

QUARTERMASTER CORPS
TENTATIVE SPECIFICATION.

"SUPERSEDED BY"

J. Q. D. No. 88
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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.
- 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 (saddler's and stitching).
- 3-124 - Bronze finish.
- 6-185 - Webbing, cotton, natural or in colors.
- 100-2 - Standard specifications for marking shipments.

A-1c. Quartermaster Corps Drawings -

- B-191 - Rucksack, illustration and details.
- B-192 - Rucksack, 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.
- 4-1-2 - Loops "A".
- 4-1-4 - Snaps "A".
- 4-1-9 - Clips, end.
- 4-1-10 - Fasteners, snap, style 2.
- 4-1-12 - Rings-D "A".
- 4-1-15 - Buckles, wire, brass.
- 4-1-23 - Eyelets, grommets and washers.
- 4-1-36 - Buckles, special "B".
- 4-1-41 - Hardware, miscellaneous "D".

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.

C-1a. 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. The duck used for the rucksack pouch bottom shall be 15.5 ounces per square yard and for all other parts of the rucksack 9.85 ounces per square yard conforming to the requirements for Type III, Table III, Federal Specification CCC-D-771.

C-1a(1). The dyed and finished duck shall withstand a hydrostatic pressure for the 9.85 oz. of 30 centimeters and for the 15.5 oz. of 40 centimeters on the Suter type apparatus before the third drop appears.

C-1b. Cloth, cotton, poplin, bleached, conforming to the following requirements shall be used in the fabrication of camouflage cover in lieu of balloon cloth specified on drawing B-201;

Wt. per Sq. Yd. (Min)	Width (Min)	Breaking Str. (Min)	Threads per inch (Minimum)	Width (Min)	Breaking Str. (Min)	Threads per inch (Minimum)	Width (Min)	Breaking Str. (Min)	Threads per inch (Minimum)
4.0	48.0	90	40	100	44	2	1		

C-1b(1). The bleached cloth shall be thoroughly waterproofed with "Zelan" or equivalent, and after being waterproofed shall weigh not over 5 ounces per square yard.

C-1c. Webbing, cotton, olive drab, 3/4", 30/100 oz. and 1", 40/100 oz. per linear yard, shall be vat dyed and conform to the requirements for Type I, light weight; 2-1/4", 2-16/100 oz. per linear yard to 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-1c(1). The color shall have good fastness to laundering agents containing active chlorine.

C-1d. Thread, cotton, machine, olive drab, 4-ply, ticket No. 16, shall be vat dyed and conform to the requirements for Type IA3 or IB3, Table I, and thread, cotton, machine, bleached, 4-ply, ticket No. 20, Type IA2 or IB2, Table I, Federal Specification V-T-276. The dyed

thread shall have good fastness to laundering agents containing active chlorine.

C-le. Thread, linen, hand shoe, unbleached, No. 10, shall conform to the requirements for Type C, Table III, Federal Specification V-T-291.

C-lf. Thread, cotton, machine (heavy) unbleached, 4-ply, ticket No. 8/4 and 6-ply, ticket No. 8/6 conforming to the requirements for Type IIIA or IIIB, Table IV, Federal Specification V-T-276 shall be used in lieu of thread, linen, machine 4 and 6-cord respectively specified on drawings B-191 and B-196. The breaking strength of the cotton thread shall be equal to that of linen thread.

C-lg. Twine, seine, cotton, No. 96, bleached, shall be medium lain and conform to the requirements of Federal Specification T-T-881.

C-lh. Cord, sash, cotton, braided, No. 4, olive drab, polished finish, shall be of a good commercial grade.

C-li. Wax, stitching and saddler's, shall be in accordance with United States Army Specification 2-97. White or russet wax may be used. The use of liquid wax or pre-wax prepared thread will not be permitted.

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

C-lj(1). Hides shall be from cattle.

C-lj(2). Tannage shall be well pickled, thoroughly chromed, and tanned soft.

C-lj(3). 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-lj(4). The leather shall contain no salts unessential to its quality. Ash shall not exceed 6 percent.

C-lj(5). 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-lj(6). The leather shall be capable of passing the tests ordinarily employed in commercial practice for strength, crackiness, appearance of fiber, and general condition.

C-lk. Fastener, hookless, 10-1/2" long, shall be Talon No. 5 size, regular (closed end) Type, nickel alloy, with 9/16" tape, olive drab color, equipped with special non-lock slider pull No. 3094 and bridge top stop.

Any other fastener equal to the above will be acceptable.

C-1e. A commercial, brass, bronze finished tubular rivet with a diameter of 0".145 plus or minus 0".003, and cap shall be used in the manufacture of the rucksack. The length of the rivet shall be as specified on drawing B-194.

C-1f. Thread, cotton, machine (heavy) unbleached, 4-ply, ticket No. 8/4 and 6-ply, ticket No. 8/6 conforming to the requirements for Type IIIA or IIIB, Table IV, Federal Specification V-T-276 shall be used in lieu of thread, linen, machine 4 and 6-cord respectively specified on drawings B-191 and B-196. The breaking strength of the cotton thread shall be equal to that of linen thread.

C-2. Substitution of Materials.-- See paragraph H-2.

C-3. Workmanship.-- The finished articles shall be clean, well finished, 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 article and its component parts shall be as shown by specifications and drawings listed in section A.

E-2. When stitching of duck, cloth, or webbing is not a continuous thread, it shall be back-stitched at the ends to prevent raveling, except when 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-3. 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 and cover.

E-4. Bronze finishing of specified bronze finish hardware shall be done in accordance with United States Army Specification 3-124.

E-5. Grommets shall be securely clinched without cutting the duck. The holes punched in duck or 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-6. 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-7. 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-8. 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-9. Holes shall be formed by tubular rivets when driven in material and not punched prior to insertion. Rivets shall be securely clinched.

E-10. All solid rivets shall be securely set.

E-11. All welds shall be sound and smooth.

E-12. The fabricated frame shall be given two coats of olive drab synthetic lustreless enamel, or olive drab lustreless lacquer.

E-13. 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.

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 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 the 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 4 or 5 - Federal Specification NN-B-621.
Style A or B - Federal Specification NN-B-601.

Inside dimensions of boxes shall be 23 inches long, 20 inches wide, and approximately 18-1/2 inches deep. Boxes shall be lined with Type B, water-proofed, kraft paper conforming to Federal Specification UU-P-271. One style of box only shall be used for 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.

H-2. In the event of an emergency, and subject to the approval of the proper authority as indicated below, substitution of materials etc., will be permitted in the manufacture of rucksack, as follows:-

When such substitutions are permitted the extent of the substitution shall be as indicated in the invitation for bids.

H-2a. Upon approval of the contracting officer:-

- a. Substitution for buckles, 1", web strap, style 4, bronze, bronze finish. Drg. 4-1-36.
Sub. - Buckles, 1", web strap, style 4, bronze, oxidized finish.
- b. Substitution for buckles, 3/4", web strap, bronze, bronze finish. Drg. 4-1-36.
Sub. - Buckles, 3/4", web strap, bronze, oxidized finish.
- c. Substitution for buckles, 5/8", brass wire, bronze finish. Drg. 4-1-15.
Sub. - Buckles, 5/8", brass wire, oxidized finish.
- d. Substitution for buckles, end, 1", bronze, bronze finish. Drg. 4-1-41.
1st Sub. - Buckles, end, 1", bronze, oxidized finish.
2nd Sub. - Buckles, end, 1", stamped brass, bronze finish.
3rd Sub. - Buckles, end, 1", stamped brass, oxidized finish.
- e. Substitution for snaps, 1", bronze, bronze finish. Drg. 4-1-44.
1st Sub. - Snaps, 1", bronze, oxidized finish.
2nd Sub. - Snaps, 1", (substitute) stamped brass, bronze finish. Drg. 4-1-44.
3rd Sub. - Snaps, 1", (substitute) stamped brass, oxidized finish.
- f. Substitution for loops, strap, 1" x ".5, style 2, brass wire, bronze finish. Drg. 4-1-2.

- 1st Sub. - Loops, strap, 1" x ".5, style 2, brass wire, oxidized finish.
- 2nd Sub. - Loops, strap, 1" x ".5, style 2, cast bronze, bronze finish.
- 3rd Sub. - Loops, strap, 1" x ".5, style 2, cast bronze, oxidized finish.
- g. Substitution for D-rings, 1" x ".875 brass wire, bronze finish.
Drg. 4-1-12.
- Sub. - D-rings, 1" x ".875 brass wire, oxidized finish.
- h. Substitution for clips, end, 5/8" and 1", brass, bronze finish.
Drg. 4-1-9.
- Sub. - Clips, end, 5/8" and 1", brass, oxidized finish.
- i. Substitution for fasteners, snap, style 2, brass, bronze finish.
Drg. 4-1-10.
- Sub. - Fasteners, snap, style 2, brass, oxidized finish.
- j. Substitution for eyelets, No. 4132, brass, bronze finish,
Drg. 4-1-23.
- Sub. - Eyelets, No. 4132, brass, oxidized finish.
- k. Substitution for rivets, tubular, 4/16", with caps, brass,
bronze finish.
- Sub. - Rivets, tubular, 4/16", with caps, brass, oxidized finish.
- l. Substitution for rivets, belt, 1/4", No. 12, with burrs,
brass, bronze finish.
- Sub. - Rivets, belt, 1/4", No. 12, with burrs, brass, oxidized finish.

H-2b. Upon approval of The Quartermaster General:-

Substitution of materials and/or finishes in lieu of those required by this specification. In all cases the finished dimensions and design of the substitute article shall be substantially the same as for the standard article shown on the drawings insofar as is consistent with good commercial practice.

- a. Substitution for buckles, 1", web strap, style 4, bronze, bronze finish. Drg. 4-1-36.
- 1st Sub. - Buckle, 1", web strap, style 4, malleable iron and steel, parkerized finish or equal and coated with clear lacquer.
- 2nd Sub. - Buckles, 1", web strap, style 4, malleable iron and steel, brass or copper plated, oxidized finish.
- 3rd Sub. - Buckles, 1", web strap style 4, malleable iron and steel, black baked enamel finish.
- 4th Sub. - Buckles, 1", web strap, style 4, malleable iron and steel, black japan finish.
- b. Substitution for buckles, 3/4", web strap, bronze, bronze finish. Drg. 4-1-36.
- 1st Sub. - Buckles, 3/4", web strap, malleable iron and steel, parkerized finish or equal and coated with clear lacquer.

- 2nd Sub. - Buckles, 3/4", web strap, malleable iron and steel, brass or copper plated, oxidized finish.
- 3rd Sub. - Buckles, 3/4", web strap, malleable iron and steel, black baked enamel finish.
- 4th Sub. - Buckles, 3/4", web strap, malleable iron and steel, black japan finish.

c. Substitution for buckles, 5/8", brass wire, bronze finish.
Drg. 4-1-15.

- 1st Sub. - Buckles, 5/8", steel wire, parkerized finish or equal and coated with clear lacquer.
- 2nd Sub. - Buckles, 5/8", steel wire, brass or copper plated, oxidized finish.
- 3rd Sub. - Buckles, 5/8", steel wire, black baked enamel finish.
- 4th Sub. - Buckles, 5/8", steel wire, black japan finish.

d. Substitution for buckles, end, 1", bronze, bronze finish.
Drg. 4-1-41.

- 1st Sub. - Buckles, end, 1", (body only) malleable iron or stamped steel, parkerized finish or equal and coated with clear lacquer.
- 2nd Sub. - Buckles, end, 1", (body only) malleable iron or stamped steel, brass or copper plated, oxidized finish.
- 3rd Sub. - Buckles, end, 1", (body only) malleable iron or stamped steel, black baked enamel finish.
- 4th Sub. - Buckles, end, 1", (body only) malleable iron or stamped steel, black japan finish.

e. Substitution for snaps, 1", bronze, bronze finish. Drg. 4-1-4.

- 1st Sub. - Snaps, 1", malleable iron and/or steel, parkerized finish or equal and coated with clear lacquer.
- 2nd Sub. - Snaps, 1", malleable iron and/or steel, brass or copper plated, oxidized finish.
- 3rd Sub. - Snaps, 1", malleable iron and/or stamped steel, black baked enamel finish.
- 4th Sub. - Snaps, 1", malleable iron and/or stamped steel, black japan finish.

f. Substitution for loops, strap, 1" x ".5, style 2, brass wire, bronze finish. Drg. 4-1-2.

- 1st Sub. - Loops, strap, 1" x ".5, style 2, malleable iron or steel wire, parkerized finish or equal and coated with clear lacquer.
- 2nd Sub. - Loops, strap, 1" x ".5, style 2, malleable iron or steel wire, brass or copper plated, oxidized finish.
- 3rd Sub. - Loops, strap, 1" x ".5, style 2, malleable iron or steel wire, black baked enamel finish.
- 4th Sub. - Loops, strap, 1" x ".5, style 2, malleable iron or steel wire, black japan finish.

g. Substitution for D-rings, 1" x ".875, brass wire, bronze finish. Drg. 4-1-12.

- 1st Sub. - D-rings, 1" x ".875, malleable iron or steel wire, parkerized finish or equal and coated with clear lacquer.

- 2nd Sub. - D-rings, 1" x ".875, malleable iron or steel wire, brass or copper plated, oxidized finish.
- 3rd Sub. - D-rings, 1" x ".875, malleable iron or steel wire, black baked enamel.
- 4th Sub. - D-rings, 1" x ".875, malleable iron or steel wire, black japan finish.

H-2c. Other substitute materials and/or finishes of materials in addition to the various substitutes heretofore mentioned may be permitted subject to the approval of the contracting officer.

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 bids, or purchase order, copies of this specification may be obtained at the following point:-

Jeffersonville Quartermaster Depot, Jeffersonville, Indiana.