

QUARTERMASTER CORPS
TENTATIVE
SPECIFICATION

J. Q. D. No. 88D
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RUCKSACK.

A. APPLICABLE SPECIFICATIONS.

A-1. The following specifications and drawings, of the issue in effect on date of invitation for bids, shall form a part of this specification:-

A-1a. Federal Specifications -

- T-T-881 - Twine; cotton, seine.
- V-T-276 - Thread; cotton.
- NN-B-601 - Boxes; wood, cleated-plywood.
- NN-B-621 - Boxes; wood, nailed and lock-corner.
- NN-B-631 - Boxes; wood, wirebound.
- QQ-M-151 - Metals; general specification for inspection of.
- UU-P-271 - Paper; kraft, wrapping, waterproofed.
- CCC-T-191 - Textiles; general specifications, test methods.

A-1b. United States Army Specifications -

- 2-97 - Wax (saddlers' and stitching).
- 48-5 - Wire, soft iron and steel, bare and coated.
- 6-185 - Webbing, cotton, natural or in colors.
- 57-136 - Steel, sheet and strip, carbon and alloy.
- 100-2 - Standard specifications for marking shipments.

A-1c. Quartermaster Corps Tentative Specifications -

- H.Q.D. ES No. 680 - General specifications protective coating materials, synthetic type.
- J.Q.D. No. 142 - Clips, end.
- J.Q.D. No. 144 - Coatings, baked, for equipment hardware made of ferrous or zinc-alloy metals.
- J.Q.D. No. 147 - Buckles, double bar, tongueless.
- J.Q.D. No. 156 - Buckles, end, 1-inch.
- J.Q.D. No. 159 - Grommets, with toothed washers.
- J.Q.D. No. 160 - Loops, strap.
- J.Q.D. No. 168 - Rings for tents.
- J.Q.D. No. 183 - Snaps 1-inch.
- J.Q.D. No. 191 - Rings-D.
- J.Q.D. No. 208 - Duck, cotton, plied-yarns (Army, numbered and tent duck).

A-1d. Quartermaster Corps Drawings -

- B-191 - Rucksack, illustration and details.
- B-192 - Rucksack, steel frame.
- B-194 - Rucksack, details "A".
- B-195 - Rucksack, details "B".

- B-196 - Rucksack, details "C".
- B-197 - Rucksack, details "D".
- B-198 - Rucksack, details "E".
- B-199 - Rucksack, details "F".
- B-201 - Rucksack, camouflage cover.
- 4-1-22 - Rivets, cap and burrs.
- 4-1-23 - Eyelets, grommets and washers.

B. TYPE AND SIZE.

B-1. This specification covers one type and size of rucksack.

C. MATERIAL AND WORKMANSHIP.

C-1. Materials.- The materials shall conform in all respects to the specifications and drawings listed in section A, and as hereinafter specified.

C-1a. Rucksack.-

C-1a(1). Duck.- The cotton duck used in the manufacture of the rucksacks shall be dyed olive drab, No. 3 shade, produced with either vat dyes, mineral dyes or a combination of the two and made highly water repellent with aluminum acetate (sulphur free), wax and soap and/or refined paraffin wax. The duck before finishing shall conform to the requirements for Type III, Table III, Quartermaster Corps Tentative Specification J.Q.D. No. 208. The duck used for the rucksack pouch bottom shall be 12.29 ozs. per sq. yard and for all other parts of the rucksack 9.85 ozs. per sq. yard.

C-1a(2). Webbing.- Webbing, cotton used in the manufacture of the rucksack shall be vat dyed No. 3 olive drab shade and conform to the requirements of United States Army Specification 6-185 as follows:-

- 3/4", 30/100 oz. per linear yard, Type I, lightweight.
- 1", 40/100 oz. per linear yard, Type I, lightweight.
- 5/8", 1 oz. per linear yard, Type III, heavyweight.
- 1", 1-33/100 oz. per linear yard, Type III, heavyweight.
- 2-1/4", 2-16/100 oz. per linear yard, Type IIB, medium heavyweight.

C-1a(2)a. The color shall have good fastness to laundering agents containing active chlorine.

C-1a(3). Thread.-

C-1a(3)a. Thread, cotton, machine (heavy), 3-ply, ticket No. 10/3 shall be vat dyed olive drab No. 3 shade and conform to the requirements for Type IIIA and IIIB, Table IV, Federal Specification V-T-276. The Type IIIB thread shall be used for top thread in machine and Type IIIA for bottom or bobbin thread in machine. The color shall have good fastness to laundering agents containing active chlorine.

C-1a(3)b. Thread, cotton, machine, 4-ply, ticket No. 16 shall be vat dyed olive drab No. 3 shade and conform to the requirements for Type IA3

and IB3, Table I, Federal Specification V-T-276. The Type IB3 thread shall be used for top thread in machine and Type IA3 for the bottom or bobbin thread in machine. The color shall have good fastness to laundering agents containing active chlorine.

C-1a(3)c. Thread, cotton, machine (heavy), 6-ply, ticket No. 8/6 shall be unbleached and conform to the requirements for Type IIIA and IIIB, Table IV, Federal Specification V-T-276. The thread Type IIIB shall be used for top thread in machine and Type IIIA for bottom or bobbin thread in machine.

C-1a(4). Cord, sash.- The cord shall be a solid braided cotton sash cord, size No. 4, of a good commercial grade. The cord shall be vat dyed in a color match of the No. 3 shade of olive drab. The color shall have good fastness to laundering agents containing active chlorine.

C-1a(5). Wax.- Wax, stitching, shall be Type II, conforming to the requirements of United States Army Specification 2-97. White or russet wax may be used. The use of pre-waxed prepared thread will not be permitted.

C-1a(6). Leather.- Leather, smoked elk, 4/64", 6/64" and 10/64" thick (plus 3/4 or minus 1/2 sixty-fourths), shall be 50 percent grade "A" and 50 percent grade "B".

C-1a(6)a. Hides shall be from cattle.

C-1a(6)b. Tannage shall be well pickled, thoroughly chromed, and tanned soft.

C-1a(6)c. Currying shall be by fat liquoring with a mixture of sulphonated oil and animal fats, and oils, only to such an extent as will give softness. The finished, curried, well dried leather shall contain not more than 6 percent currying mixture.

C-1a(6)d. The leather shall contain no salts unessential to its quality. Ash shall not exceed 6 percent.

C-1a(6)e. The finish of the leather shall be of the usual smoked color, and may be boarded by hand, three ways, but shall not be embossed by machine.

C-1a(6)f. The leather shall be capable of passing the tests ordinarily employed in commercial practice for strength, crackiness, appearance of fiber, and general condition.

C-1a(7). Fastener, slide, zinc.- The slide fastener shall conform to Talon No. 5 size, regular (closed end) Type with 9/16" vat dyed olive drab color tape, equipped with non-lock slider pull No. 3013 and bridge top stop. The metal portion of the fastener shall be die cast from zinc-alloy. Any other fastener conforming to the above described fastener will be acceptable. Length of metal fastener shall be 10-1/2 inches.

C-1a(8). Buckles, double bar, tongueless, 5/8" and 1".- The tongueless double bar buckles shall be made in accordance with the requirements

tumbling before final finish is applied.

C-1a(19)b. The fabricated buckle shall be finished in accordance with the requirements for Type II, described in Quartermaster Corps Tentative Specification J.Q.D. No. 144.

C-1a(20). Hook, sliding, 5/8".- The hook, sliding, shall be made of steel conforming to the requirements for W.D. No. 1015 United States Army Specification 57-136. The finished hook, sliding shall conform to the design, shape and dimensions as shown on drawing B-194.

C-1a(20)a. The fabricated hook shall be finished in accordance with the requirements for Type II, described in Quartermaster Corps Tentative Specification J.Q.D. No. 144.

C-1b. Camouflage Cover For Rucksack.-

C-1b(1). Cloth.- The cloth used in the manufacture of camouflage covers shall be a bleached 80 x 80 thread count print cloth 36 inches wide, waterproofed with "Zelan" or equivalent conforming to the following requirements:-

: Wt. per	: Width	: Threads	: Ply of	: Breaking Strength
: Sq. Yd.	: Inches	: per inch	: Yarns	: (Min)
: (Min)	: (Min)	: (Min)	:	: 1 x 1 x 3 Grab Method:
: Ounces	:	:	:	: Pounds
:	:	: Warp	: Filling	: Warp
: 3.60	: 35	: 87	: 75	: 1
:	:	:	:	: 1
:	:	:	:	: 52
:	:	:	:	: 33
:	:	:	:	:

C-1b(2). Thread.- Thread, cotton, machine, 4-ply, ticket No. 20 shall be bleached and conform to the requirements for Type IA2 and IB2, Table I, Federal Specification V-T-276. The thread, Type IB2 shall be used for top thread in machine and Type IA2 for bottom or bobbin thread in machine.

C-1b(3). Twine, Seine.- Shall be cotton, No. 96, bleached, medium laid, conforming to the requirements of Federal Specification T-T-881.

C-1b(4). Grommets and toothed washers No. 2.- The grommets and washers shall be made in accordance with the requirements for Class B described in Quartermaster Corps Tentative Specification J.Q.D. No. 159

C-1c. Frame for Rucksack.-

C-1c(1). Body of Frame.- Shall be made from seamless or electric resistance welded 1/2" outside diameter tubing, having a carbon content of .15 to .20%. The wall thickness of the tubing shall be 0".035.

C-1c(2). Sleeve of Frame.- Shall be made from seamless or electric resistance welded 9/16" outside diameter tubing, having a carbon content of .15 to .20%. The wall thickness of the tubing shall be 0".028.

C-1c(3). Reinforce of Frame.- Shall be made from 0".0359 thick

cold rolled sheet steel, conforming to the requirements of W. D. No. 1015, U. S. Army Specification 57-136.

C-1c(4). Link.-- Shall be made from 0".1205 diameter steel wire conforming to the requirements of W. D. No. 1015, U. S. Army Specification 48-5.

C-1c(5). Snap.-- Shall be made from 0".1205 diameter spring steel wire of a good commercial grade suitable for this type of article.

C-2. Workmanship.-- The finished articles shall be clean, well made, and free from any defects which may affect appearance or serviceability.

D. GENERAL REQUIREMENTS.

D-1. See section E.

E. DETAIL REQUIREMENTS.

E-1. All detail requirements for the manufacture of the finished articles and their component parts shall be as shown by specifications and drawings listed in section A, and as specified in this specification.

E-2. Rucksack.--

E-2a. When machine stitching (Type 301) in duck, leather, or webbing is not a continuous thread, it shall be backstitched not less than 1-inch at each break. All stitching shall be backstitched at the ends to prevent raveling, except when the ends are turned under in a hem or held down by other stitching. Thread tension shall be properly maintained so that the lock will be embedded in the center of the materials sewed.

E-2a(1). Machine stitching with 6-ply ticket No. 8/6 thread shall be done on a machine capable of using the hot stitching wax specified in paragraph C-1a(7). At the option of the contractor the 6-ply ticket No. 8/6 thread may be used on a machine capable of using either a liquid wax or a hot beeswax. The liquid wax to be equal to a commercial wax known as cyroxyton. The thread shall be thoroughly impregnated with the wax.

E-2b. Black waterproof ink or waterproof stencil paint shall be used in stamping or printing the marks shown on drawing. No other brands or marks shall show on the rucksack.

E-2c. Grommets shall be securely clinched without cutting the duck. The holes punched in the duck to receive the grommets shall be smaller than the outside diameter of the grommet barrel, so that barrel must be forced through hole, thus insuring a tightly secured grommet.

E-2d. End clips shall be firmly attached without cutting the webbing which shall be inserted the full depth and lie flat at the point where it enters.

E-2e. Fasteners, snap, style 2, shall be tightly clinched. When holes are punched before inserting the male or female part of the fastener,

they shall be smaller than the outside diameter of fastener tube, so that tube must be forced through hole.

E-2f. The male part of die or anvil used for inserting eyelets shall have a round, tapered point to prevent intentional cutting of threads in webbing, eyelets shall be tightly clinched without splitting.

E-2g. All solid rivets shall be securely set.

E-3. Camouflage Cover for Rucksack.-

E-3a. When machine stitching (Type 301) is not a continuous thread, it shall be backstitched not less than 1-inch at each break. All stitching shall be backstitched at the ends to prevent raveling, except when the ends are turned under in a hem or held down by other stitching. Thread tension shall be properly maintained so that the lock will be embedded in the center of the material sewed.

E-3b. Black waterproof ink or waterproof stencil paint shall be used in stamping or printing the marks shown on drawing. No other marks shall show on the cover.

E-3c. Grommets shall be securely clinched without cutting the cloth, the holes punched in cloth to receive the grommets shall be smaller than the outside diameter of grommet barrel, so that barrel must be forced through hole, thus insuring a tightly secured grommet.

E-4. Frame for Rucksack.-

E-4a. Construction.- The frame shall be made in accordance with the requirements as specified in this specification and the design, shape and dimensions as shown by drawing B-192. The 1-15/16" radius shown in side view illustration on drawing B-192 shall be strictly adhered to.

E-4b. Finish.-

E-4b(1). Frame.- The fabricated frame shall be thoroughly cleaned and the material prepared to insure proper adhesion of the finish. The frame shall be primed with a suitable rust inhibiting primer and then given a coating of lustreless olive drab enamel conforming to the requirements described in Quartermaster Corps Tentative Specification H.Q.D. ES No. 680, listed in section A.

E-4b(2). Snap and Link.- The fabricated wire snap and wire snap link before assembling to frame shall be finished in accordance with the requirements specified for Type II, in Quartermaster Corps Tentative Specification J.Q.D. No. 144.

E-4c. All welds shall be sound and smooth.

E-5. The contractor shall inspect all finished articles for compliance with this specification prior to submitting them to the United States Government for final inspection.

F. METHODS OF SAMPLING, INSPECTION AND TESTS.

F-1. Sampling.-- Samples of any materials, components, etc., not furnished by the United States Government, entering into the manufacture of the article covered herein shall be selected from time to time by the Government Inspector, and carefully examined and tests made to determine if they are in accordance with the drawings and specifications listed in section A, and with this specification.

F-2. Inspection.-- Inspection may be made throughout the entire process of manufacture. The passing as satisfactory of any detail of construction or materials shall not relieve the contractor of responsibility for faulty workmanship or materials which may be discovered at any time prior to final acceptance. Final inspection of the finished article shall be made either at point of production or at point of delivery designated in the contract or purchase order of procuring agency. In case of factory inspection, every facility shall be afforded inspectors, by the manufacturer, for the prosecution of their work.

F-3. Tests.-- Tests shall be in accordance with Federal Specification CCC-T-191, insofar as applicable.

G. PACKAGING, PACKING, AND MARKING.

G-1. Packaging.-- Unless otherwise specified in invitation for bids, the rucksack shall be completely assembled by attaching the bag to frame. After neatly folding the cover and placing it in the front pocket of bag, the complete assembly shall be securely tied at each end with a suitable twine or cord.

G-2. Packing.-- Unless otherwise specified in invitation for bids, contract, or order, the packaged rucksacks shall be packed 10 per box, in boxes conforming to and constructed in accordance with any of the following specifications:-

Style A or B	- Federal Specification NN-B-601.
Style 2, 2-1/2, 3 or 4	- Federal Specification NN-B-621.
Style 2 or 3	- Federal Specification NN-B-631.

Inside dimensions of boxes shall be 21 inches long, 18-1/2 inches wide and approximately 21 inches deep. Boxes shall be lined with Type B, water-proofed, kraft paper conforming to Federal Specification UU-P-271. At the top of the box and at any point where two edges of the same sheet or of different sheets of paper meet, the edges shall overlap not less than 4 inches. The rucksacks shall be alternated end for end when placing in the box. One style of box only shall be used on any one contract.

G-3. Marking.-- Unless otherwise specified in invitation for bids, contract, or order under which shipment is made, shipping containers shall be marked in accordance with United States Army Specification 100-2.

H. NOTES.

H-1. Before production is commenced, unless otherwise specified

in invitation for bids, a finished rucksack shall be submitted to the contracting officer for approval.

NOTICE:- When Government drawings, specifications, or other data are used for any purpose other than in connection with a definitely related Government procurement operation, the United States Government thereby incurs no responsibility nor any obligation whatsoever; and the fact that the Government may have formulated, furnished, or in any way supplied the said drawings, specifications, or other data, is not to be regarded by implication or otherwise as in any manner licensing the holder or any other person or corporation, or conveying any rights or permission to manufacture, use, or sell any patented invention that may in any way be related thereto.

NOTE:- Unless otherwise specified in invitation for bid or purchase order, copies of this specification may be obtained at the following point:-

Jeffersonville Quartermaster Depot, Jeffersonville, Indiana.

