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QUARTERMASTER CORPS
TENTATIVE SPECIFICATION.

"SUPERSEDED BY"

JQD 88B

J. Q. D. No. 88B

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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-D-771 - Duck; cotton, plied-yarns (Army, numbered, and tent duck).
- 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 -

- 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.

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, cotton, used in the manufacture of the Rucksacks shall be dyed an approved shade of olive drab with either vat dyes, mineral dyes, or a combination of the two, and made highly water repellent by treating with aluminum acetate (sulphur free) wax and soap, and/or refined paraffin wax. The duck used for the rucksack pouch bottom shall be 12.25 ounces per square yard and for all other parts of rucksack 9.85 ounces per square yard conforming to the requirements for Type III, Table III, Federal Specification CCC-D-771.

C-1a(2). Webbing, cotton, shall be vat dyed an approved shade of olive drab. The 3/4", 30/100 oz. and 1", 40/100 oz. per linear yard, shall conform to the requirements for Type I, light weight; 2-1/4", 2-16/100 oz. per linear yard Type II, medium heavy weight; and 5/8", 1 oz. per linear yard, and 1", 1-33/100 oz. per linear yard to Type III, heavy weight, United States Army Specification 6-185.

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

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

C-1a(4). Thread, cotton, machine, 4-ply ticket No. 16, shall be dyed an approved shade of olive drab and conform to the requirements for Type IA3 and IB3, Table I, Federal Specification V-T-276. Type IB3 shall be used for top thread in machine and Type IA3 for the bottom or bobbin thread in machine. They dyed thread shall have good fastness to laundering agents containing active chlorine.

C-1a(5). Thread, cotton, machine, (heavy) unbleached, 6-ply, ticket No. 8/6, conforming to the requirements for Type IIIA and IIIB, Table IV, Federal Specification V-T-276 shall be used in lieu of the thread, linen machine 6-cord, specified on drawing B-191. Thread Type IIIB shall be used for top thread in machine and Type IIIA for bottom or bobbin thread in machine. The dyed thread shall have good fastness to laundering agents containing active chlorine.

C-1a(6). Cord, sash, cotton, braided, No. 4, polished finish, shall be of good commercial grade. The cord shall be vat dyed olive drab matching color shade No. 3.

C-1a(7). 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 liquid wax or pre-waxed prepared thread will not be permitted.

C-1a(8). 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(8)a. Hides shall be from cattle.

C-1a(8)b. Tannage shall be well pickled, thoroughly chromed, and tanned soft.

C-1a(8)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(8)d. The leather shall contain no salts unessential to its quality. Ash shall not exceed 6 percent.

C-1a(8)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(8)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(9). Fastener, slide, zinc.- The slide fastener shall conform to Talon No. 5 size, regular (closed end) Type with 9/16" 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(10). Buckles, double bar, tongueless, 5/8" and 1".- The tongueless double bar buckles shall be made in accordance with the requirements for either Class A, B or C described in Quartermaster Corps Tentative Specification J.Q.D. No. 147.

C-1a(11). Buckles, end, 1".- The end buckle shall be made in accordance with the requirements for either Class A, B or D described in Quartermaster Corps Tentative Specification J.Q.D. No. 156

C-1a(12). Loops, strap, 1" x 1/2", Style 2.- The loops, strap shall be made in accordance with the requirements for Type II, Style II, Class A or B, described in Quartermaster Corps Tentative Specification J.Q.D. No. 160.

C-1a(13). Clips, end, 5/8" and 1"- The end clips shall be made in accordance with the requirements for Type I, Class B, described in Quartermaster Corps Tentative Specification J.Q.D. No. 142.

C-1a(14). Rings-D, 1" x ".875"- The D-ring shall be made in accordance with the requirements for Class B or C described in Quartermaster Corps Tentative Specification J.Q.D. No. 191.

C-1a(15). Snaps, 1"- The snaps shall be made in accordance with the requirements for Class B described in Quartermaster Corps Tentative Specification J.Q.D. No. 183.

C-1a(16). Fasteners, snap, Style 2.- The snap fasteners shall be made in accordance with the requirements described in Quartermaster Corps Tentative Specification J.Q.D. No. 166.

C-1a(17). Rings, 3/4", Style 1.- The rings shall be made in accordance with the requirements for Type I, Class A, B or C described in Quartermaster Corps Tentative Specification J.Q.D. No. 168.

C-1a(18). Grommets, Nos. 0 and 5.- The grommets shall be made in accordance with the requirements for Class B described in Quartermaster Corps Tentative Specification J.Q.D. No. 159.

C-1a(19). Eyelets No. 4132 shall be made in accordance with the requirements as shown by drawing 4-1-23. The fabricated eyelets shall be given either a bronze or oxidized (blue black color) finish.

C-1a(20). The rivets, and burrs used in the manufacture of the Rucksack shall be No. 12 brass flat head in accordance with the requirements shown by drawing 4-1-22, with bronze or oxidized (blue black color) finish. The length of the rivet shall be as shown on drawing B-196.

C-1a(21). The body of the buckle, 5/8", center bar, with roller, shall be cast from a good commercial grade of malleable iron and have a steel tongue and roller. The finished buckle shall conform to the design, shape and dimensions as shown on drawing B-197.

C-1a(21)a. The casting shall be of uniform quality and condition, free from blowholes, hard spots, shrinkage defects, porosity, cracks and other injurious defects. The casting shall be made smooth by necessary filing and tumbling before final finish is applied.

C-1a(21)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(22). Hook, sliding, 5/8", 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(22)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 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)	:	: 1x1x3 Grab Method	:
:Ounces	:	:	:	: Pounds	:
:	:	:Warp:Filling:	:Warp:Filling:	: Warp	: Filling
: 3.60	: 35	: 87 : 75	: 1 : 1	: 52	: 33
:	:	:	:	:	:

C-1b(2). Thread, cotton, machine, bleached, 4-ply, ticket No. 20, shall conform to the requirements for Type IA2 and IB2, Table I, Federal Specification V-T-276. 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, cotton No. 96, bleached, shall be medium laid and conform to the requirements of Federal Specification T-T-881.

C-1c. Frame for Rucksack.-

C-1c(1). Tubing, steel, 1/2" diameter, .035 wall, seamless or electric resistance welded, shall be of a good commercial grade.

C-1c(2). Wire used in the manufacture of wire snap link shall be W.D. No. 1015 conforming to the requirements of United States Army Specification 48-5.

C-1c(3). Wire, spring steel, used in the manufacture of wire snap shall be of a good commercial grade suitable for the purpose intended.

C-1c(4). Finish.-

C-1c(4)a. Frame.- The fabricated frame shall be given two coats of olive drab synthetic lustreless enamel or olive drab lustreless lacquer.

C-1c(4)b. 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.

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

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).

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 herein and the design, shape, dimensions and materials 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. 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.