

MIL-S-83154A(USAF)

12 July 1973

SUPERSEDING

MIL-S-83154 (USAF)

8 August 1968

MILITARY SPECIFICATION

SHIRT, MAN'S, WOOL-POLYESTER, TROPICAL, BLUE

1. SCOPE

1.1 Scope. This specification covers the requirements for one type of man's wool-polyester, tropical shirt.

1.2 Classification. The shirt shall be furnished in the following neck sizes and sleeve lengths as specified (see 6.2).

<u>Neck Size</u>	<u>Sleeve Lengths</u>								
13	29	30	31	32	33	34			
13-1/2	29	30	31	32	33	34	35	36	37
14	29	30	31	32	33	34	35	36	
14-1/2	29	30	31	32	33	34	35	36	
15		30	31	32	33	34	35	36	37
15-1/2		30	31	32	33	34	35	36	
16		30	31	32	33	34	35	36	
16-1/2			31	32	33	34	35	36	
17				32	33	34	35	36	
17-1/2				32	33	34	35	36	
18				32		34			

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2. APPLICABLE DOCUMENTS

- * 2.1 The following documents, of the issue in effect on date of invitation for bids or request for proposal, form a part of this specification to the extent specified herein.

SPECIFICATIONSFederal

V-B-871	Button, Sewing Hole, and Button, Staple, (Plastic)
V-T-276	Thread, Cotton
UU-P-268	Paper, Kraft, Untreated, Wrapping
CCC-C-438	Cloth, Buckram, Cotton
DDD-L-20	Label: for Clothing, Equipage, and Tentage, (General Use)
PPP-B-636	Boxes, Shipping, Fiberboard

Military

MIL-C-326	Cloth, Silesia, Cotton
MIL-C-368	Cloth, Satin, Rayon and Cloth. Twill, Rayon
MIL-B-17757	Boxes, Fiberboard, Corrugated (Modular Sizes)
MIL-C-21115	Cloth, Tropical: Wool/Polyester
MIL-C-43718	Cloth, Twill, Polyester and Cotton

STANDARDSFederal

FED-STD-191	Textile Test Methods
FED-STD-751	Stitches, Seams, and Stitchings

Military

MIL-STD-129	Marking for Shipment and Storage
MIL-STD-1492	Provisions for Evaluating Quality of Shirts

(Copies of specifications, standards, drawings, and publications required by suppliers in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.)

- * 2.2 Other publications. The following documents form a part of this specification to the extent specified herein. Unless otherwise indicated, the issues in effect on date of invitation for bids or request for proposal shall apply.

Department of Defense (DOD) Standard Shades for Buttons 1966

DOE Standard Color Card of Official Standardized Shades for Sewing Threads 1968

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(Copies of these publications may be obtained from The Color Association of the United States, Inc.; 200 Madison Avenue; New York, New York 10016.)

(Technical society and technical association specifications and standards are generally available for reference in libraries and are also distributed among technical groups and using federal agencies.)

3. REQUIREMENTS

3.1 Materials

- * 3.1.1 Basic fabric. The basic fabric shall be blue conforming to USAF color shade No. 1549 (see 6.3) and shall conform to type III, class 3 of MIL-C-21115.
- * 3.1.2 Lining. The lining for the back yoke and for the topcollar stand shall be blue conforming to USAF color shade No. 1086 (see 6.3) and shall conform to class 1 of MIL-C-368, except that the shrinkage shall be not more than 2 percent in the direction of either the warp or the filling.
- * 3.1.3 Interlining. The interlining for the collar leaf, the cuffs, and the collar stand shall conform to type II, class 1 of CCC-C-438, except that the dyed material shall have good colorfastness to wet dry cleaning, perspiration, and steam pressing and that colorfastness to steam pressing shall be determined in accordance with 5640 of FED-STD-191. The interlining for the collar stand and for the cuffs shall be black. The interlining for the collar leaf shall be either black or natural. The colored material shall be dyed with a selected direct dye. The colored material shall be treated after dyeing, preferable with a copper sulphate, to meet the requirements specified herein.
- * 3.1.4 Facing. The material for the right front button facing shall be black and shall conform to type I of MIL-C-326 or to type I of MIL-C-43718.
- * 3.1.5 Thread. Except for the lower thread of stitch type 401, the top thread and the lower thread used for seaming and stitching shall conform to type IA3, ticket No. 50, 3 ply of V-T-276. The lower thread of stitch type 401 shall conform to type IA3, ticket No. 70, 2 ply of V-T-276. The thread used for making buttonholes shall conform to type IA3, ticket No. 40, 6 ply of V-T-276 for the needle and type IA3, ticket No. 80, 3 ply of V-T-276 for the bobbin. The thread used for sewing on buttons shall conform to type IA3, ticket No. 50, 3 ply of V-T-276. All thread shall be vat dyed. The color of the dyed thread shall be DOD Thread Shade Navy Blue AT, Cable No. 66060 (see DOD Standard Color Card of Official Standardized Shades for Sewing Threads 1968). The dyed thread shall have colorfastness to light and to wet dry cleaning equal to or better than the standard sample (see 6.3). If a standard sample is not available, the dyed thread shall have good colorfastness to light and to wet dry cleaning.

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- * 3.1.6 Buttons. The buttons shall conform to type II, class D, style 24, 20-line size of V-B-871. The color of the buttons shall be DOD Button Shade Blue BV, Cable No. 62003 (see DOD Standard Shades for Buttons 1966).
- * 3.2 Design. The shirt shall be military style. It shall have semi-formfitting waist, two outside patch pockets with button flaps, a pencil pocket under the patch pocket on the left front, cuffs with two buttons each, two buttoned shoulder loops, and a two-piece stand and leaf type of collar.
- * 3.3 Construction. The shirt shall be constructed as specified in table I; however, the manufacturer will not be required to follow the exact sequence of operations as listed therein.
 - * 3.3.1 Stitches, seams, and stitchings. Stitches, seams, and stitchings specified in table I shall conform to FED-STD-751. If two or more methods, seams, or stitches are specified for the same part of an operation, any one of them may be used. The looper thread (under thread) of stitch 401 shall be on the inside of the shirt. The stitches per inch specified in table I shall be interpreted to be the minimum and the maximum stitches per inch.
 - * 3.3.1.1 Ends of seams and thread breaks. Ends of all seams and stitches of stitch type 301 not caught in other seams or stitchings shall be backstitched not less than 1/4 inch. Thread breaks of all stitch types shall be secured by stitching back of break not less than 1/4 inch. The ends of a continuous line of stitching shall overlap not less than 1/2 inch.
- * 3.4 Patterns. Standard patterns that show size, shape, placement of pocket, and directional lines for marking in will be furnished by the Government (see 6.2). The standard patterns shall not be altered in any way and shall be used only as a guide for making the manufacturer's working patterns. The manufacturer's working patterns shall be identical to the standard patterns.
 - * 3.4.1 Cut parts. The parts of the shirt shall be cut from the materials specified and in accordance with the pattern parts specified in table II. The method used for shade marking the parts of the shirt may be any method except fastening devices made of corrosive metal; sew-on-type tickets; and adhesive-type tickets that will, upon removal, show discoloration of the parts or leave an adhesive mass on the parts. Metal fastening devices shall not be used on the rayon lining.

TABLE I. Sewing Operations

No.	Description of Operation	Stitch Type	Seam and Stitching Type	Stitches Per Inch
1	<p><u>Cut parts</u></p> <p>(a) The shirt shall be cut in strict accordance with the patterns which show size, shape, directional lines, placement of pockets and flaps, and also notches for the proper assembling of all parts. The directional lines shall be placed in the warp direction.</p> <p>(b) Except for the parts that may be cut out of ends, all parts made of the basic fabric shall be cut out of one piece of material. The pencil pocket, the sleeve placket facing, the undercollar stand, the cuff lining and the shoulder loop lining may be cut from ends. The parts of the shirt that are cut from ends shall approximate the shade of the other parts of the shirt.</p> <p>(c) The topcollar stand and the back yoke lining shall be cut, in the direction of the warp, out of one piece of lining material.</p> <p>(d) The material for the right front button facing shall be cut with the warp.</p> <p>(e) The material for the collar leaf interlining and the collar stand interlining may be cut with the warp or with the filling but not on the bias.</p> <p>(f) Each part in the top ply of the main lay shall be marked with the size of the shirt.</p>			

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TABLE I. Sewing Operations (Cont.)

No.	Description of Operation	Stitch Type	Seam and Stitching Type	Stitches Per Inch
	<p>(g) Any part containing a hole; a shade bar; or a weakening defect such as a smash, a multiple float, or a slub, which is likely to develop into a hole, shall be replaced at the time of cutting.</p> <p>(h) Any part damaged during the manufacturing process by needle chews that may be expected to develop into a hole, scissor or knife cuts, tears, holes, mends, burns, or exposed drill holes shall be replaced.</p>			
2	<p><u>Shade mark parts (see 3.4.1)</u></p> <p>(a) Except for parts cut from ends as indicated in No. 1(b), all parts shall be marked or ticketed to insure a uniform shade and proper assembly throughout the shirt.</p>			
3	<p><u>Apply size label</u></p> <p>(a) The marking for the size label shall be centered on the inside of the stand of the collar.</p>			
4	<p><u>Make cuffs</u></p> <p>(a) Each cuff shall be made of two pieces of the basic fabric and one piece of the interlining. The top edge of the outer ply shall be folded 3/8 inch over the interlining and stitched 1/4 inch from the folded edge.</p>	301	SSw-2(a)	12-14

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TABLE I. Sewing Operations (Cont)

No.	Description of Operation	Stitch Type	Seam and Stitching Type	Stitches Per Inch
5	<p>(b) The cuff pieces shall be joined with a 1/4-inch seam and turned; and the edges shall be forced out. The cuff pieces shall be sewn with a single row of stitching 3/16 inch from the edge. The finished cuffs shall be 2-3/4 inches (plus 1/4 or minus 3/8 inch) wide and shall have rounded corners.</p> <p><u>Make buttonholes in cuffs</u></p> <p>(a) Two horizontal straight-type buttonholes shall be made in the upper part of each cuff 1 to 1-1/4 inches apart and 3/8 inch (plus 1/4 or minus 1/8 inch) from the front edge. The first buttonhole shall be 7/8 inch (plus or minus 1/4 inch) up from the bottom of the cuff. The buttonholes shall be well-worked with the ends securely tacked and shall fit a 20-line button. The purling of the finished buttonholes shall be on the outside of the shirt.</p>	301	SSe-2	12-14
6	<p><u>Make shoulder loops</u></p> <p>(a) Each shoulder loop shall be made of two pieces of the basic fabric. The shoulder loops shall be seamed, turned, and sewn with a single row of stitching 3/16 inch from the edge. The finished shoulder loops shall be 2 inches (plus or minus 1/4 inch) wide at the sleeve head seam on size 15 or smaller and 2-1/8 inches (plus or minus 1/4 inch) wide on size 15-1/2 or larger and shall taper to 1-1/2 inches (plus or minus 1/4 inch) wide at the base of the point in both measurements.</p>	button hole	SSe-2	52 stitches per button-hole including tack

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TABLE I. Sewing Operations (Cont)

No.	Description of Operation	Stitch Type	Seam and Stitching Type	Stitches Per Inch
7	<p><u>Make buttonholes in shoulder loops</u></p> <p>(a) A straight buttonhole with the ends securely tacked shall be made in the center of each shoulder loop (1/8-inch off center tolerance) 3/8 inch (plus 1/4 or minus 1/8 inch) from the point of the shoulder loop. The buttonholes shall fit a 20-line button. The purling of the finished buttonholes shall be on the outside of the shirt.</p>	buttonhole		52 stitches per buttonhole including tack
8	<p><u>Make collar</u></p> <p>(a) The edges of the topcollar leaf and the undercollar leaf shall be joined, 1/4 inch from the edge, catching the collar leaf interlining in the stitching.</p> <p>(b) The collar leaf points shall be trimmed, then turned, and pressed on a collar pointing machine. The points of the finished collar leaf shall be thin and flat.</p> <p>(c) The collar leaf shall be topstitched with a single row of stitching 3/16 inch from the edge.</p> <p>(d) The collar stand interlining shall be positioned to the outer ply of the collar stand and seamed from end to end, with a single row of horizontal stitching, in the center of the collar stand.</p>	301	SSe-2(a)	12-14
		301	SSe-2(b)	12-14
		301	SSa-1	12-14

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TABLE I. Sewing Operation (Cont)

No.	Description of Operation	Stitch Type	Seam and Stitching Type	Stitches Per Inch
	(e) The collar leaf shall be inserted between the collar stand pieces and shall be stitched with a 1/4-inch seam, continuing the seaming around the ends of the collar stand turn-down. The collar stand pieces shall be turned down and raise stitched, the length of the collar leaf only, 1/16 inch from the seam.	301	SSq-2	12-14
9	<u>Make pocket flaps</u> (a) Each pocket flap shall be made of either two pieces or one folded piece of the basic fabric. The pocket flap pieces shall be seamed. The pocket flaps shall be turned through the top and sewn with a single row of stitching, 3/16 inch from the edge, on the sides and the bottom.	301	SSe-2	12-14
10	<u>Make buttonholes in pocket flaps</u> (a) A vertical straight-type buttonhole that will fit a 20-line button shall be made in the center (1/8-inch off center tolerance) of each pocket flap, 3/8 inch (plus 1/4 or minus 1/8 inch) from the bottom edge. The ends of the buttonholes shall be securely tacked. The purling of the finished buttonholes shall be on the outside of the shirt.	button-hole		52 stitches per buttonhole including tack
11	<u>Hem patch pockets</u> (a) The top of each patch pocket shall be turned with the raw edge turned in and shall be stitched through the patch pocket. The finished hem shall be 7/8 inch (plus or minus 1/8 inch) at the sides and 1-3/8 inches (plus or minus 1/8 inch) at the center.	301	EFb-1	12-14

TABLE I. Sewing Operations (Cont)

No.	Description of Operation	Stitch Type	Seam and Stitching Type	Stitches Per Inch
12	<p><u>Crease patch pocket</u></p> <p>(a) The patch pocket pieces shall be creased in an edge-turning machine to insure uniformity of size and shape. The shape of the patch pockets shall be as shown on the pattern. The finished measurements shall be 5-7/8 inches wide and 6-1/4 inches deep for size 15-1/2 or larger and 5-1/2 inches wide and 6 inches deep for size 15 or smaller.</p>			
13	<p><u>Sew on plait and button facing</u></p> <p>(a) The center plait (basic material) shall be sewn, with a double row of stitching, to the left front from the neck to the bottom of the shirt. The finished plait shall be 1-1/2 inches (plus or minus 1/8 inch) wide; the gage of the machine shall be 7/8 inch to 1 inch.</p> <p>(b) The right front button facing (silesia cloth) shall be sewn to the right front from the neck to the bottom, with a double row of stitching. The finished right front facing shall be 1 inch (plus or minus 1/8 inch) wide; the gage of the machine shall be 3/4 to 7/8 inch.</p>	301 or 401	LSk-2	12-14
14	<p><u>Make and attach pencil pocket</u></p> <p>(a) On the left front of the shirt, the top of the pencil pocket shall be hemmed, and the raw edge shall be sewn with a single row of stitching through the pencil pocket. The finished hem shall be 3/4 inch (plus or minus 1/4 inch) wide.</p>	301	EFa-1	12-14

TABLE I. Sewing Operations (Cont)

No.	Description of Operation	Stitch Type	Seam and Stitching Type	Stitches Per Inch
	<p>(b) The side edges of the pencil pocket shall be turned in and seamed to the left front of the shirt, as indicated on the pattern, or the front edge of the pencil pocket may be a raw edge if it is caught in the seaming of the patch pocket. The ends of the seam shall be backstitched. Two equal-width compartments shall be formed with a row of vertical seaming at the center through the shirt. The finished pencil pocket shall be 2 inches (plus or minus 1/8 inch) wide. An off center tolerance of 1/8 inch will be permitted on the center-compartment seam.</p>	301	LSd-1 and SSv-1	12-14
15	<p><u>Set on patch pockets and pocket flaps</u></p> <p>(a) The patch pockets shall be seamed on the fronts, as indicated by the marks on the patterns, 3/16 inch from the edge of the patch pockets, with a second row of seaming on each side of the hem of the patch pocket, 1/16 to 1/8 inch from the edge, with both top corners securely tacked.</p> <p>(b) The pocket flaps shall be seamed on the fronts 1/2 inch above the top of the patch pockets, and the ends of the pocket flaps shall be securely tacked. The pocket flaps shall be turned down and raise stitched 3/16 inch from the seam. Except at the mitered corners, the pocket flaps shall completely cover the lower stitching of the pocket hem. The finished flaps shall be 2-1/2 inches (plus or minus 1/4 inch) wide. The shape of pocket flaps is shown on figure 1. The pocket flaps shall completely cover the side edges of the patch pockets but shall not extend more than 3/16 inch beyond the side edges at the top of the mitered corners.</p>	301	LSd-1	12-14
		301	LSq-2	12-14

TABLE I. Sewing Operations (Cont)

No.	Description of Operation	Stitch Type	Seam and Stitching Type	Stitches Per Inch
16	<p>The patch pockets and the pocket flaps shall be in alignment with each other. The front edges of the pocket flaps and the patch pockets shall be in alignment with the front edge of the shirt. A tolerance of $3/8$ inch from alignment will be permitted.</p> <p><u>Make back yoke</u></p> <p>(a) The back yoke shall be made of one ply of the basic fabric, lined with the rayon lining, and shall extend across the back. The bottom edge of the double yoke shall be stitched with a $3/8$-inch seam to the top of the back of the shirt. The outer ply of the yoke shall be turned up. The folded edge of the outer ply of the yoke shall be single stitched $1/16$ inch from the edge, catching the seam allowance of all plies in the stitching. The inner ply of the yoke shall be turned up. The finished yoke shall be 3 inches (plus or minus $1/8$ inch) wide at the center.</p> <p style="text-align: center;">OR</p> <p>(b) The bottom raw edges of the top and under yoke shall be folded under $3/8$ inch, and the top raw edge of the back shall be inserted. All of the plies shall be seamed together with a single row of stitching $1/16$ to $1/8$ inch from the folded edge.</p>	301 or 401	LSbp-2	12-14
17	<p><u>Hem bottom of shirt</u></p> <p>(a) The bottom of the shirt shall be folded with the raw edges turned under and stitched through all plies. The finished hem shall be $1/4$ to $3/8$ inch wide.</p>	301	EFb-1	12-14

TABLE I. Sewing Operations (Cont)

No.	Description of Operation	Stitch Type	Seam and Stitching Type	Stitches Per Inch
18	<u>Finish sleeve openings</u>			
	(a) The sleeve placket facing shall be bound to the underside of the sleeve opening and sewn with a single row of stitching on the back edge. The finished sleeve placket facing shall be 1/2 inch (plus or minus 1/8 inch) wide.	301 or 401	BSc-1	12-14
	OR			
	(b) The sleeve placket facing shall be seamed to the sleeve opening and turned to the outside. The back edge shall be turned in and seamed to the sleeve. The finished sleeve placket facing shall be 1/2 inch (plus or minus 1/8 inch) wide.	301 301	SSa-1 Lsd-1	12-14 12-14
	(c) The sleeve placket shall be folded and sewn 1/16 to 1/8 inch from the edge.	301	OSf-1	12-14
	(d) The edge of the underside of the sleeve placket shall be turned in and shall be seamed to the upper side of the sleeve 1/16 to 1/8 inch from the edge.	301	Lsd-1	12-14
	(e) The back edge of the sleeve placket shall be turned in and shall be seamed to the sleeve 1/16 to 1/8 inch from the edge, forming a triangle at the top. The finished sleeve placket shall be 1-1/4 inches (plus or minus 1/8 inch) wide.	301	Lsd-1	12-14
	(f) The sleeve opening shall be tacked with a single row of stitching across the placket. The opening shall measure 5-1/2 inches (plus or minus 1/2 inch) exclusive of the cuff.	301	SSa-1	12-14

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TABLE I. Sewing Operations (Cont)

No.	Description of Operation	Stitch Type	Seam and Stitching Type	Stitches Per Inch
19	<p><u>Join shoulder seams</u></p> <p>(a) To join the back yoke to the front, the front shall be inserted between the yoke pieces and stitched with a 3/8-inch seam, turned, and stitched 1/16 inch from the edge of the outer yoke. The seam allowance shall be toward the back.</p> <p style="text-align: center;">OR</p> <p>(b) The front shall be joined to the under yoke. The outer yoke seam allowance shall be folded and stitched to the front 1/16 to 1/8 inch from the folded edge.</p>	301 or 401	LSpb-2	12-14
20	<p><u>Set in sleeves</u></p> <p>(a) The sleeve shall be stitched in with a double-lapped and double-stitched seam, not less than 3/16-inch nor more than 5/16-inch gage. The fronts and the back shall be on the top of sleeves at the armhole seams.</p>	301 or 401	LSc-2	12-14
21	<p><u>Set on shoulder loops</u></p> <p>(a) The shoulder loops shall be trimmed and measured to fit the shoulder and match with shirt. The shoulder loops shall extend to within 1/4 inch (plus or minus 1/4) of the collar seam. The shoulder loops shall be set squarely on the top of the shoulders and shall be centered on the shoulder seams.</p>			

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TABLE I. Sewing Operations (Cont)

No.	Description of Operation	Stitch Type	Seam and Stitching Type	Stitches Per Inch
	<p>(b) The raw edge shall be turned under, and the shoulder loops shall be double-stitched to the shoulder at the armhole. The stitching shall cover and shall match the armhole stitching.</p>	301	Lsd-2	12-14
	OR	301	SSa-1	12-14
	<p>(d) The shoulder loops shall be stitched to the shoulders with two diagonal rows of stitching and one row of stitching across the loop approximately 2 inches from the inner row of stitching at the armhole (see figure 1). The diagonal stitching shall start where the inner row of armhole stitching and the loop edge stitching intersect.</p>	301	SSa-1	12-14
	<p>NOTE: No. 21(d) is not an optional operation and shall apply to both No. 21(b) and 21(c).</p>	301 or 401	LSc-2	12-14
22	<p><u>Join side and underarm seam</u></p>	301 or 401	LSc-2	12-14
23	<p><u>Set cuffs</u></p> <p>(a) The under part of the cuff shall be seamed to the sleeve and a 1-1/4-inch (plus or minus 1/4-inch) pleat formed on the topsleeve, as indicated by the notches on the patterns. The creased edge of the pleat shall face toward the sleeve opening.</p>	301	SSa-1	12-14

TABLE I. Sewing Operations (Cont)

No.	Description of Operation	Stitch Type	Seam and Stitching Type	Stitches Per Inch
	(b) The top edge of the cuff shall be seamed to the sleeve, 1/16 to 1/8 inch from the edge, with the ends of the stitching securely tacked; the seaming shall continue and shall meet the cuff stitching on the sides.	301	LSb-1	12-14
24	<u>Join collar to neck of shirt</u> (a) The collar stand (basic fabric) shall be seamed to the neck of the shirt with a 1/4-inch seam, catching the collar stand interlining in the seaming. (b) The bottom edge of the topcollar stand shall be turned in and stitched through the collar stand and the shirt. Continue stitching around the ends of the collar stand.	301	SSa-1	12-14
25	<u>Attach contractor's label</u> (a) The contractor's label shall be centered on the outside of the right front approximately 2 inches from the bottom and stitched on all four sides 1/8 inch from the edge.	301	LSbj-1	8-12
26	<u>Make buttonholes in front and collar stand</u> (a) Five straight-type buttonholes with the ends securely tacked shall be made in the front. The buttonholes shall be vertical in the center of the plait and 3-3/4 inches (plus or minus 1/4) inch apart, center to center. An off center tolerance of 1/8 inch will be permitted. The buttonholes shall fit a 20-line button. The purling of the finished buttonholes shall be on the outside of the shirt.	button-hole		52 stitches per buttonhole including tack

* TABLE I. Sewing Operations (Cont)

No.	Description of Operator	Stitch Type	Seam and Stitching Type	Stitches Per Inch
27	(b) One horizontal straight-type buttonhole with the ends securely tacked shall be made in the center of the collar stand positioned so that it will extend 1/8 inch ahead of the line of the center plait buttonholes. The buttonhole shall fit a 20-line button. The purling of the finished buttonhole shall be on the outside of the shirt.	buttonhole		52 stitches per buttonhole including tack
	<u>Sew on buttons</u>			
	(a) Sew five buttons, centered on right front button facing and in line with the corresponding buttonholes.	301 or 101		14-16 stitches per button 20-24 stitches per button
	(b) Position and sew one button on the right end of the collar stand so that the center of the button in the buttoned collar will be in line with the vertical buttons on the front, without distortion to either the front plait or the right front button facing and in line with the corresponding buttonhole. The collar leaf ends, when the collar is buttoned, shall be centered on the left front plait and shall neither touch nor open more than 1/2 inch.	301 or 101		14-16 stitches per button 20-24 stitches per button
(c) Sew a button, on each shoulder, in line with the corresponding buttonhole in the shoulder loop.	301 or 101		14-16 stitches per button 20-24 stitches per button	

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TABEL I. Sewing Operations (Cont)

No.	Description of Operation	Stitch Type	Seam and Stitching Type	Stitches Per Inch
	(d) Sew a button on each pocket in line with the corresponding flap buttonhole.	301 or 101		14-16 stitches per button 20-24 stitches per button
	(e) Sew two buttons on each cuff, 1/2 inch from the edge, in line with the corresponding buttonholes.	301 or 101		14-16 stitches per button 20-24 stitches per button
28	<p><u>Clean, press, and fold shirt</u></p> <p>(a) All ends of threads shall be trimmed. Loose threads shall be removed from shirt. All spots, stains, and shade tickets shall be removed.</p> <p>(b) One shade ticket shall be put in the right pocket.</p> <p>(c) Before the shirt is buttoned and folded, the entire shirt (collar, cuffs, sleeves, fronts, back, and yoke) shall be pressed with a heated pressing iron or machine. The sleeve pleats shall be pressed from the bottom to the top of the sleeve at the center back end of the shoulder loop. The pressing creases on the cuffs and the gloss throughout the shirt shall be removed. A steam inflated bag type machine shall not be used.</p>			

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TABEL I. Sewing Operations (Cont)

No.	Description of Operation	Stitch Type	Seam and Stitching Type	Stitches Per Inch
	(d) Each shirt shall be buttoned and neatly folded with the collar flat.			

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TABLE 11. List of Parts

*	Material	Pattern Part	Parts To Be Cut
*	Basic fabric (see 3.1.1)	Front part	2
		Back part	1
		Cuff	4
		Sleeve placket	2
		Topcollar leaf	1
		Undercollar leaf	1
		Undercollar stand	1
		Sleeve placket facing	2
		Pockets	2
*		Pocket flaps	4 $\frac{1}{2}$
		Pencil pocket	1
		Shoulder loops	4
		Left front plait	1
		Back yoke	1
		Sleeve	2
*	Lining (see 3.1.2)	Back yoke lining	1
		Topcollar stand	1
*	Interlining (see 3.1.3)	Cuff interlining	2
		Collar leaf interlining	1
		Collar stand interlining	1
*	Facing (see 3.1.4)	Right front button facing	1

* $\frac{1}{2}$ If the alternate method is used, two shall be cut.

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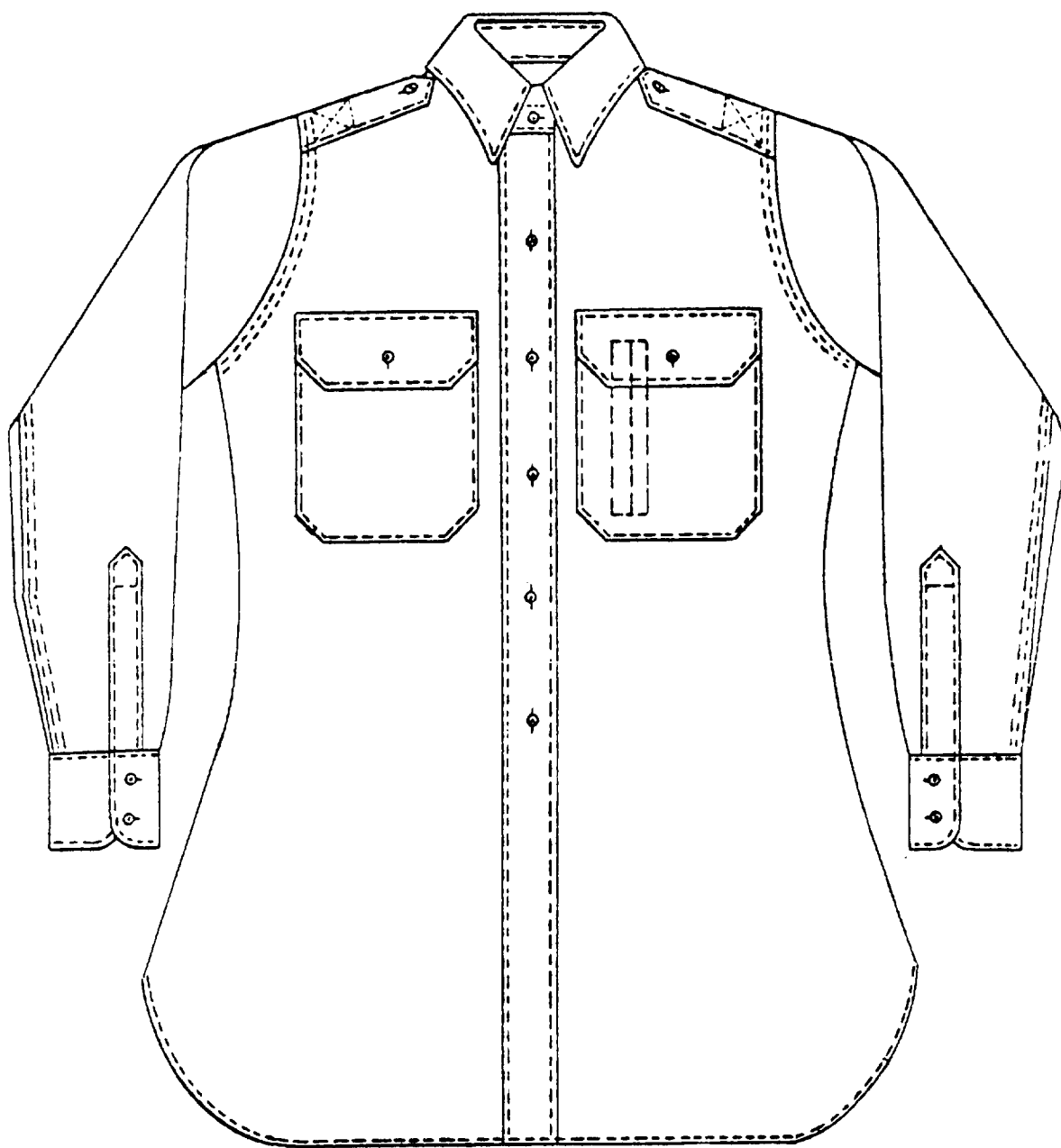


FIGURE 1. Shirt

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- * 3.5 Finished measurements. The finished measurements of the shirt shall be as specified in table III. The finished measurements of the shirt specified in table III shall be taken as follows: Measure the collar, with the collar in a flat position, from the center of the collar button to the front end of the buttonhole. Measure the 1/2 chest, with the shirt buttoned, from the folded edge to the folded edge at the base of the armhole level. Measure the back length, at the center of the back, from the collar seam to the bottom edge of the shirt. Measure the sleeve length from the center of the back at collar seam, diagonally across the back to the lower edge of the back yoke, and down the sleeve to the bottom of the cuff.
- * 3.6 Identification of product. Each shirt shall have a contractor's label and a size label. The labels shall have colorfastness to dry cleaning as specified in DDD-L-20.
- * 3.6.1 Contractor's label. The contractor's label shall conform to type I, class 1 of DDD-L-20.
- * 3.6.2 Size label. The size label shall conform to type IV, class 2 of DDD-L-20. The marking on the size label shall be in 1/4-inch-high numerals. The marking on the size label, as shown in the following example, shall include the neck size, the sleeve length, and the stock number of the shirt.

15 x 33
STOCK NUMBER

- * 3.7 Workmanship. The shirt shall be clean, well-finished, and pressed.

4. QUALITY ASSURANCE PROVISIONS

- 4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract or order, the supplier 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 inspections set forth in the specification where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements.
- * 4.2 Quality conformance inspection
 - * 4.2.1 Individual inspection. As a final step in the supplier's production control plan, before formation of a lot and prior to folding the shirt for packaging, each finished shirt shall be buttoned, pressed, laid out flat on a table, and examined for the selected defects listed in MIL-STD-1492. Any shirt that contains a selected defect shall not be included in the end item lot.

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* TABLE III. Finished Measurements

Neck Size and Sleeve Length	Finished Measurements in Inches $\frac{1}{2}$ / $\frac{2}{2}$			
	Collar	1/2 Chest	Back Length	Sleeve Length
13 x 29	13-1/2	19-5/8	30-1/2	29-1/2
13 x 30	13-1/2	19-5/8	30-1/2	30-1/2
13 x 31	13-1/2	19-5/8	30-1/2	31-1/2
13 x 32	13-1/2	19-5/8	30-1/2	32-1/2
13 x 33	13-1/2	19-5/8	30-1/2	33-1/2
13 x 34	13-1/2	19-5/8	30-1/2	34-1/2
13-1/2 x 29	14	20-1/4	30-1/2	29-1/2
13-1/2 x 30	14	20-1/4	30-1/2	30-1/2
13-1/2 x 31	14	20-1/4	30-1/2	31-1/2
13-1/2 x 32	14	20-1/4	30-1/2	32-1/2
13-1/2 x 33	14	20-1/4	30-1/2	33-1/2
13-1/2 x 34	14	20-1/4	30-1/2	34-1/2
13-1/2 x 35	14	20-1/4	31	35-1/2
13-1/2 x 36	14	20-1/4	31	36-1/2
13-1/2 x 37	14	20-1/4	31-1/2	37-1/2
14 x 29	14-1/2	20-7/8	30-3/4	29-1/2
14 x 30	14-1/2	20-7/8	30-3/4	30-1/2
14 x 31	14-1/2	20-7/8	30-3/4	31-1/2
14 x 32	14-1/2	20-7/8	30-3/4	32-1/2
14 x 33	14-1/2	20-7/8	30-3/4	33-1/2
14 x 34	14-1/2	20-7/8	30-3/4	34-1/2
14 x 35	14-1/2	20-7/8	31-1/4	35-1/2
14 x 36	14-1/2	20-7/8	31-1/4	36-1/2
14-1/2 x 29	15	21-5/8	30-3/4	29-1/2
14-1/2 x 30	15	21-5/8	30-3/4	30-1/2
14-1/2 x 31	15	21-5/8	30-3/4	31-1/2
14-1/2 x 32	15	21-5/8	30-3/4	32-1/2
14-1/2 x 33	15	21-5/8	30-3/4	33-1/2
14-1/2 x 34	15	21-5/8	30-3/4	34-1/2
14-1/2 x 35	15	21-5/8	31-1/4	35-1/2
14-1/2 x 36	15	21-5/8	31-1/4	36-1/2
15 x 30	15-1/2	22	31	30-1/2
15 x 31	15-1/2	22	31	31-1/2
15 x 32	15-1/2	22	31	32-1/2
15 x 33	15-1/2	22	31	33-1/2
15 x 34	15-1/2	22	31	34-1/2
15 x 35	15-1/2	22	31-1/2	35-1/2
15 x 36	15-1/2	22	31-1/2	36-1/2
15 x 37	15-1/2	22	32	37-1/2

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* TABLE III. Finished Measurements (Cont)

Neck Size and Sleeve Length	Finished Measurements in Inches <u>1/</u> <u>2/</u>			
	Collar	1/2 Chest	Back Length	Sleeve Length
15-1/2 x 30	16	22-7/8	31	30-1/2
15-1/2 x 31	16	22-7/8	31	31-1/2
15-1/2 x 32	16	22-7/8	31	32-1/2
15-1/2 x 33	16	22-7/8	31	33-1/2
15-1/2 x 34	16	22-7/8	31	34-1/2
15-1/2 x 35	16	22-7/8	31-1/2	35-1/2
15-1/2 x 36	16	22-7/8	31-1/2	36-1/2
16 x 30	16-1/2	23-3/4	31	30-1/2
16 x 31	16-1/2	23-3/4	31	31-1/2
16 x 32	16-1/2	23-3/4	31	32-1/2
16 x 33	16-1/2	23-3/4	31	33-1/2
16 x 34	16-1/2	23-3/4	31	34-1/2
16 x 35	16-1/2	23-3/4	31-1/2	35-1/2
16 x 36	16-1/2	23-3/4	31-1/2	36-1/2
16-1/2 x 31	17	24-3/4	31	31-1/2
16-1/2 x 32	17	24-3/4	31	32-1/2
16-1/2 x 33	17	24-3/4	31	33-1/2
16-1/2 x 34	17	24-3/4	31	34-1/2
16-1/2 x 35	17	24-3/4	31-1/2	35-1/2
16-1/2 x 36	17	24-3/4	31-1/2	36-1/2
17 x 32	17-1/2	25-3/4	31-1/4	32-1/2
17 x 33	17-1/2	25-3/4	31-1/4	33-1/2
17 x 34	17-1/2	25-3/4	31-1/4	34-1/2
17 x 35	17-1/2	25-3/4	31-3/4	35-1/2
17 x 36	17-1/2	25-3/4	31-3/4	36-1/2
17-1/2 x 32	18	26-3/4	31-1/2	32-1/2
17-1/2 x 33	18	26-3/4	31-1/2	33-1/2
17-1/2 x 34	18	26-3/4	31-1/2	34-1/2
17-1/2 x 35	18	26-3/4	32	35-1/2
17-1/2 x 36	18	26-3/4	32	36-1/2
18 x 32	18-1/2	27-3/4	31-3/4	32-1/2
18 x 34	18-1/2	27-3/4	31-3/4	34-1/2

1/ The finished measurements shall be taken as specified in 3.5.

2/ The tolerances shall be plus 1/4 or minus 1/8 inch for the collar, plus or minus 1/2 inch for the 1/2 chest and the back length, and plus 1/4 or minus 1/2 inch for the sleeve length.

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- * 4.2.2 Sampling inspection. After the finished shirts have been subjected to the individual inspection specified in 4.2.1, the finished shirts shall be subjected to sampling inspection. The sampling inspection shall consist of the end item examination and of the dimensional examination as specified for dress shirts in MIL-STD-1492. The occurrence of defects during the sampling inspection shall not exceed the applicable point value or defect limit specified in MIL-STD-1492.
- * 4.3 Examination of preparation for delivery. Shipping containers fully prepared for delivery except for closure shall be subjected to the examination of preparation for delivery specified in MIL-STD-1492. The occurrence of defects during the examination of preparation for delivery shall not exceed the applicable point value or defect limit specified in MIL-STD-1492.
- * 5. PREPARATION FOR DELIVERY
- * 5.1 Preservation and packaging. Preservation and packaging shall be level A or C as specified (see 6.2).
 - * 5.1.1 Level A. Each fully buttoned shirt shall be folded to approximate dimensions of 14 by 10-1/2 inches. The folded shirt shall be secured with tin or nickel-plated-brass pins, aluminum clips, or plastic fasteners and placed in a snug-fitting bag. The bag shall be made of polyethylene film that is 0.00125 inch thick (minimum). All seams and closures of the bag shall be effected by heat sealing with the final heat-seal closure made as close as possible to the open end (see 5.3.2). A 1/4-inch-diameter hole shall be made at one corner of each polyethylene bag to allow excess air to escape. As an option, the final closure of the polyethylene bag may be accomplished by means of a tuck or reverse flap.
 - * 5.1.2 Level C. Shirts shall be packaged to afford adequate protection against deterioration and physical damage during shipment from the supply source to the first receiving activity. The supplier may use his standard practice provided it meets the requirements for this level.
- * 5.2 Packing. Packing shall be level A, B, or C as specified (see 6.2).
 - * 5.2.1 Level A. Twenty-four shirts of one size only, packaged as specified, shall be packed in a fiberboard shipping container conforming to class weather resistant, grade V2s, style RSC of PPP-B-536. The container shall be constructed, closed, and reinforced in conformance to the requirements of the box specification and the appendix of same. Level A packages shall be packed flat (two in length, one in width, and four in depth). The inside dimensions of each shipping container shall approximate 23 inches in length, 15 inches in width, and 15 inches in depth. (Approximate dimensions are furnished as a guide only.) Toward the end of the contract or when there are less than the quantity of shirts of the same size required per shipping container, mixed sizes (see 5.3.1) may be packed within the same container.

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- * 5.2.2 Level B. Thirty shirts of one size only, packaged as specified, shall be packed in a fiberboard shipping container assembled and closed in accordance with class domestic, grade 275, size 3A of MIL-B-17757. The fiberboard for the liner shall conform to type CF, class domestic, variety DW, grade 200 of MIL-B-17757. Level A packages shall be packed, front up, collars alternated front to rear, two in length, one in width, and fifteen in depth within the shipping container. Each container shall have its contents completely covered on the top and bottom with a sheet of 30-pound minimum basis weight paper conforming to grade B of UU-P-268. Toward the end of the contract or when there are less than the quantity of shirts of the same size required per shipping container, mixed sizes (see 5.3.1) may be packed within the same container.
- * 5.2.3 Level C. Shirts packaged as specified shall be packed in a manner to insure acceptance by the carrier and safe delivery at destination at the lowest transportation rate for such supplies. Containers shall be in accordance with rules of carriers and regulations applicable to the mode of transportation.
- * 5.3 Marking. In addition to any special marking required by contract or order, shipping containers shall be marked in accordance with MIL-STD-129.
- * 5.3.1 Mixed sizes. White paper labels, 5 by 4 inches, with the words "mixed sizes" plainly stamped or printed thereon and under these words legibly printed or stamped the correct quantity and sizes of shirts contained therein shall be attached to the end and the side of each shipping container packed with mixed sizes.
- * 5.3.2 Polyethylene packages. Each package (see 5.1.1) shall have the stock number, the nomenclature, the size, and the quantity of shirts contained therein legibly printed or stamped in black directly on the bag across the center face or on a paper label placed within the bag so that it is readable through the polyethylene.

6. NOTES

- 6.1 Intended use. The shirts covered by this specification are intended for use by the male personnel of the Department of the Air Force.
- 6.2 Ordering data. Procurement documents should specify the following:
 - (a) Title, number, and date of this specification
 - (b) Neck size and sleeve length required (see 1.2)
 - (c) Government furnished patterns (see 3.4)
 - * (d) Selection of applicable levels of preservation and packaging and packing (see 5.1 and 5.2).

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- * 6.3 Samples of color shades. Samples of color shades may be obtained from the procuring activity or as directed by the contracting officer.
- * 6.4 Figure 1. Figure 1 shows general style of the shirt and is for information only. In the event of conflict between the figure and the text of this specification, the text shall apply.

6.5 Annotation for changes. The margins of this specification are marked with asterisks to indicate where changes from the previous issue were made. This was done as a convenience only, and the Government will assume 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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