

*Spkt 8*  
**N-2663**

**UNCLASSIFIED**

TRUCK LOADING

REFERENCE DATA

**DEMO**

HEADQUARTERS ETOUSA  
OFFICE OF THE CHIEF OF TRANSPORTATION  
MOTOR TRANSPORT DIVISION

MARCH 1944

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HEADQUARTERS ETOUSA  
OFFICE OF THE CHIEF OF TRANSPORTATION  
MOTOR TRANSPORT DIVISION

March 1944

The purpose of this pamphlet is to assist motor officers and dispatchers in making accurate and efficient truck allocations when called upon to move large quantities of army supplies in field operations. The list of supply items includes those most likely to be shipped by truck in large quantities from depots to ports, from ports to base depots and from the latter to branch depots.

The item nomenclature, unit pack and cubic volume are shown in the first four columns and the remaining columns show the number of unit packs that can be loaded on various cargo vehicles. The four vehicles considered are the 1-ton trailer, the  $2\frac{1}{2}$ -ton 6x6 truck, a 5-ton cargo truck or trailer and the 10-ton semi-trailer. In calculating allowable loads, both weight and volume were considered. An asterisk (\*) before an item indicates that the load limit for all the vehicles considered is determined by volume rather than by weight. When the asterisk appears after a load figure, it indicates that the load for only that particular vehicle is limited by volume. The symbol  $\emptyset$  before an item indicates that the overall length is such as to require a vehicle with a body longer than the standard  $2\frac{1}{2}$ -ton truck.

The weight-load and the cubic capacity of the various vehicles used as a basis for calculations are as follows:

	Weight Load (pounds)	Total Body Capacity (Cubic Foot)	Usable Body Capacity (Cu.Ft)
1-ton trailer	2000	110	88
$2\frac{1}{2}$ -ton cargo truck	6000	400	320
5-ton cargo truck or trailer	10000	400 or more	320 or more
10-ton semi-trailer	20000	938	750

To allow for irregularities of packages, it was assumed that the usable body capacity would be only 80 percent of the total body capacity.

In addition to the above vehicles, a large number of  $2\frac{1}{2}$ -ton 6x6 cab-over-engine trucks with 15 and 17 foot bodies will be used. The total cubic capacity of the 15-foot body is 500 cubic feet and of the 17-foot body 575 cubic foot. When either model is used for transporting heavy items (those weighing more than 31 pounds per cubic foot), the load per truck will be the same as that shown for the standard  $2\frac{1}{2}$ -ton truck. In the case of bulky items, however, (those marked with an asterisk) the load for the 15 foot cab-over-engine truck will be approximately the same as the combined load indicated for the 1-ton trailer and the standard  $2\frac{1}{2}$ -ton truck.

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In using the tables dealing with ordnance items one should bear in mind that there are often several different models of the same type gun and different kinds of ammunition of the same caliber which vary slightly in weight or cube. Those slight variations have been omitted because they were considered to be too small to substantially effect loading plans. Other discrepancies may be noted in the field due to re-packing, the inclusion of British packs, changes in the standard specifications since those computations were made or due to changes in the size or style of amphibious packs.

Experimental work in developing standard palletized or skid loads is now in progress for selected items which must be landed on beaches in the early stages of an operation. Those skid loads will weigh approximately 3000 pounds and two of such units will normally constitute a load for the standard  $2\frac{1}{2}$ -ton truck.

Methods and principles of proper loading of vehicles are adequately covered in other publications and consequently will only be mentioned here. Attention is directed especially to Paragraphs 86-90 of the Drivers Manual (TM 10-460) and to the provisions of AR 850-20 and TM 9-1900 concerning the handling of gasoline and explosives. The practice of loading only one commodity or type of package in a vehicle - commodity loading - should be followed whenever possible. In the case of certain commodities such as butter and smoked meats, gasoline and rations, etc., this is necessary to avoid contamination. Mixed loads also create confusion and loss of time at the receiving depot and necessitates sorting, reloading and transfers within the depot.

s/ Loren A. Ayers  
t/ LOREN A. AYERS  
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TABLE 1. TRUCKS REQUIRED TO HAUL GIVEN TONNAGES

Number of Trucks Required				
Tonnage to be hauled	2½-T cargo (loaded 3T)	2½-T cargo & trailer (4T)	5T cargo (loaded 5T)	10T Semi-trailor (Loaded 10T)
3	1	1	1	-
6	2	2	2	-
9	3	2	2	1
12	4	3	3	1
15	5	4	3	2
18	6	4	4	2
21	7	5	4	2
24	8	6	5	2
27	9	6	6	3
30	10	7	6	3
33	11	8	7	3
36	12	9	7	4
39	13	10	8	4
42	14	10	8	4
45	15	11	9	5
48	16	12	9	5
51	17	13	10	5
54	18	14	11	5
57	19	14	11	6
60	20	15	12	6
63	21	16	13	6
66	22	16	13	7
69	23	17	14	7
72	24	18	14	7
75	25	19	15	8

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**TABLE 1. TRUCKS REQUIRED TO HAUL GIVEN TONNAGES (cont'd)**

Tonnage to be hauled	Number of Trucks required			
	2½T cargo (loaded 3T)	2½T cargo & trailer (4T)	5T cargo (loaded 5T)	10T semi-trailor (loaded 10T)
78	26	19	16	8
81	27	20	16	8
84	28	21	17	8
87	29	22	17	9
90	30	22	18	9
93	31	23	18	9
96	32	24	19	10
99	33	25	20	10
100	33	25	20	10
150	50	37	30	15
200	67	50	40	20
250	83	62	50	25
300	100	75	60	30
350	117	87	70	35
400	133	100	80	40
450	150	112	90	45
500	167	125	100	50
550	183	137	110	55
600	200	150	120	60
650	217	162	130	65
700	233	175	140	70
750	250	187	150	75
800	267	200	160	80
850	283	212	170	85
900	300	225	180	90
950	317	237	190	95
1000	333	250	200	100

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Dimensional  
Intelligence

QUARTERMASTER

SUBSISTENCE

The following subsistence items are normally packed in #10, # $2\frac{1}{2}$  and #2 cans and the weight and cube per case is approximately the same for all commodities. The table below shows these weights and allowable load per truck for ready reference when greater accuracy is not required

Apples	Corn	Pineapple
Apple Sauce	Fruit Cocktail	Pineapple Juice
Apricots	Grapefruit	Plums
Asparagus	Grapefruit Juice	Sauerkraut
Beans	Grape Juice	Spaghetti
Berries	Hominy	Spinach
Carrots	Orange Juice	Tomatoes
Catsup	Poaches	Tomato Juice
Cherries	Peanut Butter	Tomato Puree
Chili-con-carno	Pears	Vegetables, mixed
Beets	Poas	

ITEM	:			Cases or Units Per Load			
	Unit : Weight: Vol :			1 Ton	3 Ton	5 Ton	10 Ton
	Pack	Lbs	:Cu. Ft.	Trailer	Cargo	Cargo	Semi.
<i>Average weight and cube of standard cases of canned goods:</i>							
No. 10 cans	6	51	1.2	39	118	196	393
No. $2\frac{1}{2}$ cans	24	56	1.4	36	107	179	358
No. 2 cans	24	40	1.0	50	150	250	500
Average - Mixed Loads		50	1.3	40	125	200	415
<i>*</i>							
Apples, (canned)	#10	48	1.2	42	125	208	417
" "	# $2\frac{1}{2}$	53	1.4	38	114	189	377
" "	#2	38	1.0	52	156	263	526
Apple, butter	#10	57	1.2	35	105	175	350
" "	# $2\frac{1}{2}$	63.5	1.4	31	95	157	315
" "	#2	44.5	1.0	45	135	225	450
Apples, dry	50#	56.5	1.7	35	105	177	350
Apple sauce	#10	52.5	1.2	38	114	190	380
" "	# $2\frac{1}{2}$	59	1.4	34	102	169	340
" "	#2	41	1.0	49	147	244	490

ITEM	Casos or Units per Load						
	Unit: Pack:	Weight: Lbs	Vol: Cu. Ft.	1 Ton : 3 Ton: 5 Ton: 10 Ton			
				Trailer:	Cargo:	Cargo:	Semi.
Apricots	#10	52.5	1.2	38	114	190	380
"	#2½	59	1.4	34	102	169	340
"	#2	41	1.0	49	147	244	490
Bacon	12# case	94 174	2.5 3.3	21 11	63 35	106 57	210 115
" Porishable							
Beans w/o Pork	#10	52.5	1.2	38	114	190	380
" "	1#	60.8	1.2	33	99	164	330
Beans Kidney	#10	52.5	1.2	38	114	190	380
" "	#2½	59	1.4	34	102	169	340
" "	#2	41	1.0	49	147	244	490
Beans, Kid-dry	100#	102	2.6	20	59	98	196
Beans, Lima	#10	51.4	1.2	39	117	195	390
" "	#2½	57.5	1.4	35	105	174	350
" "	#2	41	1.0	49	147	244	490
Beans, String	#10	49.9	1.2	40	120	200	400
" "	#2½	56	1.4	36	108	179	360
" "	#2	39.5	1.0	50	150	253	500
Beef, corned	6#	93	1.5	21	65	108	215
" Roast	#10	85	2.0	23	71	118	235
Beets	#10	51	1.2	39	117	196	390
"	#2½	56	1.4	36	108	179	360
"	#2	41	1.0	49	147	244	490
Berrios, Black	#10	51.4	1.2	39	117	195	390
" "	#2½	56	1.4	36	108	179	360
" "	#2	41	1.0	49	147	244	490
Biscuits, Typo C	2½#	72	2.5	28	84	139	278
Bouillon, Cubes	100	41	1.1	49	147	244	490
Button (Canned)	5#	73	1.6	27	82	137	272
" (Porishable)	60#	60	1.4	29	83	147	294
*Cabbage, dohy.	5#	23.5	1.7	52	188	188	441
Candy hard	15#	53	1.6	38	114	187	380
Carrots	#10	51	1.2	39	117	196	390
"	#2½	56	1.4	36	108	179	360
"	#2	41	1.0	49	147	244	490

ITEMS	Unit Pack	Weight lbs	Vol. Cu.Ft.	Case or Units per Load.			
				1Ton Trailer	3 Ton Cargo.	5 Ton Cargo.	10 Ton Semi.
Catsup	#10	54	1.2	37	111	185	370
"	#2½	59	1.4	34	102	169	340
"	#2	41	1.0	49	147	244	490
Cereal, uncooked	22 oz	42.5	1.3	47	141	235	470
" Individual		20	2.3	38	139	139	326
Cheese, processed	6#	87	1.6	23	69	115	230
Cherries	#10	50.6	1.2	39	117	198	390
"	#2½	56	1.4	36	108	179	360
"	#2	39.5	1.0	50	150	253	500
Chili-con-carne	#10	51	1.2	39	117	196	390
" "	#2½	56	1.4	36	108	179	360
" "	#2	41	1.0	49	147	244	490
Cocoa	5#	45	1.8	44	132	178*	417
Coffee R & G	16#	18	.6	111	333	533*	1110
"	19#	24	.8	83	249	400*	830
Corn	#10	51.8	1.2	38	114	193	380
"	#2½	57.6	1.4	35	105	174	350
"	#2	41	1.0	49	147	244	490
Crackers, Graham	2#	48	1.6	42	126	200*	420
Eggs, Dehy.	#10	30	1.2	67	201	267*	625
Figs	#10	54	1.2	37	111	185	370
"	#2½	59	1.4	34	104	169	340
"	#2	42.5	1.0	47	141	235	470
Flour, Type A	98#	101	2.8	20	60	99	200
Grapefruit Juice	#10	49.9	1.2	40	120	200	400
" "	#2½	56	1.4	36	108	179	360
" "	#2	39.5	1.0	50	150	253	500
Grape Juice	#10	51.8	1.2	38	114	193	380
" "	#2½	56	1.4	36	108	179	360
" "	#2	41	1.0	49	147	244	490
Hash, corned beef	5½#	43	1.3	46	138	233	460
" meat and veg.	#10	52.5	1.2	38	114	190	380
Jam, assorted	#10	63	1.2	32	96	159	320
" "	#2½	57.4	1.4	35	105	174	350
" "	#2	47	1.0	42	126	213	420

ITEM	Unit Pack.	Weight lbs	Vol Cu.Ft.	1 Ton Trailer	Casos or Units per load			
					3 Ton Cargo	5 Ton Cargo	10 Ton Semi	
Lard	37#	89	1.9	22	67	112	225	
" Substitute	3#	50	1.3	40	120	200	400	
Luncheon Meat	6#	94	1.9	21	64	106	213	
Mackerel	14 oz	32	1.2	62	186	313	620	
Milk, whole powdered	5#	37.5	1.2	53	160	267*	534	
* " skin powdered	50#	63	5.2	15	62	62	144	
Milk, evap.	14½ oz	55	1.3	36	108	182	360	
Oats, rolled	48 oz	48	2.3	38*	125	139*	326*	
Poaches & Poars	#10	52.5	1.2	38	114	190	380	
" "	½ 2½	57.5	1.4	35	105	174	350	
" "	#2	42.5	1.0	47	141	235	470	
Peanut Butter	#10	52.5	1.2	38	114	190	380	
" "	½ 2½	57.5	1.4	35	105	174	350	
" "	#2	41	1.0	49	147	244	490	
Peas	#10	51.4	1.2	39	117	195	390	
"	#2	41	1.0	49	147	244	490	
Picklos	1-gal	63	1.3	32	96	159	320	
Pineapple, sliced	#10	52.5	1.2	38	114	190	380	
" "	½ 2½	59	1.4	34	102	169	340	
" "	#2	41	1.0	49	147	244	490	
Pineapple Juico	#10	50	1.2	40	120	200	400	
" "	#2	41	1.0	49	147	244	490	
Plums	#10	52	1.2	38	115	192	385	
"	#2	41	1.0	49	147	244	490	
Potatoes, dehy. diced	16#	49.5	1.5	40	121	202	405	
" " shred 10#	37	1.5	53	163	213*	500*		
" sweet	½ 2½	57.5	1.4	35	105	174	250	
Prunes, dry	25#	30	.5	67	201	333	670	
" "	5#	40	.9	50	150	250	500	
" prepared	#10	55.5	1.2	36	108	180	360	
Salmon	1#	62	1.3	32	96	161	320	
Salt	100#	102	2.6	19	59	98	196	
Sauerkraut	#10	49.1	1.2	41	123	204	410	
"	½ 2½	54.5	1.4	37	111	183	370	
"	#2	39.5	1.0	50	150	253	500	

ITEM	Unit Pack	Weight lbs	Vol Cu.Ft.	Cases or Units Per Load			
				1 Ton Trailer	3 Ton Cargo	5 Ton Cargo	10 Ton Semi
Sausage, pork	2#	31	.7	64	192	323	640
" Vienna	1½#	55	1.5	36	108	182	360
Soup, dohy.	5#	40	1.4	50	150	225	500
Spaghetti, dry	#10	51.8	1.2	38	114	193	380
" "	#2½	57.5	1.4	34	104	174	340
" "	#2	41	1.0	49	146	244	488
Spinach	#10	48.7	1.2	41	123	205	410
"	#2½	54.5	1.4	37	111	183	370
"	#2	38	1.0	52	156	263	520
Stew, meat & veg.	28 oz.	57	1.4	35	105	175	350
" "	30 oz.	61	1.4	33	99	164	330
Sugar, granulated	10#	62	1.1	32	96	161	320
" "	100#	10	2.5	20	60	99	198
Syrup,	#10	62.6	1.2	32	96	160	320
" Karo	10#	68.3	1.1	29	83	146	290
*Tea	5#	35	2.7	32	119	119	278
"	5#	41.5	2.0	44*	144	160*	375*
Tomatoes	#10	50.3	1.2	39	119	199	390
"	#2½	56	1.4	36	103	179	360
"	#2	39.5	1.0	50	152	253	500
Tomato Juice	#10	49.9	1.2	40	120	200	400
" "	#2½	56	1.4	36	103	179	360
" "	#2	39.5	1.0	50	152	253	500
Vegetables, mixed	#10	51	1.2	39	117	196	390
" "	2	39.5	1.0	50	152	253	500

#### FIELD RATIONS PREPACKED

C - Ration	8 rations	40	1.2	50	150	250	500
D - "	48 rations	50	1.1	40	120	200	400
K - "	12 "	43	1.3	47	139	233	470
5-in-1 Ration	5 "	31	1.0	65	193	323	650
British Compo	14 "	68	2.0	30	88	147	300
12-in-1	12 "	87	2.6	23	69	115	230

#### POST EXCHANGE ITEMS

*Cigarettes	50 cts.	45	2.4	37	133	133	312
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ITEM	Unit Pack	Weight lbs	Vol. Cu.Ft.	1 Ton Trailer	Cases or Units Per Load			
					3 Ton Cargo	5 Ton Cargo	10 Ton Semi	
<u>CLOTHING - ALL TYPES</u>								
Caps, Winter, OD	220	108	5.0	18*	55	64*	150*	
Caps, garrison, OD	500	96	5.0	13*	62	64*	150*	
" " "Amphib Pk	500	93	4.7	19*	64	68*	159*	
*Coats, mackinaw	20	85	5.0	18	64	64	150	
" " Amphib Pk	20	95	5.0	18*	63*	64*	150*	
*Coats, wool sarge	30	91	5.4	16	59	59	139	
* " "Amphib Pk	30	87	5.0	18	64	64	150	
*Drawers, wool	100	80	5.2	17	62	62	144	
* " "Amphib Pk	100	89	4.8	18	67	67	156	
*Helmet, steel	10	29	1.8	49	178	178	417	
* " "Amphib Pk	10	32	2.5	35	128	128	300	
*Jacket, field	50	105	6.0	15	53	53	125	
* " "Amphib Pk	45	89	4.5	20	71	71	166	
Jacket, HBT	70	115	5.2	17*	52	62*	144*	
" " Amphib Pk	70	120	5.0	17*	50	64*	150*	
Jacket, HBT, Protective	70	118	5.1	17*	51	63*	147*	
" " "Amphib Pk	60	105	4.3	19	57	74*	174*	
*Jacket, combat	30	90	5.0	18	64	64	150	
" " "Amphib Pk	30	105	4.3	19	57	74*	174*	
Leggings, canvas	150	118	5.0	17	51	64*	150*	
" " "Amphib Pk	150	118	5.0	17	51	64*	150*	
Leggings, canvas	120	95	4.5	20*	63	71*	166*	
" " "Amphib Pk	150	118	5.0	17	51	64*	150*	
*Liners, helmet	30	40	7.0	13	46	46	107	
* " "Amphib Pk	30	40	7.0	13	46	46	107	
Nockbands, stool	3600	29	1.5	59*	207	213*	500*	
" " "Amphib Pk	3600	66	2.0	30	91	152	303	
*Overcoats, wool	15	95	5.0	18	63	64	150	
" " "Amphib Pk	15	107	5.0	18*	56	64*	150*	
*Overshoes, arctic	12	48	3.2	28	100	100	234	
* " "Amphib Pk	12	45	3.3	27	97	97	227	
Raincoats, dismounted	50	160	6.0	13	38	53*	125*	
" " "Amphib Pk	25	87	3.6	23	69	89*	208*	
*Shirts, flannel, OD	100	114	6.0	15	53	53	125*	
" " "Amphib Pk	100	120	5.9	15*	50	54*	127*	

ITEM	Unit Pack	Weight lbs.	Vol. Cu.Ft.	Cascs or Units Per Load			
				1 Ton Trailer	3 Ton Cargo	5 Ton Cargo	10 Ton Semi
<u>CLOTHING - ALL TYPES</u>							
*Shoos, service	12	50	2.7	33	119	119	278
* " " Amphib Pk	12	57	3.5	25	91	91	214
*Socks, wool, heavy	240	80	7.5	12	43	43	100
* " " light	720	95	5.0	18	64	64	150
" " " Amphib Pk	720	98	5.0	18*	61	64*	150*
Suits, HBT, one piece	50	154	5.6	13	39	57*	130
" " " Amphib Pk	45	137	6.0	15*	44	53*	125*
Trousers, HBT	75	118	4.7	17	51	68*	159*
" " " Amphib Pk	80	125	5.0	16	48	64*	150*
Trousers, HBT, Protective	30	125	5.0	16	48	64*	150*
" " " Amphib Pk	70	101	4.7	19*	59	68*	159*
Trousers, wool, OD	60	120	5.4	16*	50	59*	139*
" " " Amphib Pk	60	126	5.6	16*	48	57*	134*
Trousers, combat	30	111	5.0	18*	54	64*	150*
" " " Amphib Pk	30	109	5.4	16*	55	59*	139*
*Undershirts, wool	100	88	5.0	18	64	64	150
" " " Amphib Pk	100	95	5.0	18*	63	64*	150*
<u>EQUIPAGE, INDIVIDUAL EQUIPMENT</u>							
Bags, barrack	100	120	5.2	17	50	62*	144*
* " " Amphib Pk	40	90	5.0	18	64	64	150
*Bags, canvas field	50	103	5.9	15	54	54	127
* " " " Amphib Pk	50	85	5.5	16	58	58	136
Belts, cartridge, cal.30	80	136	5.2	15	44	62*	144*
Blankets, wool, OD (US)	20	85	5.0	18	64	64	150
* " " " Amphib Pk	20	85	4.7	19	60	68	159
*Cans, meat, M-1932	60	85	6.3	14	51	51	119
* " " " Amphib Pk	60	80	5.9	15	54	54	127
*Canteens, M-1910	75	70	6.9	13	46	46	108
* " " " Amphib Pk	75	68	6.1	14	52	52	123
*Covers, canteen, M-1910	180	90	6.0	15	53	53	125
* " " " Amphib Pk	180	89	6.0	15	53	53	125
Covers, mattres	50	120	5.0	17	50	64*	150*
" " " Amphib Pk	40	113	5.0	18*	54	64*	150*

