

INCH-POUND

MIL-T-43957D(GL)
16 September 1991
 SUPERSEDING
 MIL-T-43957C(GL)
 8 September 1986

MILITARY SPECIFICATION

TROUSERS, MEN'S, DRESS, WOOL AND POLYESTER/WOOL

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

1. SCOPE

1.1 Scope. This specification covers wool and polyester/wool trousers.

1.2 Classification. The trousers shall be of one type, in the following classes and sizes as specified (see 6.2).

- Class 1 - Deleted (see 6.8)
- Class 2 - Trousers, wool or polyester/wool (see 3.3.1.1).
Blue 150, 151, 450 or 451
- Class 3 - Deleted (see 6.8)
- Class 4 - Deleted (see 6.8)
- Class 5 - Deleted (see 6.8)
- Class 6 - Trousers, polyester/wool serge (11.3 oz.), Army Green 489

Schedule of sizes (waist)

X-short	Short	Regular	Long	X-long
-	-	23	-	-
-	-	24	24	-
-	-	25	25	-

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be used in improving this document should be addressed to: U.S. Army Natick Research, Development, and Engineering Center, Natick, MA 01760-5019 by using the Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A

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Schedule of sizes (waist) (cont'd)

X-short	Short	Regular	Long	X-long
26	26	26	26	26
27	27	27	27	27
28	28	28	28	28
29	29	29	29	29
30	30	30	30	30
31	31	31	31	31
32	32	32	32	32
33	33	33	33	33
34	34	34	34	34
35	35	35	35	35
36	36	36	36	36
37	37	37	37	37
38	38	38	38	38
39	39	39	39	39
40	40	40	40	40
41	41	41	41	41
42	42	42	42	42
43	43	43	43	43
44	44	44	44	44
45	45	45	45	45
46	46	46	46	46

1.3 Uniform. When class 6 trousers specified in this specification and coats specified in MIL-C-43368(GL) or MIL-C-44211(GL) are procured as a uniform, the trousers and coats shall be cut from the same roll of material and the shades shall match.

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 are those listed in the issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation (see 6.2).

SPECIFICATIONS

FEDERAL

- A-A-203 - Paper, Kraft, Untreated
- A-A-50186 - Cloth, Buckram, Woven and Nonwoven

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- A-A-50198 - Thread, Gimp, Cotton, Buttonhole
- A-A-50199 - Thread, Polyester Core, Cotton- or Polyester-Covered
- A-A-52094 - Thread, Cotton
- V-B-871 - Button, Sewing Hole, and Button, Staple, (Plastic)
- V-F-106 - Fasteners, Slide, Interlocking
- V-T-295 - Thread, Nylon
- 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-B-593 - Braid, Textile (Flat)
- MIL-C-823 - Cloth, Serge; Wool, Wool and Nylon, Polyester and Wool
- MIL-C-3727 - Cloth, Baratheia, Wool
- MIL-C-3738 - Cloth, Elastique, Wool
- MIL-C-10176 - Cloth, Gabardine: Wool, Polyester and Wool
- MIL-B-13466 - Braid, Textile and Lace, Vellum, Woven, Textile (For Blue Dress Uniform)
- MIL-L-17507 - Lace, Ornamental
- MIL-C-21115 - Cloth, Tropical: Wool, Polyester/Wool
- MIL-L-35078 - Loads, Unit: Preparation of Semipermanent Subsistence Items: Clothing, Personal Equipment and Equipage: General Specification For
- MIL-C-43718 - Cloth, Twill, Polyester; Polyester and Cotton; Polyester and Rayon
- MIL-C-43920 - Cloth, Interlining, Cotton or Synthetic, and Nylon

STANDARDS

FEDERAL

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

MILITARY

- 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-731 - Quality of Wood Members for Containers and Pallets
- MIL-STD-1488 - Provisions for Evaluating Quality of Trousers

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

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 are those listed in the issue of the DODISS specified 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).

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

D 3951 - Standard Practice for Commercial Packaging

(Application for copies should be addressed to the American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103-1187.)

(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.

3. REQUIREMENTS

3.1 First article. When specified (see 6.2), a sample shall be subjected to first article inspection (see 6.3) in accordance with 4.3.

3.2 Guide sample. Samples, when furnished, are solely for guidance and information to the contractor (see 6.4). Variation from the specification may appear in the sample, in which case this specification shall govern.

3.3 Standard sample. Standard samples will be furnished by the Government. The finished trousers shall be equal to or better than the standard sample for the characteristics for which the standard sample is referenced (see 6.4).

3.4 Materials. It is encouraged that recycled material be used when practical as long as it meets the requirements of this specification.

3.4.1 Basic cloth. The basic cloth for the various classes of trousers shall be as follows:

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3.4.1.1.1 Class 2. The material for the Army Blue uniform and Army Band uniform trousers shall be one of the following fabrics, as specified, in Blue 150 (wool) or Blue 450 (polyester/wool) for general officers, and Blue 151 (wool) or Blue 451 (polyester/wool) for other officers, enlisted men and Army Band (see 6.2).

3.4.1.1.1.1 Wool, barathea. The material shall be 14-ounce cloth conforming to type I of MIL-C-3727.

3.4.1.1.1.2 Wool, elastique. The material shall be 16-ounce cloth conforming to type III of MIL-C-3738.

3.4.1.1.1.3 Wool gabardine. The material shall be 11-ounce or 14.5-ounce cloth conforming to type I, classes 3 or 5 of MIL-C-10176.

3.4.1.1.1.4 Polyester/wool gabardine. The material shall be 9.5-ounce cloth conforming to type II, class 8 of MIL-C-10176.

3.4.1.1.1.5 Polyester/wool tropical. The material shall be 10-ounce cloth conforming to type III, class 3 of MIL-C-21115.

3.4.1.1.1.6 Wool tropical. The material shall be 10.5-ounce or 8.5-ounce cloth conforming to type I, classes 1 or 2 of MIL-C-21115.

3.4.1.2 Class 6. The material for class 6 trousers shall be 11.3-ounce polyester/wool serge cloth, Army Green 489 (approximating the standard sample for Army Green 489 basic cloth), conforming to type III, class 3 of MIL-C-823.

3.4.2 Lining, interlining, and pocketing.

3.4.2.1 Lining and interlining. The material for left fly interlining (see footnote 2/ to table I), right fly lining, waistband lining, crotch pieces, and side pocket stays shall be polyester, polyester and cotton, or polyester and rayon cloth conforming to class 1 of MIL-C-43718. As an alternate, cotton silesia cloth conforming to type I of MIL-C-326 may be used.

3.4.2.1.1 Color. Except for the waistband and right fly linings the colors shall be unbleached, white, natural, or Black 3212. The color of the lining for the crotch pieces, pocket stays, and pocketing shall be the same throughout the trousers. The color for the waistband and right fly linings shall be Black 3212.

3.4.2.2 Pocketing. The material for pocketing shall be polyester, polyester and cotton, or polyester and rayon cloth conforming to class 1 of MIL-C-43718. The color of the pocketing for each class of trousers shall be the same as indicated for linings and interlining (see 3.4.2.1.1).

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3.4.3 Buckram. The material for the waistband interlining shall be bleached or unbleached buckram conforming to type II of A-A-50186, except shrinkage in the warp and filling directions shall not exceed 2.0 percent maximum. As an option, nonwoven cloth, natural color, conforming to type V of A-A-50186 may be used as an alternative for the waistband interlining.

3.4.4 Waistband stabilizer. The material for the waistband stabilizer shall be interlining cloth conforming to type I of MIL-C-43920.

3.4.4.1 Rubberized waistband lining. The material shall consist of two rows of rubber material woven into a base 100 percent polyester webbing. Each row of rubber shall consist of four ends of bare, square cut, low modulus, heat resistant, neoprene based rubber compound yarns. The two rows of woven rubber yarns shall be 3/8 inch (nominal) distance apart. The finished waistband material shall be white in shade and $7/8 \pm 1/16$ inch wide with selvaged, nonfraying edges (see 6.5). The finished waistband shall show no evidence of flaking, decomposition, cracking, or increased stiffness when tested for resistance to dry heat, steam pressing, and perchloroethylene solvent as specified in 4.4.2.

3.4.5 Trouser ornamentation. When ornamental stripes are required, the material shall be one of the following, as specified (see 6.2).

3.4.5.1 Class 6 trousers. The material shall be mohair, nylon and mohair, or cotton, 1/2 inch wide for general officers and 1-1/2 inches wide for other officers and warrant officers, conforming to type I, class 3, type II, class 1 or type III, class 2 as specified (see 6.2) of MIL-B-593. The color shall be Black 194. The enlisted men's trousers do not require a braid.

3.4.5.2 Class 2 trousers (Army Blue uniform). The material shall be woven gold lace vellum, 1/2 inch wide, for general officers and 1-1/2 inches wide for other officers and warrant officers, conforming to type II, classes 1 or 2, style A, of MIL-L-17507. Alternatively, when specified (see 6.2), the material shall be woven lace vellum, Goldenlite, Cable No. 17425 conforming to type II, class 1, style A for general officers and style B for other officers and warrant officers of MIL-B-13466. The material for the enlisted men's trousers shall be woven lace vellum, Goldenlite, Cable No. 17425, conforming to type II, class 1, style B of MIL-B-13466.

3.4.5.3 Class 2 trousers (Army Band uniform). The material shall be 9/32 inch braid conforming to type I, class 4 of MIL-B-13466.

3.4.6 Labels. All trousers shall have a combination identification and instruction label and a separate size label or shall have a combination size and identification label and a separate instruction label. All labels shall show fastness to dry cleaning as specified in DDD-L-20.

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3.4.6.1 Combination identification and instruction label. The label shall conform to type VI, class 15 of DDD-L-20. The instruction legend shall be as specified in 3.4.6.4.

3.4.6.2 Size label. The label shall conform to type VI, class 2 of DDD-L-20.

3.4.6.3 Combination size and identification label. The label shall conform to type VI, classes 1 and 2 of DDD-L-20.

3.4.6.4 Instruction label. The label shall conform to type VI, class 3 of DDD-L-20. The letters for the caption shall be not less than 3/16 inch in height and all other lettering shall be not less than 1/8 inch in height. The instruction legend shall be as follows:

TROUSERS, MEN'S, DRESS, WOOL AND POLYESTER/WOOL

1. Dry clean only
2. Permanent creased
3. Press on same crease line. Press/Iron temperature with steam shall be $325^{\circ} \pm 6^{\circ}\text{F}$ or wool setting with steam.

3.4.7 Thread. The thread for seaming and stitching shall be cotton- or polyester-covered polyester core conforming to ticket numbers 50-2 ply and 70-2 ply of A-A-50199. As an option, cotton thread conforming to type I of A-A-52094 may be used as an alternate for overedge stitching.

3.4.7.1 Machine thread. The thread for automatic machine pocket construction may be type III, Ticket No. A, 3-ply of A-A-52094.

3.4.7.2 Automatic button sewing. If an automatic machine which sews and shanks (wraps) the buttons in one operation is used, the thread shall be waxed nylon monocord special No. 5, having a minimum breaking strength of 16 pounds and a minimum length per unit weight of 2150 yards, and shall be tested for these requirements. The colorfastness shall be in accordance with the applicable test methods as specified in V-T-295 (see 3.4.7.3.1).

3.4.7.3 Color. The color of the thread for each class of trousers shall conform to the following:

- Class 6 - Black AA, C.A. 66043 and Army Green 489
(shall approximate the standard sample for Army Green 489 thread)
- Class 2 - Black AA, C.A. 66043, or Blue AB, C.A. 66044 for fabric shade 150 or 450; Blue AC, C.A. 66045 for fabric shade 151 or 451 and Goldenlite AJ, C.A. 66051 for ornamentation (see 6.2).

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Where the thread appears on the unbleached silesia, the thread shall be unbleached or white, except that the bobbin thread matching the basic material may be used where stitching is through the basic material and the silesia. Unbleached white or dyed (matching the basic material) thread may be used for stitching labels.

3.4.7.3.1 Colorfastness. All dyed threads shall show colorfastness to light and wet dry cleaning, equal to or better than the standard sample. When no standard sample is available, the dyed thread shall show "good" fastness to light and wet dry cleaning.

3.4.8 Gimp. The gimp for reinforcing buttonholes shall be cotton, size No. 8, conforming to type I or II of A-A-50198.

3.4.8.1 Color. The color of gimp for each class shall be the same as indicated for thread in 3.4.7.3.

3.4.8.2 Colorfastness. The dyed gimp shall show fastness to wet dry cleaning equal to or better than the standard sample. When no standard sample is available, the dyed gimp shall show "good" fastness to wet dry cleaning.

3.4.9 Buttons. The buttons for the left hip pocket and fly-tab closure shall be type II, class D, style 4, 22 line, glossy finish, conforming to V-B-871. The color of the buttons for each class of trousers shall be as follows:

Class 6 - Army Green BR, Cable 62015.

Class 2 - Black BT, Cable 62001.

3.4.10 Slide fastener. For all classes, the slide fastener shall be type I, style 1, cam lock, size LS, short tab pull, brass chain, conforming to V-F-106, except that the tape of the slide fastener shall be cotton, synthetic, or a combination of cotton and synthetic yarns. The closed bottom stop shall be a staple type and shall be secured over the first two or three scoops and around the beaded edges of both tapes. The tape shall show fastness to wet dry cleaning equal to or better than the standard sample. When no standard sample is available, the tape shall show "good" colorfastness to wet dry cleaning. The tape shall match the basic fabric in the following shades:

Class 6 - Green Shade X, Cable No. 66524.

Class 2 - Dark Blue, Shade Z, Cable No. 66526 or Black, Shade G, Cable No. 66507 for fabric shade 150 or 450 and Bright Blue, Shade AA, Cable No. 66527 or Medium Blue, Shade O, Cable No. 66515 for fabric shade 151 or 451 (see 6.2).

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3.4.11 Hook and eye. The hook and eye shall be North and Judd (Hook Flex H-49, K-50, H-89 and E-90); Universal Button Co. (Talon #3, #7, and #8 hook with #8 eye or #85 eye); Akim Co. or Patwin, Inc., Junior Series, type JB; Stimpson (P-536, D-4086, D-4457, D-4288; Rau (QA50, OK 1256, 080415), Patwin, Inc., (Slim-Slak with MB eye, and Silk-Slak) or equal (see 6.7). The finish shall be nickel plate.

3.5 Design. The trousers are dress type with a sew-on waistband with hook and eye closure, a french fly with slide fastener, straight side pockets, and double cord hip pockets. The left hip pocket has a buttonhole tab and button. An outlet is provided at seat seam and from crotch to knee at inseam. (See figure 1). The inside of the waistband has a rubberized track. The leg front and back creases are treated with a permanent silicone adhesive bead.

3.5.1 Figure. Figures are furnished for information only. To the extent of any inconsistencies between the written specification and the figures, this specification shall control.

3.6 Patterns. Standard patterns to be used for cutting the contractor's working patterns will be furnished by the Government. Except as allowed by footnotes to table I, the working patterns shall be identical to the standard patterns and shall not be altered in any way. The patterns provide a 1/4 inch seam allowance for bagging pockets and for pocket flaps and a 3/8 inch seam allowance for all other seams except seat seam and inseam of back part; 7/8 inch has been added to the seat seam allowances (total 1-1/4 inches at top) to allow for tapering the seat outlet and 3/4 inch has been added to the inseam of back part (total 1-1/8 inches at top) to allow for tapering the inseam outlet of back part.

3.6.1 List of pattern parts. The component parts of the trousers shall be cut from materials as specified in accordance with the number of parts required as shown in table I.

TABLE I. List of pattern parts

Material	Pattern nomenclature	Cut parts
Basic material (as specified)	Front	2
	Back	2
	Flies (one right and one left)	2
	Right fly with integrated tab (optional)	1
	Side pocket wide facing (or bearer)	2
	Side pocket narrow facing	2
	Hip pocket bearer	2
	Hip pocket cord	2
	Waistband (one right and one left)	2
	Right waistband for use with integrated tab (optional)	1
	Fly tab (optional)	2

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TABLE I. List of pattern parts (cont'd)

Material	Pattern nomenclature	Cut parts
Twill cloth (see 3.4.2.1)	Right fly lining <u>1</u> /	1
	Right fly lining with integrated tab (optional) <u>1</u> /	1
	Crotch lining	2
	Side pocket stay	2
	Left fly interlining <u>2</u> /	1
Twill cloth (see 3.4.2.2)	Side pocket	2
	Hip pocket	2

NOTE: Patterns are not furnished for belt loops, buttonhole tab, waistband lining and waistband interlining (buckram). See table II, operations 1 and 2 for their requirements.

- 1/ The right front end of the waistband lining may extend to the front opening. When this optional construction is used, the right fly lining shall be shortened at the top. The altered right fly lining must be sufficiently long to extend under the waistband lining and be caught by the waistband-top stitching (see operations 20a, 22c, and 25a).
- 2/ Not applicable to class 2 when the trousers are made of barathra, elastique or wool gabardine (see 3.4.2.1).

3.7 Construction.

3.7.1 Stitches, seams, and stitching. All stitches, seams, stitching types, and stitches per inch specified in table II shall conform to FED-STD-751. Where two or more methods for seam or stitch types are given for the same part of an operation, any one of them may be used. Where stitch type 401 is used, the looper (underthread) shall be on the inside of the trousers. Seam allowances shall be maintained with seams sewn so that no raw edges, runoffs, twists, pleats, puckers, or open seams will result. All seams shall start and finish evenly. Thread tension shall be maintained so that there will be no tight or loose tension. Buttonholes shall be clean cut and the stitching shall be securely caught in the fabrics.

3.7.2 Stitches per inch. The minimum and maximum number of stitches per inch shall be as specified in table II.

3.7.3 Thread breaks and ends of seams. The ends of all seams and stitching, when not caught in other seams and stitching, shall be backtacked not less than 1/4 inch. The ends of a continuous line of stitching (except on labels) shall be overlapped not less than 1/2 inch. The ends of the label stitching shall be overlapped not less than three stitches. Thread breaks

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(all stitch types) shall be secured by stitching back of the break not less than 1/2 inch. Skipped stitches or thread breaks on 401 seaming may be repaired using 301 stitch type. Bartacks shall be not more than 1/16 inch wide.

3.7.4 Buttonholes. Buttonholes shall be the eyelet end, taper bar, or eyelet end, square bar type, worked over gimp with the end securely tacked. The finished cut length shall be 5/8 inch. The eyelet end, square bar type shall be bartacked in a separate operation. The bar at end of the taper bar type buttonhole shall have a minimum of four tacks not including the first cross-over stitch.

3.8 Manufacturing operations requirements. The trousers shall be made by and with the use of all operations listed in table II. The contractor is not required to follow the exact sequence of operations. Any additional basting or holding stitching used to facilitate manufacture is permissible provided that the thread is removed or does not show on the finished trousers.

3.8.1 Pressing. Pressing specified in table II shall be performed by use of a heated pressing iron or machine.

3.8.2 Permanent creasing. All trousers shall have permanent silicone creases (see 6.6 and 6.6.1). Each of the trousers shall have a single continuous 1/16 inch (nominal) silicone adhesive nonstaining bead applied to the backside of the basic material in the center of each of the four prepressed leg creases to form permanent creases. Each bead shall be applied evenly and equally from the top of the crotch to within 2 inches of the open (unfinished) trouser bottom. The permanent creases in the trousers shall show no evidence of flaking, decomposition, failure to retain crease, cracking, staining or strike back onto face of material, or increased stiffness when tested for resistance to dry heat, steam pressing, and perchloroethylene solvent as specified in 4.4.2.

3.9 Marking. The component parts shall be marked to insure a uniform shade and size throughout the trousers (or uniform). Any method of shade marking may be used except:

- a. Corrosive metal fastening devices.
- b. Sew-on shade tickets.
- c. Adhesive type tickets which leave traces of paper or adhesive on the material upon removal of the tickets.

3.10 Use of automated apparel equipment. Automated apparel equipment may be used to perform any of the operations specified in table II, providing that the seam and stitch type are as specified and the finished component conforms to the required configuration. When a government furnished shaper pattern is forwarded, the component shall conform to that pattern.

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NO.	TABLE II. MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD		
					NEEDLE	BOBBIN/ LOOPER	COVER
1.	<p><u>Cut trousers</u></p> <p>a. Spread the material without tension in a suitable number of plies for the applicable fabric. The cut parts from the top and bottom ply shall match and correspond to the pattern.</p> <p>b. Cut trousers in accordance with patterns furnished which show directional lines, size, placement of pockets and notches for the proper assembly of all parts. Directional lines shall be placed in the warp direction.</p> <p>c. The directional lines on the fronts and backs may vary from the warp direction by not more than 1 inch. Measurements shall be taken at the top and bottom edges of the pattern from the directional line to the selvage edge of the fabric (even side of lay) and the difference between the two measurements shall not exceed 1 inch.</p> <p>d. Cut all parts of the trousers out of the same piece of material except narrow facings for side pockets, hip pocket bearers, belt loops, fly tab pieces, and fly pieces (right and left) which may be cut from ends. The parts cut from ends shall approximate the shade of the trousers.</p> <p>e. When the trousers are cut as a part of the uniform, the trousers and the coat shall be cut from the same piece of material, except those parts which may be cut from ends.</p>						

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NO.	TABLE II. (cont'd) MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD	
					NEEDLE	BOBBIN/COVER
1.	<p><u>Cut trousers.</u> (cont'd)</p> <p>f. Cut the stripping for belt loops and buttonhole tabs of sufficient width to comply with operation 7.</p> <p>g. The selvage shall not appear on the outside of trousers.</p>					
2.	<p><u>Cut linings and interlinings.</u></p> <p>a. Cut the right fly lining on the straight or on the bias.</p> <p>b. Cut left fly interlining (when applicable), and stays for side pockets in the warp or filling direction.</p> <p>c. Cut crotch lining pieces so that the fold will be on the bias and one of the inseam sides is in the direction of the warp.</p> <p>d. Cut the waistband linings and the waistband interlinings on the bias of sufficient width to comply with operation 20.</p> <p>e. Cut waistband stabilizer of sufficient length to comply with operation 20.</p> <p>-or-</p> <p>f. Cut rubberized waistband material of sufficient length to comply with operation 20.</p>					

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1 Dec 76 EDITION OF 1 OCT 76 WILL BE USED UNTIL EXHAUSTED.

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NO.	TABLE II. (cont'd) MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD	
					NEEDLE	BOBBIN/ LOOPER COVER
2.	<p><u>Cut linings and interlinings.</u> (cont'd)</p> <p>g. The waistband linings may be commercial type using lining, interlining, rubber inside track and waistband materials specified (see 6.5).</p> <p>h. When applicable, the waistband linings may be commercial type using the lining, interlining and waistband stabilizer materials specified.</p>					
3.	<p><u>Cut pockets.</u></p> <p>Cut pocketing in the warp or filling direction. Cut as many as possible in the warp direction.</p>					
4.	<p><u>Marking (see 3.9).</u></p> <p>Mark or ticket all component parts of trousers except parts cut from ends, to insure a correct size and uniform shade throughout the trousers (or uniform).</p>					
5.	<p><u>Replacement of damaged parts.</u></p> <p>Care shall be exercised during the spreading, cutting, and manufacturing operations to assure that material defects and damages, as classified in MIL-STD-1488, are excluded and replaced with non-defective and properly matched material.</p>					

NATICK Form 903

1 Dec 76

EDITION OF 1 OCT 76 WILL BE USED UNTIL EXHAUSTED.

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NO.	TABLE II. (cont'd) MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD		
					NEEDLE	BOBBIN/ LOOPER	COVER
6.	<u>Overedge stitching.</u>						
	a. Overedge the seam allowance of inseam, outseam from lower side pocket notch to bottom of trousers, bottom edge, crotch seam, and right front edge of foreparts. The crotch linings folded in half lengthwise shall be caught in the overedge stitching.	502 and 503 or 504	EFD-1 EFD-1 EFD-1	8-10 8-10 8-10	70-2 70-2 70-2	70-2 70-2 70-2	
	b. The folded crotch lining may be stitched to the foreparts in a separate operation.	301	SSa-1	8-10	50-3	50-3	
	c. Overedge the seam allowance of inseam, outseam, bottom edge, and seat seam of back parts. The side pocket stay pieces, with the bottom ends turned under, may be caught in the overedging of the outseams (see operation 16).	502 or 503 or 504	EFD-1 EFD-1 EFD-1	8-10 8-10 8-10	70-2 70-2 70-2	70-2 70-2 70-2	
7.	d. Overedge the left end of the waistband.						
	NOTE: When a knife is used on the serging machine, the gage shall be set so that the raveled ends are trimmed but the edge of the fabric is not cut off.	502 or 503 or 504	EFD-1 EFD-1 EFD-1	8-10 8-10 8-10	70-2 70-2 70-2	70-2 70-2 70-2	
	<u>Make stripping (see operation 1.f.) for buttonhole tab and belt loops.</u>						
	a. Fold stripping with the edges abutted at center and stitch with each row of stitching not less than 1/16 inch from edge and the covering stitch on the underside. The finished stripping shall measure 5/16 to 3/8 inch wide.	406	ETh-1	12-14	50-3	50-3	

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NO.	TABLE II. (cont'd) MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD		
					NEEDLE	BOBBIN/LOOPER	COVER
7.	<p><u>Make stripping (see operation 1.f.) for buttonhole tab and belt loops.</u> (cont'd)</p> <p>-or-</p> <p>b. Fold stripping with both edges turned in and the turned-in edges abutted at center and stitch with a covering stitch.</p> <p>-or-</p> <p>c. Turn in one side of stripping. Fold stripping with the turned-in edge overlapped on the raw edges at center and stitch with a covering stitch.</p>	105	EFae-1	12-14	50-3	50-3	
8.	<p><u>Make hip pocket buttonhole tab.</u></p> <p>a. Cut a piece of stripping (see operation 7) of sufficient length to comply with operation 8b below and to measure $1-1/4 \pm 1/8$ inches long when attached to the left hip pocket.</p> <p>b. Fold the piece in half and about the side edges forming a point. Bartack across the abutted edges at pointed end catching the base of the triangle. Place a second bartack across the abutted edges $5/8 \pm 1/16$ inch from the first tack, forming a slit buttonhole. The bartacks shall be $3/8$ to $1/2$ inch long.</p>	105	--	12-14	50-3	50-3	
		Bartack or automatic loop tacker	--	21-28 per tack 24-28 per tack	50-3 50-3	50-3 50-3	

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NO.	TABLE II. (cont'd) MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD		
					NEEDLE	BOBBIN/ LOOPER	COVER
9.	<p><u>Make fly tab (applicable if separate tab piece is used).</u></p> <p>a. Stitch the two fly tab pieces together along the sides and the pointed end; trim corners and point; turn; force out points and edges and edge stitch 1/16 to 1/8 inch from edge.</p> <p>b. Make buttonhole at pointed end of tab as indicated by pattern, with the inside edge of the eyelet 5/8 to 3/4 inch from point. The purling shall face the wearer on the finished trousers. The eyelet end, square bar type buttonholes shall be bartacked with 21 stitches per bar.</p>	<p>301 or 401 and 301</p> <p>Button- hole</p>	<p>SSe-2(a) SSe-2(a) SSe-2(b)</p> <p>--</p>	<p>10-16 10-16 12-16</p> <p>52-54 per buttonhole including tack</p>	<p>50-3 50-3 50-3</p> <p>50-3</p>	<p>50-3 70-2 50-3</p> <p>50-3</p>	
10.	<p><u>Make flies.</u></p> <p>a. Superimpose left fly on left fly interlining (when applicable). Stitch back edge of fastener tape to left fly (through interlining when applicable) with two rows of stitching. The end of the scoops shall be 1/4 to 1/2 inch above the fly notch when fasteners are cut and scoops removed. When the trousers are finished, the edge of the chain shall be 1/2 to 5/8 inch from edge at top, tapering to 1/4 to 3/8 inch from edge at bottom (figure 3A).</p> <p>b. After fastener is cut and the scoops removed, stitch the fastener tape to back edge of right fly, with bottom end of scoops 1/4 to 1/2 inch above the fly notch (figure 3B).</p>	<p>301 or 401</p> <p>503 or 504</p>	<p>LSbj-2 LSbj-2</p> <p>SSa-1</p>	<p>12-16 12-16</p> <p>6-10</p>	<p>50-3 50-3</p> <p>70-2</p>	<p>50-3 70-2</p> <p>70-2</p>	

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NO.	TABLE II. (cont'd) MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD	
					NEEDLE	BOBBIN/ LOOPER COVER
10.	<p><u>Make flies.</u> (cont'd)</p> <p>c. (Applicable if separate tab piece is used.) With the fly tab positioned 3/8 to 3/4 inch from the top raw edge of right fly, seam the fly lining to the front edge of the right fly to within $1 \pm 1/4$ inches from top of fly inclosing the fly tab between the two plies. On the finished trousers the fly, fly tab and waistband shall lie smooth and flat when fly tab is buttoned (figure 3C).</p> <p style="text-align: center;">-or-</p> <p>d. If option to use front fly with integrated fly tab is exercised, seam lining to the front edge of right fly to within $1 \pm 1/4$ inches from top to fly.</p> <p>e. Overedge the back edge of the left fly (and interlining when applicable) (figure 3e).</p> <p><u>Seam darts in back (all classes).</u></p> <p>a. Fold the backs, matching the cut edges of waist darts. Seam lengthwise along the entire length of the dart, starting 3/8 inch from cut edges at the top end and tapering to a point at the lower end as indicated by marks on patterns.</p> <p>b. Spread open and press darts smooth and flat with heated pressing iron or pressing machine.</p>	301 or 401	SSe-2(a) SSe-2(a)	10-16 10-16	50-3 50-3	50-3 70-2
11.		301 or 401	SSe-2(a) SSe-2(a)	10-16 10-16	50-3 50-3	50-3 70-2
		503 or 504	SSa-1 SSa-1	6-10 6-10	70-2 70-2	70-2 70-2
		301	SSa-1	12-16	50-3	50-3

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NO.	TABLE II. (cont'd) MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD	
					NEEDLE	BOBBIN/ LOOPER COVER
12.	<p><u>Make hip pockets and attach label(s).</u></p> <p>Finished appearance. The pockets shall be in alignment, uniform in width and depth and shall finish 5-3/4 to 6-1/4 inches deep. There shall be no raw edges or pleats at the end of the openings. The pocket openings shall finish 5-1/4 \pm 1/8 inches long.</p> <p>a. Position the combination identification and instruction label (see 3.4.6.1) or instruction label (see 3.4.6.4), as applicable, on the bottom of the right rear pocketing so that on the finished trousers it will face the wearer. No part of the label printing will be covered by the waistband interlining curtain. Stitch on all four sides. Stitching shall not be through the printing.</p> <p>b. Turn in lower raw edge of bearer and seam to pocket at notches. When the bearer piece is cut on the selvage, the edge need not be turned in (figure 5A).</p> <p>c. Position cord facing piece on outside of trousers as indicated on pattern with the pocketing placed on the underside (as indicated by solid line on pattern) and stitch to trousers through pocketing with two rows of stitching (figure 5B).</p> <p>d. Cut opening between the rows of stitching through all plies simultaneously, turn lower part of facing through the cut opening and raise stitch forming a 1/8 to 3/16 inch cord edge (figures 5C, 5D and 5E).</p>	301	LSbj-1	10-16	50-3	50-3
		301	LSd-1	12-16	50-3	50-3
		301	--	12-16	50-3	50-3
		301	--	12-16	50-3	50-3

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NO.	TABLE II. (cont'd) MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD	
					NEEDLE	BOBBIN/ LOOPER COVER
12.	<u>Make hip pockets and attach label(s).</u> (cont'd)					
	e. Turn in raw edges of cord facing piece and seam to pocketing. When cord facing piece is cut on the selvage the edge need not be turned in (figure 5E).	301	Lsd-1	12-16	50-3	50-3
	f. Fold pocketing, seam the sides and turn to finished position (figure 5F).	301 or 401	SSae-2(a) SSae-2(a)	12-16 12-16	50-3 50-3	50-3 70-2
	g. Smooth out pocketing and single stitch 5/16 to 3/8 inch from edge. The stitching may extend across the bottom folded edge. The ends of the bearer and cord facing piece shall be caught by the edge stitching only (figure 5G).	301	SSae-2(b) and OSf-1	12-16 12-16	50-3 50-3	50-3 50-3
	-or-					
	h. Fold pocketing with side raw edges turned to the inside $3/8 \pm 1/16$ inch and stitch down sides and across bottom, $1/8 \pm 1/16$ inch from pocket edges.	301	SSC-1 and OSf-1	12-16	50-3	50-3
	i. Form a 1/8 to 3/16 inch cord of the facing on the upper edge of pocket opening, insert buttonhole tab at center (1/4 inch off center tolerance) on left hip pocket and raise stitch the seam through the trousers, cord facing piece, pocket bearer and pocketing, closing the top of pocket (figure 5H).	301	--	12-16	50-3	50-3
	-or-					
	j. Tack ends of pocket opening 1/4 to 3/8 inch through cord, bearer, and pocketing.	301	--	12-16	50-3	50-3

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NO.	TABLE II. (cont'd) MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD	
					NEEDLE	BOBBIN/ LOOPER COVER
12.	<p><u>Make hip pockets and attach label(s).</u> (cont'd)</p> <p>k. Operations 12c and 12d above may be accomplished with a double piped pocket machine which stitches, cuts and turns piped edges in one operation. When this machine is used, the welt piece may be trimmed to permit insertion into the machine and the machine manufacturer's recommended pocket-stay material may be used.</p> <p style="text-align: center;">--and--</p> <p>1. Raise stitch the joining seam of lower piping piece through back of trousers and piping piece only; raise stitch the joining seam of the top piping piece through all plies closing the top of pocket. The ends of the pocket openings shall be securely tacked.</p>	101	--	12-16	50-3	--
13.	<p><u>Make side pockets.</u></p> <p>Place facing and bearer on pocketing and stitch along the inner side, with the raw edge turned in, and across the lower end (figure 2A). A selvage edge need not be turned in.</p> <p>NOTE: When using automated equipment, the facing and bearer may be straight stitched along the inner side with the raw edge turned-in from the top to the bottom.</p>	301	--	12-16	50-3	50-3
14.	<p><u>Attach side pockets.</u></p> <p>Finished appearance. The edges of the pocket openings shall not be distorted. The openings shall</p>	301	Lsd-1 and LSbj-1	10-16 10-16	50-3 50-3	50-3 50-3

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NO.	TABLE II. (cont'd) MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD	
					NEEDLE	BOBBIN/ LOOPER COVER
14.	<p><u>Attach side pockets.</u> (cont'd)</p> <p>be aligned, uniform in length, and shall measure not less than 5-3/4 nor more than 6-1/2 inches between tacks. Avoid notching the pocket or underside beyond the width of the side seam allowance.</p> <p>a. Seam side pocket to front, as indicated by marks on pattern. Notch for pocket opening, turn to finished position with the seam to the back of the front edge and stitch 3/16 to 1/4 inch from edge (figures 2B and 2C).</p> <p>b. Fold pocket right-side-out and seam raw edges from step to folded edge of pocketing. Notch pocket and facing at top of step and turn pocket (figures 2D and 2E).</p> <p>c. Tack ends of the openings to the bearer with a 1/4 to 3/8 inch tack. The right and left pocket openings shall not be out of alignment by more than 1/2 inch (figure 2F).</p> <p><u>Sew on flies.</u></p> <p>Finished appearance. The ends of the flies shall be even where they join the crotch seam. The fly shall lie flat without twists or puckers when fastener is closed.</p> <p>a. Sew on right fly (slide fastener and fly tab, if separate piece, attached) with notches matched (figure 3F).</p>	301	SSe-2	12-16	50-3	50-3
15.		301 or 401 or 515, 516 or 519	SSae-2(a) SSae-2(a) SSa-2	12-16 12-16 12-16	50-3 50-3 50-3	50-3 70-2 70-2
		301	---	12-16	50-3	50-3
		301	SSa-1	12-16	50-3	50-3

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					NEEDLE	BOBBIN/ LOOPER COVER
15.	<u>Sew on files.</u> (cont'd) b. Sew on left fly (slide fastener attached) with notches matched. Turn fly to inside with the seam 1/16 to 1/8 inch back of folded edge and press front edge without damage to the fastener (figures 3G and 3H.)	301	SSa-1	12-16	50-3	50-3
16.	<u>Join outseams.</u> a. Join outseams with the notches matched, catching the pocket stay piece with the bottom ends turned under (if not previously caught in overedge operation) (see operation 6c). b. Press outseam open from bottom to top of trousers. The pocket stay pieces may be folded over the open seam and pressed into position for operation 17.	301 or 401	SSa-1 SSa-1	12-14 12-14	50-3 50-3	50-3 70-2
17.	<u>Finish side pockets.</u> Turn in back edge of side pockets and the edge of stay pieces and stitch to stay pieces 1/4 to 3/8 inch from edge along the side seam allowance. Continue the stitching around pocket to folded edge and securely backstitch end of seam (figure 2G).	301 301	SSc-1 and SSae-2(b)	12-16 12-16	50-3 50-3	50-3 50-3
18.	<u>Ornamentation</u> (see figure 6). Finished appearance. The ornamentation for general officers (see 3.4.5.1 and 3.4.5.2) consists of two stripes 1/2 inch apart on each outseam. The ornamentation for Army Band trousers (see 3.4.5.3) consists of two stripes 1 inch apart. All other ornamentation					

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NO.	TABLE II. (cont'd) MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD		
					NEEDLE	BOBBIN/ LOOPER	COVER
18.	<p><u>Ornamentation (see figure 6).</u> (cont'd)</p> <p>(see 3.4.5.1 and 3.4.5.2) consists of a single stripe on each outseam. The stripes shall be evenly stitched on each side without twists, puckers or pleats. When trousers are finished, the stripes shall be caught in the waistband.</p> <p>a. Position the stripes on foreparts with the back edge of the stripes aligned with the outseam and edge of pocket opening. Seam to trousers from top of forepart to lower end of pocket. This part of stripe is attached before closing pocket (see operation 14b). Continue the stitching from the lower end of the pocket opening to the bottom of leg, gradually working the stripes towards the back so that at the bottom the stripes will be centered over the outseam. This part of the stripe is attached after outseams have been pressed open (see operation 16). The second stripe shall be positioned on foreparts 1/2 inch (general officers) or 1 inch (Army Band) from first stripe. The stitching shall be $1/16 \pm 1/32$ inch from each edge of the stripes.</p>	301	SSau-2	12-16	50-3	50-3	
19.	<p><u>Attach waistband and set belt loops.</u></p> <p>Finished appearance. The finished waistband shall measure $1-1/2 \pm 1/8$ inches wide. There shall be seven loops for sizes up to and including 37 and eight loops for sizes 38 and up. The loops shall be positioned as follows:</p> <p>One on each front as indicated by patterns.</p>						

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NO.	TABLE II. (cont'd) MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD	
					NEEDLE	BOBBIN/ LOOPER COVER
19.	<p><u>Attach waistband and set belt loops.</u> (cont'd)</p> <p>One on each back with the front edge of loop positioned 1/8 inch from side seam. One centered between outseam and seat seam. One on seat seam (see operations 28a and 28b or 28c and 29a). The extra loop for larger sizes, on right front 1-1/4 to 1-3/4 inches from right fly joining seam.</p> <p>a. Stitch right and left waistbands to trousers catching the ends of belt loops (except center back loop, see operations 28a and 28b or 28c and 29a) in the stitching.</p> <p>b. Press waistband seams open.</p> <p>-or-</p> <p>c. When the alternate method to tack the belt loops is used, drop belt loops and securely stitch or bartack the loops 3/8 to 1/2 inch below waistband seam. The stitching or tacking shall not extend beyond the width of the loop.</p> <p>NOTE: When alternate method is used, operation 20.e will not be required.</p> <p>-or-</p>	301 or 401	SSa-1 SSa-1	12-14 12-14	50-3 50-3	50-3 70-2
		301 or bartack or automatic loop tacker	LSd-1 LSd-1 LSd-1	12-14 21-28 per bartack 24-28 per tack	50 50 50	50 50 50

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NO.	TABLE II. (cont'd) MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD	
					NEEDLE	BOBBIN/ LOOPER COVER
19.	<p><u>Attach waistband and set belt loops.</u> (cont'd)</p> <p>d. <u>When second alternate method is used.</u></p> <p>Position with underside of belt loop facing up, position top edge 3/8 inch from top edge of waistband and bartack or stitch the belt loop to waistband at top so that when belt loop is turned down the folded edge is even with or not more than 1/16 inch below top edge of waistband.</p> <p>e. Turn belt loop to finished position, turn under bottom of loop and position folded edge $1/2 \pm 1/16$ inch from bottom of waistband and bartack to trousers 1/16 to 1/8 inch from folded edge. The finished belt loops shall measure $1-3/4 \pm 1/8$ inches from top of loop to the bottom folded edge.</p> <p>NOTE: The waistband lining may be attached to the waistband (operation 20) prior to setting the trousers.</p>	<p>301 or bartack or automatic loop tacker</p> <p>301 or bartack or automatic loop tacker</p>	<p>IScu-2(a) IScu-2(a) ISd-1</p> <p>ISd-1 ISd-1 ISd-1</p>	<p>12-14 21-28 per bartack 24-28 per tack</p> <p>12-14 21-28 per bartack 24-28 per tack</p>	<p>50 50 50</p> <p>50 50 50</p>	
20.	<p><u>Make and join waistband linings.</u></p> <p>Finished appearance. The waistband linings shall measure not less than 2 inches wide in the finished trousers. The waistband linings may be placed providing the seam is flat and there is no more than one piecing on each trouser. The waistband stabilizer may be 1 inch shorter than the waistband lining at seat seam.</p>					

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NO.	TABLE II. (cont'd) MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD		
					NEEDLE	BOBBIN/ LOOPER	COVER
20.	<p><u>Make and join waistband linings.</u> (cont'd)</p> <p>a. Overlap the lining 1/4 inch on the rubber track material, position the lining 1/8 inch from each rubber track and stitch 1/16 inch from edge of lining. Overlap the lining on the interlining 1 inch (see operation 2d) and stitch 1/8 to 3/16 inch from edge of lining. Position waistband stabilizer to opposite remaining edge of interlining and stitch 1/2 inch from edge. Fold lining over interlining and press.</p> <p>b. A commercial waistband conforming to specified requirements may be used (see operation 2g).</p> <p style="text-align: center;">-or-</p> <p>c. The waistband stabilizer may be inserted during the joining of the waistband and waistband lining.</p> <p>d. Turn under top edge of waistband lining and stitch to top edge of waistband catching interlining stabilizer and the top of the belt loops with a row of simulated hand felling or fell by hand. The belt loops shall lie flat and shall not deviate from the straight by more than 3/16 inch.</p> <p>e. Tack the tops of the belt loops to the waistband through waistband but not through waistband lining. The bartack shall not be visible on the outside of the trousers when waistband lining is folded to the inside. The tacks shall extend the width of the loop.</p>	<p>101 or 301 or 401</p> <p>304 or 404 or Hand or 401</p> <p>301 or bartack or automatic loop tacker</p>	<p>LSa-1 LSa-1 LSa-1</p> <p>-- -- -- --</p> <p>-- -- --</p>	<p>6-10 6-10 6-10</p> <p>12-16 12-16 6-8 12-14</p> <p>12-16 28 per bartack 24-28 per tack</p>	<p>50-3 50-3 50-3</p> <p>50-3 50-3 50-3 50-3</p> <p>50-3 50-3 50-3</p>	<p>-- 50-3 70-2 70-2</p> <p>50-3 70-2 -- 70-2</p> <p>50-3 50-3 50-3</p>	

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NO.	TABLE II. (cont'd) MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD	
					NEEDLE	BOBBIN/ LOOPER COVER
20.	<u>Make and join waistband linings.</u> (cont'd) f. (When option to extend waistband lining to right end of waistband is exercised). Turn right end of waistband lining to the outside and stitch to front edge of waistband catching the top of the fly lining in the stitching. g. Fold waistband lining to the inside and baste or press top edge. The lining shall not be exposed beyond the top of waistband.	301 or 401	SSe-2(a) SSe-2(a)	12-16 12-16	50-3 50-3	50-3 70-2
21.	<u>Attach hooks and eyes.</u> a. Position the hook on the center (1/4 inch off center tolerance) of the left waistband with the rolled edge of the hook aligned with the slide fastener scoops. Attach through a suitable reinforcement. b. Position the eye on the center of the right waistband, aligned with slide fasteners scoops, to correspond to the hook on left waistband. Attach through a suitable reinforcement. NOTE: When the hook and eye are engaged on the finished trousers, the closure shall not bulge, pucker, or twist.					
22.	<u>Finish right and left flies.</u> Finished appearance. The top corners of the right (when applicable) and left flies shall be completely forced out and shall not be bulky. The stitching of the left fly shall be uniformly spaced from edge of					

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NO.	TABLE II. (cont'd) MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD	
					NEEDLE	BOBBIN/ LOOPER COVER
22.	<p><u>Finish right and left flies.</u> (cont'd)</p> <p>fly. The seam joining the left fly to the forepart shall not be exposed on outside of trousers, when fastener is closed. The right fly lining shall not be exposed on outside. The flies shall be smooth without twists or puckers or excessive fullness.</p> <p>a. Continue the stitching of the fly lining to the top of the waistband.</p> <p>b. Turn right fly lining to the inside and stitch 1/16 to 1/8 inch from front edge. Turn in fly lining at top of waistband and continue the stitching across top; turn in raw edge of fly lining and raise stitch the fly joining seam catching the fly lining in the stitching (figures 3D and 4J). The edge stitching along front edge of fly may be accomplished in a separate operation.</p> <p>-or-</p> <p>c. (When option to extend waistband lining to right end of waistband is exercised). Turn right fly lining to the inside and stitch 1/16 to 1/8 inch from front edge; continue the stitching along front end of waistband, across top of waistband and down to meet back of right fly; turn in raw edge of fly lining and raise stitch the fly joining-seam catching the fly lining in the stitching.</p> <p>d. Turn back end of waistband in line with the front folded edge of left fly and stitch across top of</p>	301 or 401	SSe-2(a) SSe-2(a)	12-16 12-16	50-3 50-3	50-3 70-2
		301	SSe-2(b) and	12-16	50-3	50-3
		301	SSc-1 and	12-16	50-3	50-3
		301	LSq-2(b)	12-16	50-3	50-3
		301	SSe-2(b) and LSq-2(b)	12-16 12-16	50-3 50-3	50-3 50-3
		301	SSa-1	12-16	50-3	50-3

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NO.	TABLE II. (cont'd) MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD	
					NEEDLE	BOBBIN/ LOOPER COVER
22.	<u>Finish right and left flies.</u> (cont'd) waistband the width of the fly. Trim, turn, and work out corner (figure 4K). a. Stitch down left fly with waistband lining smoothly inserted between fly and trouser. The stitching shall be $1\text{-}3/8 \pm 1/8$ inches from front edge of fly, extend from top of waistband, and curve to fly notch (figure 4K).	301	--	12-16	50-3	50-3
23.	<u>Join inseams.</u> a. Join inseams forming outlet tapering the seam allowance of back part from $1\text{-}1/8$ inches at crotch to $3/8$ inch at notch (knee). The seams shall start and finish evenly and the notches shall match. b. Press inseams open.	301 301 or 401 401	SSbd-1 and SSa-1 LSr-2(a) and SSa-1	12-16 12-16 12-16 12-16	50-3 50-3 50-3 50-3	50-3 50-3 70-2 70-2
24.	<u>Join seat seams.</u> Finished appearance. The seat seam shall be joined with stitch tension of sufficient elasticity to meet strain encountered in sitting or stooping. The waist shall be measured before the seat seam is joined to assure correct waist size. In the joining of the seat seam, the inseam shall meet and the right and left waistband joining seams shall be aligned. The base of the left fly shall cover the right fly on outside of the finished trousers.					

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NO.	TABLE II. (cont'd) MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD	
					NEEDLE	BOBBIN/ LOOPER COVER
24.	<u>Join seat seams.</u> (cont'd) a. Join seat seam from base of fly to end of waistband lining with a double needle seat seamer with the rows of stitching 1/64 to 1/32 inch apart. The seam from the waistband joining seam to the end of the waistband lining shall be perpendicular (90 degree angle) to the waistband joining seam. b. Press crotch and seat seam open.	401	SSa-2	8-10 each needle	50-3	70-2
25.	<u>Finish waistband and attach size or combination size and identification label.</u> a. Top stitch the spread open waistband seam 1/16 inch below the joining seam on the trouser side, simultaneously catching the waistband lining (with the ends at center back folded in). The stitching shall not extend across the fly except when option to extend waistband lining to right end of waistband is exercised. Pockets may be stitched or basted to waistband seam allowance prior to top stitching. b. Stitch the top edge of the size label (see 3.4.6.2) or combination size and identification label (3.4.6.3), as applicable to lower edge of waistband lining above the right hip pocket. The end of the stitching need not be tacked providing the stitching extends at least 1/2 inch beyond each end of the label. The stitching shall not be through the printing.	301	LSbd-2(b) --	12-16 10-14	50-3 50-3	50-3

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NO.	TABLE II. (cont'd) MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD	
					NEEDLE	BOBBIN/ LOOPER COVER
26.	<u>Assemble slide fastener.</u> Attach slider and, with the ends of the chain even, staple the fastener together.					
27.	<u>Stitch right fly extension.</u> Turn in the raw edges of the right fly extension piece and machine stitch or hand fell to each side of the spread-open crotch and seat seam (figure 4L).	301 or Hand	SSac-3(b) (c), (d) SSac-3(b) (c), (d)	12-16 6-8	50-3 50-3	50-3 --
28.	<u>Attach center back belt loop.</u> Finished appearance. The tacking shall extend the width of the loop but not beyond. a. Turn under top end of belt loop, position over seat seam even with top of waistband and stitch, tack, or bartack to trousers 1/16 to 1/8 inch from folded edge. b. Turn under bottom end of belt loop and bartack to trousers 1/4 ± 1/8 inch below waistband. The opening of the finished loop shall measure 1-1/2 to 1-5/8 inches between tacks. -or- <u>When alternate method is used.</u>	301 or bartack or automat- ic loop tacker 301 or bartack or automat- ic loop tacker	Lsd-1 Lsd-1 Lsd-1 Lsd-1 Lsd-1 Lsd-1	12-16 21-28 per bartack 24-28 per tack 12-16 21-28 per bartack 24-28 per tack	50-3 50-3 50-3 50-3 50-3 50-3	

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NO.	TABLE II. (cont'd) MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD	
					NEEDLE	BOBBIN/ LOOPER COVER
28.	<u>Attach center back belt loop. (cont'd)</u> c. <u>Finish belt loop attachment.</u> Turn up belt loops, fold under top of loops and position folded edge $1/8 \pm 1/16$ inch from top of waistband and bartack. The finished belt loops shall measure $1-3/4 \pm 1/8$ inches from bartack at top of loop to the bottom folded edge.	301 or bartack or automatic loop tacker	Lsd-1 Lsd-1 Lsd-1	12-14 21-28 per bartack 24-28 per tack	50 50	50 50
29.	<u>Alternate method to attach center back belt loop (see operation 19.c).</u> Finished appearance. The tacking shall extend the width of the loop but not beyond. a. Place bottom edge of belt loop, with underside facing up, even with bottom edge of waistband and positioned over center back seam. Securely bartack the loop $3/8$ to $1/2$ inch below waistband seam. b. Turn belt loop to finished position, turn under top of loop and position folded edge $1/8 \pm 1/16$ inch from top of waistband and bartack to trousers $1/16$ to $1/8$ inch from folded edge. The finished back center belt loop shall measure $1-3/4 \pm 1/8$ inches from top of loop to the bottom folded edge.	301 or bartack or automatic loop tacker 301 or bartack or automatic loop tacker	Lsd-1 Lsd-1 Lsd-1 Lsd-1 Lsd-1 Lsd-1	12-14 21-28 per bartack 24-28 per tack 12-14 21-28 per bartack 24-28 per tack	50 50 50 50	50 50 50 50

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NO.	TABLE II. (cont'd) MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD	
					NEEDLE	BOBBIN/ LOOPER COVER
30.	<p>Make buttonhole (applicable to fly with integrated fly tab.</p> <p>Make buttonhole at end of tab, as indicated by pattern, with the inside edge of eyelet 5/8 to 3/4 inch from point. The purling shall face the wearer on the finished trousers. The eyelet end, square bar type buttonhole shall be bartacked with 21 stitches per bar.</p>	Button-hole	--	52-54 per buttonhole including tack	50-3	50-3
31.	<p>Mark or gage and sew buttons.</p> <p>Finished appearance. The buttons shall be securely sewn and properly aligned with buttonholes. Hand sewn buttons shall be shank wrapped three times and the ends of the thread shall be securely tacked with not less than two stitches. Machine sewn buttons which are automatically shanked shall have a minimum of ten wraps with three locking stitches.</p> <p>NOTE: All machine sewn buttons shall be shank wrapped.</p> <p>a. Sew a 22-line button on the left waistband lining to correspond with the fly-tab buttonhole. The stitching shall not be visible on the outside of the trousers.</p>	301 or 101 or Hand	-- -- --	14-16 per button 14-16 per button 4 double per button not including shank wrapping	50-3 50-3 50-3	50-3 -- --

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NO.	TABLE II. (cont'd) MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD		
					NEEDLE	BOBBIN/ LOOPER	COVER
31.	<u>Mark or gage and sew buttons.</u> (cont'd) b. Sew a 22-line button on left hip pocket through pocket and facing to correspond to buttonhole tab.	301 or 101 or Hand	--	14-16 per button 14-16 per button 4 double per button not in- cluding shank wrapping	50-3 50-3 50-3	50-3 -- --	
32.	<u>Bartacking.</u> Finished appearance. The bartacks shall be well made and correctly placed to reinforce points of strain as specified. The bartacks at side pocket openings shall extend beyond the outseams 1/16 to 1/8 inch. a. Bartack all pockets at ends of pocket openings. The bartacks shall be perpendicular to the openings. b. Bartack at base of fly at the junction of the crotch seam and fly. The bartack may be diagonal, in line with the fly stitching, or may be horizontal and shall not extend beyond the crotch seam (figure 4M). c. The inside edges of the right and left flies shall be bartacked together.	Bartack Bartack Bartack	-- -- --	21-28 per bartack 21-28 per bartack 21-28 per bartack	50-3 50-3 50-3	50-3 50-3 50-3	

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NO.	TABLE II. (cont'd) MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD	
					NEEDLE	BOBBIN/ LOOPER COVER
33.	<p><u>Finish trouser bottoms.</u></p> <p>When ornamental stripes are required.</p> <p>1. Cut two pieces of self material for protector strips and pink the upper and side edges. The strips after pinking, shall measure $3 \pm 1/8$ inches long and $2 \pm 1/8$ inches wide.</p> <p>2. Center a protector strip over the ornamental stripes on each trouser leg with the shorter dimension across the stripe. Stitch on all four sides $3/16$ to $1/4$ inch from edge.</p>	301	LSbj-1	8-16	50-3	50-3
34.	<p><u>Cleaning.</u></p> <p>a. Trim all ends of stitching and remove loose threads.</p> <p>b. Trim ends of center back belt loop to a length of $1/16$ to $1/4$ inch.</p> <p>c. Remove all spots, stains and marking tickets.</p>					
35.	<p><u>Pressing.</u></p> <p>a. Press and crease the legs with the seam matching at the bottoms and knees.</p> <p>b. Permanent creasing, apply the silicone adhesive bead to the front and back of legs along the crease area (see 3.8.2). Press and crease the legs with seams matching at the bottoms and knees. The legs shall be pressed individually. There shall be no</p>					

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NO.	TABLE II. (cont'd) MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD		
					NEEDLE	BOBBIN/ LOOPER	COVER
35.	<p><u>Pressing.</u> (cont'd)</p> <p>variation in the sharpness of the left crease at front and back parts of the legs. The end of the crease shall be not more than 1 inch higher nor less than 2 inches lower than the junction of the inseams at crotch. The length of the crease shall not vary by more than 1-1/2 inches.</p> <p>c. Press tops of trousers, including fly and pockets.</p> <p>d. Close slide fastener, fasten waistband and button hip pocket.</p>						

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3.11 Finished measurements. The finished trousers shall conform to the measurements shown in table III. The tolerance shall be $\pm 1/4$ inch for $1/2$ waist, $1/2$ knee, and $1/2$ bottom measurements; $\pm 1/2$ inch for outseams; and $+ 1/4$, $- 1/2$ for $1/2$ seat measurements.

TABLE III. Measurements in inches

	ODD SIZES											
	23	25	27	29	31	33	35	37	39	41	43	45
<u>1/2 waist 1/</u>	11-1/2	12-1/2	13-1/2	14-1/4	15-1/2	16-1/2	17-1/2	18-1/2	19-1/2	20-1/2	21-1/2	22-1/2
<u>1/2 seat 2/</u>	-	17	18	19	20	21	22	23	24	25-1/4	26	27-1/2
<u>Inseams 3/</u>												
- X-Short	-	-	30	30	30	30	30	30	30	30	30	30
- Short	-	-	32	32	32	32	32	32	32	32	32	32
- Regular	34	34	34	34	34	34	34	34	34	34	34	34
- Long	-	36	36	36	36	36	36	36	36	36	36	36
- X-Long	-	-	38	38	38	38	38	38	38	38	38	38
<u>Outseams 4/</u>												
- X-Short	-	-	37-3/4	38	38-1/4	38-1/2	38-3/4	39	39-1/4	39-1/2	39-3/4	40
- Short	-	-	40-1/4	40-1/2	40-3/4	41	41-1/4	41-1/2	41-3/4	42	42-1/4	42-1/2
- Regular	-	-	42-3/4	43	43-1/4	43-1/2	43-3/4	44	44-1/4	44-1/2	44-3/4	45
- Long	-	45	45-1/4	45-1/2	45-3/4	46	46-1/4	46-1/2	46-3/4	47	47-1/4	47-1/2
- X-Long	-	-	47-3/4	48	48-1/4	48-1/2	48-3/4	49	49-1/4	49-1/2	49-3/4	50
<u>1/2 knee 5/</u>												
- X-Short & Short	-	-	9-3/8	9-5/8	9-7/8	10-1/8	10-3/8	10-5/8	10-7/8	11-1/8	11-3/8	11-5/8
- Regular	9	9-3/8	9-5/8	9-7/8	10-1/8	10-3/8	10-5/8	10-7/8	11-1/8	11-3/8	11-5/8	11-7/8
- Long & X-Long	-	9-5/8	9-7/8	10-1/8	10-3/8	10-5/8	10-7/8	11-1/8	11-3/8	11-5/8	11-7/8	12-1/8
<u>1/2 bottom (leg) 6/</u>												
- X-Short & Short	-	8-7/16	8-9/16	8-11/16	8-13/16	8-15/16	9-1/16	9-3/16	9-5/16	9-7/16	9-9/16	9-11/16
- Regular	8-7/16	8-9/16	8-11/16	8-13/16	8-15/16	9-1/16	9-3/16	9-5/16	9-7/16	9-9/16	9-11/16	9-13/16
- Long & X-Long	8-7/16	8-9/16	8-11/16	8-13/16	8-15/16	9-1/16	9-3/16	9-5/16	9-7/16	9-9/16	9-11/16	9-13/16

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TABLE III. Measurements in inches (cont'd)

		EVEN SIZES											
		24	26	28	30	32	34	36	38	40	42	44	46
1/2 waist 1/	12	13	14	15	16	17	18	19	20	21	22	23	
1/2 seat 2/	-	17-1/2	18-1/2	19-1/2	20-1/2	21-1/2	22-1/2	23-1/2	24-1/4	25-3/4	26-3/4	28	
<u>Inseams 3/</u>													
- X-Short	-	30	30	30	30	30	30	30	30	30	30	30	30
- Short	-	32	32	32	32	32	32	32	32	32	32	32	32
- Regular	34	34	34	34	34	34	34	34	34	34	34	34	34
- Long	36	36	36	36	36	36	36	36	36	36	36	36	36
- X-Long	-	38	38	38	38	38	38	38	38	38	38	38	38
<u>Outseams 4/</u>													
- X-Short	-	37-5/8	37-7/8	38-1/8	38-3/8	38-5/8	38-7/8	39-1/8	39-3/8	39-5/8	39-7/8	40-1/8	
- Short	-	40-1/8	40-3/8	40-5/8	40-7/8	41-1/8	41-3/8	41-5/8	41-7/8	42-1/8	42-3/8	42-5/8	
- Regular	42-3/8	42-5/8	42-7/8	43-1/8	43-3/8	43-5/8	43-7/8	44-1/8	44-3/8	44-5/8	44-7/8	45-1/8	
- Long	44-7/8	45-1/8	45-3/8	45-5/8	45-7/8	46-1/8	46-3/8	46-5/8	46-7/8	47-1/8	47-3/8	47-5/8	
- X-Long	-	47-5/8	47-7/8	48-1/8	48-3/8	48-5/8	48-7/8	49-1/8	49-3/8	49-5/8	49-7/8	50-1/8	
<u>1/2 knee 5/</u>													
- X-Short & Short	-	9-1/4	9-1/2	9-3/4	10	10-1/4	10-1/2	10-3/4	11	11-1/4	11-1/2	11-3/4	
- Regular	9-1/4	9-1/2	9-3/4	10	10-1/4	10-1/2	10-3/4	11	11-1/4	11-5/8	11-7/8	12-1/4	
- Long & X-Long	-	9-1/2	9-3/4	10	10-1/4	10-3/4	11	11-1/4	11-1/2	11-3/4	12	12-1/4	
<u>1/2 bottom (leg) 6/</u>													
- X-Short & Short	-	8-1/2	8-5/8	8-3/4	8-7/8	9	9-1/8	9-1/4	9-3/8	9-1/2	9-5/8	9-3/4	
- Regular	8-1/2	8-5/8	8-3/4	8-7/8	9	9-1/8	9-1/4	9-3/8	9-1/2	9-5/8	9-3/4	9-7/8	
- Long & X-Long	8-1/2	8-5/8	8-3/4	8-7/8	9	9-1/8	9-1/4	9-3/8	9-1/2	9-5/8	9-3/4	9-7/8	

1/ With slide fastener closed and the waistband hooked measure along top edge of waistband from folded edge to folded edge.

2/ With slide fastener closed measure across trousers, one inch above fly bartack, from folded edge to folded edge.

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- 3/ Measure along inseam from crotch seam to unhemmed bottom edge. (An allowance of 3 inches from hems is included in the inseam lengths.)
- 4/ Measure along outseam from bottom edge of waistband to unhemmed bottom edge of leg. (An allowance of 3 inches for hems is included in the outseam lengths.)
- 5/ The location of knee measurements shall be within 17-7/8 to 18-3/8 inches from bottom of trousers for X-Shorts; 18-7/8 to 19-3/8 inches for Shorts; 19-7/8 to 20-3/8 inches for Regulars; 20-7/8 to 21-3/8 inches for Longs; and 21-7/8 to 22-3/8 inches for X-Longs. Measure from folded edge to folded edge.
- 6/ Measure along unhemmed bottom edge of leg from folded edge to folded edge.

3.12 Workmanship. The finished trousers shall conform to the quality of product established by this specification.

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 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 this 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 part of the contractor's overall inspection system 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 Responsibility for dimensional requirements. Unless otherwise specified in the contract or purchase order, the contractor is responsible for ensuring that all specified dimensions have been met. When dimensions cannot be examined on the end item, inspection shall be made at any point, or at all points in the manufacturing process necessary to ensure compliance with all dimensional requirements.

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4.1.3 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 inspections. The inspection requirements specified herein are classified as follows:

- a. First article inspection (see 4.3).
- b. Quality conformance inspection (see 4.4).

4.3 First article inspection. When a first article is required (see 3.1 and 6.2), it shall be examined for visual and dimensional defects specified in MIL-STD-1488.

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

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

4.4.1.1 Component and material certification. A certificate of compliance may be acceptable as evidence that the hook and eye conforms to the requirements specified in 3.4.11.

4.4.2 Permanent crease and waistband testing. Prior to end item point count inspection, three samples of trousers shall be randomly selected from each end item lot, regardless of lot size, and tested as specified in table IV. Any evidence of nonconformance with the specified requirement shall be considered a test failure. Any test failure shall be cause for rejection of the lot.

TABLE IV. Permanent crease and waistband tests

Characteristic	Requirement paragraph	Test method <u>1</u> /
Waistband resistance to:		
Dry heat (3 exposures)	3.4.4.1	5642 <u>2</u> /
Steam pressing	3.4.4.1	<u>3</u> /
Perchloroethylene solvent (3 exposures)	3.4.4.1	5621 <u>4</u> /
Permanent crease resistance to:		
Dry heat (3 exposures)	3.8.2	5642 <u>2</u> /

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TABLE IV. Permanent crease and waistband tests (cont'd)

Characteristic	Requirement paragraph	Test method 1/
Steam pressing	3.8.2	5/
Perchloroethylene solvent (3 exposures)	3.8.2	5621

1/ From FED-STD-191.

2/ A maximum of 400°F.

3/ Wet waistband lining with water and steam press at a temperature of 240° to 250°F for 1 minute. Allow the lining to reach room temperature and without rewetting, steam press again for 1 minute. Repeat two more times and visually check for degradation after each exposure.

4/ The waistband only shall be steam pressed with no vacuum for a minimum of 20 seconds after each dry cleaning.

5/ Steam press only in the folded state.

4.4.3 Point count inspection. Sampling and inspection provisions for end item examination of dress (D) trousers, dimensional examination, and packaging inspection shall be performed in accordance with MIL-STD-1488.

4.4.4 Palletization examination. The fully packaged and palletized end items shall be examined for the defects listed below. The lot size shall be expressed in units of palletized unit loads. The sample unit shall be one palletized unit load, fully packaged. The inspection level shall be S-1 and the AQL, expressed in terms of defects per hundred units, shall be 6.5.

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

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5. PACKAGING

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

5.1.1 Level A preservation. Each pair of trousers shall be folded so that the length dimension is approximately 23 inches.

5.1.2 Commercial preservation. Trousers of one class and size only, shall be preserved in accordance with ASTM D 3951.

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

5.2.1 Level A packing. Trousers of one class and size only, preserved as specified in 5.1, shall be packed in quantities specified in table V in a snug fitting fiberboard shipping container conforming to style RSC-L, grade V2s of PPP-B-636. The inside of each shipping container shall be fitted with a box liner conforming to type CF, class weather-resistant, variety DW, grade V15c of PPP-B-636. Level A folded trousers shall be packed flat, alternated end for end, within a shipping container. Inside dimensions of each shipping container shall approximate 23-1/2 inches in length, 15 inches in width, and 15 inches in depth. Approximate dimensions are furnished as a guide only. Each container shall have the contents completely covered on the top and bottom with a sheet of 30-pound minimum basis weight kraft paper conforming to A-A-203. Each shipping container shall be closed in accordance with method III, waterproofed in accordance with method V, and reinforced as specified in the appendix of PPP-B-636, except that the inspection shall be in accordance with 4.4.3. Shipping containers shall be arranged in unit loads in accordance with MIL-L-35078 for the type and class of load specified (see 6.2). Strapping shall be limited to nonmetallic strapping, except for type II, class F loads.

TABLE V. Quantity of trousers of one class only per shipping container

<u>Class of trousers</u>	<u>Quantity per shipping container (pair)</u>
2	30 1/
6	30

1/ When the trousers are made of 16-ounce wool elastique, the trousers shall be packed 25 pair per shipping container.

5.2.2 Level B packing. Trousers of one class and size only, preserved as specified in 5.1, shall be packed in quantities specified in table V in a snug fitting fiberboard shipping container conforming to style RSC-L, type CF, class domestic, variety DW, grade 275 of PPP-B-636. The inside of each

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shipping container shall be fitted with a box liner conforming to type CF, class domestic, variety DW, grade 275 of PPP-B-636. Level A folded trousers shall be packed flat, alternated end for end, within a shipping container. Inside dimensions of each shipping container shall approximate 23-1/2 inches in length, 15 inches in width, and 15 inches in depth. Approximate dimensions are furnished as a guide only. Each container shall have the contents completely covered on the top and bottom with a sheet of 30-pound minimum basis weight kraft paper conforming to A-A-203. Each shipping container shall be closed in accordance with method II as specified in the appendix of PPP-B-636, except that the inspection shall be in accordance with 4.4.3.

5.2.2.1 Weather-resistant fiberboard container. When specified (see 6.2), the shipping container shall be grade V3c, V3s, or V4s fiberboard box fabricated in accordance with PPP-B-636, and closed in accordance with method II as specified in the appendix of PPP-B-636, except that the inspection shall be in accordance with 4.4.3.

5.2.3 Commercial packing. Trousers of one type, class and size only, preserved as specified in 5.1, shall be packed in accordance with ASTM D 3951.

5.3 Palletization. When specified (see 6.2), trousers, packed as specified in 5.2.2 or 5.2.3, shall be palletized on a 4-way entry pallet in accordance with lead type Ia of MIL-STD-147. Pallet types shall be type I (4-way entry), type IV, or type V in accordance with MIL-STD-147. Pallets shall be fabricated from wood groups I, II, III, or IV of MIL-STD-731. Each prepared load shall be bonded with primary and secondary straps in accordance with bonding means C and D or film bonding means F or G. Pallet pattern shall be number 3 in accordance with appendix of MIL-STD-147.

5.4 Marking. In addition to any special marking required by the contract or purchase order, shipping containers and palletized unit loads shall be marked in accordance with MIL-STD-129 or ASTM D 3951, as applicable.

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 trousers are intended for wear by male personnel of the Army as part of the dress Army Green, Army Blue, and Army Band Uniforms.

6.2 Acquisition requirements. Acquisition documents must specify the following:

- a. Title, number, and date of this specification.
- b. Class and sizes required (see 1.2).
- c. Whether coat and trousers are procured as a uniform (see 1.3).

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- d. Issue of DODISS to be cited in the solicitation, and if required, the specific issue of individual documents referenced (see 2.1.1 and 2.2).
- e. When a first article is required (see 3.1, 4.3, and 6.3).
- f. Basic material and color required for class 2 trousers (see 3.4.1.1).
- g. When ornamental stripes are required and the material required (see 3.4.5).
- h. Whether type I or II braid is required for stripes (see 3.4.5.1).
- i. When woven lace vallum (MIL-B-13466) may be used for general officers or other officers and warrant officer (see 3.4.5.2).
- j. Color of components for class 2 trousers (see 3.4.7.3, 3.4.8.1, and 3.4.10).
- k. Levels of preservation and packing (see 5.1 and 5.2).
- l. Type and class of unit load required (see 5.2.1).
- m. When weather-resistant grade fiberboard shipping containers are required for level B packing (see 5.2.2.1).
- n. When palletization is required (see 5.3).

6.3 First article. When a first article sample is required, it shall be inspected and approved under the appropriate provisions of FAR 52.209-4. The first article should be a preproduction sample. The contracting officer should specify the appropriate type of first article and the number of units to be furnished. The contracting officer should include specific instructions in acquisition documents regarding arrangements for selection, inspection, and approval of the first article.

6.4 Samples. For access to samples, address the contracting activity issuing the invitation for bids and request for proposal.

6.5 Rubberized waistband. A suggested source for the commercial type rubberized waistband lining is "Snugtex" or equal (see 6.7). Snugtex is available from Southern Waistband Inc., telephone number (404) 867-3156.

6.6 Permanent creasing. A guide for the permanent creasing procedure is as follows: After pressing the trouser crease apply the silicone resin in a fine bead to the inside of all four creases of the trouser. The bead should be applied from crotch height to within 2 inches of the open bottom trouser. The bead of resin after application should be 1/16 (nominal) inch in width and should follow the crease line exactly. Where resin misses the crease for any reason, it should be re-applied into the crease. No special drying or baking procedures are needed when using the silicone crease. The resin will quickly air-cure and no repressing after application is needed. Material and machines required for the process can be obtained from:

Clantexport, Inc.
(Linctrac Processing)
Thomson, Georgia 30824
Telephone (404) 595-9272
Telephone (800) 367-1153

Creaset Inc.
1460 Broadway
Suite 1501
New York, New York 10036
Telephone (212) 840-6868

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6.6.1 Storage. Storage and stability (shelf life) of silicone resin used in permanent creasing.

a. A six-month storage life can be expected if stored in the original unopened cartridges. All cartridges are "use by" dated.

b. All unopened cartridges can be returned to the manufacturer for exchange before the expiration of the "use by" date.

c. Do not use resin that has an expired "use by" date.

6.7 Equal item. Prior to the use of an "or 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.

6.8 Supersession data. The classes 1, 3, 4 and 5 trousers have been deleted as they are no longer required.

6.9 Subject term (key word) listing.

Army Band
Army Blue
Army Green
Permanent crease
Uniforms

6.10 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.

Custodian:

Army - GL

Preparing activity:

Army - GL

Review activities:

Army - MD
DLA - CT

(Project 8405-A139)

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BELT LOOP ADDED
FOR WAISTS 38 & UP

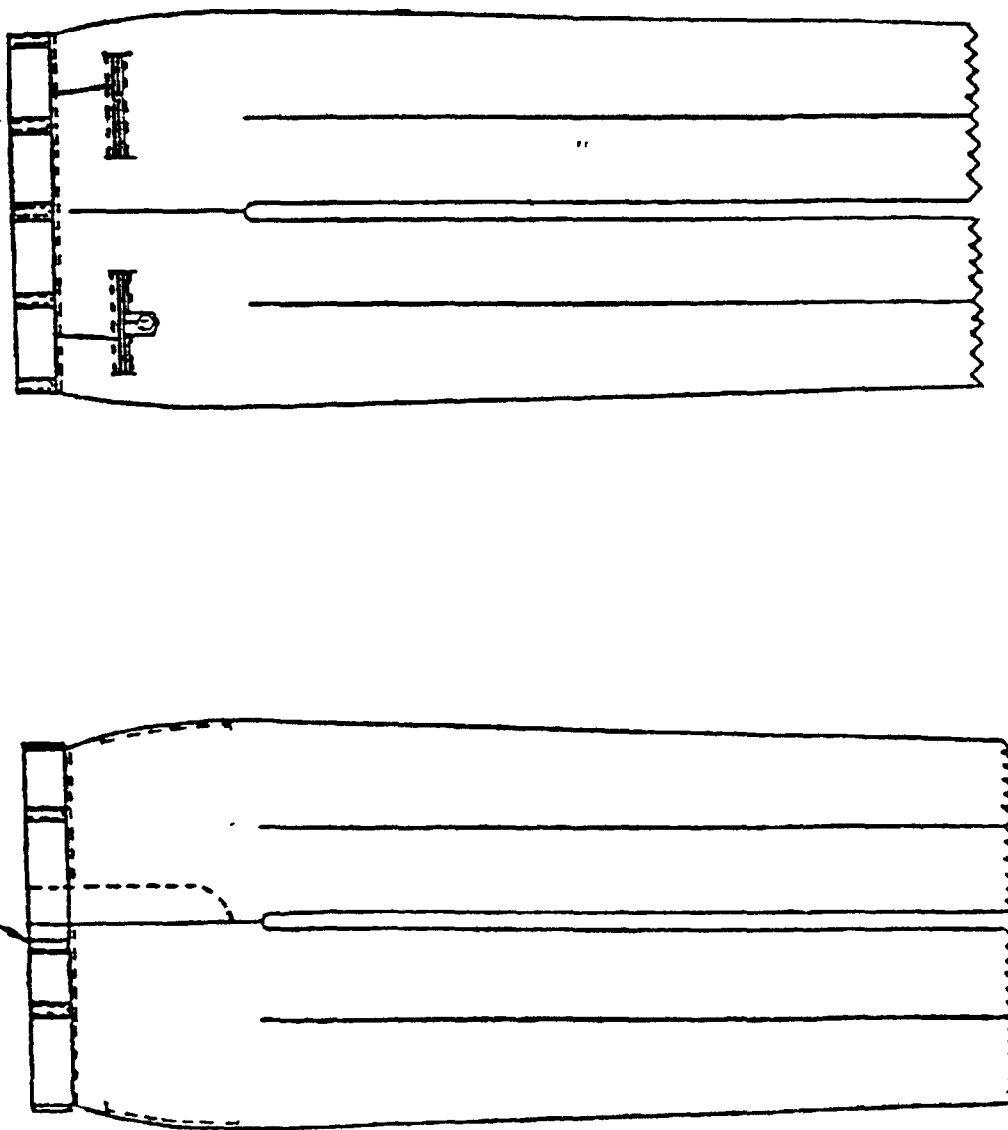


FIG. 1-TROUSERS, MEN'S, DRESS WOOL AND POLYESTER/WOOL
2-1-430 G

MIL-T-43957D(GL)

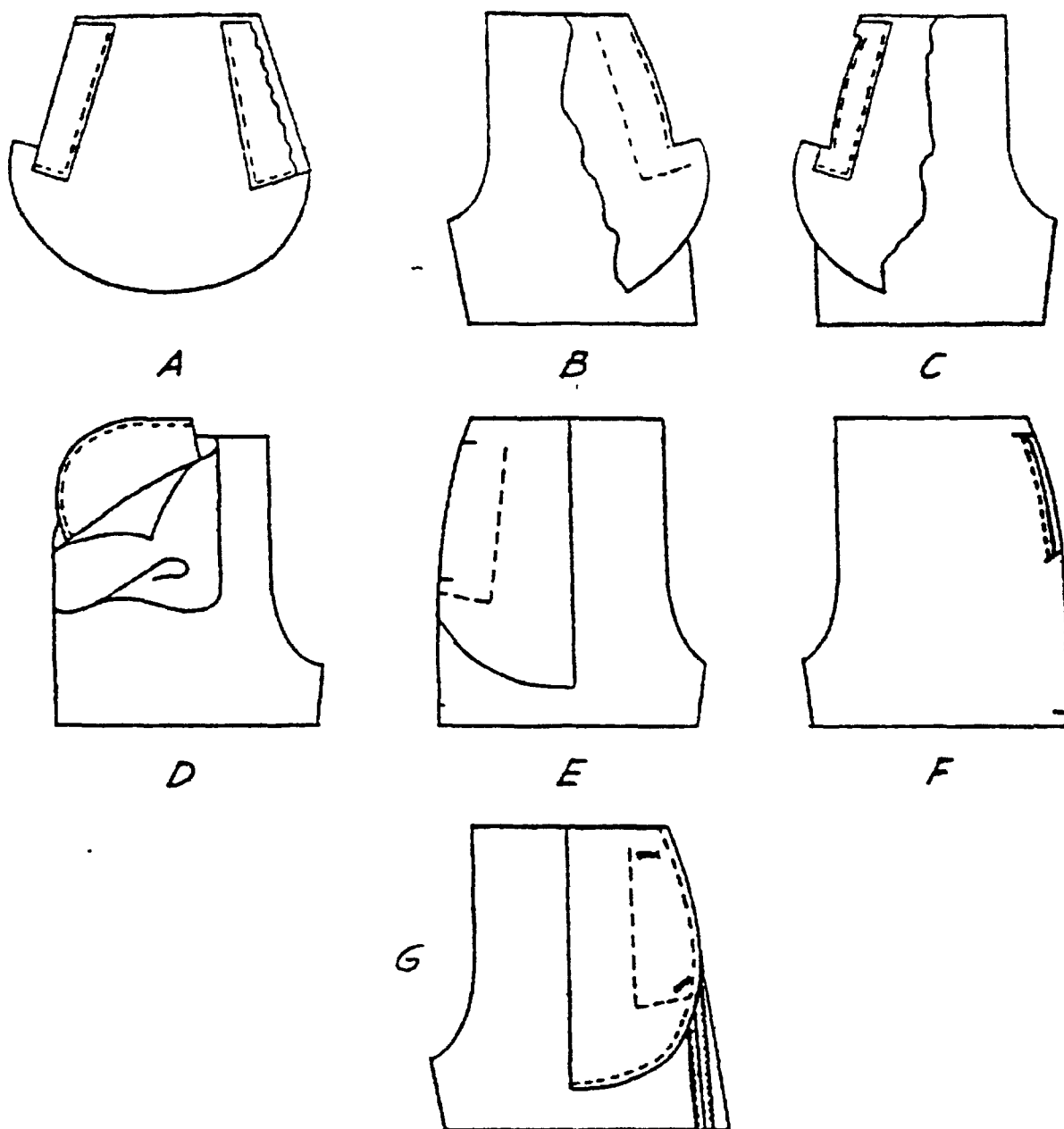


FIG.2 SIDE POCKET

- A - STITCH FACING AND BEARER TO POCKET
- B - STITCH POCKET TO FRONT
- C - TURN POCKET AND TOP STITCH
- D&E - SEAMED AND TURNED
- F - TACK POCKET OPENING TO BEARER
- G - FINISHED POCKET

2-1-263-E

MIL-T-43957D(GL)

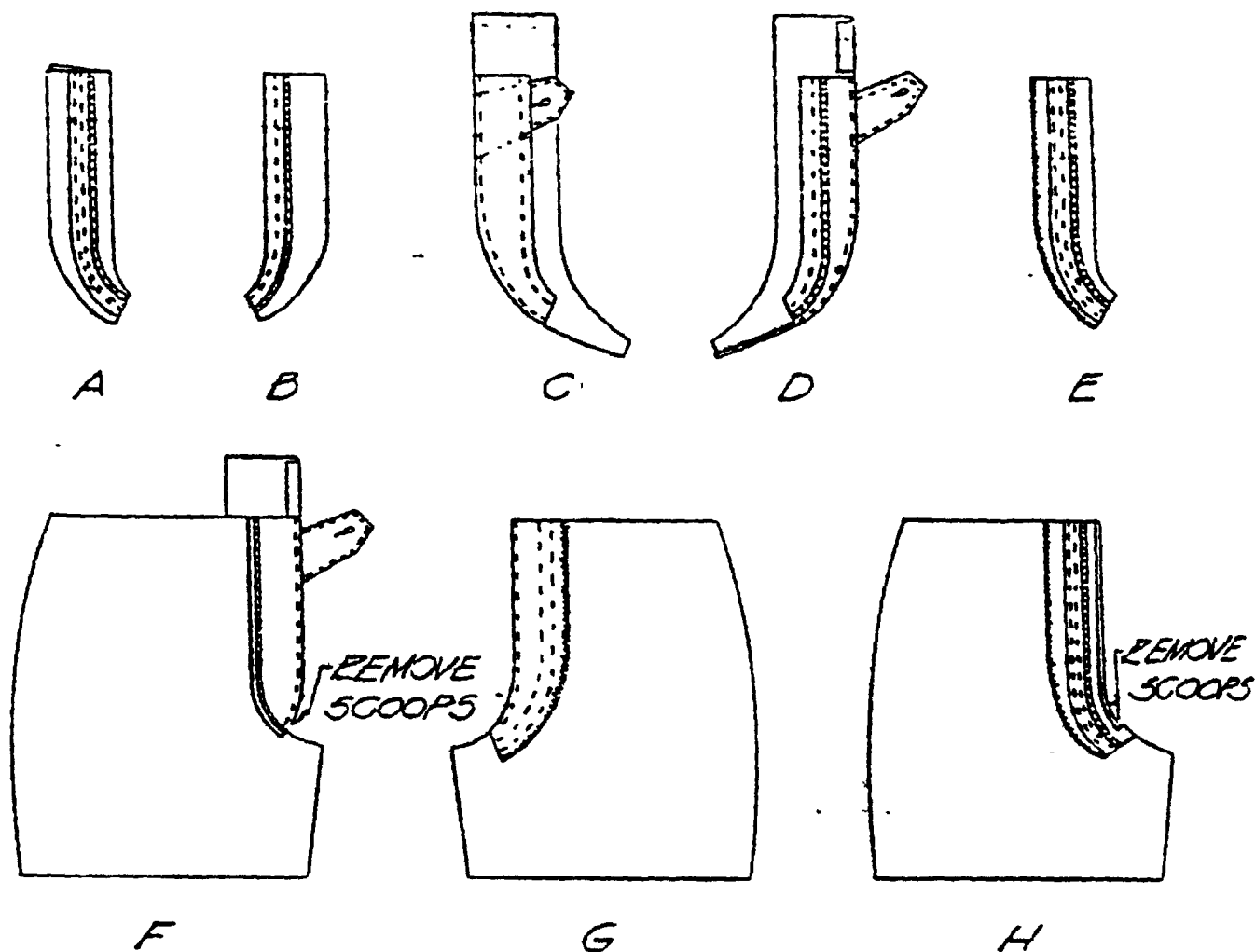
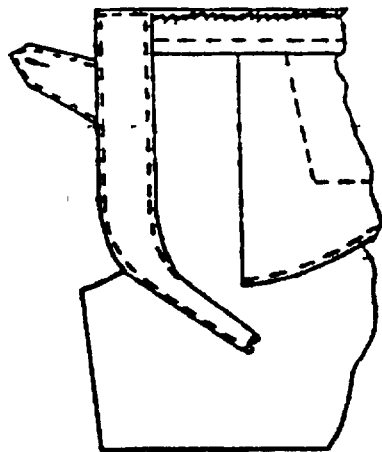


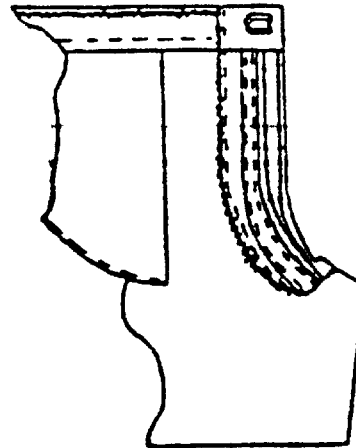
FIG 3, FLY (RIGHT WITH SEPARATE TAB, AND LEFT).

- A - DOUBLE STITCH FASTENER TAPE TO LEFT FLY THROUGH LINING.
 B - SEAM FASTENER TAPE TO RIGHT FLY.
 C & D - SEAM LINING TO RIGHT FLY, TURN AND RAISE STITCH
 E - OVEREDGE LEFT FLY
 F - JOIN RIGHT FLY TO TROUSERS
 G & H - JOIN LEFT FLY TO TROUSERS AND PRESS.

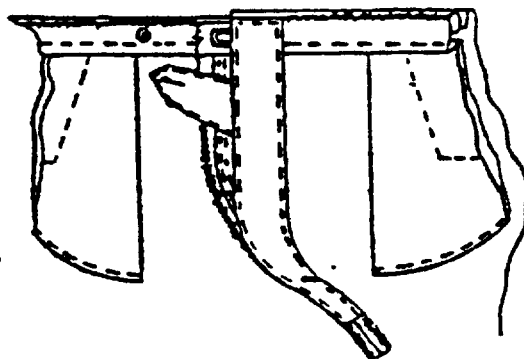
MIL-T-43957D(GL)



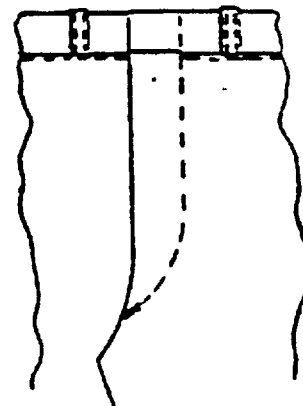
J



K



L



M

FIGURE 4 FLY (RIGHT WITH SEPARATE TAB, AND LEFT)

J - RAISE STITCH RIGHT FLY CATCHING LINING

K - RAISE STITCH BACK EDGE OF LEFT FLY THROUGH TROUSER

L - FINISH END OF RIGHT FLY LINING

M - BARTACK BASE OF FINISHED FLY

2-1-869 B

MIL-T-43957D(GL)

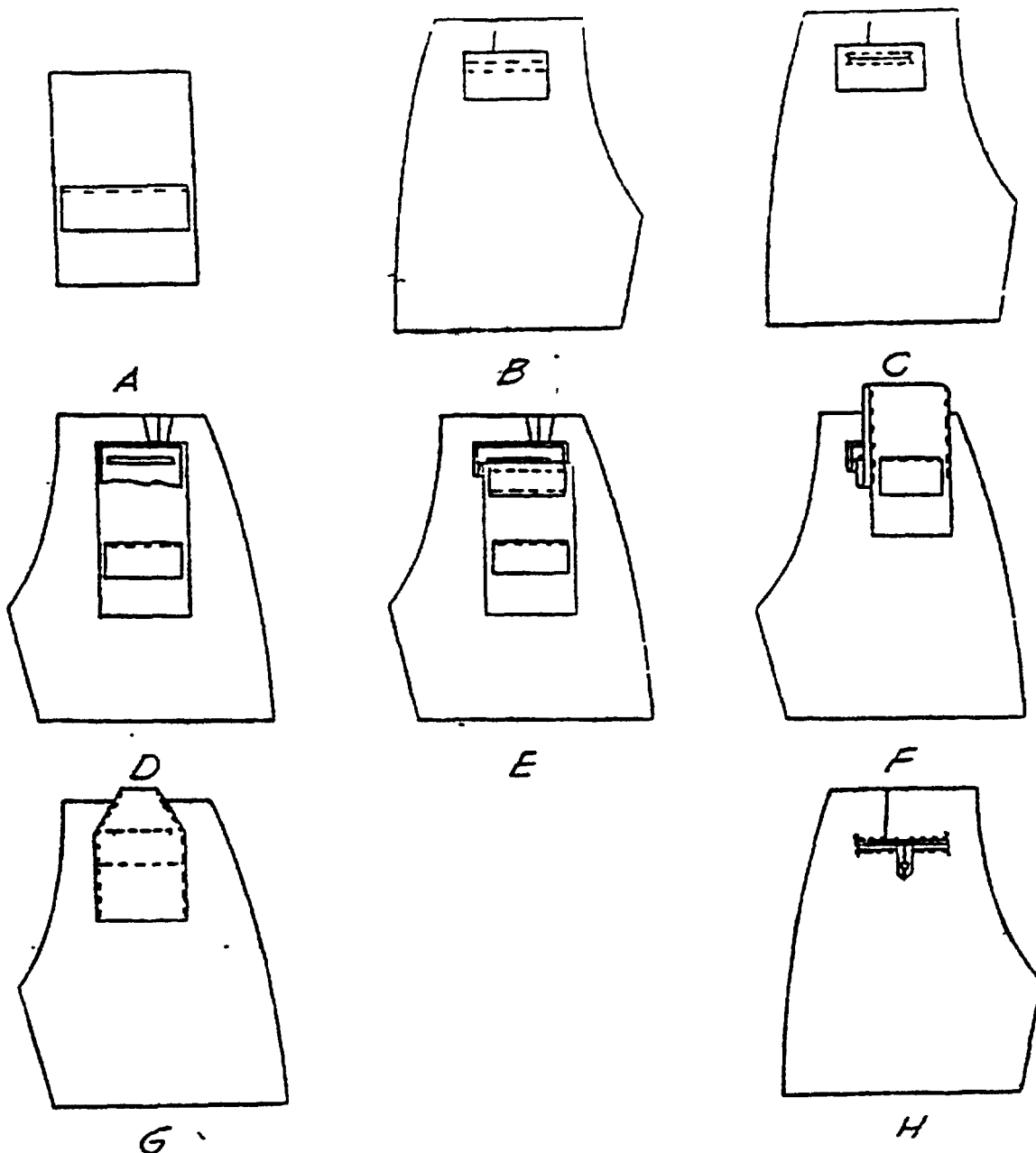


FIG. 5 **HIP POCKET**

A-BEARER ON POCKET

B-CORD FACING PIECE ON OUTSIDE OF TROUSERS

C-CUT THROUGH CORD PIECE AND NOTCH

D-CORD PIECE TURNED INSIDE

E-MAKE CORD

F-POCKET PULLED THROUGH AND CLOSED

G-POCKET PULLED THROUGH TO INSIDE & TOP STITCHED ON SIDES

H-TOP POCKET OPENING STITCHED THROUGH POCKET AND FACING

PIECE WITH BUTTONHOLE TAB INSERTED.

2-1-270 B

MIL-T-43957D(GL)

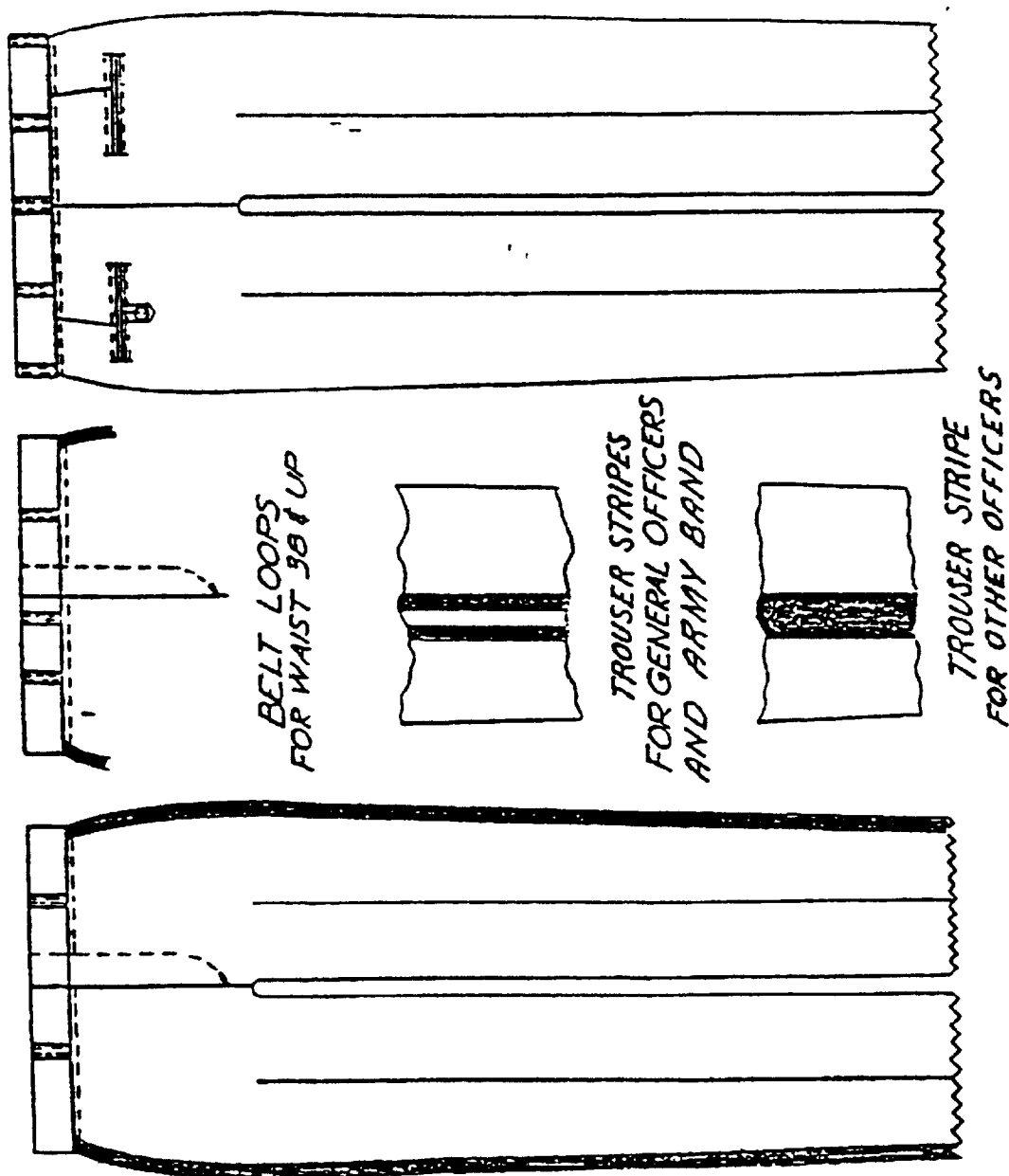


FIG. 6 TROUSERS, MEN'S, DRESS WOOL & POLYESTER/WOOL,
ORNAMENTATION

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.

RECOMMEND A CHANGE	1. DOCUMENT NUMBER MIL-T-43957D(GL)	2. DOCUMENT DATE (YYMMDD) 1991 September 16
	3. DOCUMENT TITLE TROUSERS, MEN'S, DRESS, WOOL AND POLYESTER/WOOL	
4. NATURE OF CHANGE (Identify paragraph number and include proposed rewrite, if possible. Attach extra sheets as needed.)		

5. REASON FOR RECOMMENDATION

6. SUBMITTER		
7. DATE SUBMITTED (YYMMDD)		
8. ADDRESS (Include Zip Code)	9. TELEPHONE (Include Area Code)	10. DATE SUBMITTED (YYMMDD)

8. PREPARING ACTIVITY	
a. NAME U.S. Army Natick RD&E Center	b. TELEPHONE (Include Area Code) (1) Commercial 508-651-4532 (2) AUTOVON/DSN 256-4532
c. ADDRESS (Include Zip Code) Commander, U.S. Army Natick RD&E Center ATTN: STRNC-IRT Natick, MA 01760-5019	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