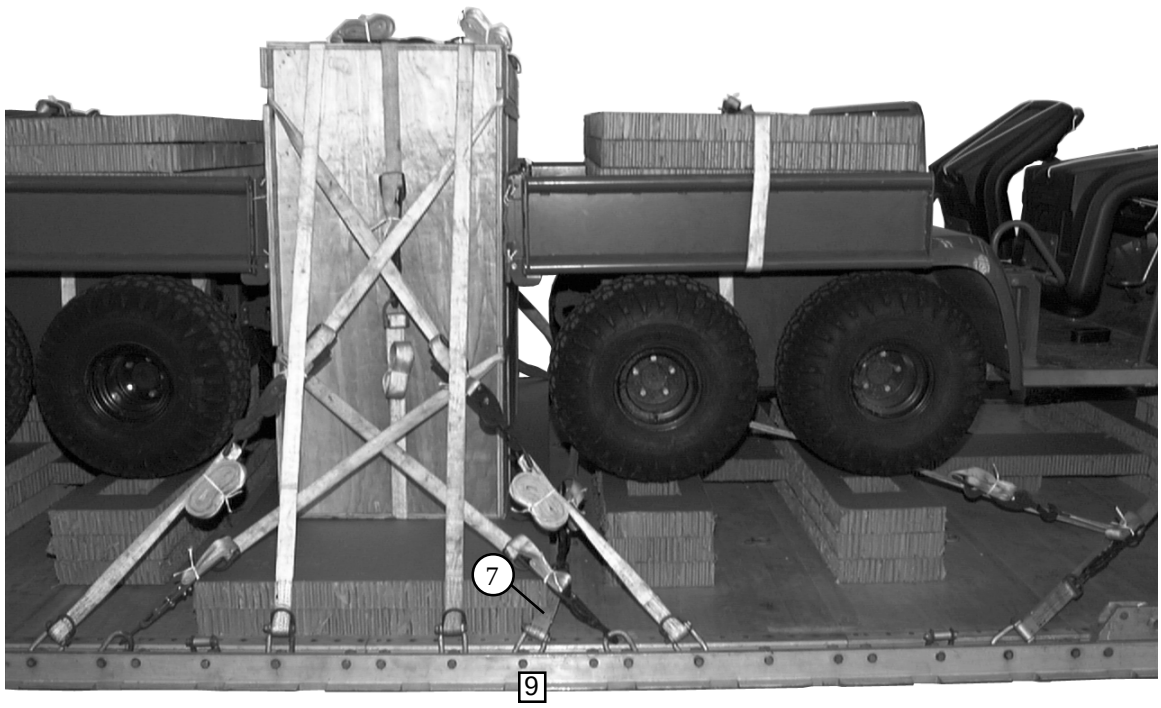
Lashing Number	**Tiedown** Clevis Number	**Instructions**
		Pass lashing through:
3	Tiedown-ring 2A	Right rear tiedown point
4	Tiedown-ring 2B	Left rear tiedown point

Figure 2-10. Lashings 3 and 4 Installed



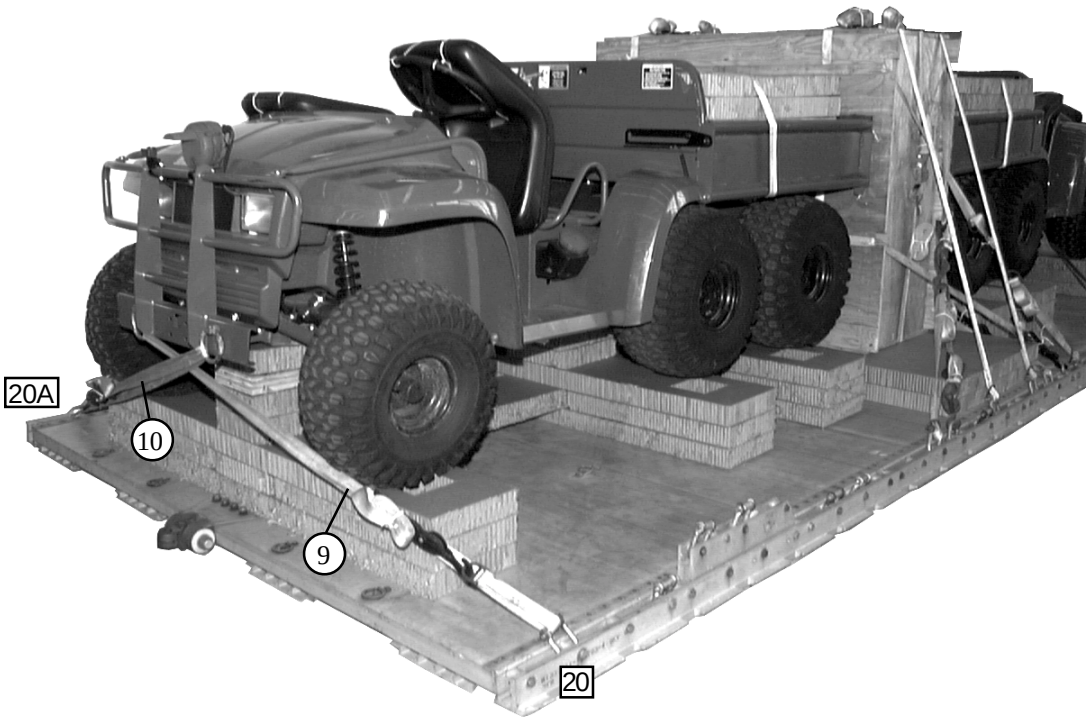
Lashing Number	**Tiedown** Clevis Number	**Instructions**
		Pass lashing through:
5	5	Front right tiedown point
6	5A	Front left tiedown point

Figure 2-11. Lashings 5 and 6 Installed



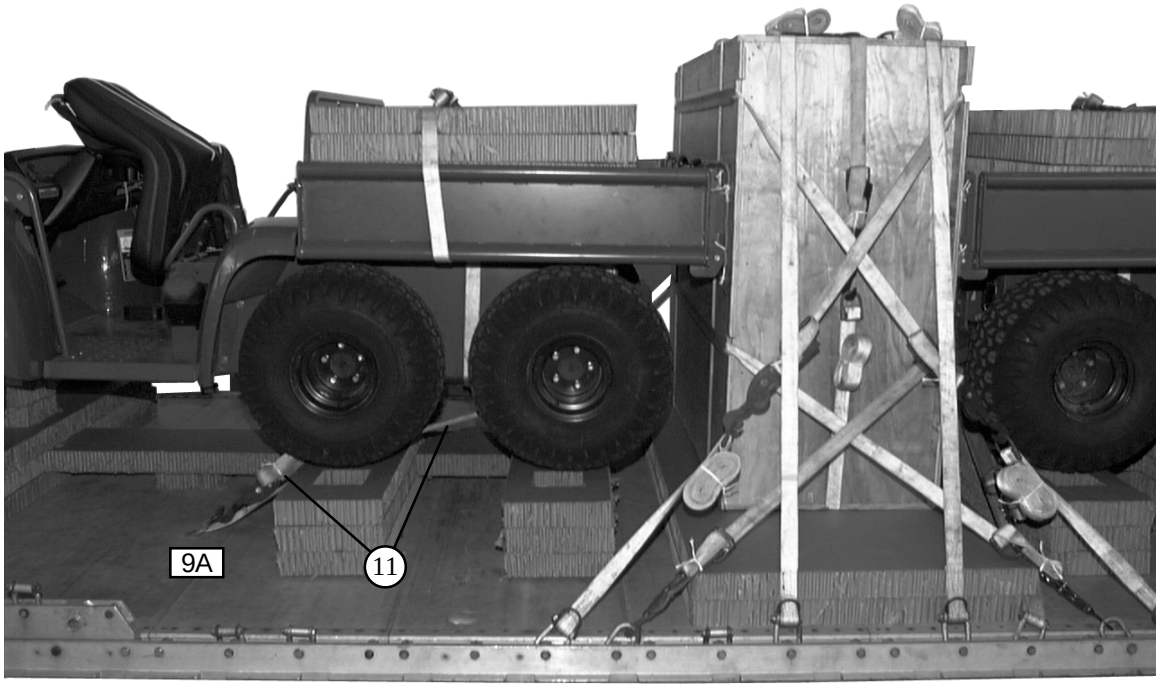
Lashing Number	**Tiedown** Clevis Number	**Instructions**
		Pass lashing through:
7	9	Rear left tiedown point
8	9A	Rear right tiedown point

Figure 2-12. Lashings 7and 8 Installed



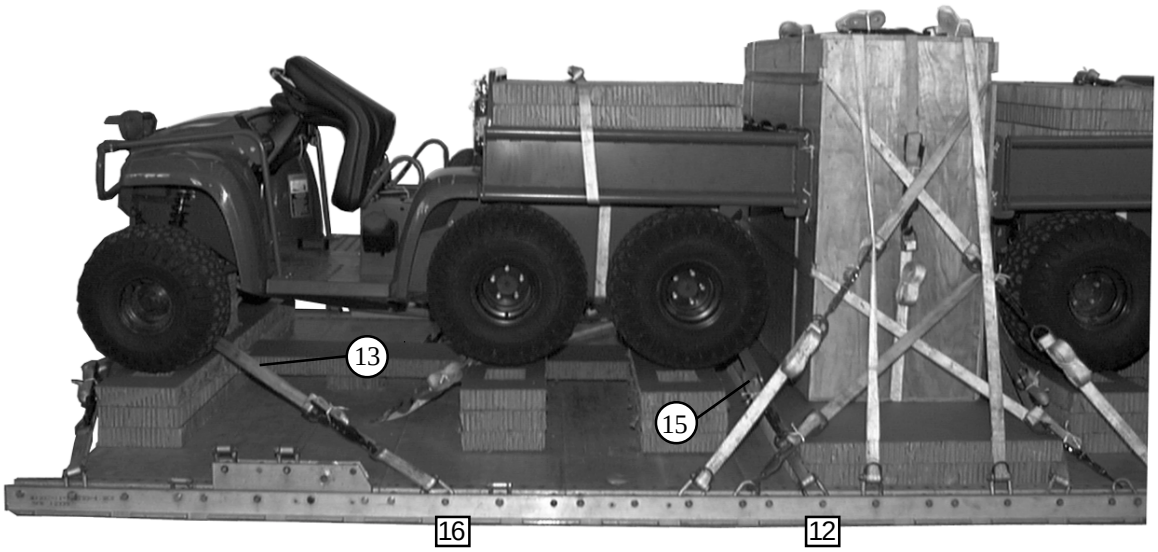
Lashing Number	**Tiedown** Clevis Number	**Instructions**
		Pass lashing through:
9	20	Front right tiedown point
10	20A	Front left tiedown point

Figure 2-13. Lashings 9 and 10 Installed



Lashing Number	**Tiedown** Clevis Number	**Instructions**
		Pass lashing through:
11	Tiedown-ring 9A	Left rear tiedown point
12	Tiedown-ring 9B	Right rear tiedown point

Figure 2-14. Lashings 11 and 12 Installed

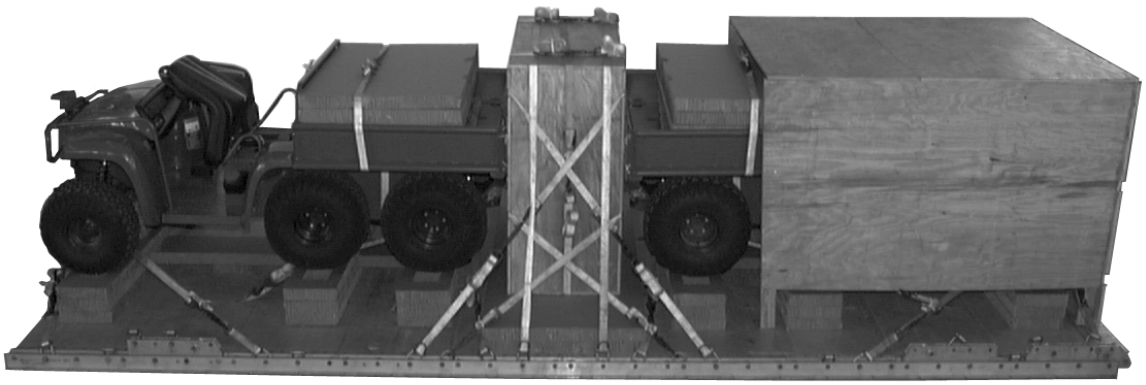


Lashing Number	**Tiedown** Clevis Number	**Instructions**
		Pass lashing through:
13	16	Front left tiedown point
14	16A	Front right tiedown point
15	12	Right rear tiedown point
16	12A	Left rear tiedown point

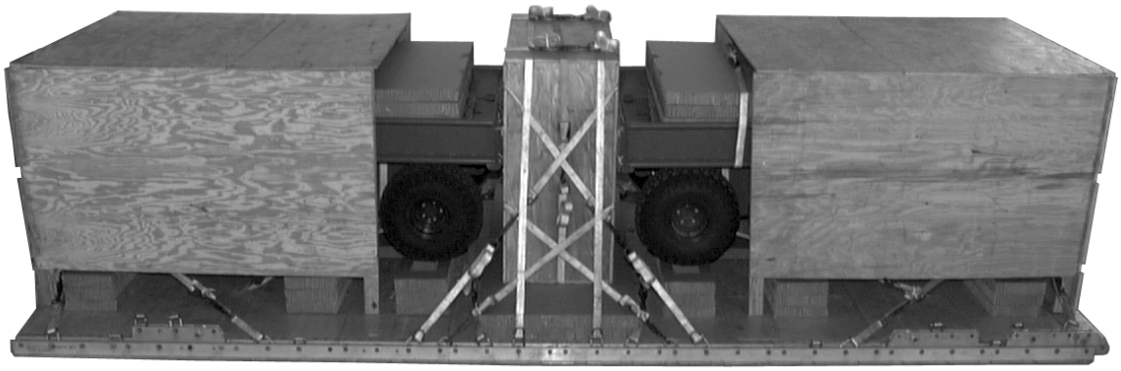
Figure 2-15. Lashings 13 and 14 Installed

POSITIONING M-GATOR BOXES

2-12. Position M-Gator boxes as shown in Figure 2-16.



Position the front box over the front M-Gator aligning the bottom front edge of the box with the front edge of the platform.

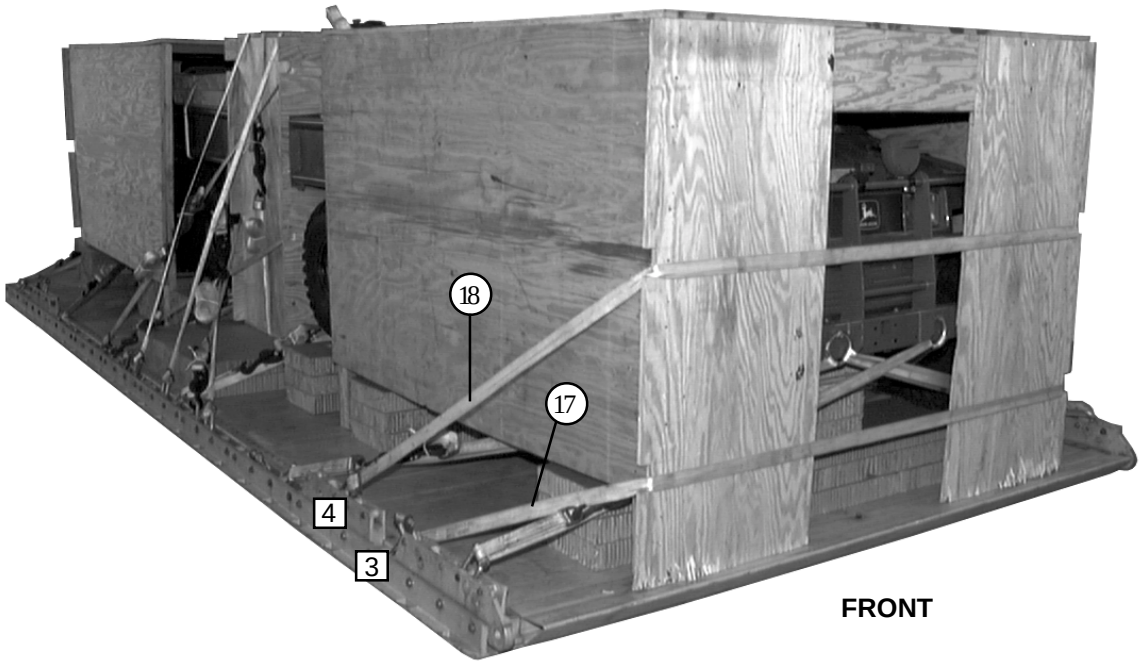


Position the rear box over the rear M-Gator aligning the bottom front edge of the box with the rear edge of the platform.

Figure 2-16. M-Gator Boxes Positioned

LASHING M-GATOR BOXES

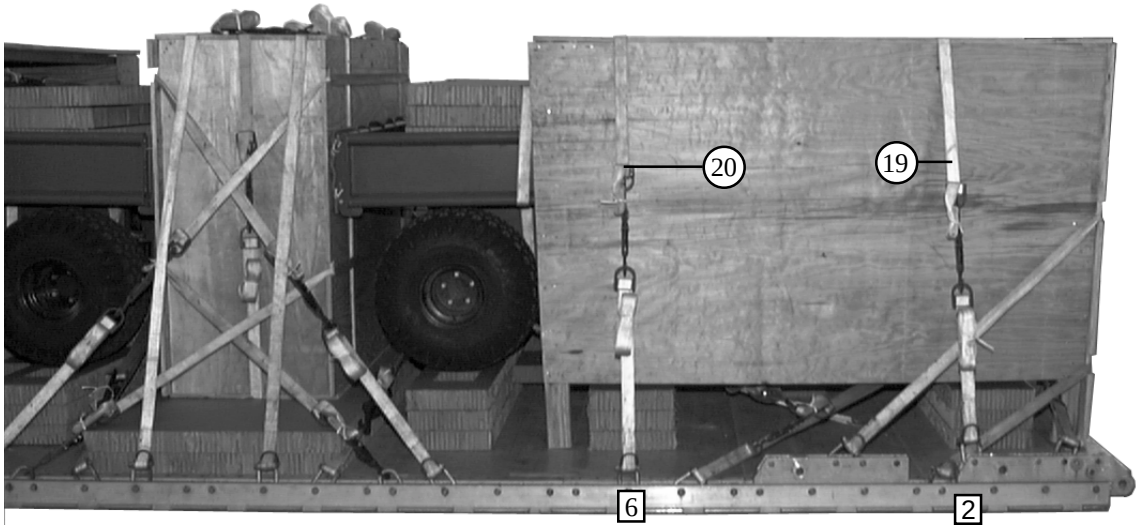
2-13. Lash the M-Gator boxes to the platform according to FM 10-500-2/TO 13C7-1-5 and as shown in Figure 2-17.



Route a lashing through clevis 3 and back through it's own D-ring, and pull strap taut. Repeat the same steps for clevis 4. Bind to clevises 3A and 4A.

Lashing Number	**Tiedown** Clevis Number	**Instructions**
		Pass lashing through:
17	3 and 3A	Front lower cutouts of front box
18	4 and 4A	Front upper cutouts of front box

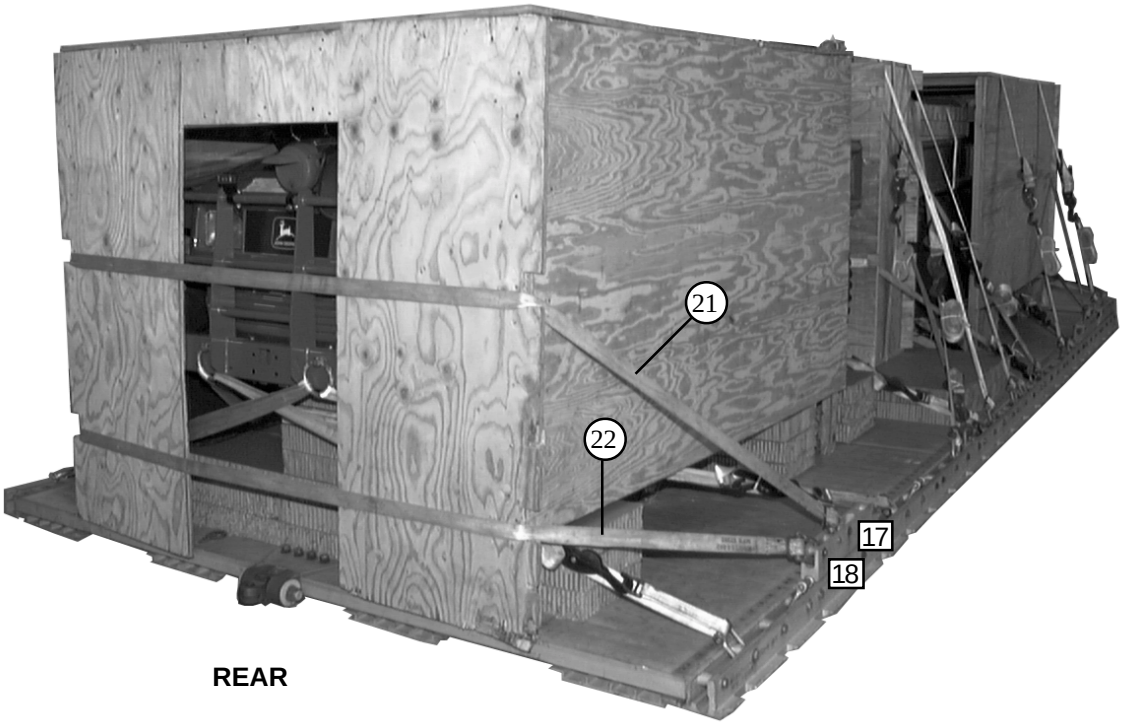
Figure 2-17. M-Gator Boxes Lashed



Route a lashing through clevis 2 and back through it's own D-ring, and pull strap taut. Repeat the same steps for clevises 2A, 6, and 6A.

Lashing Number	**Tiedown** Clevis Number	**Instructions**
		Pass lashing through:
19	2 and 2A	Over top of box and bind on right side of box.
20	6 and 6A	Over top of box and bind on right side of box.

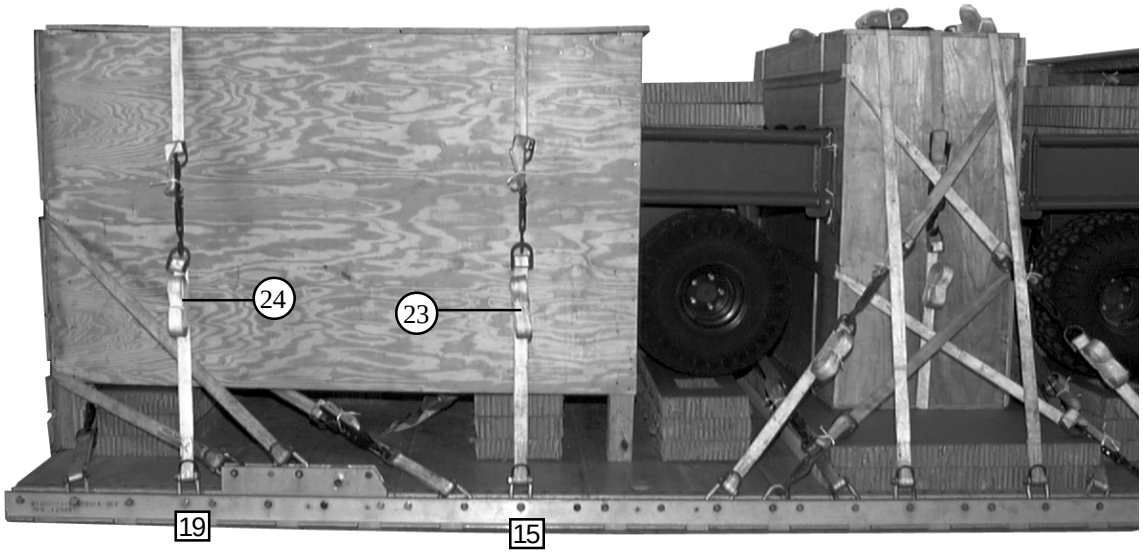
Figure 2-17. M-Gator Boxes Lashed (continued)



Route a lashing through clevis 17 and back through it's own D-ring, and pull the strap taut. Repeat the same steps for 17A, 18, and 18A. Bind to clevises 17A and 18A.

Lashing Number	**Tiedown** Clevis Number	**Instructions**
21 22	17 and 17A 18 and 18A	Pass lashing through: Front upper cutouts of rear box. Front lower cutouts of rear box.

Figure 2-17. M-Gator Boxes Lashed (continued)



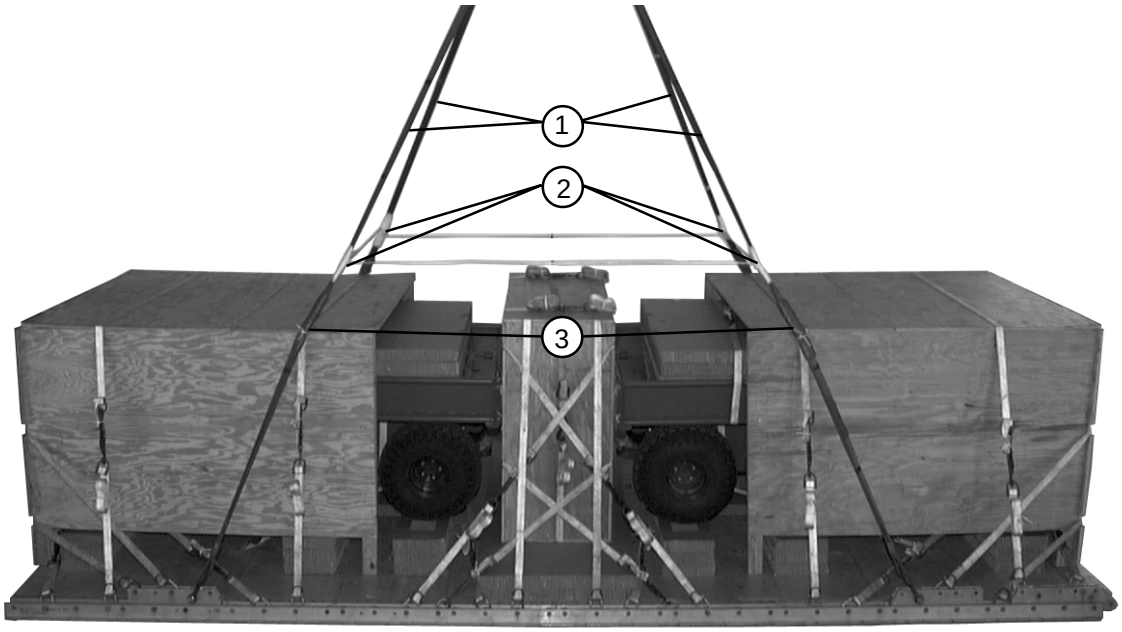
Route a lashing through clevis 15 and back through it's own D-ring, and pull strap taut. Repeat the same steps for clevises 15A, 19, and 19A.

Lashing Number	**Tiedown** Clevis Number	**Instructions**
		Pass lashing:
23	15 and 15A	Over top of box and bind on left side of box.
24	19 and 19A	Over top of box and bind on left side of box.

Figure 2-17. M-Gator Boxes Lashed (continued)

INSTALLING SUSPENSION SLINGS

2-14. Install four 16-foot (2-loop), type XXVI nylon slings as suspension slings according to FM 10-500-2/TO 13C7-1-5 and as shown in Figure 2-18.



(1) Attach a 16-foot (2-loop), type XXVI nylon sling to each of the four suspension links using a large clevis.

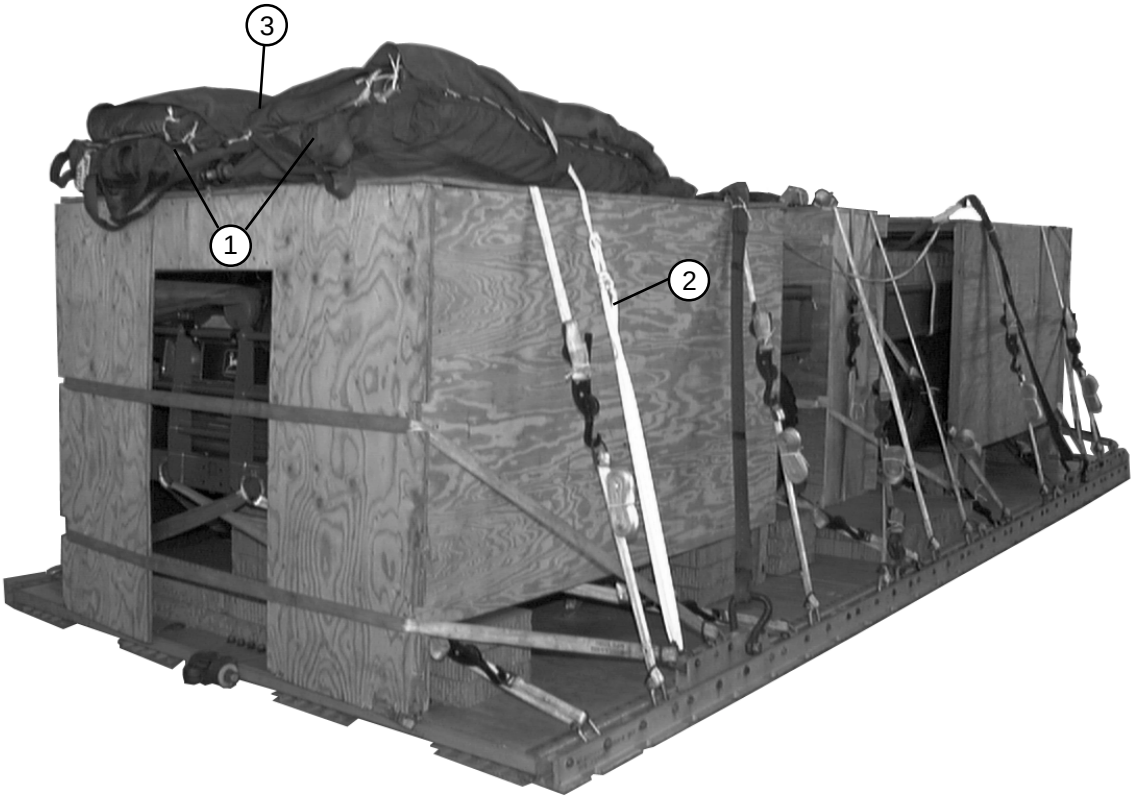
(2) Raise the slings above the load and install the deadman's tie as outlined in FM 10-500-2/TO 13C7-1-5.

(3) Felt and tape each sling where they make contact with the boxes.

Figure 2-18. Suspension Slings Installed

STOWING CARGO PARACHUTES

2-15. Prepare, stow, and restrain two G-11 cargo parachutes according to FM 10-500-2/TO 13C7-1-5 and as shown in Figure 2-19.

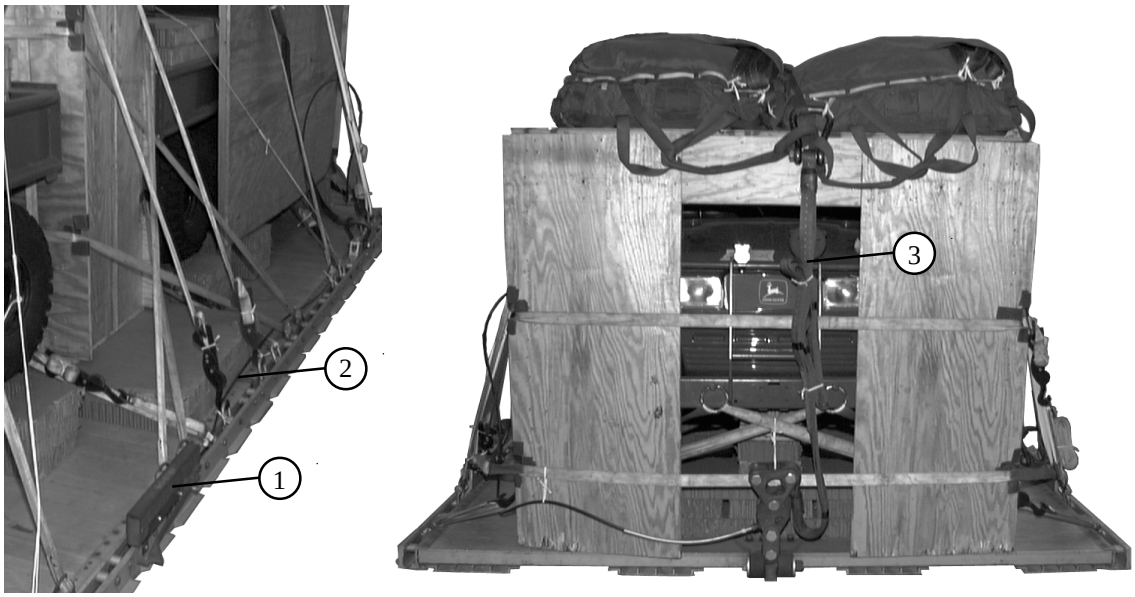


1. Place two G-11 cargo parachutes on the front edge of the rear M-Gator box.
2. Restrain the parachutes with type VIII nylon webbing to clevises 18 and 18A.
3. Install the parachute release strap according to FM 10-500-2/TO 13C7-1-5.

Figure 2-19. Cargo Parachutes Stowed

INSTALLING EXTRACTION SYSTEM

2-16. Install the Extraction Force Transfer Coupling (EFTC) according to FM 10-500-2/TO 13C7-1-5 and as shown in Figure 2-20.

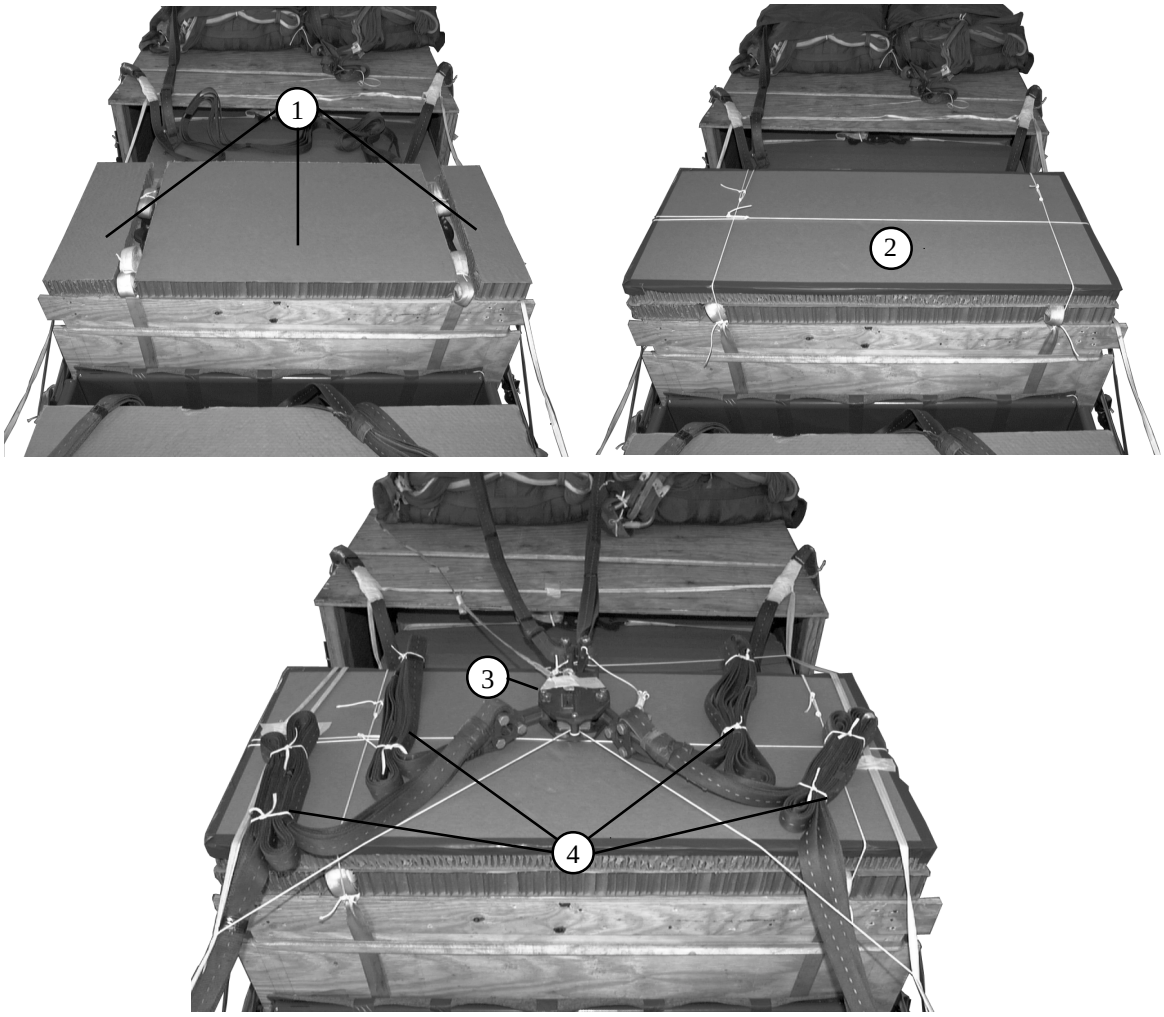


1. Install EFTC actuator mounting brackets using rear mounting holes.
2. Install a 20-foot cable.
3. Attach a 9-foot (2-loop), type XXVI nylon sling for the deployment line.

Figure 2-20. Extraction System Installed

INSTALLING PARACHUTE RELEASE

2-17. Prepare and install an M-1 cargo parachute release system according to FM 10-500-2/TO 13C7-1-5 and as shown in Figure 2-21.



1. Cut one piece of honeycomb to fit between the lashings and two pieces to fit outside the lashings on top of the equipment box. Each piece will be 25 1/2-inches wide.
2. Cut a 58 1/2-inch by 25 1/2-inch piece of honeycomb and place it on top of the three pieces previously placed on top of the equipment box. Tape the outer edges and secure with type III nylon cord.
3. Place the M-1 release on the equipment box and safety it to convenient places on the load.
4. Fold and secure any slack in the suspension slings.

Figure 2-21. Parachute Release Installed

POSITIONING EXTRACTION PARACHUTE

2-18. Select the extraction parachute and extraction line needed using the extraction line requirements table in FM 10-500-2/TO 13C7-1-5. Place the extraction parachute and extraction line on the load for installation inside aircraft.

INSTALLING PROVISIONS FOR EMERGENCY RESTRAINTS

2-19. Select and install provisions for emergency restraints according to the emergency aft restraint requirements in FM 10-500-2/TO 13C7-1-5.

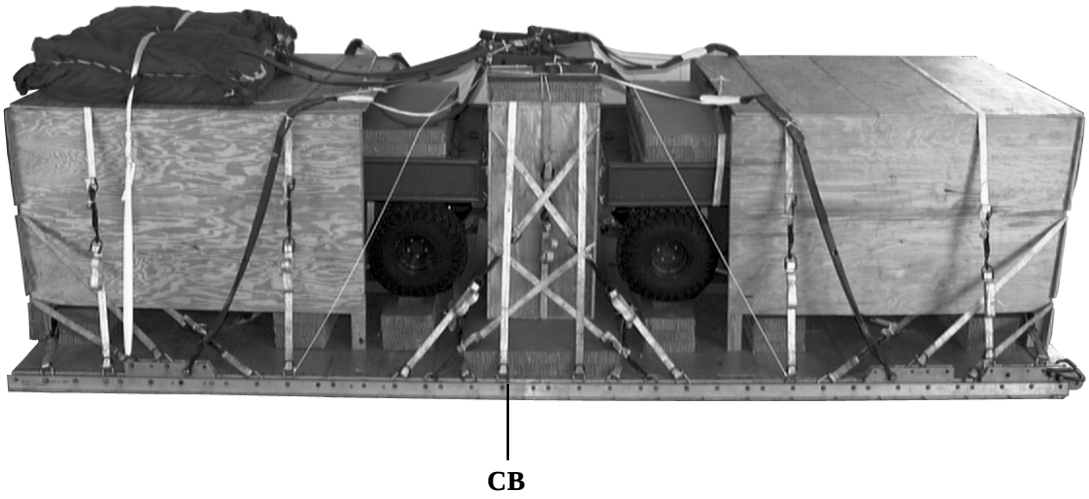
MARKING RIGGED LOAD

2-20. Mark the rigged load according to FM 10-500-2/TO 13C7-1-5 and as shown in Figure 2-22. Complete the Shipper's Declaration for Dangerous Goods. If the load varies from the one shown, the weight, height, CB, and must be recomputed.

EQUIPMENT REQUIRED

2-21. The equipment required to rig this load is listed in Table 2-1.

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



RIGGED LOAD

Weight	8,520 pounds
Height	78 inches
Width	108 inches
Overall Length	258 inches
Overhang: Front (Box)	2 1/2 inches
Rear (EFTC)	18 inches
Center of Balance (from front edge of platform)	124 inches

Figure 2-22. M-Gator Rigged on a 20-Foot Platform for Low-Velocity Airdrop

Table 2-1. Equipment required for rigging M-Gator on a 20-foot platform for low-velocity airdrop

National Stock Number	Item	Quantity
8040-00-273-8713	Adhesive paste, 1-gal	As required
1670-01-035-6054	Bridle, extraction line bag (C-17)	1
4030-00-090-5354	Clevis, suspension, 1-in (large)	5
4020-00-240-2146	Cord, nylon, type III, 550-lb	As required
1670-00-434-5783	Coupling, airdrop, extraction force transfer with cable, 20ft	1
	Cover:	
1670-00-360-0328	Clevis, large	2
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
1670-01-107-7652	For C-5: 160-ft (1-loop), type XXVI	1
1670-01-107-7651	For C-17: 140-ft (3-loop), type XXVI	1
	Link assembly:	
	Two-point, 3 3/4-in	1
5306-00-435-8994	Bolt, 1-in diam, 4-in long	(2)
5310-00-232-5165	Nut, 1-in, hexagonal	(2)
1670-00-003-1954	Plate, side, 3 3/4-in	(2)
5365-00-007-3414	Spacer, large	(2)
	Two-point, 3 3/4-in (for C-17)	1
5306-00-435-8994	Bolt, 1-in diam, 4-in long	(2)
5310-00-232-5165	Nut, 1-in, hexagonal	(2)
1670-00-003-1954	Plate, side, 3 3/4-in	(2)
5365-00-007-3414	Spacer, large	(2)
N/A	Link, towed mechanized release (H-Block) C-17 aircraft	1
	Lumber:	
5510-00-220-6146	2- by 4-in	As required
5510-00-220-6148	2- by 6-in	As required
5315-00-010-4659	Nail, steel wire, common, 8d	As required
1670-00-753-3928	Pad, energy dissipating, honeycomb, 3- by 36- by 96-in	20 sheets

Table 2-1. Equipment required for rigging M-Gator on a 20-foot platform for low-velocity airdrop (continued)

National Stock Number	Item	Quantity
	Parachute:	
1670-01-016-7841	Cargo, G-11B	2
1670-01-063-3716	Cargo, extraction, 22-ft (for C-130 and C-17)	1
1670-01-063-3715	Drogue, 15-ft (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	(40)
1670-01-353-8424	Extraction bracket assembly	(1)
1670-01-162-2381	Link, tandem, suspension link assembly	(2)
1670-01-247-2389	Link, suspension	(4)
5530-00-128-4981	Plywood, 3/4- by 48- by 96-in	9 sheets
1670-01-097-8816	Release, cargo parachute, M-1	1
	Sling, cargo airdrop	
	For suspension:	
1670-01-063-7761	16-ft (2-loop), type XXVI nylon webbing	4
	For deployment:	
1670-01-062-6304	9-ft (2-loop), type XXVI nylon webbing	1
	For riser extention:	
1670-01-062-6302	20-ft (2-loop), type XXVI nylon webbing	2
7510-00-266-5016	Tape, adhesive, 2-in	As required
1670-00-937-0271	Tie-down assembly, 15-ft	46
	Webbing:	
8305-00-268-2411	Cotton, 1/4-in, type I	As required
8305-00-082-5725	Nylon, tubular, 1/2-in	As required
8305-00-261-8585	Type VIII	As required

CHAPTER 3

Rigging One Military Utility Vehicle (M-Gator) and an A-22 Cargo Bag on a 12-Foot Platform for Low-Velocity Airdrop

DESCRIPTION OF LOAD

3-1. This load consists of one John Deere Diesel, which has been named the M-Gator and one A-22 cargo bag. The minimum the A-22 cargo bag can weigh is 800 pounds and the maximum weight is 1,000 pounds. It is rigged on a 12-foot platform. The load shown has a rigged weight of 4,630 pounds. It has an overall length of 162 inches, width of 108 inches, and height of 78 inches, with a center of balance of 68 inches. The load is rigged with one G-11 cargo parachute.

PREPARING PLATFORM

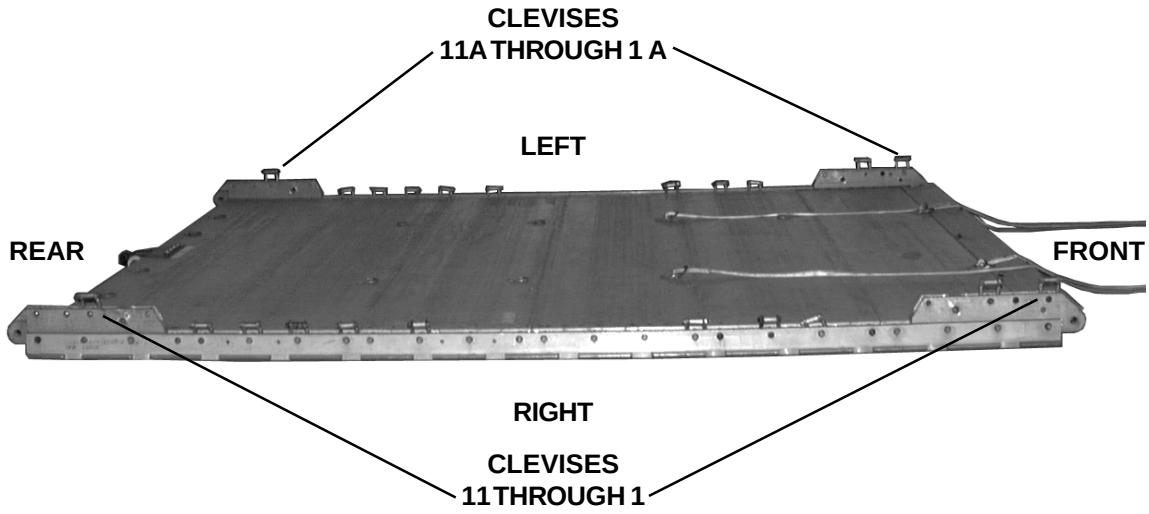
3-2. Inspect, or assemble and inspect, a 12-foot platform as outlined in TM 10-1670-268-20&P/TO 13C7-52-22. Prepare a 12-foot platform using 22 tiedown clevises as shown in Figure 3-1.

BUILDING M-GATOR BOX

3-3. Build the M-Gator box as outlined in chapter 1, paragraph 1-7.

PREPARING M-GATOR

3-4. Prepare the M-Gator according to chapter 1, paragraph 1-4 and chapter 2, paragraph 2-5.



Step:

1. Install a tandem multi-purpose link to the front of each platform side rail using holes 1,2, and 3.
2. Install a tandem multi-purpose link to the rear of each platform side rail using holes 22, 23, and 24.
3. Install a clevis on bushings 1 and 3 of each front tandem link.
4. Install a clevis on bushing 2 of each rear tandem link.
5. Starting at the front of each platform side rail, install clevises on the bushings bolted on holes 6, 7, 9, 15, 17, 18, 19, and 20.
6. Starting at the front of the platform number the clevises 1 through 11 on the right side and 1A through 11A on the left side.
7. Label the tie-down rings according to FM 10-500-2/TO 13C7-1-5.
8. Route a lashing through tie-down ring 1A and back through it's own D-ring, repeat for tie-down rings 1B, 3A, and 3B.

Figure 3-1. Platform Prepared

BUILDING HONEYCOMB STACKS

3-5. Refer to paragraph 1-3 for building honeycomb stack 1. Build honeycomb stack 2 as shown in Figure 3-2.

Stack Number	Pieces	Width (inches)	Length (inches)	Material	Instructions
2	2	51	36	Honeycomb	Glue and place one on top of the other.

Figure 3-2. Honeycomb Stack Prepared

POSITIONING HONEYCOMB STACK 1

3-6. Position honeycomb stack 1 centered left to right and 47 1/2 inches from the front edge of the platform and as shown in Figure 3-3.

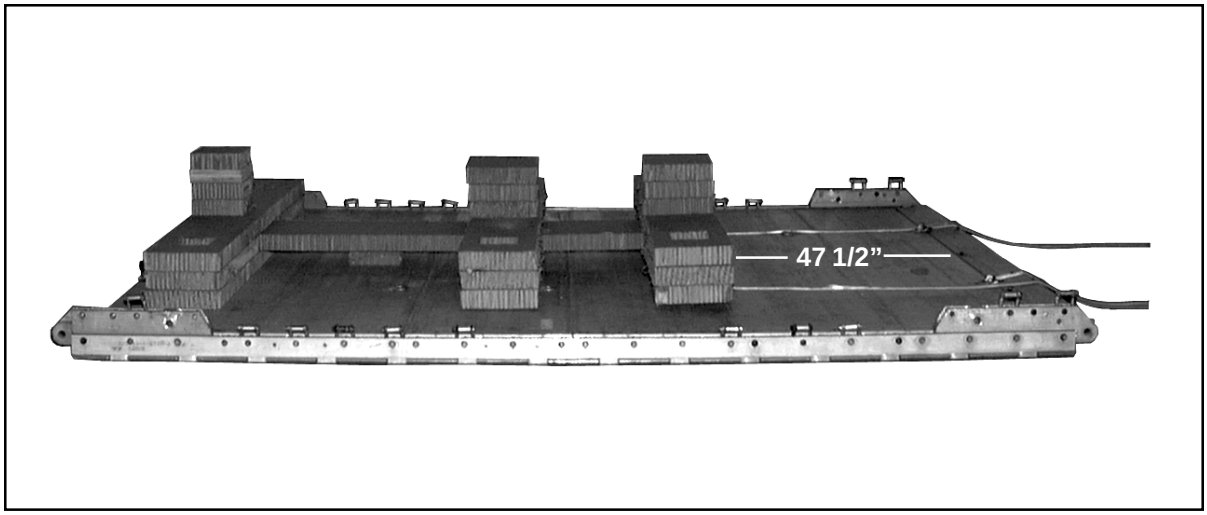


Figure 3-3. Honeycomb Stack 1 Positioned

POSITIONING LOAD

3-7. Use four 12-foot (2-loop), type XXVI, nylon suspension slings to lift and position the M-Gator. Attach large clevis assemblies to each sling. Using two front and two rear lifting points, attach one clevis to each lifting point. Position the M-Gator with the rear of the vehicle facing the front of the platform. Align the rear edge of the M-Gator frame with the front edge of the honeycomb stack and center. Each tire will be centered over a cutout in the honeycomb stack as shown in Figure 3-4.

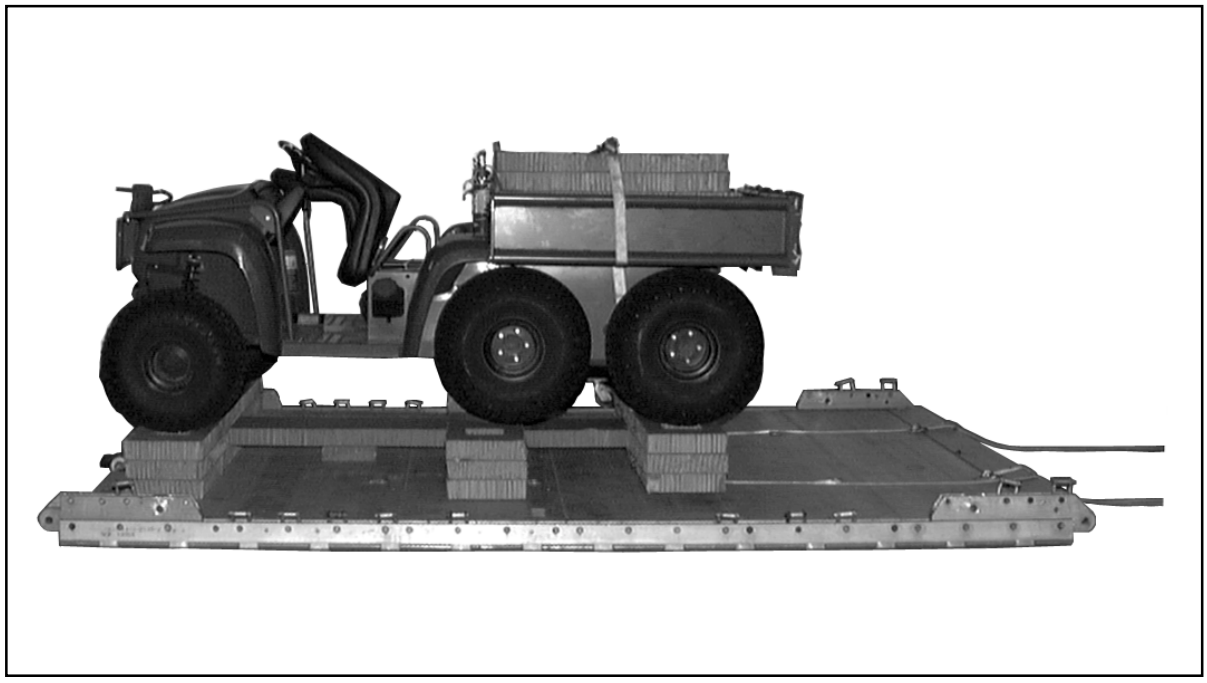


Figure 3-4. M-Gator Positioned

POSITIONING HONEYCOMB STACK 2

3-8. Temporarily place the pre-positioned lashings from deck-rings 3A and 3B over the tailgate. Position honeycomb stack 2 on the front edge of the platform, centered left to right ensure the 51 inch length is across the platform as shown in Figure 3-5.

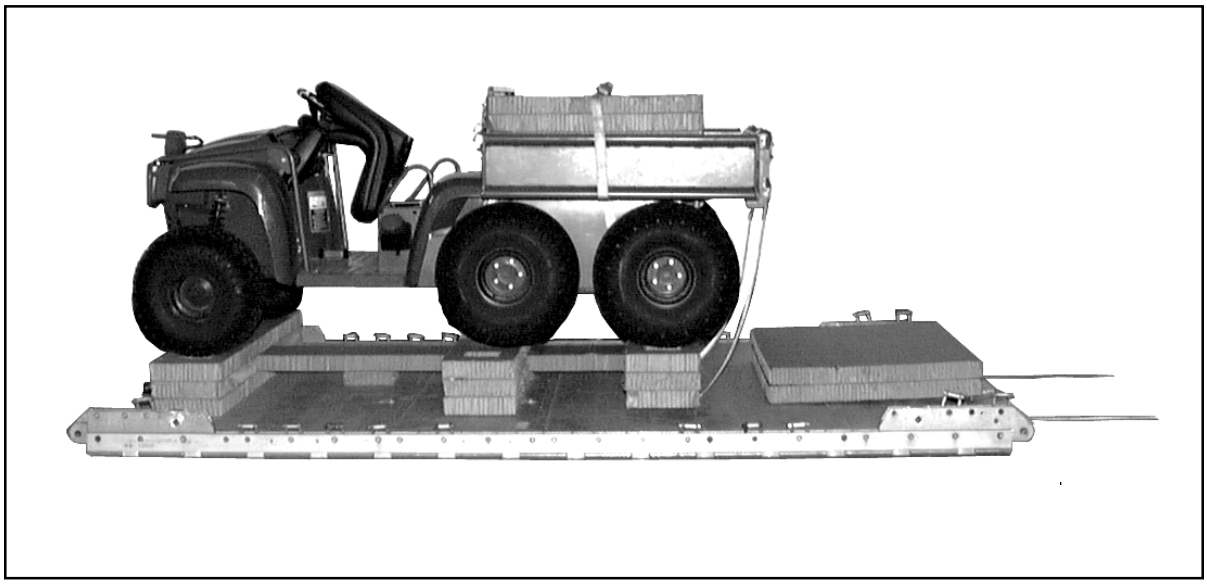


Figure 3-5. Honeycomb Stack 2 Positioned

RIGGING AND POSITIONING THE A-22 CARGO BAG

3-9. Rig the A-22 cargo bag as described in FM 10-500-3/TO13C7-1-11. The A-22 cargo bag weight limitations are 800 pounds minimum to 2,000 pounds maximum of unit specific equipment. Position the A-22 container on stack 2. Place the A-22 container against the tailgate of the M-Gator so there is no overhang as shown in Figure 3-6.

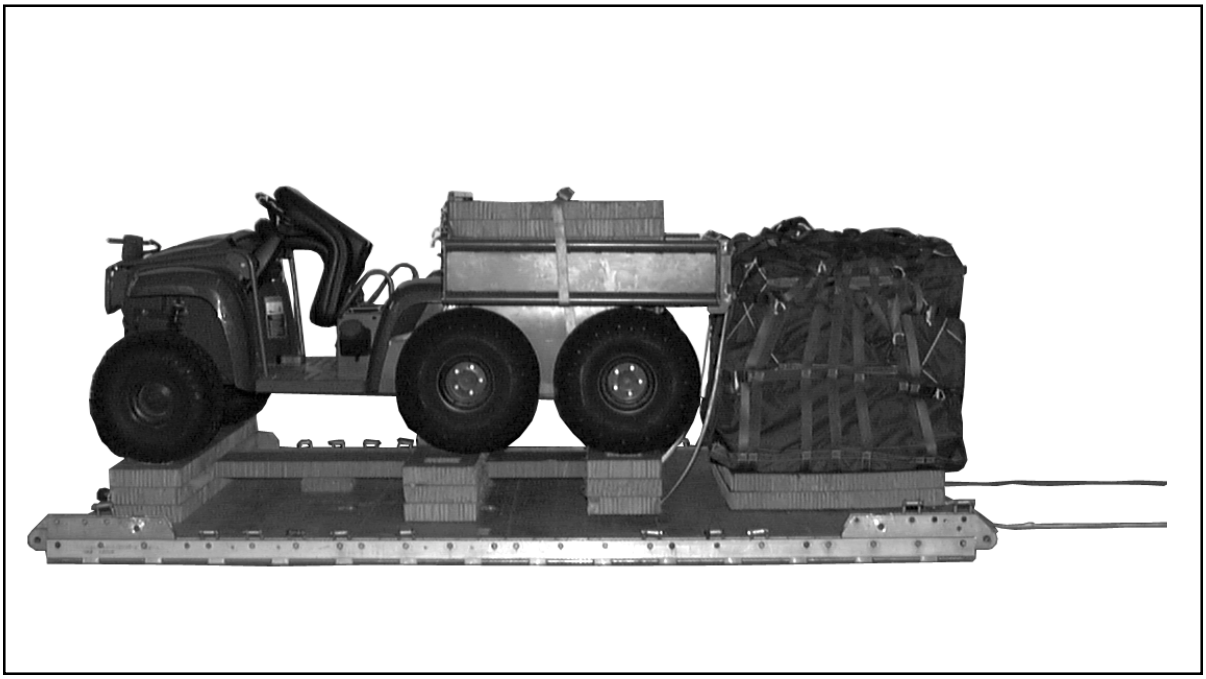
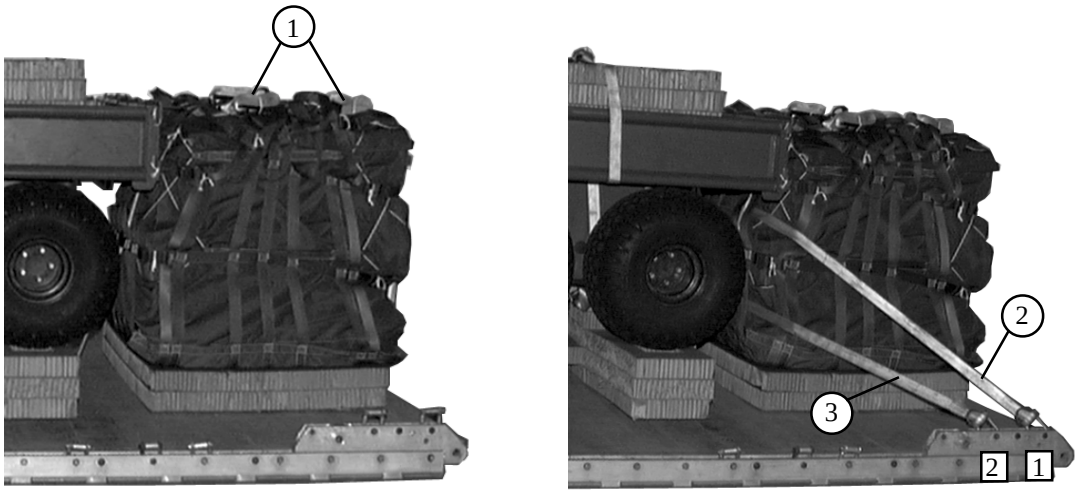


Figure 3-6. A-22 Cargo Bag Postitioned

LASHING THE A-22 CARGO BAG

3-10. Lash the A-22 cargo bag to the platform according to FM 10-500-2/TO 13C7-1-5 and as shown in Figure 3-7.

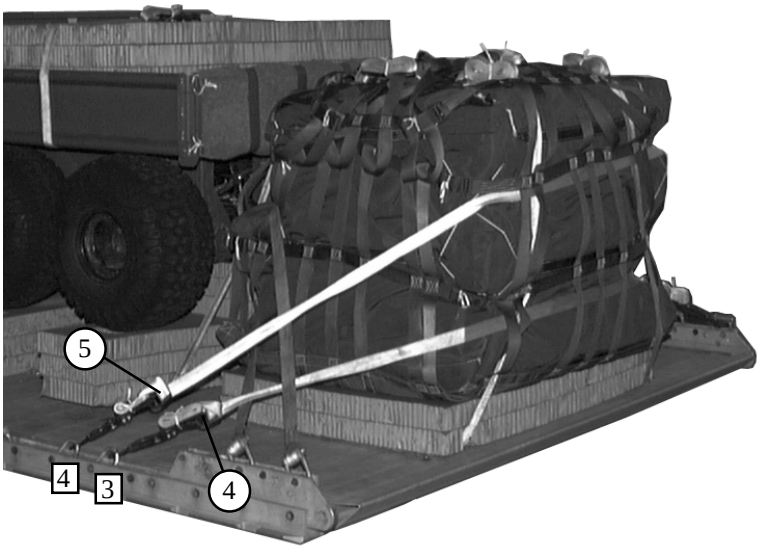


1. Route the pre-positioned lashings under the A-22 cargo bag webbing, tie-down ring 1A load binds to tie-down ring 3A, tie-down ring 1B load binds to tie-down ring 3B, and load bind on top of A-22 cargo bag.

2. Route a lashing through clevis 1 and back through it's own D-ring, route it through the rear middle webbing on the A-22 cargo bag and load bind to clevis 1A.

3. Route a lashing through clevis 2 and back through it's own D-ring, route it through the rear lower webbing on the A-22 cargo bag and load bind to clevis 2A.

Figure 3-7. A-22 Cargo Bag Lashed



(4) Route a lashing through clevis 3A and back through it's own D-ring. Route it through the front lower webbing on the A-22 cargo bag and load bind to clevis 3.

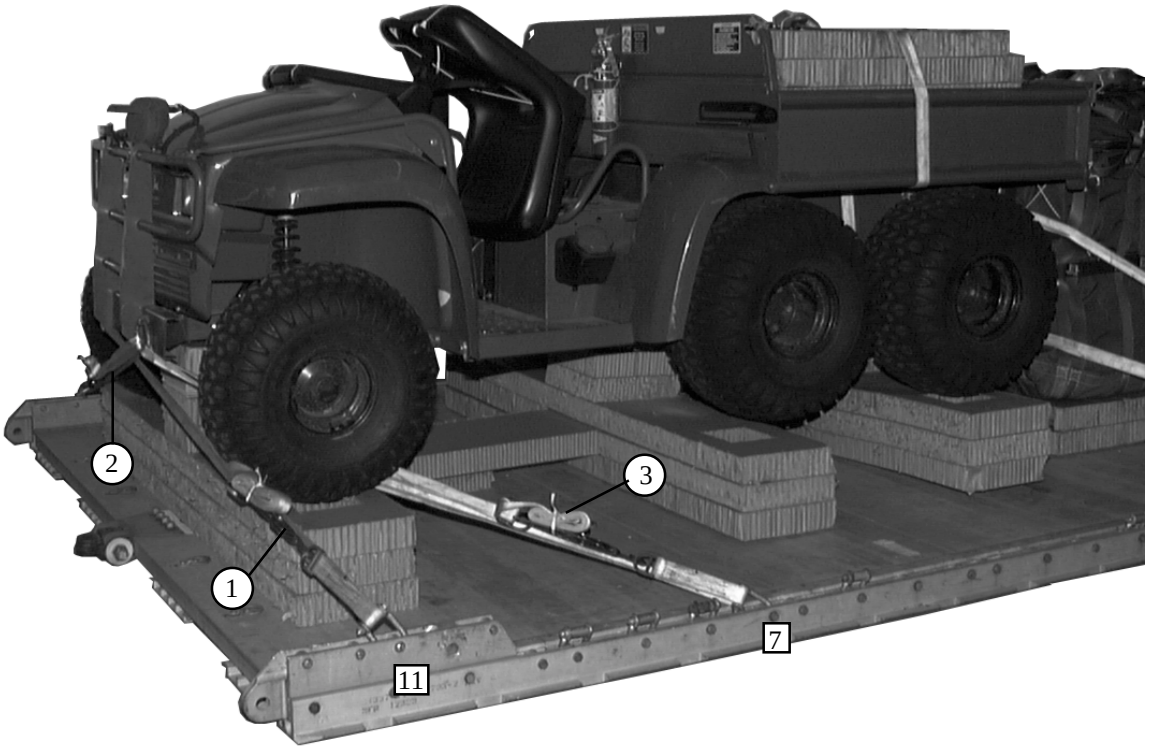
(5) Route a lashing through clevis 4A and back through it's own D-ring. Route it through the front middle webbing on the A-22 cargo bag and load bind to clevis 4.

Figure 3-7. A-22 Cargo Bag Lashed (Continued)

LASHING M-GATOR

3-11. Lash the M-Gator to the platform according to FM 10-500-2/TO 13C7-1-5 and as shown in Figures 3-8 through 3-10.

NOTE: Place all load binders near the platform in case adjustments to the lashings are needed.

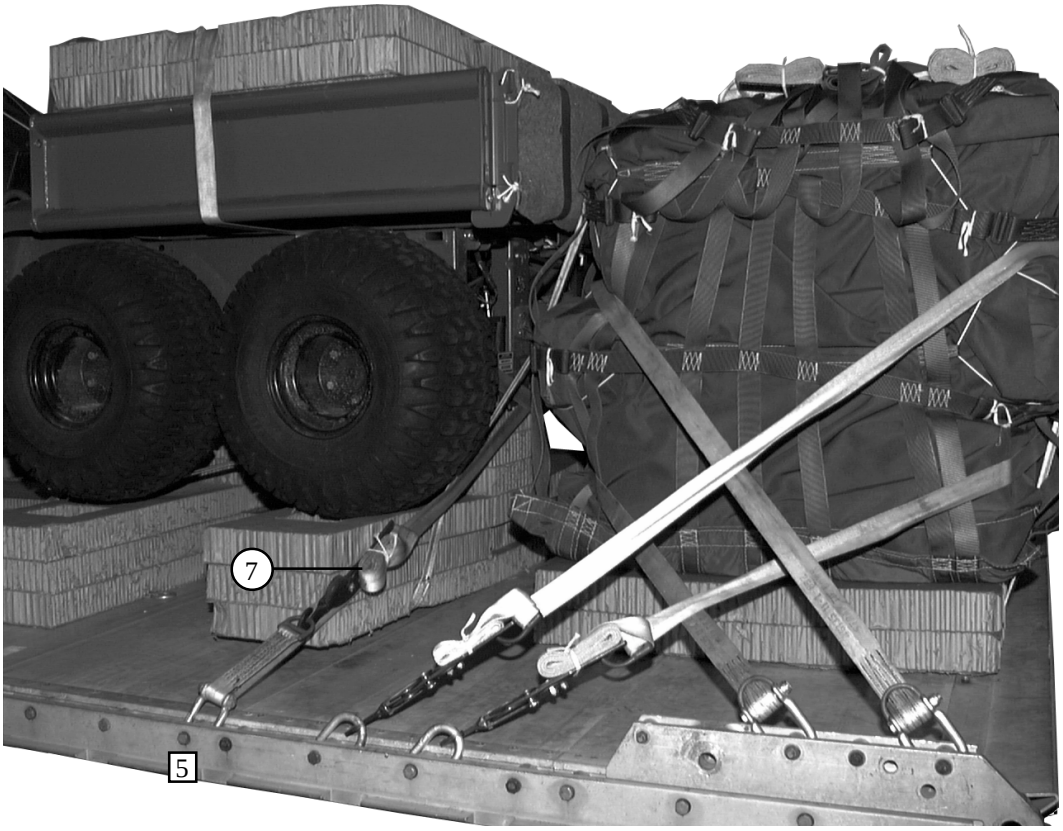


Lashing Number	**Tiedown** Clevis Number	**Instructions**
		Pass lashing through:
1	11	Front right tiedown point
2	11A	Front left tiedown point
3	7	Front left tiedown point
4	7A	Front right tiedown point

Figure 3-8. Lashings 1,2,3, and 4 Installed

Lashing Number	**Tiedown** Clevis Number	**Instructions**
		Pass lashing through:
5	Tiedown-ring 5A	Left rear tiedown point (do not tighten)
6	Tiedown-ring 5B	Right rear tiedown point (do not tighten)

Figure 3-9. Lashings 5 and 6 Installed

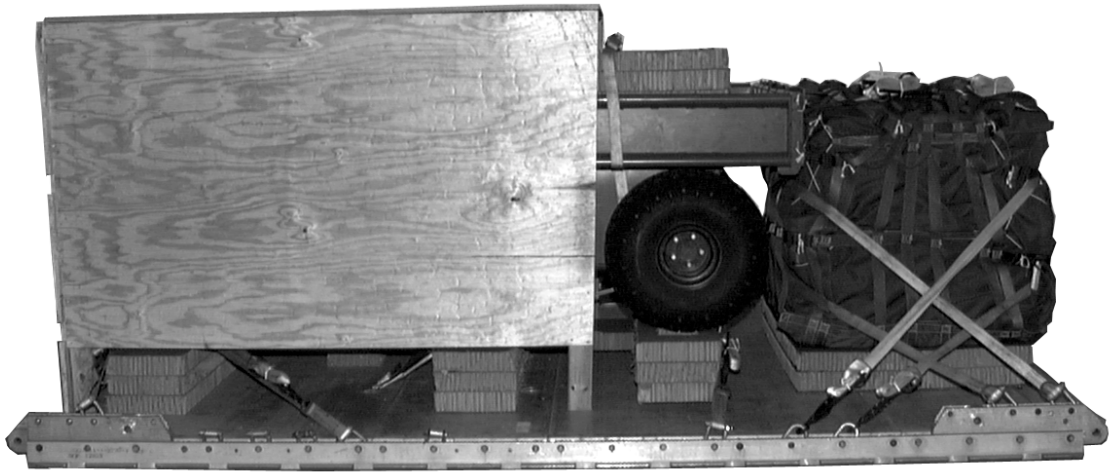


Lashing Number	**Tiedown** Clevis Number	**Instructions**
		Pass lashing through:
7	5	Rear right tiedown point (do not tighten)
8	5A	Rear left tiedown point (do not tighten)
		Tighten lashings 5 and 6 and then 7 and 8

Figure 3-10. Lashings 7 and 8 Installed

POSITIONING M-GATOR BOX

3-12. Position M-Gator box as shown in Figure 3-11.

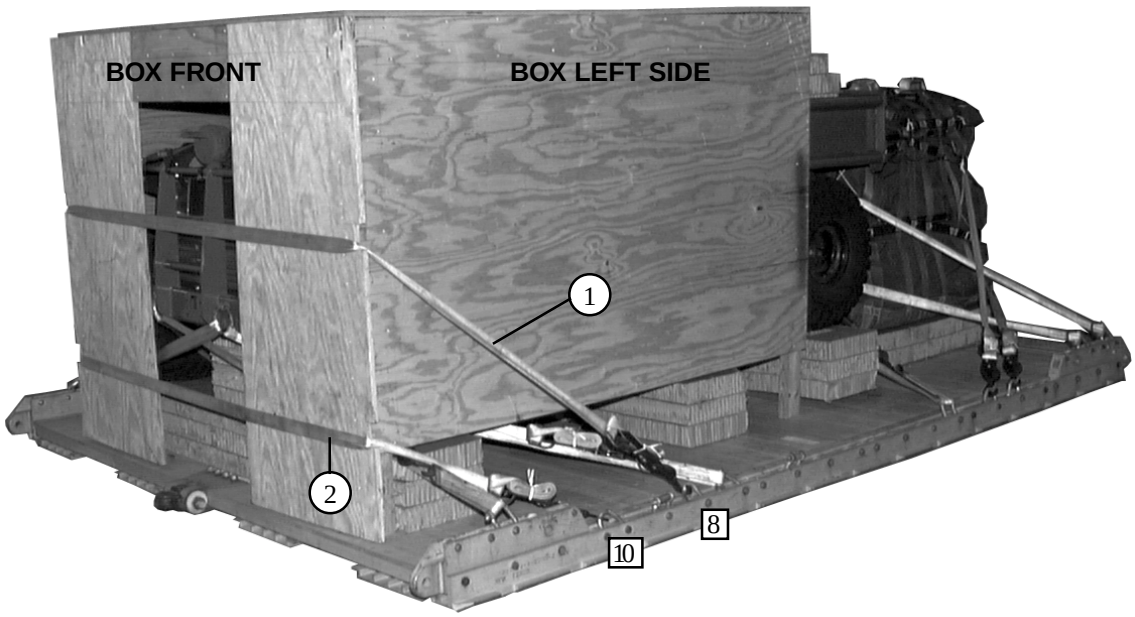


Position the box on the platform, aligning the front bottom edge of the box with the platform rear edge.

Figure 3-11. M-Gator Box Positioned

LASHING M-GATOR BOX

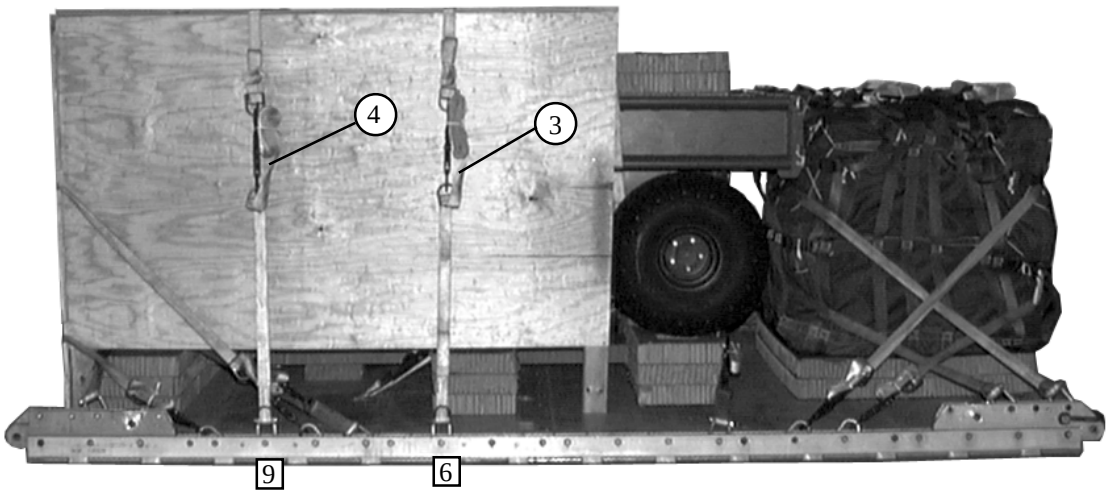
3-13. Lash the M-Gator box to the platform according to FM 10 500-2/TO 13C7-1-5 and as shown in Figure 3-12.



Route a lashing through clevis 8A and back through it's own D-ring, and pull the strap taut. Repeat the same steps for clevis 10A.

Lashing Number	**Tiedown** Clevis Number	**Instructions**
		Pass lashing through:
1	8A and 8	Top rear cutouts of box
2	10A and 10	Bottom rear cutouts of box

Figure 3-12. M-Gator Box Lashed



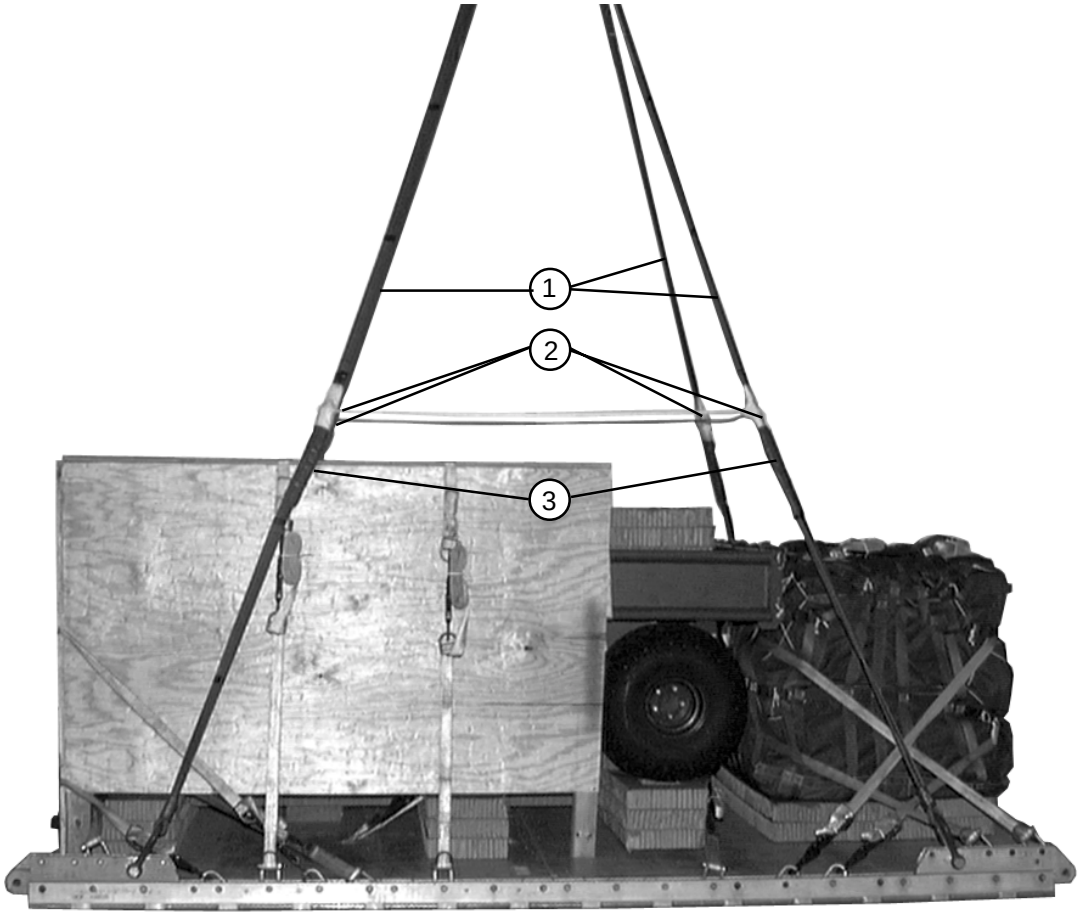
Route a lashing through clevis 6 and back through it's own D-rig, and pull strap taut. Repeat the same steps for clevises 6A, 9, and 9A.

Lashing Number	**Tiedown** Clevis Number	**Instructions**
		Pass lashing:
3	6 and 6A	Over top of box and bind on left side of box.
4	9 and 9A	Over top of box and bind on left side of box.

Figure 3-12. M-Gator Box Lashed (Continued)

INSTALLING SUSPENSION SLINGS

3-14. Install four 16-foot (2 loop), type XXVI nylon slings as suspension slings according to FM 10-500-2/TO 13C7-1-5 and as shown in Figure 3-13.



(1) Attach a 16-foot (2-loop), type XXVI nylon sling to each of the four suspension links using a large clevis.

(2) Raise the slings above the load and install the deadman's tie as outlined in FM 10-500-2/TO 13C7-1-5.

(3) Felt and tape each sling where they may make contact with the box or load.

Figure 3-13. Suspension Slings Installed

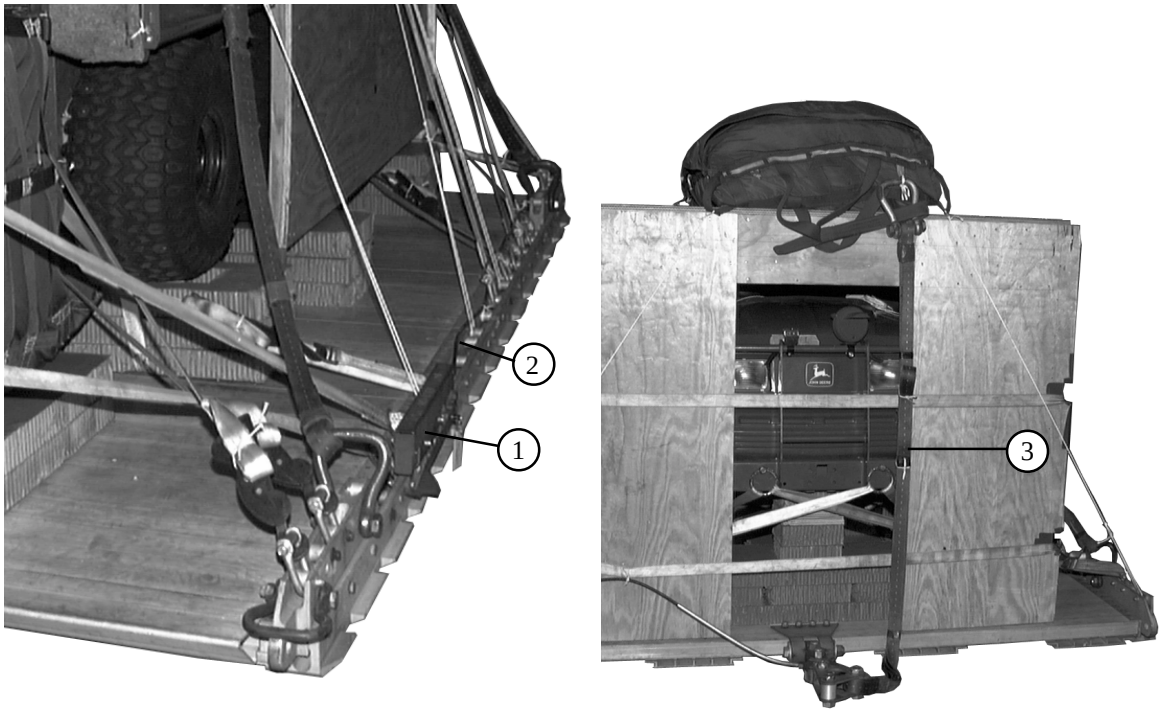
STOWING CARGO PARACHUTE

3-15. Prepare, stow, and restrain one G-11 cargo parachute on the front edge of the M-Gator box according to FM 10-500-2/TO 13C7-1-5 and as shown in Figure 3-14.

Figure 3-14. Cargo Parachute Stowed

INSTALLING EXTRACTION SYSTEM

3-16. Install the Extraction Force Transfer Coupling (EFTC) according to FM 10-500-2/TO13C7-1-5 and as shown in Figure 3-15.



1. Install EFTC actuator mounting bracket using front mounting holes.
2. Install a 12-foot cable.
3. Attach a 9-foot (2-loop), type XXVI nylon sling for the deployment line.

Figure 3-15. Extraction System Installed

INSTALLING PARACHUTE RELEASE

3-17. Prepare and install an M-1 cargo parachute release system according to FM 10-500-2/TO 13C7-1-5, and as shown in Figure 3-16.

1. Place the M-1 release on the M-Gator box, and safety it to a convenient place on the load.
2. Fold and secure any slack in the suspension slings.

Figure 3-16. Parachute Release System Installed

POSITIONING EXTRACTION PARACHUTE

3-18. Select the extraction parachute and extraction line needed using the extraction line requirements table in FM 10-500-2/TO 13C7-1-5. Place the extraction parachute and extraction line on the load for installation inside aircraft.

INSTALLING PROVISIONS FOR EMERGENCY RESTRAINTS

3-19. Select and install provisions for emergency restraints according to the emergency aft restraints requirements in FM 10-500-2/TO 13C7-1-5.

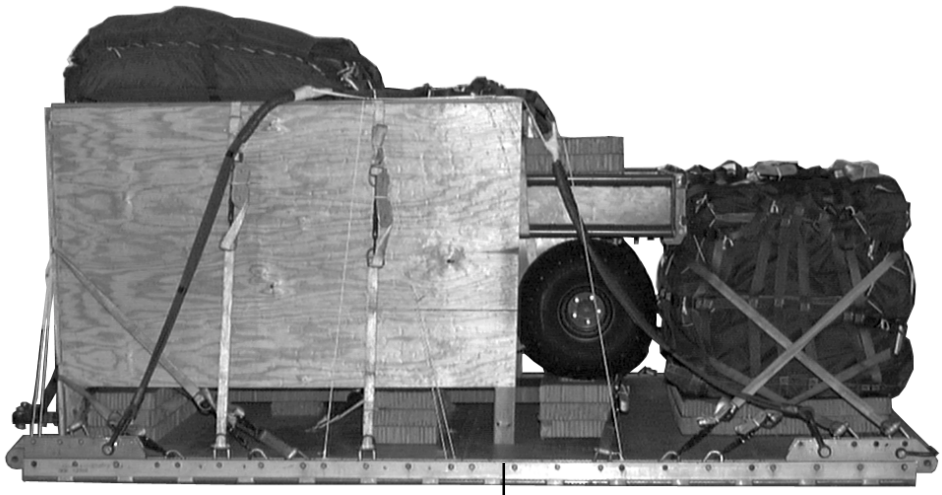
MARKING RIGGED LOAD

3-20. Mark the rigged load according to FM 10-500-2/TO 13C7-1-5 and as shown in Figure 3-17. Complete the Shipper's Declaration for Dangerous Goods. If the load varies from the one shown, the weight, height, tip-off curve, CB, and parachute requirements must be recomputed.

EQUIPMENT REQUIRED

3-21. The equipment required to rig this load is listed in Table 3-1.

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



RIGGED LOAD

Weight	4,630 pounds
Height	78 inches
Width	108 inches
Overall Length	162 inches
Overhang: Front	0 inches
Rear (EFTC)	18 inches
Center of Balance (from front edge of platform)	68 inches

Figure 3-17. M-Gator and CDS Rigged on a 12-Foot Platform For Low- Velocity Airdrop

Table 3-1. Equipment required for rigging M-Gator and CDS on a 12-foot platform for low-velocity airdrop

National Stock Number	Item	Quantity
8040-00-273-8713	Adhesive paste, 1-gal	As required
1670-01-035-6054	Bridle, extraction line bag	1
1670-00-587-3421	Bag, cargo, aerial delivery, A-22	1
4030-00-090-5354	Clevis, suspension, 1-in (large)	5
4020-00-240-2146	Cord, nylon, type III, 550-lb	As required
1670-00-434-5783	Coupling, airdrop, extraction force transfer with cable, 12-ft	1
	Cover:	
1670-00-360-0328	Clevis, large	1
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:	
1670-01-064-4452	For C-130: 60-ft (1-loop), type XXVI	1
1670-01-107-7652	For C-141: 160-ft (1-loop), type XXVI	1
1670-01-107-7652	For C-5: 160-ft (1-loop), type XXVI	1
1670-01-107-7652	For C-17: 160-ft (1-loop), type XXVI	1
	Link assembly:	
	Two-point, 3 3/4-in	1
5306-00-435-8994	Bolt, 1-in diam, 4-in long	(2)
5310-00-232-5165	Nut, 1-in, hexagonal	(2)
1670-00-003-1954	Plate, side, 3 3/4-in	(2)
5365-00-007-3414	Spacer, large	(2)
	Two-point, 3 3/4-in (for C-17)	1
5306-00-435-8994	Bolt, 1-in diam, 4-in long	(2)
5310-00-232-5165	Nut, 1-in, hexagonal	(2)
1670-00-003-1954	Plate, side, 3 3/4-in	(2)
5365-00-007-3414	Spacer, large	(2)
N/A	Link, towed mechanized release (H-Block) C-17 aircraft	1
	Lumber:	
5510-00-220-6146	2- by 4-in	As required
5510-00-220-6148	2- by 6-in	As required
5315-00-010-4659	Nail, steel wire, common, 8d	As required
1670-00-753-3928	Pad, energy dissipating, honeycomb, 3- by 36- by 96-in	9 sheets

Table 3-1. Equipment required for rigging M-Gator and CDS on a 12-foot platform for low-velocity airdrop (continued)

National Stock Number	Item	Quantity
	Parachute:	
1670-01-016-7841	Cargo, G-11B	1
1670-01-063-3715	Cargo, extraction, 15ft	1
1670-01-063-3715	Drogue, 15ft (for C-17)	1
	Platform, airdrop, type V, 12-foot:	
1670-01-353-8425	Bracket assembly, coupling	(1)
1670-01-162-2372	Clevis assembly, type V	(22)
1670-01-353-8424	Extraction bracket assembly	(1)
1670-01-162-2381	Link, tandem, suspension link assembly	(4)
5530-00-128-4981	Plywood, 3/4- by 48- by 96-in	6 sheets
1670-01-097-8816	Release, cargo parachute, M-1	1
	Sling, cargo airdrop	
	For suspension:	
1670-01-063-7761	16-ft (2-loop), type XXVI nylon webbing	4
	For deployment:	
1670-01-062-6304	9-ft (2-loop), type XXVI nylon webbing	1
	For riser extention:	
1670-01-062-6301	3-ft (2-loop), type XXVI nylon webbing	1
7510-00-266-5016	Tape, adhesive, 2-in	As required
1670-00-937-0271	Tie-down assembly, 15-ft	24
	Webbing:	
8305-00-268-2411	Cotton, 1/4-in, type I	As required
8305-00-082-5725	Nylon, tubular, 1/2-in	As required
8305-00-261-8585	Type VIII	As required

Glossary

AFB	Air Force Base
AFTO	Air Force Technical Order
AFSOC	Air Force Special Operations Command
ALC	Airlift Logistics Center
AMC	Air Mobility Command
CB	center of balance
CDS	container delivery system
d	penny
DC	District of Columbia
diam	diameter
EFTC	extraction force transfer coupling
FM	field manual
ft	foot/feet
gal	gallon
HQ	headquarters
in	inch
lb	pound
M-Gator	military utility vehicle
No	number
TRADOC	US Army Training and Doctrine Command
USA	United States of America
TM	technical manual
TO	technical order

References

AFR 55-40/AR59-4	Joint Airdrop Inspection Records, Malfunction Investigations and Activity Reporting. 1 May 1998.
***AFJMAN 24-204/ TM 38-250**	Preparing Hazardous Materials for Military Air Shipments. 25 November 1994.
FM 10-500-2/TO 13C7-1-5	Airdrop of Supplies and Equipment: Rigging Airdrop Platforms. 1 November 1990.
FM 10-500-3/TO 13C7-1-11/ FMFM 7-47	Airdrop of Supplies and Equipment: Rigging Containers. 26 September 1996.
FM 10-500-53/MCRP No 4-3.8/TO 13C7-18-41	Airdrop of Supplies and Equipment: Rigging Amunition. 19 August 1996.
TM 10-1670-268-20&P/ TO 13C7-52-22	Organizational Maintenance Manual With Repair Parts and Special Tools List: TypeV Airdrop Platform. 1 June 1986.
TM 10-1670-278-23&P/TO 13C5-26-2/NAVAIR 13-1-27 /TM 01109C-23&P/1	Unit and Intermediate DS Maintenance Manual Including Repair Parts and Special Tools List for Parachute, Cargo Type, 15-ft Diam, Extraction. 6 November 1989.
TM 10-1670-279-23&P/TO 13C5-27-2/NAVAIR 13-1-28	Unit and Intermediate DS Maintenance Manual Including Repair Parts and Special Tools List for Parachute, Cargo Type, G-11A, G-11B, and G-11C. 5 August 1991.
TM 10-1670-280-23&P/TO 13C5-31-2/NAVAIR 13-1-31	Unit and Intermediate DS Maintenance Manual Including Repair Parts and Special Tools List for Parachute, Cargo Type, 22-ft Diam, Extraction. 30 August 1989.

***AFJMAN 24-204/TM 38-250 has superseded AFR 71-4/TM 38-250 (15 January 1988).**

TM 10-1670-286-20/ TO 13C5-2-41	Unit Maintenance Manual for Sling/Extraction Line Panel (Including Stowing Procedures). 1 April 1986
TM 10-1670-296-20&P/ TO 13C7-49-2	Unit Maintenance Manual Including Repair Parts and Special Tools List for Ancillary Equipment for Low-Velocity Airdrop System (LVADS). 15 September 19995
AFTO Form 22	Technical Order Publication Improvement Report
DA Form 2028	Recommended Changes to Publication and Blank Forms. February 1974.
***Shipper's Declaration for Dangerous Goods**	Locally Procured Form.

***Shipper's Declaration for Dangerous Goods has superseded DD Form 1387-2 (February 1982).**

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

ERIC K. SHINSEKI
General, United States Army
Chief of Staff

Official:

JOEL B. HUDSON
Administrative Assistant to the
Secretary of the Army

GEORGE T. BABBITT
General, USAF
Commander, AFMC

MICHAEL E. RYAN
General. USAF
Chief of Staff

DISTRIBUTION:

Active Army, Army National Guard, and U.S. Army Reserve: To be distributed in accordance with the initial distribution number xxxxxx, requirements for FM 4-20.108.