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6 May 1982
SUPERSEDING
MIL-C-43563(GL)
6 February 1968

MILITARY SPECIFICATION

CAP, SERVICE: ARMY BAND, BLUE

This specification is approved for use by the Natick Research and Development Laboratories, Department of the Army and is available for use by all Departments and Agencies of the Department of Defense.

1. SCOPE

1.1 Scope. This document covers a service cap made of wool or polyester/wool material.

* 1.2 Classification. The cap shall be of one type in the following classes and sizes (see 6.2):

Class 1 - Wool, Barathea; 14.0 ounce
Class 2 - Wool, Tropical; 10.5 ounce
Class 3 - Wool, Elastique; 16.0 ounce
Class 4 - Polyester/Wool, Gabardine; 9.5 ounce
Class 5 - Polyester/Wool, Tropical; 10.0 ounce
Class 6 - Wool, Gabardine; 11.0 or 14.5 ounce

Schedule of sizes

6-3/8	7-1/4
6-1/2	7-3/8
6-5/8	7-1/2
6-3/4	7-5/8
6-7/8	7-3/4
7	7-7/8
7-1/8	

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: US Army Natick Research and Development Laboratories, Natick, MA 01760 by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

FSC 8405

2. APPLICABLE DOCUMENTS

* 2.1 Government documents. Unless otherwise specified, the following documents of the issue in effect on date of invitation for bids or request for proposal, form a part of this document to the extent specified herein.

SPECIFICATIONS

FEDERAL

H-S-951	-	Synthetic Filaments For Brushes; General Specification For
L-P-375	-	Plastic Film, Flexible, Vinyl Chloride
L-P-390	-	Plastic, Molding and Extrusion Material, Polyethylene and Copolymers (Low, Medium, and High Density)
V-T-295	-	Thread, Nylon
UU-P-553	-	Paper, Wrapping, Tissue
CCC-C-432	-	Cloth, Sheeting Cotton, (Unbleached, Bleached and Dyed)
DDD-L-20	-	Label: For Clothing, Equipage and Tentage (General Use)
PPP-B-636	-	Boxes, Shipping, Fiberboard
PPP-T-45	-	Tape, Gummed, Paper, Reinforced and Plain, for Sealing and Securing

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MIL-C-368	-	Cloth, Satin, Rayon and Cloth, Twill, Rayon
MIL-B-593	-	Braid, Textile (Flat)
MIL-B-3461	-	Buttons, Insignia, Metal, Uniform and Cap
MIL-S-3577	-	Sweatband, Headwear Leather
MIL-C-3727	-	Cloth, Barathea, Wool
MIL-C-3738	-	Cloth, Elastique, Wool
MIL-C-10176	-	Cloth, Gabardine: Wool, Polyester and Wool
MIL-B-13466	-	Braid, Textile and Lace, Vellum, Woven, Textile (for Blue Dress Uniform)
MIL-E-20652/1	-	Eyelets, Metallic, Rolled Flange Type; and Eyelet Washer
MIL-C-21115	-	Cloth, Tropical: Wool, Polyester/Wool
MIL-O-43517	-	Ornamentation (Army Band)
MIL-L-43541	-	Leather, Cattlehide for Visors and Chinstraps
MIL-C-43675	-	Cloth, Interlining, Cotton Warp and Rayon Filling
MIL-C-43920	-	Cloth, Interlining, Cotton or Synthetic, and Nylon
MIL-S-43993	-	Sweatband, Headwear: Artificial Leather

STANDARDS

FEDERAL

FED-STD-151	-	Metals; Test Method
FED-STD-191	-	Textile Test Methods
FED-STD-311	-	Leather; Methods of Sampling and Testing
FED-STD-751	-	Stitches, Seams, and Stitchings

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MIL-STD-105 - Sampling Procedures and Tables for Inspection by Attributes
MIL-STD-129 - Marking for Shipment and Storage
MIL-STD-657 - Provisions for Evaluating Quality of Service Caps
MIL-STD-1188 - Commercial Packaging of Supplies and Equipment

DRAWING

US ARMY NATICK RESEARCH AND DEVELOPMENT LABORATORIES

2-1-254 - Cap, Service, Army; Packaging Bridge and its Location for Packing Two Caps Per Box

(Copies of documents required by manufacturers in connection with specific acquisition functions should be obtained from the contracting activity or as directed by the contracting officer.)

* 2.2 Other publications. Unless otherwise specified, the following documents of the issue in effect on date of invitation for bids or request for proposal, form a part of this document to the extent specified herein.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

D-374 - Standard Methods of Test for Thickness of Solid Electrical Insulation

(Application for copies should be addressed to the American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.)

(Technical society and technical association documents are generally available for reference from libraries. They are also distributed among technical groups and using Federal agencies.)

* 2.3 Order of precedence. In the event of a conflict between the text of this document and the references cited herein, the text of this document shall take precedence.

3. REQUIREMENTS

* 3.1 Guide sample. Samples, when furnished, are solely for guidance and information to the contractor (see 6.3). Variation from the document may appear in the sample in which case the document shall govern.

3.2 Material (see 6.5).

3.2.1 Basic material.

* 3.2.1.1 Class 1. The basic material for the class 1 cap shall be wool barathea cloth, 14.0 ounce, dyed Army Blue Shade No. 150, conforming to type I of MIL-C-3727.

* 3.2.1.2 Class 2. The basic material for the class 2 cap shall be wool tropical cloth, 10.5 ounce, dyed Army Blue Shade No. 150, conforming to type I, class 1 of MIL-C-21115.

* 3.2.1.3 Class 3. The basic material for the class 3 cap shall be wool elastique cloth, 16.0 ounce, dyed Army Blue Shade No. 150, conforming to type III of MIL-C-3738.

* 3.2.1.4 Class 4. The basic material for the class 4 cap shall be polyester/wool gabardine, 9.5 ounce, dyed Army Blue Shade No. 450, conforming to type II, class 8 of MIL-C-10176.

* 3.2.1.5 Class 5. The basic material for the class 5 cap shall be polyester/wool, tropical, 10.0 ounce, dyed Army Blue Shade No. 450, conforming to type III, class 3 of MIL-C-21115.

* 3.2.1.6 Class 6. The basic material for the class 6 cap shall be wool gabardine, 11.0 ounce or 14.5 ounce, dyed Army Blue Shade No. 150, conforming to type I, class 3 or 5 of MIL-C-10176.

3.2.2 Lining. The lining for body of cap and covering front stay shall be rayon twill cloth dyed shade Gold 68, conforming to class 1 of MIL-C-368.

3.2.3 Bias tape. The bias tape for crown seam will be made from cotton sheeting conforming to type VII or VIII, class 3 of CCC-C-432, except that the sheeting shall contain not less than 6 percent starch and protein content including chloroform-soluble and water soluble material; the colorfastness requirements for light, bleaching and laundering shall not apply; the seam efficiency test shall not apply; and the shrinkage shall not exceed 6 percent in the warp or filling. The sheeting shall be dyed to approximate the shade of the lining fabric. The bias tape may be made from lining material specified in 3.2.2.

3.2.4 Crown protector and binding. The crown protector and binding shall be colorless waterproof flexible film, 0.004 $\pm$ 0.0004 inch thick, conforming to type II, class 1 of L-P-375.

3.2.5 Pressed fiber. The pressed fiber for sweatband welt shall weigh 1.5 to 2.0 ounces per square foot, 0.015 to 0.020 inch thick, in a natural, red, or black color when tested as specified in 4.2.1.

3.2.6 Front and sides (quarters) interlining. The interlining for the front piece and sides shall be either one of the following:

* 3.2.6.1 Cotton warp-fused rayon filling cloth or monofilament filling cloth. The interlining material shall conform to MIL-C-43675 or type I of MIL-C-43920.

3.2.6.2 Haircloth. In lieu of the fabric specified in 3.2.6.1, the material may be cotton warp and horsehair filling interlining cloth, conforming to the following requirements when tested as specified in 4.2.1:

Weight per square yard (minimum) - 8.0 ounces
Cotton, warp threads per inch - 55 to 65 (single or two ply yarns).
Horsehair, filling hairs per inch - 65 to 85.
Stiffness, load-pounds, minimum - warp 0.05, filling 0.155.

The cotton warp may be dyed or undyed. The filling shall be natural color horsehair. When dyed yarns are used for the warp, the dyed yards shall show "good" fastness to perspiration and wet drycleaning when tested as specified in 4.2.1.

3.2.7 Crown seam tape interlining. The crown seam tape interlining shall be natural or dyed nylon mesh, knitted on a single needle bar Raschel and weighing 6.5 ± 0.5 ounces per square yard. Dyed mesh shall show "good" colorfastness to wet drycleaning. The stiffness of the finished cloth shall be as follows. Testing shall be as specified in 4.2.1.

	Stiffness in load pounds	
	Minimum	Maximum
Two-inch specimen; length parallel to wales	0.025	0.045
Two-inch specimen; length across or perpendicular to wales	0.040	0.060

* 3.2.8 Inner body band. The inner body band shall be of high density (linear) polyethylene plastic material meeting the requirements of type III, class H, grades 1 or 2 of L-P-390, except that the low-temperature brittleness, dielectric constant, dissipation factor and thermal-stress cracking resistance properties shall not apply (see 6.4). A suitable grade or a blend of class H materials shall be used to give the following required properties for stiffness and bending. The bands shall be extruded, stripped, slit or cut 2 ± 1/16 inches wide, with a thickness of 0.030 ± 0.002. At least one side of the material shall have a dull finish. Testing shall be as specified in 4.2.1.

3.2.8.1 Punching or perforating. The band shall be perforated by punching or other means in a repetitive pattern as approximated by the standard sample (see 6.3) with the diameters of the holes as shown by the standard sample. Not less than a 3/8-inch margin at top and bottom of band shall remain unperforated.

3.2.8.2 Stiffness. The perforated bands shall have a stiffness (scale reading) between 11 and 27 inclusive when tested as specified in 4.2.1.

3.2.8.3 Bending. The perforated band material shall show no cracks after the bending test specified in 4.2.1.

3.2.9 Wadding. The material for reinforcing the front and sides (quarters) of cap shall be gray, tan, or natural color cotton wadding, weighing 2.0 to 2.5 ounces per square yard. Colored wadding shall show "good" fastness to wet drycleaning when tested as specified in 4.2.1.

* 3.2.10 Thread. The cotton thread for seaming and stitching the caps shall conform to V-T-295. Colors and size shall be as indicated below:

Use	Color Type	Ticket No.		Ply
Seaming and stitching	Blue, shade AB, C.A. 66044 or	IB3	16 or 20	4 (top thread)
		IA3	20	4 (bottom thread)
	Black, shade AA, C.A. 66043	IC2	A	3
	Brown (matching sweatband)	IC2	A	3
	Goldenlite, shade AJ, C.A. 66051	IC2	A	3
Seaming and stitching visor	Black, shade AA, C.A. 66043	IB3	36	4 (top thread)
		IA3	36	4 (bottom thread)
Felling sweatband	Blue, shade AB, C.A. 66044 or	IV	C	2
	Black, shade AA, C.A. 66043	IV	C	2

3.2.10.1 Colorfastness. The dyed thread shall show fastness to light and wet drycleaning equal to or better than the standard sample. When no standard sample is available, the dyed thread shall show "good" fastness to light and wet drycleaning.

* 3.2.11 Sweatband. The leather for sweatband shall be 1-1/4 ± 1/8 inches wide, dyed a brown shade, conforming to requirements of MIL-S-3577 or as an alternate, artificial leather material conforming to MIL-S-43993 may be used. The sweatband shall be embossed with an imitation turned line 1/8 inch from top edge.

3.2.11.1 Punching or perforating. The sweatband shall be perforated by punching or other means in a repetitive pattern with the holes measuring 3/32 and 1/16 inch in diameter. There shall be 5 to 6 of the larger holes and 25 to 30 of the smaller holes per three inches of linear band and not less than 5/16-inch margin at top and bottom of band shall remain unperforated. Testing shall be as specified in 4.2.1.

* 3.2.12 Outer body band. The braid for the outer body band shall conform to type III, class 1, 1-3/4 inch width, of MIL-B-593 and shall be dyed Blue 173.

3.2.13 Visor. The visor shall consist of two pieces of leather with the outside edge bound with a plastic strip. The leather shall be free from grain cracks, scars, scratches and other defects that would affect appearance or serviceability of the visor.

3.2.13.1 Top piece. The top piece shall be 3.0 to 4.0 ounces cattlehide leather conforming to type II of MIL-L-43541.

3.2.13.2 Bottom piece. The bottom piece shall be 5.5 to 6.5 ounces cattlehide conforming to type II of MIL-L-43541.

3.2.13.3 Binding. The binding shall be made from black vinyl chloride flexible plastic film 0.012 inch thick having a smooth finish approximate to the finish of the top leather piece and shall conform to type I, class 2 of L-P-375. The binding shall finish 3/16 to 1/4 inch on top and bottom of visor.

3.2.13.4 Fabrication. The visor shall be cut in strict conformance with pattern furnished. The two pieces shall be laminated with latex or flexible glue. The two pieces shall then be placed together and pressed. The strength of the bond between the top and bottom layers shall be not less than 0.6 pound per inch. The stiffness of the visor shall require a force of not less than 1/2 pound to bend it through an angle of 20 degrees. The inside edge of the visor shall be skived. The outside edge of visor shall be trimmed, sanded, bound and stitched 1/32 + 1/32-0 inch from folded edge of binding strip on top of visor, with cotton thread as specified in 3.2.10, with 8 to 10 stitches per inch, using stitch type 301 and seam type BSb-1 of FED-STD-751. Testing shall be as specified in 4.2.1. The visor shall be molded with heat into a curved shape as shown by standard sample.

* 3.2.14 Ornamental braids. The ornamental braids shall conform to MIL-B-13466.

* 3.2.14.1 Bottom braid. The bottom braid shall conform to type I, class 4, 9/32 inch wide of MIL-B-13466.

* 3.2.14.2 Top braid. The top braid shall conform to type I, class 3, 1/2 inch wide of MIL-B-13466.

3.2.15 Ornamental cord. The ornamental cord for front of cap shall conform to type III of MIL-C-43517.

3.2.16 Ornamental soutache braid. The soutache braid for the trifoil ornamentation of the crown shall conform to type I, class 1 of MIL-B-13466.

3.2.17 Labels. Each cap shall have a combination identification-size label and a cardboard instruction folder.

3.2.17.1 Identification-size label. The combination identification-size label shall conform to type VI, class 4 of DDD-L-20. The fastness to drycleaning, requirements of DDD-L-20 shall apply.

* 3.2.17.2 Cardboard instruction label. The printed cardboard instruction label of commercial type shall be attached by a string not less than 12 inches in length, looped through a hole 5/32 to 1/4 inch in diameter and shall be attached to one of the chin strap buttons. The label shall measure 4 by 3 inches. The text of the label shall be as shown on figure 3, printed on one side only in letters not less than 1/8 inch in height. Label shall be tested in accordance with 4.2.1.

3.2.18 Buttons. The buttons for affixing the ornamental cord shall be metal, cap, screwback, gold plated, 25-line, conforming to type II, style 2A of MIL-B-3461.

3.2.19 Eyelets. The eyelets and washers shall be brass, conforming to MIL-E-20652. The side eyelets shall conform to Dash No. BBE 110, the front eyelet to Dash No. BBE 118. The washer for the front eyelet shall conform to BBW 101 of MIL-E-20652/1. The four side eyelets may be backed with washers.

3.2.20 Sweatband reinforcement strip. The reinforcement piece shall be a strip of coated or uncoated print cotton cloth or sheeting 5/8 to 3/4 inch in width.

3.2.21 Front stay. The front stay shall consist of a commercial twin wire tape stiffener and one ply each of undyed stiff crinoline and plastic, cut to pattern measurements. The stay shall be covered with rayon lining specified in 3.2.2. The stay components shall meet the following requirements when tested as specified in 4.2.1.

3.2.21.1 Twin wire tape stiffener. The twin wire tape shall measure 1 inch wide. The steel wire used in the tape shall be hard rolled, cold finished carbon steel, galvanized, flat wire, and shall be 0.016 $\pm$ 0.002 inch thick by 0.090 $\pm$ 0.004 inch wide.

3.2.21.2 Crinoline. The crinoline for front stay shall be an undyed commercial crinoline, weighing 1-1/2 to 2-1/2 ounces per square yard finished, with not less than 25 yarns per inch on the warp and filling.

3.2.21.3 Plastic. The plastic backing shall be 0.020 inch thick, natural color linear polypropolene or polyethylene.

3.2.22 Staples. The staples shall be stamped from steel wire 0.025 inch $\pm$ 0.0005 inch thick. The wire shall be steel, Monel metal, brass or stainless steel. If ordinary carbon steel is used, it shall have a noncorrosive finish capable of withstanding not less than 25 hours of the salt spray test as specified in 4.2.1.

3.2.22.1 Staples for button post. The staples for fastening the bottom of the screw post to inner body band shall be staples, heavy duty flat, standard clinch 0.05 inch wide, 1/4 $\pm$ 1/64 inch long leg, 1/2 inch wide crown.

3.2.22.2 Staples for securing front welt and ends of stitching thereon. The staples for securing the front welt and ends of stitching thereon shall be flat type measuring 1/4 ± 1/64 inch wide by 1/4 ± 1/64 inch leg, 0.0018 ± 0.0003 inch wide by 0.0054 ± 0.0009 inch thick and shall be finished black.

3.2.23 Crown support. The crown support shall consist of a steel wire inclosed in a nylon grommet conforming to the following requirements when tested as specified in 4.2.1.

* 3.2.23.1 Steel wire. The steel wire shall be spring steel 5/16 ± 1/16 inch wide and 0.020 ± 0.005 inch thick, cut to required size. The wire shall be completely covered with white ethyl cellulose or cellulose acetate propionate coating. The coupling shall be 1 ± 1/8 inches long and zinc or cadmium coated to withstand 25 hours of the salt spray when tested as specified in 4.2.1.

3.2.23.2 Nylon grommet. The grommet shall be composed of nylon filling yarns and cotton warp yarns braided to form a grommet, approximately 3/4 inch in diameter. The filling yarns shall be of clear nylon monofilament, 0.012 ± 0.005 inch thick in diameter conforming to class N, type II of H-S-951, except the cut length designation shall be 12 ± 1/2 count singles carded cotton. The grommet shall be made on a 44 or 38 carrier braider, with carriers braiding in pairs with a 1/1 weave with one 0.012-inch diameter nylon monofilament ends per carrier; or a 24 carrier braider with carriers braiding in pairs on a 1/1 weave with two 0.012-inch diameter nylon monofilament ends per carrier. Not less than eight warps of 2 ends each of cotton yarn shall be intermittently spaced around the circumference interlacings. There shall be not less than 8 picks per inch in the relaxed state. The ends of the grommet shall be joined by the use of wood or cork plugs, laminated paper rings, or other suitable material to insure proper closure of the grommet.

3.3 Design. The cap shall consist of three side pieces and a top crown piece with plastic crown protector. The cap shall be fully lined and have a loosely woven braid band. The cap shall be provided with a removable grommet, a leather visor, a perforated sweatband and a permanently attached front stay. The front of the cap shall be vertical.

3.4 Patterns. Standard patterns, which provide an allowance of 1/4 inch for all seams, except the back seam of the 1 inch band and braid which shall be 3/8 inch will be furnished by the Government to the contractor for cutting working patterns. Neither the Government patterns nor the working patterns shall be altered in any way.

3.4.1 List of pattern parts. The cap shall be cut from the specified materials in accordance with the pattern parts indicated:

Material	Nomenclature of pattern parts	Cut parts
Basic material	Crown	1
	Front	1
	Side (or quarters)	2
	Welt for visor	1
Lining: Cloth, rayon twill	Crown	1
	Front piece	1
	Side (or quarters)	2
	Front stay	1
Wadding, cotton	Front	1
	Side (quarters)	2
Cloth, cotton warp-fused, rayon filling or hair cloth or monofilament filling cloth	Front piece interlining	1
	Side (quarters) interlining	2
Crinoline	Front stay	1
Polyethylene or polypropylene	Front stay	1
Leather; as specified	Visor (to show size and shape)	1
Polyethylene film 0.0040 inch thick	Crown protector (see oper. 6c)	1

3.5 Construction.

* 3.5.1 Stitches, seams and stitching. All stitches, seams and stitching shall conform to FED-STD-751. The type of seam, stitching and stitches per inch shall be as specified in table I. Seam allowances shall be maintained with seams sewn so that no raw edges, run-offs, pleats, puckers or open seams occur. When two or more methods of seams or stitches are given for the same operation, any one may be used. Where stitch type 101 or 401 is used, the chain or underside of the stitch shall be on the inside of the cap.

* 3.5.1.1 Type 301 stitching. Ends of all stitching shall be backstitched or over-stitched not less than 1/4 inch except where ends are turned under or caught in other seams or stitching. Ends of a continuous line of stitching shall overlap not less than 1/2 inch. Thread tensions shall be maintained so that there will be no loose stitching resulting in loose bobbin or top thread or excessively tight stitching resulting in puckering of the materials sewn. The lock shall be imbedded in the materials sewed.

3.5.1.1.1 Repairs of type 301 stitching.

a. When thread breaks, skipped stitches, run-offs, or bobbin runouts occur during sewing, the stitching shall be repaired by restarting the stitching a minimum of 1/4 inch in back of the end of the stitching. 1/

b. Except for prestitching, thread breaks, or two or more consecutive skipped or run-off stitches noted during inspection of the item shall be repaired by overstitching. The stitching shall start a minimum of 1/4 inch in back of the defective area, continue over the defective area, and continue a minimum of 1/4 inch beyond the defective area onto the existing stitching. Loose or excessively tight stitching shall be repaired by removing the defective stitching without damaging the materials, and restitching in the required manner. 1/

1/ When making the above repairs, the ends of the stitching are not required to be backstitched.

* 3.5.1.2 Type 101, 401, and 500 class stitching. Thread tension shall be maintained so that there will be no loose stitching. All repairs shall be in accordance with 3.5.1.1.1a. and b. Thread tension shall be maintained so that there will be no loose or excessively tight stitching resulting in puckering of materials sewn. Repairs to stitch types 101 and 401 may be accomplished by use of stitch type 301.

3.6 Manufacturing operation requirements. The cap shall be manufactured in accordance with operations requirements specified in table I. The contractor is not required to follow the exact sequence of operations or sub operations, with exceptions of operations 20 through 22 which shall be performed on the completed cap as the last three operations. Any additional basting of holding stitching, other than those specified, used to facilitate manufacture, is permissible provided that the threads are removed or do not show in the finished cap.

3.6.1 Figures. Figures 1 and 2 are furnished for information purposes only. If there are inconsistencies between the written document and the figures, the written document shall control.

3.6.2 Pressing. All references to pressing in table I shall be accomplished with a heated pressing iron or machine, except blocking which shall be accomplished as indicated by operation 20.

3.6.3 Marking. The components of the cap shall be marked to insure a uniform shade and size. Any method of marking may be used except:

(1) Corrosive metal fastening devices (no metal devices to be used on lining material).

(2) Adhesive type marking tickets which show discoloration or the adhesive mass adheres to the material upon removal of the markings.

NO.	TABLE I. MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD		
					NEEDLE	BOBBIN/ LOOPER	COVER
1.	Cutting. a. Cut cap parts in strict accordance with patterns furnished. b. Cut the crown piece with the length running in the direction of the warp. Cut the front piece with the directional line in the warp direction. Cut side pieces with the warp or the filling but in the like direction on each cap. Cut all component parts from one piece of material, except the 3/4 inch strips for visor welt and the strip of 1-1/8 inches wide basic material for bottom edge of band, which may be cut from ends. c. Cut the lining material with the length of the crown piece running in the direction of the warp. Cut the front lining piece and side lining piece across the warp in accordance with patterns furnished. d. Cut material for seam tape on the bias, 1-5/8 ± 1/8 inches wide, Cut the interlining for the crown seam tape 3/4 ± 1/16 inch wide in the warp direction. e. Cut the wadding in the direction of the running yard (not across the material) in accordance with patterns furnished. f. Cut the crown protector piece and visor in accordance with patterns furnished. g. Cut the front and side interlining in accordance with patterns furnished.						

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NO.	TABLE I. (cont'd) MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD		
					NEEDLE	BOBBIN/ LOOPER	COVER
2.	Replacement of damaged parts.						
	a. Replace at time of cutting any part of the cap or lining materials containing a hole, or weakening defect, such as smash, multiple float, loose or weakening slub, shade bar, dye streak or unsightly slub.						
	b. Replace any part damaged during the manufacturing process by a needle chew, cut, tear, hole, mend, burn, or exposed drill hole in the basic or lining materials; tear, stitch hole, scar scratch, spot or stain, rough or uneven edge of the leather.						
3.	Marking.						
	a. Mark, ticket or bundle all cut parts to insure a uniform shade and size throughout the cap.						
4.	Make crown seam bias tape.						
	a. The crown seam tape may be cut and stitched or pressed and placed on rolls for machine application.						
	b. (1) Fold sheeting or lining over interlining strip with edges of material abutting or overlapping at center and stitch with two rows of stitching, 3/16 to 1/4 inch gage, through center of tape.	301 or 401 or 101		6-8	A gold	A gold	
	or						
	(2) Fold sheeting or lining over interlining strip with edges of material abutting or overlapping at center and press.						

TABLE I. (cont'd)

NO.	MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD		
					NEEDLE	BOBBIN/ LOOPER	COVER
5.	Make inner body band.						
	Finished appearance. The inner body band shall be cut to required length and with the overlapped ends in the back portion of cap not closer than 1/2 inch of center back seam. The dull side shall be toward outside of cap.						
	a. Overlap ends of inner body band 1 ± 1/4 inches and stitch top and bottom edges 3/16 to 1/4 inch from each edge for a distance of not less than 1/2 inch beyond each overlapped end, or secure with two black staples, equally spaced widthwise in center of overlap, with the staples clinched on inside of band.	301 or 101		6-8	A	A	
6.	Make crown.						
	Finished appearance. The lining shall not be twisted, full or tight in the finished cap.						
	a. Cut the soutache braid to proper length to finish in accordance with operation 6b.						
	b. Stitch the braid to top of crown with stitching centered on the braid. The braid shall be stitched to the crown as indicated on figure 1.	301			A gold	A gold	
	c. Cut crown protector in accordance with patterns furnished and center of the crown lining.						
*	d. Stitch crown protector to crown lining 1/8 ± 1/16 inch from edge of protector.	301	LSbj-1	6-8	A gold	A gold	

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NO.	TABLE I. (cont'd) MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD		
					NEEDLE	BOBBIN/ LOOPER	COVER
6.	Make crown. (cont'd)						
	e. Baste crown lining evenly, close to edge of outer crown. Basting shall not show on outside of finished cap.	101	SSa-1	4-6	A gold		
7.	Join sides of cap.						
	Finished appearance. The sides of the cap shall be carefully joined to avoid twisting or puckering.						
	a. Join front and sides of cap; open seam and stitch each side of seam 1/16 ± 1/32 inch. Seams may be pressed open prior to stitching each side of seam.	301	SSz-3	10-14	A	A	
8.	Make front stay (3.2.21).						
*	a. Position bottom edge of plastic reinforcement piece and crinoline (plastic face up) on lining at center of lining piece. Fold sides of lining piece over plastic piece toward center and stitch through all plies with two rows of vertical stitching 1-1/4 to 1-5/16 inch gage, centered on stay and catching a piece of black silesia (other suitable material), cut 1-1/2 to 2 inches high and to shape of bottom and sides front stay.	301		6-10	A gold	A gold	
	NOTE: Black facing shall be against braid in the finished cap.						
	b. Stitch across top of stay 5/8 to 3/4 inch from top edge of stay, catching edge of plastic piece in the stitching.	301		6-10	A gold	A gold	

TABLE I. (cont'd)

NO.	MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD		
					NEEDLE	BOBBIN/ LOOPER	COVER
9.	Make band.						
	a. Cut the 1-1/8 inch strip of basic material for the bottom edge of band (see operation 1b) and the 1-3/4 inch braid, each to the size of cap.						
	b. Overedge stitch the bottom edge of the 1-1/8 inch strip of basic material.	502 or 503	EFd-1	6-8	A	A	
	c. Lap the braid on the raw edge of the 1-1/8 inch strip, 1/4 ± 1/16 inch and stitch 1/16 ± 1/32 inch from edges of braid.	301 or 101	LSa-1	10-14	A	A	
10.	Attach top ornamental braid.						
	a. Cut the 13/32 inch braid to the size of the band.						
	b. Position the braid so that on finished cap the top will be even with top of band and stitch braid to band with two rows of stitching 1/16 to 3/32 inch from each edge.	301	SSau-2	10-14	A gold	A gold	
	c. Join back seam of band with a 3/8 inch (minimum) seam, catching the raw ends of the ornamental braid in the seam. Open seam and stitch each side of seam 1/16 + 1/32 inch. Seam may be pressed open prior to stitching each side of seam.	301	SSz-3	10-14	A	A	
11.	Attach bottom ornamental braid.						
	a. Cut the 9/32 inch braid to fit around the back of the band from 5-3/4 ± 1/16 inches each side of center front of cap.						

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NO.	TABLE I. (cont'd) MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD		
					NEEDLE	BOBBIN/ LOOPER	COVER
11.	Attach bottom ornamental braid. (cont'd)						
	b. Position braid with bottom edge of braid 3/16 to 1/4 inch from bottom edge of body band braid, around back of band between points indicated in (a) and stitch 1/16 to 3/32 inch from each edge.	301	SSau-2	10-14	A gold	A gold	
12.	Make lining and attach to quarters.						
	Finished appearance. The front and sides of the lining shall be so joined to the front and sides of the cap that the seams are not twisted or puckered and that the basting stitches will not be exposed on the outside of the finished cap.						
	a. Join front and sides of the lining.	301	SSa-1	10-14	A gold	A gold	
	b. Bind the top edges of front and side interlining pieces with a 3/4 inch wide strip of polyethylene film.	301	BSa-1	4-8	A gold	A gold	
	NOTE: Wadding may be joined to interlining in the binding operation.						
	c. Superimpose top edges of wadding pieces and interlining pieces. Position both plies 5/16 to 3/8 inch from top edge of lining, lapping pieces at sides and back with wadding face up. Stitch through lining 5/8 ± 1/8 inch from top edge of lining. Wadding and interlining may be joined together prior to attaching to lining.	301 or 101		10-14	A gold	A gold	

NO.	TABLE I. (cont'd) MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD		
					NEEDLE	BOBBIN/ LOOPER	COVER
12.	Make lining and attach to quarters. (cont'd)						
	d. Baste the lining sides to the cap sides along top and bottom edges. The basting stitches shall be close to the edge so that the stitches will not be exposed on outside.	101	SSa-1	6-10	A		
13.	Join band to sides and front, and join sides and front to crown.						
	Finished appearance. The band shall be joined to the sides and front and the sides and fronts joined to the crown of the cap so that the seams are not twisted or puckered.						
	a. Join the top edge of braid to the bottom edge of the side with the seam of band aligned with center back seam.	101 or 301 or 500 class	SSa-1	10-14 10-14 6-8	A A A	 A A	
	b. Join crown to the sides and front with not more than a 1/4 inch seam, catching the front lining and top of front stay in the stitching at center front of cap. The plastic side of front stay shall be against front of cap.	301 or 101	SSad-3(a)	10-14	A	A	
	c. Press crown seam open.						
	d. Stitch each side of seam 1/16 + 1/32, - 0 inch around crown, catching the crown seam tape in both rows of stitching on the underside. The ends of the tape shall overlap not less than 1/2 inch.	301 or 401	SSad-3(b)	10-14	A	A	

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NO.	TABLE I. (cont'd) MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD NEEDLE	THREAD BOBBIN/ LOOPER	THREAD COVER
14.	Set eyelet.						
	a. Position one eyelet in center of front piece (1/8 inch tolerance) and 1 + 1/8, - 0 inches above top edge of braid, measured from center of eyelet. The eyelet shall be inserted through the front piece, lining, front stay, and shall be backed with a brass washer.						
	b. Insert two eyelets in each side of cap, through cloth and lining of front piece and side pieces 7/8 + 1/8, - 0 inch from top edge of the band to center of eyelet. The eyelets shall be horizontally positioned, 1 ± 1/8 inches each side of the front and side joining seams measured to center of eyelets. The eyelets may be backed with a brass washer.						
15.	Set inner body band in cap.						
	Finished appearance. The inner body band shall be so attached in the cap that there shall be no twisting or puckering of the braid band. The front stay shall finish between inner body and braid.						
	a. Reverse inner body band and outside of band and and position so that the bottom edge of braid shall be 3/16 ± 1/16 inch above the bottom edge of the finished cap, with the overlapped portion of the inner body band centered (1/8 inch tolerance) on back seam of band.						
	b. Stitch top edge of inner body band to seam allowance of braid band and cap 1/4 to 5/16 inch from top edge of inner body band. The stitching shall start and finish within 1-1/4 inches each side of front stay.	301 or 101	SSa-1	6-8 6-8	A A	A A	

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TABLE I. (cont'd)

NO.	MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD		
					NEEDLE	BOBBIN/ LOOPER	COVER
15.	Set inner body band in cap. (cont'd)						
	c. Turn cap and insert the twin wire, cut 3-3/8 to 3-1/2 inches long, between rows of stitching, positioned between crinoline and plastic of front stay.						
	d. Pull the bottom of band tightly over the bottom edge of the inner body band and stitch 1/16 ± 1/32 inch from bottom edge of braid through all plies, catching bottom edge of front stay in the stitching. The side edge of the identification-size label shall be caught in the stitching, 1 ± 1/2 inches to the right or left of center back seam. The label shall be so positioned that the size marking shall be visible beyond edge of sweatband in the finished cap.	301	OSf-1	8-12	A	A	
16.	Set welt and visor.						
	Finished appearance. The welt and visor shall be uniformly set and the band shall not be distorted or twisted in the setting.						
	a. Fold a strip of the basic material in half, cut in accordance with patterns furnished, over the 3/8 + 0, - 1/16 inch wide reinforcement strip of pressed fiber and stitch 1/4 to 5/16 inch from folded edge.	301 or 101	BSa-1	6-8	A	A	
	b. Fold in half a strip of polyethylene film, cut 3/4 ± 1/16 inch wide, and superimpose on folded basic material (with reinforcement strip inserted) with folded edges even and stitch through all plies 1/8 to 3/16 inch from folded edges to form a welt.	301 or 101	SSa-1	6-8	A	A	
	NOTE: Operations a and b may be combined in one operation.						

NO.	TABLE I. (cont'd) MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD		
					NEEDLE	BOBBIN/ LOOPER	COVER
16.	Set welt and visor. (cont'd)						
	c. Center the visor and the reinforced welt (cut longer than the length of the visor 1/2 + 1/4 inch on each side) on the inside of the inner body band and stitch together in one operation forming an inside welt for attaching sweatband. The polyethylene strip shall be next to the visor.	301	LSa-1	6-8	16-4 20-4	20-4	
17.	Finish ends of welt.						
	a. Raise each end of the welt 1/8 to 3/16 inch from bottom edge of band and staple through welt and all plies of material including the braid band, with the legs of the staple spanning the stitching in the welt. Ends of staple shall be clinched on outside braid band.						
18.	Attach button socket posts.						
	Finished appearance. The button socket posts shall be uniformly positioned so that the eagles on the buttons will be in an upright position when buttons are secured.						
	a. Position socket holes on the band so that the center of each socket is 5-3/4 + 1/16 inches each side of center front of cap and centered on end of braid.						
	b. Neatly punch the button socket holes through band, inner body band and ends of visor welt.						

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TABLE I. (cont'd)

NO.	MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD		
					NEEDLE	BOBBIN/ LOOPER	COVER
18.	Attach button socket posts. (cont'd)						
	c. Insert button socket posts and stitch through inner body band.	Hand		4-6	A		
	or						
	d. The button socket posts shall be inserted and a securing staple clinched snugly over the center of the screw tube flange on the inside of the band (see 3.2.22.1) or if the flange is equipped with perforations, the staple may be through perforations.						
19.	Make and attach sweatband.						
	Finished appearance. The abutted edges of seam of sweatband shall be even with the center back seam of cap. The sweatband shall finish smooth and flat without distortion to provide a comfortable fit. Neither the felling stitches nor the edge of the sweatband shall be exposed beyond the lower edge of the cap.						
	a. Butt ends of the sweatband and join with a row of zig-zag stitching, reinforced on the underside with a 5/8 ± 1/16 inch strip of cotton fabric.	304	SSa-1	8-12	A brown	A brown	
	b. Fell sweatband neatly in the cap in such a manner as to give a cushioning effect at front of cap.	Hand		7-9	C- black or blue		
20.	Block caps.						
	Finished appearance. The caps shall be uniformly blocked, and shall not be distorted in the blocking.						

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TABLE 1. (cont'd)

NO.	MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD		
					NEEDLE	BOBBIN/ LOOPER	COVER
20.	Block caps. (cont'd)						
	a. Handblock caps to proper shape over wooden blocks for each specified size.						
	b. The blocking shall be done on a five piece block by thoroughly steaming on the block. The caps shall be thoroughly dried while still on the block in a heated oven.						
21.	Ornamental cords and buttons.						
	Finished appearance. The ornamental cord shall fit smoothly without twists or distortion.						
	a. Attach the ornamental cord snugly and attach buttons into the posts with the eagle in an upright position.						
22.	Clean cap.						
	a. Trim all thread ends; remove loose threads, spots, stains and shade tickets without injury to the material.						
	b. Insert the grommet into the crown. The width of grommet shall be evenly distributed over the crown and fit snugly in the cap.						

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3.7 Measurement of cap. The finished measurements of the caps shall be as specified in table II.

TABLE II. Measurement of cap

	Inches
Height of cap at front (measured at the point where band joins the visor to center of crown seam).	4-1/4 ± 1/8
Width of quarters at side seams (measured from band joining seam to center of seam).	1-7/8 ± 1/8
Width of front piece at center front (measured from band joining seam to crown joining seam).	2-1/2 ± 1/8
Width of sides at backseam (measured from band joining seam to crown joining seam).	1-7/8 ± 1/8
Width of visor (measured on upper side at center front).	2 ± 1/16
Width of finished band (measured from front and side seams to bottom edge of band).	1-3/4 ± 1/8

Crown

Head measurement 1/	Size of cap	Length of crown 2/ (from seam to seam)	Width of crown 2/ (from seam to seam)
Inches		Inches	Inches
20-1/8	6-3/8	10-3/8	9-7/8
20-1/2	6-1/2	10-1/2	10
20-7/8	6-5/8	10-5/8	10-1/8
21-1/4	6-3/4	10-3/4	10-1/4
21-5/8	6-7/8	10-7/8	10-3/8
22	7	11	10-1/2
22-3/8	7-1/8	11-1/8	10-5/8
22-3/4	7-1/4	11-1/4	10-3/4
23-1/8	7-3/8	11-3/8	10-7/8
23-1/2	7-1/2	11-1/2	11
23-7/8	7-5/8	11-5/8	11-1/8
24-1/4	7-3/4	11-3/4	11-1/4
24-5/8	7-7/8	11-7/8	11-3/8

1/ All head measurements + 1/8 - 1/4 inch.

2/ All crown measurements ± 3/16 inch.

3.7.1 Sizes. All caps shall be properly sized and marked accordingly.

* 3.8 Workmanship. The finished cap shall conform to the quality of product established by this document. The occurrence of defects shall not exceed the applicable acceptable quality levels.

4. QUALITY ASSURANCE PROVISIONS

* 4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the contractor is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract or purchase order, the contractor may use his own or any other facilities suitable for the performance of the inspection requirements specified herein unless disapproved by the Government. The Government reserves the right to perform any of the inspection set forth in the document where such inspections are necessary to assure supplies and services conform to prescribed requirements.

4.1.1 Certificate of compliance. When certificates of compliance are submitted, the Government reserves the right to check test such items to determine the validity of the certification.

* 4.2 Quality conformance inspection. Unless otherwise specified, sampling for inspection shall be performed in accordance with MIL-STD-105.

* 4.2.1 Component and material inspection. In accordance with 4.1, components and materials shall be inspected in accordance with all the requirements of referenced documents unless otherwise excluded, amended, modified, or qualified in this document or applicable purchase document.

4.2.1.1 Component and material testing. In addition to the quality assurance provisions of the referenced documents, component and material shall be tested as shown in table IV. The methods of testing specified in FED-STD-191, wherever applicable, and as listed in table IV, shall be followed. All requirements apply to the sample unit. All test reports shall contain the individual values utilized in expressing the final result. The lot shall be unacceptable if one or more sample units fail to meet any test requirement specified. The sample size shall be as specified in table III. The lot size units and the sample units shall be as follows:

Component	Lot size unit	Sample unit
Pressed fiber (sweatband welt)	Yards	1/2 yard full width
Haircloth	Yards	1 yard full width
Knitted nylon mesh (Raschel)	Yards	1 yard full width
Inner body band (Polyethylene)	Each	7 each
Wadding	Yards	1/4 yard full width
Sweatband	Each	7 each

Component	Lot size unit	Sample unit
Visors	Each	3 complete
Cardboard instruction label	Each	1 label
Eyelets, brass	Gross	15 each
Washers, eyelet, brass	Gross	10 each
Sweatband reinforcement strip (cotton) print or sheeting cloth, coated or uncoated)	Yards	1 yard (strip)
Twin wire tape	Feet	2 feet
Crinoline	Yards	1/4 yard full width
Plastic (linear polypropylene or polyethylene)	Sheets	6 x 6 inches
Staples (each type)	Gross	15 each
Crown support	Each	1 each

TABLE III. Sample size

Lot size	Sample size
800 or less	2
801 to 22,000 inclusive	3
22,001 and over	5

TABLE IV. Component and material tests

Component	Characteristic	Requirement paragraph	Test method or procedure
Pressed fiber (sweatband cuff)	Weight	3.2.5	5041 1/
	Color	3.2.5	Visual 2/
	Thickness	3.2.5	5030
Haircloth	Material identification	3.2.6.2	4/
	Weight per square yard	3.2.6.2	5041
	Yarn ply, warp	3.2.6.2	Count 3/
	Yarns per inch, warp	3.2.6.2	5050
	Hairs per inch, filling	3.2.6.2	5050
	Stiffness	3.2.6.2	5202
	Color	3.2.6.2	Visual 2/
	Colorfastness (when dyed yarns are used):	3.2.6.2	
	-to perspiration		5680
	-to wet drycleaning		5622

TABLE IV. Component and material tests (cont'd)

Component	Characteristic	Requirement paragraph	Test method or procedure
Knitted nylon mesh (Raschel)	Material identification	3.2.7	1530
	Colorfastness to wet drycleaning	3.2.7	5622
	Weight per square yard	3.2.7	5041
	Stiffness:	3.2.7	
	-parallel to wales		5202
	-perpendicular to wales		5202
Inner body band (Polyethylene)	Width	3.2.8	5202
	Thickness	3.2.8	5030
	Finish	3.2.8	Visual 2/
	Stiffness	3.2.8.2	4.3.1
	Bending	3.2.8.3	4.3.2
Wadding	Weight per square yard	3.2.9	5041
	Fastness to wet drycleaning	3.2.9	5622
Sweatband	Width	3.2.11	5020
	Diameter of holes	3.2.11.1	Visual 2/
	Number of holes	3.2.11.1	Count 3/
	Margin	3.2.11.1	Measurement 2/
Visor	Stiffness	3.2.13.4	4.3.3 2/
	Bond strength	3.2.13.4	4.3.4 2/
	Outside edge finish (trim and sanding)	3.2.13.4	Visual 2/
Instruction label (cardboard)	Size (overall)	3.2.17.2	Measurement 2/
	Size (of lettering)	3.2.17.2	Measurement 2/
Sweatband reinforcement strip	Material identification	3.2.20	4/
	Width	3.2.20	Measurement 2/
Front stiffener:			
-Twin wire tape	Material identification (wire)	3.2.22.1	4/
	Thickness (wire)	3.2.21.1	Measurement 2/
	Width (wire)	3.2.21.1	Measurement 2/
	Width (overall)	3.2.21.1	Measurement 2/
Crinoline	Material identification	3.2.21.2	1200
	Weight	3.2.21.2	5041
	Yarns per inch	3.2.21.2	
	-warp		5050
	-filling		5050
-Plastic (Linear Polypropylene or polyethylene)	Material identification	3.2.21.3	4/
	Thickness	3.2.21.3	Measurement 2/
	Color	3.2.21.3	Visual 2/

TABLE IV. Component and material tests (cont'd)

Component	Characteristic	Requirement paragraph	Test method or procedure
Staples	Material identification	3.2.22	4/
	Thickness	3.2.22.1 & 3.2.22.2	Measurement 2/
	Width	3.2.22.1 & 3.2.22.2	Measurement 2/
	Length of legs	3.2.22.1 & 3.2.22.2	Measurement 2/
	Salt spray	3.2.22	Method 811 of FED-STD-151 2/
Crown support	Identification of steel wire and coating, width and thickness	3.2.23.1	4/
	Material identification of coupling	3.2.23.1	4/
	Coupling length	3.2.23.1	Measurement 2/
	Salt spray	3.2.23.1	Method 811 of FED-STD-151 2/
Grommet	Identification of nylon	3.2.23.2	1530 4/
	Identification of cotton	3.2.23.2	1200
	Diameter	3.2.23.2	Count 3/
	Number of carriers	3.2.23.2	Count 3/
	Ends per carrier	3.2.23.2	Count 3/
	Warps	3.2.23.2	Count 3/
	Picks per inch	3.2.23.2	Count 3/

1/ Five determinations shall be made from each sample unit and the results reported as the average of the five determinations to the nearest 0.01 ounce per square foot.

2/ One determination shall be made from each sample unit and the results reported as "pass" or "fail". All failures to be described.

3/ One determination shall be made from each sample unit and the results reported to the nearest whole number.

4/ A certificate of compliance shall be submitted and will be acceptable for the stated requirement.

* 4.2.2 Point count inspection. Sampling and inspection provisions for end item examination, dimensional examination, and packaging inspection shall be performed in accordance with MIL-STD-657.

4.3 Methods of inspection.

* 4.3.1 Polyethylene inner body band stiffness. The band shall be tested for stiffness at room temperature according to FED-STD-311, Method 4211, using a span length of 1.0 inches, a moment weight of 1.0 inch-pounds and measuring the load at 20° on the angular deflection scale.

4.3.1.1 Perforated band. The test piece shall be a section of the band, 1 inch ± 0.005 inch wide, 4 inches long and the thickness of the band. It shall be cut from the center part of the band containing perforations and the cut edges may contain perforations. The thickness shall be measured to an accuracy of ± 0.001 inch using Method B of ASTM D-374, at not less than five points distributed both across the width of the sample and along its length, and the average thickness recorded for each test piece.

4.3.2 Polyethylene inner body band bending test. The test is run on five 4-inch long pieces of the perforated band. Each piece shall be bent across its width at least 180° around a metal test mandrel, a round metal bar measuring 1/8-inch diameter. The piece shall be pressed firmly against the mandrel and the bend made at the location of the perforations. Each piece shall be examined for cracks, both while bent and after removing from the test. The test shall be run at 0°F. The specimen shall be straightened to its original position after removal from the mandrel. All samples and the test mandrel shall be kept in a cold box at a temperature of 0 ± 3°F for not less than 4 hours before the test. The test shall be run in the cold box and the samples and mandrel handled only with heavy gloves so as to prevent warming of the samples during the test.

4.3.3 Visor stiffness. The stiffness of the visor shall be tested as follows:

4.3.3.1 Specimen. The specimen shall be 1 inch by 5 inches and shall be cut from the middle section of the visor, not including the skived edge.

* 4.3.3.2 Apparatus. The apparatus used shall be as specified in Method 4211 of FED-STD-311.

4.3.3.3 Procedure. Place the weight on the pendulum to give a bending moment of 5 inch-pounds and adjust the pin to give a 2-inch span. One end of the specimen shall be clamped in the jaws of the machine with the top side of the visor in position to rest against the pin. The free end of the specimen shall extend 1-1/2 inches beyond the pin. The apparatus shall be operated until the free end of the specimen just makes contact with the pin. Both pointers shall be adjusted to zero. The apparatus shall be operated until the angle pointer shows that the leather has been bent through an angle of 20°. At that instant, the percent of maximum bending moment as indicated by the other pointer shall be recorded. The force required to bend the leather is calculated by dividing the bending moment by the span.

4.3.3.4 Report. The force in pounds required to bend the leather through an angle of 20° shall be reported.

4.3.4 Visor bond strength. The visor bond strength shall be tested as follows:

4.3.4.1 Specimen. The specimen shall be 1 inch by 5 inches. The specimen used in the stiffness test shall be used. The top and bottom layers of the leather shall be separated for a distance of 2 inches from one end of the specimen.

4.3.4.2 Apparatus. The machine shall be of such capacity that the reading made will fall into that part of the scale which is accurate to within 1/4 pound. The speed of the moving jaws shall be 10 ± 2 inches per minute. The machine shall be adjusted to record instantaneous load by removing any automatic limiting device.

4.3.4.3 Procedure. The separated ends of the specimen shall be clamped in the jaws of the machine with the jaws approximately 1 inch apart. The machine shall be started and the pieces of leather shall be pulled apart for a distance of 1 inch. At that instant, the load on the machine shall be read and recorded.

4.3.4.4 Report. The report shall state the load, in pounds per inch, required to separate the two pieces of leather.

5. PACKAGING

5.1 Preservation. Preservation shall be level A or Commercial as specified (see 6.2).

5.1.1 Level A.

5.1.1.1 Unit pack. Each cap shall be inserted into a polyethylene bag. The polyethylene bag shall be flat style, made from clear polyethylene film of 0.00125-inch thickness (± 25 percent tolerance). The bag shall be formed with heat sealed seams that are straight, continuous and parallel to each other and the formed edges of the bag. The cap visor shall face the bag opening. The bag shall measure 19 by 14-1/2 inches with the opening on the 14-1/2 inch dimension. A mechanical tie (paper or plastic covered soft steel wire, aluminum band, etc.) shall be applied to close the bag opening.

5.1.1.2 Intermediate pack. Two caps of one class and size only, bagged as specified in 5.1.1.1, shall be placed in an intermediate fiberboard box conforming to style RSC, type CF, variety SW, class domestic, grade 125 of PPP-B-636. The inside dimensions of each fiberboard box shall be 11-3/4 inches in length, 11-3/4 inches in width, and 8-1/2 inches in depth. Each box shall be provided with a one-piece die-cut corrugated fiberboard bridge with the shape, dimensions, and material requirements as shown on figure 3 (Drawing No. 2-1-254). The first cap shall be placed crown up in the box with the visor in a corner. Two sheets of tissue wrapping paper, 30 inches in length by 20 inches in width, conforming to type I, class 1 or 2

of UU-P-553, shall be loosely rolled along the 30-inch dimension. The roll of tissue wrapping paper shall be used to fill the void behind the cap and shall halfway circumvent the cap band so as to fit between the bridge uprights and the cap. The set-up fiberboard bridge shall then be positioned in the box at right angles to the cap with the bridge platform incline parallel to the slope of the cap crown. The second cap shall be placed crown down in the box with the visor in the opposite corner from the visor of the first cap. A two sheet roll of tissue wrapping paper as specified for the first cap shall be applied to the second cap in the same manner as required for the first cap. Each box shall be sealed with gummed paper tape having a minimum width of two inches conforming to type III, grade A of PPP-T-45.

5.1.2 Commercial. The caps shall be preserved in accordance with MIL-STD-1188.

5.2 Packing. Packing shall be level A, B or Commercial as specified (see 6.2).

5.2.1 Level A packing. Twenty-four caps of one class and size only, preserved as specified in 5.1, shall be packed in a fiberboard shipping container conforming to style RSC, grade V2s of PPP-B-636. Level A intermediate packs shall be packed flat two in length, two in width, and three in depth within a shipping container. Inside dimensions of each shipping container shall approximate 24-3/4 inches in length, 24-3/4 inches in width, and 27-3/4 inches in depth. Approximate dimensions are furnished as a guide only. Each shipping container shall be closed in accordance with method III, waterproofed in accordance with method V, and reinforced as specified in the appendix of PPP-B-636, except that the inspection shall be in accordance with MIL-STD-657. Toward the end of the contract or when there are less than the required amount of the same size per container, mixed sizes of one class only, may be packed within the same container.

5.2.2 Level B packing. Twenty-four caps, of one size only, preserved as specified in 5.1, shall be packed in a fiberboard shipping container conforming to style RSC, type CF, (variety SW) or SF, class domestic, grade 200 of PPP-B-636. Level A intermediate packs shall be packed flat two in length, two in width, and three in depth within a shipping container. Inside dimensions of each shipping container shall approximate 24-3/4 inches in length, 24-3/4 inches in width, and 27-3/4 inches in depth. Approximate dimensions are furnished as a guide only. Each shipping container shall be closed in accordance with method II as specified in the appendix of PPP-B-636, except that the inspection shall be in accordance with MIL-STD-657. Toward the end of the contract or when there are less than the required amount of the same size per container, mixed sizes of one class only may be packed within the same container.

5.2.2.1 Weather-resistant containers. When specified (see 6.2), the shipping container shall be grade V3c, V3s or V4s fiberboard box fabricated in accordance with PPP-B-636 and closed in accordance with method III as specified in the appendix of PPP-B-636, except that the inspection shall be in accordance with MIL-STD-657.

5.2.3 Commercial packing. Caps, preserved as specified in 5.1, shall be packed in accordance with MIL-STD-1188.

5.3 Marking. In addition to any special marking required by the contract or purchase order, intermediate packs and shipping containers shall be marked in accordance with MIL-STD-129 or MIL-STD-1188, as applicable.

5.3.1 Labels, mixed sizes. Each shipping container, packed with caps of mixed sizes of one class only, shall have securely attached to the end and side, directly under the printing or stenciling, a white paper label 5 by 4 inches with the words "MIXED SIZES" plainly printed or stamped thereon, and under these words shall be legibly printed or stamped the correct quantity and size contained therein.

5.3.2 Handling marking. One side and one end of each shipping container shall be plainly marked in 1-1/2-inch letters the word "UP" with arrow marks as follows:

UP UP

6. NOTES

6.1 Intended use. The caps are intended for use by male military personnel of the Department of the Army.

6.2 Ordering data. Procurement documents should specify the following:

(a) Title, number and date of this document.
(b) Class and size required (see 1.2).
(c) Selection of applicable levels of preservation and packing (see 5.1 and 5.2).
(d) When weather-resistant grade fiberboard shipping containers are required for level B packing (see 5.2.2.1).

* 6.3 Samples. For access to samples address the procuring activity issuing the invitation for bids.

6.4 Plastic material for inner body band. Satisfactory results have been obtained in meeting the detailed requirements of the inner body band by utilizing a plastic material which has a stiffness (scale reading) before perforation of 15 to 31 as measured by the method of test specified herein.

* 6.5 Recycled material. It is encouraged that recycled material be used when practical as long as it meets the requirements of the document.

* 6.6 Changes from previous issue. The margins of this document are marked with an asterisk to indicated where changes (additions, modifications, corrections, deletions) from the previous issue were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous issue.

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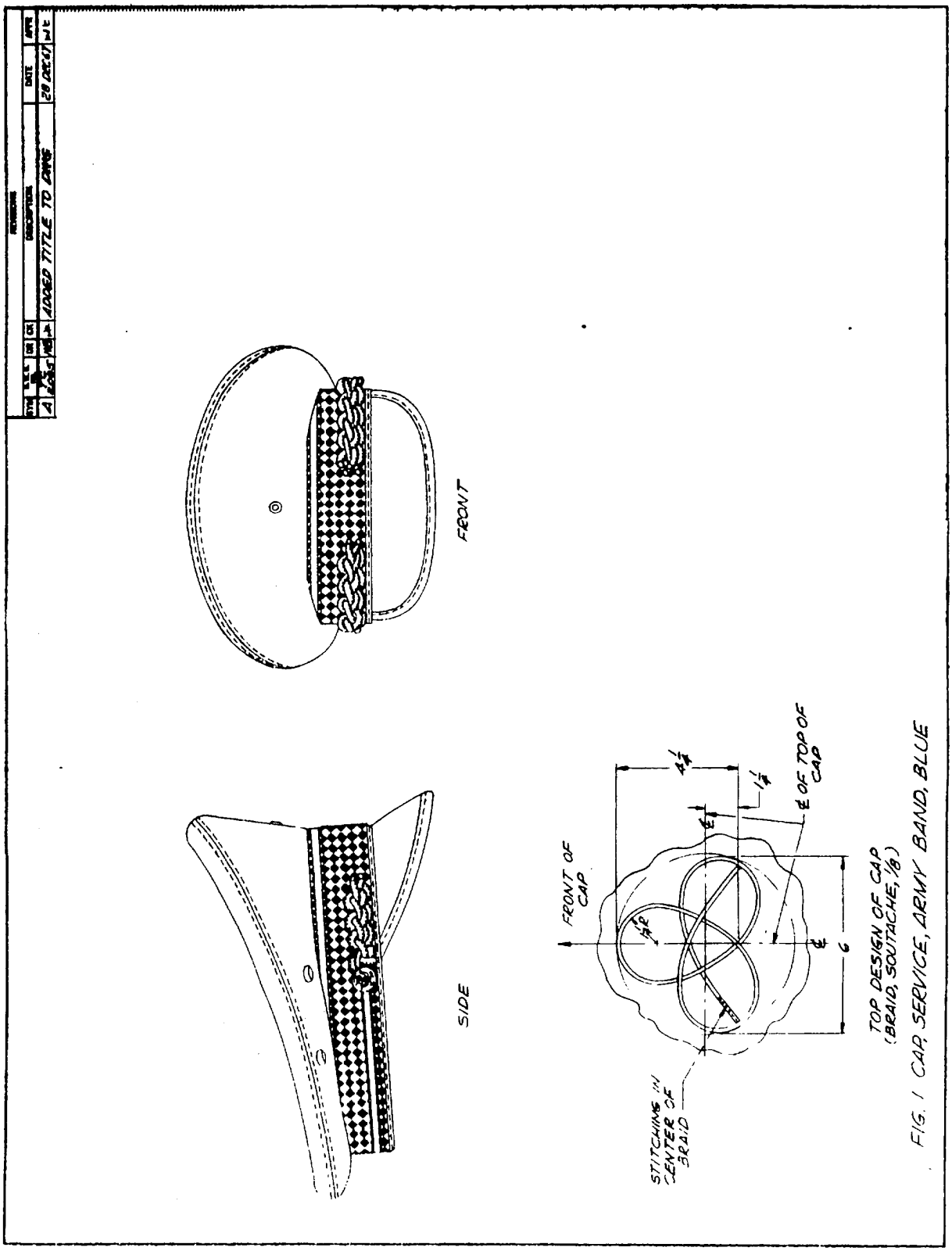


FIG. 1 CAP, SERVICE, ARMY BAND, BLUE

Instructions for Handling

1. Never pick cap up by grabbing the front edge of the crown. Eventually that practice will cause damage.

2. Always put the cap down right side up, never lay it down on the crown.

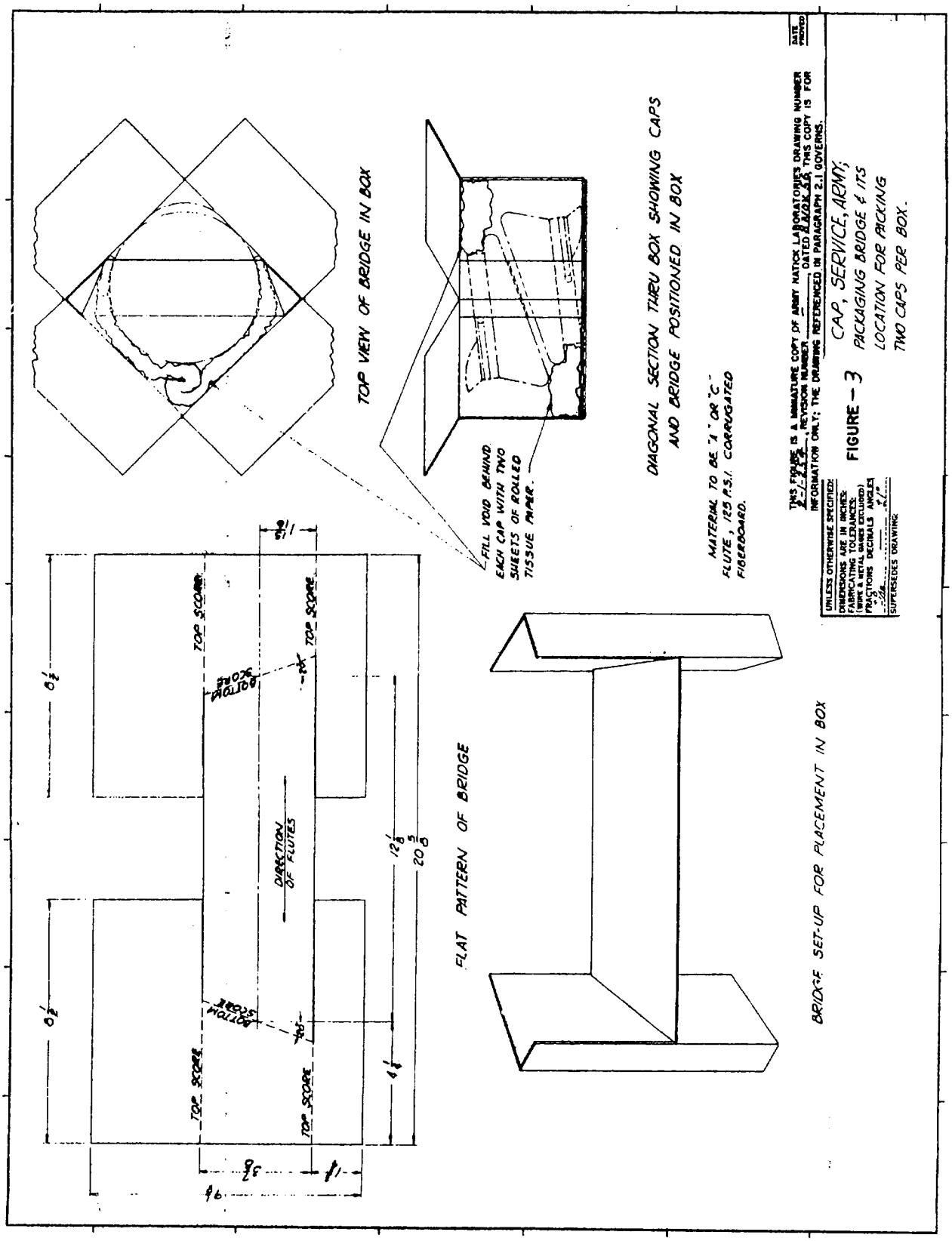
3. Never carry the cap crushed under your arm.

4. Pick up your cap by sliding your fingers under the side at the rear of the visor.

5. To brush the cap, use a soft brush and brush from front to rear.

FIGURE 2 CAP, SERVICE, ARMY BAND, BLUE
INSTRUCTION LABEL

2-1-1583



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