DEPARTMENT OF THE ARMY TECHNICAL MANUAL

AIR TRANSPORTABILITY GUIDANCE
GASOLINE IN DRUM, FABRIC, COLLAPSIBLE, LIQUID FUEL, 500-GALLON-CAPACITY (NONVENTED), IN U.S. AIR FORCE C-7A AIRCRAFT

Headquarters, Department of the Army, Washington, D.C.
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1. Purpose and Scope

a. This manual provides transportability guidance for movement of gasoline in drum, fabric, collapsible, liquid fuel, 500-gallon-capacity (nonvented) (also referred to as "item"), in U.S. Air Force C-7A aircraft. The manual prescribes materials and manpower needed to prepare, load, tie down, and off-load the item.

b. The reporting of errors, omissions, and recommendations for improving this manual by the individual user is encouraged. Reports should be submitted on DA Form 2028 (Recommended Changes to DA Publications) and forwarded to Director, U.S. Army Transportation Engineering Agency, Military Traffic Management and Terminal Service, ATTN: MTT-GD, Fort Eustis, Va. 23604.

2. Applicability

a. The guidance in this manual applies when the item is transported in U.S. Air Force C-7A aircraft. With the consent of the aircraft commander, the transported unit can add cargo and/or personnel within allowable load limits and restrictions prescribed for the C-7A aircraft (app).

CAUTION

TM 38-250 will be consulted to insure the compatibility of any additional cargo being considered for loading with the item.

b. The item will be loaded and tied down in accordance with the guidance in this manual except when, for operational reasons or to accommodate additional cargo and/or per-

*This manual supersedes TM 55-8110-201-1, 21 February 1966.

sonnel, the aircraft commander designates a location other than that shown in the tiedown diagram. If the item is relocated, the aircraft commander must insure that:

(1) The number and load capacity of the tiedown devices are as prescribed in this manual.

(2) The tiedown devices restraining the item are secured to tiedown fittings of at least the same strength and in the same location relative to the item as those fittings used in the tiedown diagram.

(3) The aircraft center of gravity is maintained within limits prescribed for the C-7A aircraft (app).

3. Responsibilities

a. Transported Unit.

(1) Effect advance coordination with the transporting unit, to include a request for the tiedown devices required.

(2) Provide the manpower and materials needed to prepare, load, and off-load the equipment.

(3) Prepare equipment for air transport with supervision and assistance as required from appropriate field support units.

(4) Load, tie down, and off-load equipment transported aboard the aircraft, subject to approval by the aircraft commander or his authorized representative. Such approval is to insure that loading, tiedown, and off-loading are accomplished as prescribed by this manual.

(5) Provide guidance to the aircraft commander relative to safety and any technical Peculiarities of the item which may affect its air transport.

(6) Observe the following safety precautions:

(a) Prior to loading, inspect drums for leaks (consult TM 10-8110-201-14).

(b) Provide fire extinguishers in aircraft as follows:

1. One 40-pound, CO_2 bottle.

2. One 2 1/2-gallon, foam-type bottle.

b. Transporting Unit.

(1) Supply the tiedown devices required.

(2) Operate aircraft-associated equipment, and monitor loading, tie down, and off-loading to insure compliance with this manual.

(3) Inspect the aircraft for serviceability appropriate to the mission, and comply with pertinent aviation directives and maintenance manuals (app).

(4) Provide ventilation to exhaust gasoline fumes during all operations.

(5) Loosen or tighten tiedown devices that cross the top of the item to counteract the 10- to 20-percent expansion of gasoline that occurs during ascents to an altitude of 10,000 feet (two men are required).

(6) Insure that tiedown devices attached to fore and aft ends of the item are tight at all times.

4. Load Description

a. The approximate dimensions and weight of one drum follow:

Length	80 inches.
Diameter	46 inches.
Weight of drum filled with approximately 425 gallons of gasoline.	2,860 pounds (includes 250 pounds for drum weight).

(Drum can be filled with approximately 425 gallons (2,610 pounds) of gasoline, using gravity-flow filling.)

b. A typical load is composed of two collapsible drums, each filled with approximately 425 gallons of gasoline.

NOTE

Support the fuselage with the steady strut before loading item into aircraft.

5. Preparation and Loading

a. Materials.

(1) One *2* l/2-ton truck with cargo bed sideboards removed.

(2) Two plywood platforms, 48 by 84 inches, constructed with 2- *by* 6-inch beveled edging at the top surface.

(3) Four plywood sheets, each *28* by *70* inches. Two sheets (fig. 1) are used to form a V-pallet to cradle each item.

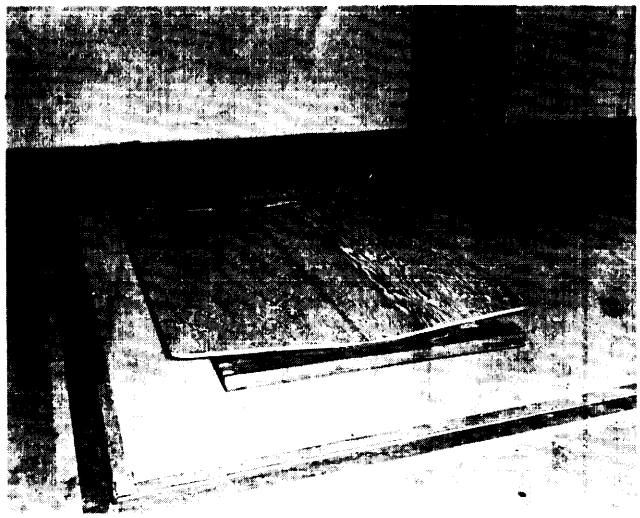

Figure 1. V-pallet for drums (containers) filled with gasoline

(4) Four sections of 15- to 20- foot-length wheel or roller conveyors in addition to the installed conveyors organic to the aircraft.

b. On-loading.

(1) Position conveyors in truck bed as shown in figure 2. Place conveyors with roller sides up and extending approximately 12 inches over the rear edge of the truck bed.

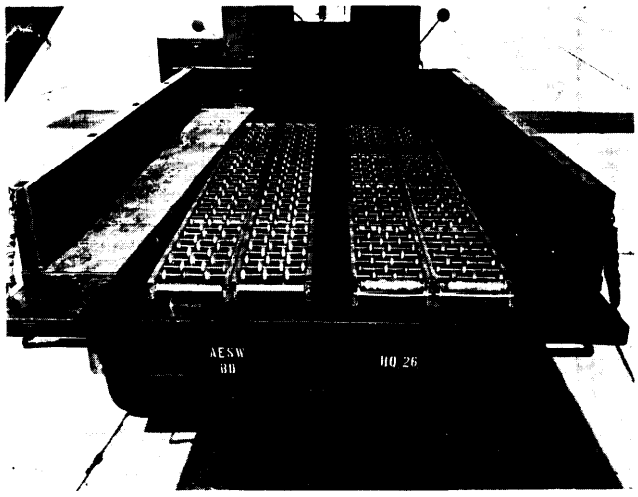

Figure 2. Placement of conveyors in truck bed.

(2) Position V-pallets on the conveyors, and load one drum on each pallet. Secure drums during movement to aircraft.

(3) Position aircraft ramp with organic conveyors to match level of conveyors in truck bed.

(4) Manhandle the pallets from transporting truck into aircraft, and position at tiedown locations.

(5) Tie down the items in accordance with figures 3 and 4 and table 1. Twelve CGU-1/B and four MB-1 tiedown devices are required.

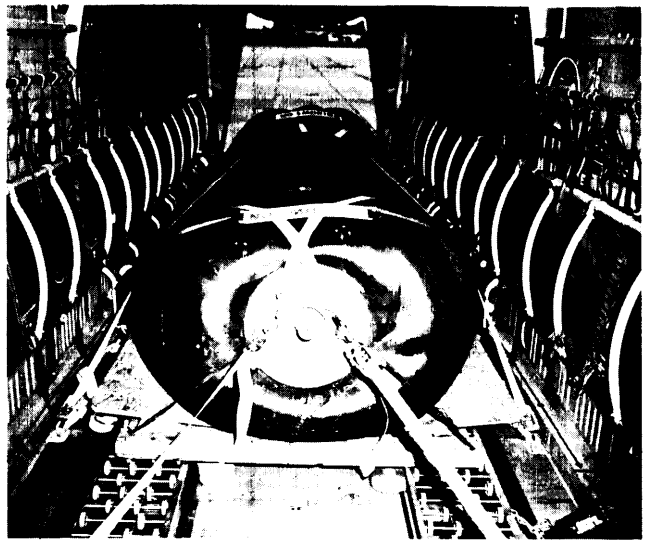

Figure 3. Drums, fabric, collapsible, tied down on V-pallets. View looking aft in aircraft.