

QUARTERMASTER CORPS
TENTATIVE
SPECIFICATION

*Superseded
by JQD 88G*

J. Q. D. No. 88F
31 August 1943
Superseding
J.Q.D. No. 88E
4 December 1942.

RUCKSACK*
(STOCK No. 74-R-350).

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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.
- KK-L-201 - Leather; lace.
- 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 specifications for inspection of.
- UU-P-271 - Paper; kraft, wrapping, waterproofed.
- CCC-T-191 - Textiles; general specifications, test methods.
- DDD-S-751 - Stitches; seams, and stitching.

A-1b. United States Army Specifications:-

- 2-97 - Wax (saddlers' and stitching).
- 6-185 - Webbing, cotton, natural or in colors.
- 57-136 - Steel, carbon and alloy; sheets and strips.

A-1c. Quartermaster Corps Tentative Specifications:-

- J.Q.D. No. 101 - Rope, tent, cotton, solid braided.
- J.Q.D. No. 142 - Clips, end.
- 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).
- J.Q.D. No. 226 - Dyeing (vat) and finishing of duck and tent twill.

*This is the approved nomenclature.

- J.Q.D. No. 231 - Dyeing (mineral) and finishing of duck and tent twill.
- J.Q.D. No. 269 - Eyelets and washers.
- J.Q.D. No. 328 - Snap, lock.
- J.Q.D. No. 376 - Hook, sliding, 5/8".
- J.Q.D. No. 377 - Leather, chrome and chrome vegetable retained (Latigo type).
- J.Q.D. No. 407 - Buckles, center-bar, (satchel or skate).
- J.Q.D. No. 430 - Rivets, belt and burrs.
- P.Q.D. No. 62 - Fasteners, slide, interlocking.
- O.Q.M.G. No. 94 - Specifications for marking of outside shipping containers by contractors.

A-1d. Ordnance Department Tentative Specifications:-

TAC ES No. 680 - Protective coating materials, synthetic type.

A-1e. 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.

B. TYPE AND SIZE.

B-1. This specification covers one type and size of rucksack, as depicted by illustration shown on CJ-951 attached to and forming a part of this specification.

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 indicated.

C-1a. Rucksack, less Camouflage Cover, Frame and Snap Lock.

C-1a(1). Duck.- The cotton duck used in the fabrication of the bottom of the rucksack shall be 12.29 oz. per square yard and for all other parts 9.85 oz. per square yard, conforming to the requirements of Type III, Table III, as described in Specification J.Q.D. No. 208.

C-1a(1)a. Color and Finish.- The duck shall be vat dyed in a color match of the No. 7 shade of olive drab and water repellent finished in accordance with the requirements described in

Specification J.Q.D. No. 226 or mineral dyed in a color match of the No. 7 shade of olive drab and water repellent finished in accordance with the requirements as described in Specification J.Q.D. No. 231.

C-1a(2). Webbing, Cotton.- Shall be vat dyed in a color match of the No. 7 shade of olive drab and conform to the requirements of Specification 6-185, as follows:-

For binding - $3/4$ " , 30/100 oz. per linear yard, Type I, lightweight.

For back strap reinforce - 1" , 40/100 oz. per linear yard, Type I, lightweight.

For belt strap, rifle securing strap, loop and buckle chape billet, loop and buckle chape, frame securing strap, frame securing strap buckle chape, connecting straps and sliding loop chape - $5/8$ " , 1 oz. per linear yard, Type III, heavyweight.

For shoulder strap buckle chapes, shoulder strap billet, waist strap, back strap buckle chape, back strap billet and pouch reinforce strap - 1" , 1- $33/100$ oz. per linear yard, Type III, heavyweight.

For back strap body and shoulder strap body - 2- $1/2$ " , 4 oz. per linear yard, Type III, 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 in a color match conforming to shade "S", U. S. Army Standard Color Card, and conform to the requirements for Type IIIA and IIIB, Table IV, Specification V-T-276. The Type IIIB thread shall be used for top or needle 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 in a color match conforming to shade "S", United States Army Standard Color Card, and conform to the requirements for Type IA3 and IB3, Table I, Specification V-T-276. The Type IB3 thread shall be used for top or needle 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, Specification V-T-276. The thread Type IIIB shall be used for top or needle thread in machine and Type IIIA for bottom or bobbin thread in machine.

C-1a(4). Rope, Tent, Cotton, Solid Braided.- Shall be in accordance with the requirements for Size No. 4, described in Specification J.Q.D. No. 101.

C-1a(5). Wax, Stitching.- Shall be Type II, either white or russet, conforming to the requirements of Specification 2-97.

C-1a(6). Leather.-

C-1a(6)a. Leather, chrome, vegetable retanned, 50 percent Grade "A" and 50 percent Grade "B," conforming to the requirements as described in Specification J.Q.D. No. 377 shall be used in the fabrication of the following leather parts on the rucksack:-

- Leather pocket flap billets.
- Leather pocket buckle chapes.
- Leather pouch reinforcement strap billet ends.
- Leather pouch reinforcement strap buckle chapes.
- Leather inside frame supports.
- Leather outside frame supports.
- Leather reinforces.
- Leather slide fastener thongs.

The thickness of the leather used for each article shall be as indicated on drawings listed in Section A.

C-1a(6)b. Thong, Snap, Lock Rucksack.- Shall be made from lacc leather $6/64$ " thick (minimum) to $8/64$ " thick (maximum), conforming to the requirements of Type B, Class II, described in Specification KK-L-201. The slits shall be cut and holes punched as indicated on drawing B-195.

C-1a(7). Fastener, Slide.- Shall be zinc, cronak finished, conforming to the requirements for Type IB, Class C, Style 2, described in Specification P.Q.D. No. 62. Length of metal fastener shall be 10 inches.

C-1a(8). Buckles, double bar, tongueless, $5/8$ " and 1".- Shall be made in accordance with the requirements for either Class A, B, or C, described in Specification J.Q.D. No. 147.

C-1a(9). Buckles, end, 1".- Shall be made in accordance with the requirements for either Class A, B or D, described in Specification J.Q.D. No. 156.

C-1a(10). Loops, Strap, 1" x $1/2$ ", Style 2.- Shall be made in

accordance with the requirements for Type III, Style 2, Class A or B, described in Specification J.Q.D. No. 160.

C-1a(11). Clips, end, 5/8", and 1".- Shall be made in accordance with the requirements for Type I, Class B, described in Specification J.Q.D. No. 142.

C-1a(12). Rings-D, 1" x ".875.- Shall be made in accordance with the requirements for Class B or C, described in Specification J.Q.D. No. 191.

C-1a(13). Snaps, 1".- Shall be made in accordance with the requirements for Class B, described in Specification J.Q.D. No. 183.

C-1a(14). Fasteners, snap, Style 2.- Shall be made in accordance with the requirements described in Specification J.Q.D. No. 166.

C-1a(15). Rings, 3/4".- Shall be made in accordance with the requirements for Type I, Class A or B, described in Specification J.Q.D. No. 168.

C-1a(16). Grommets and toothed washers, Nos. 0 and 5.- Shall be made in accordance with the requirements for Class B, described in Specification J.Q.D. No. 159.

C-1a(17). Eyelets, No. 4132.- Shall be made in accordance with the requirements as described in Specification J.Q.D. No. 269.

C-1a(18). Rivets, belt, 3/8", with burrs.- Shall be made in accordance with the requirements for No. 12, as described in Specification J.Q.D. No. 430.

C-1a(19). Buckles, 5/8" and 1", Center-bar, with Roller (Satchel or Skate).- Shall be made in accordance with the requirements as described in Specification J.Q.D. No. 407.

C-1a(20). Hook, Sliding, 5/8".- Shall be made in accordance with the requirements as described in Specification J.Q.D. No. 376.

C-1b. Cover, Camouflage, Rucksack.-

C-1b(1). Cloth.- The cloth used in the manufacture of the camouflage cover shall be a bleached 120 x 120 thread count cotton balloon cloth, 36" wide; waterproofed with a durable type water repellent, with an initial spray rating of 90, and 70 after three dry cleanings or three launderings. This cloth shall conform to the following requirements:-

Wt. per Sq. Yd. (Max.) Ounces	Width Inches (Min.)	Threads Per inch (Min.)		Ply of Yarns		Breaking Strength (Min.) 1x1x3 Grab Method Pounds	
		Warp	Filling	Warp	Filling	Warp	Filling
2.15	35	120	120	1	1	35	35

C-1b(2). Thread.- Thread, cotton, machine, 4-ply, ticket No. 24, shall be bleached and conform to the requirements for Type IA2 and IB2, Table I, Specification V-T-276. The thread, Type IB2 shall be used for top or needle 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 Specification T-T-881

C-1b(4). Grommets and toothed washers No. 2.- Shall be made in accordance with the requirements for Class B, described in Specification J.Q.D. No. 159.

C-1c. Frame, Steel, 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 percent. 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 percent. The wall thickness of the tubing shall be 0".028.

C-1c(3). Reinforce and Cross Plates of Frame.- Shall be made from 0".0359 thick cold rolled sheet steel, conforming to the requirements of W.D. No. 1015, Specification 57-136.

C-1d. Snap, Lock, Rucksack.-

C-1d(1). The snap, lock shall be made in accordance with the requirements as described in Specification J.Q.D. No. 328.

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 indicated in this specification.

E-2. Rucksack, less Camouflage Cover, Frame and Snap Lock.-

E-2a. Stitching, Machine.- Shall be Type 301, as described in Specification DDD-S-751. The number of stitches to the inch shall be as indicated on drawings listed in Section A.

E-2a(1). When machine stitching, Type 301 in duck, 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. Thread breaks in leather shall be overlapped consistent with good commercial practice.

E-2a(2). Machine stitching with 6-ply, ticket No. 8/6 thread, shall be done either on a machine capable of using a hot stitching wax, the wax to conform to Type II, described in paragraph C-1a(5), or on a machine capable of using a liquid wax, the wax to be equal to a commercial wax known as Cyroxyton. The thread shall be thoroughly impregnated with the wax. The use of prewaxed prepared thread will not be permitted.

E-2b. 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-2c. 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-2d. 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 the tube must be forced through the hole.

E-2e. 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-2f. All solid rivets shall be securely set.

E-2g. Marking for Identification.- Black waterproof ink or waterproof stencil paint shall be used in stamping or printing the "U.S." in solid, bold face characters, 1" high, and the name of the contractor and year manufactured in characters of a suitable size, and in the locations as indicated on drawing B-199. No other brands or marks shall show on the rucksack.

E-3. Camouflage Cover for Rucksack.-

E-3a. Stitching, Machine.- Shall be Type 301, as described in Specification DDD-S-751. The number of stitches to the inch shall be as indicated on drawings listed in Section A.

E-3a(1). 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 materials sewed.

E-3b. 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-3c. Marking for Identification.- Black waterproof ink or waterproof stencil paint shall be used in stamping or printing the "U.S." in solid, bold face characters, $3/8$ " high, and the name of the contractor and year manufactured in characters of a suitable size, and in the locations as indicated on drawing B-201. No other marks shall show on the cover.

E-4. Frame for Rucksack.-

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

E-4a(1). The finished frame, when placed on an even plane, shall withstand a compression test of at least 350 pounds without permanently distorting the frame not more than $1/4$ " across the width or $1/8$ " in the depth.

E-4b. Finish for 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 metal primer, Class 101, and then given a coating of lustreless olive drab enamel, Class 204, conforming to the requirements described in Specification TAC ES No. 680.

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

E-5. Contractor's Inspection.- 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 Specification CCC-T-191, insofar as applicable.

G. PACKAGING, PACKING, AND MARKING.

G-1. Packaging and Packing of Rucksacks, Complete.-

G-1a. Packaging.- Unless otherwise specified in invitation for bids, contract or order, the rucksack shall be completely assembled by attaching the bag to the frame and also attaching the snap lock to the frame with the thong provided for that purpose as indicated on drawing B-191. The cover shall be neatly folded and placed in the front pocket of the bag.

G-1b. Packing.- Unless otherwise specified in invitation for bids, contract or order, rucksacks shall be packed ten (10) per box, alternated end for end, in boxes conforming to and constructed in accordance with any of the following specifications:-

- Style A or B - Specification NN-B-601.
- Style 2 or 4 - Specification NN-B-621.
- Style 2 - Specification NN-B-631 (Group III or IV woods; sides, top, bottom, and ends not less than 1/4" thick; no fewer than two (2) battens per end adjacent to the cleats and not more than 10" between the battens).

Inside dimensions of boxes shall be 21" long, 18-1/2" wide and approximately 21" deep. Boxes shall be lined with Type B, water-proofed, kraft paper conforming to 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".

G-2. Packaging and Packing of Leathers, Cut Stock, for Rucksack.-

G-2a. Packaging.- Unless otherwise specified in invitation for bids, contract or order, leathers, cut stock, for rucksack, when procured as separate components, shall be prepared for packing by segregating the various component parts such as the top and bottom frame supports, slide fastener thongs, buckle chapes and billets,

etc., in bundles of fifty (50) units each, securely tied with a suitable cord or string.

G-2b. Packing.- Unless otherwise specified in invitation for bids, contract or order, leathers, cut stock, for rucksack, when procured as separate components, shall be packed two hundred (200) complete sets in a corrugated fibreboard box, conforming to Specification O.Q.M.G. No. 93, Style RSC, Type CF, Grade 4 board. The box shall be equipped with a liner placed inside the box so that it covers the sides and ends extending the full depth of the box. The liner shall be constructed of B flute fibreboard having a bursting strength of not less than 200 pounds per square inch, having corrugations parallel to the depth of the box, and having a taped butt joint at the center of one side of the box.

G-3. Packaging and Packing of Thongs, Snap Lock for Rucksack

G-3a. Packaging.- Unless otherwise specified in invitation for bids, contract or order, thongs, snap lock for rucksack, when procured as a separate component, shall be prepared for packing by tying securely in bundles of fifty (50) each with a suitable cord or string.

G-3b. Packing.- Unless otherwise specified in invitation for bids, contract or order, thongs, snap lock for rucksack, when procured as a separate component, shall be packed twenty-five hundred (2500) (50 bundles) in a corrugated fibreboard box, conforming to Specification O.Q.M.G. No. 93, Style RSC, Type CF, Grade 4 board. The box shall be equipped with a liner placed inside the box so that it covers the sides and ends extending the full depth of the box. The liner shall be constructed of B flute fibreboard having a bursting strength of not less than 200 pounds per square inch, having corrugations parallel to the depth of the box, and having a taped butt joint at the center of one side of the box.

G-4. Packing of Frames for Rucksack.- Unless otherwise specified in invitation for bids, contract or order, frames for rucksack when procured as a separate component, shall be packed forty (40) per corrugated fibreboard box having approximate inside dimensions 22" long, 22" wide and 31" deep, conforming to Specification O.Q.M.G. No. 93, Style RSC, Type CF, Grade 4 board. The frames shall be arranged within the box, alternated end for end, in pairs with the convex face down. The first pair shall be placed across the width of the box, the second pair across the length, the third pair across the width, and so on, alternating each pair, until the box is full.

G-5. Marking.-

G-5a. Marking on Boxes of Rucksacks, Complete.- Unless otherwise specified in invitation for bids, contract or order under which shipment is made, marking on each box containing rucksacks, complete shall conform to Specification O.Q.M.G. No. 94.

G-5b. Marking on Boxes of Components for Rucksacks.- Unless

otherwise specified in invitation for bids, contract or order under which shipment is made, marking on boxes containing components for rucksacks, which are procured separately, shall conform to Specification O.Q.M.G. No. 94, except that service color markings will not be required.

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. As of this date, Bill of Materials No. 3-206K, dated 8-31-43, is applicable to this specification.

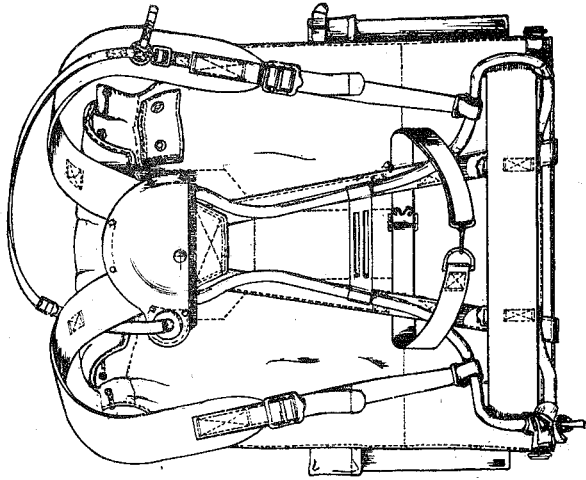
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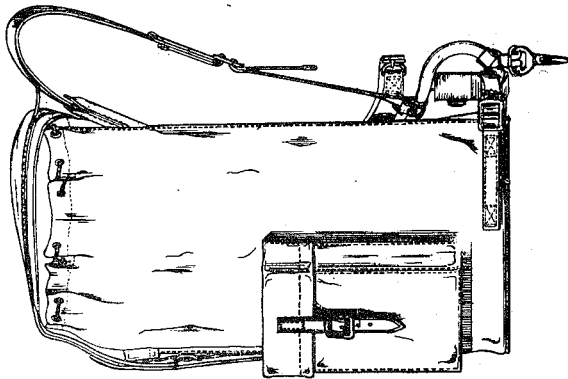
NOTE:- Unless otherwise specified in invitation for bid or purchase order, copies of this specification may be obtained at the following point:-

Jeffersonville Quartermaster Depot, Jeffersonville, Indiana.

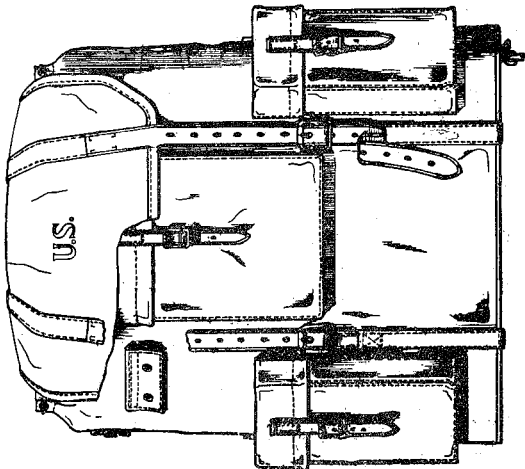




BACK VIEW



SIDE VIEW



FRONT VIEW

ILLUSTRATION

CV-951

BUCKPACK

