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DEPARTMENT OF THE ARMY PAMPHLET **30-10-2**

FOREIGN MILITARY WEAPONS AND EQUIPMENT (U)

QUARTERMASTER ORGANIZATIONAL EQUIPMENT (U)

SINO-SOVIET BLOC (LESS USSR)

THE INFORMATION CONTAINED IN THIS PUBLICATION IS CURRENT AS OF THE DATE SHOWN ON THE BOTTOM OF EACH PAGE

REGRADING DATA CANNOT BE PREDETERMINED

HEADQUARTERS, DEPARTMENT OF THE ARMY • WASHINGTON 25, D. C.

~~CONFIDENTIAL~~

FOREWORD

The object of this publication, the second volume in a series on foreign military weapons and equipment, is to present essential technical, tactical, and recognition data on all types of quartermaster organizational materiel used by the Sino-Soviet Bloc (less U. S. S. R.) ground forces.

Each item is given a fourfold treatment: (1) A photograph; (2) a short descriptive paragraph; (3) a line drawing showing main recognition features; and (4) a characteristics table.

The publication is in looseleaf form to facilitate periodic amendment. Supplements and revisions will be issued as new information becomes available. The information contained in this publication is current as of the date shown at the bottom of each page.

Items are presented according to country of manufacture. These countries are grouped in the following four sections:

Section 1. U. S. S. R.
Section 2. Sino-Soviet Bloc (less U. S. S. R.)
Section 3. North Atlantic Pact Countries.
Section 4. Other Countries

Section 2, for the purpose of this pamphlet, includes the following countries:

Albania	Hungary
Bulgaria	North Korea
Communist China	North Vietnam
Czechoslovakia	Poland
East Germany	Rumania

For each country the various categories of quartermaster materiel are treated separately under major headings such as aerial supply equipment, field sanitation equipment, food service equipment, reclamation and repair, remount, sleds, tent stoves, and tentage. All items known or believed to be in use in significant quantities by any foreign country are included even though they may be regarded as obsolete by the country of manufacture.

German-designed equipment now being manufactured in the Satellites or in the U. S. S. R. is listed under the country of manufacture.

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*Pam 30-10-2

PAMPHLET
No. 30-10-2

HEADQUARTERS,
DEPARTMENT OF THE ARMY
WASHINGTON 25, D. C., *4 September 1957*

FOREIGN MILITARY WEAPONS AND EQUIPMENT (U)
QUARTERMASTER ORGANIZATIONAL EQUIPMENT (U)
SINO-SOVIET BLOC (LESS U. S. S. R.) (U)

***This pamphlet supersedes DA Pam 30-10-2, 14 October 1954, which should be destroyed in accordance with AR 380-5.**

INTRODUCTION

The Armies of East Germany and Czechoslovakia are better equipped with quartermaster organizational materiel than the Armies of the other Satellites. The industrial capacity and relatively high level of the civilian economy of these two areas were outstanding in central Europe even before World War II. At the other extreme, quartermaster-type organizational equipment in Communist China, North Korea, and Albania is very scarce. Methods and equipment used by the Armies of these less developed countries for moving supplies, preparing food, and performing other types of quartermaster services are essentially the same as those used by the civilians of those countries. In most Satellite Armies, civilian-type quartermaster items with no special military characteristics at all have been incorporated into the supply system. In the less developed systems there has been little attempt at standardization.

The Warsaw Pact and the Unified Command Accord recently have been formulated to unite European Satellite nations and the U. S. S. R. into a formal alliance providing for mutual military aid and the establishment of a unified military command. Although details of this agreement and the implications of a unified command have not yet become apparent, it would appear that standardization programs will be developed whereby all Satellite Armies will be adequately equipped with standard items of materiel.

INTRODUCTION

General. Quartermaster organizational equipment of the Albanian Army has been in general of Italian, British, German World War II, and Soviet origin. Since its reorganization along Soviet lines the Albanian Army is being instructed by Soviet technicians, and its heterogeneous equipment is gradually being replaced by Soviet items. There is no domestic production of strictly military quartermaster organizational equipment in Albania. It is probable, however, that items common to both military and civilian use, such as wagons or saddles, are produced locally.

Aerial Supply Equipment. There is no indication that the Albanian Army uses any aerial supply equipment.

Food Service Equipment. The Albanian Army reportedly uses the German World War II-type field kitchens, but there is no information available on the use of mobile bakeries, refrigerators, and any other food service equipment.

Petroleum Handling Equipment. Reported petroleum handling equipment is limited to 200-liter drums and 20-liter jerricans. No information is available on any other equipment used.

Remount Equipment. A relatively high percentage of the supply load is carried by horse-drawn or horse-packed transport. The mountainous terrain and a poor road system indicate a continued large-scale reliance on animal transport in spite of increased motorization.

Tentage. Two types of hospital tents have been observed: one type is believed to be of Soviet design, and the other appears to be of Italian origin. These tents are described in this section.

Other. There is no information available on the use of field sanitation equipment, materials-handling equipment, sleds, tent stoves, or any other quartermaster-type field equipment.

Quartermaster Organizational Equipment of Foreign Manufacture in Significant Use in Albania

Albanian nomenclature	Origin		DA Pamphlet (or Other Reference for Coverage)
	Country	Nomenclature	
Unknown	Germany	Field Kitchen, Large	30-10-2 (East Germany).
Unknown	do	Field Kitchen, Small	30-10-2 (East Germany).
Unknown	U. S. S. R.	Drum, Inflammable-Liquid, Steel (200-Liter)	30-10-1
Unknown	do	Sovi-Can	30-10-1

A. TENTAGE

1. Tent, Hospital, Surgical, Double-Wall

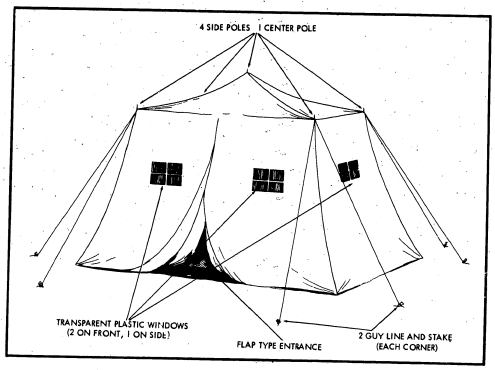
(No illustration available)

This square-shaped medical tent, believed to be of Soviet design, is used for performing surgical operations in the field. It has double walls with a space of 15 to 20 cm. (6 to 8 in.) between them. Thereby an air cushion is formed to maintain an even temperature within the tent. The outer wall is olive drab, and the inner wall is of a light cream color. There are six transparent plastic windows on the outer wall with corresponding windows on the inner wall.

In service in the Albanian Army.

1. Tent, Hospital, Surgical, Double-Wall

RECOGNITION FEATURES



CHARACTERISTICS

I. PHYSICAL DATA:

Length	4 meters (13 ft.)
Width	4 meters (13 ft.)
Height	4 meters (13 ft.)

II. REMARKS: Used in the Medical Service.

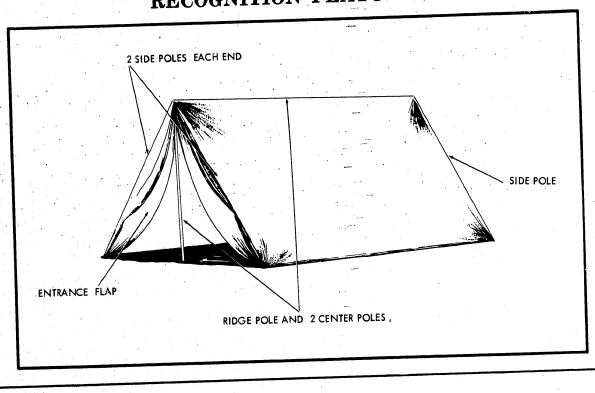
2. Tent, Hospital Ward

(No illustration available)

This olive-green medical tent, believed to be of Italian design, is used by the Albanian Army for the temporary quartering of patients in the field. Reportedly, it has no windows but has a flap-type entrance at one end.

2. Tent, Hospital Ward

RECOGNITION FEATURES



CHARACTERISTICS

I. PHYSICAL DATA:

Length	5 meters (16½ ft.)
Width	3 meters (10 ft.)
Height	2.5 meters (8¼ ft.)

II. CAPACITY: 2 patients for short periods

INTRODUCTION

General. Most of the quartermaster organizational equipment of the Bulgarian Army is believed to consist principally of Soviet items.

Aerial Supply Equipment. Aerial supply capabilities, if any, must be on a very limited scale because of the limited number of available transport planes. It is known, however, that a personnel parachute of German origin is used by the Bulgarian Army.

Field Sanitation Equipment. Information is limited as to the types of field sanitation equipment used by the Bulgarian Army. A few mobile bath and disinfestation units captured from the Germans in World War II are used, but monthly visits to public baths while in garrison and the use of streams and lakes in the field are the usual methods of bathing. In general, local women are hired to do laundry in garrison; in the field the Bulgarian soldier does his own laundry by hand.

Food Service Equipment. Food service equipment consists primarily of German World War II horse-drawn field kitchens. Bread is usually baked in military garrison bakeries or is requisitioned from the nearest civilian bakeries during field operations. Soviet nonrigid transportable water tanks are used for water storage in the field. The fresh meat supply either is moved up on the hoof by the battalion supply company or is purchased from local slaughterhouses when needed. Mobile refrigeration equipment has never been observed.

Petroleum Handling Equipment. POL supplies are imported almost exclusively from Rumania, railroad tank cars being the usual means of transportation. Transfer of POL products from tank car to the user is accomplished mainly through the use of 200-liter drums. Drums are used extensively for storage in army POL depots. POL tank trucks are in short supply.

Reclamation and Repair. Clothing and boot repair and reclamation services are performed by regimental tailors and cobblers. In many instances these are civilian workers who are employed permanently and maintain workshops in the garrison. These men make major repairs only; replacement of buttons and other minor repairs are done by the individual soldier. Mobile workshops equipped with lathes, tool racks, and work benches are available in some motorized units for repairs of mechanical equipment.

Tentage. Presumably, all tentage used by the Bulgarian Army consists of Soviet items.

Other. No information is available on materials-handling equipment, remount equipment, sleds, tent stoves, or any other quartermaster-type field equipment.

Quartermaster Organizational Equipment of Foreign Manufacture in Significant Use in Bulgaria

Bulgarian nomenclature	Origin		DA Pamphlet (or Other Reference for Coverage)
	Country	Nomenclature	
Unknown	Germany	Personnel Parachute, Model RC 20	Not available.
Unknown	do	Field Kitchen, Large	30-10-2 (East Germany).
Unknown	do	Field Kitchen, Small	30-10-2 (East Germany).
Unknown	U. S. S. R.	Water Reservoir (RE 3000)	30-10-1
Unknown	do	Reservoir-Cistern (RTs-1200)	30-10-1
Unknown	do	Reservoir-Cistern (RTs-500)	30-10-1
Unknown	do	Drum, Inflammable-Liquid, Steel (200-Liter)	30-10-1
Unknown	do	Sovi-Can	30-10-1

INTRODUCTION

General. Up to the present time, the Chinese Communist Army has not used the standard types of quartermaster organizational equipment to the extent used in modern Western armies. Local civilian resources and improvisations are utilized to the greatest extent possible. Since 1950, however, there has been a noticeable trend toward the modernization and standardization of organizational equipment throughout the Chinese Communist Army. Progress is expected to continue with the receipt of Soviet equipment and domestic production of military items.

Aerial Supply Equipment. Soviet-type square parachutes, constructed of panels of silk or nylon fabric, are used by the Chinese Communist Army. The parachute has 22 suspension lines which are attached to the canopy, so that a vent forms at the rear of the canopy during descent. The parachute has no apex vent.

Food Service Equipment. Food service equipment consists of large metal cooking pots and small serving pots, pans, and bowls. In isolated instances, a few Soviet field kitchens have been observed. This equipment is truck-drawn, uses wood for fuel, and contains one cooking pot with a capacity of about 66 gallons, enough to furnish a hot meal for 330 men. Field bakeries, ranges, and refrigerators are not known to be used in the food service system. According to recent information, however, diesel-powered rail refrigeration cars are being imported from East Germany.

Materials-Handling Equipment. Information is not available on any materials-handling equipment used by the Chinese Communist Army. Recently a power-driven fork-lift similar to the United States Clark "Yardlift 150" was observed loading supplies on a wharf in Shanghai. The State-operated Diesel Engine Plant reportedly is manufacturing three models of power-driven fork-lifts. A chain slat conveyor was observed at the Chinese Communist display at the Damascus International Fair in Syria. This conveyor has a transporting capacity of 100 kilograms (220.46 lbs.). No additional information is available.

Petroleum-Handling Equipment. Five-gallon cans and 30-, 40-, and 55-gallon drums are used. The 55-gallon drum closely resembles the United States Army item. Wooden 55-gallon barrels are used generally for heavy greases and heavy oil. Dispensing equipment consists of rubber hoses or tubes. There have been no reports that either motor-driven or hand-operated pumps are used in the field. A few United States-type tank trucks (believed to be captured United States equipment) have been observed.

Remount Equipment. The Chinese Communists make use of every form of transportation available to them. During the Korean War they had limited motor transport at army level. In units below army level, supply movement usually was accomplished by man or animal power. Horses, mules, and oxen are used to draw heavy wagons and carts. Lighter carts are drawn and pushed by troops or local laborers.

Tentage. Two types of tents are being used. One type is a poncho-shelter half which is being issued in increasing numbers to serve as an effective two-man tent. The other type is a modified version of the cone-shaped field tent which reportedly is no longer standard issue. These tents are described in this section.

Other. Mobile laundry and bath units, mobile clothing and shoe repair units, and sleds are believed to be unknown to the Communist Chinese combat and supply forces.

Quartermaster Organizational Equipment of Foreign Manufacture in Significant Use in Communist China

Communist China nomenclature	Origin		DA Pamphlet (or Other Reference for Coverage)
	Country	Nomenclature	
Unknown	U. S. S. R.	Personnel Parachute PL–45 (1949 Model)	30–10–1
Unknown	do	Personnel Parachute MPL–43 (1945 Model)	30–10–1
Unknown	do	Field Kitchen, Model 1941	30–10–1
Unknown	U. S. A.	Drum, Inflammable Liquid, Steel, 55-Gallon	TM 10–466*
Unknown	do	Drum, Inflammable Liquid, (Gasoline) Steel, with Carrying Handle, 5-Gallon.	TM 10–466*
Unknown	U. S. S. R.	Supply Wagons PKh–1 and PKh–2	30–10–1

*Superseded by TM 10-1101. Do not requisition from adjutant general publications centers as no stocks are available.

A. FOOD SERVICE EQUIPMENT

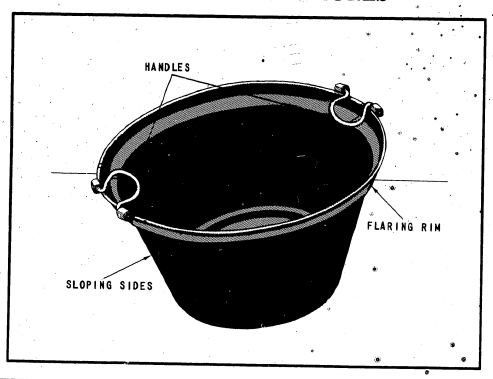
Field Cooking Pot

This field cooking pot is standard equipment of the rear services units of the Chinese Communist Army. It is used for preparing rice, millet, or stews in the field. This pot can be man-packed along with the usual food supplies and smaller cooking utensils of the service squad. An aluminum pot is carried by one man; an iron pot is carried on a pole between two men.

In service in China and North Korea.

Field Cooking Pot

RECOGNITION FEATURES



CHARACTERISTICS

I. PHYSICAL DATA:
Height ..... 15 inches (estimated)
Diameter (at top) ..... 22 inches (estimated)
II. CAPACITY ..... 15 gallons (estimated) (can provide food for 60 to 75 men)
III. REMARKS: This pot may be constructed of iron or aluminum.

B. PETROLEUM-HANDLING EQUIPMENT

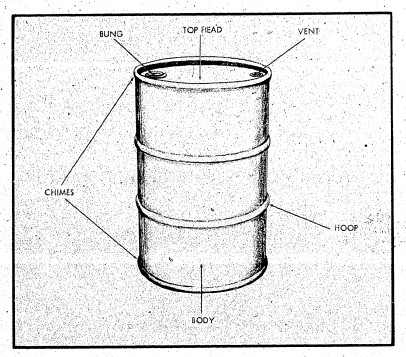
Drum, Inflammable-Liquid, Steel, 55-Gallon

The 55-gallon metal drum shown in the above illustration is essentially the same as the United States Army item.

In service in the Chinese Communist Army.

Drum, Inflammable-Liquid, Steel, 55-Gallon

RECOGNITION FEATURES



CHARACTERISTICS

I. PHYSICAL DATA:

Weight:	
Empty	72 pounds (estimated)
Filled	412 pounds (estimated)
Height	36 inches (estimated)
Diameter	23 inches (estimated)
Volume	10 cubic feet (estimated)
Gauge of metal body	18 gauge (estimated)
Bungholes	One 2-inch in head with ¾-inch vent

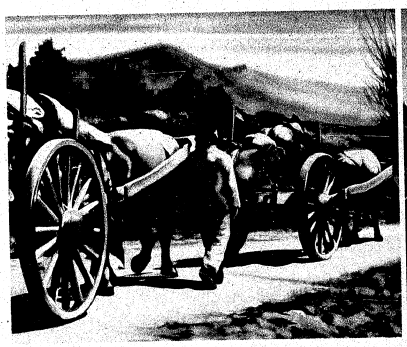
II. CAPACITY: 52.8 gallons (estimated)

III. REMARKS: The above estimates are based on the United States Army standard 55-gallon drum.

C. REMOUNT

1. Supply Carts and Wagons

a. Supply Cart (No. 1)

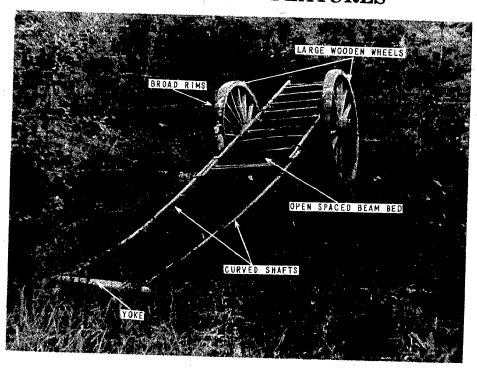


Heavy two-wheel carts drawn by horses or oxen are very common in the Chinese Communist Army supply system. The large diameter wheels are well suited to the poor roads and trails of China and Korea. The open bed of spaced beams gives carrying strength without the greater weight of a solid platform. Small articles are carried in large baskets or are tied into bundles large enough to span the beams. Carts of this kind can move from 1,000 to 2,000 pounds of supplies over distances of from 12 to 16 miles per working day.

In service in China and North Korea.

a. Supply Cart (No. 1)

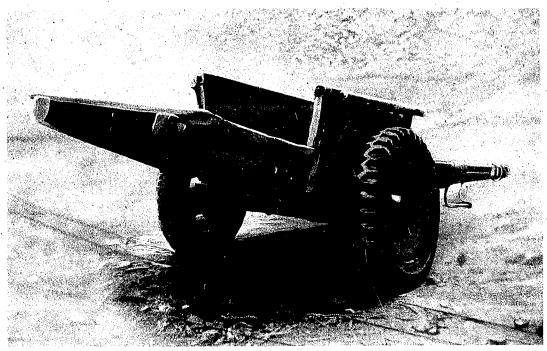
RECOGNITION FEATURES



CHARACTERISTICS

I. PHYSICAL DATA:
Weight ..... Unknown
Dimensions ..... Do
II. CAPACITY ..... Varies between 1,000 to 2,000 pounds

b. Supply Cart (No. 2)

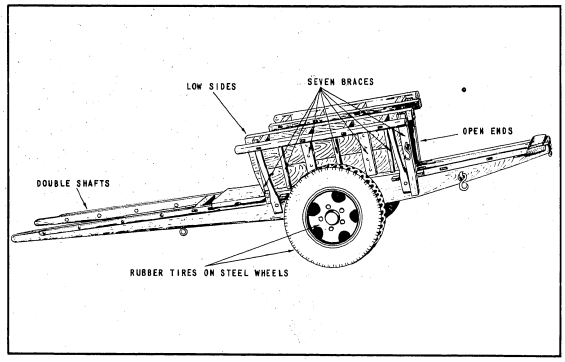


This supply cart in its basic design is very similar to Supply Cart (No. 1). Modifications in the form of large truck wheels and tires, side boards, and a plank bed probably have resulted in a cart of at least equal carrying capacity that is more mobile than the wooden-wheeled models. Variations of carts of this general design are employed for farm and commercial hauling throughout China. They could be impressed into military service in large numbers if required.

In service in China and North Korea.

b. Supply Cart (No. 2)

RECOGNITION FEATURES

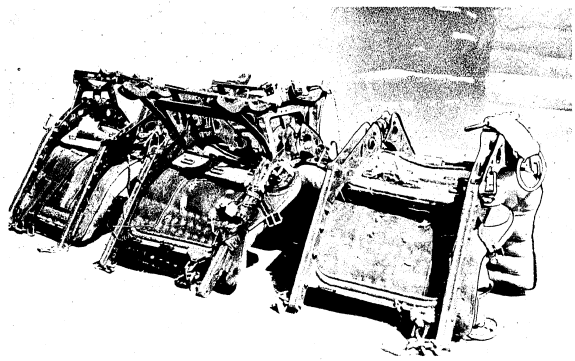


CHARACTERISTICS

I. PHYSICAL DATA:
Weight..... Unknown
Dimensions..... Do
II. CAPACITY..... Varies between 1,000 to 2,000 pounds

2. Packsaddles

a. Packsaddle, Metal Frame (No. 1)



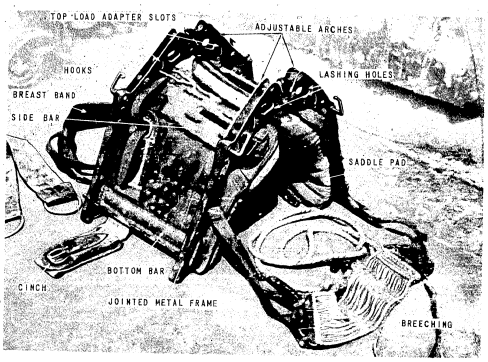
This packsaddle, designed for large animals and heavy loads, has a jointed metal frame and adjustable arches. With various types of fittings it can be modified for use as a mountain pack, machinegun pack, or ammunition pack.

Pads are filled with mohair, cotton, or rice husks.

In service in China and North Korea.

a. Packsaddle, Metal Frame (No. 1)

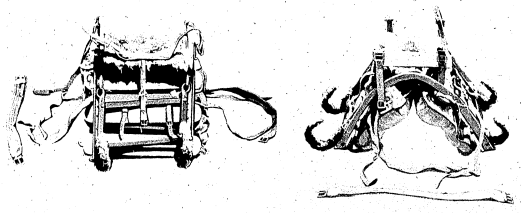
RECOGNITION FEATURES



CHARACTERISTICS

I. PHYSICAL DATA:	
Weight	65 to 75 pounds (estimated)
Dimensions	Unknown
II. CAPACITY	220 to 260 pounds (estimated average); varies from ¼ to ⅓ of the animal's weight, depending on gait and terrain.

b. Packsaddle, Metal Frame (No. 2)

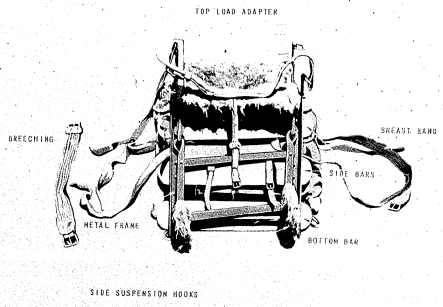


This packsaddle has a metal frame and four large side suspension hooks. Its size indicates that it is designed for small animals. The arches are not adjustable. A felt pad or a pad filled with rice husks is used under the saddle.

In service in China and North Korea.

b. Packsaddle, Metal Frame (No. 2)

RECOGNITION FEATURES



CHARACTERISTICS

I. PHYSICAL DATA:
Weight ..... 35 to 45 pounds (estimated)
Dimensions ..... Unknown
II. CAPACITY ..... 170 to 180 pounds (estimated average)

c. Packsaddle, Wood Frame (No. 3)

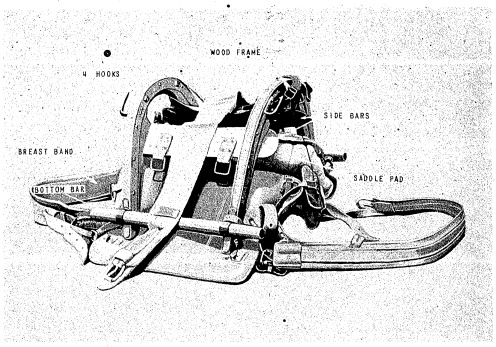
(No illustration available)

This packsaddle has a heavy, wooden, non-adjustable frame. The wooden arches are reinforced with metal facings on the front and rear sides. The thick pads used with this packsaddle allow adjustment to larger or smaller animals by means of removing or adding filling material.

In service in China and North Korea.

c. Packsaddle, Wood Frame (No. 3)

RECOGNITION FEATURES

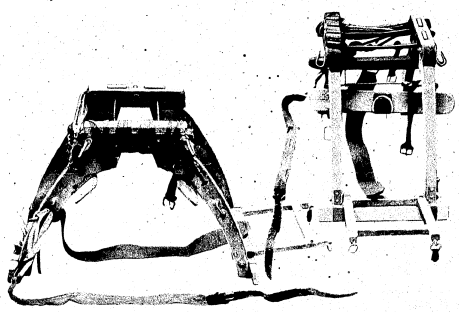


CHARACTERISTICS

I. PHYSICAL DATA:
- Weight..... 65 to 75 pounds (estimated)
- Dimensions..... Unknown

II. CAPACITY..... 220 to 260 pounds (estimated average) varies from ¼ to ⅓ of the animal's weight, depending on gait and terrain

d. Packsaddle, Wood Frame (No. 4)



This packsaddle has a jointed, wooden, non-adjustable frame. A straight transverse piece instead of the usual curved arch joins the two curved ribs. A hinged side-load adapter can be folded flat against the pad when not in use.

In service in China and North Korea.

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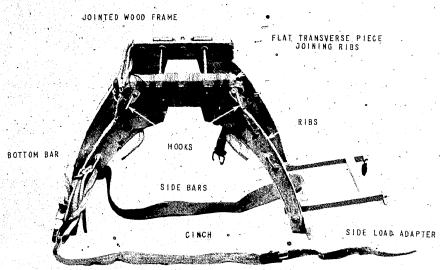
d. Packsaddle, Wood Frame (No. 4)

RECOGNITION FEATURES



CHARACTERISTICS

I. PHYSICAL DATA:
- Weight..... 65 to 75 pounds (estimated)
- Dimensions..... Unknown

II. CAPACITY..... 220 to 260 pounds (estimated average); varies from ¼ to ⅓ of the animal's weight, depending on gait and terrain

e. Packsaddle, Wood Frame (No. 5)

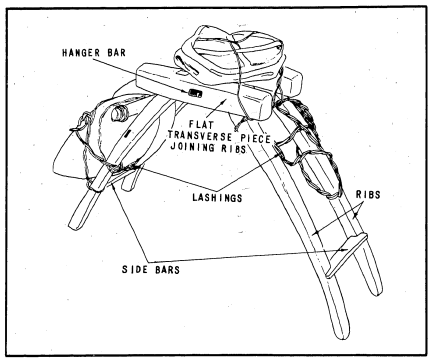
This packsaddle is representative of the types of improvised or "homemade" remount equipment utilized by the Chinese Communist Army. Items of this sort are cheap, are easy to make from local raw materials, and can be requisitioned in large numbers from civilian sources.

The construction of this packsaddle is very simple. It consists of four slightly bowed ribs, two straight transverse pieces connecting each pair of ribs, and a hanger bar and two bottom bars joining the front and rear sections. Loads are attached with whatever rope, wire, or twine is available. Little or no metal is used in the saddle or bindings.

In service in China and North Korea.

e. Packsaddle, Wood Frame (No. 5)

RECOGNITION FEATURES

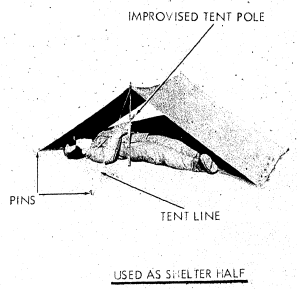


CHARACTERISTICS

I. PHYSICAL DATA:
Weight..... Unknown
Dimensions..... Do
II. CAPACITY..... 220 to 260 pounds (estimated average); varies from ¼ to ½ of the animal's weight, depending on gait and terrain

D. TENTAGE

1. Tent, Shelter-Half



This tent has recently been issued to Chinese Communist troops. Two shelter-halves buttoned or tied together form a small tent which can accommodate two men, as shown in the above illustration. Improvised tent poles are used for support.

1. Tent, Shelter-Half

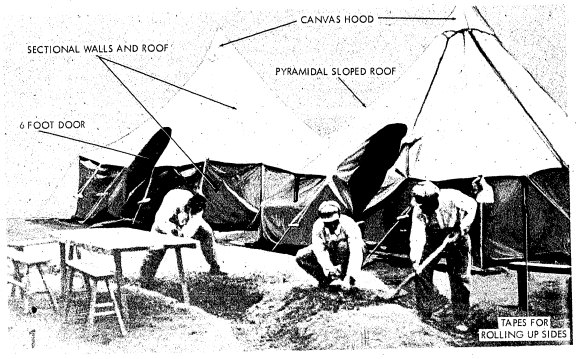
RECOGNITION FEATURES

(No illustration available)

CHARACTERISTICS

I. PHYSICAL DATA:
Weight:
Shelter-Half only..... 2½ pounds (estimated)
With Poles and Pins..... 3¼ pounds (estimated)
Dimensions (each side)..... 6 feet (estimated)
II. CAPACITY..... 2 shelter-halves combined; accommodates 2 men

2. Tent, Pyramidal



This tent is a recent, modified version of the cone-shaped field tent, which reportedly is no longer standard issue. Similar to the United States Army's Tent, Pyramidal, M–1934, O.D., it has a square base, a pyramidal roof, and a 6-foot door.

In service in the Chinese Communist Army.

2. Tent, Pyramidal

RECOGNITION FEATURES

(No illustration available)

CHARACTERISTICS

I. PHYSICAL DATA:
Weight:
Tent..... 130 pounds (estimated)
Poles and pins..... 90 pounds (estimated)
Height:
Overall..... 12 feet (estimated)
Wall..... 4½ feet (estimated)
II. CAPACITY..... 10 men (estimated)
III. REMARKS: This tent is essentially identical to the United States Army Tent, Pyramidal, M–1934.

INTRODUCTION

General. Quartermaster-type field equipment used by the Czechoslovak Army consists in general of German World War II design. There is a noticeable trend, however, toward the replacement of many of these items by Soviet equipment, particularly as regards aerial supply equipment and tentage.

Aerial Supply Equipment. Aerial supply techniques are known and practiced in Czechoslovakia. Although detailed information is not available on the aerial supply equipment currently employed by the Czechoslovak Army, it is known that Soviet-designed parachutes are manufactured locally and are used for personnel and small cargo. Both square-type and circular personnel parachutes are used. These parachutes are described in this section. Soviet-type square parachutes were observed at the 1954 Air Force Day Parade. These parachutes were of various colors, each of which had a secondary white parachute which opened in flight to provide stability for safe landing. Recent information indicates the use of paper parachutes; however, no other information is available.

Field Sanitation Equipment. The only field sanitation equipment observed to date is a German World War II mobile disinfestation unit.

Food Service Equipment. Although a program of modernization is currently underway, much old equipment is still used by the Czechoslovak Army. Modernization of field kitchens has consisted mainly of a change from the large wooden-wheel horse-drawn carriage with limber to a more streamlined truck-drawn carriage on rubber tires. Two postwar improved models are now used: one type consisting of 3 kettles, each 100-liter capacity (approximately 26 United States gal.) and the other consisting of only 1 kettle of 50-liter capacity (approximately 13 gal.). Although field bakeries are used, details of their employment or capacities are not known. It is believed that most units of battalion size, or larger, receive bread from garrison bakeries. Garrisons receive fresh meat from civilian slaughterhouses. Although cold storage facilities are increasing rapidly, they are still in short supply. Mechanically refrigerated civilian railway cars and truck semitrailers are built in 3-, 7-, and 10-ton sizes. The trailer cooling mechanism has a small diesel engine and fin, and tube type coils; methyl chloride is used as the refrigerant. These civilian items can be brought into military supply service whenever they are needed. A mobile refrigerator car (DIA) is now available and is capable of transporting approximately 25 tons of meat. This item is described in this section.

Petroleum-Handling Equipment. Little is known about petroleum-handling equipment of the Czechoslovak Army except that 200-liter drums, 20-liter jerricans, and hand pumps are commonly used.

Reclamation and Repair. The Czechoslovak Army is equipped with mobile mechanical repair units mounted on trailers. It is probable that equipment for the reclamation and repair of shoes and clothing is also used in the field.

Remount Equipment. Czechoslovak ground forces are becoming more motorized, but remount equipment is still observed at military installations in the smaller towns. Supply wagons, resembling those used by the Germans in World War II, are seen most frequently in areas near the frontiers and in poor road areas of Slovakia. Pack horses are used by the cavalry brigades. A general-purpose packsaddle believed to be used by the Army is illustrated in this section.

Sleds. Simple, wooden, horse-drawn sleds are used to supply mountain positions in winter.

Tentage. Recent reports and photographs indicate that Soviet-type tentage has been made available to the Czechoslovak Army. Two types are known to be used: one type is a shelter-half which can be combined to accommodate from 2 to 11 men; the other type is a waterproof general-purpose wall tent which may be used as an officers' mess tent or a kitchen tent or for storing rations and other supplies.

Other. No information is available on materials-handling equipment or any other quartermaster-type field equipment used.

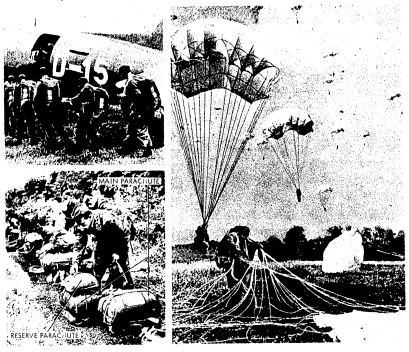
Quartermaster Organizational Equipment of Foreign Manufacture in Significant Use in Czechoslovakia

Czechoslovakian nomenclature	Origin		DA Pamphlet (or Other Reference for Coverage)
	Country	Nomenclature	
Unknown	U. S. S. R.	Personnel Parachute, PD–6	30–10–1
Unknown	do	Personnel Parachute, PD–41–I	30–10–1
Unknown	do	Personnel Parachute, PZ–41	30–10–1
Unknown	do	Personnel Parachute, PS	30–10–1
Unknown	do	Personnel Parachute, P1–3M	30–10–1
Unknown	do	Personnel Parachute, "Ribbon Type"	30–10–1
Unknown	Germany	Mobile Bath and Disinfestation Unit	30–10–2 (East Germany).
Unknown	U. S. S. R.	Field Tent for Enlisted Men	30–10–1

A. AERIAL SUPPLY EQUIPMENT

Parachutes

1. Parachute, Troop, Square-Type



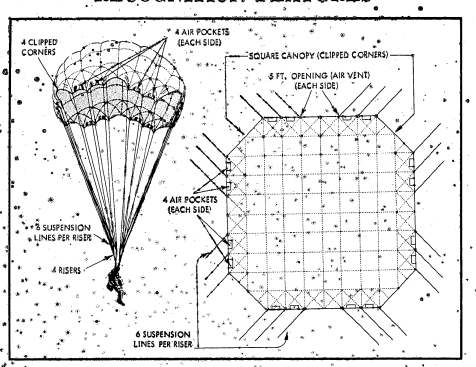
This type of parachute is the standard personnel parachute used by the Czechoslovak Army. It has a flat, square-shaped cotton or synthetic fiber canopy. The suspension lines are arranged to leave a 5-foot air vent. Each side of the canopy has air pockets on each side of the air vent. The pockets, 1 foot wide and ½ foot deep, are sewed to the exterior of the canopy. These pockets tend to speed the opening of the canopy and to increase stability of the parachute during descent.

The parachute is packed in a cotton duck envelope-type pack which has a semirigid frame. The pack has quick-opening elastic bands and a protector flap which is secured with snaps. The parachute is equipped with a ripcord which permits the parachute to be opened manually.

A chest-type reserve parachute is used with this item.

1. Parachute, Troop, Square-Type

RECOGNITION FEATURES



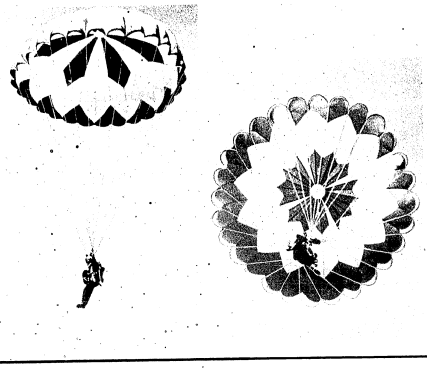
CHARACTERISTICS

I. PHYSICAL DATA:

Material	Cotton or synthetic fiber
Number of Suspension Lines	24
Length of Suspension Lines	22 to 24 feet

II. REMARKS: When packed, this personnel parachute and its reserve parachute appear to be bulkier than the United States parachute.

2. Parachute, Troop, Circular



The personnel parachutes shown in the above illustration are made of various colors. The parachute assembly consists of the canopy, pack, and harness. These parachutes closely resemble the Soviet training parachutes (PS back parachute and/or PD–6 training parachute).

In service in the Czechoslovak Army.

2. Parachute, Troop, Circular

RECOGNITION FEATURES

(No illustration available)

CHARACTERISTICS

PHYSICAL DATA:

Weight (complete assembly)	29 pounds (estimated)
Diameter	32 feet
Number of Panels	28
Number of Suspension Lines	28

B. FOOD SERVICE EQUIPMENT

1. Field Kitchens

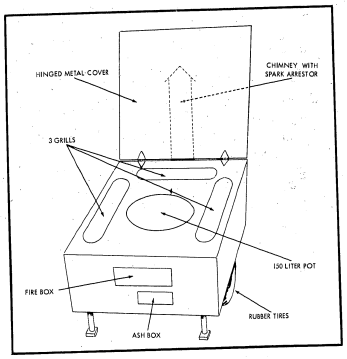
a. Field Kitchen, One-Pot

(No illustration available)

This small field kitchen is issued to small detachments in the Czechoslovak Army. It has a 50-liter (13 United States gal) cooking pot, a chimney, a firebox and ash box, and is equipped with three grills of equal size. The unit is complete with a hinged metal cover which is folded down over the top of the grills and cooking pot when it is not in use. This field kitchen has two rubber-tired wheels and is either horse- or truck-drawn.

a. Field Kitchen, One-Pot

RECOGNITION FEATURES



CHARACTERISTICS

I. PHYSICAL DATA:	
Length	2 meters (6½ ft)
Width	2 meters (6½ ft)
Height of body	140 cm (4½ ft)
II. CAPACITY	Feeds 260 men (approx.)
III. FUEL	Wood

b. Field Kitchen, Three-Pot

(No illustration available)

This mobile field kitchen has a capacity for feeding approximately 260 men. It consists of three kettles, each 100 liters capacity (approximately 26 U. S. gallons), 1 for stews, 1 for soups, and 1 for coffee. The kitchen also has three grills of various sizes.

Wood is used for fuel. The fire box is 40 cm long (approximately 1 ft. 4 in.) and the ash box is 30 cm long (approximately 1 ft.). The chimney is approximately 120 cm high (approximately 4 ft.) and is fitted with a spark arrestor.

This field kitchen has two rubber-tired wheels and can be either horse- or truck-drawn. Each kitchen is operated by five men.

In service in the Czechoslovak Army.

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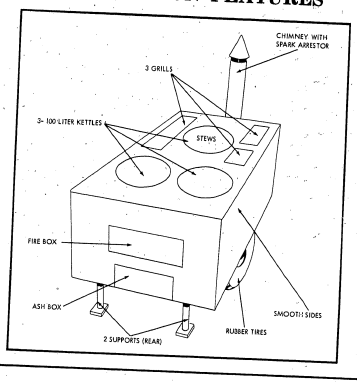
b. Field Kitchen, Three-Pot

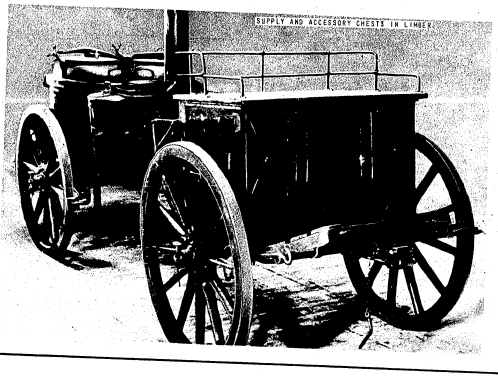
RECOGNITION FEATURES



CHARACTERISTICS

I. PHYSICAL DATA:
Length ..... 150 cm (5 ft. approx)
Width ..... 100 cm (3 ft. 3 in.)
Height of body ..... 60 cm (2 ft.)
II. CAPACITY ..... Feeds 260 men (approx)
III. FUEL ..... Wood
IV. REMARKS: Four large field kitchens are issued to each regiment in the Czechoslovak Army. Five men are required to operate one kitchen.

c. Field Kitchen, Model 1909

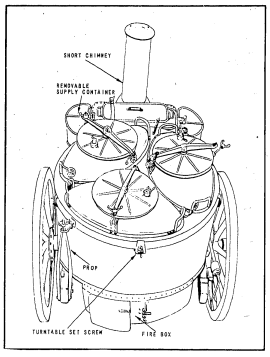


The Model 1909 field kitchen has three large pots set in a turntable mounted on the frame of a round firebox. For convenience of loading or serving, each pot can be brought in turn around to the most accessible point on the perimeter. This kitchen is usually towed behind a horse-drawn limber.

In service in Czechoslovakia.

c. Field Kitchen, Model 1909

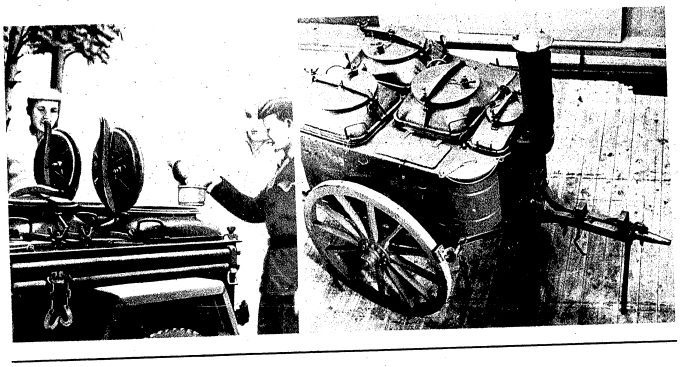
RECOGNITION FEATURES



CHARACTERISTICS

I. PHYSICAL DATA:
Weight..... Unknown
Dimensions..... Do.
II. CAPACITY..... Feeds a company or equivalent unit
III. FUEL..... Wood or coal
IV. REMARKS: This field kitchen is easily recognizable by its round turntable construction.

d. Field Kitchen, Four-Pot

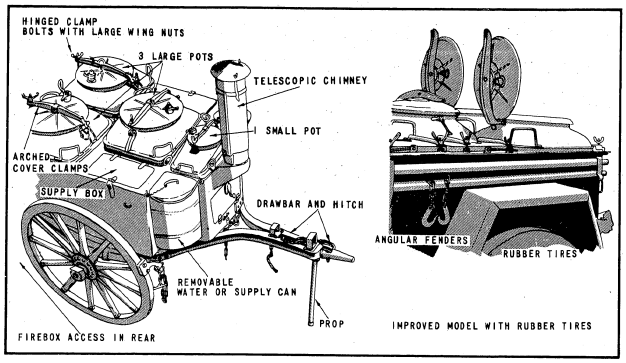


This pre-World War II field kitchen is still observed frequently in Czechoslovakia. The older model shown above is usually towed behind a limber which provides additional storage space for supplies. The three large pots and one small pot can provide hot soup or stew and a beverage for a company-size unit. The wooden-wheeled models are normally horse-drawn; the new, postwar improved models with rubber tires have been observed behind 3-ton Tatra trucks. These kitchens can cook on the move.

In service in Czechoslovakia.

d. Field Kitchen, Four-Pot

RECOGNITION FEATURES



CHARACTERISTICS

I. PHYSICAL DATA:
- Weight..... Unknown
- Dimensions..... Do.

II. FUEL..... Wood or coal

III. CAPACITY..... Feeds a company or equivalent unit

2. Field Refrigeration

a. Portable Refrigerator

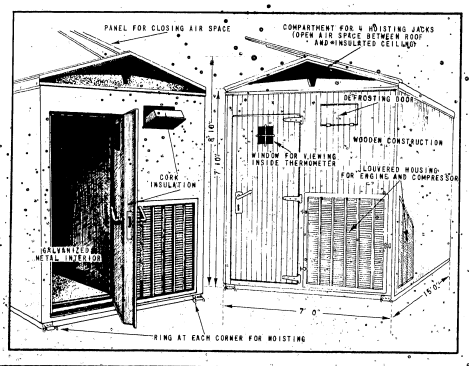
This large, portable walk-in refrigerator was manufactured in Czechoslovakia during World War II. It is not known how many of these units may be in use in the peacetime Czechoslovak Army, when large commercial cold storage installations are available, but it is probable that they could be provided for field operations if required.

The refrigerator box is heavily insulated with cork and has an estimated capacity of approximately 380 cubic feet. The cooling mechanism is powered by a two-cylinder gasoline engine and employs methyl chloride as a refrigerant. It is equipped with lifting jacks and can be carried by truck or railway.

In service in Czechoslovakia.

a. Portable Refrigerator

RECOGNITION FEATURES



CHARACTERISTICS

I. PHYSICAL DATA:

Weight: 1.75 tons (estimated)

	Outside (ft.)	*Inside (ft.)*
Length	13.1	12.1
Width	6.9	5.8
Height:		
At corner	7.8	6.4
At peak	8.9	

II. OPERATIONS:

Cooling mechanism: Powered by two-cylinder, air-cooled, gasoline motor without automatic controls. Motor runs until shut off or fuel is exhausted. Belt-driven compressor pumps methyl chloride through coils located in the chamber above motor compartment. An 8-inch air circulation fan is also powered by the compressor motor. Defrosting is accomplished by circulating warmer outside air drawn in through door above motor compartment.

Box handling and placement: Box can be raised to truck or platform height by four manual jacks carried in storage space under roof peak.

III. CAPACITY: 381 cubic feet.

IV. REMARKS: Wood exterior with galvanized metal roof; interior is galvanized metal; cork insulation.

b. Mobile Refrigerator Car "DIA"

(No illustration available)

This mobile refrigerator car, mounted on eight wheels, can be used as a stationary refrigerated warehouse on wheels or linked with other cars to form a refrigerator train. When used as a train, the refrigerant is carried from car to car in a flexible insulated hose that can be uncoupled. The inside temperature of the car is regulated by means of a thermostat. The car is equipped with meat hooks attached to the beams under the roof for transporting fresh meat. Ice is loaded through 2 roof hatches into 4 ice compartments.

This car can transport frozen goods at a cargo space temperature of −10° Centigrade (14° Fahrenheit) with a medium outside temperature of 30° Centigrade (86° Fahrenheit); precooled goods at a cargo space temperature of 2° Centigrade (35.6° Fahrenheit) with a medium outside of 30° Centigrade (86° Fahrenheit); and non-precooled goods at a medium outside temperature of 30° Centigrade (86° Fahrenheit), but cargo must be cooled within 6 days from 25° Centigrade (77° Fahrenheit) to 4° Centigrade (39.2° Fahrenheit).

Each car is capable of transporting approximately 25 tons of meats.

This refrigerator is manufactured by Deutscher Innen- und Aussenhandel Transportmaschinen (DIA), Berlin, W 8, Mohrenstrasse 61.

b. Mobile Refrigerator Car "DIA"

RECOGNITION FEATURES

(No illustration available)

CHARACTERISTICS

I. PHYSICAL DATA:
- Length:
  - Outside..... 14,080 mm. (48 ft.)
  - Inside..... 13,222 mm. (43 ft. 3 in.)
- Width:
  - Outside..... 3,040 mm. (10 ft.)
  - Inside..... 2,700 mm. (8 ft. 10 in.)
- Height:
  - Maximum from Rails..... 4,940 mm. (16 ft. 2 in.)
  - Inside, Floor to Ceiling..... 2,620 mm. (8 ft. 8 in.)
  - Inside, Duck Boards to Ceiling..... 2,497 mm. (8 ft. 3 in.)
- Total Floor Space..... 35.7 sq. m. (384 sq. ft.)
- Cargo Space..... 27.58 sq. m. (297.sq. ft.)

II. CAPACITY..... 25 tons

III. REMARKS: The standard Czechoslovak Army refrigerator train consists of 20 refrigerator cars with a total carrying capacity of 500 tons.

C. PETROLEUM-HANDLING EQUIPMENT

Can, Gasoline (5 Gal.)

This gasoline can is similar to the Soviet can known as the "Sovi-Can." It is steel-welded, has a cam closure, and is ribbed on each side. In service in Czechoslovakia.

Can, Gasoline (5 Gal.)

RECOGNITION FEATURES

(No illustration available)

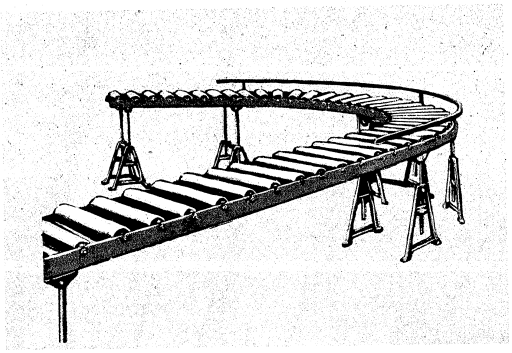
CHARACTERISTICS

I. PHYSICAL DATA:
- Weight..... 10 pounds (estimated)
- Height..... 1½ feet (estimated)
- Width..... ½ foot (estimated)

II. CAPACITY..... 5 gallons

D. MATERIALS-HANDLING EQUIPMENT

1. Roller Conveyor



The roller conveyor shown in the above illustration is used in Czechoslovak warehouses. The rollers consist of steel frames with tubular rollers and bearings. These frames are movable and can be set up in different patterns according to the type of load.

1. Roller Conveyor

RECOGNITION FEATURES

(No illustration available)

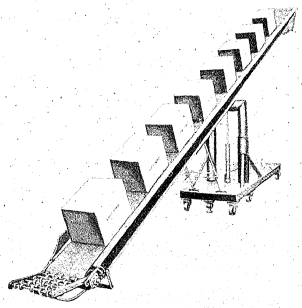
CHARACTERISTICS

PHYSICAL DATA:

Length ..... 2 or 3 meters (6.5 or 9.8 feet)

(No other data available)

2. Stacker



This stacker consists of a roller conveyor and a stationary belt. It is used in Czechoslovak military warehouses primarily for transporting soft goods in sacks.

2. Stacker

RECOGNITION FEATURES

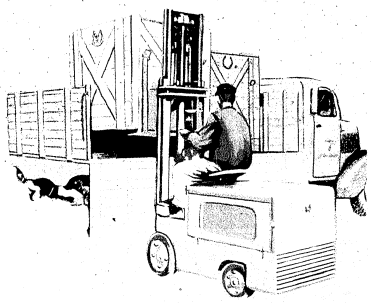
(No illustration available)

CHARACTERISTICS

(No data available)

3. Truck, Fork-Lift

(Vysokozdvizny vozik)



The fork-lift truck shown in the above illustration is used in Czechoslovak military factories and warehouses for loading, unloading, and transporting supplies.

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3. Truck, Fork-Lift

RECOGNITION FEATURES

(No illustration available)

CHARACTERISTICS

I. PHYSICAL DATA:	
Weight	1½ tons (estimated)
Height:	
Maximum	12 feet (estimated)
Minimum	8 feet (estimated)
Width	5 feet (estimated)
II. CAPACITY	1,100 pounds (estimated)

E. RECLAMATION AND REPAIR

Mobile Repair Unit

The Czechoslovak Army has fitted out some of its trucks with machine-shop equipment for repair and reclamation services. These shop units are equipped with work benches, welding equipment, power lathes, drills, saws, grinding and cutting tools, and a large assortment of hand tools. It is probable that they are designed to repair wood and metal mechanical items rather than clothing and footwear.

Mobile Repair Unit

RECOGNITION FEATURES

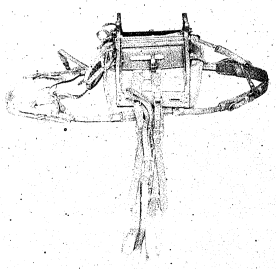
(No illustration available)

CHARACTERISTICS

(No data available)

F. REMOUNT EQUIPMENT

Packsaddle (General-Purpose)

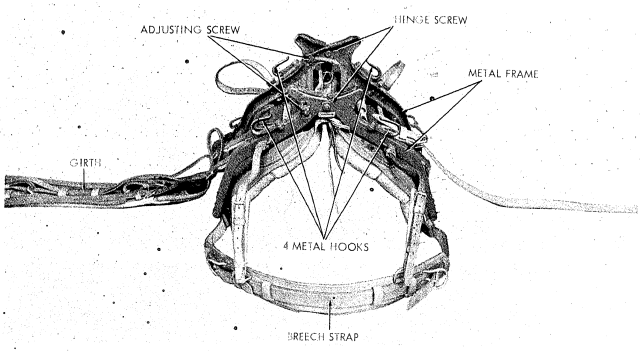


Detailed information is negligible concerning the packsaddle shown in the above illustration. It is known, however, that this item is manufactured locally.

Believed to be in service in the Czechoslovak Army.

Packsaddle (General-Purpose)

RECOGNITION FEATURES



CHARACTERISTICS

(No data available)

G. TENTAGE

1. Tent, Shelter-Half

(No illustration available)

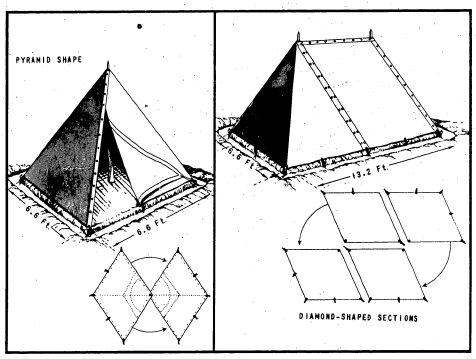
The shelter-half tent is made of waterproofed canvas and can be folded into a rectangle, rolled, and fastened with two small leather straps. The rolled tent can be carried by a soldier by attaching the straps to his belt. Shelter-halves are pitched by 2 men as a single tent, or a number of shelter-halves can be fastened together to accommodate up to 11 men. When used as a single tent, the walls extend upward from the ground to a single peak. This tent has colors and designs in several combinations which provide camouflage for winter and summer.

A shelter-half, 4 pins, and ½ of a tent pole are carried by each Czechoslovak soldier in the field. This item can also be used as a cape in rainy weather.

In service in Czechoslovakia.

1. Tent, Shelter-Half

RECOGNITION FEATURES



CHARACTERISTICS

I. PHYSICAL DATA:
- Weight..... Unknown
- Length..... Sides and short diagonal are 6.6 feet at peak (estimated).
- Height..... 5.7 feet at peak (estimated)
- Components..... Tent sections, 2 pegs per section, 4-piece support, steel ring.

II. CAPACITY..... The 2-section tent is designed for 3 men; the 4-section tent, for 6 men.

III. REMARKS: Shelter-half tents of Czechoslovak or German designs provide less sleeping space per man than the United States-type shelter-half.

2. Tent, Field

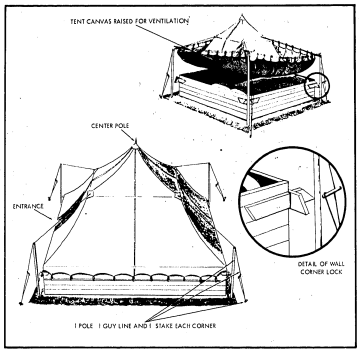
(No illustration available)

This tent is similar to the Soviet field tent for enlisted men. Like the Soviet item, this tent may be easily identified by its sloping sides. It has a pyramidal top, but it does not have windows or ventilators. During warm weather the tent may be raised as shown in the illustration. The tent wall is constructed so that the ends are locked and held secure without the use of nails; this provides for rapid assembly.

In service in Czechoslovakia.

2. Tent, Field

RECOGNITION FEATURES



CHARACTERISTICS

I. PHYSICAL DATA:
- Weight (complete with poles)..... 90 pounds (estimated)
- Height..... Unknown
- Sides..... 13 feet square (estimated)

II. CAPACITY..... 10 to 12 men

3. Tent, Wall

(No illustration available)

Wall tents made of waterproofed canvas are usually issued for officers' use. Two or three of these tents can be placed together to make a long narrow tent. When used as an officers' mess tent, the walls and ends are raised in warm weather. Wall tents are also used as CP tents, as medical tents in the field, as kitchen tents, and for storing rations. These tents are unlike the United States item in that they do not have a fly cover.

In service in Czechoslovakia.

3. Tent, Wall

RECOGNITION FEATURES

(No illustration available)

CHARACTERISTICS

I. PHYSICAL DATA:
Length..... 5 meters (16 ft. approx.)
Width..... 3½ meters (11½ ft. approx.)
Height..... 3½ meters (11½ ft. approx.)
II. REMARKS: Used for officers' mess, CP tent, medical tent, and kitchen tent and for storing rations and other supplies.

INTRODUCTION

General. The East German Army[1] is better equipped than any other Satellite Army. Although some items have been modified and modernized, the quartermaster organizational equipment used by the Army is essentially the same as that of the Wehrmacht of World War II. A few Soviet items also are used, including the Thermoszuege mobile refrigerator and some tentage items.

Aerial Supply Equipment. The German Army acquired broad experience in combat aerial supply operations during World War II. In recent years it appears that emphasis is being placed on aerial supply techniques and equipment. Programs now in effect include the development of parachutes by the VEB Bekleidungswerk in Seifenhennersdorf. A requirement recently has been placed on the firm of Erich Mueller, Clement Gottwaldstrasse, Berlin-Weissenses for the manufacture of a large quantity of aluminum-lined boxes for the storage of parachutes. German-designed ribbon parachutes are being manufactured for the U. S. S. R.

Field Sanitation Equipment. The East German Army is issued mobile bath and disinfestation units at regimental level. Identification plates and operational instruction attached to this equipment (in both the German and the Russian languages) indicate that these units also are intended for Soviet use. Mobile bath and disinfestation equipment used by the Wehrmacht in World War II is still available in East Germany and is in use in several of the other Satellites. A mobile shower and disinfestation trailer recently has been issued to troops. This unit is described in this section.

The East German Army does not have laundry or dry cleaning facilities; these services for the East German Army are provided by civilian establishments.

Food Service Equipment. Mobile field kitchens and bakeries are used by the East German Army. Field kitchens are patterned after the German two-wheel trailer type of World War II; some Soviet kitchens also are reported in use. Hot meals are cooked at battalion level in four kitchens, and each kitchen is towed to a company area. Portable, insulated food containers are used to carry hot food to platoons from the company kitchen. These containers are believed to be of two sizes: 25- and 50-liter. Recent information indicates that in 1953 new field kitchens were being issued, replacing the older types. This new type of kitchen was used in 1953 field exercises, during which time 4 field kitchens fed 300 men per day and were operated by 2 cooks.

The German Army had portable refrigeration units in World War II which are still believed to be used. New field refrigeration equipment has been developed since World War II. The G–5 refrigerator truck which is capable of transporting 3½ tons is currently used. A mobile refrigerator known as the Thermoszuege also is used by the East German Army and the Soviet Army. A newly designed refrigerator trailer was exhibited at the 1955 Leipzig Industrial Fair. This trailer has a capacity for transporting approximately 10 tons of meat, vegetables, and other perishable food. Rail refrigeration cars manufactured by the VEB Railroad Works, Dessau, also were exhibited at the Fair.

Materials-Handling Equipment. Nothing is known of the materials-handling equipment used by the East German Army, except that hand trucks with flat beds or box bodies are used in military warehouses.

Petroleum-Handling Equipment. The East German Army has modern POL-handling equipment. Two hundred liter drums and 20-liter jerricans are used extensively. Electric pumps and tank trucks with approximately 2,000-liter capacity also are used. Hand pumps are used to dispense POL products from drums; tank truck pumps are operated by the truck motor. Although no recent information is available, it is likely that the East German Army uses the World War II drum cleaning and repair equipment of the German Army.

Reclamation and Repair. Reclamation and repair services in the East German Army are usually carried out in garrison shops. In the field, repair units are mounted in van-type trailers and are equipped with forges, drills, and other power tools. All types of mechanical field equipment, including motor vehicles and electrical installations, can be repaired by these units. Information is lacking on mobile equipment for the field repair of boots and clothing.

Remount Equipment. Supply service on the ground is motorized. With the exception of border guard dogs and a very few work horses in garrison gardens, animals are not used in the East German Army. However, there is a strong remount tradition in German military forces. Remount services could be established if the need for them arises. During World War II the Germans relied heavily on animal-drawn columns on the eastern front. One-team wagons were generally used. Cavalry units used two-team wagons. Pack trains of approximately 40 horses or mules equipped with light, adjustable saddles operated over mountainous terrain.

Sleds. Sleds were used for over-snow supply movement in World War II. Light loads and combat casualties were carried in boat-type sleds adopted from the Finns and Russians. Several kinds of heavier sleds on runners carried enclosed two-man ambulance bodies, light field kitchens, light artillery pieces, and large supply loads. Definite information concerning the use of sleds by the East German Army is lacking, but it is probable that military sleds could be provided if required.

Tent Stoves. Tents are heated in winter by small, round, sheet-metal stoves. Both wood and coal are used for fuel.

Tents. Standard tentage of the East German Army is designated by numbers 1 through 6. Tent No. 1 is a command post tent. Tents 2 and 3 are personnel and supply tents. Tents 4, 5, and 6 have not been positively identified, but they may be old Wehrmacht tents. World War II models are reported to be still used in East Germany and Soviet-designed tents and shelter-halves are also used. Recently several new type tents have been reported in use by the East German Army and may also be used by the Soviet Army. These tents include the following: 10- to 12-man tent, 20- to 25-man tent, a bakery tent, and a tent for mobile disinfestation units. These tents are described in this section.

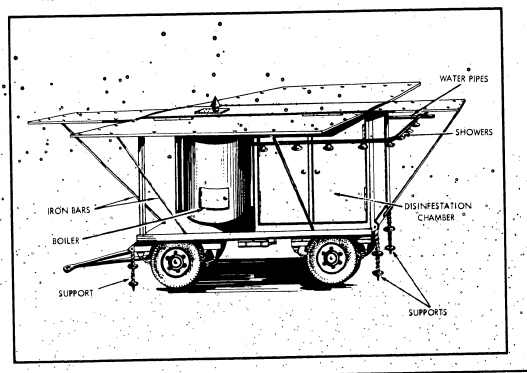
[1] On January 1956, the East German Government established a new Ministry for Defense to control Army, Navy, and Air elements. The Army element was formerly known as the Garrison Police (Kasernierte Volkspolizei—KVP).

Quartermaster Organizational Equipment of Foreign Manufacture in Significant Use in East Germany

East German nomenclature	Origin		DA Pamphlet (or Other Reference for Coverage)
	Country	Nomenclature	
Unknown	U. S. S. R.	Field Kitchen, Model 1941	30–10–1
Mobile Field Bakery, Wernet and Pfleiderer	do	Mobile Field Bakery, Werner and Pfleiderer	30–10–1
Insulated Food Can, M–1941	do	Thermos, Oval, 12-Liter	30–10–1
"Jerrican"	do	Sovi-Can	30–10–1
Unknown	do	Drum, Inflammable Liquid, Steel (200-Liter)	30–10–1
Boat Akja	U. S. S. R.	Boat-Type Sled (No. 4)	30–10–1
Light Akja	Finland.	Boat-Type Sled (No. 5)	30–10–1
Weapons Akja	do	Boat-Type Sled (No. 6)	30–10–1
Unknown	do	Field Tent for Enlisted Men	30–10–1
Unknown	U. S. S. R.	Tent, USB–41	30–10–1
	do		

A. FIELD SANITATION EQUIPMENT

1. Mobile Shower and Disinfestation Trailer



This trailer is a four-wheeled unit which has a disinfecting chamber, a steam boiler, and facilities for setting up an eight-showerhead section. During operation the four sides of the trailer are raised; additional overhead cover is provided by tentage. Water is pumped directly from the source into the boiler, where it is heated by coal, coke, or wood.

In service in East Germany.

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1. Mobile Shower and Disinfestation Trailer

RECOGNITION FEATURES

(No illustration available)

CHARACTERISTICS

I. PHYSICAL DATA:

Length	17 feet (approx.)
Width	8 feet (approx.)
Height	11 feet (approx.)
II. FUEL	Coal, coke, or wood

2. Mobile Bath and Disinfestation Unit, "Sauna"

(No illustration available)

Mobile bath and disinfestation units have been issued in the East German Army on a regimental level since 1951. The "Sauna" unit is installed in a double-walled, sheet metal, van-type trailer. The trailer body is mounted on four dual wheels equipped with puncture-proof tires, and it is towed by a truck or prime mover.

The shower section has a portable frame fitted with eight detachable shower heads. The shower frame is set up in a 26- by 33-foot tent erected around three sides of the trailer. The entire tent space is floored with duck boards. The showers accommodate from 10 to 16 men at a time.

The "Sauna" unit also has a hot air compartment for the disinfestation of clothing. Although air temperatures up to 248° F. can be produced, temperatures of 176° F. to 194° F. are usually sufficient for the disinfestation process.

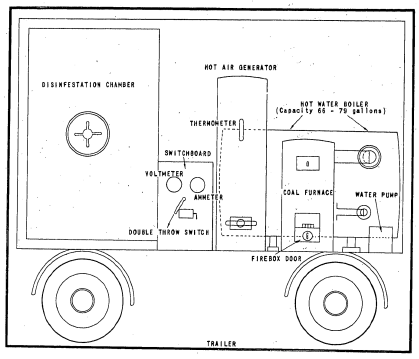
The operating equipment of the "Sauna" unit includes a coal furnace, a hot water boiler, a hot air generator, a water pump, a small gasoline engine, and a switchboard for electrical connections.

Electricity is obtained by connecting with available power lines. Water is drawn from available water lines and hydrants. When water is drawn from streams or lakes, a pump must be borrowed from the regimental fire department. Two men are required to operate and maintain this unit.

In service in East Germany and probably in the U. S. S. R.

2. Mobile Bath and Disinfestation Unit, "Sauna"

RECOGNITION FEATURES



CHARACTERISTICS

I. PHYSICAL DATA:
- Weight: Unknown
- Length:
  - Trailer: 19.7 feet (estimated)
  - Shower Tent: 33 feet (estimated)
- Width:
  - Trailer: 8.2 feet (estimated)
  - Shower Tent: 26 feet (estimated))
- Height (Trailer): 9.2 feet (estimated)

II. CAPACITY:
- Shower Section: 160 to 180 men per hour (estimated)
- Clothing disinfestation: Unknown
- Hot water boilers: 80 gallons (estimated)

III. FUEL: Coal or wood

IV. REMARKS: The "Sauna" unit appears to have some serious weaknesses for field operations if it is dependent upon public utility sources for power and water pumping as reported. It probably would be equipped with its own pump and a portable generator under emergency conditions, however.

3. Mobile Bath and Disinfestation Unit, "Banya"

(No illustration available)

The "Banya" bath and disinfestation unit is installed in the same van-type, four-wheel trailer as the "Sauna" unit. It differs from the "Sauna" unit in that it has no portable shower frame to set up outside of the trailer. The "Banya" has two compartments, one for clothing disinfestation and one for bathing and disinfecting personnel. Both compartments are approximately 5 by 6.5 feet in size. The personnel compartment can accommodate only about four men at a time. Each compartment is equipped with its own hot air blower. Heat is supplied by a coal furnace. Blower fans are electrically operated.

In service in East Germany and probably in the U. S. S. R.

3. Mobile Bath and Disinfestation Unit, "Banya"

RECOGNITION FEATURES

(No illustration available)

CHARACTERISTICS

I. PHYSICAL DATA:

Weight	Unknown	
	Trailer (ft.) (estimated)	*Compartments (ft.) (estimated)*
Length	19.7	6.5
Width	8.2	5.0
Height	9.2	---

II. CAPACITY:

Shower Section	40 to 50 men per hour (estimated)
Clothing Disinfestation	Unknown

III. FUEL: Coal or wood

4. Mobile Bath and Disinfestation Unit (Special Trailer 11)

(Der Anäenger für Entseuchung mit Brausevorrichtung, Sonderanhänger 11)

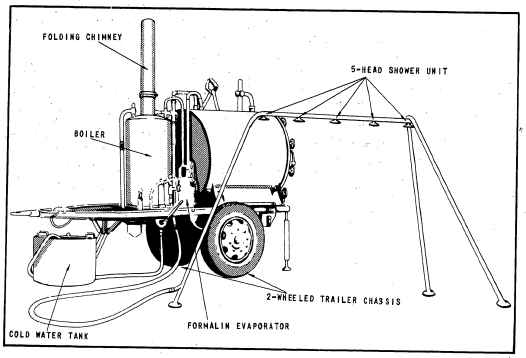
(No illustration available)

Special Trailer 11 is a two-wheel bath disinfestation unit equipped with a boiler, hand pumps, a hot water tank, a disinfestation chamber, and a portable shower frame. Disinfestation is accomplished by a steam-formalin mixture. Two hand pumps draw water from outside sources into the boiler and shower system. The hot water tank is located between double rear walls in the disinfestation chamber. Steam from the boiler on its way into the disinfestation chamber circulates around this tank and heats the water. A cold and hot water mixing valve controls the temperature of the shower water. The portable shower frame is erected beside the trailer. It has five shower heads and is connected to the trailer by a flexible water hose.

Believed to be in service in East Germany, Czechoslovakia, and Bulgaria.

4. Mobile Bath and Disinfestation Unit (Special Trailer 11)

RECOGNITION FEATURES



CHARACTERISTICS

I. PHYSICAL DATA:
- Weight..... Unknown
- Dimensions..... Do.

II. CAPACITY:
- Shower Section..... 40 to 50 men per hour (estimated)
- Clothing Disinfestation..... Unknown
- Steam Boiler..... 26 gallons (estimated)
- Hot Water Tank..... 47 gallons (estimated)

III. FUEL..... Coal or wood

5. Mobile Bath Unit (Kfz 92)

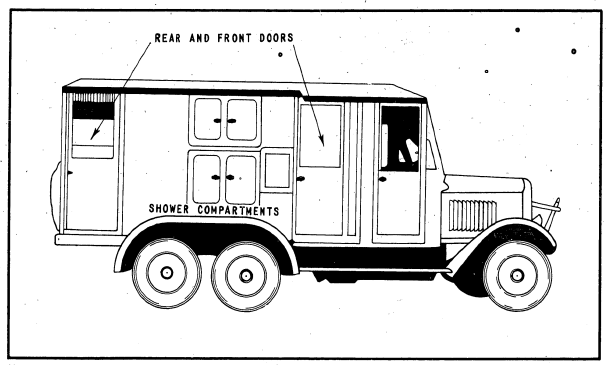
(No illustration available)

The mobile bath unit (Kfz 92) is a six-wheel truck fitted with a large van-type body. It contains bathing facilities with a capacity of 150 men per hour. This unit weighs about nine tons when completely equipped. No further information is available.

Believed to be in service in East Germany, Czechoslovakia, and Bulgaria.

5. Mobile Bath Unit (Kfz 92)

RECOGNITION FEATURES



CHARACTERISTICS

I. PHYSICAL DATA:
Weight..... 9 tons (estimate !)
Dimensions..... Unknown

II. CAPACITY..... 150 men per hour

III. REMARKS: Although specific information is not available, it is probable that this unit closely resembles Mobile Disinfestation Unit (Kfz 93) in its power plant and general operation.

6. Mobile Disinfestation Unit (Kfz 93)

(No illustration available)

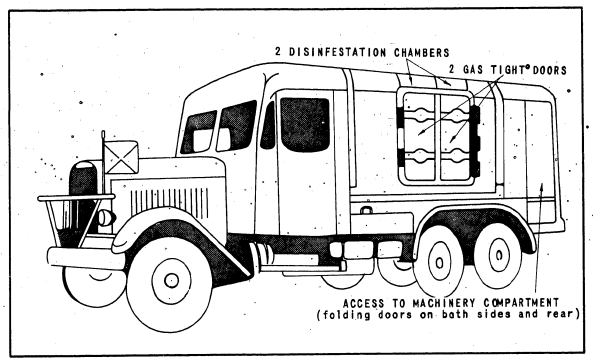
The mobile disinfestation unit (Kfz 93) consists of a standard 6-wheel Henschel chassis with a diesel engine and a large van-type body completely equipped for the disinfestation of clothing. Two insulated chambers can be charged with hot air or steam simultaneously or separately. Airtight doors in the side of the van provide access to the chambers.

Steam and hot air are produced in the machinery compartment at the rear of the van. A single-tube high-speed steam boiler heated by a diesel oil furnace supplies steam at 175 to 200 pounds of pressure per square inch and 300° to 350° C. for a 5,000 rpm steam turbine. This turbine provides power for the unit's motors, fans, and pumps.

Believed to be in service in East Germany, Czechoslovakia, and Bulgaria.

6. Mobile Disinfestation Unit (Kfz 93)

RECOGNITION FEATURES



CHARACTERISTICS

I. PHYSICAL DATA:
Weight..... 9.7 tons (estimated)
Dimensions..... Unknown
II. CAPACITY..... Unknown
III. FUEL..... Diesel oil

IV. REMARKS: Articles of clothing and equipment are hung up or laid out in the disinfestation chambers. Steam, chemically charged steam, or hot air is forced under pressure into the chambers. Steam and hot air are produced by a boiler and a diesel furnace. Power for fans and pumps is supplied by a steam turbine.

7. Disinfestation Wagon

(No illustration available)

This disinfestation wagon is a horse-drawn vehicle that was widely used in rear areas and areas with poor roads in World War II. Its construction is relatively simple. Essentially, it consists of a coal- or wood-fired, steam boiler and an airtight chamber mounted on a wagon chassis.

Available in East Germany and believed to be in service in Poland, Czechoslovakia, and Bulgaria.

7. Disinfestation Wagon

RECOGNITION FEATURES

CHARACTERISTICS

I. PHYSICAL DATA:
Weight..... Unknown
Dimensions..... Do

II. CAPACITY..... Unknown

III. FUEL..... Coal or wood

IV. REMARKS: Steam produced by the coal- or wood-fired boiler is injected under pressure into the disinfestation chamber. After a prescribed period of time the steam is released, and the processed items are removed from the chamber.

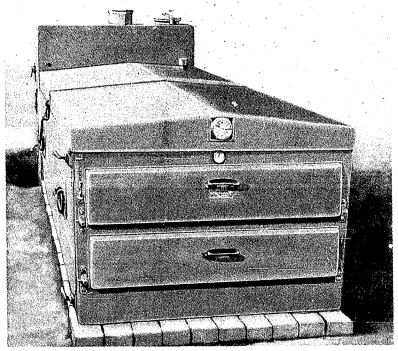
B. FOOD SERVICE EQUIPMENT

1. Field Bakeries

a. Portable Field Bakery, M–1939

(Doppelherdiger Dampfbackofen Modell 1939)

(Double-hearth, Steam Bakery Oven, Model 1939)

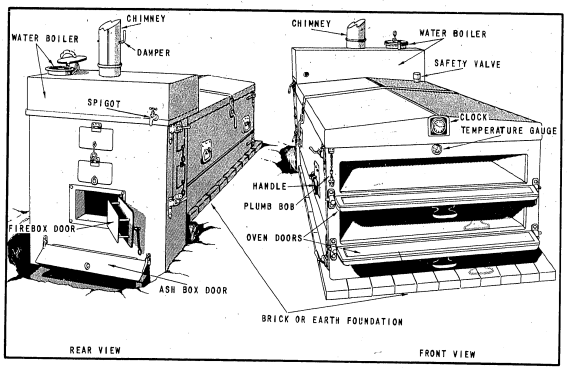


This compact, metal, field oven is an improved version of the M–1900 Payer oven. It is known to have been in use as early as 1939. This oven is easily moved and can be set up on the ground or on a foundation of brick or stone. A small space is excavated for the grate, ash box, and draft door. Steam pipes distribute heat throughout the two ovens. A clock and temperature gauge are located above the oven doors.

Available in East Germany and believed to be in service in the East German Army.

a. Portable Field Bakery, M–1939

RECOGNITION FEATURES



CHARACTERISTICS

I. PHYSICAL DATA:
- Weight..... Unknown
- Length..... 8 feet (estimated)
- Width..... 4 feet (estimated)

II. CAPACITY..... 2,200 pounds per day (estimated)

III. FUEL..... Coal or wood

b. Mobile Field Bakery (Vwf–1)

4 WHEELED, HORSE-DRAWN WAGON

This mobile field bakery was used by the German Army in World War II. Although later models, described as "Bakery Trailer, Special Vehicle 105," have been produced, the primary change has been that of replacing the iron-rimmed wheels with pneumatic tires. The oven construction and operating capabilities remain the same.

In service in East Germany.

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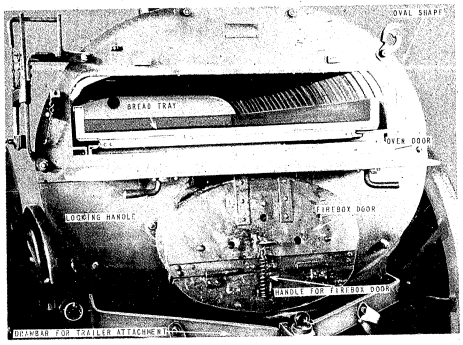
b. Mobile Field Bakery (Vwf–1)

RECOGNITION FEATURES



CHARACTERISTICS

I. PHYSICAL DATA:

Weight	2.25 tons
Length (without tongue)	11.5 feet
Width	6.1 feet
Height	7.3 feet
Wheel Diameters	3.4 feet (front) 4.6 feet (rear)

II. CAPACITY:

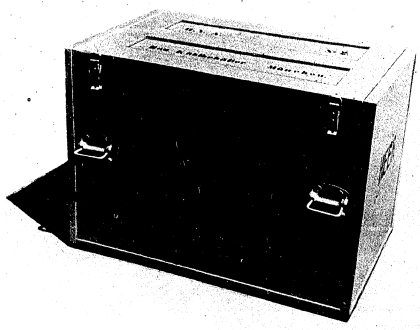
Production	4.6 tons per 24-hour day
Water tank	16 gallons

III. FUEL: Coal or wood

2. Food Containers

Insulated Food Container, "Munich"

(Kuhldienst, Heer, "Munchen")

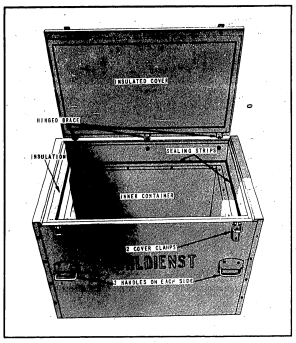


This insulated, box-type food container was used by the German Army in Italy and North Africa during World War II. Its primary use in those areas was for holding chilled foods, but it also would serve to keep food hot in cold areas.

In service in East Germany.

Insulated Food Container, "Munich"

RECOGNITION FEATURES



CHARACTERISTICS

I. PHYSICAL DATA:

Weight	22 pounds (estimated)
Length	3.0 feet (estimated)
Width	1.25 feet (estimated)
Height	2.0 feet (estimated)
II. CAPACITY	12 gallons (estimated)

3. Field Kitchens

a. Field Kitchen, M–1953

(No illustration available)

The M–1953 field kitchen has a capacity for providing food for approximately 60 men and is similar in design to the small field kitchen also used. It is truck-drawn and consists of a large kettle for stews, a coffee container, and a small compartment for semisolid food. One field kitchen is authorized per company; four kitchens are authorized per battalion.

A larger kitchen of similar design, except that the kettle has a capacity for 125 liters (33 gals.), also is used.

In service in the East German Army.

a. Field Kitchen, M–1953

RECOGNITION FEATURES

(No illustration available)

CHARACTERISTICS

I. PHYSICAL DATA:
- Weight..... 1.50 to 2 tons
- Length..... 1.60 meters (5.2 ft.)
- Width..... 2 meters (6.5 ft.)
- Height..... 1.20 to 1.40 meters (3.9 to 4.5 ft.)

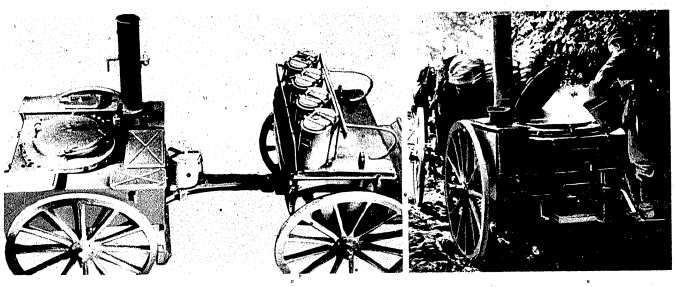
II. CAPACITY:
- Kettle..... 75 liters (19.8 gals.)
- Coffee Container..... 50 liters (13.2 gals.)
- Small Compartment..... 30 liters (7.9 gals.)

III. FUEL..... Coal or wood

IV. REMARKS: Provides food for approximately 60 men.

b. Field Kitchen, Large

(Grosse Feldkuche)



German field kitchens have served as models for other European Armies for decades. This large field kitchen was used by the Wehrmacht in World War II, and many were left in countries invaded by Germany.

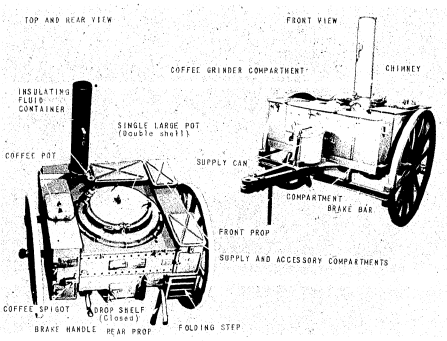
This kitchen has complete equipment for field messing. Various models were manufactured with greater broiling or frying space. Numerous food preparation aids such as grinders, shredders, and strainers are included as standard equipment.

The horse-drawn models are normally towed behind limbers which provide additional storage space. Storage space for truck-drawn kitchens is provided inside the trucks. More recent models are equipped with rubber tires. Models used in the U. S. S. R. probably have been modified to fit the Soviet ration system.

In service in East Germany, the U. S. S. R., Albania, and Bulgaria.

b. Field Kitchen, Large

RECOGNITION FEATURES



CHARACTERISTICS

I. PHYSICAL DATA:

Weight:	
Limber (loaded)	1,364 pounds
Kitchen (loaded)	1,463 pounds
Length (limber and kitchen)	13.3 feet
Width	5.8 feet
Height	5.5 feet

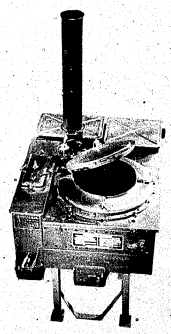
II. CAPACITY:

Center Pot	53 gallons
Coffee Pot	24 gallons

III. FUEL: Coal or wood

c. Field Kitchen, Small

(Kleine Feldkuche)

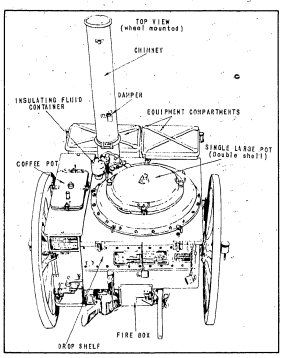


The small field kitchen differs from the larger model in its smaller feeding capacity, fewer cooking compartments, less storage space, and smaller complement of accessories. It is more mobile, however, and better suited to field operations of small units. During its use by the German Army in World War II, it was mounted on trucks, sleds, or the usual two-wheel trailers. Recent models are equipped with rubber tires. Models used in the U. S. S. R. probably are modified to suit the Soviet ration system.

In service in East Germany, the U. S. S. R., Albania, and Bulgaria.

c. Field Kitchen, Small

RECOGNITION FEATURES



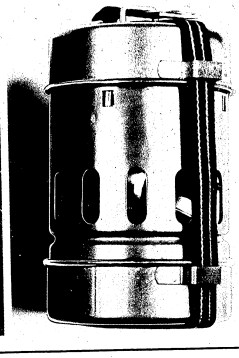
CHARACTERISTICS

I. PHYSICAL DATA:
Weight:
Limber (loaded)..... 1,012 pounds
Kitchen (loaded)..... 1,005 pounds
Length (limber and kitchen)..... 12.3 feet
Width..... 4.6 feet
Height..... 5.3 feet

II. CAPACITY:
Center Pot..... 29 gallons
Coffee Pot..... 16 gallons
III. FUEL..... Coal or wood

d. Stove, One-Burner Gasoline, M–1941

(Benzin-Sportkocher)

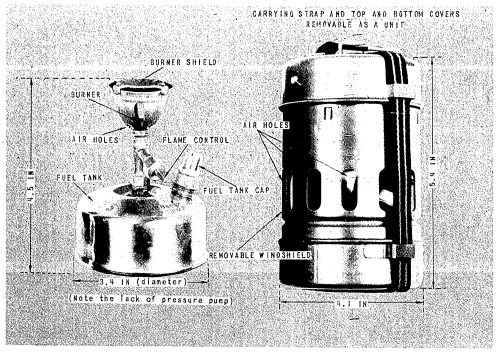


The one-burner gasoline stove is issued to patrols and other small units for detached field operations. Its cover serves as a carrying case, windshield, and storage space for spare parts and accessories. This stove has no pump; pressure is built up by warming the fuel tank. During World War II it was used by the German Army on the Eastern Front and in North Africa.

In service in East Germany.

d. Stove, One-Burner Gasoline, M–1941

RECOGNITION FEATURES



CHARACTERISTICS

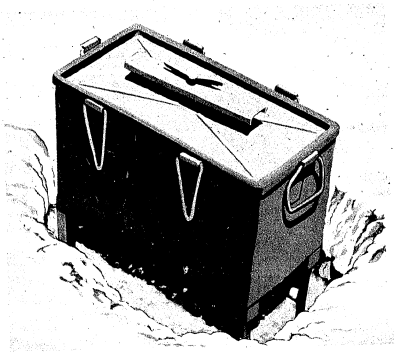
I. PHYSICAL DATA:

Weight:		
Total	1.36 pounds	
Stove	0.58 pounds	
Parts and Accessories	0.11 pound	
Case and Webbing	0.67 pound	
	Stove	*Carrying case*
Diameter	3.4 inches	4.1 inches
Height	4.5 inches	5.4 inches

II. FUEL: Gasoline, benzine, or alcohol

e. Field Cooking Chest

(Feldkochkiste)

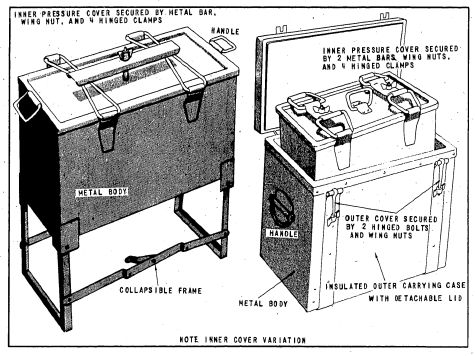


This field cooking chest was employed by the Afrika Korps in North Africa. It is composed of a pressure cooker and an insulated carrying case. When the unit is used in the field, the collapsible metal legs serve to support the cooker over a fire. Before the contents are completely cooked, the cooker can be removed from the fire and placed in the insulated carrying case, where the cooking is finished during transport to the troops.

In service in East Germany.

e. Field Cooking Chest

RECOGNITION FEATURES



CHARACTERISTICS

I. PHYSICAL DATA:

Weight..... 15 lbs (estimated)

	Cooker	*Carrying Case*
Length	15 inches	18 inches (estimated)
Width	7 inches	9 inches (estimated)
Height	12 inches	16 inches (estimated)

II. CAPACITY..... 5 gallons (estimated)

III. FUEL..... Wood or coal

4. Field Refrigeration Equipment

a. Refrigerator Trailer

(Gefrierapperat Fahrbar)

(No illustration available)

This 12-wheeled refrigerator trailer unit is generally used to freeze and transport fresh meat supplies and is set up to operate in conjunction with a meat packing plant. During World War II it was an integral part of the German Army fresh foods supply channel.

In service in East Germany.

a. Refrigerator Trailer

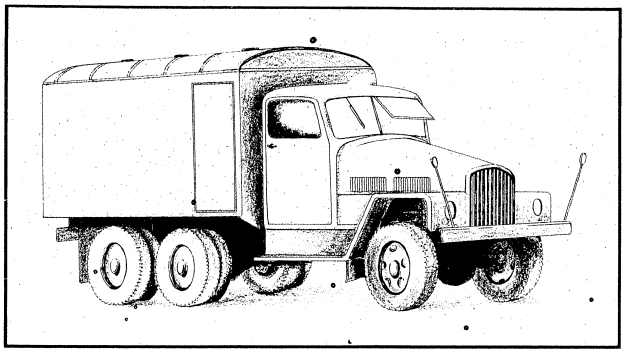
RECOGNITION FEATURES

CHARACTERISTICS

I. PHYSICAL DATA:

Weight	4 tons (estimated)
Length	25 feet (estimated)
Width	7 feet (estimated)
Height	10 feet (estimated)
II. CAPACITY	2 tons (estimated)

b. Truck, Refrigerator, G–5



The G–5 refrigerator truck is a standard military truck with a special insulated van-type body. It is used by the East German Army for transporting meats, butter, cheese, and vegetables. The van is lined and covered with sheet metal. There are three revolving ventilators on the top of the van and a door on the right front of the van.

In service in East Germany.

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b. Truck, Refrigerator, G–5

RECOGNITION FEATURES

(No illustration available)

CHARACTERISTICS

I. PHYSICAL DATA:

Weight	Unknown
Length (overall)	7 meters (22.9 ft.)
Width	2.5 meters (8.2 ft.)
Height	2.8 meters (9.1 ft.)
II. CAPACITY	3½ tons (approx.)

c. Mobile Refrigerator (Thermoszuege)

(Kuehlfahrzueg)

(No illustration available)

The mobile refrigerator, known as the Thermoszuege, consists of a special-type insulated vehicle and trailer, both of which are covered with aluminum. The truck has a capacity for five tons; the trailer has a capacity of six tons.

This refrigerator is manufactured by the VEB Lowa Werdau Plant, Saxony. It is reportedly used in East Germany for the shipment of perishable foods from central supply points to units which are too far from the slaughterhouses or cold storage plants.

In service in the East German Army and believed to be in service in the Soviet Army.

c. Mobile Refrigerator (Thermoszuege)

RECOGNITION FEATURES

(No illustration available)

CHARACTERISTICS

I. PHYSICAL DATA:	
Weight	Unknown
Length:	
Truck	6 meters (19.6 ft.)
Trailer	7 meters (22.9 ft.)
Width:	
Truck	3.2 meters (10.4 ft.)
Trailer	3.2 meters (10.4 ft.)
Height:	
Truck	4 meters (13 ft.)
Trailer	4 meters (13 ft.)
II. CAPACITY:	
Total	11 to 12 tons
Truck	5 tons (approx.)
Trailer	6 tons (approx.)

d. Portable Refrigerator, "Rocket"

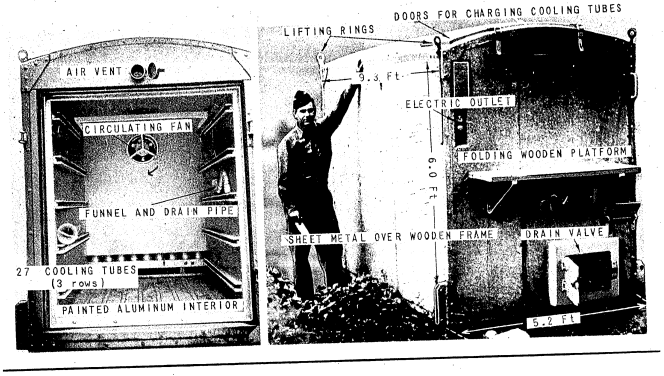
(Raketen-Eismaschinen DRP)

This portable refrigerator, which was used by the German Army in World War II, is a cork-insulated box cooled by 27 large vertical cooling tubes and a 10-inch electric fan. The fan draws air through the cooling compartment into the cold chamber. The cooling tubes are charged with a cooling agent, probably an ice-salt mixture, through an opening in the roof over the cooling chamber. A drain is provided at the bottom of the tubes. The interior of the cold chamber is fitted with eight rolling hangers for sides of meat and five pairs of tracks for movable trays of perishable foods. The box has a wooden frame covered inside and out with light sheet steel.

In service in East Germany.

d. Portable Refrigerator, "Rocket"

RECOGNITION FEATURES



CHARACTERISTICS

I. PHYSICAL DATA:

Weight ..... 1.25 tons (estimated).

	Outside (ft.)	Inside, cold chamber (ft.)
Length	9.3	5.5
Width	5.2	4.0
Height	6.0	4.75

II. CAPACITY ..... 120 cubic feet (estimated).

III. REMARKS: The cooling agent used is believed to be an ice-salt mixture.

e. Portable Cold Storage Unit

(No illustration available)

This cold storage unit, which was used by the German Army in World War II, has a welded steel construction; enameled pressed fiberboard liner; and a white, fibrous insulation. It provides 247 cubic feet of cold storage space at temperatures down to −40° F. and has a dry ice capacity of 880 pounds for full freezing.

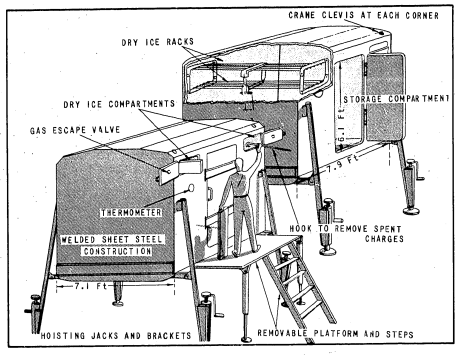
In normal usage this unit is carried on a truck, trailer, or railroad flat car or is supported on adjustable jacks. The jacks are also used to raise or lower the box from trucks or cars.

Packaged frozen foods and sides of meat are the usual contents.

In service in East Germany.

e. Portable Cold Storage Unit

RECOGNITION FEATURES



CHARACTERISTICS

I. PHYSICAL DATA:

Weight:	
Empty	1.25 tons
Filled	5.50 tons
Length	7.9 feet
Width	7.1 feet
Height	7.4 feet

II. CAPACITY:

Freezing space	247 cubic feet
Dry ice	880 pounds

III. REMARKS: The cooling agent used is dry ice.

5. Water Containers

Water Container, 20-Liter Can; 200-Liter Drum

The 20-liter (5-gallon) jerrican and 200-liter (53-gallon) drum are the principal portable water containers used by the East German Army. These appear to be identical to the container used for POL products, but they are reserved for water by means of special markings. A miscellaneous assortment of other metal containers may also be observed occasionally. Tanks with a capacity of 400 or 500 liters are sometimes mounted on small trucks. Mobile field kitchens and bakeries are usually accompanied by special water trailers.

Water Container, 20-Liter Can; 200-Liter Drum

RECOGNITION FEATURES

(No illustration available)

CHARACTERISTICS

I. PHYSICAL DATA..... Unknown

II. CAPACITY:

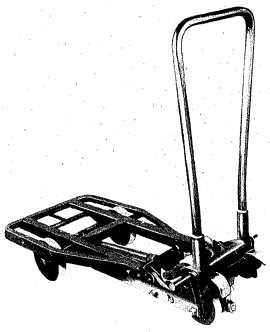
Drum ..... 200 liters (53 gals)
Can..... 20 liters (5 gals)

III. REMARKS: The 20-liter cans and 200-liter drums are the principal portable water containers in use. There is no specific information on other containers less commonly used.

C. MATERIALS-HANDLING EQUIPMENT

Truck, Pallet, Hand

(Scheldkrote Hubtransportwagen)



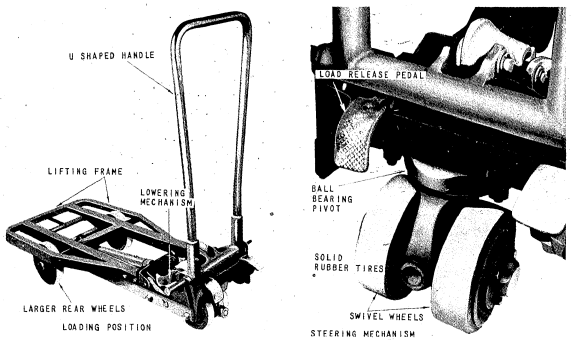
The East German Army uses hand trucks to move stores in warehouses and depots. Other kinds of materials-handling equipment probably are used also, but specific information is lacking.

This pallet truck is equipped with solid rubber tires, is easily handled, and can lift about 1,650 pounds 2.5 inches from the floor.

In service in East Germany.

Truck, Pallet, Hand

RECOGNITION FEATURES



CHARACTERISTICS

I. PHYSICAL DATA:

Weight	Unknown
Length (handle raised)	4.2 feet
Width	1.9 feet
Height (platform lowered)	7.8 inches
Extent of lift	2.5 inches

II. CAPACITY: 750 kilograms (1,653 lbs) (maximum)

III. REMARKS: This pallet truck has an assisted leverage lifting mechanism requiring one stroke of the handle to lift the load. The load automatically locks in position, leaving the handle free. The hydraulic load release is operated by a foot pedal. The front steering wheels swivel on a ballbearing pivot and are independent of the handle.

D. PETROLEUM-HANDLING EQUIPMENT

1. Pump, Gasoline, Hand-Dispensing

(Hand Pumpe)

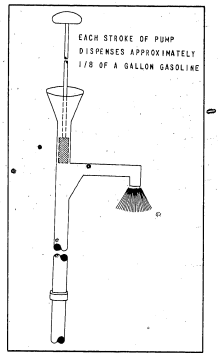
(No illustration available)

Two types of gasoline-dispensing hand pumps are used in East Germany. The pump shown in the following line drawing utilizes a vertical stroke action for drawing fuel from a container. Another type is described as having a horizontal "back and forth" stroke. Small pumps of this kind are used for transferring fuel from drums to vehicle tanks, from drums to cans, or from drum to drum.

The East German Army also has pumps driven by tank truck motors as well as the common electric "filling station" pumps.

1. Pump, Gasoline, Hand-Dispensing

RECOGNITION FEATURES



CHARACTERISTICS

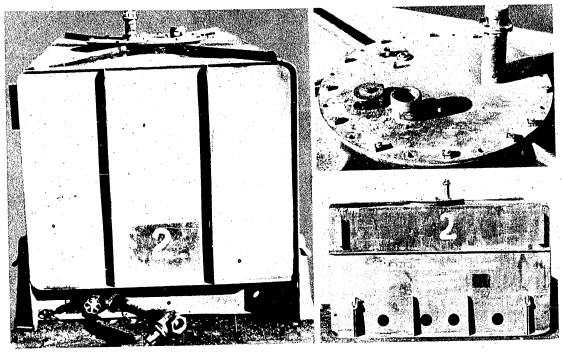
I. PHYSICAL DATA:

Dimensions	Unknown
Weight	Unknown

II. CAPACITY: ⅛ gallon per stroke

III. REMARKS: This pump has a vertical stroke pumping action.

2. Gasoline Skid Tank (3,000 Liters)

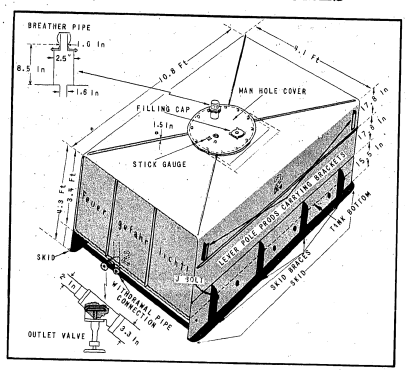


The German Army used metal skid tanks in large numbers in World War II. They are designed for quantity production and can be used for several different purposes. The 3,000-liter model shown above serves as a storage tank, as a stationary filling point, or as an emergency gasoline tank truck when mounted on a 2½- or 3-ton truck. As a filling point it is filled in an elevated position by the pump of a tank truck, and gasoline is dispensed to vehicles by gravity flow.

In service in East Germany.

2. Gasoline Skid Tank (3,000 Liters)

RECOGNITION FEATURES



CHARACTERISTICS

I. PHYSICAL DATA:

Weight:	
Empty	750 kilograms (1,654 lbs)
Filled	3,000 kilograms (6,614 lbs)
Length	10.8 feet
Width	4.1 feet
Height	3.4 feet

II. CAPACITY: 3,000 liters (800 gals)

III. REMARKS: This skid tank is constructed of four identical sections of ⅛-inch sheet steel welded together and around flat end plates. Steel ribs ¾ by 1.5 inches are welded on the ends, sides, and top. Two sets of baffle plates within the tank restrict dangerous splashing of the contents during movement.

3. Drum Cleaner, Portable

(No illustration available)

This portable drum cleaner was the newest item for cleaning drums furnished to the Wehrmacht at the end of World War II. Advantages over older models that are incorporated in this newer cleaner are reduced weight, simple construction, protection for the spray tip, and a rocking cradle.

In service in East Germany.

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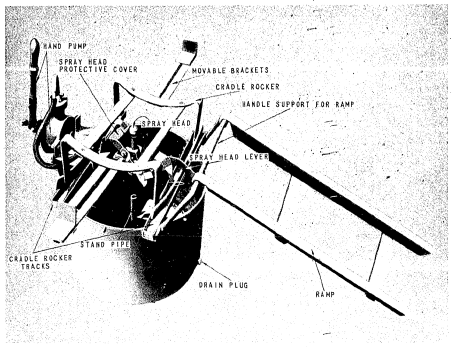
3. Drum Cleaner, Portable

RECOGNITION FEATURES



CHARACTERISTICS

I. PHYSICAL DATA:
- Weight: 150 pounds (estimated)
- Diameter: 23.3 inches
- Height: 17.0 inches

II. CAPACITY:
- Cleaning fluid: 20 gallons
- Rate of cleaning: 1 drum per minute

III. REMARKS: The tank is constructed of galvanized iron; pumps are painted iron or steel. The spray-head is aluminum. A drum is placed on the cradle with the spray-head inserted through the bunghole. The hand pump forces a cleaning fluid (gasoline or water) through the spray-head into the drum while the drum is being rocked continuously. The cleaning fluid falls back into the tank and is reused. One man is needed to work the pump. Two men control the drum during the cleaning operation.

E. SLEDS

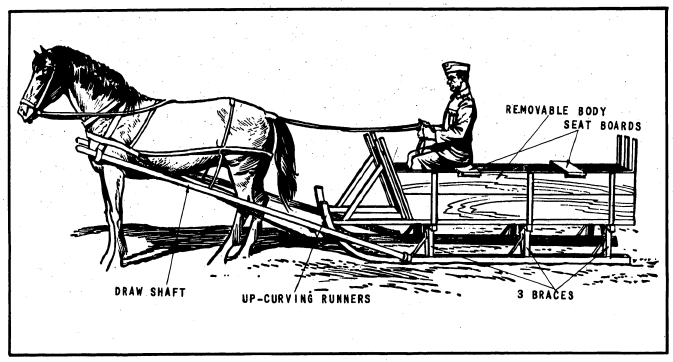
1. Army Sled No. 1

The German Army developed several standard sleds for use on the Eastern Front during World War II. Two main types are large sleds on runners and small boat-type sleds, or akjas. Army Sled No. 1 is a one-piece sled used for carrying freight and personnel. For bulky loads larger than the carrying surface, the side and rear boards of the box can be removed. The front and back of the box can be built up by attaching additional boards. This sled is drawn by one horse or a tandem depending on the load. Smaller sleds, or akjas, can be hooked on to the rear crossbar.

In service in East Germany.

1. Army Sled No. 1

RECOGNITION FEATURES



CHARACTERISTICS

I. PHYSICAL DATA:
- Type: Cargo and personnel sled
- Configuration: Over-snow carrier with 1-piece up-curving runners, 3 braces, and normally a box body.
- Equipment: Box body, seat boards, drawing shafts, and towing hooks.
- Weight: 284 pounds

II. CAPACITY: 661 pounds maximum
- Length without shafts: 9.0 feet
- Length with shafts: 17.5 feet
- Width: 3.1 feet
- Box length: 6.8 feet
- Box width: 2.4 feet
- Box height: 1.4 feet

III. REMARKS: Army Sled No. 1 is employed to carry cargo or personnel over snow-covered areas. Depending on its load, it is drawn by one or more horses. With side and back boards removed, or built up, it can accommodate cargoes larger than its standard box.

2. Army Sled No. 3

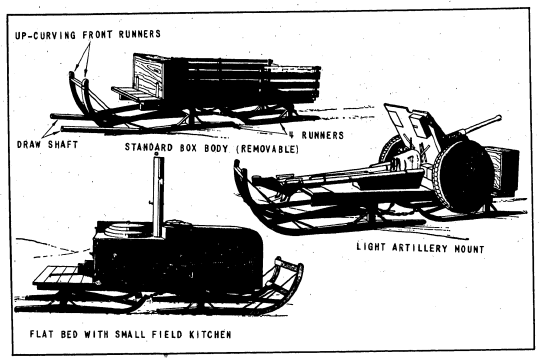
(No illustration available)

Army Sled No. 3 is a larger and more versatile vehicle than Army Sled No. 1. This sled is constructed in two parts which are connected with two crossed chains. A removable box is attached to each part with a peg. The two-piece construction gives this sled greater maneuverability than a one-piece sled. It is usually drawn by one horse or by two horses in tandem.

In service in East Germany.

2. Army Sled No. 3

RECOGNITION FEATURES



CHARACTERISTICS

I. PHYSICAL DATA:

Type	Cargo and general utility sled
Configuration	Over-snow carrier with 2-piece up-curving runners, 2 braces, and a wide variety of body styles
Equipment	Varies with load but may include box body, artillery mounts, or small field kitchen and food storage chests
Weight	459 pounds
Length without shafts	12.9 feet
Length with shafts	21.1 feet
Width	3.9 feet

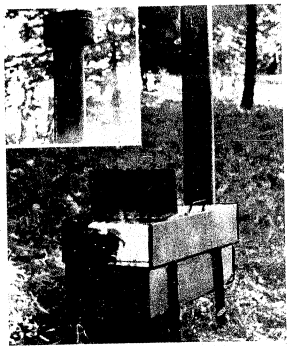
II. CAPACITY: 1,100 pounds maximum

Box length	7.4 feet
Box width	3.6 feet
Box height	1.4 feet

III. REMARKS: This sled is employed to carry small field kitchens, light artillery, signal and engineer equipment, ammunition, and other miscellaneous cargoes.

F. TENT STOVES

1. Tent Stove, Rectangular, Collapsible

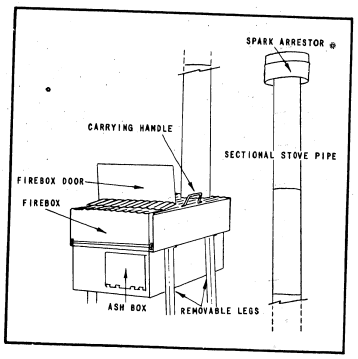


The collapsible rectangular stove, which was used by the German Army in World War II, is moderately large for a tent stove, but it is so constructed that it can be collapsed and transported conveniently. The top section fits over the lower section when in the carrying position. The large firebox indicates that this stove is designed for use under very cold conditions. The flat top surface can be used for heating water or rations.

In service in East Germany.

1. Tent Stove, Rectangular, Collapsible

RECOGNITION FEATURES



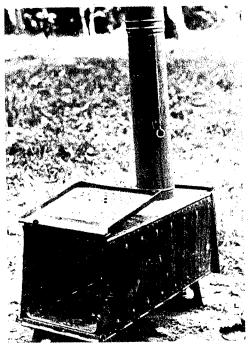
CHARACTERISTICS

I. PHYSICAL DATA:

Weight	35 pounds (estimated)
Length	2.5 feet (estimated)
Width	1.5 feet (estimated)
Height (with legs)	2.0 feet (estimated)
Diameter of stovepipe	3.4 inches

II. FUEL: Wood or coal

2. Tent Stove, Rectangular, Folding

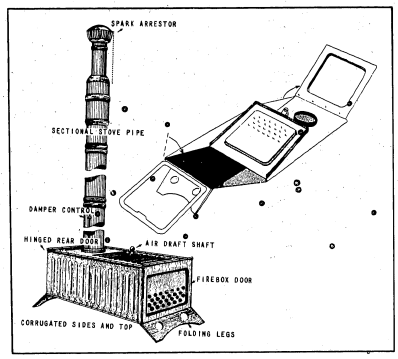


This folding rectangular tent stove was used by the German Army on the Eastern Front during World War II. Its hinged construction makes this small stove very compact and portable.

In service in East Germany.

2. Tent Stove, Rectangular, Folding

RECOGNITION FEATURES



CHARACTERISTICS

I. PHYSICAL DATA:

Weight	15 pounds (estimated)
Length	18 inches (estimated)
Width	10 inches (estimated)
Height (on legs)	14 inches (estimated)
Diameter of stovepipe	3.4 inches

II. FUEL: Wood

3. Tent Stove, Squad

(Zelt und Graben Ofen)

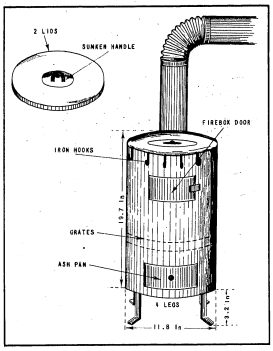
(No illustration available)

This squad tent stove is a very simple metal cylinder with a top, bottom, grates, and two doors. It has four small metal legs; and the stovepipe enters in the back opposite the doors. Metal hooks around the upper rim are used for heating rations. A round lid in the center of the stove top can be removed for cooking or water heating.

In service in East Germany.

3. Tent Stove, Squad

RECOGNITION FEATURES

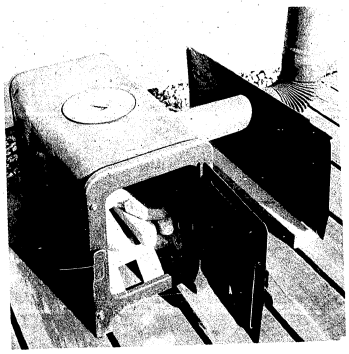


CHARACTERISTICS

I. PHYSICAL DATA:

Weight	18 pounds (estimated)
Diameter	11.8 inches
Height (on legs)	22.9 inches
II. FUEL	Wood or coal

4. Tent Stove, Wood-Burning

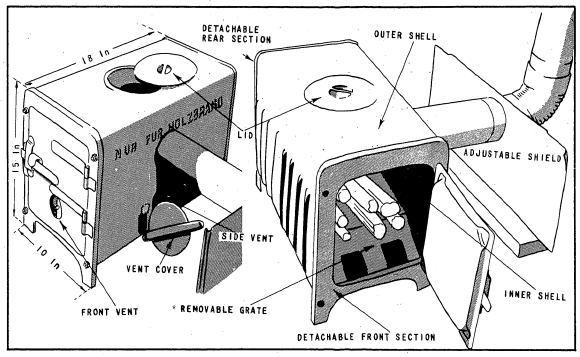


This small compact tent stove, which was used by the German Army in World War II, has excellent burning and heating characteristics. The stove assembly has six parts: An outer shell with side louvers, an inner shell, a front section containing the door, a rear section, a stove lid, and a small wedge-shaped grate intended to hold one end of a piece of wood off the bottom of the firebox. Because of this type of grate and the light metal construction of the shells, only wood can be used as fuel.

In service in East Germany.

4. Tent Stove, Wood-Burning

RECOGNITION FEATURES



CHARACTERISTICS

I. PHYSICAL DATA:

Weight (total)	35 pounds
Length	18 inches
Width	10 inches
Height	15 inches
Diameter of stovepipe	3.4 inches

II. FUEL — Wood only

G. TENTAGE

1. Command Post Tent, No. 1

(Stabs Zelt)

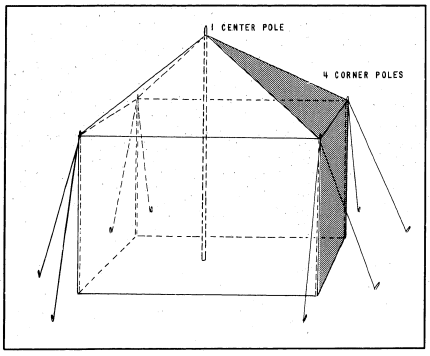
(No illustration available)

This small square tent is without windows or stovepipe opening. Detailed information is not available.

In service in East Germany.

1. Command Post Tent, No. 1

RECOGNITION FEATURES



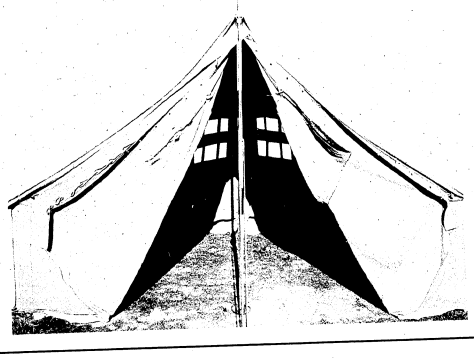
CHARACTERISTICS

I. PHYSICAL DATA:

Weight	70 pounds (estimated)
Length	7.8 feet (estimated)
Width	Do
Height:	
Center	7.0 feet (estimated)
Sides	5.0 feet (estimated)

II. CAPACITY 3 men and equipment (estimated)

2. Command Post Tent



The command post tent, which was used by the Germany Army in World War II, is similar to the United States small wall tent. One end of the German tent has an extension, however, so that it can be joined to another tent in the same manner as the United States large wall tent.

The loosely woven tent fabric tightens and becomes water repellent when the linen fibers get wet. Workmanship on this tent is generally excellent.

Believed to be in service in East Germany, Hungary, and Poland.

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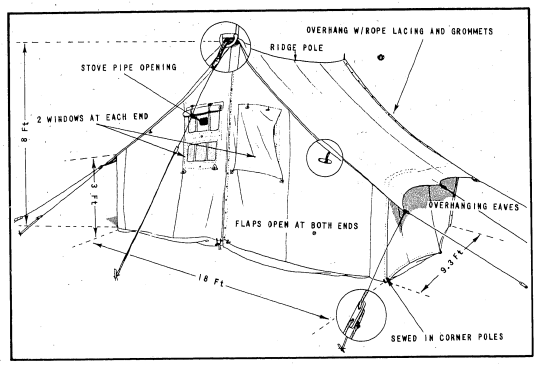
2. Command Post Tent

RECOGNITION FEATURES



CHARACTERISTICS

I. PHYSICAL DATA:

Weight	70 pounds
Length	9.25 feet
Width	18.0 feet
Height:	
Center	8.0 feet
Sides	3 feet
II. CAPACITY	4 men

III. REMARKS: German tents normally are not fireproofed or treated with mildew inhibitor.

3. Tent, Medical

This medical tent was used by the German Army in World War II. Its light metal arched frame gives a large expanse of open space for cots and medical equipment. Vestibules at each end and midway along one side permit movement in or out with a minimum of disturbance to the occupants.

In service in East Germany.

3. Tent, Medical

RECOGNITION FEATURES

(No illustration available)

CHARACTERISTICS

I. PHYSICAL DATA:	
Weight	Unknown
Length	70 to 75 feet (estimated)
Width	20 feet (estimated)
Height:	
Center	12 feet (estimated)
Side	8 feet (estimated)
II. CAPACITY	30 to 40 cots (estimated)

4. Tent, Medical

This medical tent is similar to the United States medium general purpose tent. It is rectangular and has a gable-type end construction and two windows on each side. This item can accommodate up to 16 patients and 1 medical NCO. Each tent is equipped with 16 combination sleeping bags and stretchers. Four tents of the same size and type comprise one mobile medical unit. Tentage and equipment required by these mobile medical units are transported on a three-ton ZIS-type truck. This tent is manufactured by the Traenker and Wuerker Tent Factory in Leipzig.

In service in East Germany and in the U. S. S. R.

4. Tent, Medical

RECOGNITION FEATURES

(No illustration available)

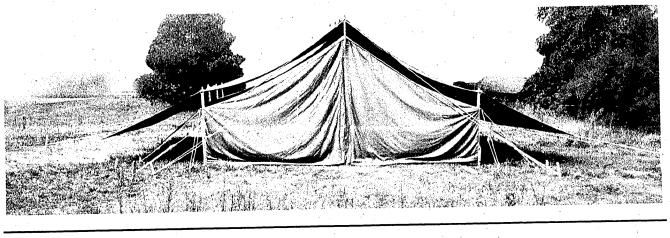
CHARACTERISTICS

I. PHYSICAL DATA:

Weight (tent and poles)	332 pounds
Length	26 feet
Width	13½ feet
Height:	
Ridge	7½ feet
Side wall	5 feet

II. CAPACITY: Accommodates up to 16 patients and 1 NCO

5. Personnel Tent



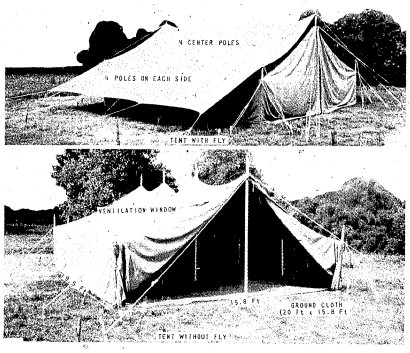
This 12-man German tent is similar to the United States large wall tent except that it is lower and larger. It is equipped with a ground cloth and fly. The fly is supported approximately one foot above the tent proper and extends approximately six feet beyond the eave line. The ridge is reinforced with heavy webbing.

This troop tent was widely used by the Germans in World War II. It is the prototype of two very similar tents, the Model 70 and the Model 100.

In service in East Germany, Hungary, and Poland.

5. Personnel Tent

RECOGNITION FEATURES



CHARACTERISTICS

I. PHYSICAL DATA:

Weight:	
Total	352 pounds
Tent	92 pounds
Ground cloth	40 pounds
Fly	78 pounds
Tent cover	7 pounds
Accessories	135 pounds
Length	19.5 feet
Width	15.8 feet
Height:	
Center	7.25 feet
Sides	3.5 feet
II. CAPACITY	12 men

6. Billeting and Supply Tent, No. 2

(Unterkunfts und Metereal Lager Zelt No. 2)

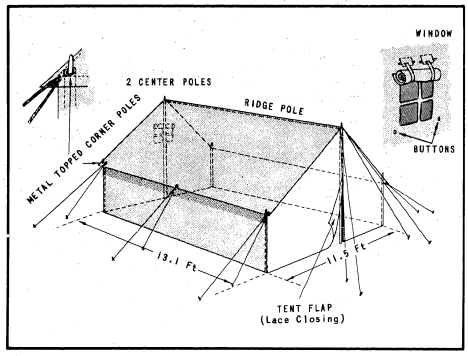
(No illustration available)

This small wall tent is used for storage or for billeting four officers in the field. It is supported by a ridgepole joining the two main end poles and by four-corner poles. A screened window in the rear wall provides ventilation. The front flaps can be laced closed.

In service in East Germany.

6. Billeting and Supply Tent, No. 2

RECOGNITION FEATURES



CHARACTERISTICS

I. PHYSICAL DATA:	
Weight	200 pounds (estimated)
Length	12.1 feet
Width	11.5 feet
Height:	
Center	6.5 feet
Sides	3 feet (estimated)
II. CAPACITY	4 men

7. Billeting and Supply Tent, No. 3

(Unterkunfts und Metereal Lager Zelt No. 3)

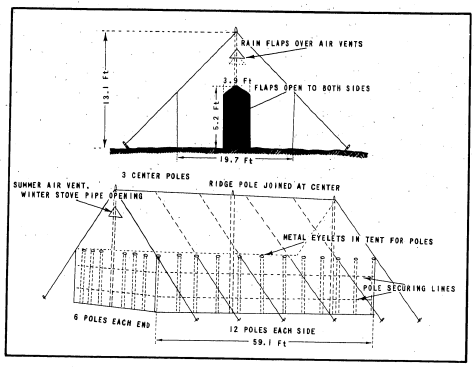
(No illustration available)

This large wall tent is used for storage and billeting troops in the field. It is often set up with a wooden floor. Two end poles and a center pole support a long two-section ridge pole. Thirty-six short poles inserted in canvas pockets support the ends and sides. Small air vents near the peaks at each end provide ventilation.

In service in East Germany and Poland.

7. Billeting and Supply Tent, No. 3

RECOGNITION FEATURES



CHARACTERISTICS

I. PHYSICAL DATA:
- Weight..... 1,200 pounds (estimated)
- Length..... 59.1 feet (estimated)
- Width..... 19.7 feet (estimated)
- Height:
  - Center..... 13.1 feet
  - Sides..... 5 feet (estimated)

II. CAPACITY..... 36 to 60 men

8. Signal Tent, Large

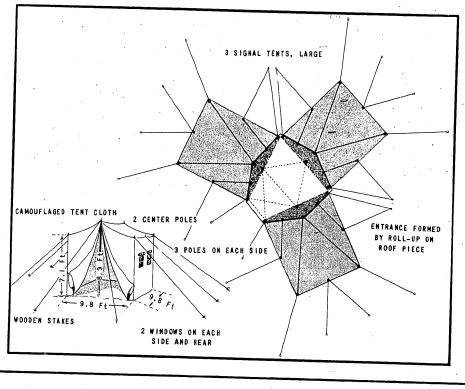
(No illustration available)

The large signal tent, which was used by the German Army in World War II, is designed to shelter radio equipment in the field. The tent material is camouflaged, impregnated cotton tent cloth. The guy lines are impregnated and permanently attached to the tent canvas. The high sidewalls allow the construction of a direction-finding antenna within the tent. Two plastic windows on each side and in the rear provide light and ventilation. Three of these tents are frequently set up and joined together for one operating unit.

In service in East Germany.

8. Signal Tent, Large

RECOGNITION FEATURES



CHARACTERISTICS

I. PHYSICAL DATA:

Weight	200 to 250 pounds (estimated)
Length	9.8 feet
Width	9.8 feet
Height:	
Center	8.8 feet
Sides	7.1 feet
II. CAPACITY	96 square feet of floor space with a minimum height of 7.1 feet

9. Workshop Tent, M–H 05.501

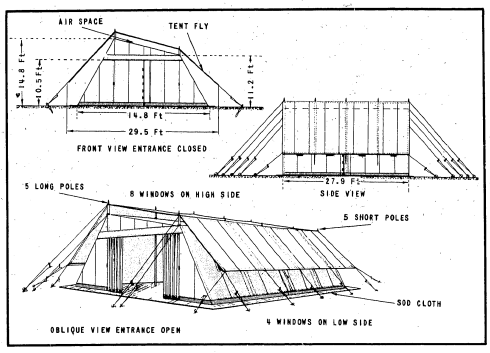
(No illustration available)

The workshop tent, which was used by the German Army in World War II, serves as a garage tent for the repair of motor vehicles. The configuration of this tent is unusual in that the roof slopes in only one direction. Folding doors at each end of the tent can accommodate large trucks or other vehicles. Eight windows along the high sidewall and four along the low wall provide light and ventilation. During warm weather a fly is erected over the tent to furnish shade.

In service in East Germany.

9. Workshop Tent, M–H 05.501

RECOGNITION FEATURES



CHARACTERISTICS

I. PHYSICAL DATA:	
Weight	1,157 pounds
Length	27.9 feet
Width	29.5 feet
Height:	
High wall	14.8 feet
Low wall	11.2 feet
Door width	14.8 feet
Door height	10.5 feet
Fly length	27.9 feet
Fly width	33.8 feet
II. CAPACITY	2 to 3 trucks

10. Tent, 10- to 12-Man

(Unterkunftszelt, 10- 12-Mann)

SIDE VIEW

FRONT VIEW

This tent has a square base and a pyramidal roof. It has one entrance and four windows with wooden frames and celluloid panes. It can accommodate from 10 to 12 men. This tent is manufactured by the Sparfeld Factory of the VEB Sattler- und Lederwarenfabriken in Leipzig.

In service in East Germany.

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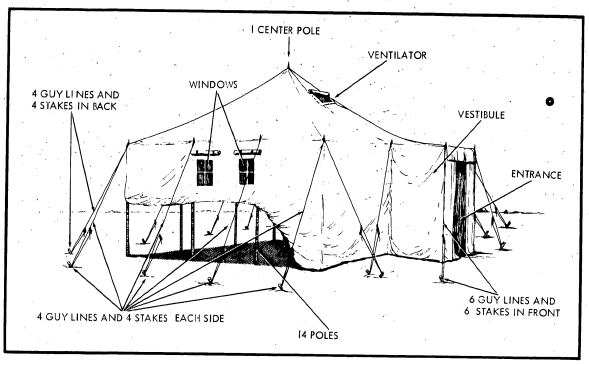
10. Tent, 10- to 12-Man

RECOGNITION FEATURES



CHARACTERISTICS

I. PHYSICAL DATA:

Weight (total)	26 kilograms (approx.) (57.30 lbs. approx.)
Height:	
Apex	3½ meters (11.48 ft.)
Wall	1¾ meters (5.74 ft.)
Length	5 meters (16.40 ft.)
Width	5 meters (16.40 ft.)
Floor area	22 square meters (236.78 sq. ft.)

II. CAPACITY: 10 to 12 men

11. Tent, 20- to 25-Man

(Unterkunfszelt, 20- 25-Mann)

The tent shown in the above illustration can accommodate from 20 to 25 men. It has one entrance and eight side windows with wooden frames and celluloid panes. The tent is used by the East German Army for both winter and summer field duty. In winter a wool lining is attached to the inner side walls of the tent, and a stove is installed. This tent is manufactured by the Sparefeld Factory of the VEB Sattler-und Lederwarenfabriken in Leipzig.

In service in East Germany.

11. Tent, 20- to 25-Man

RECOGNITION FEATURES

(No illustration available)

CHARACTERISTICS

I. PHYSICAL DATA:

Weight (total)	350 kilograms (771.7 lbs.)
Height (apex)	3½ meters (11.48 ft.)
Length	8 meters (26.24 ft.)
Width	6 meters (19.68 ft.)
Floor area	44 square meters (473.57 sq. ft.)

II. CAPACITY: 20 to 25 men

12. Tent, Bakery

This tent is part of the equipment of a field bakery. It consists of three sections, each of which are made of heavy gray canvas: a two-sectional main tent and two annexes. The annexes are connected to the main tent by means of corridors. The main tent is used to house a trailer-mounted generator set, four trailer-mounted dough-kneading machines, and three work tables. The annexes are equipped with wooden racks for storing baked bread and have wooden duckboards for storing bags of flour.

12. Tent, Bakery

RECOGNITION FEATURES

(No illustration available)

CHARACTERISTICS

I. PHYSICAL DATA:

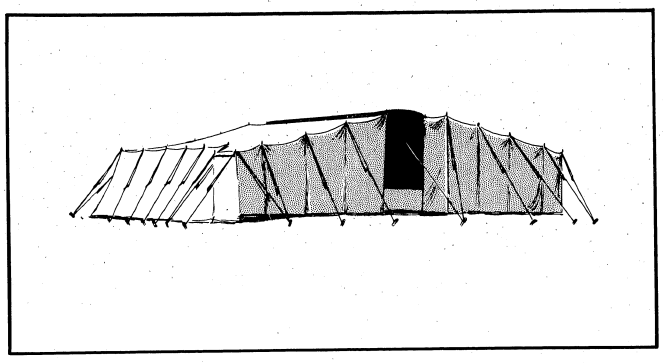
Weight:
- Total, i. e., Main Tent, Two Annexes, Poles, Pins, etc. 1,000 kilograms (2,204 lbs.)
- Main Tent 500 kilograms (1,102 lbs.)
- Annex (each) 200 kilograms (440.80 lbs.)

Height:
- Main Tent:
  - Apex 6.50 meters (21.32 ft.)
  - Wall 3.20 meters (10.49 ft.)
- Annexes (each):
  - Apex 4.50 meters (14.76 ft.)
  - Wall 3.20 meters (10.49 ft.)

Length:
- Main Tent 15 meters (49.20 ft.)
- Annexes (each) 7 meters (22.96 ft.)

Width:
- Main Tent 12 meters (39.36 ft.)
- Annexes (each) 6 meters (19.68 ft.)

13. Tent for Mobile Disinfestation Unit



The tent shown in the above illustration is used by the East German Army in connection with the mobile disinfestation unit. (This unit consists of a four-wheel van-type trailer.) The tent is built around the side walls and the front of the trailer, with the rear side open. The sides of the tent have an additional vertical inner wall made of lighter weight canvas. This unit is used for the disinfecting of men and clothing. This tent is manufactured by the Sparfeld Factory of the VEB Sattler- und Lederwarenfabriken in Leipzig.

Believed to be in service in the Soviet Army.

13. Tent for Mobile Disinfestation Unit

RECOGNITION FEATURES

(No illustration available)

CHARACTERISTICS

I. PHYSICAL DATA:

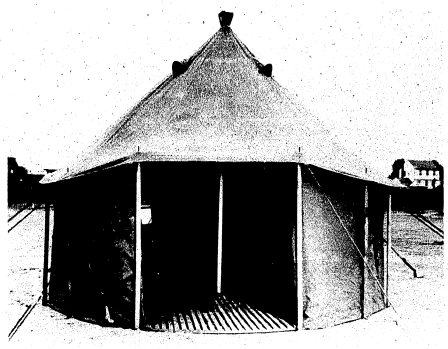
Weight	Unknown
Height:	
Maximum	280 centimeters (9.2 ft.)
Minimum	220 centimeters (7.2 ft.)
Length	7 meters (22.96 ft.)
Width	6 meters (19.68 ft.)

II. CAPACITY: Provides shelter for the mobile disinfecting and delousing unit, which has the following dimensions:

Length	4.25 meters (13.94 ft.)
Width	1.75 meters (5.74 ft.)
Height	2 meters (6.56 ft.)

14. Tent, Supply

(Vorratszelt)



This is a conical tent used primarily for the storage of food supplies. The tent has four ventilators. Duckboards (in six-sections) are placed over a burlap cloth to form a circular floor covering the entire area of the tent. The tent is manufactured by the Traenker and Wuerker Tent Factory located in Poetschkerweg in Leipzig.

In service in East Germany and the U. S. S. R.

14. Tent, Supply

RECOGNITION FEATURES

(No illustration available)

CHARACTERISTICS

PHYSICAL DATA:	
Weight (poles and pins)	350 pounds
Height:	
Peak	10 feet 10 inches
Center pole	11 feet 4 inches
Side wall	5 feet
Door	5 feet 6 inches
Diameter	14 feet

INTRODUCTION

General. Quartermaster organizational equipment in the Hungarian Army consists principally of World War II Hungarian and German items and a limited number of Soviet items. The establishment of separate service and supply units in the Hungarian Army indicates a high degree of adaptation to Soviet tables of organization. In addition to food service personnel, Hungarian service units contain mechanics and drivers, tailors, cobblers, and sanitation personnel.

Aerial Supply Equipment. Soviet personnel parachutes, or parachutes assembled from Soviet manufactured components, are used by Hungarian paratroops. Because of the lack of cargo planes and equipment, it is believed that aerial supply capabilities are extremely limited. Reports indicate that Soviet cargo parachutes probably are available for current use.

Field Sanitation Equipment. In garrison, bathing and laundry services are provided by public baths and central Army laundries. In summer field camps, shower and wash tents are provided, but nothing is known of field sanitation equipment.

Food Service Equipment. Both animal-drawn and truck-drawn field kitchens are used in the Hungarian Army. Most animal-drawn units are the older, wooden-wheel models; newer models with rubber tires are usually truck-drawn. Most kitchens are designed to feed company-size units. The Hungarians use a mobile field bakery unit which is capable of producing approximately 6 to 7 tons of bread per day; however, details of its appearance and construction are not known. Two units operating together can supply a division and its supporting elements. This bakery may be moved by either horses or trucks. There is no information available concerning refrigeration equipment in the Hungarian Army.

Materials-Handling Equipment. No information is available on the materials-handling equipment used in military warehouses. A fork-lift truck displayed at the Damascus International Fair is described in this section.

Petroleum-Handling Equipment. POL products for motorized units are supplied primarily by railroad tank cars, 200-liter drums, and 20-liter jerricans. During field operations, drums and cans are filled directly from tank cars on sidings and hauled by trucks to supply points. A new, modern Army tank truck of approximately 2,000-gallon capacity was first observed in 1953. Drums of 55-gallon capacity also are used. This item is described in this section.

Reclamation and Repair. Reclamation and repair services in the field are believed to be centered around the van-type vehicles which accompany most Army units.

Remount Equipment. Although a limited number of motorized vehicles are available, horses and four-wheeled wagons have been observed at many garrisons. Carts and wagons with rubber tires are to be issued as they become available. Mountain units are equipped with pack animals.

Tentage. The Hungarian Army uses Soviet, German, and United States tents. Soviet tents used are 12- and 29-man billeting tents and the 40-man medical barracks tent. German-type camouflage shelter-halves are used to form pyramidal tents of various sizes. World War II models of United States Army pyramidal tents, squad tents, shelter-halves, and large wall tents have been observed.

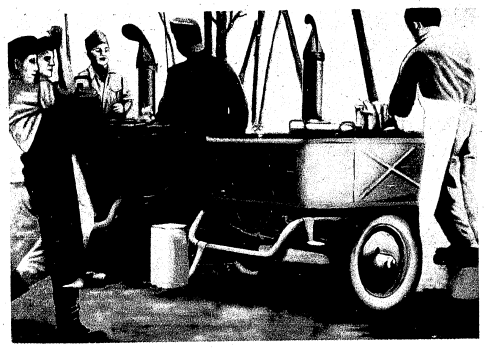
Quartermaster Organizational Equipment of Foreign Manufacture in Significant Use in Hungary

Hungarian nomenclature	Origin		DA Pamphlet (or Other Reference for Coverage)
	Country	Nomenclature	
Unknown	U. S. S. R.	Personnel Parachute, PD–6	30–10–1
Unknown	do.	Personnel Parachute, PD–41–1	30–10–1
Unknown	do.	Personnel Parachute, PZ–41	30–10–1
Unknown	do.	Drum, Inflammable-Liquid, Steel (200-Liter)	30–10–1
Unknown	do.	Sovi-Can	30–10–1
Unknown	do.	Field Tent for Enlisted Men	Quartermaster Corps Tentage. Dec. 1952 (Obsolete).
Unknown	do.	Tent, Pyramidal, M–1934	Do.
Unknown	U. S.	Tent, Storage, with Bag	30–10–2 (East Germany)
Unknown	Germany	Command Post Tent	30–10–2 (East Germany)
Unknown	do.	Personnel Tent	

A. FOOD SERVICE EQUIPMENT

1. Field Kitchens

a. Field Kitchen, Two-Pot



The Hungarian field kitchen shown above was observed on the 1950 summer maneuvers. It is a modern two-pot kitchen designed to feed a company-size unit in the field. This model usually is towed by trucks; older models with wooden wheels are normally horse-drawn.

In service in Hungary.

a. Field Kitchen, Two-Pot

RECOGNITION FEATURES

(No illustration available)

CHARACTERISTICS

I. PHYSICAL DATA:
- Weight..... Unknown
- Length..... 4.5 feet (estimated)
- Width..... 3.5 feet (estimated)
- Height..... Do.

II. CAPACITY..... Quantity unknown; described as having a company-size capacity

III. REMARKS: Hungarian field kitchens can be recognized by their peculiar chimney caps. A large, curved wind vane on the top of this cap can be set in four positions so as to take the greatest advantage of the wind in regulating the draft through the firebox.

b. Field Kitchen, Three-Pot

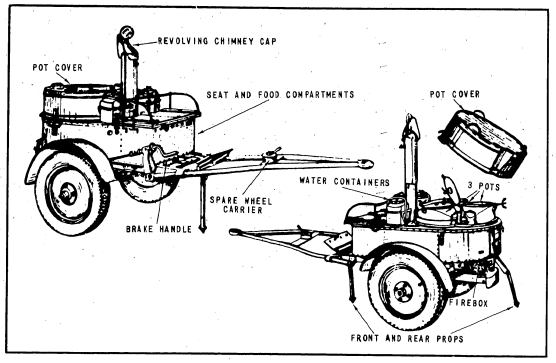
(No illustration available)

The Hungarian three-pot field kitchen is a model adopted by the Hungarian Army in 1941 and used in World War II. It can be changed into an animal-drawn unit by substituting a double shaft for the trailer drawbar. A unique feature of this item, in addition to the four-position draft control of the chimney cap, is a large metal cover over the cooking pots. The cover prevents an accumulation of dust on surfaces likely to be in contact with food.

In service in Hungary.

b. Field Kitchen, Three-Pot

RECOGNITION FEATURES



CHARACTERISTICS

I. PHYSICAL DATA:
- Weight..... 740 pounds (empty)
- Length..... 10 feet (overall)
- Width..... 4.8 feet

II. CAPACITY..... 36 gallons (3 12-gal. pots)

III. REMARKS: The adjustable chimney cap and the cooking pot cover of this field kitchen are identifying features very easily recognized.

c. Field Kitchen, Three-Pot

(No illustration available)

This mobile field kitchen is believed to have a capacity for feeding approximately 250 men. It consists of three kettles which are used for preparing stews, soups, and coffee.

In service in the Hungarian Army.

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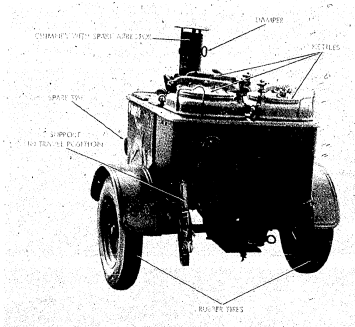
c. Field Kitchen, Three-Pot

RECOGNITION FEATURES



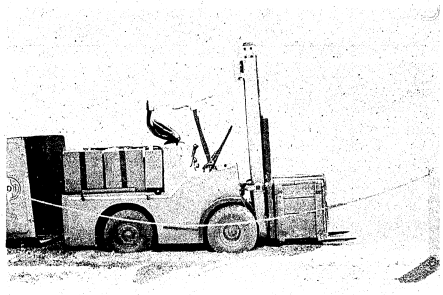
CHARACTERISTICS

I. PHYSICAL DATA:

Length	5 feet (estimated)
Width	3 feet (estimated)
Height (of body)	2 feet (estimated)
II. CAPACITY	Feeds approximately 250 men

B. MATERIALS-HANDLING EQUIPMENT

Truck, Fork-Lift



The fork-lift truck shown in the above illustration was displayed in the Hungarian Exhibit at the Damascus International Fair in 1954. Detailed information on this item is not yet available, but presumably it will be used in military factories and warehouses for loading, unloading, stacking, and transporting supplies.

Truck, Fork-Lift

RECOGNITION FEATURES

(No illustration available)

CHARACTERISTICS

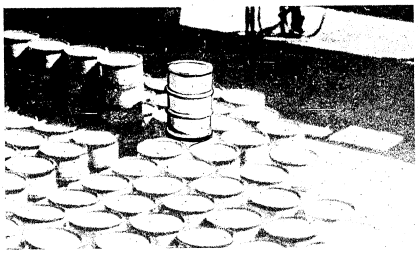
PHYSICAL DATA:

Height:
- Maximum Lift..... 11 feet (estimated)
- Minimum Lift..... 7 feet (estimated)

Width..... 4.5 feet (estimated)

C. PETROLEUM-HANDLING EQUIPMENT

Drum, Steel, 55-Gallon



This 55-gallon steel drum has two hoops and a central bunghole.

In service in the Hungarian Army.

Drum, Steel, 55-Gallon

RECOGNITION FEATURES

(No illustration available)

CHARACTERISTICS

I. PHYSICAL DATA:
- Weight ..... 75 pounds (estimated)
- Height ..... 3½ feet (estimated)
- Diameter ..... 2 feet (estimated)

II. CAPACITY ..... 55 gallons

INTRODUCTION

General. Quartermaster-type services in the North Korean Army are similar to those of the Chinese Communist Army. The use of local resources and civilian items of equipment predominates in quartermaster operations.

Food Service Equipment. The simple food services of the North Korean quartermaster consist primarily of distributing a few basic staple food items and providing large metal pots and small bowls for cooking and serving. A few Soviet field kitchens have been observed in North Korea. The more complex mechanical food storage and preparation equipment common to modern Western Armies is not required in the North Korean food service system.

Remount Equipment. The North Koreans use the same kinds of packsaddles, carts, and wagons as the Chinese to move their supplies. However, a man-pack item of considerable logistical importance, the A-frame, is indigenous to North Korea. With this frame the average Korean porter can carry a 60-pound load 15 miles per day. Koreans have been known to carry loads of up to 300 pounds on A-frames for short distances.

Other. As in the Chinese Army, aerial supply equipment, mobile laundry and bath units, mobile clothing and shoe repair units, and standardized models of sleds are believed to be unknown to the North Korean combat and supply forces.

Quartermaster Organizational Equipment of Foreign Manufacture in Significant Use in North Korea

North Korean nomenclature	Origin		DA Pamphlet (or Other Reference for Coverage)
	Country	Nomenclature	
Unknown	U. S. S. R.	Personnel Parachute, PL–45 (1949 Model)	30–10–1
Unknown	do	Personnel Parachute, MPL–43 (1945 Model)	30–10–1
Unknown	do	Personnel Parachute, PL–3M	30–10–1
Unknown	do	Personnel Parachute, WAKO, Ribbon	30–10–1
Unknown	do	Field Kitchen, Model 1941	30–10–1
Unknown	do	Supply Wagons PKh–1, PKh–2	30–10–1
Unknown	U. S. A.	Drum, Inflammable Liquid, Steel, 55-Gallon	TM 10–466*
Unknown	do	Drum, Inflammable Liquid, (Gasoline) Steel, with carrying handle, 5-Gallon.	TM 10–466*
Unknown	Communist China	Field Cooking Pot	30–10–2
Unknown	do	Packsaddle, Metal Frame (No. 1)	30–10–2
Unknown	do	Packsaddle, Metal Frame (No. 2)	30–10–2
Unknown	do	Supply Cart (No. 1)	30–10–2
Unknown	do	Supply Cart (No. 2)	30–10–2

*Superseded by TM 10–1101. Do not requisition from adjutant general publications centers as no stocks are available.

A. REMOUNT EQUIPMENT

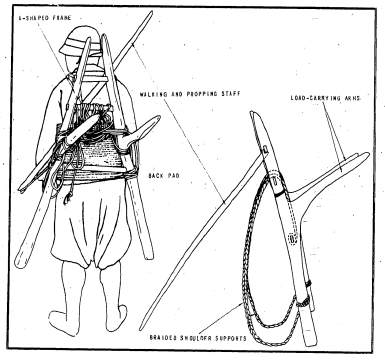
A-Frame

The North Korean A-frame is a man-pack item that has been used in Korea for hundreds of years. Although the A-frame is an unmodified civilian-type carrying frame, its universal military use and logistical importance in the Korean conflict justify its presentation as an item of military equipment.

A-frames can be constructed by native labor from locally available materials. Porters accustomed to their use can carry heavy, bulky loads with relative ease. In military supply operations, North Koreans carry 60- to 80-pound loads from 10 to 20 miles per day. Loads of several times these weights are carried shorter distances.

A-Frame

RECOGNITION FEATURES



CHARACTERISTICS

I. PHYSICAL DATA:
Weight..... 10 to 20 pounds (estimated)
Length..... 3 to 4 feet (estimated)
Width..... 1.5 to 2.0 feet (estimated)

II. CAPACITY..... 150 to 300 pounds maximum (estimated)
III. CONSTRUCTION..... Wood

INTRODUCTION

Starting its activity as a guerrilla force after the close of World War II, the Viet Minh Army has accumulated and operated with whatever material has become available. When military equipment was not available, improvisation was resorted to. During the Indochina War, units as a rule operated from native villages, and the unit and individual soldiers maintained themselves much as did the villagers. Supply movement was accomplished by coolies, farm carts, oxen, and elephants.

French and United States equipment captured from the French Forces was put to use, and in the later stages of the Indochina conflict the Viet Minh Forces received large quantities of Chinese, Soviet, and Satellite equipment via Communist China. Sino-Soviet Bloc aid is now the major source of Viet Minh equipment and will undoubtedly become increasingly characteristic within the Armed Forces.

The present status of equipment in North Vietnam is definitely nonstandard. As information is received on specific items of quartermaster field equipment used by the Viet Minh Forces, it will be published in revisions to this pamphlet.

INTRODUCTION

General. The Polish Army is largely equipped with World War II quartermaster organizational equipment of Polish and German design. The few new items seen are reported to be of Soviet or East German origin.

Aerial Supply Equipment. Nothing is known about aerial supply equipment, except that some Soviet parachutes are believed to be used.

Field Sanitation Equipment. The only known field sanitation equipment is a World War II horse-drawn disinfestation wagon. Models of modern disinfestation trailers have been shown in recent exhibits, but none has been seen in the field.

Food Service Equipment. Food service equipment is being modernized slowly. Mobile field kitchens on rubber tires are appearing, and mobile bakeries and meat-handling units are being developed. Three types of field kitchens in use have capacities of approximately 100, 150, and 200 liters. The four-pot, 200-liter kitchen is the most common type. Companies and units of similar size are issued field kitchens; however, it is reported that cooking is not done below the battalion level. Company kitchens usually are used only to transport hot food from the battalion kitchen to the company area; in emergency situations, each company is equipped to do its own cooking in the company area.

Materials-Handling Equipment. Information is not available on materials-handling equipment used in military warehouses.

Petroleum-Handling Equipment. POL handling equipment for motorized units consists primarily of 200- and 250-liter drums, hand pumps, and 20-liter jerricans. A few small Soviet-manufactured tank trucks have been observed.

Reclamation and Repair Equipment. The Polish Army is not known to have mobile reclamation and repair units equipped with power tools. Maintenance personnel transport their hand tools in trucks or horse-drawn wagons and set up makeshift shops where needed. Most reclamation and repair work is carried out in permanently established garrison shops.

Remount Equipment. The mechanization of the Polish Army is far from complete. Horses are used extensively. Wagons drawn by two horses and equipped with rubber tires, wooden sides, and occasionally with canvas covers are observed regularly in garrison and in the field. Good leather equipment is produced in Poland.

Other. No information is available on any other quartermaster-type field equipment used.

Quartermaster Organizational Equipment of Foreign Manufacture in Significant Use in Poland

Polish nomenclature	Origin		DA Pamphlet (or Other Reference for Coverage)
	Country	Nomenclature	
Unknown	U. S. S. R.	Drum, Inflammable-Liquid, Steel (200-Liter).	30–10–1
Unknown	do.	Sovi-Can	30–10–1
Unknown	do.	Field Tent for Enlisted Men	30–10–1
Unknown	U. S.	Tent, Squad, M–1942	Quartermaster Corps Tentage, Dec 1952 (obsolete).
Unknown	do.	Tent, Pyramidal, M–1934	Do.
Unknown	do.	Tent, Command Post, M–1942	Do.
Unknown	Germany	Command Post Tent	30–10–2 (East Germany)
Unknown	do.	Personnel Tent	30–10–2 (East Germany)
Unknown	East Germany	Billeting and Supply Tent, No. 3	30–10–2 (East Germany)

A. FIELD SANITATION EQUIPMENT

Mobile Disinfestation Unit

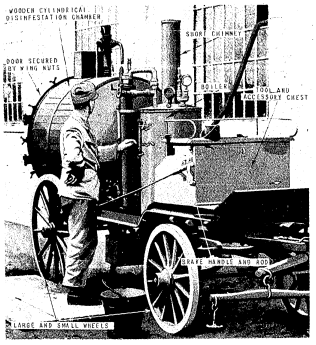
(No illustration available)

This mobile disinfestation unit, of World War II type, is one of the few items of field sanitation equipment known to be used by the Polish Army. A modern vehicle-towed unit mounted on a two-wheel trailer equipped with rubber tires has been developed, but it has not been observed in service.

In service in Poland.

Mobile Disinfestation Unit

RECOGNITION FEATURES



CHARACTERISTICS

I. PHYSICAL DATA:
Weight..... Unknown

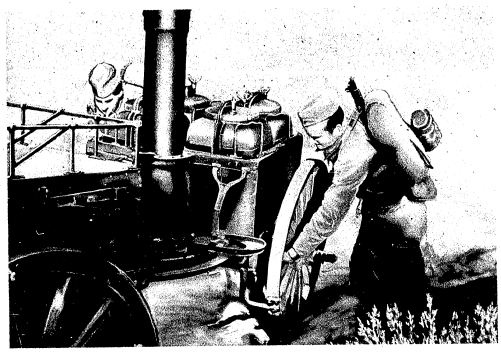
II. CAPACITY..... Unknown

III. FUEL..... Wood or coal

IV. REMARKS: The boiler produces steam and vaporizes a chemical disinfectant which is injected under pressure into the disinfestation chamber.

B. FOOD SERVICE EQUIPMENT

1. Field Kitchen



The Polish Army uses several types of mobile field kitchens with one, two, or four pots. The four-pot kitchen illustrated above is the most common type. One pot for potatoes, one for soup or stew, one for coffee, and one for hot water for canteens is a normal utilization of this kitchen. The horse-drawn model is towed behind a limber. Field kitchens equipped with rubber tires are normally towed by trucks and use the truck box for storage purposes.

In service in Poland.

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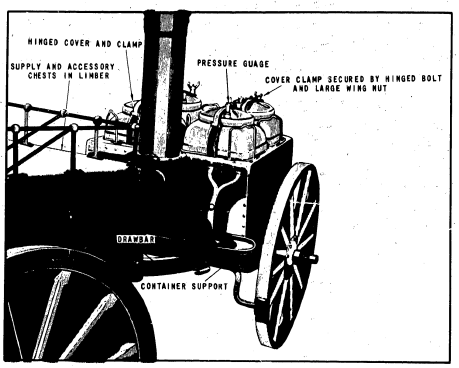
1. Field Kitchen

RECOGNITION FEATURES



CHARACTERISTICS

I. PHYSICAL DATA:
Weight..... Unknown

II. CAPACITY..... 200 liters (estimated); feeds a company or equivalent unit

III. FUEL..... Wood or coal

IV. REMARKS: The four pots of this field kitchen are an easily observed recognition feature.

2. Field Kitchen, Four-Pot

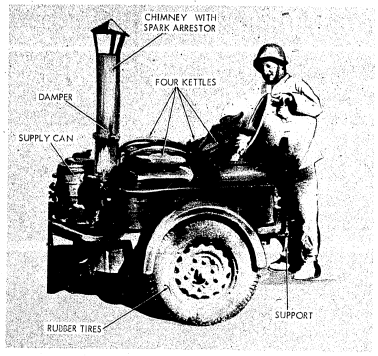
(No illustration available)

This mobile field kitchen has four kettles, a platform for supply cans, and is mounted on two wheels with rubber tires.

In service in the Polish Army.

2. Field Kitchen, Four-Pot

RECOGNITION FEATURES



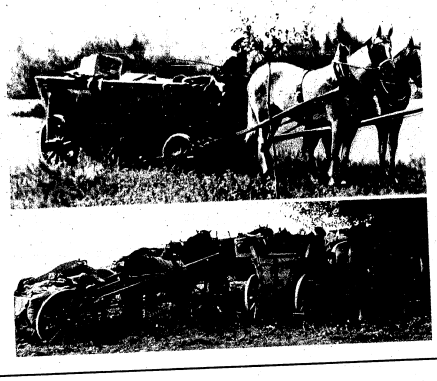
CHARACTERISTICS

I. PHYSICAL DATA:
- Length (overall)..... 6 feet (estimated)
- Width..... 3¼ feet (estimated)
- Height (body)..... 2 feet (estimated)

II. CAPACITY..... Feeds approximately 260 men

C. REMOUNT EQUIPMENT

Supply Wagons



Wagons and carts are used widely for the movement of supplies in Poland. The heavy wooden-wheel wagons shown above are typical of Polish supply wagons. Small two-wheel carts drawn by one horse are used for lighter loads. More recently constructed wooden wagons and carts are equipped with rubber tires.

In service in Poland.

Supply Wagons

RECOGNITION FEATURES

(No illustration available)

CHARACTERISTICS

(No information available)

INTRODUCTION

General. The development and use of quartermaster-type organizational equipment have progressed very litttle in the Rumanian Army since World War II. With Soviet aid a token force of paratroopers has been established, probably for purposes of prestige.

Aerial Supply Equipment. It is considered most unlikely in the present state of the Rumanian Air Force that any aerial supply system could be organized. Practice in air dropping of supplies has never been reported from Rumania.

Food Service Equipment. The Rumanian Army relies entirely on mobile field kitchens for the preparation of hot meals in the field. These kitchens are of a World War I design. Kitchens for animal-drawn units are fitted with wooden wheels. Armored and other mechanized units have kitchens mounted on rubber tires. Field kitchens are issued on a scale of one per company or equivalent unit. In peacetime the Army bread supply is furnished by state bakeries located in major cities. In wartime, field bakeries, with from 10 to 16 ovens, form part of the division, corps, and army supply columns. Nothing is known of portable refrigeration units in the Rumanian Army; however, every city with a slaughterhouse keeps a refrigerated supply of meat for the Army.

Petroleum-Handling Equipment. Little is known about Class III supply methods, but since Rumania is a major oil-producing country in Europe, it is probable that motorized units of the Rumanian Army have modern POL handling equipment.

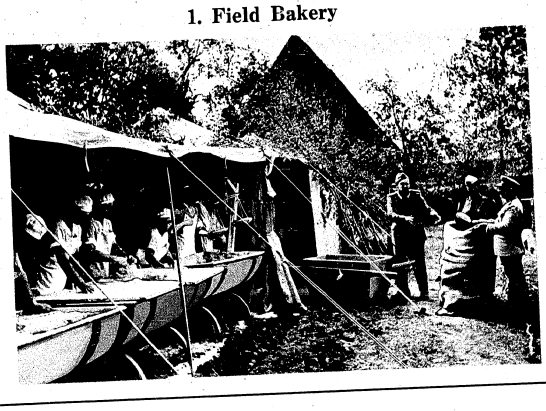
Reclamation and Repair. Reclamation and repair services are carried out in Army garrison shops employing both military and civilian workers. There is no information available concerning reclamation and repair activities in the field.

Remount Equipment. Remount services still play a large part in supply movement on the ground. Mountain divisions are equipped with animal-drawn kitchens, bakeries, ambulances, and wagons. Both horses and mules are used as pack animals. The engineering, transportation, and administrative services are reported to have only horse-drawn units below divisional level.

Other. No information is available on any other quartermaster-type field equipment used.

A. FOOD SERVICE EQUIPMENT

1. Field Bakery



The Rumanian Army has mobile field bakeries for operational use. In peacetime, bread is supplied by permanent bakery installations located in the larger cities throughout the country. During field operations, mobile bakeries are a part of the division, corps, and army supply columns.

The breadmixing troughs, boards, and scales shown above indicate that field baking is relatively crude and unmechanized in the Rumanian Army. Field bakeries are reported to have from 10 to 16 ovens. Performance and construction details of Rumanian field ovens are unknown.

In service in Rumania.

1. Field Bakery

RECOGNITION FEATURES

(No illustration available)

CHARACTERISTICS

(No information available)

2. Field Kitchen

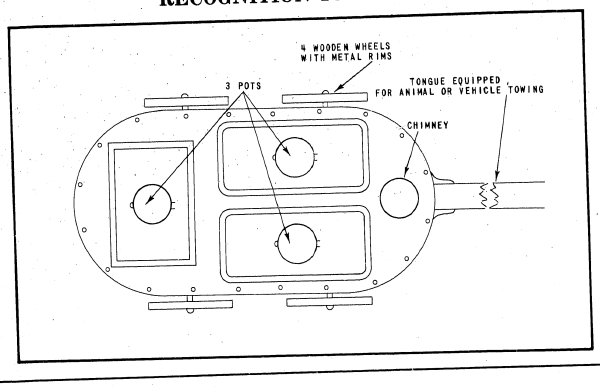
(No illustration available)

The Rumanian field kitchen was developed from a World War I pattern. It is the only four-wheel kitchen reported in use in the Satellite countries. The three pots are used for tea, soup, and a stew or a vegetable. This model comes equipped with wooden wheels for infantry or mounted units and with rubber tires for motorized units. Each type may be either animal- or truck-drawn.

In service in Rumania.

2. Field Kitchen

RECOGNITION FEATURES



CHARACTERISTICS

I. PHYSICAL DATA:
Length:
Overall..... 13.5 feet (estimated)
Without Tongue..... 7.5 feet (estimated)
Width..... 4.5 feet (estimated)
Height..... 4.5 feet (estimated)
II. CAPACITY..... Issued at rate of 1 per company:
1 pot with 20 gallons capacity (estimated)
1 pot with 15 gallons capacity (estimated)
1 pot with 12 gallons capacity (estimated)
Total 47 gallons capacity (estimated)
III. REMARKS: This is the only one-piece four-wheel field kitchen reported from the Satellite countries. It may be equipped either with wooden wheels, as shown, or with rubber tires.

[AG 400 (26 Nov 56)]

By Order of *Wilber M. Brucker*, Secretary of the Army:

MAXWELL D. TAYLOR,
General, United States Army,
Chief of Staff.

Official:
HERBERT M. JONES,
Major General, United States Army,
The Adjutant General.

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ARWC
CGSC
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Arty & GM Sch
AAA & GM Sch
Engr Sch (CONUS)
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QM Sch
Trans Sch
AIC
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8583d Det "R"
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TUSAG, Turkey
ARMA:
Afghanistan
Austria
Czechoslovakia
Finland
Greece
Hong Kong
Hungary
Iran
Italy
Laos
Norway
Philippines Republic
Poland
Rumania
Taiwan
Turkey
USSR
Yugoslavia
Singapore
Units organized under following TOE's:
10-22, Hq & Hq Det, QM Gp
10-500 (AA-AD), QM Svc Org

NG: None.
USAR: None.
For explanation of abbreviations used, see AR 320-50.

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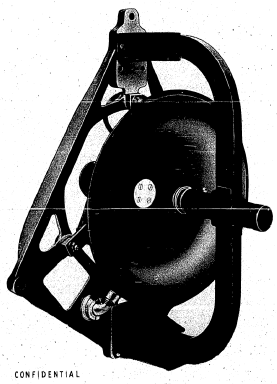

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Fig.1. View of scanner from front

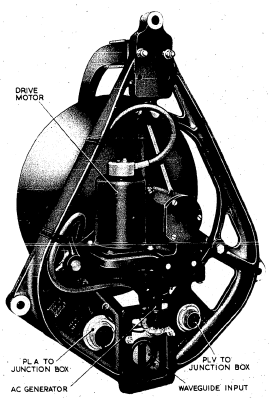

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Fig.2. View of scanner from rear

INTRODUCTION

1. The purpose of the aerial system is to provide a guidance beam for the Fireflash missile and also to receive echoes from target aircraft for range and velocity measurement. It consists of a rotating parabolic dish fed from a waveguide.

2. The aerial system also includes an AC generator driven from the same motor as the dish. The output from this generator is consequently synchronized to the dish rotation, and is fed through gyro Mk.11 to the pulse generator where it is used to time-modulate the pulse recurrence frequency.

3. The aerial system consists of scanner XL390, together with a radome and the radome mounting ring. The whole forms an assembly which is attached to the nose of the aircraft. The scanner is the same as that used in ARI.5869 (Meteor) but the radome and mounting ring are different.

MECHANICAL AND ELECTRICAL DESCRIPTION

REFLECTOR AND DRIVE

4. Views of the scanner are given in fig.1 and 2 and details of the drive to the reflector in fig.3. The scanner reflector is a light metal casting having an aperture of 10 in. and a parabolic profile of the form $y^2 = 10x$. The reflector is pinned to a bush on the driving shaft. This bush is eccentric on the shaft so that the reflector does not rotate about its geometric axis but about an axis which is displaced from but parallel to it.

5. The reflector shaft is driven through a 1:1 bevel gear and a 4:1 reduction gear by a 4-pole motor of the hysteresis type. This motor runs at 12,000 r.p.m. (controlled to 2 per cent) so that the reflector rotates at 3,000 r.p.m.

6. The permanent magnet AC generator is coupled to the reduction gearing so that it runs at the same speed as the reflector. This generator gives an output of 0·9V RMS per 1,000 r.p.m. and its field windings are connected to the sine-cosine potentiometers in gyro Mk.11. Since the reflector rotates at 3,000 r.p.m. the outputs from the generator vary sinusoidally at 50c/s. The production of the reference sine wave is described in Chapter 7.

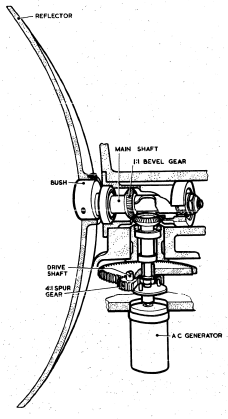

Fig.3. Reflector drive