

INCH POUND

MIL-P-43907D
12 March 1993
SUPERSEDING
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11 December 1987

MILITARY SPECIFICATION

PARKA AND TROUSERS, WET WEATHER

This specification is approved for use by all Departments and Agencies of the Department of Defense.

1. SCOPE

1.1 Scope. This document covers one type of a woodland camouflage polyurethane coated nylon wet weather parka and trousers.

1.2 Classification. The parka and trousers shall be of the following sizes as specified (see 6.2).

Class 1 - Deleted (see 6.8)
Class 2 - Woodland camouflage

Schedule of sizes

XX-Small
X-Small
Small
Medium
Large
X-Large

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-FSSD, 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.

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2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 Documents. The following specifications, standards, and handbooks form a part 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-50083 | - Bag, Plastic, Folded Garment |
| A-A-50199 | - Thread, Polyester Core, Cotton-, or Polyester-Covered |
| V-F-106 | - Fasteners, Slide, Interlocking |
| V-T-285 | - Thread, Polyester |
| V-T-295 | - Thread, Nylon |
| DDD-L-20 | - Label, For Clothing, Equipage, and Tentage, (General Use) |
| PPP-B-636 | - Boxes, Shipping, Fiberboard |

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- | | |
|---------------|---|
| MIL-B-371 | - Braid, Textile, Tubular |
| MIL-E-20652/1 | - Eyelets, Metallic, Rolled Flange Type; and Eyelet Washer |
| MIL-F-21840 | - Fastener Tapes, Hook and Loop, Synthetic |
| MIL-C-43303 | - Cord, Elastic, Cotton |
| MIL-T-43566 | - Tape, Textile, Cotton or Polyester, General Purpose, Natural or in Colors |
| MIL-C-43906 | - Cloth, Coated, Nylon, Polyurethane Double Coated |

STANDARDS

FEDERAL

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

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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 |

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(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.)

2.2 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 specified in the solicitation. Unless otherwise specified, the issues of documents not listed in the DODISS shall be the issues of the Nongovernment documents which are current on the date of the solicitation.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

D 3951 - Standard Practice for Commercial Packaging

(Applications 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 shall take precedence. Nothing in this document, however, shall supersede applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 Basic material. When specified (see 6.2), a sample shall be subjected to first article inspection (see 6.5) in accordance with 4.3.

3.2 Materials (see 6.4).

3.2.1 Basic material. The basic material for the parka and trousers shall conform to type II of MIL-C-43905.

3.2.2 Braids, drawcord.

3.2.2.1 Hood drawcord. The hood drawcord shall be flat cotton braid conforming to type VII, class 4, Camouflage Green 483 of MIL-B-371. The finished length shall be 44 ± 1 inches.

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3.2.2.2 Trouser drawcord. The trouser drawcord shall be solid tubular cotton braid conforming to type IV or V, class 4, Camouflage Green 483 of MIL-B-271. The braid shall finish 5 inches longer than the circumference of the drawcord tunnel, measuring at waist from eyelet on right front to drawcord exit on left front, and from eyelet to eyelet on leg bottoms.

3.2.2.3 Parka drawcord. The parka waist drawcord shall be cotton elastic cord, conforming to class 2, Camouflage Green 483 of MIL-C-43303. The cord shall finish 5 inches longer than the circumference of the drawcord tunnel, measuring from drawcord exit on left side at bottom of parka to eyelet on right side.

3.2.2.4 Drawcord ends. The drawcord ends shall be tipped or impregnated to prevent raveling. The tipped or impregnated ends shall be at least 1/2 inch in length.

3.2.3 Tape. The tape for the trousers shall be 1/2 inch wide cotton tape, conforming to type I, class 4, Camouflage Green 483 of MIL-T-43566.

3.2.4 Fastener tape, hook and loop. The fastener tape shall conform to type II, class 1, 5/8 inch and 1 inch wide of MIL-F-21840. The color shall be Camouflage Green 483.

3.2.5 Thread. The thread for seaming and stitching shall be Sizes AA and B conforming to either types I or II, class 1, subclass B of V-T-285 or type I or II, class B of V-T-295 or A-A-50199, Ticket No. 50 with nonwicking finish may be substitute for sizes AA and B. The thread shall be dyed Camouflage Green 483.

3.2.5.1 Thread lubricant. When lubrication of the sewing thread is necessary, only water or isopropyl alcohol shall be used as a lubricant.

3.2.6 Fastener, slide, interlocking. The slide fastener shall conform to type IV, style 8, size MS, continuous element polyester coil with long tab pull, (with hole large enough to accommodate a thong), 3/4 inch tape dyed Camouflage Green 483, of V-F-106. The lengths shall be as specified in 3.10.

3.2.6.1 Slide fastener thong. The slide fastener thong shall be as specified in V-F-106, except that the finished length of thong after assembly to the pull shall be $4 \pm 3/4$ inches.

3.2.7 Eyelets and washers. The eyelets and washers for drawcord outlets shall be brass, black chemical finish. The eyelets shall conform to M20652/1-BBE 117 and the washers shall conform to M20652/1-BBW 101 of MIL-E-20652/1.

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3.2.8 Seam sealant tape. The seam tape used to seal the seams and allowable needle holes shall be cut in 1 inch ($\pm 1/16$ inch) wide strips of semi-clear tape fabricated in two layers as specified below. The completed semi-clear tape shall be 0.006 inch (minimum) thickness and shall be capable of meeting a 5 pound (2.3 kg) minimum bonding strength.

- a. Adhesive or bottom layer shall be of 0.002 inch (minimum) thickness polyurethane adhesive.
- b. Barrier or top layer shall be of 0.004 inch (minimum) thickness high temperature resistant polyurethane carrier membrane.

3.2.8.1 Heat sealing tape. Seams and stitching on outer shell, as indicated in 3.6.5.1, shall be sealed with heat sealing tape on the inner side of the parka and trousers. The entire width of the seam seal tape shall be hot air sealed over the seam or stitching. The tape shall be applied by blowing high temperature air on the thermoplastic tape adhesive, which is then driven through pressurized and sealing the seam and stitching. The machine shall operate on 1200 to 3600 watts, 115 or 200 vac air heater with pneumatically activated driven rollers which press and tape onto the seam or stitching being sealed at a maximum of 20 feet per minute. All seam tapes shall be applied without tension and such that a minimum of 3/16 inch overlap is on both sides of the seam, except for the inside seam of the parka slide fastener closest to the chain shall be 1/8 inch minimum. All seam tapes shall overlap a minimum of 3/4 inch at joining parts. Sealed seams and end item shall be tested in accordance with 4.4.1.3 and 4.4.4.

3.2.9 Labels. Each parka and trousers shall have a combination identification-size label, an instruction label, and a care instruction label conforming to type IV of DDD-L-20. The fastness to crocking requirements of DDD-L-20 shall apply.

3.2.9.1 Combination identification-size label. The label shall conform to class 12. The label shall be located on the inside left front of the parka and the inside right back of the trouser.

3.2.9.2 Instruction label. The instruction label shall conform to class 13. The label shall be located directly under the combination identification-size label. The body of the instructions shall be as follows:

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THESE GARMENTS ARE DESIGNED TO FIT OVER THE COLD WET UNIFORM. IN HOT WEATHER, IT MAY BE DESIRABLE TO USE SMALLER SIZED GARMENTS. SINCE AN IMPERMEABLE MATERIAL IS USED IN THE GARMENTS, CAUTION MUST BE TAKEN TO AVOID MOISTURE BUILD UP IN THE CLOTHING (INSULATION) WORN UNDERNEATH THE GARMENTS. MOISTURE BUILD UP MAY BE REDUCED IN TWO WAYS: BY ADJUSTING THE INNER CLOTHING WORN TO THE OUTDOOR TEMPERATURE AND THE ACTIVITY PLANNED AND ALSO BY UTILIZING THE CLOSURES TO PERMIT THE HEAT BUILD UP UNDER PARKA AND TROUSERS TO ESCAPE THEREBY REDUCING THE MOISTURE WITHIN THE INSULATING LAYERS. "CAUTION - IMPROPER USE OF THESE GARMENTS CAN PRODUCE HEAT EXHAUSTION WITHIN THIRTY MINUTES OF HARD WORK."

3.2.9.3 Care instruction label. The care instruction label shall conform to class 13. The label shall be located directly under the instruction label.

CAUTION

DO NOT MACHINE LAUNDRER. DO NOT DRY CLEAN. HAND WASH IN WARM WATER AND MILD SOAP OR DETERGENT USING A SOFT BRISTLE BRUSH. RINSE THOROUGHLY AND AIR DRY.

3.3 Design. The design of the parka and trousers shall be as shown in Figures 1 and 2, respectively. The heavily coated side of the cloth shall be on the outside of the parka and trousers. The parka shall have a hood with a drawcord at face opening and a slide fastener closure in the front. The trousers shall have a drawcord for waist adjustment and a drawcord at the bottom of each leg.

3.4 Figures. Figure 1 and 2 are furnished for information only. In the event of any inconsistencies between the figures and the written document, the written document shall control.

3.5 Patterns. Standard patterns, which provide an allowance of 1/2 inch for all seams, except where otherwise indicated, will be furnished by the Government to the contractor for cutting working patterns. The working patterns shall be duplicates of the Government patterns. For the parkas, the contractor has the option of increasing the armhole area by 3/4 to 1-1/2 inches.

3.5.1 List of pattern parts. The pattern parts shall be cut from material as specified and according to the number of parts listed in Table I.

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TABLE I. List of pattern parts.

<u>Materials</u>	<u>Pattern nomenclature</u>	<u>Cut parts</u>
Polyurethane double coated nylon cloth	<u>PARKA</u>	
	Hood	2
	Front, back and sleeve	2
	Pocket welt	4
	<u>TROUSERS</u>	
	Front and back	2
	Pocket welt	4

3.6 Construction.

3.6.1 Stitches, seams, and stitching. Stitch, seam, and stitching types, specified in Table II shall conform to FED-STD-751. When two or more seam or stitch types are given for the same part of the operation, any one of them may be used. Where stitch type 401 is used, the looper (underthread) shall be on the inside of the garment. 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 stitching. Unless otherwise indicated, the gage of stitching for the double-lapped, double-stitched seams shall be 3/16 to 1/4 inch.

3.6.2 Thread breaks and ends of seams. Ends of all seams and stitching produced with 301 stitch type, when not caught in other seams or stitchings, shall be backtacked not less than 1/4 inch. Thread breaks in type 301 stitching shall be secured by stitching back of the break not less than 1 inch and thread breaks in type 401 stitching shall be overstitched not less than 1-1/2 inches at each break. Skipped stitches or thread breaks on 401 stitch type may be repaired by using 301 stitch type.

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

3.6.4 Caution. Care shall be taken during manufacturing operations (seaming, stitching and sealing) to insure that the coated cloth area adjacent to the seam is not damaged (see 6.3).

3.6.5 Sealing of seams and stitching.

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3.6.5.1 Sealed areas. Both sides of the slide fastener tape stitching shall be sealed on the inside. Also, all crossover heat sealed tape seams and any tape ends not caught in turn in hem construction shall be separately sealed on a platen type heat sealer capable of applying pressure and controlling heat. As an option, if seam sealing machine is capable of securing tape ends, then a separate heat seal operation is not needed. The following areas shall not be sealed.

- a. Facing piece seam around the face opening of the hood.
- b. Unattached portion of pocket welt. (All other seamed areas of pocket welt shall be sealed).
- c. Sleeve hem of parka.
- d. Drawcord tunnels at bottom of parka, at trouser waist, and at bottom of trouser legs.
- e. Hook and pile tape stitching.
- f. Left and right fly stitching.

3.6.6 Sealed seam area performance requirements.

3.6.6.1 Hydrostatic resistance. The sealed seams and the immediate adjacent area shall be subjected to the hydrostatic test specified in 4.4.4. Failure of the sealed seam area shall be evidenced by the appearance of one or more drops of water at three different locations within the test area. Before testing, the test area shall be flexed as specified in 4.5.1 and shall show no peeling, whitening, or lifting of the tape.

3.7 Repairs on finished parka and trousers.

3.7.1 Repairable areas. Repairable areas generated during manufacturing of the parka and trouser shall be generally defined as follows:

3.7.1.1 Scuffs. Any break in the coated surface (nylon yarns intact) other than a pick-off of the coating or a pinhole. Scuffs not exceeding four in number may be repaired. The size of any repair shall not exceed 2 inches in length and 1 inch in width.

3.7.1.2 Pinholes. Pinholes in coating not exceeding eight in number may be repaired and the size of the repair shall not exceed 3/4 inch in length and width.

3.7.1.3 Needle holes. Needle hole repairs shall not exceed 2 inches in length and 1 inch in width. Only when necessary for repair purposes, seam tape may be used to cover needle holes resultant from hem repair longer than 2 inches. Tape repairs used for hemming operations shall not be factored into the total seam tape repair requirements of 20 inches.

3.7.1.4 Pick-offs. Pick-offs in the coating not exceeding four in number may be repaired and the overall size of such repairs shall not exceed 1 1/2 inch in diameter.

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3.7.1.5 Heat seam tape. Areas of heat seal tape below the minimum overlap requirements specified in 3.2.8.2.1 may be repaired by retaping over the original tape layer provided the minimum overlap requirements are met. Seam tape or outershell material puckered, pleated (areas where material is backfolded upon itself) or nonfused tape areas (designated by whitening effect) may be repaired on the crossover heat sealer provided the outershell material is not degraded. Tape repairs to individual trousers or parkas shall not exceed a total of 20 inches. Only when necessary for repair purposes, an individual 2 by 2 inch (maximum) size repair tape may be used on the neck cross over area. As an alternate, two one inch wide seam tape strips no longer than 2 inches in length may be used for repair purposes, provided they longitudinally overlap each other a minimum of 1/8 inch. Each continuous length of one inch wide tape used for repair procedures (except hem repairs) shall be considered as an additive repair and removal of tape from the outershell material is not permitted.

3.7.2 Repair procedure. The repair procedure for the heat seal method shall be the tape as specified in 3.2.8, separately heat sealed on a platen type heat sealer, capable of applying pressure and controlling heat. All tape ends shall be securely sealed. As an alternate, repairable areas designated in 3.7.1.1 through 3.7.1.4 may be repaired using the heat seal tape with either the seam sealing machine or crossover heat sealer provided the tape extends 3/4 inch beyond the longest dimension of the repairable area. However, exposure of the heat seal tape in any manner to the face side of the outershell material is not permitted.

3.7.3 Requirements for repaired areas. The repaired areas shall show no stiffening or other defects that would affect the serviceability or the outside appearance of the parka or trousers. The repaired area shall conform to the blocking requirements of the sealed seams specified in 3.6.6.3. The repair compound shall be well adhered to the coated fabric and when subjected to a flexing or scrubbing action between the hands, will show no lifting of the edge and no cracking, flaking, or removal of the repair compound.

3.8 Manufacturing operations requirements. The parka and trousers shall be made in accordance with the operation requirements specified in Table II. The contractor is not required to follow exact sequence of operations listed.

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Table II.
Manufacturing Operations Requirements.

NO.	OPERATION	STCH TYPE	SEAM/ STCH TYPE	STCH PER INCH	THREAD NDL BOB LPR
1.	<p><u>Cutting.</u></p> <p>a. Cut the parka and trousers in strict accordance with patterns furnished which show directional lines, size, placement of pocket welts, placement of nook and loop tape, and notches for proper assembly. Directional lines shall be placed in the warp direction. The use of drill holes is prohibited, except for marking position of the eyelets and pocket welts. The heavier coated side of the fabric shall be on the outside of the finished garments.</p> <p>b. Cut reinforcements for eyelets approximately 3/4 by 3/4 inch for use in operations 9a. and 18a.</p>				
2.	<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 4.4.2, are excluded and replaced with non-defective and properly matched material.</p>				
3.	<p><u>Marking.</u></p> <p>Mark, ticket, or bundle all component parts to insure correct shade and size throughout the parka and trousers.</p> <p align="center"><u>PARKA</u></p>				
4.	<p><u>Make four pocket welts.</u></p> <p>a. Fold pocket welt in half in the lengthwise direction, face to face and stitch across one end and along the length, 3/8 inch from raw edge</p>	301	SSe-2 (a)	9-11	B B

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Table II.
Manufacturing Operations Requirements. (Cont'd)

NO.	OPERATION	STCH TYPE	SEAM/ STCH TYPE	STCH PER INCH	THREAD NDL BOB I.P.R.
	b. Turn and work out edges and corners. Fold in open end $3/8$ inch and stitch $1/16$ to $1/8$ inch from edge on all sides except the folded one.	301	SSe-2 (b) and SSc-1	9-11 9-11	B B B B
	or				
	c. Fold welt in half (face side out), turn side and bottom edges to inside and stitch with a single row $1/16$ to $1/8$ inch from turned edges. The edges may be pre-creased.	301	SSc-1	9-11	B B
	d. Stitch hook and loop fastener tapes to pocket welts on all four sides with a single row of stitching $1/16$ inch from edge as shown by marks on pattern. Both hook and loop tapes shall measure $5/8$ inch in width and $1-1/2 \pm 1/8$ inches in length.	301	LSbj-1	9-11	B B
5.	<u>Join pocket welts to parka.</u>				
	a. Position welts on front of parka, as indicated by marks on pattern, with curved sides toward center of parka and with the outer welt having either the hook or loop tape and the inner welt having the opposite. The folded edge of the welt shall be abutted on the cut line. Stitch welts to parka $3/8 \pm 1/16$ inch from the folded edges	301	LSbj-1	9-11	B B
	b. Cut opening and tongue-notch ends.				
	c. Turn welts to finished position and raise stitch $1/16$ to $1/8$ inch back from joining seams.	301	LSq-2	9-11	B B
	d. Stitch down top and bottom of welts, with the welts smooth and flat, catching the inner welt in the stitching. The stitching shall be a rectangular box with the rows of	301		9-11	B B

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Table II.
Manufacturing Operations Requirements. (Cont'd)

NO.	OPERATION	STCH TYPE	SEAM/ STCH TYPE	STCH PER INCH	THREAD NDL BOB LPR
	stitching 1/4 to 3/8 inch apart and the outside row 1/16 to 1/8 inch from edge of welt.				
	or				
	Two 1/2 inch bartacks, positioned on each end of welt, parallel to the end and 1/8 to 3/16 inch from edge, may be used in lieu of the rectangular stitching.	Brck		21-28 per Brck	B B
6.	<u>Join side and sleeve seams.</u> Stitch side and sleeve seams on right and left parka halves with a double-lapped, double-stitched seam. The fronts shall lap the backs.	301 or 401	LSc-2 LSc-2	9-11 9-11	B B B AA
7.	<u>Hem sleeves.</u> a. Turn under bottom of sleeves, as indicated by marks on pattern, and with the raw edge turned in, stitch 1/16 to 1/8 inch from edge.	301	EFb-1	9-11	B B
	b. Stitch a 1 inch by $2 \pm 1/8$ inches length of hook fastener tape and a 1 inch by $3-1/2 \pm 1/8$ inches length of loop fastener tape to each sleeve, positioned as indicated on pattern.	301	LSbj-1	9-11	B B
8.	<u>Hem front.</u> Hem the front edges of the parka with a 1/4 inch wide hem with raw edges turned under and single stitch 1/16 to 1/8 inch from the turned edge. The hem of the left front shall be toward the inside and the hem of the right front shall be toward the outside.	301	EFb-1	9-11	B B
9.	<u>Make hood and attach to parka.</u> a. Attach three eyelets to each hood half as indicated on pattern.				

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Table II.
Manufacturing Operations Requirements. (Cont'd)

NO.	OPERATION	STCH TYPE	SEAM/ STCH TYPE	STCH PER INCH	THREAD NDL BOB LPR
	The eyelets shall be reinforced in back with a piece of self-material (see operation 1.b).				
	NOTE: Hood and parka may be joined by either of the following:				
	b. Stitch center seam of hood with a double-lapped, double-stitched seam. The seam may be lapped in either direction, but the hood and center back seam of parka shall be lapped in the same direction.	301 or 401	LSc-2 LSc-2	9-11 9-11	B B B AA
	c. Join center back of parka with a double-lapped, double-stitched seam.	301 or 401	LSc-2 LSc-2	9-11 9-11	B B B AA
	d. Stitch hood to neck of parka with a double-lapped and double-stitched seam.	301 or 401	LSc-2 LSc-2	9-11 9-11	B B B AA
	or				
	e. Stitch each half of hood to each parka half at neck with double-lapped and double stitched seam.	301 or 401	LSc-2 LSc-2	9-11 9-11	B B B AA
	f. Join the two halves of parka with a double-lapped and double stitched seam. Stitching shall be from bottom of parka and continue through top of hood.	301 or 401	LSc-2 LSc-2	9-11 9-11	B B B AA
10.	<u>Make hood tunnel for drawcord.</u>				
	a. Thread each end of the drawcord through the hood eyelets.				
	b. Fold face opening of hood as indicated by marks on pattern and with raw edge turned under, stitch 1/16 to 1/8 inch from turned edge forming drawcord tunnel. The drawcord shall be positioned within the tunnel prior to stitching. The tunnel shall finished $1 \pm 1/16$ inches wide, and the drawcord	301	EFb-1	9-11	B B

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Table II.
Manufacturing Operations Requirements. (Cont'd)

NO.	OPERATION	STCH TYPE	SEAM/ STCH TYPE	STCH PER INCH	THREAD NDL BOB LPR
	shall not be caught in the stitching.				
	c. Stitch hook fastener tape on outer right side of hood at position shown on pattern and loop fastener tape on inner left side of hood at position shown on pattern. The hook and loop pieces shall measure 1 inch by $3-3/8 \pm 1/8$ inches.	301	LSbj-1	9-11	B B
11.	<u>Make hem at bottom of parka.</u>				
	a. Attach an eyelet at bottom of parka $5-5/8 \pm 1/8$ inches from the right front raw edge and $1-3/4 \pm 1/8$ inches from bottom raw edge.				
	b. Thread drawcord through bottom eyelet and knot.				
	c. Turn under the raw edge of bottom $1/4$ inch and form a $1 \pm 1/8$ inches wide hem, with the drawcord positioned between fold of hem. The stitching for the hem shall be $1/16$ to $1/8$ inch from the turned edge.	301	EFb-1	9-11	B B
	d. On left front side put a $1/2$ to $3/4$ inch row of stitching at the end of the drawcord tunnel parallel to the drawcord. The stitching shall be as close as possible to the drawcord without interfering with the functioning of the cord.	301 or Brck	SSa-1	9-11 21 per Brck	B B B B
12.	<u>Sew on slide fastener.</u>				
	Finished appearance. The left and right parts of the slide fastener shall be stitched without gathers or pleats. The slider shall run smoothly without material interference. All bartacks shall be $1/2$ to $5/8$ inch in length.				

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Table II.
Manufacturing Operations Requirements. (Cont'd)

NO.	OPERATION	STCH TYPE	SEAM/ STCH TYPE	STCH PER INCH	THREAD NDL BOB LPR
	a. Position slide fastener on left front with front edge of scoops positioned 1 inch from front finished turned edge. Turn under top raw edge of tape and stitch through front with two rows of stitching 3/16 to 1/4 inch apart. The back row of stitching shall be 1/16 to 3/32 inch from back edge of tape and shall run from top to bottom ends of tape.	301	LSbj-2	9-11	B B
	b. Position slide fastener on right front with front edge of scoops positioned 3/8 inch (\pm 1/16 inch) from front finished turned edge and stitch through front with two rows of stitching 1/16 to 1/4 inch apart. The back row of stitching shall be 1/16 to 3/32 inch from back edge of tape and shall run from top to bottom ends of tape. The top raw edge of tape shall be turned under and caught in the stitching.	301	LSbj-2	9-11	B B
	c. Bartack top of right and left fastener tapes with a vertical tack superimposed on the row of stitching next to scoops.	Brtck		28 per Brtck	B B
	d. Bartack bottom of slide fastener tapes with diagonal tacks, catching both rows of double stitching and with bottom of bartack catching the edge.	Brtck		28 per Brtck	B B
	e. Loop slide fastener thong through pull and knot at the end.				
	<u>TROUSERS</u>				
13.	<u>Make four pocket welts.</u> a. Fold pocket welt in half in the lengthwise direction, face to face and stitch across one end and along the length 3/8 inch from raw edge.	301	SSe-2 (a)	9-11	B B

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Table II.
Manufacturing Operations Requirements. (Cont'd)

NO.	OPERATION	STCH TYPE	SEAM/ STCH TYPE	STCH PER INCH	THREAD NDL BOB LPR
14.	b. Turn and work out edges and corners. Fold in open end 3/8 inch and stitch 1/16 to 1/8 inch from edge on all sides except the folded one.	301	SSe-2 (b) and SSc-1	9-11 9-11	B B B B
	or				
	c. Fold welt in half, (face side out), turn side and bottom edges to inside and single stitch 1/16 to 1/8 inch from turned edges. The edges may be creased.	301	SSc-1	9-11	B B
	d. Stitch hook and loop fastener taped to pocket welts on all four sides with a single row of stitching 1/16 inch from edge as shown by marks on pattern. Both hook and loop tapes shall measure 5/8 inch by 1-1/2 ± 1/8 inches.	301	LSbj-1	9-11	B B
14.	<u>Join pocket welt to trousers.</u>				
	a. Position welts on front of trousers as indicated by marks on the pattern with curved sides toward center of trousers and stitch 3/8 ± 1/16 inch from folded edges, with the outer welt having either the hook or loop tape and the inner welt having the opposite. The folded edge of the welt shall be abutted on the cut line. The curved edge of the outer welt shall face towards the front and the curved edge of the inner welt shall be toward the slide of the trousers.	301	SSb-1	9-11	B B
	b. Cut opening and tongue-notch ends.				
	c. Turn welts to finished position and raise stitch 1/16 to 1/8 inch back from joining seams	301	LSq-2	9-11	B B

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Table II.
Manufacturing Operations Requirements. (Cont'd)

NO.	OPERATION	STCH TYPE	SEAM/ STCH TYPE	STCH PER INCH	THREAD NDL BOB LPR
	d. Stitch down top and bottom of welts with the welts smooth and flat catching the inner welt in the stitching. The stitching shall be a rectangular box with the rows of stitching 1/4 to 3/8 inch apart and the outside row 1/16 to 1/8 inch from edge of welt; or two 1/2 inch bartacks, positioned on each end of welt parallel to and 1/8 to 3/16 inch from edge, may be used in lieu of the rectangular stitching.	301	LSq-2	9-11	B B
		301		9-11	B B
		Brtck		21 per Brtck	B B
15.	<u>Join front crotch.</u> Join the right and left trouser halves at the front crotch with a double-lapped and double-stitched seam 3/16 to 1/4 inch gage with the other row 1/16 inch from the finished edge.	301 or 401	LSc-2 LSc-2	9-11 9-11	B B B AA
16.	<u>Form right and left fly.</u> a. Single fold right fly front to the inside in accordance with notches on pattern and stitch 1/16 to 1/8 inch from the back edge.	301	EFa-1	9-11	B B
	b. Double fold the left fly front to the inside in accordance with notches on pattern and stitch 1/16 to 1/8 from the back folded edge.	301	EFaa-1	9-11	B B
	c. Stitch a 1 inch by 1-3/4 ± 1/8 inches hook fastener tape to left inside fly and a 1 inch by 1-3/4 ± 1/8 inches loop fastener tape to right outside fly at location shown on pattern.	301	LSbj-1	9-11	B B
	d. Join right and left fly at crotch with a double row of stitching 3/16 to 1/4 inch apart.	301	LSa-2	9-11	B B

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Table II.
Manufacturing Operations Requirements. (Cont'd)

NO.	OPERATION	STCH TYPE	SEAM/ STCH TYPE	STCH PER INCH	THREAD NDL BOB LPR
17.	<u>Join seat and legs.</u> Join the seat and legs with a double-lapped and double-stitched seam 3/16 to 1/4 inch gage, with the outer row 1/16 inch from the finished edge.	301 or 401	LSc-2 LSc-2	9-11 9-11	B B B AA
18.	<u>Insert leg eyelets and make draw-cord tunnel on each leg.</u> a. Attach two eyelets in each leg at locations shown on pattern. The eyelets shall be reinforced in back with a piece of self material measuring approximately 3/4 inch by 3/4 inch. b. Thread end of drawcord through each eyelet and knot. Turn under the raw edge 1/4 inch and form a tunnel by folding at mark shown on pattern with drawcord positioned in the tunnel. Stitch around the entire leg with a single row of stitching 1/8 inch from the turned edge.	 301	 EFb-1	 9-11	 B B
19.	<u>Make waist tunnel for drawcord.</u> a. Attach eyelet for drawcord on right front at location shown on pattern. The eyelet shall be reinforced in back with a piece of self material measuring approximately 3/4 by 3/4 inch. b. Thread end of the drawcord through eyelet and knot. Turn under the top raw edge of trousers 1/4 inch and form a 1 to 1-1/8 inch wide tunnel, with drawcord positioned in the tunnel. Stitch around the entire waist with a single row of stitching 1/8 inch from the lower turned edge.	 301	 EFb-1	 9-11	 B B

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Table II.
Manufacturing Operations Requirements. (Cont'd)

NO.	OPERATION	STCH TYPE	SEAM/ STCH TYPE	STCH PER INCH	THREAD NDL BOB LPR
	c. On left front side put a 1/2 to 3/4 inch row of stitching at the end of the drawcord tunnel parallel to the drawcord. The stitching should be close enough to the drawcord so that the knotted cord will not slip through the opening and still allow the cord to slide freely.	301	Osf-1	9-11	B B
	d. Stitch two pieces of 8 inch long webbing on the waist at the ends of the webbing approximately 3-1/2 and 6-1/2 inches in from the finished edge of the fly, to form the hook as shown in Figure 1. This procedure applies to both sides of the fly front. The stitching shall be made at the hem line and the webbing may be stitched to the waist in one operation when forming the waist tunnel.	Brtck		28 per Brtck	B B

NOTE: The abbreviations used in Table II are as follows:

Stch	-	Stitch
In	-	Inch
Ndl	-	Needle
Bob	-	Bobbin
Lpr	-	Looper
Mchne	-	Machine
Brtck	-	Bartack
Comrc1	-	Commercial
smlr	-	similar
Btnhl	-	Buttonhole
incl	-	including
abl	-	double
chnstch	-	chainstitch

3.9 Finished measurements. The finished parka shall conform to the measurements shown in Table III and the finished trousers shall conform to the measurements shown in Table IV. Tolerance on all measurements shall be $\pm 1/2$ inch

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TABLE III.
Parka measurements.

Size	Chest <u>1</u> / (inches)	Bottom <u>2</u> / (inches)	Length <u>3</u> / (inches)	Sleeves <u>4</u> / (inches)	Slide fastener (inches)
XX-small	22	24	32-7/8	34-1/4	26
X-small	24	26	33-3/8	34-7/8	26-1/2
Small	26	28	33-7/8	35-1/2	27
Medium	28	30	34-3/8	36-1/4	27-1/2
Large	30	32	34-7/8	36-7/8	28
X-Large	32	34	35-3/8	37-5/8	28-1/2

1/ Measure across front, 15-1/2 inches up from the bottom edge, from folded edge to folded edge.

2/ Measure across bottom, from folded edge to folded edge.

3/ Measure along center back, from neck seam to bottom edge of parka.

4/ Measure from back seam (where hood is joined) to bottom edge of sleeve.

TABLE IV.
Trouser measurements

Size	1/2 waist <u>1</u> / (inches)	Inseam length <u>2</u> / (inches)	1/2 leg circumference <u>3</u> / (inches)
XX-small	15	31	10-1/2
X-small	17	31	10-3/4
Small	19	31	10-3/4
Medium	21	31	11
Large	23	31	11-1/4
X-Large	25	31	11-1/4

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- 1/ Measure across waist, from folded edge to folded edge.
- 2/ Measure along inseam, from crotch seam to bottom end of leg.
- 3/ Measure at bottom end of leg, from folded edge to folded edge.

3.10 Workmanship. The parka and trousers shall conform to the quality of product established by this document. The occurrence of defects shall not exceed the applicable acceptable quality levels.

4. QUALITY ASSURANCE PROVISIONS

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

4.1.1 Responsibility for compliance. All items must meet all requirements of sections 3 and 5. The inspection set forth in this document shall become a part of the contractor's overall inspection system or quality program. The absence of any inspection requirements in the document shall not relieve the contractor of the responsibility of assuring that all products or supplies submitted to the Government for acceptance comply with all requirements of the contract. Sampling in quality conformance 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 assuring 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 assure compliance with all dimensional requirements.

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

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- 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 6.2), it shall be examined for the defects specified in 4.4.2 and 4.4.3 and tested as specified in 4.4.4. The presence of any defect or failure shall be cause for rejection of the first article.

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 document or applicable purchase document.

4.4.1.1 Preproduction test. Prior to heat seam sealing any parkas or trousers, the basic coated outer shell material shall be evaluated to assure proper seam sealing machine settings, tape alignment, appearance, and sealability. An individual evaluation shall be conducted per seam sealing machine at the beginning of each day on either the parka or trouser end items are to be heat seam sealed. The following constitutes this evaluation.

4.4.1.2 Seam sealing procedure. Cut an 8 by 12 inches (any direction) sample of coated outer shell material then cut sample down the middle of the 8 inch width for the entire 12 inch length. Double needle sew the cut edges together using stitch type 301, or 401, seam type LSc-2, at 9-11 stitches per inch with thread specified in 3.2.5. Operate seam sealing machine according to tape manufacturers recommended settings and apply middle of the heat sealing tape over back side of sewn seam leaving at least a one inch peel tab of unsealed tape. There shall be no sign of melting, burning, delamination, puckering, discoloration, or any visible sign of degradation of any kind to the coated material. Also, the tape shall be flat with no wrinkles, puckers, or bubbles on its surface. Using the unsealed pull tab section of the tape, slowly pull three inches of the sealed type with a calibrated spring scale or CRT or CRE tester. The tape shall meet requirements as specified in 3.2.8.2. Also the green coated material side shall exhibit an even distribution of color change corresponding to the full tape width when the tape is peeled back.

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4.4.1.3 Tape alignment. At random, fold a section of seam sealed material across the width of tape such that a crease mark is visible when refolded (press on tape if necessary). Observe that the tape edges remain secure with no sign of delamination at this point. Note that any lifted tape areas, usually denoted by turning opaque, signify either delamination or points in which the heat nozzle of the sealing machine are in misalignment with the tape.

4.4.1.4 Hydrostatic resistance. To determine proper seal, a randomly selected tape section shall withstand the hydrostatic resistance test requirements in accordance with 4.5.1, including flexing. As an alternate, a commercially available hydrostatic machine with 4-1/2 inch head may be utilized. The taped specimen shall maintain a hydrostatic pressure at 0.8 psi for 3 minutes. In either case, the taped material side shall be face down or on the same side as the hydrostatic pressure. In case of dispute, Method 5516 of FED-STD-191 shall prevail.

4.4.1.5 Reporting. If taped material observation, tape alignment, and hydrostatic resistance results meet requirements, then record sealing machine settings (temperature, pressure, and speed) and date onto taped material specimen with indelible ink, and continue with daily production utilizing settings. Report all test and reporting procedures for each day of production. Retain all taped specimens until acceptance of end items has been finalized.

4.4.2 End item visual examination. The end item shall be examined for the defects listed in Table V. The lot size shall be expressed in units of one parka or trousers. The sample unit shall be one parka or trousers, as applicable. The inspection level shall be II and the acceptable quality level (AQL), expressed in terms of defects per hundred units, shall be 1.5 for major defects and 10 for total (major and minor combined) defects. All defects shall be classified as indicated below except for those with an asterisk (*) in the classification column which shall be classified as follows:

Major defect - When seriously affecting appearance or serviceability.

Minor defect - When affecting appearance or serviceability but not seriously.

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TABLE V.
End item visual defects

Examine	Defects	Classification	
		Major (*)	Minor
Clean- liness	Any spot, streak, or stain of a permanent nature on any portion of garment which would be visible when garment is worn.	X	
	Any spot, streak, or stain of a permanent nature not visible when garment is worn.		X
	Removable spot, streak, or stain on outside of garment.		X
	Thread ends not trimmed throughout garment.		X
	Excessive dusting powder distributed over exterior or interior seams of garment (see 3.6.5.3).	(*)	
	Dusting powder on any area other than seams (except that which may have come from seams as garment is folded).		X
Component and assembly	Any defective component.	(*)	
	Any component part omitted.	X	
Drawcord	Any required operation omitted or improperly performed.	(*)	
	Any drawcord caught in hem or tunnel stitching restricting use of drawcord.	X	
	Any end not tipped or impregnated.	X	
	Any drawcord omitted.	X	
	Any end not knotted (except hood drawcord).		X
	Hood drawcord more than 45 inches or less than 43 inches.		X
	Any other drawcord not 5 inches longer than the circumference of the draw cord tunnel.		X
Eyelet and slide fastener thong	Any omitted, broken, bent, or not securely clinched.	X	
	One or more too tightly clinched, cutting coated cloth.	X	
	One or more having sharp or rough edge.	X	
	Not clinched through reinforcement.	X	
	Slide fastener thong not specified length.		X
Label	Missing, incorrect, or illegible.		X
	Not located as specified.		X

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TABLE V.
End item visual defects - (continued)

Examine	Defects	Classification Major (*) Minor	
Coated cloth defects and damages	Any blister.	X	
	Hard permanent creases or wrinkles.	X	
	Uneven coating resulting in sharply contrasting shade areas of heavy warp-wise lines.		X
	Foreign matter.		X
	Any uncoated area. Lump exceeding 1/4 inch in diameter or there or more lumps of any size within a square foot area.	X	
Workman-ship damages	Needle chews.	X	
	Any mend, cut, or hole.	X	
	Any tear or burn.	X	
	Any scuff, pinhole, pick-off, or needle hole uncoated.	X	
	Repair compound on fabric cracks, lifts, or flakes when flexed or scrubbed.		X
	Any repaired area not dusted.		X
	More than four scuffs repaired.		X
	Any scuff repair exceeding 2 inches in length and 1 inch in width.		X
	More than eight pinholes repaired.		X
	Any pinhole repair exceeding 3/4 inch in length or width.		X
	Any needle hole repair exceeding 2 inches in length and 1 inch in width.		X
	Any pick-off repair area exceeding 1/2 inch in diameter.		X
Sealing of seams and stitching	Any seam stitching required to be sealed, not properly sealed, or does not completely cover the stitching or any needle hole.	X	
	Edge of seam tape less than 3/16 inch from seam allowance.	X	
	Visible scorching (heat degradation of fabric on the laminate) in excess of 3/16 inch in width or 1 inch in length at any location along a taped seam.	X	
	Seam tape lifting off fabric: - Up to 1/8 inch inclusive - More than 1/8 inch	X	X
	Seam badly twisted, pleated, or puckered when the condition is caused by improperly performed heat sealing operation. 1/		X

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TABLE V.
End item visual defects - (continued)

Examine	Defects	Classification <u>Major (*)</u> <u>Minor</u>
Accuracy of seaming	1/ Parka and trousers drawn for examination for these defects shall have been production folded for packing for a minimum of 1 hour.	
	Seam badly twisted, pleated, or puckered.	(*)
	Part of parka or trouser caught in any unrelated operation or stitching.	(*)
	Thread break (type 301 stitching) secured by stitching back of the break less than 1 inch; or thread break (type 401 stitching) over stitched less than 1-1/2 inches.	X
	Ends of all seams and stitching when not caught in other seams or stitching, backtacked less than 1/4 inch.	X
	Wrong shade of thread in contrast with color and shade of parka or trouser.	X
	Gage of stitching not as specified.	X
	Stitching less than 1/16 inch from edge resulting in damage to the material.	X
	Raw edge on inside or outside caused by excessive seam allowance protruding from a double-lapped, double stitched seam.	X
	Raw edge in a double-lapped, double-stitched seam caused by incomplete lapping:	
	- Up to 1 inch.	X
	- Over 1 inch.	X
	Edge of seam tape less than 3/16 inches from seam allowance.	X
	Seam tape lifting off fabric.	X
	Visible scorching (heating degradation of fabric on the laminate) in excess of 3/16 inchwidth or 1 inch length at any location along a taped seam.	X
Open seams	Seam tape lifting off fabric:	
	- up to 1/8 inch, inclusive.	X
	- more than 1/8 inch.	X
Open seams	More than 1/8 inch but not more than 1/2 inch.	X
	More than 1/2 inch.	X

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TABLE V.
End item visual defects - (continued)

Examine	Defects	Classification Major (*) Minor	
	NOTE: One or more broken or two or more continuous skipped or run-off stitches constitute an open seam. On double stitched seams, a seam is considered open when one or both sides of the seam is open. Also, a raw edge not securely caught in stitching shall be classified as an open seam.		
Seam and stitch types	Not specified seam or stitch type. Looper thread located on outside of parka or trouser when 401 stitch type is used.	X X	
Bartacks	Any bartack omitted. Any bartack not as specified or not in specified location. Stitching loose, incomplete or broken.	X X X	
Stitch tension	Loose tension in any area: - more than 1 inch but not more than 2 inches. - more than 2 inches. Tight tension (stitches break when normal strain is applied to the seam or stitching).	X X X	
Stitches per inch (to be scored only when the condition exists on major portion of the seam)	Less than minimum specified: - 1 stitch. - 2 or more stitches. More than maximum specified.	X X X	

4.4.3 End item dimensional examination. The end item shall be examined for conformance to the dimensions specified in Tables III and IV. Any dimension not within the specified tolerance shall be classified as a defect. The lot size shall be expressed in units of one parka or trousers, as applicable. The sample unit shall be one parka or trousers, as applicable. The inspection level shall be S-3 and the AQL, expressed in terms of defects per hundred units, shall be 4 0.

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4.4.4 End item testing. The end item shall meet the requirements specified in 3.6.6.1 for hydrostatic resistance when tested in accordance with 4.5.1. The lot size shall be expressed in units of parkas or trousers, as applicable. The sample unit shall be one parka or trousers, as applicable. The inspection level shall be S-2 and the AQL, expressed in terms of defects per hundred units, shall be 6.5 for test failures.

TABLE VI.
End item tests

Characteristic	Requirement reference	Test method
Sealed seam area, hydrostatic resistance	3.6.6.1	4.5.1
Sealed seam sealant:		
Resistance to low temperature flexing	3.6.6.2	4.5.2
Resistance to blocking	3.6.6.3	4.5.3

4.4.5 Packaging examination. The fully packaged end item shall be examined for the defects listed below. The lot size shall be expressed in units of shipping containers. The sample unit shall be one shipping container fully packaged. The inspection level shall be S-2 and the AQL, expressed in terms of defects per hundred units, shall be 2.5.

<u>Examine</u>	<u>Defect</u>
Marking (exterior and unit packs)	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.

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<u>Examine</u>	<u>Defect</u>
Content	Number of parkas or trousers per container is more or less than required. 1/ Size shown on one or more parka or trousers not as specified on shipping container. 1/

1/ For this defect, one box in the sample shall be examined.

4.4.6 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 dimension	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.

4.5 Methods of inspection.

4.5.1 Hydrostatic resistance test. The hydrostatic resistance of sealed seam areas of the parka or trousers shall be determined in accordance with Method 5514 of FED-STD-191, except for the following: The seam area of the fabricated parka or trousers shall be tested without cutting or otherwise damaging the parka or trousers. The seam shall be flexed ten times in the following manner. The parka or trousers seam shall be grasped using the thumb and fingers of each hand in such a manner that the thumbs are parallel to each other and approximately 1/2 inch beyond (outside) the edges of the tape. With the seam held firmly in the above manner the thumbs shall be brought together so the cloth and the tape are in contact. The sealed area shall be flexed vigorously ten times with the cloth and tape in contact throughout the test. The flexing action shall be such that when fully flexed in either direction there shall be a minimum of 2 inches between each thumbnail when the flexed area is fully extended with the test area in contact with itself at all times.

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The test area shall be visually examined for the characteristic indicated in 3.6.6.1 prior to conduct of the hydrostatic test. The tape side of the seam shall be the same side as the hydrostatic pressure. The water level shall be raised from 0 to 50 at a rate of 1 centimeter per second and maintained at 50 centimeters for 2 minutes and 10 seconds such that the seam is exposed for a total of 3 minutes hydrostatic head.

4.5.1.1 Parka. Test shall be run on the finished parka at four different locations as follows: One on a randomly selected side seam, one on the center hood seam, and two on the seam joining the hood to the neck of the parka, including crossover seam. The four determinations shall be reported separately as "pass" or "fail". No more than one area of the four test areas on each parka shall show leakage in less than 3 minutes at the required hydrostatic head. A failure of the parka is defined as a hydrostatic failure in two or more of the four determinations.

4.5.1.2 Trousers. Tests shall be run on the finished trousers at three different locations as follows: One on each leg seam and one on the seat seam. The three determination shall be reported separately as "pass" or "fail". No more than one of the three test areas on each of the trousers shall show leakage in less than 3 minutes at the required hydrostatic head. A failure of the trouser is defined as a hydrostatic failure in two or more of the three determinations.

4.6 Heat seal tape thickness procedure.

NOTE: In case of dispute, the following procedure shall be used to confirm the tape thickness requirements in accordance with 3.2.8.

4.6.1 Equipment required. Crossover heat sealer, thin glass microscope slides, manila (file folder) cardboard, thickness gauge capable of measuring to nearest 0.0001 inch at 25 lbs. psi with 0.25 inch diameter presser foot.

4.6.2 Test method. Cut five two inch by two inch square manila cardboard specimens and record thickness in middle of specimen. Heat the crossover sealer to a temperature 151-154 degrees F (66-68 degrees C). Place a three inch section of seam seal tape with the adhesive side toward the cardboard and place a cool glass slide on top of the tape. Heat the sandwiched cardboard-tape-glass sample on the crossover sealer approximately 30 seconds. Do not apply excessive pressure as to crack the glass slide. Immediately after heat removal, remove the glass slide and peel the tape off the cardboard. A uniform residual adhesive mass will remain attached to the cardboard.

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4.6.3 Results. Measure thickness of cardboard and adhesive residue at center point of cardboard specimen. The reported thickness of adhesive shall be the difference between the initial center point cardboard thickness and the final center point cardboard and adhesive thickness. Membrane or barrier thickness shall be the difference between the initial tape thickness and the reported adhesive thickness. Report the thickness to the nearest 0.0001 inch.

5. PACKAGING

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

5.1.1 Level C.

5.1.1.1 Parka. Each parka with slide fastener closed shall be neatly folded to measure approximately 15 inches in length by 11 inches in width. Each folded parka shall be individually inserted in a polyethylene bag conforming to A-A-50083.

5.1.1.2 Trousers. Each pair of trousers shall be neatly folded to measure approximately 14-1/2 inches in length by 11 inches in width and individually inserted in a polyethylene bag conforming to A-A-50083.

5.1.2 Commercial. Parkas only or trousers only, shall be preserved in accordance with ASTM D 3951.

5.2 Packing. Packing shall be level B or Commercial (see 6.2).

5.2.1 Level B packing.

5.2.1.1 Parka. Twenty-four parkas of one size only, preserved as specified in 5.1, shall be packed in a fiberboard box conforming to style RSC-L, grade V3c of PPP-B-636. Inside dimensions of the box shall be approximately 23 by 15-1/2 by 15 inches. Each box shall be closed in accordance with the appendix of PPP-B-636.

5.2.1.2 Trousers. Twenty-four trousers of one size only, preserved as specified in 5.1, shall be packed in a fiberboard box conforming to style RSC-L, grade V3c of PPP-B-636. Inside dimensions of the box shall be approximately 23 by 15-1/2 by 15 inches. Each box shall be closed in accordance with the appendix of PPP-B-636.

5.2.1.3 Weather-resistant fiberboard containers. When specified (see 6.2), the shipping container shall be a grade V3c, V3s, or V4s fiberboard box fabricated in accordance with PPP-B-636 and closed in accordance with method III as specified in the appendix of PPP-B-636, except that the inspection shall be in accordance with 4.4.5.

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5.2.2 Commercial packing. Parkas only or trousers only, preserved as specified in 5.1, shall be packed in accordance with ASTM D 3951.

5.3 Palletization. Parkas and trousers, packed as specified in 5.2, shall be palletized on a 4-way entry winged pallet in accordance with load type Ia of MIL-STD-147. Pallet pattern shall be number 3 in accordance with the appendix of MIL-STD-147.

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

5.4.1 Polyethylene bagged unit packs. Polyethylene bagged unit packs shall have the required identification information legibly printed or stamped in black directly on the bag across the center face or on a white paper label inserted within the bag so as to permit ready identification.

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 parka and trousers are intended to be used by Military personnel of the Department of Defense performing those physical activities, in rain or wet snow, which would be hindered by the use of the poncho, or in operations where the poncho will not provide adequate protection. The parka and trouser are sized to fit over cold-wet clothing and when used with hot-wet clothing the sizing for the individual soldier should be reduced one size.

6.2 Ordering data. Acquisition documents should specify the following:

- a. Title, number, and date of this document.
- b. Size required (see 1.2).
- c. When a first article sample is required (see 3.1, 4.3, and 6.5).
- d. When resistance to low temperature flexing is not required (see 3.6.6.2).
- e. Selection of applicable levels of preservation and packing (see 5.1 and 5.2).

6.3 Sewing machine speeds. Experience has shown that sewing machine speeds up to 3200 stitches per minute will result in a more efficient sewing operation and higher quality stitching and seaming on this type of coated cloth (see 3.6.4).

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6.4 First article. When a first article is required, it should be inspected and approved under the appropriate provisions of FAR 52.209. 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 all acquisition instruments regarding arrangements for selection, inspection, and approval of the first article.

6.5 Subject term (key word) listing.

Fowl weather
Water proof
Outer garment

6.6 Changes from previous issue. Asterisks are not used in this revision to identify changes with respect to the previous issue due to the extensiveness of the changes.

6.7 Supersession data. The class 1 olive green 207 parka and trousers have been deleted as they are no longer required.

Custodians:
Army - GL
Air Force - 99

Preparing Activity:
DLA - CT

Review Activities:
Army - MD
Air Force - 45, 82
Army - GL

Project No.
8405-0197

User Activities
Air Force - 45

MIL-P-43907D

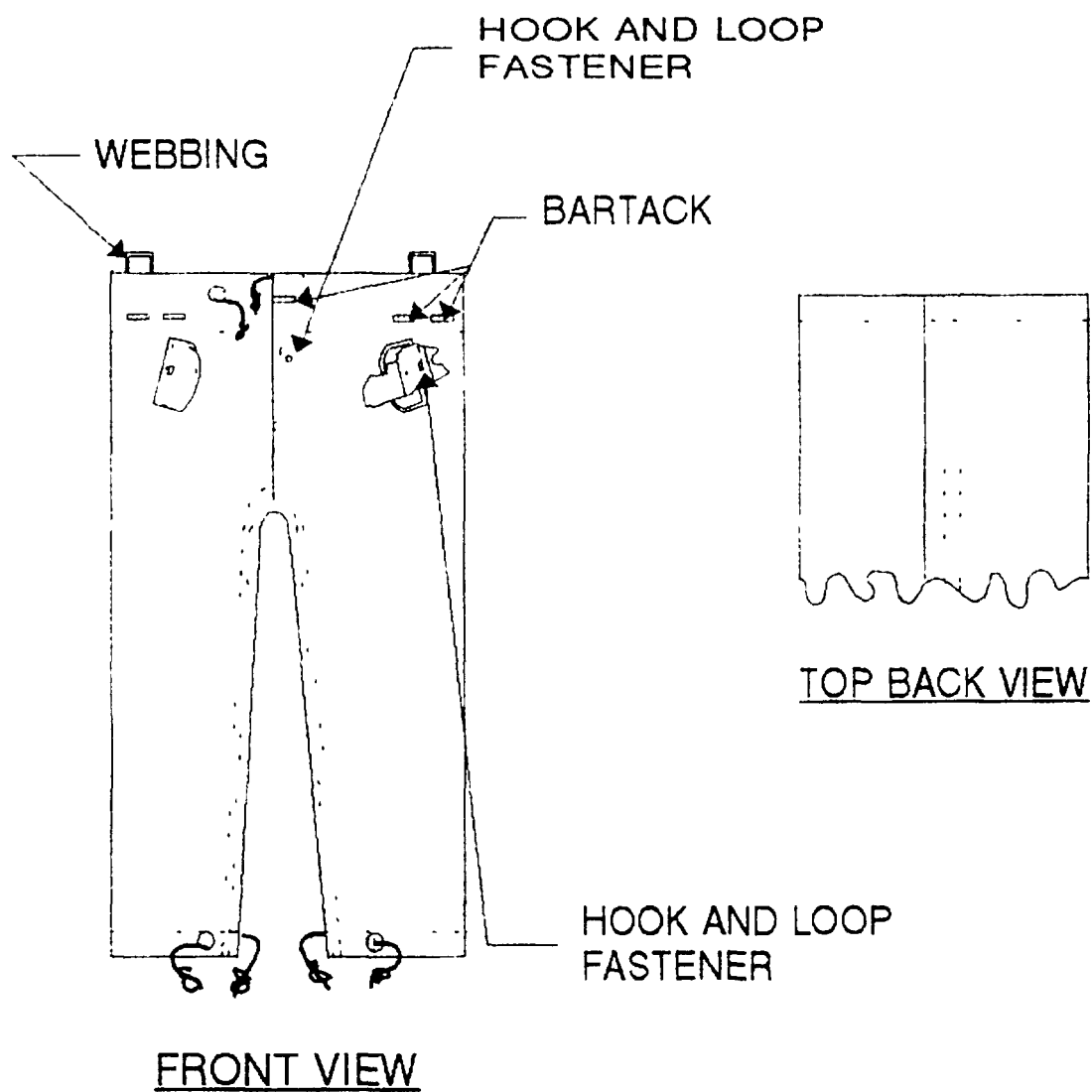


FIGURE 1

PARKA AND TROUSERS, WET WEATHER

M L-P-43907D

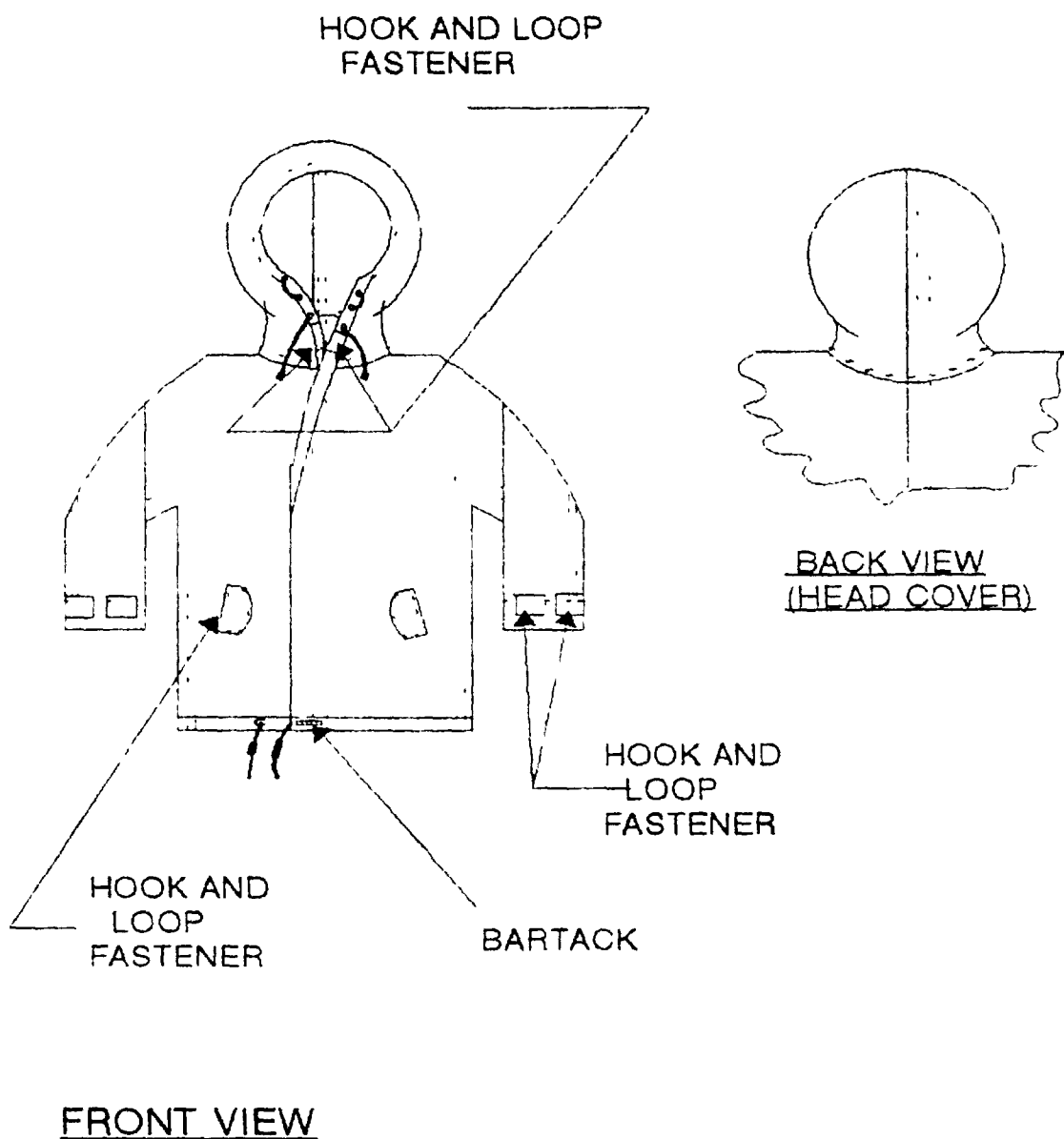


FIGURE 2

PARKA AND TROUSERS, WET WEATHER

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.

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1. RECOMMEND A CHANGE:		1. DOCUMENT NUMBER MIL-P-43907D	2. DOCUMENT DATE (YYMMDD) 93-03-12
3. DOCUMENT TITLE PARKA AND TROUSERS, WET WEATHER			
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-FSSD (12-3-D)		b. TELEPHONE (include Area Code) (1) Commercial 215-737-8105 (2) AUTOVON 444-8105	
c. ADDRESS (include Zip Code) 2800 South 20th Street P. O. Box 8419 Philadelphia, Pennsylvania 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	