Internal Air Transport Certification

ASC/ENFC (ATTLA)
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WPAFB, OH 45433-7101
https://afkm.wpafb.af.mil/ATTLA (direct)
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Date: 11 March 2009
Item Nomenclature: 16 Foot Haulmark Trailer, Model TSC85X16WT2
File Number: 2008.10.18.2
Requestor: 146 ALCF (Mark Rubio, MSgt CA-ANG)

Reference Documents: ASC/ENFC Internal Air Transport Certification 2008.04.07 Revision 1, dated 16 January 2009. A test load was performed for a trailer with similar dimensions on a C-130.

Item Description: The subject trailers are identified to be 16' long two axle enclosed trailers manufactured by Haulmark, Model TSC85X16WT2. Trailer dimensions are approximately 240" L x 102.5" W x 104" H. The Trailer's gross vehicle weight rating is 7,000 lbs; each axle is rated at 3,500 lbs.

Certified Aircraft: AMC gained or operated USAF C-130, C-130J-30, C-17 and C-5 aircraft.

Conditions of Certification:

1. **Maximum Weight for Air Transport:**

   a. Gross Vehicle Weight: 7,000 lbs (trailer limitation)

   b. Axle Limits: 3,500 per axle (trailer limitation)

2. **Item Preparation:**

   a. Maximum trailer, axle, lunette, and landing gear weights for air transport shall not exceed capacities given in the Item Description paragraph. When gross trailer weight, axle weights, and landing gear/tongue weights exceed 5,600 lbs, 2,800 lbs (each axle), and 1,185 lbs respectively, sleeper shoring is required. Actual gross weight, axle weights and tongue weights shall be marked on the trailer after aerial port weighs the item.

   b. C-5, C-17, and C-130 E/H/J/J-30: Shipper provided approach shoring required, see paragraph 5.a. Shipper provided sleeper/protective shoring may be required (see paragraph 2.a, 5.b and 5.c).

c. C-130 E/H/J/J-30: An additional set of auxiliary loading ramps is required.

d. C-130 E/H/J/J-30: A/T forklift preparation required. Remove cab and upper fork carriage back stop structure to facilitate movement into/out of aircraft.

e. Tire inflation pressure shall not exceed 100 psi.

f. Shipper has certified that the trailer and its contents are capable of withstanding rapid in-flight decompression of up to 8.3 PSI within ½ second without endangering the aircraft or personnel.

g. 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.

h. 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. For operations that involve loading from the ground, the prime mover will have sufficient towing and braking capacities; otherwise, connected trailer and prime mover shall be winch loaded.

b. C-5: Trailer may be loaded over forward ramp when configured in forward kneel, drive-on mode. Trailer may be loaded over aft ramp when configured in aft kneel position.

c. C-5/C-17: Trailer will require approach shoring, see paragraph 5.a.

d. C-130 E/H/J/J-30: Two loading methods can be utilized for all C-130 versions. A third method is approved for C-130J-30 only (see below).

1) Trailer can be loaded straight into the cargo compartment utilizing a Tunner or Halvorsen loader, or off a flat bed trailer.

2) The trailer may be loaded from the ground using an A/T Forklift with tine equipped fifth wheel pintle hook/ball. In order to prevent trailer contact with aircraft structure, it will be necessary to lower and raise the lunette to adjust trailer aft end projection during loading operations. Approach shoring is not required when using A/T Forklift to load empty trailer; however, minimal approach shoring may be required when loading trailer that contains cargo. **Caution:** Ensure combined A/T Forklift and trailer lunette weight does not exceed 13,000 lbs for C-130 loading operations.

3) Four safety observers are required to monitor critical clearances during ground loading operations. Ramp contact, projection, ground contact and side clearances are very tight.

4) An additional set of auxiliary loading ramps shall be installed when loading trailer from the ground with a prime mover.

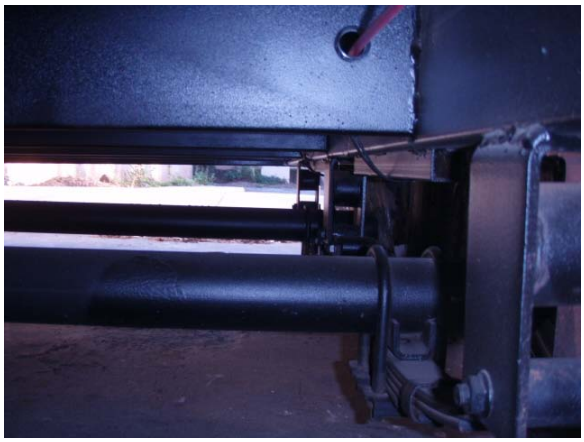
5) Troop doors shall be closed during loading operations.

6) Load trailer within 1 ½” of aircraft centerline to prevent tires loading over ADS rails.

7) C-130J-30: It is permissible to load trailer with unit equipped prime mover. Truck and trailer shall be driven on front end facing forward in aircraft. Approach shoring is required, see Paragraph 5.a. Prime mover shall be certified for air transport. The combined truck aft axle and trailer lunette weight shall not exceed 80% of the truck aft axle rated capacity; otherwise, the shipper has two options: 1) The aft end of the truck shall be sleeper shored. Sleeper shoring dimensions shall be derived from TO 1C-130J-9. 2) Truck and trailer shall be disconnected.

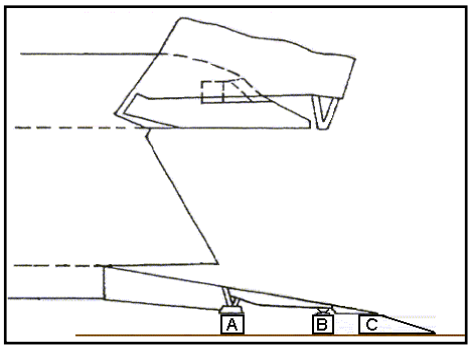
e. When sleeper shoring is required, five stacks of sleeper shoring will be used (see paragraph 5.b for dimensions). When trailer is disconnected from prime mover, lunette shall be lowered onto a single stack of shoring located between the front end of the trailer cargo box and the lunette cross member. When gross trailer weight/axle weight ratings exceed limits in paragraph 2.a, four sleeper shoring stacks shall be positioned under the trailers' frame/chassis, one under each corner, front and rear of the trailer. The trailer deck should be approximately level when shored. Sleeper shoring at trailer corners shall be stacked to within ½" of frame chassis, contact is preferred. Sleeper shoring stacks shall be secured with cargo straps.

4. Restraint Requirements: The trailer 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 trailer has four tiedown provisions that are permanently installed to the frame of the trailer. Each of these provisions is rated at 10,000 lbs. The axles of the trailer can also be used for restraint as long as no more than 50% of the restraint for any given direction is attached to the axles.



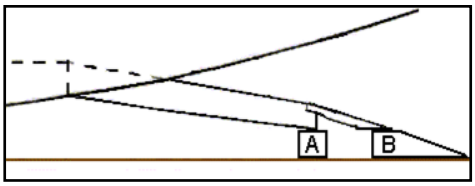
5. Required Shoring Dimensions & Diagrams:

a. Approach Shoring: Minimum recommended dimensions for 10˚ approach angle. Requirements for other configurations are in the applicable aircraft loading manual.

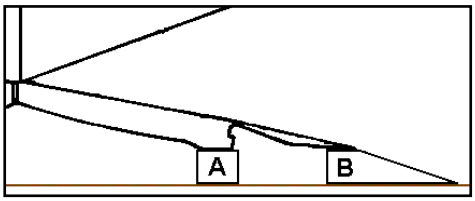


C-5 Forward Shoring (Forward Kneel)
Pedestal Shoring
"A" 16" L x 13" W x 1" H (2 each inboard)
18" L x 15" W x 1" H (2 each outboard)
"B" 15" L x 15" W x 6" H (4 each)
Approach Shoring
"C" 57" L x 24" W x 8" H (2 required)
(Board in contact with ramp toe should be at least 11" L)

(C-5) CAUTION: *Width of approach shoring "C" in the area under the toe must be as wide as the ramp toe it is placed under. The remaining approach shoring extending away from the ramp toe extension contact point must be a minimum of 24 inches wide.*



C-17 Shoring
Pedestal Shoring
"A" N/A
Approach Shoring
"B" 72" L x 24" W x 11" H (2 required)
(Board in contact with ramp toe should be at least 11" L)



C-130J-30 Shoring
Pedestal Shoring
"A" N/A
Approach Shoring
"B" 120" L x 24" W x 8-10" H (2 required)
(Board in contact with ramp toe should be at least 11" L)

C-130J-30 Note: These shoring dimensions were obtained from validation load.

b. When required in accordance with Paragraph 2.a, sleeper shoring minimum base dimensions shall be 8" L x 8" W. Five stacks of sleeper shoring will be used. Shoring stacks shall be positioned under the trailer frame/chassis, one under each corner, front and rear of the trailer. The trailer deck should be approximately level when shored. Sleeper shoring at trailer corners shall be stacked to within ½" of frame/chassis, contact is preferred. One stack shall be positioned under frame at lunette location and shall support lunette weight, contact required, see Paragraph 5.c. Sleeper shoring stacks shall be secured with cargo straps.

c. When trailer is disconnected from prime mover, lunette shall be lowered onto a single stack of shoring located between the front end of the trailer cargo box and the lunette cross member. Lunette landing gear foot pad protective floor shoring minimum base dimensions shall be 10" L x 10" W x 3/4" H.

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 this item.

2. AMC/A3V

Point of Contact: TSGT Brian Herriott, at Brian.Herriott@wpafb.af.mil, (DSN 785-1758 or Commercial (937) 255-1758) or Melvin Santiago at Melvin.Santiago@wpafb.af.mil, (DSN 785-2330 or Commercial (937) 255-2330). Refer to file number 2008.10.18.2 to reference this item.

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