

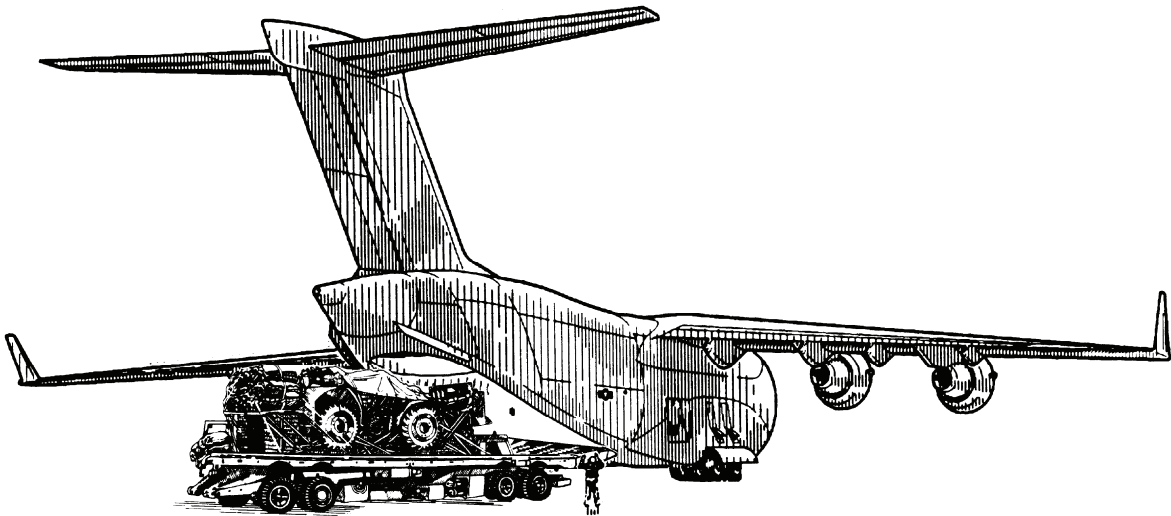
**FM 4-20.108 (FM 4-20.108 & FM 10-500-77)  
TO 13C7-2-491**

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**Airdrop of Supplies and Equipment:  
Rigging Military Utility Vehicles**

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SEPTEMBER 2007



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**Headquarters  
Department of the Army  
Department of the Air Force**

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Field Manual  
No. 4-20.108  
Technical Order  
No. 13C7-2-491

Headquarters  
Department of the Army  
Department of the Air Force  
Washington, DC, 10 September 2007

# **Airdrop of Supplies and Equipment: Rigging Military Utility Vehicles**

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# Preface

## SCOPE

This manual is designed for use by all parachute riggers. This manual shows and tells how to prepare and rig the following configurations of the Military Utility Vehicles (M-Gator), one 80-cubic centimeter minibike, one or two 250- to 300-cubic centimeter motorcycles, one 350-cubic centimeter Yamaha four wheeled quad-runner on a combat expendable platform and one 500-cubic centimeter Polaris four wheeled quad-runner on a combat expendable platform. They are rigged for low-velocity airdrop from a C-130 or C-17 aircraft.

## USER INFORMATION

The proponent of this publication is United States Training and Doctrine Command. You are encouraged to report any errors or omissions and suggest ways for improving this manual.

Army personnel, send your comments on DA Form 2028 (Recommended Changes to Publications and Blank Forms) to:

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# Introduction

## DESCRIPTION OF LOAD

- 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.
- 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 cargo 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.

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*Note.* The only exception to these weight restrictions is the A-22 cargo bag limitations on the Military Utility Vehicle (M-Gator) with the First Response Expeditionary (FRE) Fire Vehicle and an A-22 cargo bag assembly load. The A-22 cargo bag on this load will weigh 1,200 pounds.

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- Military Utility Vehicle (M-Gator) with the First Response Expeditionary (FRE) Fire Vehicle: The M-Gator with FRE basic platform is a standard M-Gator modified with the cargo bed removed and replaced with an ultra high pressure system fire fighting equipment mounted in the cargo bed's place. The M-Gator W/FRE is 120 inches long, 63 inches wide and 62 inches high. The weight of the M-Gator W/FRE is 2,280 pounds.
- The minibike is an 80-cubic centimeter. The minibike is 61 inches long, 27 inches wide and 34 inches high. The weight of the minibike is 155 pounds, including fuel and fluids.
- The motorcycle is a 250 to 300-cubic centimeter. The motorcycle is 88 inches long, 32 inches wide and 49 inches high. The motorcycle weighs 275 pounds, including fuel and fluids.
- The four wheeled quad-runner is a 350-cubic centimeter. The quad-runner is 72 inches long, 45 inches wide and 65 inches high. The quad-runner weighs 550 pounds, including fuel and fluids.
- The four wheeled quad-runner is a 500-cubic centimeter. The quad-runner is 89 inches long, 48 inches wide and 50 inches high. The quad-runner weighs 820 pounds, including fuel and fluids.



## SPECIAL CONSIDERATIONS

### CAUTION

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

- The loads covered in this manual include hazardous material as defined in AFMAN 24-204(I)/TM 38-250/NAVSUP PUB 505/MCO P4030.19I. The hazardous materials must be packaged, marked and labeled as required by AFMAN 24-204(I)/TM 38-250/NAVSUP PUB 505/MCO P4030.19I.
- A copy of this manual must be available to the Joint Airdrop Inspectors during the before and after loading inspection in accordance with AR 59-4/OPNAVINST 4630.24C/AFI 13-210(I)/MCO 13480.1B.

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## Chapter 1

# Rigging One Military Utility Vehicle (M-Gator) on an 8-Foot, Type V 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) (Figure 1-1). It is rigged on an 8 foot, type V 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, type V platform as outlined in TM 10-1670-268-20&P/TO 13C7-52-22. Prepare an 8-foot, type V platform using 14 tie-down clevises as shown in Figure 1-2.

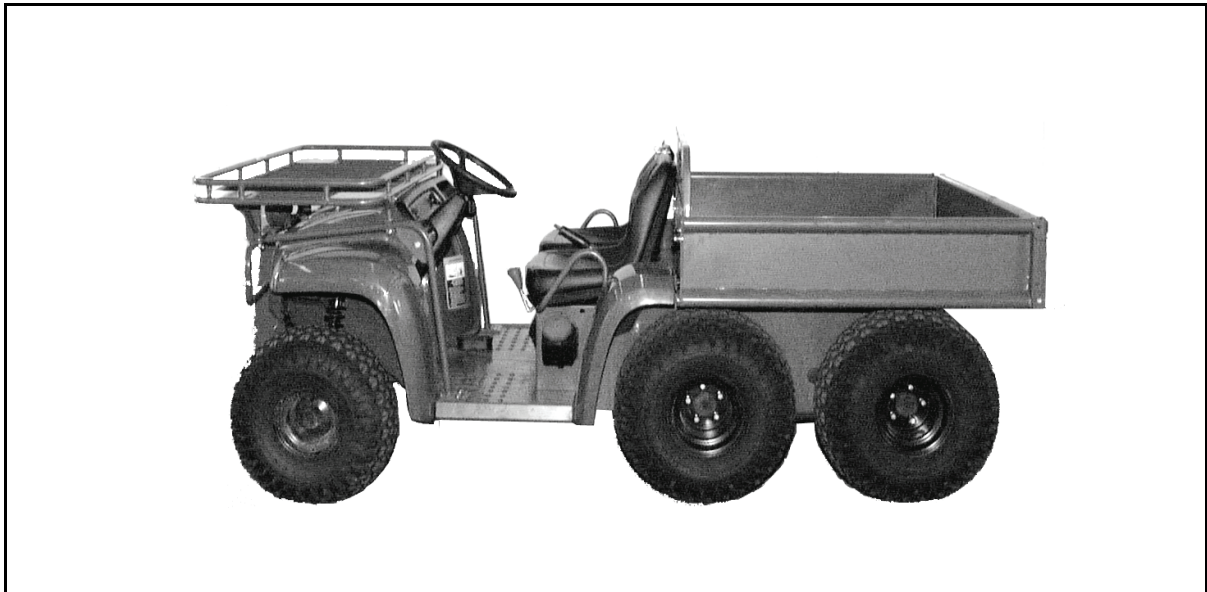
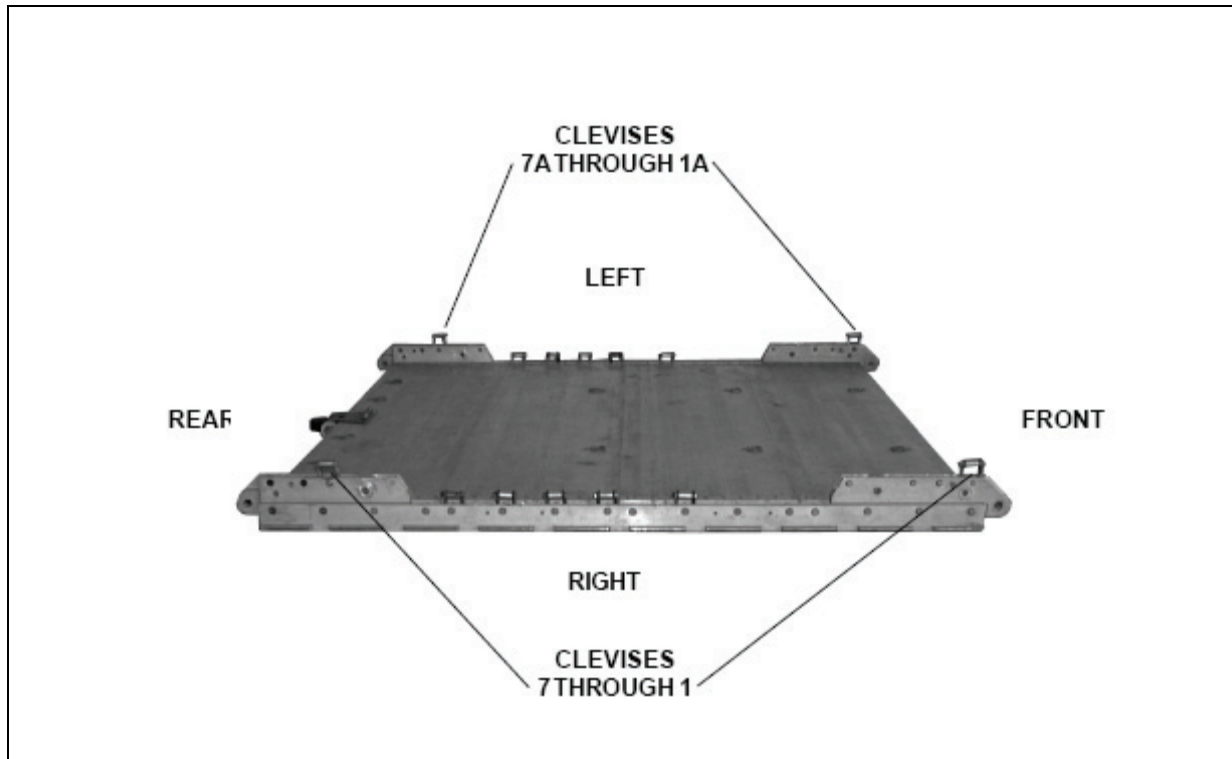


Figure 1-1. Military Utility Vehicle (M-Gator)



**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 4-20.102/MCRP 4-11.3J /NAVSEA SS400-AB-MMO-010/TO 13C7-1-5.

**Figure 1-2. Platform Prepared**