



Internal Air Transport Certification

ASC/ENFC (ATTLA)
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Date: 6 June 2012

Item Nomenclature: M1151 HMMWV and M153 CROWS

File Number: 2012.05.29.1

Requestor: US Army RDECOM-ARDEC/RDAR-QEW-C (Jose V. Andrade)

Reference: ASC/ENFC (ATTLA) Memo, 2007.06.22 Rev 3 Armored HMMWVs Supporting Combat Operations

Item Description: The subject items are identified to be M1151 HMMWV (High Mobility Multipurpose Wheeled Vehicles) with a M153 Common Remotely Operated Weapon Station (CROWS) system mounted on the roof (figure 1). The reported dimensions evaluated are 191" L x 91" W x 111" H. It is possible that vehicle dimensions may be greater and require loadmasters to assess dimensional capability to load on aircraft in accordance with aircraft general loading procedures. These HMMWVs in their combat operation configuration may exceed the rated capacity for the vehicle. Note that vehicles may be equipped with ancillary equipment or components that are not shown. The reported gross vehicle weight is 12,100 lbs and the rating (GVWR) is 12,300 lbs. The reported front axle weight is 4,980 lbs with a rating of 5,750 lbs. The reported rear axle weight 5,320 lbs with a rating of 7,000 lbs.



Figure 1: M1151 HMMWV with M153 CROWS

Certified Aircraft: USAF C-130, C-17, and C-5

Conditions of Certification:

1. Maximum Weight for Air Transport (per 2007.06.22 Rev 3 cert memo):

- a. Gross Vehicle Weight: 14,100 lbs (restraint limitation)
- b. Axle Limits:

(1) Front Axle: 5,750 lbs w/o sleeper shoring. 7,500 lbs with sleeper shoring (shoring limitation)

(2) Rear Axle: 7,000 lbs w/o sleeper shoring. 7,500 lbs with sleeper shoring (shoring limitation)

2. Item Preparation:

- a. C-130: The M153 CROWS unit must be removed from the vehicle and transported separately.
- b. Shipper is responsible for sleeper shoring, see paragraph 5 for dimensions.
- c. All equipment shall be prepared, packaged, or mounted such that there is no adverse effect on the functioning of the equipment after being subjected to the aircraft environmental extremes. MIL-STD-810 provides guidance on approved test methods and data gathering techniques.
- d. All hazardous materials (to include fuel level, batteries, etc.) must be prepared and certified for airlift in accordance with TM 38-250/AFMAN 24-204(I). Do not consider this air transport certification as approval for hazardous materials. Authorization for airlifting hazardous material is the responsibility of 401 SCMS/GUMAA (DSN 787-4503 or COM (937) 257-4503).

3. Loading Instructions:

- a. Load vehicle using normal vehicle loading procedures as listed in the respective aircraft cargo loading manual.
- b. Shipper provided sleeper shoring may be required, see paragraph 1 and 5.

4. Restraint Requirements: The subject HMMWV and all accompanying cargo must be restrained to meet MIL-HDBK-1791 requirements of 3G forward, 1.5G aft and lateral, and 2G up. In addition, stored or installed equipment must meet these requirements and be capable of withstanding a 4.5G down load. The front and rear bumper large teardrop swivel tiedown provisions on these HMMWV versions have a rated capacity of 25,000 lbs in all directions. The smaller front bumper provisions that only rotate vertically have longitudinal, lateral, and vertical rated capacity of 10,000 lbs, 7,500 lbs, and 5,000 lbs respectively. The pintle hook is rated at 30,000 lbs in the longitudinal direction only. As a last resort, the lower axle support/control arms have a longitudinal and lateral rated capacity of 7,000 lbs and 4,000 lbs respectively.

Caution

Do not use the radius rods as tiedown provisions.

Higher Capacity Chassis/Bumper Tiedown Provision Examples



Figure 2: Front Right



Figure 3: Front End



Figure 4: Rear Left

5. Required Shoring Dimensions: Sleeper shoring dimensions are based on vehicle maximum weight (14,100 lbs) and heaviest axle weight provided (7,500 lbs).

Caution

If an axle weight exceeds 7,500 lbs, loadmasters will perform calculations to ensure an appropriate amount of sleeper shoring is utilized.

Note: When the GVW is in excess of GVWR, both ends of the vehicle require sleeper shoring. It is permissible to sleeper shore only one end of the vehicle when the adjacent axle weight exceeds the rated capacity.

a. C-5/C-17: For configurations with one shoring stack located at each end of the vehicle, the minimum base dimensions for each shoring stack are 24" L x 10" W , stacked to within ½" of front and rear bumpers. Shoring shall be placed on the vehicles' lateral centerline under the vehicle's front and/or rear bumpers, as necessary, then secure each stack with cargo straps. As an option, the C-130 sleeper shoring dimensions as listed in paragraph 5.b may be used.

b. C-130: The minimum base dimensions for each shoring stack should be 24" L x 5" W and stacked to within ½" of the vehicle's front and/or rear bumper or frame/chassis area. Secure each stack with cargo straps, as necessary. Two stacks shall be placed under each end (if required), one stack each side.

Required Distribution:

1. Shipper shall give a copy of this certification to the ATOC representative when the item is presented for airlift. This memo shall be part of the official cargo manifest documentation package and shall be briefed to the aircraft loadmaster prior to loading these items.

2. AMC/A3V.

3. SDDC TEA.

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