

INCH-POUND

MIL-J-87035D
4 August 1994
SUPERSEDING
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22 June 1989

MILITARY SPECIFICATION

JUMPER, MAN'S (BLUE, DRESS)

This specification is approved for use by the Navy Clothing and Textile Research Facility and the Department of the Navy. This specification is available for use by all department and agencies of the Department of Defense.

1 SCOPE

1.1 Scope This specification covers the requirements for a wool serge jumper.

1.2 Classification The jumper shall be of one type only in the following sizes and lengths (see 6.2)

Sizes 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, and 52

Lengths Extra Short, Short, Regular, Long, and Extra Long

2 APPLICABLE DOCUMENTS

2.1 Government documents

2.1.1 Specifications, standards, and handbooks The following specifications, standards and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents shall be those listed in the issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitations (see 6.2).

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to Defense Personnel Support Center, Clothing and Textiles Directorate, Attn DPSC-FQSD, 2800 South 20th Street, Philadelphia, PA 19101-8419, by using the Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A

FSC 8405

DISTRIBUTION STATEMENT A

Approved for public release, distribution is unlimited

MIL-J-87035D**SPECIFICATIONS****FEDERAL**

- A-A-50198 - Thread, Gimp, Cotton, Buttonhole
- A-A-50199 - Thread, Polyester Core Cotton, or Polyester-Covered
- A-A-52016 - Cloth, Polyester, Polyester and Cotton, Polyester and Rayon, for Pockets
- A-A-52094 - Thread, Cotton
- DDD-L-20 - Label, For Clothing, Equipage and Tentage (General Use)
- DDD-T-86 - Tape, Textile, Cotton, General Purpose (Unbleached, Bleached, or Dyed)
- NN-P-71 - Pallet, Material Handling, Wood, Stringer Construction, 2 Way and 4 Way (Partial)

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- MIL-C-368 - Cloth, Satin, Rayon and Cloth, Twill Rayon
- MIL-C-823 - Cloth, Serge, Wool, Wool and Nylon, Polyester and Wool
- MIL-P-15011 - Pallets, Material Handling, Wood, Post Construction, 4-Way Entry
- MIL-B-17143 - Buttons, Insignia (Anchor, Plastic, Black)
- MIL-B-17757 - Boxes, Shipping, Fiberboard (Modular Sizes)
- MIL-C-21852 - Cloth, Taffeta, Nylon

STANDARDS**FEDERAL**

- 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-147 - Palletized Unit Loads
- MIL-STD-2073-1 - DOD Materials Procedures for Development and Application of Packaging Requirements
- MIL-STD-2073-2 - Packaging Requirement Codes

(Unless otherwise indicated, copies of Federal and military specifications, standards, and handbooks are available from the Standardization Documents Order Desk, Bldg 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094)

2 1 2 Other Government documents, drawings, and publications The following other Government documents, drawings, and publications form a part of this document to the extent specified herein Unless otherwise specified, the issues are those cited in the solicitation

**RULES AND REGULATIONS UNDER THE TEXTILE
FIBER PRODUCTS IDENTIFICATION ACT**

(Copies may be obtained without charge from the Federal Trade Commission, Washington, DC 20580-0001)

U S POSTAL SERVICE MANUAL

(Copies of the manual may be obtained from the Superintendent of Documents, U S Government Printing Office, Washington, D C 20402-0001)

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DRAWING

**NAVY CLOTHING AND TEXTILE RESEARCH FACILITY STITCH
ENLARGEMENT DRAWING NUMBERS 16-1-872 & 16-1-16021**

(Copies of the stitch enlargement required by contractors in connection with specific procurement functions should be obtained from the procuring agency or as directed by the contracting officer)

2.2 Non-Government publications The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues of the documents which are DoD-adopted shall be those listed in the issue of the DODISS cited in the solicitation. Unless otherwise specified, the issues of documents not listed in the DODISS are the issues of the documents cited in the solicitation (see 6.2).

NATIONAL MOTOR FREIGHT TRAFFIC ASSOCIATION, INC , AGENT

National Motor Freight Classification

(Application for copies should be addressed to the American Trucking Association, ATTN Traffic Department, 1616 P Street, N W , Washington, DC 20036-1404)

UNIFORM CLASSIFICATION COMMITTEE, AGENT

Uniform Freight Classification

(Application for copies should be addressed to the Uniform Classification Committee, Room 1106, 222 South Riverside Plaza, Chicago, Illinois 60606-5808)

THE COLOR ASSOCIATION OF THE UNITED STATES

**Department of Defense Standard Shades for Sewing Threads
Department of Defense Standard Shades for Buttons**

(Application for copies should be addressed to the Color Association of the United States, 409 W 44th St., New York, NY 10036)

**TECHNICAL MANUAL OF THE AMERICAN ASSOCIATION OF TEXTILE
CHEMISTS AND COLORISTS**

**Method No. 8 Colorfastness to Crocking AATCC Crockmeter Method
Method No. 16 Colorfastness to Light General Method**

(Applications for copies should be addressed to the AATCC National Headquarters, P O Box 12215, Research Triangle Park, NC 27709-2215.)

(Non-Government standards and other publications are normally available from the organizations that prepare or distribute the documents. These documents also may be available in or through libraries or other informational services.)

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 takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

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3 REQUIREMENTS

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

3.2 First article When specified, the contractor shall furnish sample unit(s) for first article inspection and approval (see 4.3 and 6.2).

3.3 Material

3.3.1 Basic material The basic material for the jumper shall be wool, serge, 15 ounces, blue 3346, conforming to type I, class 5 of MIL-C-823. The piece no shall be 89096.

3.3.2 Twill cloth The cloth for the pocketing shall be twill cloth conforming to class 1 of A-A-52016. The color shall approximate black 423.

3.3.3 Tape The cotton tape for the trim on the collar and cuffs shall be white, 3/16 inch, conforming to type II, class 2 of DDD-T-86. The tape for the hanger loop shall be black, 1/2 to 5/8 inch, conforming to type I or type II, class 3 of DDD-T-86. Colorfastness to bleaching is not required.

3.3.4 Binding The binding shall be nylon taffeta cloth conforming to type IV of MIL-C-21852. The color shall be black. The binding shall be cut on a 45 (\pm 5) degree angle in strips of 7/8 to 1 inch wide. The ends of the strips shall be joined together by stitch type 301 and seam type Ssa-1, with 10-12 stitches per inch. As an alternate, a rayon binding can be used, which shall conform to class 1 of MIL-C-368.

3.3.5 Buttons The plastic, insignia, sewing-hole-type buttons shall be 25-line, anchor emblem, black shade BT, cable no 62001, in accordance with the Department of Defense Standard Shades for Buttons, and shall conform to class 1 of MIL-B-17143.

3.3.6 Thread

3.3.6.1 Thread, polyester-covered The thread used for seaming and stitching shall match shade black AA, CA 66043 except where shade white, AH CA 66050 is indicated. The thread shall conform to ticket numbers 50 and 70, 2 or 3 ply of A-A-50199. Each cable number shall conform with the Department of Defense Standard Shades for Sewing Threads. The thread for the crow tack shall be as specified in 3.3.6.1.3.

3.3.6.1.1 Thread, cotton alternate As an alternate to the thread specified in 3.3.6.1, a cotton thread may be used that conforms to type I, black AA, cable number 66043, ticket numbers 50 and 70, 3 ply, or type I, white AH, cable number 66050, ticket number 50, 3 ply of A-A-52094. Each cable number shall conform with the Department of Defense Standard Shades for Sewing Threads.

3.3.6.1.2 Thread, monofilament alternate As an alternate to the white thread specified in 3.3.6.1 and 3.3.6.1.1, a continuous monofilament transparent thread may be used in stitching on the white trim taping of the collar and cuffs only. The monofilament thread shall be a high-tenacity soft nylon equal to or better than Synthetic Thread Company's Sew-Kleer, size 19. Prior to the use of the "equal" item, the contractor shall submit the item to the contracting officer with supporting data for approval (see 6.5 and 6.6).

3.3.6.1.3 Thread for crow tack The thread for the crow tack shall be type III, black AA, CA 66043, ticket no B or C, 3 ply, or ticket no 30, 2 ply of A-A-52094.

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3 3 6 1 4 Thread for star Needle (embroidery) yarn shall be 100 percent mercerized, cotton-wrapped, 150 denier/2 ply polyester core, or Coats and Clark, 00 TEX 24 brilliant, or equal The bobbin thread shall be of a quality suitable for the purpose intended, or shall equal Coats and Clark L-V-15. The embroidery yarn shall be white to match the Navy's reference sample The bobbin thread shall be white or natural (undyed) Prior to the use of the "equal" item, the contractor shall submit the item to the contracting officer with supporting data for approval (see 6.5 and 6.6)

3 3 6 1 5 Automatic pocket machine. When an automatic pocket machine using a 101 stitch type is used, the thread shall be type III, ticket no A, 3 ply, conforming to A-A-52094 When an automatic pocket machine using a 301 stitch type is used, the thread shall be ticket number 50, 2 or 3 ply, conforming to A-A-50199 The cable number shall be as stated in 3.3.6.1

3 3 6.2 Colorfastness of thread The dyed thread shall show colorfastness to wet-dry cleaning, perspiration, and light equal to or better than the standard sample when tested as specified in A-A-52094 or A-A-50199 As a limit of acceptability, or when no standard sample is available, the dyed thread shall show good colorfastness to wet-dry cleaning, perspiration, and light when tested as specified in A-A-52094 or A-A-50199

3 3 7 Gimp The cotton gimp used for reinforcing the buttonholes shall be dyed to match shade black AA, cable number 66043, and shall conform to type I or II, size number 8 of A-A-50198

3 3 7 1 Colorfastness of gimp The dyed gimp shall show colorfastness to wet-dry cleaning equal to or better than the standard sample when tested as specified in A-A-50198 When no standard sample is available, the dyed gimp shall show "good" colorfastness to wet-dry cleaning when tested as specified in A-A-50198

3 3 8 Labels

3.3.8.1 Combination label Each jumper shall have a combination label listing identification, personnel, and instruction data, and shall conform to type VI, classes 10 and 14 of DDD-L-20 The label marking shall show colorfastness to dry cleaning The inscription and format shall be as follows

NAME
 SERVICE NUMBER
 JUMPER, MAN'S (BLUE DRESS)
 FIBER CONTENT. 100% WOOL
 CONTRACT NUMBER DLA 100-00-0-0000 (EXAMPLE)
 STOCK NUMBER 8405-00-000-0000 (EXAMPLE)
 NAME OF CONTRACTOR
 NAME OF MANUFACTURER (IF OTHER THAN CONTRACTOR)

CLEANING INSTRUCTIONS

DRY CLEANING ONLY
 DO NOT REMOVE THIS LABEL
 PRESS GARMENT INSIDE OUT

3 3 8 2 Size label The size label shall conform to type VI, class 2 of DDD-L-20 The inscription and format shall be as follows

34 R (EXAMPLE)
 8405-00-000-0000

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NOTE: The lengths Extra-Short, Short, Regular, Long, and Extra Long may be abbreviated as XS, S, R, L, and XL

3.3.8.3 Removable size ticket Each jumper shall have a commercial-type size ticket attached to the outside of the lower left sleeve. The ticket shall be 1-1/2 inches long and 2 inches high, and made of a suitable plain white cardboard. The corners of the ticket may be double-perforated for ease in tacking. The size (for example, 38 R) shall be printed or stamped on the upper left hand corner in black or blue ink. The lettering for the size shall be 1/4 inch in height. Abbreviations for lengths shall be allowed in accordance with 3.3.8.2.

3.3.8.4 Label/tag Each jumper shall be individually bar-coded with the type VIII, class 17 label/tag of DDD-L-20. This label/tag shall be located so that it is completely visible on the packaged garment and causes no damage to the garment.

3.4 Design The jumper shall be of the pull-over type, having a front and back yoke, a plain square sailor collar, a "V" neck, and one-piece sleeves with 2-button cuffs. There shall be a double-welt pocket on the outside left front yoke and a button-down patch pocket on the right inside front. The collar and cuffs shall be trimmed with three rows of white tape. The collar shall also have a machine-embroidered white star in each lower corner.

3.4.1 Figures The figures are furnished for information purposes only. When inconsistencies exist between the written specification and the figures, the written specification shall govern.

3.5 Patterns Standard patterns to be used to cut working patterns will be furnished by the Government (see 6.3). The working patterns shall be identical to the Government patterns. Neither the Government patterns nor the working patterns shall be altered in any way, except that additional notches for use during construction are permitted on the working patterns. Also, minor modifications are permitted where necessary when using automatic equipment. These modifications shall not alter the dimensional, serviceability, or appearance requirements cited in the specification. The standard patterns provide an allowance of 1/2 inch for sleeve, armhole, and side seams, 3/8 inch seam allowance for shoulders, yokes, and collar at neck joining seams, and 1/4 inch seam allowance for joining outer edges of collar and sleeves to cuffs. Unless otherwise indicated in Table I, seams shall be in accordance with these seam allowances.

3.5.1 Pattern parts The component parts for the jumper shall be cut from the material specified in accordance with the following pattern parts:

<u>Basic material</u>	<u>Pattern parts</u>	<u>Cut parts</u>
Cloth, Serge, Wool	Back	1
	Front	1
	Sleeves	2
	Back yoke	1
	Front yoke	1
	Top collar	1
	Under collar	1
	Cuffs	2
	Inside patch pocket	1
	Flap for inside patch pocket	2
	Pocket welt	1
	Pocket facing	1
	Cloth, Twill	Outside breast pocket

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3 6 Construction

3.6 1 Stitches, seams and stitchings Stitch, seam and stitching types specified in Table I shall conform to FED-STD-751. Whenever two or more methods for seam or stitch types are given for the same part of the operation, any one may be used. Seam allowance shall be maintained with seams sewn so that no raw edges, runoffs, twists, pleats, puckers or open seams result. All seams shall start and finish evenly. Thread tension shall be maintained so that there is no tight or loose stitching. Where stitch type 401 or 101 is used, the looper (underthread) shall be on the inside of the jumper. Unless otherwise specified topstitching and edge stitching shall be 1/16 to 1/8 inch from the edge. Double needle stitching shall be 1/4 (\pm 1/16) inch gauge with the outer row of stitching 1/16 to 1/8 inch from the edge. During the overedge operations, a knife shall be used for trimming off loose thread ends. Buttonholes shall be cut clean and the stitching shall be securely caught in the fabric. Use of additional basting to facilitate manufacturing is acceptable provided it does not show on the outside.

3 6 2 Thread breaks and end of seams End of all seams and stitching shall be backtacked not less than 3/8 inch. The ends of a continuous line of stitching when not caught on other seams or stitching (except label) shall be overlapped not less than 1/2 inch. The ends of the label stitching shall be overlapped not less than 3 stitches. Thread breaks (all stitch types) shall be repaired by stitching back of the break not less than 1/2 inch. Skipped stitches or thread breaks on 401 stitch type may be repaired by using 301 stitch type. Where stitch type 401 or 101 is permitted as an option, it shall not be used unless ends are caught in other seams or stitching. Use of additional basting to facilitate manufacturing is acceptable.

3 6 3 Stitches per inch The minimum and maximum number of stitches per inch shall be as specified in Table I.

3 7 Manufacturing operations requirements The jumpers shall be manufactured in accordance with all operation requirements specified in Table I. The contractor is not required to follow the exact sequence of operations as specified, provided the finished jumpers are identical to those produced by following the sequence of operations as specified in Table I. Minor modifications are permitted where necessary when using automatic equipment. These modifications shall not alter the dimensional, serviceability, or appearance requirements cited in the specification.

3 7 1 Pressing All pressing operations referenced in Table I shall be performed by using a heated pressing iron or steam pressing machine.

3 7 2 Shade and size marking The component parts shall be marked to ensure a uniform shade and size throughout the jumper. Any method may be used except

- a Corrosive metal fastening devices
- b Sew-on shade tickets
- c Adhesive-type tickets which discolor, or whose adhesive sticks to the material upon removal of the tickets

NOTE: The use of ink and numbering machine, rubber stamp, or pencil is acceptable provided the numbers do not show through the outside of the jumper. Whenever possible, numbers shall be covered by the seam allowance.

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3 7 3 Abbreviations in table of operations The abbreviations used in Table I are as follows

Stch	-	Stitch
in	-	inch
Ndl	-	Needle
Bob	-	Bobbin
Lpr	-	Looper
Mchne	-	Machine
Brtck	-	Bartack
Comrcl	-	Commercial
smlr	-	similar
Btnhl	-	Buttonhole
incl	-	including
dbl	-	double
wh	-	white
blk	-	black

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TABLE I.
CONSTRUCTION OF JUMPER

NO.	OPERATION	STCH TYPE	SEAM/ STCH TYPE	STCH PER INCH	THREAD	
					NDL	BOB LPR
1	<p><u>Cutting</u></p> <p>a. The jumper shall be cut in strict accordance with patterns furnished, which shall show size, shape, and directional lines for cutting, and notches and pattern marks for proper assembly of parts. Perforated paper markers are prohibited on wool.</p> <p>b. All component parts shall be cut from one piece of material, except inside pocket and inside pocket flap, which may be cut from ends. Parts cut from ends shall be a good match to the main assembly.</p>					
2	<p><u>Replacement of defective components</u></p> <p>During the spreading, cutting, and manufacturing process, components with material defects or damages that are classified as defects in section 4 shall be removed from production and replaced with nondefective and properly matched components.</p>					
3	<p><u>Shade and size marking</u> (see 3 7 2)</p> <p>All parts shall be marked or ticketed to ensure a uniform shade, size, and proper assembly throughout the garment, except those parts cut from ends.</p>					
4	<p><u>Make outside pocket</u></p> <p>Pocket welts shall be formed with an automatic double welt pocket machine. Each welt shall finish 1/8 inch wide. Welts shall be even and uniform with no raw edges, distortion, gapping, or overlapping at the ends of the pocket. The welt pocket shall be made on the left front only.</p> <p>a. Position pocket facing on the inside of the pocket piece opposite the welt location marks. Turn under inner edge of facing or overedge and stitch to the pocket piece. (If cut on selvage, facing need not be overedged)</p> <p>b. Position pocket piece on inside of yoke in accordance with pattern marks with the long portion of the pocket below welt marks.</p> <p>c. Insert welt piece in the pocket machine. Form welts.</p> <p>d. Turn welts to finished position. Turn lower raw edge of welt under and stitch to pocket piece. Caution shall be exercised in performing this operation so that no distortion or bulging results.</p>	<p>503, 504 or 602 & 301 or 401</p> <p>101 or 301</p> <p>301 or 401</p>	<p>LSd-1</p> <p>LSbj-1</p> <p>pocket mchine</p> <p>LSd-1</p>	<p>12-14</p> <p>12-14</p> <p>12-14</p>	<p>70</p> <p>50</p> <p>50</p> <p>A</p> <p>50</p> <p>50</p> <p>50</p> <p>50</p>	<p>70</p> <p>50</p> <p>70</p> <p>-</p> <p>50</p> <p>70</p>

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TABLE I.
CONSTRUCTION OF JUMPER - (contd.)

NO.	OPERATION	STCH TYPE	SEAM/ STCH TYPE	STCH PER INCH	THREAD NDL	BOB LPR
	e Topstitch 1/16 inch below lower welt through all plies the length of the pocket and 1 or 2 stitches beyond the ends of the pocket	301	LSca-2 (b)	12-14	50	50
	f Turn up pocket piece matching top edges and close sides of pocket 3/8 inch from the edge.	301 or 401	SSa-1	12-14	50 50	50 70
	g Topstitch 1/16 inch above upper welt through all plies the length of the pocket and 1 or 2 stitches beyond the ends of the pocket	301		12-14	50	50
5	<u>Finish outside pocket</u> a Make a uniform crowsack with 3 pointed rays at each end of pocket opening. The crowsacks shall measure 3/4 (\pm 1/16) inch between tips of the two opposite rays. The crowsack shall be stitched with the center ray pointed horizontally and the two opposite rays pointed vertically. The three rays shall be equal in length. The crowsack stitching shall be executed in accordance with stitch enlargement number 16-1-872 and shall completely cover the prescribed background design area in a close, dense and tightly drawn manner to produce a clear, sharp execution of the design with no background cloth visible. The raised area of the design shall be equal to the reference sample. Crowsacks at ends of opening shall be made through the yoke, welt ends, and shall be set within 1/16 inch of the square ends of the pocket openings, without extending into the welts. b For sizes 30 thru 36, the finished pocket shall measure 3-1/8 (\pm 1/4) inches wide at the opening and shall be not less than 3-3/4 inches or more than 4-1/4 inches deep. For sizes 38 thru 52, the finished pocket shall measure 3-1/2 (\pm 1/4) inches wide at the opening and shall be not less than 4 inches deep or more than 4-1/2 inches deep.	crow- tack		126 per crow-tack	C or B	30 or B
6	<u>Make inside pocket and flap</u> a The pocket shall be one piece					
	b Overedge top of pocket	503 or 504 or 602	EFd-1	12-14	70	70
	c Hem top pocket 1-1/4 (\pm 1/8) inches	301 or 401	EFa-1	12-14	50 50	50 70
	d Edgestitch top of pocket 1/16 to 1/8 inch from folded edge	301 or 401	OSf-1	12-14	50 50	50 70

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TABLE I.
CONSTRUCTION OF JUMPER - (contd.)

NO.	OPERATION	STCH TYPE	SEAM/ STCH TYPE	STCH PER INCH	THREAD	
					NDL	BOB LPR
7	e Bind raw edges of pocket	301 or 401	BSc-1	12-14	50 50	50 70
	f The flap shall be two pieces Bind and stitch raw edges of pocket flaps together on all sides, binding the curved edge first	301 or 401	Smlr to BSc-1	12-14	50 50	50 70
	<u>Set inside pocket and flap</u>					
	a Double-stitch pocket to right inside front as indicated by marks on pattern, catching the binding within 1/8 inch from the outside edge of the tape	301	LSbj-2	12-14	50	50
	b Double-stitch top edge of pocket flap to right inside front with lower row of double stitching 3/8 (\pm 1/8) inch above top edge of pocket, catching the binding within 1/8 inch from the top edge of the tape.	301	LSbj-2	12-14	50	50
	c For sizes 30 thru 34, the flap shall finish 2-1/8 (\pm 1/8) inches in vertical length at the center and 4-1/4 (\pm 1/4) inches wide across the top edge For sizes 36 thru 52, the flap shall finish 2-1/8 (\pm 1/8) inches in vertical length at the center and 4-1/2 (\pm 1/4) inches wide across the top edge					
	d For sizes 30 thru 34 the pocket shall measure outside, 4 (\pm 1/4) inches wide and 4-3/8 (\pm 1/4) inches in vertical length For sizes 36 thru 52 the pocket shall measure outside, 4-1/4 (\pm 1/4) inches wide and 5 (\pm 1/4) inches in vertical length					
8	<u>Label</u> Stitch the combination label to the outside of the back yoke on all four sides, catching the top edge of the size label beneath the bottom side of the combination label The combination label shall be centered with the top edge of the label 1/2 (\pm 1/8) inch below neck seamline	301	LSbj-1	12-14	50	50
9	<u>Join body shoulder seam</u>					
	a Join body shoulder seams 3/8 inch from edge with the undersides of the front and back together	301 or 401	SSz-3 (a)	12-14	50 50	50 70
	b Spread seam open and flat and topstitch underside 1/8 inch gauge on each side of seam	301 or 401	SSz-3 (b)	12-14	50 50	50 70
	OR					
	c Operations 9b, 10b, 11b, and 11d may be performed in one operation by using a double needle lock stitch machine with a special plough foot					

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TABLE I.
CONSTRUCTION OF JUMPER - (contd.)

NO.	OPERATION	STCH TYPE	SEAM/ STCH TYPE	STCH PER INCH	THREAD	
					NDL	BOB LPR
10	<u>Join yoke shoulder seams</u>					
	a Join yoke shoulder seams 3/8 inch from edge, face to face	301 or 401	SSz-3 (a)	12-14	50 50	50 70
	b Spread seam open and flat and topstitch 1/8 inch gauge on each side of seam (see operation 9c)	301 or 401	SSz-3 (b)	12-14	50 50	50 70
11	<u>Join collar and yokes</u>					
	a Join undercollar to yoke along neck, face to face	301 or 401	SSz-3 (a)	12-14	50 50	50 70
	b Spread seam open and flat and topstitch 1/8 inch gauge on each side of seam (see operation 9c)	301 or 401	SSz-3 (b)	12-14	50 50	50 70
	c Join topcollar to body along neck with face of topcollar against inner side of body	301 or 401	SSz-3 (a)	12-14	50 50	50 70
	d Spread seam open and flat and topstitch 1/8 inch gauge on each side of seam (see operation 9c)	301 or 401	SSz-3 (b)	12-14	50 50	50 70
	e Stutch front yoke to body, face to face, along neck opening and continuously stutch undercollar to topcollar with a 5/16 to 3/8 inch seam Turn, working out points, and topstitch	301	SSe-2	12-14	50	50
	f Align neckline seams and stutch from shoulder seam to shoulder seam on the back yoke, superimposing the stutching over the seam topstitching	301	SSa-1	12-14	50	50
	g Stutch yokes to body along armholes 1/16 to 1/8 inch from edge	301 or 401	SSa-1	12-14	50 50	50 70
h Double topstitch the lower edge of yokes to body tucking in outside pocket bag if necessary to avoid catching it in the topstitching	301 or 401	LSd-2	12-14	50 50	50 70	
12	<u>Neck opening</u> Zigzag-stutch along "V" of neck opening extending 3/4 (+ 1/8) inch upward on each side Stutching shall be 1/8 inch wide and continuous	304 or 404	EFd-1	56-60	50	50
13	<u>Collar tape</u> a Double-stutch 1/8 inch gauge 3 rows of 3/16-inch wide, white, cotton, herringbone tape along edge of collar and body of neck opening Each row of tape shall be continuous without splicing The corners shall be square mitered Ends of tape shall extend 1/4 to 3/8 inch below bottom of neck opening	301	SSau-2	10-14	50 (wh)	50 (blk)

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TABLE I.
CONSTRUCTION OF JUMPER - (contd.)

NO.	OPERATION	STCH TYPE	SEAM/ STCH TYPE	STCH PER INCH	THREAD	
					NDL	BOB LPR
	<p>b The outer row of tape shall be 3/16 to 1/4 inch from edge with the others equally spaced 3/16 (\pm 1/32) inch from the first. The variation of spacing between the rows shall not be more than 1/16 inch</p> <p>c The outer row of tape shall be folded diagonally at the corners where it turns at the bottom of neck opening, and shall cover the bottom raw edges of all other rows of tape</p> <p>d Thread ends shall be trimmed as close as possible</p> <p>NOTE: Care shall be taken when trimming thread ends not to damage fabric or collar tape</p>					
14	<p>Crowtack</p> <p>a Make a crowtack with 3 pointed rays at the base of the "V" neck opening within 1/16 inch below the zigzag edge stitching. The center ray shall point downward and align vertically with the opening. The opposite rays shall point horizontally and measure 3/4 (\pm 1/16) inch between their tips. The three rays shall be equal in length. The crowtack stitching shall be executed in accordance with stitch enlargement number 16-1-872 and shall completely cover the prescribed background design area in a close, dense, and tightly drawn manner to produce a clear, sharp execution of the design with no background cloth visible. The raised area of the design shall be equal to the reference sample</p>	301	SSau-2	10-14	50 (wh)	50 (blk)
	<p>Star</p> <p>Make a 5-pointed, machine-embroidered star using a multi-head type embroidery machine, positioned on each corner of the outside of the top collar through one or both plies. The center of the star shall be 1-1/8 (\pm 1/16) inches from the inner edges of the inner side and bottom rows of tape, measured perpendicularly, and the top point shall be vertically positioned on the finished jumper, as worn. The star shall be sized to fit a circle 3/4 (\pm 1/32) inch in diameter. The overlay stitches shall be executed in accordance with stitch enlargement number 16-1-16021 and shall completely cover the prescribed background design area in a close, dense, and tightly drawn manner to produce a clear, sharp execution of the design with no cloth or underlay stitches visible. The raised area of the design shall be equal to the reference sample. The underlay stitches shall be inserted in the direction and manner shown on the stitch enlargement and shall not contain fewer than the number of stitches specified</p>	crow- tack		see S E number 16-1-872	C or B	30 or B
15	<p>Star</p> <p>Make a 5-pointed, machine-embroidered star using a multi-head type embroidery machine, positioned on each corner of the outside of the top collar through one or both plies. The center of the star shall be 1-1/8 (\pm 1/16) inches from the inner edges of the inner side and bottom rows of tape, measured perpendicularly, and the top point shall be vertically positioned on the finished jumper, as worn. The star shall be sized to fit a circle 3/4 (\pm 1/32) inch in diameter. The overlay stitches shall be executed in accordance with stitch enlargement number 16-1-16021 and shall completely cover the prescribed background design area in a close, dense, and tightly drawn manner to produce a clear, sharp execution of the design with no cloth or underlay stitches visible. The raised area of the design shall be equal to the reference sample. The underlay stitches shall be inserted in the direction and manner shown on the stitch enlargement and shall not contain fewer than the number of stitches specified</p>	Mchne embroi- -dered		see S.E number 16-1- 16021	see par 3.3.6 1 4	

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TABLE I.
CONSTRUCTION OF JUMPER - (contd.)

NO.	OPERATION	STCH TYPE	SEAM/ STCH TYPE	STCH PER INCH	THREAD NDL BOB LPR	
16.	<u>Sleeve opening</u> Clip both underarm seam allowances 3-3/8 (\pm 1/8) inches above the bottom raw edge of the sleeve piece indicated by notch. The clip shall not be more than 1/2 inch long. Fold sleeve opening over, turn under raw edge forming a 1/4 (\pm 1/8) inch hem and stitch along inner folded edge. Stitching shall continue from the sleeve bottom, parallel to the turned edge, to the base of the sleeve opening.	301	EFb-1	12-14	50	50
17	<u>Cuffs</u> a Cuffs shall be one piece					
	b Fold cuff in half lengthwise face to face and close ends 1/4 inch from the edge	301 or 401	SSa-1	12-14	50 50	50 70
	c Turn to the outside forcing out points, and stitch inner ply of cuff to the inside bottom edge of sleeve 1/4 inch from edge, taking up fullness of sleeve bottom in six pleats, 1/4 (\pm 1/16) inch deep and 1-1/4 (\pm 1/8) inches apart. The pleats on the outside of the sleeve shall be folded away from the top of the sleeve, towards the underarm seam.	301 or 401	SSa-1	12-14	50 50	50 70
	d Turn cuff to finished position and double stitch around cuff	301	LScg-3 (b) OSf-2 and SSe-3 (b)	12-14	50	50
	<u>NOTE</u> Stitching shall not continue beyond cuff into sleeve					
18	<u>Cuff tape</u> a Double-stitch 1/8 inch gauge 3 rows of 3/16 inch wide white tape spaced 3/16 (\pm 1/32) inch apart, centered horizontally on the cuff, and finished off at each end by a perpendicular stripe of white tape 3/16 inch wide across the ends of the horizontal stripes. The distance from the outer edge of perpendicular stripes to each end of the cuff shall be 1-1/2 (\pm 1/8) inches, but the difference from each end of the perpendicular stripe to the cuff edge shall not exceed 1/8 inch. The rows of tape shall be continuous without splicing. The raw edge at the end of the tape shall be turned under. <u>NOTE:</u> The corners shall be square mitered with no thread floats (see figure 2). This can be accomplished with a double needle split bar machine. b The cuff shall finish 2-1/8 (\pm 1/8) inches wide	301	SSau-2	10-14	50 (wh)	50 (blk)

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TABLE I.
CONSTRUCTION OF JUMPER - (contd.)

NO.	OPERATION	STCH TYPE	SEAM/ STCH TYPE	STCH PER INCH	THREAD	
					NDL	BOB LPR
19	<u>Sleeves, armholes, and sides</u> a. Set sleeve to armhole	301 or 401	SSa-1	12-14	50 50	50 70
	b Bind armhole, starting and finishing at side seams, catching yoke, body, and sleeve	301	BSc-1	12-14	50	50
	c Double-stitch sleeves to armhole with sleeves on top of body on the outside	301 or 401	LSb-2	12-14	50 50	50 70
	OR Use d as an alternate to a, b, and c					
	d Double-lap and double-stitch sleeves to armholes with sleeves on top of body on the outside	301 or 401	LSc-2	12-14	50 50	50 70
20	e Double-lap and double-stitch sleeves and side seams in one continuous operation, with fronts over back on outside The stitching should continue to 1/4 inch beyond the clip at sleeve opening (operation 16)	301 or 401	LSc-2	12-14	50 50	50 70
	<u>NOTE:</u> The sleeve opening shall finish lapped (not abutted)					
	<u>Bottom</u> a Bind bottom edge of jumper, forming a loop 1/2 (\pm 1/8) inch back from side seam with the runoff binding by turning the end onto itself and securely bartacking or tacking through all plies	301	BSc-1	12-14	50	50
	OR					
	b Bind bottom edge of jumper inserting the ends of a 1/2 inch wide black herringbone hanger loop tape at the back approximately 1/2 inch from the folded edge of the side seams	301 or 401	BSc-1	12-14	50 50	50 70
c The hanger loop tape shall be folded in half with the raw edges of tape hidden by the binding						
d Hem the bottom edge of the jumper to finish 1-1/2 (\pm 1/8) inches wide simultaneously folding prestitched hanger loop towards the top of the jumper and catching it in the hem stitching The hem stitching shall catch the binding within 1/8 inch from the top edge of the binding	301	EFa-1	12-14	50	50	
e The hanger loop shall have a 1-1/4 (\pm 1/4) inch opening						

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TABLE I.
CONSTRUCTION OF JUMPER - (contd.)

NO.	OPERATION	STCH TYPE	SEAM/ STCH TYPE	STCH PER INCH	THREAD NDL	BOB LPR
21	<p><u>Bartacks</u> a Make one bartack across each sleeve opening 2-3/4 (\pm 1/8) inches from top edges of cuff to secure lapped seam allowance of opening while catching ends of double-stitching</p> <p>b Bartack shall not be less than 3/8 inch long or more than 1/2 inch long</p>	Brtck or auto- matic loop tacker		21-28 per brtck 24-28	50 50	50 50
22	<p><u>Buttonholes</u> a Buttonholes shall be 3/4 inch long, cut-first, eyelet-end, square-bar-type, worked-over gimp The gimp shall be pulled through to the inside Purling shall finish on the outside A 1/4 inch bartack, made in a separate operation, shall be positioned over the end of the buttonhole opposite the eyelet, perpendicular to and centered with respect to the cut The tack shall securely catch the ends of the gimp and cover the width of the bar As an alternate, the buttonhole on the inside pocket flap may be a 3/4 inch cut after, eyelet-end, tapered-bar type, worked-over gimp and shall be without the 1/4 inch bartack The buttonholes shall be placed as follows</p> <p>(1) One buttonhole centered vertically on the pocket flap, with the inside edge of the eyelet 1/2 (\pm 1/8) inch above the bottom-most point on the curve of the flap</p> <p>(2) Two horizontal buttonholes on the upper side of each cuff, centered 1-1/8 (\pm 1/8) inches apart and 1/2 (\pm 1/8) inch from front edge when measured from inside edge of eyelets or buttonhole opening</p>	Btnhl and Brtck		45-50 per btnhl 18-22 per brtck	50 50	70 50
23	<p><u>Buttons</u> a Sew one 25-line button on the patch pocket hem to correspond with the buttonhole eyelet in the pocket flap</p> <p>b Sew two 25-line buttons 1/2 (\pm 1/8) inch from edge on the underflap side of each cuff to correspond with the cuff buttonhole eyelets</p>	101 or 301 101 or 301		20-22 per btn 14-16 per btn 20-22 per btn 14-16 per btn	50 50 50 50	50 50 50 50

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TABLE I.
CONSTRUCTION OF JUMPER - (contd.)

NO.	OPERATION	STCH TYPE	SEAM/ STCH TYPE	STCH PER INCH	THREAD NDL BOB LPR
24	<p>c The crown of the anchor shall point toward the bottom of the jumper. The stitching of the button shall fall in the grooves provided in the button, except for the one cross-over stitch.</p> <p><u>Removable size ticket</u> Attach a removable size ticket to the outside of the lower left sleeve, stitching at all four corners. As an alternate, a plastic barb attaching the removable size ticket to the hanger loop may be used, providing the entire ticket is visible below the bottom hem, and the ticket will not tear easily.</p>	Hand or Mchne		2-4 per tack 6-8 per tack	
25	<p><u>Cleaning and pressing</u></p> <p>a Trim and remove all loose ends of threads</p> <p>b Remove all shade tickets</p> <p>c Press jumper inside out using a heated iron or pressing machine</p> <p>d. Fold collar in half matching edges (star on star) and press to crease. Unfold, turn edges in (undercollar to undercollar) with crease at star and press flat. Crease from attaching seam to edge of flap (see Figure 3)</p> <p>e Press sleeve flat with underarm seam to front of jumper. Crease from shoulder seam to 5 inches back from edge of cuff</p> <p><u>NOTE:</u> Pleats should not be pressed</p> <p>f Press body of jumper flat, with side seams to front. Crease from edge of hem to bottom point of yoke</p> <p>g Remove gloss and impressions</p> <p>NOTE</p> <p>(1) Care shall be taken when trimming thread ends so that damage to fabric does not result</p> <p>(2) When buck pressing, apply vacuum only after unlocking. When automatic press is used, apply bottom steam and dry only</p> <p>(3) If impressions and gloss occur, the buck may be lowered in that area without locking, and the garment steamed and dried</p>				

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3.8 Table of measurements Unless otherwise specified, sizes and measurements for the finished jumper shall be in accordance with Table II (see Figure 1) All measurements and tolerances are expressed in inches

Table II.
Sizes and measurements

Size	Length	Chest (A)	Body Length (B)	Sleeve Length (C)	Collar Depth (D)	Collar Width (E)	Cuff Length (F)
30	XS	33	21-1/2	19-1/8	9-3/8	10-1/2	8-1/2
	S	33	23	20-3/8	9-3/8	10-1/2	8-1/2
	R	33	24-1/2	21-5/8	9-3/8	10-1/2	8-1/2
	L	33	26-1/2	23-1/8	9-3/8	10-1/2	8-1/2
	XL	33	28-1/2	24-5/8	9-3/8	10-1/2	8-1/2
32	XS	35	21-1/2	19-1/8	9-3/8	10-3/4	8-3/4
	S	35	23	20-3/8	9-3/8	10-3/4	8-3/4
	R	35	24-1/2	21-5/8	9-3/8	10-3/4	8-3/4
	L	35	26-1/2	23-1/8	9-3/8	10-3/4	8-3/4
	XL	35	28-1/2	24-5/8	9-3/8	10-3/4	8-3/4
34	XS	37	21-1/2	19-1/8	9-3/8	11	9
	S	37	23	20-3/8	9-3/8	11	9
	R	37	24-1/2	21-5/8	9-3/8	11	9
	L	37	26-1/2	23-1/8	9-3/8	11	9
	XL	37	28-1/2	24-5/8	9-3/8	11	9
36	XS	39	21-3/4	19-1/8	9-3/4	11-1/4	9-1/4
	S	39	23-1/4	20-3/8	9-3/4	11-1/4	9-1/4
	R	39	24-3/4	21-5/8	9-3/4	11-1/4	9-1/4
	L	39	26-3/4	23-1/8	9-3/4	11-1/4	9-1/4
	XL	39	28-3/4	24-5/8	9-3/4	11-1/4	9-1/4
38	XS	41	22	19-1/8	9-3/4	11-1/2	9-1/2
	S	41	23-1/2	20-3/8	9-3/4	11-1/2	9-1/2
	R	41	25	21-5/8	9-3/4	11-1/2	9-1/2
	L	41	27	23-1/8	9-3/4	11-1/2	9-1/2
	XL	41	29	24-5/8	9-3/4	11-1/2	9-1/2
40	XS	43	22-1/4	18-1/8	9-3/4	11-3/4	9-3/4
	S	43	23-3/4	20-3/8	9-3/4	11-3/4	9-3/4
	R	43	25-1/4	21-5/8	9-3/4	11-3/4	9-3/4
	L	43	27-1/4	23-1/8	9-3/4	11-3/4	9-3/4
	XL	43	29-1/4	24-5/8	9-3/4	11-3/4	9-3/4
42	XS	45	22-1/2	19-1/8	10-1/8	12	10
	S	45	24	20-3/8	10-1/8	12	10
	R	45	25-1/2	21-5/8	10-1/8	12	10
	L	45	27-1/2	23-1/8	10-1/8	12	10
	XL	45	29-1/2	24-5/8	10-1/8	12	10

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Table II.
Sizes and measurements - (contd.)

Size	Length	Chest (A)	Body Length (B)	Sleeve Length (C)	Collar Depth (D)	Collar Width (E)	Cuff Length (F)
44	XS	47	22-1/2	19-1/8	10-1/8	12-1/4	10-1/4
	S	47	24	20-3/8	10-1/8	12-1/4	10-1/4
	R	47	25-1/2	21-5/8	10-1/8	12-1/4	10-1/4
	L	47	27-1/2	23-1/8	10-1/8	12-1/4	10-1/4
	XL	47	29-1/2	24-5/8	10-1/8	12-1/4	10-1/4
46	S	49	24-1/4	20-3/8	10-1/8	12-1/2	10-1/2
	R	49	25-3/4	21-5/8	10-1/8	12-1/2	10-1/2
	L	49	27-3/4	23-1/8	10-1/8	12-1/2	10-1/2
	XL	49	29-3/4	24-5/8	10-1/8	12-1/2	10-1/2
48	S	51	24-1/2	20-3/8	10-1/2	12-3/4	10-3/4
	R	51	26	21-5/8	10-1/2	12-3/4	10-3/4
	L	51	28	23-1/8	10-1/2	12-3/4	10-3/4
	XL	51	30	24-5/8	10-1/2	12-3/4	10-3/4
50	S	53	24-1/2	20-3/8	10-1/2	13	11
	R	53	26	21-5/8	10-1/2	13	11
	L	53	28	23-1/8	10-1/2	13	11
	XL	53	30	24-5/8	10-1/2	13	11
52	S	55	24-3/4	20-3/8	10-1/2	13-1/4	11-1/4
	R	55	26-1/4	21-5/8	10-1/2	13-1/4	11-1/4
	L	55	28-1/4	23-1/8	10-1/2	13-1/4	11-1/4
	XL	55	30-1/4	24-5/8	10-1/2	13-1/4	11-1/4
Tolerances		± 1	± 1/2	± 1/2	± 1/4	± 1/4	± 1/4

NOTE: Refer to Figure for A, B, C, D, E, and F measurements

- (A) Chest - Twice the measurement taken across front at base of armholes from folded edge to folded edge
 (B) Body Length - Measurement taken from base of under collar down center of back to bottom
 (C) Sleeve Length - Measurement taken from finished underarm seam down to outer end of finished cuff
 (D) Collar Depth - Measurement taken at center collar from back neck seam to bottom edge of collar
 (E) Collar Width - Measurement taken at a bottom line of white tape from collar edge to collar edge
 (F) Cuff Length - Twice the measurement taken from one end to folded edge with cuff open and folded in half

3.9 Workmanship The finished jumper shall conform to the quality of product established by this specification. The occurrence of defects shall not exceed the applicable quality levels.

MIL-J-87035D**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 (examinations and tests) 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 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 ensure supplies and services conform to prescribed requirements.

4 1 1 Responsibility for compliance All items shall meet all requirements of sections 3 and 5. The inspection set forth in this specification shall become a part of the contractor's overall inspection systems or quality program. The absence of any inspection requirements in the specification shall not relieve the contractor of the responsibility of ensuring that all products or supplies submitted to the Government for acceptance comply with all requirements of the contract. Sampling inspection, as part of manufacturing operations, is an acceptable practice to ascertain conformance to requirements, however, this does not authorize submission of known defective material, either indicated or actual, nor does it commit the Government to acceptance of defective material.

4 1 2 Certificate of compliance Where certificates of compliance are submitted, the Government reserves the right to check test such items to determine the validity of the certification.

4 2 Classification of inspection The inspection requirements specified herein are classified as follows:

- 1 First article inspection (see 4 3)
- 2 Quality conformance inspection (see 4 4)

4 3 First article inspection The first article, submitted in accordance with 3 2, shall be inspected as specified in 4 4 2 for compliance with design, construction, workmanship, appearance and dimensional requirements.

4 4 Quality conformance inspection Sampling for inspection shall be performed in accordance with MIL-STD-105, except where otherwise indicated.

4 4 1 Component and material inspection In accordance with 4 1 above, components and materials shall be tested in accordance with all the requirements of referenced specifications, drawings, and standards unless otherwise excluded, amended, modified, or qualified in this specification or applicable procurement documents.

4 4 2 Examination of end item Examination of the end item shall be in accordance with 4 4 2 1 and 4 4 2 2. The applicable inspection levels and acceptable quality levels (AQL's) shall be as indicated in 4 4 2 3. The sample unit shall be one finished jumper. The lot size shall be expressed in units of jumpers.

4 4 2 1 Visual examination The jumpers shall be examined for defects in color, design, material, construction, workmanship, and marking and the defects classified in accordance with the following list:

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<u>DEFECTS</u>	<u>CLASSIFICATION</u>		
	<u>MAJOR</u>	<u>MINOR</u>	
		<u>A</u>	<u>B</u>
MATERIAL DEFECTS AND WORKMANSHIP DAMAGES			
a. Any hole, cut, tear, smash, burn, drill hole, scorched area, multiple float, or open place	X		
b. Misweave, area of poor dye penetration, dye streak, broken and missing section of yarn, visible mend, woven in waste, thin place, or shade bar	X		
c. Slubs or knots which exceed the limits specified in the basic cloth specification		X	
SHADED PART(S)			
a. Variation in shade within a part or between parts (except part(s) which may be cut from ends)			X
b. Part(s) cut from ends poorly match main assembly			X
CLEANNES			
a. Any spot or stain clearly noticeable - on outside - on inside		X	X
b. More than 3 thread ends not trimmed to 1/4 inch or less on outside, except at V neck opening and on stars		X	
c. More than 5 thread ends not trimmed to 1/2 inch or less on inside			X
d. Two or more shade tickets not removed			X
e. Shade stamping or marking readily visible on outside		X	
f. Excessive lint			X
g. Foreign matter embedded in seams		X	
COMPONENT AND ASSEMBLY			
a. Any component part or operation omitted (unless otherwise classified herein)	X		
b. Any component not as specified	X		
c. Any component part tight, twisted, distorted, pleated, or full (unless otherwise classified herein)		X	
d. Any operation not as specified (unless otherwise classified herein)		X	
e. The edge of any component part required to be forced out having folds of more than 1/8 inch (unless otherwise classified herein)		X	
CUTTING			
a. Any component part of basic material not cut in accordance with patterns or in accordance with specification requirements	X		
PRESSING			
a. Burned or scorched	X		
b. Poorly pressed, pressing omitted or not pressed as specified		X	

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DEFECTS	CLASSIFICATION		
	MAJOR	MINOR	
		A	B
c Gloss or impressions not removed			X
d Shading or spotting		X	
e Collar not pressed as specified			X
SEAMS AND STITCHING			
a <u>Accuracy of seaming</u>			
1. Seam twisted, puckered, or pleated	X		
2 Part of garment caught in any unrelated operation or stitching	X		
3 End of seam or stitching when not caught in another seam or stitching backtacked less than 3/8 inch		X	
4 Ends of a continuous line of stitching overlapped less than specified		X	
5 Thread break not secured or stitching back of the break less than 1/2 inch		X	
6 Wrong or varying shades of thread used on outside	X		
b <u>Gauge of stitching</u>			
1 Irregular, i e , unevenly gauged, not uniform		X	
2 Beyond range of width specified or varies more than 1/16 inch when no range is specified			X
3 Edge or top stitching too close to edge, resulting in damage to the cloth	X		
c <u>Open seams</u> (resulting from 2 or more skipped, broken, run-off or missing stitches)			
1 On joining seams (including one or both rows of double-needle stitching)			
- less than 1/4 inch			X
- 1/4 inch to 1/2 inch		X	
- more than 1/2 inch	X		
2 On trimming (tape)			
- 1/4 inch to 1/2 inch			X
- more than 1/2 inch		X	
3 On edge and topstitching			
- up to 1/2 inch on inside			X
- on outside, or more than 1/2 inch on inside		X	
4 On overedgeing or binding			
- up to 3 inches			X
- over 3 inches		X	
d <u>Raw edges</u>			
1 On outside			
- less than 1/8 inch long			X
- 1/8 inch to 1/2 inch long inclusive		X	
- more than 1/2 inch long	X		
2 On inside (except at clip at top of sleeve opening - operation 16)			
- 1/2 inch to 1 inch long inclusive			X
- more than 1 inch long		X	
3 Binding or overedgeing omitted (Score as a raw edge on inside)			

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DEFECTS	CLASSIFICATION	
	MAJOR	MINOR
	A	B
e <u>Seam and stitch type</u>		
1. Not specified seam or stitch type	X	X
2. Looper thread of 401 or 101 stitch type finished on the outside of the jumper		
f <u>Stitch tension</u>		
1. Loose tension resulting in loose seam		
- up to 1/2 inch inclusive		X
- more than 1/2 inch up to 3/4 inch inclusive	X	X
- more than 3/4 inch		
2. Loose tension on raised or edge stitching resulting in exposed loose threads		X
3. Tight tension (stitches break when strain is applied in the direction of the seam or stitching)	X	
4. Uneven tension on collar tape stitching resulting in white threads showing on front, or black threads showing on tape		X
g <u>Stitches per inch</u> (score only when condition exists for more than 2 inches)		
1. Less than minimum specified		
- one stitch		X
- two stitches		X
- three or more stitches	X	
2. Three or more than the maximum specified		X
h <u>Needle chew on outside</u>		
1. Up to 1/4 inch inclusive		X
2. More than 1/4 inch	X	
CROWTACKS AND BARTACKS		
a. Missing, insecure, not positioned as specified, not as specified, or not serving intended purpose		
- one crowtack or bartack		X
- two crowtacks or bartacks	X	
b. One or more skipped or broken stitches		
- in one crowtack or bartack		X
- in two crowtacks or bartacks		X
c. Crooked i.e., opposite rays of crowtack deviate from vertical or horizontal axis, as applicable, or causing distortion		X
d. Crowtack stitching extending into welt area		X
e. Crowtacks set more than 1/16 inch away from the square ends of the front pocket opening		X
f. Not specified size or not in accordance with stitch enlargement or guide sample		X
g. Incomplete cover, i.e., background cloth visible		X
h. Bobbin threads visible, affecting appearance		X

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DEFECTS	CLASSIFICATION		
	MAJOR	MINOR	
		A	B
BUTTONS			
a Missing, loose, or defective		X	
b Not specified type or size		X	
c Button not aligned with buttonhole, causing bulge or twist when buttoned		X	
d Crown of anchor not pointed toward bottom of jumper			X
e Stitching not in button grooves (except for crossover stitch)			X
BUTTONHOLES			
a Omitted	X		
b Not specified type or size		X	
c Uncut or partially cut buttonhole		X	
d Buttonhole not securely caught on fabric causing stitching to pull away from fabric	X		
e End not securely tacked, tack not placed as specified		X	
f Ragged edges, i e , yarn or thread ends on inside of buttonhole not trimmed to less than 1/4 inch			X
g Gimp omitted		X	
h Gimp not pulled through to inside			X
i Purling on the underside of cuff or flap			X
j Off center of flap by more than 1/4 inch		X	
k One or more broken or two or more skipped stitches		X	
l Position from bottom edge of flap (measured from inside edge of eyelet) - less than 3/8 inch or more than 5/8 inch - less than 1/4 inch or more than 3/4 inch		X	X
m Stitching incomplete		X	
n Crooked or positioned incorrectly		X	
"V" NECK OPENING			
a <u>Zigzag stitching</u>			
1. Omitted	X		
2. Stitching incomplete	X		
3. Stitching extending less than 5/8 inch or more than 7/8 inch upward on each side of "V" neck opening or not continuous			X
4. Width other than specified			X
b Stitching of yoke to body causing distortion, twisting or bulging on front, along front edge of opening or at base of V	X		
c Thread ends not trimmed as close as possible to jumper	X		

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<u>DEFECTS</u>	<u>CLASSIFICATION</u>	
	<u>MAJOR</u>	<u>MINOR</u>
	<u>A</u>	<u>B</u>
POCKET (outside)		
a Welts irregular in width by more than 1/16 inch within or between welts	X	
b Welts less than 1/16 inch or more than 3-1/16 inch		X
c Opening gapped more than 1/8 inch at center	X	
d Opening less than 2-7/8 or more than 3-3/8 inches wide for sizes 30 thru 36 OR Opening less than 3-1/4 inches or more than 3-3/4 inches wide for sizes 38 thru 52	X	
e Pocket less than 3-3/4 inches or more than 4-1/4 inches deep at center for sizes 30 thru 36 OR Pocket less than 4 inches or more 4-1/2 inches deep at center for sizes 38 thru 52	X	
f One or both crowtacks caught through front body		X
g Top and bottom edges of pocket (above and below welts) not parallel, or less than 1/4 inch or more than 3/8 inch apart	X	
h Stitching along top and bottom edges does not continue 1 or 2 stitches beyond the ends of pocket or extends more than 1/8 inch beyond vertical rays of crowtack	X	
i Ends of stitching along top and bottom edges not secured in crowtacks		X
j Raw edges, distortion, gapping, or overlapping at ends of the welts	X	
k Set on crooked relative to a straight edge laid perpendicularly across chest by 1/4 inch or more	X	
POCKET AND FLAP (inside)		
a <u>Patch pocket</u>		
1. Hem less than 1-1/8 inches or more than 1-3/8 inches wide		X
2 Excessively full or tight		X
3. Width of pocket		
- For sizes 30 thru 34, less than 3-3/4 inches or more than 4-1/4 inches wide OR	X	
- For sizes 36 thru 52, less than 4 inches or more than 4-1/2 inches wide	X	
4 Vertical length of pocket		
- For sizes 30 thru 34, less than 4-1/8 inches or more than 4-5/8 inches in vertical length	X	
- For sizes 36 thru 52, less than 4-3/4 inches or more than 5-1/4 inches in vertical length	X	
5 Binding or overedging omitted	X	
b <u>Flap</u>		
1 Lower row of double stitching at top of flap less than 1/4 inch or more than 1/2 inch above top edge of pocket		X
2 Less than 2 inches or more than 2-1/4 inches in vertical length at center		X
3 Width of flap		
- For sizes 30 thru 34, less than 4 inches or more than 4-1/2 inches across the top edge	X	
- For sizes 36 thru 52, less than 4-1/4 inches or more than 4-3/4 inches across the top edge	X	
4 Binding or overedging omitted	X	
COLLAR		
a Top collar full, tight, or twisted	X	

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DEFECTS	CLASSIFICATION	
	MAJOR	MINOR
	A	B
b Collar edge crooked		X
c Corners poorly shaped, i e , angle excessively distorted		X
d Undercollar exposed along collar edge for a length of 1 inch or more		X
e Improperly set to jumper causing puckers or pleats on neck edge of topcollar, undercollar, yoke, or body		X
f Stitching of neck seam allowance of yoke and body together on the inside from shoulder seam to shoulder seam across back - omitted or insecure - incomplete or ends more than 1 inch from shoulder seam		X
g Stars		
1 One or both omitted	X	
2 Not specified size or not in accordance with stitch enlargement or guide sample		X
3 Poorly formed, distorted, threads bunched or tangled or of insufficient density (refer to guide sample)		X
4 Top point of star not in vertical, upright position when garment is worn		X
5 Center of star more than 1-3/16 or less than 1-1/16 inches perpendicularly from the inner edges of the inner side and bottom rows of tape		X
6 More than 1/16 inch difference between the distances from the centers of the stars to their respective tape edges		X
7 One or more skipped or broken stitches or stitching incomplete		X
8 Embroidery does not finish on outside of top collar	X	
9 Embroidery yarns shifted, affecting appearance		X
10 Incomplete coverage, i e , background cloth or underlay stitches visible		X
11 Bobbin threads visible, affecting appearance		X
12 Loose or tight tension, causing puckering, or otherwise affecting appearance		X
13 Stitches out of alignment, affecting appearance		X
14 Misshaped or distorted		X
15 Two or more thread ends not trimmed to 1/16 inch or less		X
h Collar tape		
1 Any row omitted or incomplete	X	
2 Rows of tape irregular or unevenly spaced	X	
3 Rows of tape sewn on taut, causing excessive waviness along collar edge	X	
4 Inner row of tape not covering raw ends of the first two rows of tape at the base of the neck opening		X
5 One or more corners of outer rows of tape not square mitered		X
6 Any row of tape not position as specified		X
7 One or more rows of tape spliced between corners		X
8 Tape extends less than 1/4 inch or more than 3/8 inch below bottom of neck opening		X
9 Bottom tape not parallel with hem by more than 1/8 inch, measured from each end of tape to bottom of the hem		X
YOKE (front or back)		
a Left and right sides of yoke not of uniform shape, i e , curved edge of yoke out of symmetry by more than 1/4 inch when jumper is folded in half at center front		X

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DEFECTS	CLASSIFICATION		
	MAJOR	MINOR	
		A	B
b Short, tight, or twisted, causing excessive fullness or distortion on front, back, or along armholes	X		
c Distance along armhole from bottom of yoke to side seam uneven from right side to left by more than 1/4 inch		X	
ARMHOLE SEAMS			
a. Armhole lapped over sleeve		X	
b Ends of armhole seam staggered at junction, from center to center of seam by more than 1/2 inch		X	
SIDE AND SLEEVE SEAMS			
a Back lapped over front		X	
SLEEVES			
a Puckered or pleated at armhole		X	
b Sleeve tight, causing fullness or pleats on front or back yokes or front and back at armhole		X	
c Pleats omitted at bottom of sleeves - one pleat - two pleats or more	X	X	
d One or more outside pleats not folded towards underarm sleeve seam		X	
e Pleats less than 3/16 inch or more than 5/16 inch deep			X
f Pleats less than 1-1/8 inches or more than 1-3/8 inches apart			X
g Sleeve opening hem less than 3/16 inch or more than 5/16 inch wide			X
CUFFS			
a Reversed, i e., buttonholes on underlapping end of cuff and buttons on overlapping end of cuff	X		
b Cuff uneven in width by more than 1/4 inch		X	
c Other than a one-piece construction	X		
d Finished width less than 2 inches or more than 2-1/4 inches		X	
e Rows of tape irregular or unevenly spaced		X	
f Rows of tape not horizontally centered on cuff by more than 1/4 inch		X	
g Excessive fullness or twist on the outer ply of cuff		X	
h Distance from outer edge of perpendicular tape to each edge of cuff, less than 1-3/8 inches or more than 1-5/8 inches			X
i One or more corners of outer rows of tape not square mitered			X
j Corners of tape stitching having floats		X	
k Perpendicular tape not covering raw edge of center row of tape			X

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<u>DEFECTS</u>	<u>CLASSIFICATION</u>	
	<u>MAJOR</u>	<u>MINOR</u>
	<u>A</u>	<u>B</u>
l Perpendicular tape crooked with respect to cuff edge by more than 1/8 inch		X
m One or more rows of tape spliced between corners	X	
n Raw edge at end of tape on one or both cuffs not turned under and stitched		X
o <u>Position of buttonholes</u> (measure from inside edge of eyelet or buttonhole opening)		
1 Not centered in respect to top and bottom edges of cuff	X	
2 Position from front edge less than 3/8 inch or more than 5/8 inch	X	
3 Buttonholes spaced less than 1 inch or more than 1-1/4 inches apart	X	
p <u>Position of buttons</u>		
1 Buttons not aligned with buttonhole eyelets resulting in misalignment of lower edges of cuff by 1/4 inch or more when buttoned	X	
2 Center of button less than 3/8 inch or more than 5/8 inch from end of cuff	X	
BOTTOM HEM		
a Binding tight on bottom hem, causing puckering or twist on the outside of the jumper	X	
b Bottom edge stretched or uneven with respect to a straight edge laid from side seam to side seam, by more than 1/4 inch	X	
c Line of stitching irregular by more than 1/8 inch	X	
d Width, including binding, less than 1-3/8 inches or more than 1-5/8 inches	X	
e Binding not securely caught on fabric, causing binding to pull away from fabric easily	X	
f Irregular in width by 1/4 inch or more		X
g Hem stitching more than 1/8 inch beneath top edge of binding tape		X
HANGER LOOPS		
a Tape not specified type or size	X	
b Omitted	X	
c Not securely caught in binding seam	X	
d Placed on front part	X	
e Loop less than 1 inch or more than 1-1/2 inches long		X
LABELS		
a. Omitted, incorrect, or illegible	X	
b Off center of back by more than 1/2 inch		X
c Combination label less than 3/8 inch or more than 5/8 inch below neck seamline		X
d. Combination label not stitched on one or more sides		X
e Size label not securely caught in combination label stitching		X
f Removable size ticket not as specified or not positioned as specified		X

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<u>DEFECTS</u>	<u>CLASSIFICATION</u>	
	<u>MAJOR</u>	<u>MINOR</u>
	<u>A</u>	<u>B</u>
BAR CODES		
a Bar code omitted or not readable by scanner		X
b Human readable interpretation (HRI) omitted or illegible		X
c Not visible on folded, packaged item		X
d Causes damage to the item	X	

4 4 2 2 Dimensional examination The jumper shall be examined for defects in dimensions in accordance with the following

- a Any measurement deviating from nominal dimensions and tolerances specified in Table II shall be scored as a size measurement defect
- b Sleeve lengths unequal in length by 1/2 inch or more shall be scored as a size measurement defect

4 4 2 3 Inspection levels and acceptable quality levels The inspection levels and acceptable quality levels (AQL's) expressed in defects per 100 units for visual and dimensional examinations shall be as follows

	<u>AQL's</u>	<u>Inspection level</u>
For visual examination in 4 4 2 1		
Major	1 0	III
Major, Minor A (combined)	4 0	III
Total (Major, Minor A, Minor B combined)	10 0	III
For dimensional examination in 4 4 2 2		
One class	2.5	S-3

4 4 3 Examination of packaging requirements An examination shall be made to determine that packaging, packing, and marking complies with Section 5 requirements of this specification. Defects shall be scored in accordance with the list below. The sample unit shall be one shipping container fully prepared for delivery. Defects of closure listed below shall be examined on shipping containers fully prepared for delivery. The lot size shall be the number of shipping containers in the end item inspection lot. The inspection level shall be S-2 and the AQL shall be 2.5 defects per hundred units in accordance with MIL-STD-105

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<u>Examination</u>	<u>Defect</u>
Marking (exterior and interior)	Omitted, incorrect, illegible, of improper size location, sequence, or method of application
Materials	Any component missing, damaged, or not as specified
Workmanship	Inadequate application of components, such as Incomplete closure of container flaps, loose strapping, inadequate stapling, or improper taping Bulged or distorted container
Content	Number of jumpers per shipping container is more or less than required <u>1/</u> Size shown on one or more items not as specified on shipping container <u>2/</u> Open and non-continuous heat sealed seams and closure of polyethylene bag <u>2/</u> Alternate closure of polyethylene bag not provided with tuck or reverse flap <u>2/</u> Omission of required vent hole in polyethylene bag <u>2/</u>

1/ One shipping container in the sample shall be examined

2/ For these defects, one package shall be examined from each shipping container in the sample

4 4 4 Palletization examination An examination shall be made to determine that the palletization complies with the section 5 requirements Defects shall be scored in accordance with the list below The sample unit shall be one palletized unit load fully packaged The lot size shall be the number of palletized unit loads in the end item inspection lot The inspection level shall be S-1 and the AQL, expressed in terms of defects per hundred units, shall be 6 5 as specified in MIL-STD-105

<u>Examine</u>	<u>Defect</u>
Finished dimension requirements	Length, width, or height exceeds specified maximum
Palletization	Pallet pattern not as specified Interlocking of loads not as specified Load not bonded with required straps as specified
Weight	Exceeds maximum load limits
Marking	Omitted, incorrect, illegible, of improper size, location, sequence, or method of application

5 PACKAGING

5 1 Preservation Preservation shall be level A or Commercial (see 6 2)

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5.1.1 **Level A** Each jumper shall be folded and packaged as follows

- (1) Lay jumper flat, front up (inside out)
- (2) Fold sleeves straight across the chest with the cuffs folded back approximately 6 inches
- (3) Fold the jumper in half by placing one shoulder on top of the other, maintaining pressed lines on collar. The folded jumper shall measure approximately 11-1/2 inches
- (4) Fold collar over jumper
- (5) Fold bottom of jumper up so that the folded length is approximately 15 inches
- (6) Each folded jumper shall be individually packaged in a snug-fitting flat style clear polyethylene bag of 0.00125 (\pm 20% tolerance) inch thickness. All seams and closures shall be formed by heat sealing. A 1/4-inch maximum diameter hole shall be made at one corner of each bag to allow excess air to escape. As an alternate, the polyethylene bag may be the tuck-in overlap type. Heat seal closure and corner hole are not required.

5.1.2 **Commercial** Jumpers shall be packaged to afford adequate protection against physical damage during shipment from the supply source to the first receiving activity. The package and the quantity per package shall be the same as that normally used by the contractor for retail distribution.

5.2 **Packing** Packing shall be level A, B, or C (see 6.2)

5.2.1 **Level A** Twelve (12) jumpers, of one size and length only, packaged as specified in 5.1.1 shall be packed flat, one in width and two in length and six in depth with the length of the bags parallel to the end panels of the box. The fiberboard shipping container shall conform to type CF, class weather resistant, variety DW, grade V15C, size 2A of MIL-B-17757. The fiberboard for the liner shall conform to type CF, class domestic and be in accordance with MIL-B-17757. Each container shall have the contents completely covered on the top and bottom with a sheet of commercial grade kraft paper.

5.2.2 **Level B** Twelve (12) jumpers, of one size and length only, packaged as specified in 5.1.1 shall be packed flat, one in width and two in length and six in depth with the length of the bags parallel to the end panels of the box. The fiberboard shipping container shall conform to type CF, class domestic, variety DW, grade 200, size 2A of MIL-B-17757. The fiberboard for the liner shall conform to type CF, class domestic of MIL-B-17757.

5.2.3 **Level C** Jumpers, packaged as specified in 5.1.1, shall be packed in a manner to insure carrier acceptance and safe delivery at destination at the lowest transportation rate for such supplies. The quantity per shipping container shall be the same as that normally used by the contractor for retail distribution. Container shall comply with the U.S. Postal Service Manual, Uniform Freight Classification Rules or National Motor Freight Classification Rules, as applicable.

5.3 **Marking** In addition to any special marking required by the contract or order, unit packs, intermediate or exterior containers, and palletized unit loads shall be marked in accordance with MIL-STD-129.

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5 4 Palletization When specified (see 6 2), jumpers, packed as specified in 5 2, shall be palletized on a 4-way entry pallet in accordance with load type Ia of MIL-STD-147. Each prepared load shall be bonded with primary and secondary straps in accordance with the bonding means C, K and L, or O or P. Pallet patterns shall be in accordance with the appendix of MIL-STD-147. The pallet shall be 4-way, Type IV, Type V, class 1, size 2, or Type VIII, fabricated from wood groups I, II, III or IV, Grade A of NN-P-71, or 4-way, Style 1, Size A, Type I, Class 1 fabricated from groups specified of MIL-P-15011. Interlocking of loads shall be effected by reversing the pattern of each course. If the container is of a size which does not conform to any of the patterns specified in MIL-STD-147, the pallet pattern used shall first be approved by the contracting officer.

5 5 MIL-STD-2073 When specified (see 6 2), preservation and packing shall be in accordance with MIL-STD-2073-1 and MIL-STD-2073-2.

6 NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

6 1 Intended use The jumpers covered by this specification are intended for use by the Navy enlisted man as part of the blue dress uniform.

6 2 Acquisition requirements Acquisition documents should specify the following:

- a Title, number, and date of this specification
- b Issue of DODISS to be cited in the solicitation, and if required, the specified issue of individual documents referenced (see 2 1 1 and 2 2)
- c Size and length required (see 1 2)
- d When first article inspection is required (see 3 2 and 4 3) the item will be tested and should be a first article sample. The contracting officer should include specific instructions in acquisition of documents regarding arrangement for examinations, quantity, and testing and approval.
- e Selection of applicable levels of preservation and packing (see 5 1 and 5 2)
- f When palletization is required (see 5 4)
- g When all packaging data is to be found in MIL-STD-2073-1 and MIL-STD-2073-2 (see 5 5)

6 3 Samples and patterns For access to samples and patterns, address the procuring activity issuing the invitation for bids.

6 4 Changes from previous issue Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extensiveness of the changes.

6 5 Suggested source The monofilament thread "Sew Kleer, size 19" is manufactured by Synthetic Thread Company, Inc., 825 12th Avenue, Bethlehem, PA 18018. The thread for the embroidered star is manufactured by Coats and Clark, P O Box 1627, Toccoa, GA 30577 (see 3 3 6 1 2 and 3 3 6 1 4).

6 6 Equal item Prior to the use of an "equal item", the contractor shall submit the item with supporting data to the contracting officer for subsequent approval or disapproval by the responsible military agency (see 3 3 6 1 2 and 3 3 6 1 4).

6 7 Recycled materials The use of recycled materials is encouraged when practicable as long as the material meets the requirements of this specification.

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6 8 Subject term (key word) listing

Men's
Wool serge
Uniform, men's

Custodian
Navy - NU

Civil Agency Coordinating
Activity
GSA-FSS

Preparing Activity
DLA-CT

Project No
8405-0223

MIL-J-87035D

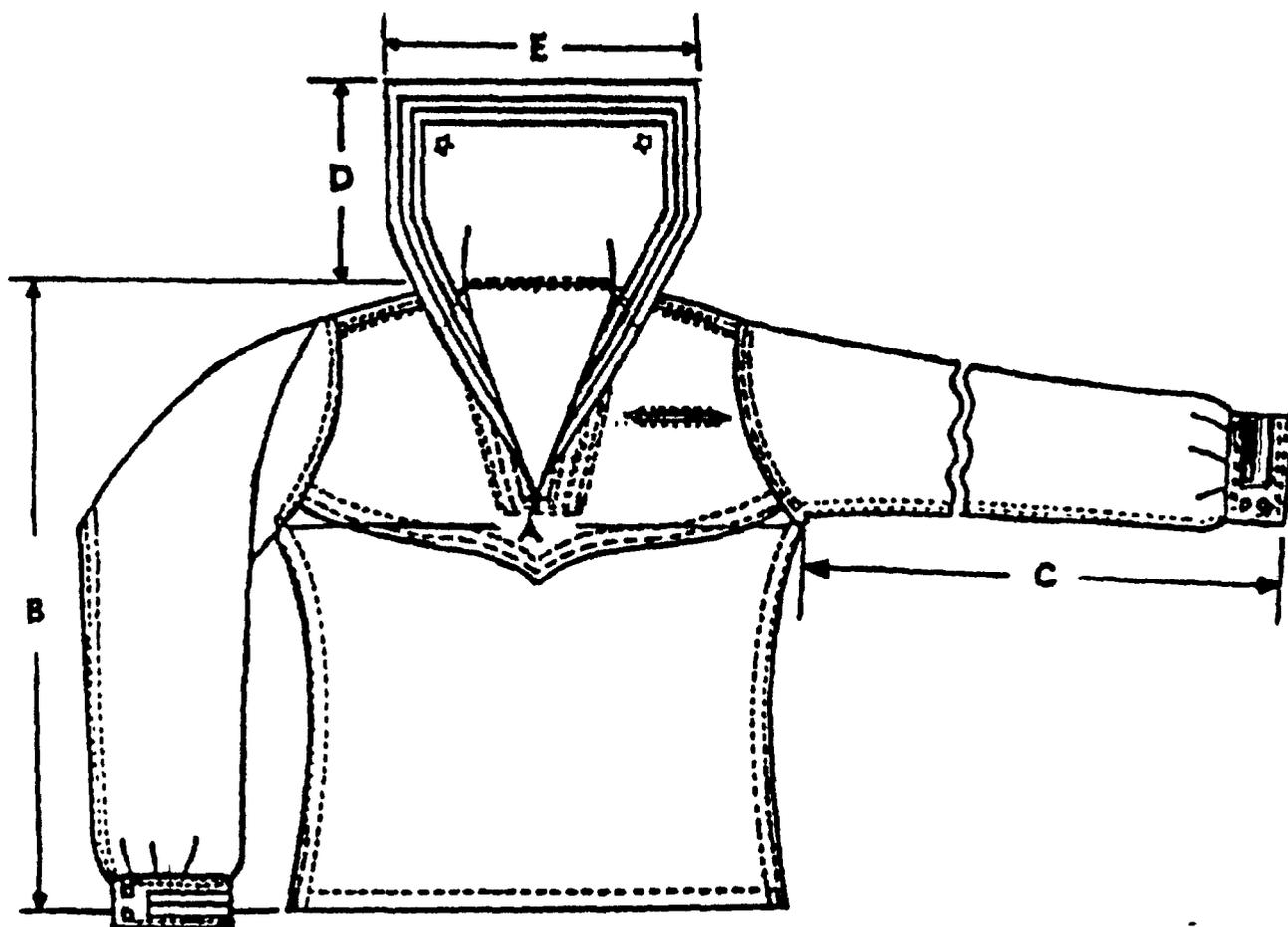


Figure 1
Jumper, Man's (Blue Dress)

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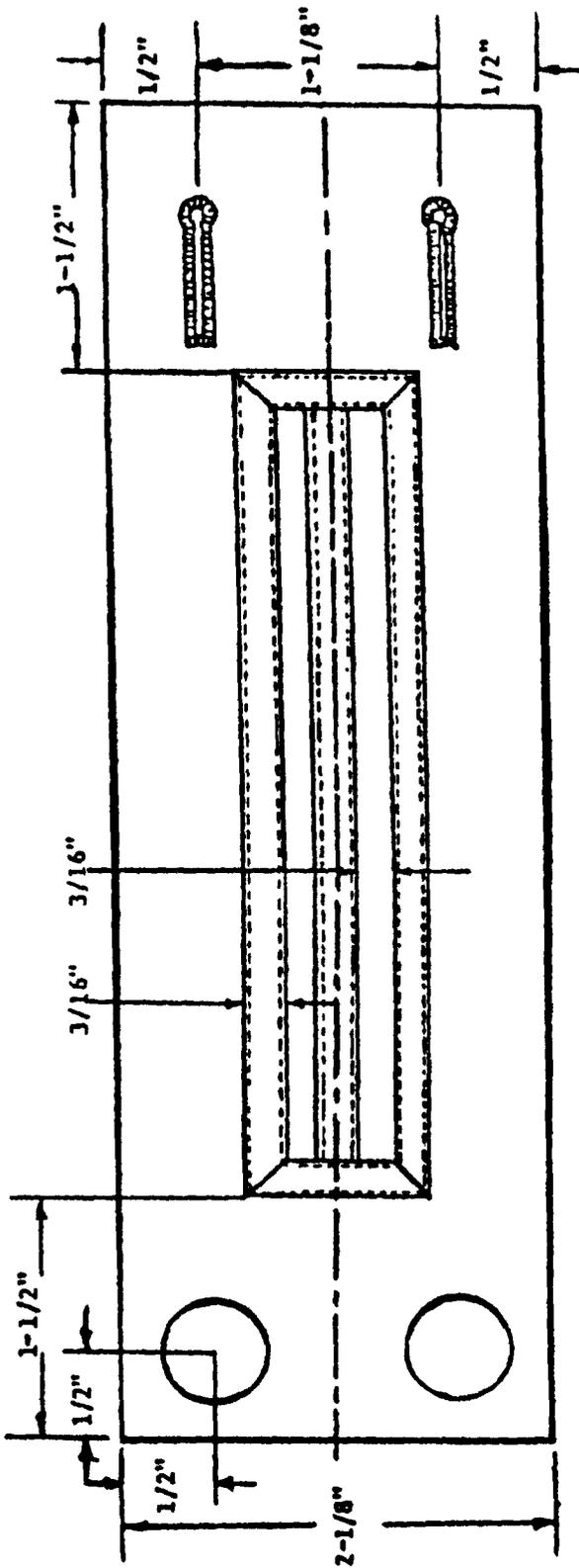


Figure 2

Jumper. Man's (Blue, Dress)

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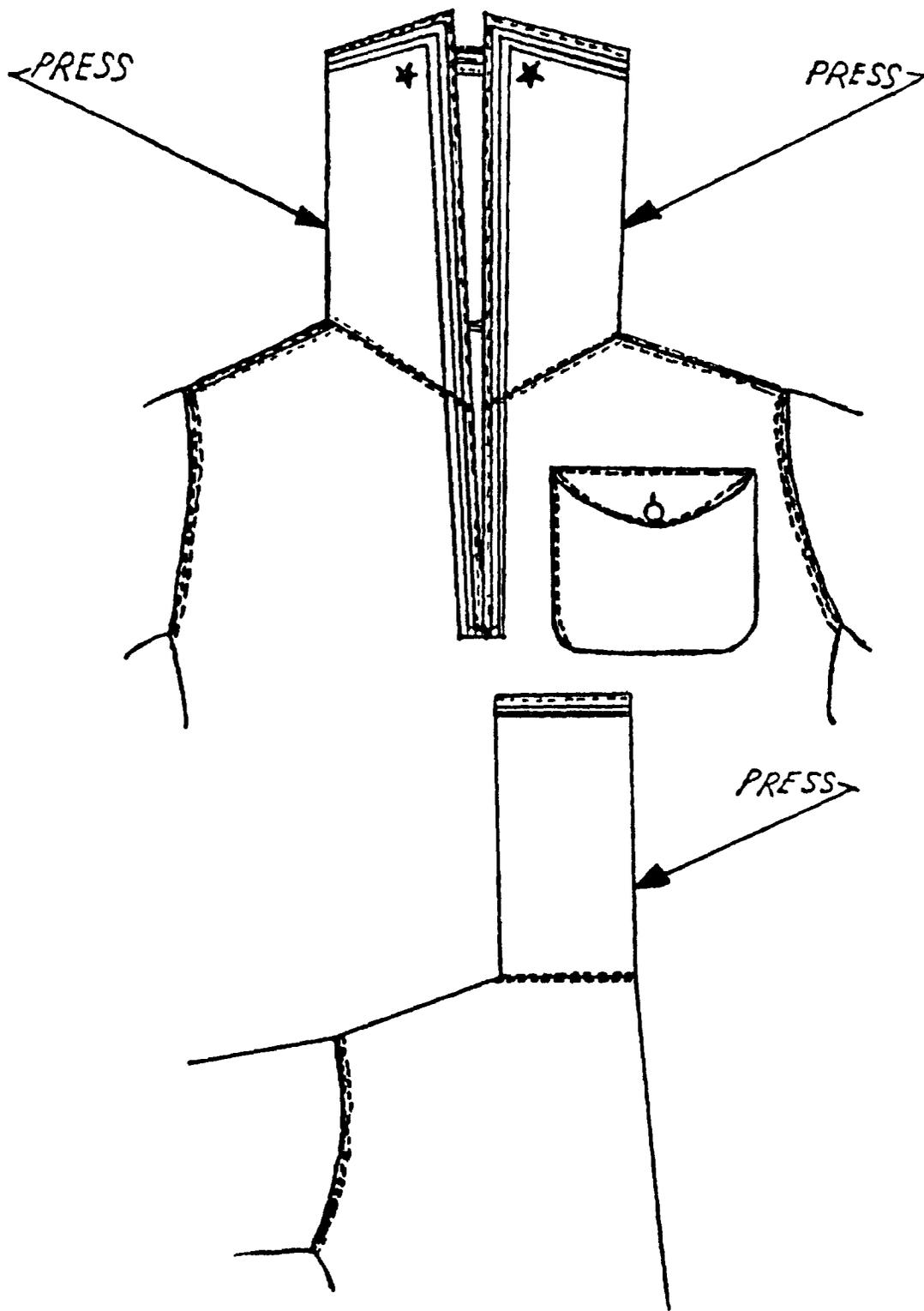


Figure 3
Jumper. Man's (Blue, Dress)

STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

INSTRUCTIONS

- 1 The preparing activity must complete blocks 1, 2, 3, and 8. In block 1, both the document number and revision letter should be given.
- 2 The submitter of this form must complete blocks 4, 5, 6, and 7.
- 3 The preparing activity must provide a reply within 30 days from receipt of the form.

NOTE: This form may not be used to request copies of documents, nor to request waivers, or clarification of requirements on current contracts. Comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or to amend contractual requirements.

I RECOMMEND A CHANGE:

1 DOCUMENT NUMBER
MIL-J-87035D

2 DOCUMENT DATE (YYMMDD)
94-08-05

3 DOCUMENT TITLE

JUMPER, MAN'S (BLUE DRESS)

4. NATURE OF CHANGE (Identify paragraph number and include proposed rewrite, if possible. Attach extra sheets as needed.)

5 REASON FOR RECOMMENDATION

6. SUBMITTER

a. NAME (Last, First, Middle Initial)

b. ORGANIZATION

c. ADDRESS (Include Zip Code)

d TELEPHONE (include Area Code)
(1) Commercial
(2) AUTOVON
(if applicable)

7. DATE SUBMITTED
(YYMMDD)

8. PREPARING ACTIVITY

a NAME

**DEFENSE PERSONNEL SUPPORT CENTER
ATTN: DPSC-FQSD**

b TELEPHONE (include Area Code)

(1) Commercial (2) AUTOVON
(215)-737-8105 444-8105

c ADDRESS (Include Zip Code)

**2800 S. 20TH STREET
PHILADELPHIA, PA 19101-8419**

**IF YOU DO NOT RECEIVE A REPLY WITHIN 45 DAYS, CONTACT
Defense Quality and Standardization Office
5203 Leesburg Pike, Suite 1403, Falls Church, VA 22041-3466
Telephone (703) 756-2340 AUTOVON 289-2340**