

MIL-P-87098
14 October 87

MILITARY SPECIFICATION

PARKA, WET WEATHER

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

1. SCOPE

1.1 Scope. This specification covers the requirements for a waterproof parka, made of a double coated nylon twill cloth.

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

XX Small	- (26-28)
X Small	- (30-32)
Small	- (34-36)
Medium	- (38-40)
Large	- (42-44)
X-Large	- (46-48)

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 specification to the extent specified herein. Unless otherwise specified, the issues of these documents shall be those listed in the issue of the Department of Defense Index of Specifications and Standards (DoDISS) and supplement thereto, cited in the solicitation.

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Officer in Charge, Navy Clothing and Textile Research Facility, 21 Strathmore Road, Natick, MA 01760-2490 by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC/NA

FSC 8405

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

MIL-P-87098

SPECIFICATIONS

FEDERAL

- V-F-106 - Fastener, Slide, Interlocking
- V-T-295 - Thread, Nylon
- NN-P-71 - Pallet, Material Handling, Wood, Stringer Construction, 2 Way and 4 Way (Partial)
- JJ-W-155 - Webbing, Textile, (Cotton, Elastic)
- DDD-L-20 - Label; For Clothing, Equipage, and Tentage (General Use)

MILITARY

- MIL-F-10884 - Fasteners, Snap
- MIL-P-15011 - Pallet, Material Handling, Wood, Post Construction, 4 Way Entry
- MIL-G-16491 - Grommet, Metallic
- MIL-B-17757 - Boxes, Shipping, Fiberboard (Modular Sizes)
- MIL-C-19759 - Cloth, Coated, Twill, Nylon (Low Count)
- MIL-F-21840 - Fastener Tapes, Hook and Pile, Synthetic

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

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

2.1.2 Other Government documents, drawings, and publications. The following other Government documents, drawings, and publications form a part of this specification to the extent specified herein. Unless otherwise specified, the issues shall be those in effect on the date of the solicitation.

LAWS AND REGULATIONS

US POSTAL SERVICE MANUAL

(Copies of the manual may be obtained from the Superintendent of Documents, US Government Printing Office, Washington, DC 20402).

MIL-P-87098

2.2 Other publications. The following document(s) form a part of this specification to the extent specified herein. Unless otherwise specified, the issues of 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 issue of the nongovernment documents which is current on the date of the solicitation.

NATIONAL MOTOR FREIGHT TRAFFIC ASSOCIATION, INC., AGENT

National Motor Freight Classification

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

UNIFORM CLASSIFICATION COMMITTEE, AGENT

Uniform Freight Classification

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

2.3 Order of precedence. In the event of a conflict between the text of this specification and the references cited herein, the text of this specification shall take precedence. Nothing in this specification, however, shall supersede applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

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

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

3.3 Material.

3.3.1 Basic material. The basic material for the parka shall be a chloroprene coated nylon twill conforming to Type II of MIL-C-19759, except that the coating shall be unvulcanized. The cloth shall be tested as specified in 4.4.1.

3.3.2 Braid, tubular, elasticized. The hood drawcord shall be of 1/8 inch diameter, rayon-covered, 6-strand rubber cord braid such as that commercially available from Thomas Taylor and Sons, 50 Houghton St. Box A, Hudson, Ma. 01749, Style No. 16450 or the equivalent (see 6.4).

3.3.3 Cement, chloroprene. The cementing compound shall have a chloroprene base and the same curing characteristics as the coating compound specified in 3.3.1. The use of reclaimed rubber is prohibited (see 4.4.1). Cemented sample seams shall have a minimum adhesion of 5 pounds per inch width when tested as specified in 4.4.1. The color of the cement shall approximate the

MIL-P-87098

shade of the green coating compound specified in 3.3.1 or shall be unpigmented.

3.3.4 Thread, nylon. The nylon thread used for all seaming and stitching shall conform to Type III, size B or E, of V-T-295, except that the colorfastness requirements shall not apply. The color shall approximate the green shade of the basic material.

3.3.5 Fastener tapes. The fastener tapes shall conform to Type II, Class 3 or 5, of MIL-F-21840. The tapes shall be 1 inch or 2 inches in width (see Table I). The color shall be Green 3422.

3.3.6 Webbing, elastic. The elastic webbing used in the waist of the parka shall conform to Type 1, Class 3 or 4, of JJ-W-155. The elastic webbing for the hood adjustment strap assembly shall conform to Type 1, Class 6 of JJ-W-155. Class 4 webbing shall be black. Class 6 webbing shall be dyed to approximate the green shade of the basic material. Class 3 webbing shall be unbleached, bleached or dyed to approximate the green shade of the basic material.

3.3.7 Bias tape. The bias tape used as stay stripping or seam strapping shall be any suitable plain woven fabric, weighing not less than 2.5 oz. per square yard (see 4.4.1). The cloth shall be dyed to harmonize with the shade of the back side of the basic cloth and bias cut to the width required. (see Table I). Any continuous length used for the construction of the parka shall contain not more than two seams. As an alternate, the basic material specified in 3.3.1 may be used. When basic material is used, any continuous length shall not be spliced or seamed.

3.3.8 Fasteners, slide. The slide fastener for closing the front opening shall be interlocking short or long tab pull, natural brass or bronze, or plastic (nylon) chain conforming to Type IV, Style 8, Size M of V-F-106. The color of the tape shall be black or shall approximate the green shade of the basic material. The tape shall be cotton, synthetic or a combination of both. When cotton is used, it shall be mildew-resistant treated (see 4.4.1). All components of the slide fastener shall be furnished by the same supplier (see 4.4.1). The top tape extension beyond scoops shall be 1 1/8 inches maximum. The length of the slide fastener chain for each size parka shall be as follows:

<u>Size of Parka</u>	<u>Length (inches)</u>
XX Small, X Small Small and Medium	24 (+ 1/4)
Large and X Large	25 (+ 1/4)

The thong for the slide fastener tab pull shall be as specified in V-F-106, except that the finished length after attachment shall be 3 to 4 inches. The color of the thong shall approximate the green shade of the basic material or shall be black.

3.3.9 Grommets. The grommets for the hood assembly drawcords shall conform to Type I, Class 3 Size 0 or 1 of MIL-G-16491.

MIL-P-87098

3.3.10 Fasteners, Snap. The snap fasteners used for the bottom closure of the parka (see Table I operation 16d. and Figure 3) shall consist of a stud and button (attached to right moisture barrier) and a socket and button (attached to left moisture barrier). The fasteners shall be Style 2, 24 line, Size 1 or 2 of MIL-F-10884, with a black or commercial dark finish on the button portion.

3.3.11 Combination label. A combination identification, size, and instruction label, conforming to Type IV, Classes 12 and 13, of DDD-L-20, shall be printed on a suitable sized piece of unvulcanized basic material or may be marked directly on the parka. All markings shall be bright yellow in color. The inscription shall be as follows:

PARKA, WET WEATHER
 CONTRACT NO. DLA-100-00-0-0000 (EXAMPLE)
 STOCK NO. 8405-00-000-0000 (EXAMPLE)
 SIZE: MEDIUM (38-40) (EXAMPLE)
 NAME OF CONTRACTOR

INSTRUCTIONS

THIS WATERPROOF PARKA HAS BEEN OVERSIZED
 TO FIT OVER HEAVY CLOTHING FOR USE UNDER COLD/
 WET WEATHER CONDITIONS. IF TOO LARGE WHEN WORN
 OVER LIGHT CLOTHING, USE A SMALLER SIZE. HOOD
 SIZE MAY BE ADJUSTED BY THE USE OF THE INNER
 HOOD ADJUSTMENT STRAP.

RINSE GARMENT WITH A HOSE OR SPONGE USING
 FRESH WATER AFTER EVERY USE.

DO NOT DRY CLEAN.

3.3.12 Dusting medium. The dust used in fabricating both the basic material and parka shall be applied in the smallest quantity necessary to prevent blocking. The dust shall consist of a finely powdered mineral material such as talc, except that the addition of zinc stearate to the medium is permissible in an amount that will not support mildew growth on the finished vulcanized parka (see 4.4.1).

3.4 Design. The parka shall be jacket style, cement-constructed and vulcanized, have a slide fastener front closure with double moisture barrier flaps, patch pockets and have a permanently attached, oversized 2-piece hood assembly with adjustable elasticized drawcord closures and a size adjustment strap at the center of the inner hood. Hook and pile fastener tape tabs shall be provided at sleeve bottoms for take-up and at neck for proper closure. The two front patch pockets with flaps shall fasten with hook and pile tape closures. Elastic shall be inserted in the back parka hem and a snap closure shall be provided at the bottom front (see Figures 1 and 2).

3.4.1 Figures. Figures 1 through 6 are furnished for information purposes only. When inconsistencies exist between the written specification and the figures, the written specification shall govern.

MIL-P-87098

3.5 Patterns. Standard patterns will be furnished by the Government. The standard patterns shall not be altered in any way and are to be used for cutting the contractor's working patterns. The working patterns shall be identical to the standard patterns.

3.5.1 Pattern parts. The component parts shall be cut from the material specified, and in accordance with the following pattern parts:

Material	Pattern Parts	Cut parts
Cloth coated, nylon twill	Front	2
	Back & Backsleeve	2
	Front sleeve	2
	Inner hood side	2
	Outer hood side	2
	Inner hood center	1
	Outer hood center	1
	Pocket	2
	Moisture barrier (right side)	1
	Moisture barrier (left side)	1
	Moisture barrier spacer	1
	Sleeve Tab	2
	Neck tab	1
	Inner hood channel	1
	Pocket cement marker	-
Templates		

3.6 Construction.

3.6.1 Sewn seams. Stitch and seam types specified in Table I shall conform to FED-STD-751. Seam allowances shall be maintained with seams properly sewn so that no raw edges, runoffs, twists, pleats, or open seams will result. Thread breaks shall be secured by starting the repair stitch not less than 1/2 inch in back of the break. Skipped stitches shall be repaired using 301 stitch type. The minimum and maximum number of stitches per inch shall be as specified in Table I.

3.6.2 Bartacks. Where bartacks are required in Table I operations, they shall be 1/2 inch in length and contain 21 to 28 stitches. Either size B or E thread shall be used. (see 3.3.4).

3.6.3 Cemented seams and parts. Prior to joining of precemented and dusted parts, the surfaces to be joined shall be washed and reactivated with a suitable solvent. Care shall be exercised in performing this operation to avoid solvent staining of adjacent surfaces. Unless otherwise specified in Table I, all LSa type cemented seams shall overlap 1/2 to 3/4 inch. The width of the cemented area (cement margin) for seams before joining shall be a maximum of 7/8 inch per single ply of material. The cement line after seams are joined shall be visible but no wider than 3/8 inch on the outside and 3/8 inch on the underside. Whenever possible, cementing shall be performed by shingling or with the aid of templates to insure that the cement lines are even, uniform, and within specified tolerances. Cemented parts such as the pocket and reinforcement patches shall show a cement line no wider than 3/8 inch around all outer edges. All cemented seams and parts shall be rolled to

MIL-P-87098

remove any puckers, tunnels, or wrinkles and shall be dusted in accordance with 3.3.12. Cemented seam types specified in Table I, are similar to the seam types specified in FED-STD-751 minus the stitchline.

3.6.4 Dusting visible cement lines. Before vulcanization, visible cement lines along edges of seams and parts shall be dusted with the minimum amount of dusting medium necessary to prevent adhesion of uncured coated fabric and cemented surfaces. Care shall be taken to insure only the cemented areas are dusted (see 3.3.12).

3.6.5 Vulcanization. The parka shall be vulcanized in accordance with the time and temperature requirements supplied by the coated fabric manufacturer which shall result in seams meeting the requirements of 3.9 when tested as specified in 4.5.

3.7 Manufacturing operation requirements. The contractor shall manufacture the parkas in accordance with Table I. The contractor is not required to follow the exact sequence of operations listed provided the finished parkas are identical to that produced by following the sequence listed in Table I.

3.7.1 Shade and size marking. The component parts shall be marked, ticketed, or bundled to insure a uniform shade and size throughout the parka, except parts which may be cut from ends. Any method may be used except:

1. Metal fastening devices
2. Sew-on tickets
3. Adhesive type tickets whose adhesive causes discoloration or whose adhesive mass adheres to the material upon removal of the tickets.

The use of a rubber stamp, ink pad numbering machine, or pencil is acceptable provided the numbers are legible and are not visible on the outside of the parka.

3.7.2 Abbreviations in table of operations. The abbreviations used in Table I are as follows:

Stch	-	Stitch
in	-	inch
Ndl	-	Needle
Bob	-	Bobbin
Lpr	-	Looper
Mchne	-	Machine
Brck	-	Bartack
Comrc	-	Commercial
smlr	-	similar
Btnhl	-	Buttonhole
incl	-	including
dbl	-	double
bx stch	-	box stitch

MIL-P-87098

TABLE I - CONSTRUCTION OF PARKA

NO.	OPERATION	STCH TYPE	SEAM/ STCH TYPE	STCH IN	THREAD	
					NDL BOB/ LPR	

1. Cutting

a. The parka shall be cut in strict accordance with patterns furnished, which show size, shape, directional lines for cutting, and notches for proper assembly of all parts. The use of devices such as staples, pins, etc., to hold the working patterns on the basic material during cutting is not permitted.

b. All basic fabric component parts shall be cut from one piece of material except the reinforcement patches (strapping), stay stripping, labels, sleeve tabs, neck tab, moisture barrier flaps, barrier spacer and inner hood facing which may be cut from ends. Stay stripping, when cut from basic cloth shall not be spliced or seamed.

c. The use of a drill hole is permitted only when the hole is located in an area where it will be covered in a later operation by the cement portion of a cemented component part.

d. All other trimmings shall be cut in accordance with the pattern or in accordance with the description of operation when no pattern is furnished.

e. The lightly coated (green) side of the basic material shall finish on the outside of the parka.

f. Patches of basic material or bias tape (see 3.3.7) of sufficient size shall be cemented to the underside of the parka to reinforce and seal each area of stitching as indicated herein. Cement (see 3.3.3) shall be applied to the stitched area and to the reinforcement material. When basic material is used for reinforcement, the green side of the material shall be affixed to the parka. When bias tape is used, either side may be affixed to the parka.

g. Splicing of hook and pile tape is not permitted.

MIL-P-87098

TABLE I - CONSTRUCTION OF PARKA

NO.	OPERATION	STCH TYPE	SEAM/ STCH TYPE	STCH IN	THREAD NDL BOB/ LPR	
2.	<u>Replacement of defective components.</u> During the spreading, cutting, and manufacturing process, components having material defects or damages that are classified as defects in Section 4, shall be removed from production and replaced with non-defective and properly matched components.					
3.	<u>Shade and size marking</u> All parts shall be marked, ticketed, or bundled in accordance with 3.7.1. When parts are cut from ends, the parts shall closely match the major component parts of the parka.					
4.	<u>Assemble and attach sleeve tabs and take-up tape (see Figure 3).</u>					
	a. Cement entire back of each tab. Fold edges in half in accordance with pattern marks and roll flat. The finished dimensions on the tab shall be 3 1/8 to 3 1/4 inches X 7/8 to 1 inch.		OSf			
	b. Stitch a 1 1/4 to 1 3/8 inch length of 1 inch hook fastener tape to one end of the tab around all sides, 1/16 to 1/8 inch from edges.	301	LSbj-1	8-10	B or E	B or E
	or					
	c. As an alternate, the hook tape may be stitched to the tab prior to cementing and folding.	301	LSbj-1	8-10	B or E	B or E
	d. Apply a 1 1/4 to 1 3/8 inch length of 1 inch pile fastener tape to the back of each sleeve, as indicated by marks on pattern for tab placement, and stitch around all sides, 1/16 to 1/8 inch from edges.	301	LSbj-1	8-10	B or E	B or E
	e. Align hook portion of tab over pile portion so that the tab is parallel to the sleeve bottom and the free end faces toward the underarm seam. Boxstitch the free end of tab to back of sleeve, 1/16 to 1/8 inch from the three free edges and the inner hook tape stitch line.	301	bx stch	8-10	B or E	B or E

MIL-P-87098

TABLE I - CONSTRUCTION OF PARKA

NO.	OPERATION	STCH TYPE	SEAM/ STCH TYPE	STCH IN	THREAD	
					NDL	BOB/ LPR
	<p>f. Position a 6 1/4 to 6 3/8 inch length of 1 inch pile fastener tape onto each sleeve front as indicated by marks on pattern. Stitch around all sides, 1/16 to 1/8 inch from edges.</p> <p>g. Cut pieces of basic material or bias tape (see 3.3.7) and cement solid to the inside of the parka to reinforce and seal each area of stitching produced by operations 4d through 4f.</p>	301	LSbj-1	8-10	B or E	B or E
5.	Assemble pockets (see Figure 6).					
	<p>a. Attach two 1 1/4 to 1 3/8 inch lengths of 1 inch pile fastener tape to top portion of pockets, each positioned 1/2 (+ 1/16) inch below the the top set of pattern marks and 3/4 (+ 1/16) inch from edges by box stitching around all sides, 1/16 to 1/8 inch from each edge.</p>	301	bx stch	8-10	B or E	B or E
	<p>b. Stitch two 1 1/4 to 1 3/8 inch lengths of hook fastener tape in the same manner as described in 5a., to the mid portion of pockets, each positioned 1 1/2 (+ 1/16) inches below lower set of pattern marks and 3/4 (+ 1/16) inch from each edge.</p>	301	bx stch	8-10	B or E	B or E
	<p>c. Cement all around the back of the pocket from the outside edge to 1/2 to 5/8 inch from edge. Cement an area 1 1/2 to 1 5/8 inches wide between the top set of pattern marks (3/4 (+ 1/16) inch above marks and 3/4 (+ 1/16) inch below).</p>					
	<p>d. Cement and affix a 7/8 to 1 inch by 8 1/2 to 8 5/8 inch strip of reinforcing material (cut from basic material or bias tape) over area marked for pocket opening. Puncture at ends of pocket opening, as indicated by marks on pattern, with 1/8 inch diameter holes. Slash between dots through both plies.</p>					

MIL-P-87098

TABLE I - CONSTRUCTION OF PARKA

NO.	OPERATION	STCH TYPE	SEAM/ STCH TYPE	STCH IN	THREAD NDL BOB/ LPR
	e. Fold cemented area of pocket together along top set of pattern marks to form flap. Fold the bottom portion of pocket in the opposite direction along the lower marks. The hook and pile tapes shall line up in the finished pocket assembly. The edges and folded area forming the flap shall be securely cemented together, with the back of the topmost portion of the flap free to be attached to the parka.		OSf		
6.	<u>Attach pockets (see Figure 6).</u>				
	a. Make a reusable rigid template of the same configuration as the pocket piece with $\frac{3}{8}$ (+ $\frac{1}{16}$) inch removed from around the side and bottom edges. The top of the template shall finish at the lower set of pocket pattern marks.				
	b. Apply cement to both outside surfaces of a length of V-stay strip (1 strip per pocket template). The V-stay strip shall consist of a $\frac{7}{8}$ to 1 inch width of bias tape (see 3.3.7) or basic material, folded in half lengthwise and permanently creased.		OSf		
	c. Encase the side and bottom of the template described in 6a. with the inside surfaces of the V-stay strip. Ends of the V-stay strip shall extend $\frac{1}{4}$ to $\frac{3}{8}$ inch beyond the top of the template.				
	d. Apply cement to the parka fronts by means of the cement marker template in the areas where pockets are to be affixed.				
	e. Position the template prepared as specified in 6c. onto the parka fronts so that the top of the template is even with the pocket placement marks on the parka. The template shall be cemented so that the cemented areas on the parka fronts are of even width around the outside of the template.				

MIL-P-87098

TABLE I - CONSTRUCTION OF PARKA

NO.	OPERATION	STCH TYPE	SEAM/ STCH TYPE	STCH IN	THREAD NDL BOB/ LPR	
	f. Activate the cement applied in operation 5c. around the back of the pocket assemblies with an appropriate solvent. Place each pocket assembly over the template and secure pocket sides and bottom to the parka and V-stay strip in accordance with pattern marks. The top of the pocket assembly shall be left free.					
	g. Remove the template, leaving the V-stay strip in place and affix the top of the pocket assembly to the parka.		LSbj			
7.	<u>Assemble inner hood and hood adjustment strap assembly (see Figures 2 and 5).</u>					
	a. Punch holes for headset and drawcord on left and right sides of inner hood in accordance with pattern marks.					
	b. Superimpose a 2 1/4 to 2 3/8 inch piece of 1 inch wide elastic webbing over the back of a 7 to 7 1/8 inch piece of 1 inch wide pile fastener tape and stitch together 1/8 to 3/16 inch from raw edges.	301	LSq-2 (a)	8-10	B or E	B or E
	c. Turn seam allowance toward elastic webbing and topstitch 1/8 to 3/16 inch from the raw edges.	301	LSq-2 (b)	8-10	B or E	B or E
	d. Hem up free end of pile fastener tape 1/4 to 3/8 inch.	301	EFa-1	8-10	B or E	B or E
	e. Position tape assembly so that the face side of pile tape faces the hood. Fold under free end of elastic webbing 1/4 to 3/8 inch and attach to center section of inner hood in accordance with pattern marks.	301	SSb-1	8-10	B or E	B or E
	f. Attach a 1 1/2 to 1 5/8 inch length of 1 inch hook tape to center section of inner hood in accordance with pattern marks. The hook tape shall be positioned so as to form a smooth closure with free end of pile tape (operation 7e).	301	LSbj-1	8-10	B or E	B or E

MIL-P-87098

TABLE 1 - CONSTRUCTION OF PARKA

NO.	OPERATION	STCH TYPE	SEAM/ STCH TYPE	STCH IN	THREAD NDL BOB/ LPR		
	g. Cut two 2 1/2 to 2 5/8 inch by 1 1/8 to 1 1/4 inch pieces of basic material and apply cement (see 3.3.3) completely covering black side. Fold in half widthwise.		OSf				
	h. Fold under ends of strips 1/4 to 3/8 inch. Bartack strips to center section of inner hood with vertical bartacks in accordance with pattern marks, enclosing the adjusting strap.	301	EFa and Brck	21-28 stchs/ Brck	B or E	B or E	
	i. Cut pieces of basic material or bias tape (see 3.3.7) of sufficient size and cement to inside of parka to reinforce and seal each area of stitching produced by operations 7e through 7h.						
	j. Precement sections of inner hood (see 3.3.3) on the black side 5/8 to 3/4 inch along seam edges to be sewn.						
	k. Join left and right sides of inner hood to center section (green side to green side) with a 1/4 to 5/8 inch seam keeping edges even.	301	LSq-2 (a)	8-10	B or E	B or E	
	l. Turn seams and topstitch 1/8 to 3/16 inch in from the edges on center panel.	301	LSq-2 (b)	8-10	B or E	B or E	
	m. Cut pieces of strapping from basic material or bias tape (see 3.3.7) of sufficient size and cement to inside of inner hood to reinforce and seal each area of stitching produced by operations 7k through 7l.						
	NOTE: Care must be taken to center the strapping over the seams.						
8.	<u>Assemble and attach Neck tab and take up tape.</u>						
	a. Cement entire back of tab. Fold edges in half in accordance with pattern marks and roll flat. The finished dimensions on the tab shall be 5 1/8 to 5 1/4 by 3 to 3 1/8 inches.		OSf				
	b. Stitch a 2 1/4 to 2 3/8 inch length of 2 inch hook fastener tape in accordance with pattern marks, to one end of the tab around all sides, 1/16 to 1/8 inch from edges.	301	LSbj-1	8-10	B or E	B or E	

MIL-P-87098

TABLE I - CONSTRUCTION OF PARKA

NO.	OPERATION	STCH TYPE	SEAM/ STCH TYPE	STCH IN	THREAD	
					NDL	BOB/ LPR
	c. As an alternate, the hook tape may be stitched to the tab prior to cementing and folding.	301	LSbj-1	8-10	B or E	B or E
	d. Stitch neck tab to left front of inner hood through all plies in accordance with pattern marks.	301	bx stch	8-10	B or E	B or E
	e. Stitch a 2 1/4 to 2 3/8 inch piece of 2 inch hook tape to right side of inner hood in accordance with pattern marks, 1/16 to 1/8 inch from edges.	301	LSbj-1	8-10	B or E	B or E
	f. Cut pieces of strapping from basic material or bias tape (see 3.3.7) of sufficient size and cement to inside of inner hood to reinforce and seal each area of stitching produced by operations 8d through 8e.					
9. <u>Assemble outer hood.</u>						
	a. Precement sections of outer hood (see 3.3.3) on the black side 5/8 to 3/4 inch along seam edges to be sewn.					
	b. Join left and right sides of outer hood to center section (green side to green side) with a 1/4 inch seam keeping edges even.	301	LSq-2 (a)	8-10	B or E	B or E
	c. Turn seams and topstitch 1/8 to 3/16 inch in from the edge on center panel.	301	LSq-2 (b)	8-10	B or E	B or E
	d. Cut pieces of strapping from basic material or bias tape (see 3.3.7) of sufficient size and cement to inside of outer hood to reinforce and seal each area of stitching produced by operations 9b through 9c.					
	NOTE: Care must be taken to center the strapping over the seams.					
	e. Turn under front edge of outer hood 1/4 to 3/8 inch to form a hem. Stitch the length of hood, 1/16 to 1/8 inch from the edge.	301	EFa-1	8-10	B or E	B or E

MIL-P-87098

TABLE I - CONSTRUCTION OF PARKA

NO.	OPERATION	STCH TYPE	SEAM/ STCH TYPE	STCH IN	THREAD NDL BOB/ LPR	
	f. Turn under the bottom edge of outer hood to form a 5/8 to 3/4 inch hem, completely enclosing a length of elastic drawcord (see 3.3.2). The corners of the outer hood shall be folded to the inside 1/4 to 5/16 inch so that when stitched, the ends of the drawcord tunnel shall finish evenly with the hem of the outer hood. Stitch 1/16 to 1/8 inch from the edge. The drawcord shall not be caught in the stitching.	301	EFa-1	8-10	B or E	B or E
	g. The drawcord shall be of sufficient length to extend around the perimeter of the hood opening and a minimum of two inches beyond drawcord tunnel. The ends of the drawcord shall be tipped and tied off to prevent their being pulled through the drawcord tunnel.					
10.	<u>Attach outer hood to inner hood.</u>					
	a. Position outer hood over the top of inner hood and align hood fronts in accordance with pattern marks. The turned front edge of the outer hood shall be positioned 5/8 to 3/4 inch from the raw edge of inner hood. Stitch front edge of outer hood to the front of the inner hood, according to marks on pattern for stitchline, directly over stitching performed in operation 9e.	301	LSd-1	8-10	B or E	B or E
	b. Secure the left and right ends of the stitching produced in operation 10a with bartacks in accordance with pattern marks.	301	Brck	21-28 stchs/ Brck	B or E	B or E
	c. Cut pieces of strapping from basic material or bias tape (see 3.3.7) of sufficient size and cement to inside of inner hood to reinforce and seal each area of stitching produced by operations 10a and 10b.					
	NOTE: Care must be taken to center the strapping over the seam.					
11.	<u>Assemble and attach inner hood channel.</u>					
	a. Fold left and right ends of the inner hood channel 1/4 to 5/8 inch. Stitch 1/16 to 1/8 inch from edges.	301	EFa-1	8-10	B or E	B or E

MIL-P-87098

TABLE I - CONSTRUCTION OF PARKA

NO.	OPERATION	STCH TYPE	SEAM/ STCH TYPE	STCH IN	THREAD	
					NDL BOB/ LPR	
	b. Insert drawcord. Fold channel lengthwise in half and edgestitch closed to front of inner hood 1/4 inch from edge.	301	SSa-1	8-10	B or E	B or E
	c. Attach grommets (see 3.3.9) to the left and right inner hood drawcord openings (operation 7a). Insert ends of drawcord (see 3.3.2) through the backs of the grommets. The drawcord shall be of sufficient length to extend around the perimeter of the hood opening and a minimum of two inches beyond each grommet. The ends of the drawcord shall be tipped and tied off to prevent their being pulled through the grommet eyes.					
12.	<u>Join Seams and attach hood assembly.</u>					
	a. Seams shall be cemented in the following manner (see Figure 4 and 3.6.3).					
	1. Apply cement over a 3/4 to 7/8 inch width along each surface to be joined. Cement may be allowed to dry and be dusted and reactivated with an appropriate solvent before the seam is joined.					
	2. Cemented face and back surfaces shall be joined by overlapping in the specified direction 1/2 to 3/4 inch. The cemented areas shall extend 1/8 to 3/8 inch beyond the lapped edge of the seam on both the front and back of the garment.					
	3. Roll seam flat. There shall be no puckers, pleats or areas of poor adhesion.					
	b. Join front sleeve to parka front, from neckline to underarm, lapping sleeve over parka front on both left and right sides.				LSa	
	c. Join front sleeve to parka back from neckline to bottom of sleeve, lapping front over back on both left and right sides.				LSa	

MIL-P-87098

TABLE I - CONSTRUCTION OF PARKA

NO.	OPERATION	STCH TYPE	SEAM/ STCH TYPE	STCH IN	THREAD	
					NDL	BOB/ LPR
	d. Join underarm and side seams from bottom of sleeve to bottom of parka, lapping front over back on both left and right sides.		LSa			
	e. Join center back seam from neckline to bottom of parka, lapping left over right.		LSa			
	f. Attach hood assembly to parka by applying a 5/8 to 3/4 inch cement line to neckline of parka and placing inner hood on top of neckline (center portion of inner hood to line up with center back of parka) and closing the seam from back of parka, left front edge to right front edge.		LSa			
13.	<u>Front opening assembly (see Figure 4).</u>					
	a. Apply cement to backs of left and right moisture barriers. Fold each in half lengthwise. Roll flat to ensure a secure bond.		OSf			
	b. Position a 1 to 1 1/8 inch piece of 1 inch hook fastener tape to right moisture barrier and a 1 to 1 1/8 inch piece of 1 inch pile fastener tape to left moisture barrier. Tapes shall be 3/8 to 1/2 inch from the top raw edges of barriers and even with the front edges of barriers. Stitch around all sides, 1/16 to 1/8 inch from edges.	301	LSbj-1	8-10	B or E	B or E
	or					
	c. As an alternate, the fastener tapes may be stitched to the moisture barriers prior to cementing and folding.	301	LSbj-1	8-10	B or E	B or E

MIL-P-87098

TABLE I - CONSTRUCTION OF PARKA

NO.	OPERATION	STCH TYPE	SEAM/ STCH TYPE	STCH IN	THREAD	
					NDL	BOB/ LPR
	d. Fold moisture barrier spacer in half lengthwise. Insert spacer between right moisture barrier and back side of right slide fastener tape. The side raw edges of the spacer, the right moisture barrier and slide fastener tape shall be aligned evenly. The top tooth of the slide fastener chain shall finish $1 \frac{7}{8}$ (+ $\frac{1}{8}$) inches from the top raw edge of the right moisture barrier and shall be aligned evenly with the top tooth of the left slide fastener chain. The top edge of slide fastener tape shall finish 1 to $1 \frac{1}{8}$ inches below the top raw edges of the moisture barrier spacer and right moisture barrier. Stitch along the length of the moisture barrier, through all plies, $\frac{3}{16}$ (+ $\frac{1}{16}$) inch from the raw edges.	301	SSa-1	8-10	B or E	B or E
	e. Position right slide fastener assembly face to face against right parka front, aligning raw edges down the front and at the neck edge. Stitch along the length of the slide fastener assembly and parka front, through all plies, $\frac{1}{4}$ to $\frac{3}{8}$ inch from raw edges, adjacent to stitching performed in 13d.	301	SSa-1	8-10	B or E	B or E
	f. Position back side of slide fastener onto left moisture barrier. The side raw edges of the left moisture barrier and slide fastener tape shall be aligned evenly. The top tooth of the slide fastener chain shall finish $1 \frac{7}{8}$ (+ $\frac{1}{8}$) inches from the top raw edge of the left moisture barrier and shall be aligned evenly with the top tooth of the right slide fastener chain. The top edge of slide fastener tape shall finish 1 to $1 \frac{1}{8}$ inches below the top raw edge of the left moisture barrier. Stitch along the length of the moisture barrier, through all plies, $\frac{3}{16}$ (+ $\frac{1}{16}$) inch from raw edges.	301	SSa-1	8-10	B or E	B or E

MIL-P-87098

TABLE I - CONSTRUCTION OF PARKA

NO.	OPERATION	STCH TYPE	SEAM/ STCH TYPE	STCH IN	THREAD	
					NDL	BOB/ LPR
	g. Position left slide fastener assembly face to face against left parka front, aligning raw edges down the front and at the neck edge. Stitch along the length of the slide fastener assembly and parka front, through all plies, 5/16 (+ 1/16) inch from raw edges, adjacent to stitching performed in 13f.	301	SSa-1	8-10	B or E	B or E
	h. Apply cement along the back edges of the left and right parka fronts from the inner hood neck edge to the welt edge in 1 7/8 to 2 inch wide strips. Fold fronts inward along center front forming a 7/8 to 1 inch hem so that each folded edge is aligned with the outer edges of the slide fastener chain. The folded edges shall continue to the bottom of the parka. The front edges shall finish smooth and be securely bonded along the folds.		EFa			
	i. Insert a thong (see 3.3.8) through each free end of tab pulls.					
14.	<u>Bind front edge of inner hood.</u>					
	a. With a 7/8 to 1 inch wide piece of bias cut self material, bind front edge of the inner hood from edge to edge catching drawcord tunnel. The ends of the moisture barrier flaps shall be caught in the stitching. The binding shall extend 1/2 to 5/8 inch beyond the ends of moisture barrier flaps.	301	BSc-1	8-10	B or E	B or E
	b. Fold ends of binding inward the length of the overlap specified in operation 14a, against backs of left and right moisture barriers and secure with horizontal bartacks.	301	Brck	21-28 stchs/ Brck	B or E	B or E
	NOTE: Bartacks shall not extend into the hook and pile tape closures on the moisture barriers.					
15.	<u>Hem sleeves.</u>					
	a. Apply cement from edge of each sleeve bottom 1 1/4 to 1 1/2 inches on the inside of parka.					
	b. Fold under sleeve bottom 1/2 to 3/4 inch to form hem. Roll flat to ensure adhesion.		EFa			

or

MIL-P-87098

TABLE I - CONSTRUCTION OF PARKA

NO.	OPERATION	STCH TYPE	SEAM/ STCH TYPE	STCH IN	THREAD	
					NDL	BOB/ LPR
	c. As an alternate, hems may be folded under 1/2 to 3/4 inch and stitched 1/8 to 1/4 inch from the raw edge.	301	EFa-1	8-10	B or E	B or E
16.	<u>Hem parka.</u>					
	a. Elastic for the back of the parka (see 3.3.6) shall be cut in the following lengths (+ 1 inch tolerance):					
	XXS - 6 inches M - 10 inches					
	XS - 7 inches L - 12 inches					
	S - 8 inches XL - 14 inches					
	b. Secure the ends of a length of 3/4 inch wide elastic webbing to each side seam on the inside of the parka with vertical bartacks or straight stitching backstitched over itself across the width of elastic. Ends of the elastic shall finish with the lower edges 1/8 to 1/4 inch from and parallel to the bottom edge of the parka.	301	Bartack or	21-28 Stchs per Bartack	B or E	B or E
		301	SSb-1	8-10	B or E	B or E
	c. Turn under a 1 to 1 1/4 inch hem and stitch around the entire bottom of the parka, 1/8 to 1/4 inch from the edge enclosing elastic in the hem and partially enclosing ends of left and right moisture barriers. Elastic shall not be caught in the hem stitching.	301	EFa-1	8-10	B or E	B or E
	d. The snap fasteners (see 3.3.10) for the bottom closure shall be positioned and attached as shown in figure 3. The snap, attached through the right moisture barrier shall fasten onto the socket (male portion), positioned in the left moisture barrier when closure is desired. The button portion shall finish on the outside of the parka.					
17.	<u>Label.</u> (see 3.3.11) Cement the combination identification - size - instruction label or print label inscription directly on inside of the parka, centered across the center back seam and 1 to 1 1/8 inches below the hood to parka joining seam on the right back panel.		LSbj			

MIL-P-87098

TABLE I - CONSTRUCTION OF PARKA

NO.	OPERATION	STCH TYPE	SEAM/ STCH TYPE	STCH IN	THREAD	
					NDL BOB/ LPR	
18.	<u>Vulcanization.</u> (see 3.6.5) The assembled parka shall be fully heat cured for the appropriate length of time at the recommended temperature to produce a properly vulcanized garment.					
19.	<u>Cleaning.</u> a. Trim all thread ends to less than 1/2 inch. b. Clean all removable spots, stains, dusting medium, and shade and size markings on outside of parka, taking care not to damage coating in the process.					

MIL-P-87098

3.8 Measurements. The finished parka shall conform to the dimensions as specified in Table II. All measurements and tolerances are expressed in inches and shall be taken with the parka laid smooth and flat and the slide fastener closed.

Table II - Finished measurements

Measurement	Size						Tolerance
	XX Small (26-28)	X Small (30-32)	Small (34-36)	Medium (38-40)	Large (42-44)	X Large (46-48)	
Chest (A)	42	46	50	54	58	62	$\pm 1\ 1/2$
Sleeve (B)	18 1/4	18 3/4	19 1/4	19 3/4	20 1/4	20 3/4	$\pm 1/2$
Length (C)	28 7/8	29 1/2	30 1/8	30 3/4	31 3/8	32	$\pm 1/2$

NOTE: A, B, and C refer to Figure 1.

- A. Twice the measurement taken across the front at sleeve seam from folded edge to folded edge.
- B. Measurement shall be taken along underarm seam to bottom of hemmed sleeve.
- C. Measurement shall be taken from base of hood along center back seam, to the bottom hemmed edge of parka.

3.9 End item performance testing. The vulcanized cemented seams shall conform to the requirements specified in Table III when tested as specified in 4.5. The requirements specified do not refer to stitched or strapped seams.

Table III - Requirements for cemented seams in end item

Characteristic	Requirement	
	Average (min.)	Individual (min.)
Seam strength, lbs	150	100
Seam adhesion, lbs/1 inch width	5.0	4.0
Hydrostatic resistance, lbs/sq inch		
Initial	100	50
After 1 dry cleaning	80	50
After 3 launderings (cotton)	80	50

3.10 Coating repairs on parka.

3.10.1 Black coated side (inside). Pinholes and uncoated areas of any type shall be repaired either before or after curing the assembled parkas with the black coating compound specified in 3.3.1. When parkas are repaired after curing, the repair compound shall be formulated to cure at room temperature. The size of the inside repair shall not exceed 3/4 inch in length or width. The number of repairs allowed per parka on the black coated side shall not exceed four. The repairable area shall be coated with a minimum of two coats of the repair compound. The first coat shall completely wet out the defective area and shall be thoroughly worked into the surface. The second coat shall be

MIL-P-87098

spread on smoothly and evenly over the first coating. After the compound is dry, the repaired area shall be lightly dusted with the dusting powder specified in 3.3.12. When fully cured, there shall be no lifting of the edges, cracking, flaking, or removal of the repair compound from the inside repaired area when subjected to a flexing action between the hands.

3.10.2 Green coated side (outside). Any area where the nylon base fabric is exposed shall be touched up (hidden) before or after curing with a suitably thinned solution of the green coating compound specified in 3.3.1. When parkas are repaired after vulcanization, the touch-up solution shall be formulated to cure at room temperature. The size of the repair shall not exceed 3/4 inch in length or width. Only the minimum amount of solution necessary to hide the uncoated area shall be applied. The number of repairs allowed per parka on the green coated side shall not exceed two. The color of the repaired areas shall be a good match to the surrounding coating.

3.11 Workmanship. The finished parkas shall conform to the quality established by this specification. 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, the contractor is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract or order, the contractor may use his own or any other facilities suitable for performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to 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 specification shall become a 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 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 Certificate of compliance. Where certificates of compliance are submitted, the Government reserves the right to check test such items to determine the validity of the certification.

4.2 Classification of inspection. The inspection requirements specified herein are classified as follows:

1. First article inspection (see 4.3).
2. Quality conformance inspection (see 4.4).

4.3 First article inspection. When required, the first article submitted in accordance with 3.2 and 4.3 shall be inspected as specified for compliance

MIL-P-87098

with design, construction, workmanship, and dimensional requirements.

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

4.4.1 Component and material inspection. In accordance with 4.1 above, components and materials shall be tested in accordance with all the requirements of referenced specifications, drawings, and standards unless otherwise excluded, amended, modified, or qualified in this specification or applicable procurement documents. A certificate of compliance shall be furnished for the chloroprene cement coating requirements of 3.3.1, the material identification of the chloroprene cement (see 3.3.3), the reclaimed rubber requirement of 3.3.3, the bias tape weight requirements of 3.3.7, the dusting medium characteristics specified in 3.3.12, the mildew resistant treatment of the cotton slide fastener tape (see 3.3.8) and that the slide fastener components specified in 3.3.8 are furnished by the same supplier. In addition, components and materials listed in Table IV shall be tested for the characteristics specified and in accordance with FED-STD-191 whenever applicable. All test reports shall contain the individual values utilized in expressing the final result. For the cloth, coated, nylon twill (vulcanized), the lot size shall be expressed in yards and the sample size shall be 3 continuous yards full width. The sample size shall be as follows:

<u>Lot size (yards)</u>	<u>Sample size</u>
800 or less	2
801 up to and including 22,000	3
22,001 and over	5

The lot shall be unacceptable if one or more units fail to meet any requirement specified.

Table IV - Instructions for component testing

<u>Component</u>	<u>Characteristics</u>	<u>Requirement paragraph</u>	<u>Test Method</u>
Cloth, coated, nylon twill (vulcanized)	Blocking	3.3.1	1/
	Breaking strength	3.3.1	1/
	Weight	3.3.1	1/
	Tear strength	3.3.1	1/
	Hydrostatic resistance	3.3.1	1/
	Flex stiffness	3.3.1	1/
	Adhesion of coating	3.3.1	1/
	Resistance to heat	3.3.1	1/
Cement, chloroprene	Seam adhesion	3.3.3	5960 2/

1/ Three yards of unvulcanized cloth shall be cured under conditions used on the end item and shall be tested to meet the requirements specified in paragraph 3.3.3.4 of MIL-C-19759 for Type II vulcanized cloth.

2/ Cemented seam specimens shall be prepared in accordance with 3.6.3 and Table I, operation 12a., except that the seam shall overlap 1-1/4 inches.

MIL-P-87098

After vulcanization, a 1 inch wide by 6 inch long strip shall be marked and cut from the overlapped seam in the length direction.

4.4.2 Examination of the end item. Examination of the end item shall be in accordance with 4.4.2.1 and 4.4.2.2. The applicable inspection levels and acceptable quality levels (AQL's) shall be as indicated in 4.4.2.3. The sample unit shall be one finished parka. The lot size shall be expressed in units of parkas.

4.4.2.1 Visual examination. The parka shall be examined for defects classified in accordance with the list below.

Defect	Classification	
	Major	Minor

I Material Defect(s) or Damage(s)

A. Cloth, coated, nylon

- | | | |
|--|---|---|
| 1. Any hole, cut, tear, pinhole, uncovered drillhole, blister or burn | X | |
| 2. Any lump or imbedded foreign matter | X | |
| 3. Any weak or thin area | X | |
| 4. Permanent crease or wrinkle | X | |
| 5. Any pickoff or uncoated area | X | |
| 6. Any tackiness | X | |
| 7. Coating soft, i.e., not fully cured | X | |
| 8. Any brittle area, i.e., coating cracks when bent | X | |
| 9. Abraded or scuffed, resulting in a weak place or coating removal | X | |
| 10. Any patched or stitched mend | X | |
| 11. Any objectionable odor other than that which is characteristic of the coating compound | | X |

II Cleanness

- | | | |
|---|---|---|
| 1. Any permanent spot, stain (except solvent), streak, or assembly marking on any outside portion of the parka which would be visible when worn | | |
| - Up to 1/2 inch inclusive in diameter or length | | X |
| - More than 1/2 inch in diameter or length | X | |
| 2. Any size, permanent spot, stain (except solvent), streak, or assembly marking not visible on outside when parka is worn. | | X |
| 3. Two or more removable spots, stains, streaks or assembly markings on outside of parka. | | X |
| 4. Six or more thread ends not trimmed to less than 1/2 inch | | X |
| 5. Cement on any area other than where specified | | X |
| 6. Excessive dusting powder distributed over outside | | X |

MIL-P-87098

Defect	Classification	
	Major	Minor
7. Excessive solvent staining on outside		X
<u>III Components and Assembly (unless otherwise classified)</u>		
1. Any component part omitted, misplaced, damaged, or otherwise defective	X	
2. Any required operation omitted	X	
3. Any required operation not as specified		X
4. Any component part not as specified, (type, size, color, etc.)	X	
<u>IV Cutting</u>		
- Any part not cut in accordance with patterns, directional lines indicated on patterns or not in accordance with specification requirements	X	
<u>V Shaded part(s)</u>		
- Variation in shade within or between outside parts (except parts which may be cut from ends)		X
<u>VI Repaired area(s)</u>		
1. Repair compound on coated fabric cracks, i.e., lifts off or flakes when coated fabric is flexed between the hands	X	
2. Repair compound not smoothly or evenly applied		X
3. Repair compound does not cover defective area		X
4. Repaired area not dusted		X
5. Size of repair more than 3/4 inch in length or width		X
6. Repaired areas number more than four (4) on black side or more than two (2) on green side		X
7. Color of repaired area on green side not good color match		X
<u>VII Seams and Stitchings</u>		
<u>A. General</u>		
1. Any seam twisted, puckered, or pleated	X	
2. Any part of garment caught in an unrelated cementing or stitching operation	X	
<u>B. Cemented seams, patches, and strapping</u>		
1. Poorly rolled forming:		
a. An open tunnel		

MIL-P-87098

Defect	Classification	
	Major	Minor
(1) Extending up to 1/2 the width of the seam, patch, or strapping		X
(2) Extending for more than 1/2 the width of seam, patch, or strapping	X	
b. A permanent pucker, wrinkle, fold, or closed tunnel		X
2. Seam overlapped less than 1/2 inch or more than 3/4 inch		X
3. Direction of seam lap other than specified		X
4. Any loose or unaffixed edge (except reinforcement patches) with a:		
a. Length:		
(1) Up to 1/4 inch inclusive		X
(2) More than 1/4 inch	X	
b. Depth:		
(1) Up to 1/8 inch inclusive		X
(2) More than 1/8 inch	X	
5. Dusting powder omitted or improperly applied causing adhesion between two surfaces	X	
6. Visible cement line more than 3/8 inch in width for more than 1/2 the length of seam		X
7. Excessive cement resulting in adhesion of surfaces that were not required to be cemented	X	
8. Reinforcement patch edge loose or unaffixed by more than 1/4 inch		X
9. No visible cement line along more than 1/2 the length of the seam or patch		X
10. Seam not strapped as specified	X	
11. Bias tape strapping containing more than two seams		X
12. Basic fabric strapping spliced or seamed		X
C. <u>Stitched seams</u>		
1. Stitching margin not as specified		X
2. Ends not securely tacked		X
3. Any open seam (see note)		
a. 1/4 to 1/2 inch inclusive		X
b. more than 1/2 inch	X	

NOTE: One or more broken stitches or two or more continuous skipped or runoff stitches constitute an open seam.

MIL-P-87098

Defect	Classification	
	Major	Minor
4. Loose tension resulting in a loosely secured seam		X
5. Tight tension (stitches break when normal strain is applied in the direction of the seam or stitching)	X	
D. <u>Stitches per inch</u> (score only when condition exists on more than 1/2 the length of seam)		
1. One stitch less than the minimum or any number in excess of the maximum specified		X
2. Two or more stitches less than the minimum specified	X	
E. <u>Seam and stitch types</u>		
1. Not as specified	X	
2. Any line of stitching not beginning or not ending where specified		X
3. Any required line of stitching omitted	X	
F. <u>Bartack(s)</u>		
1. Missing or misplaced; not serving intended purpose	X	
2. Not size specified		X
3. Insecure or loose stitch tension		X
4. Not containing the required number of stitches		X

VIII Hems

1. Puckered, twisted, or pleated		X
2. Irregular in width by 1/4 inch or more		X
3. Width of sleeve hem less than 1/2 inch	X	
4. Width of sleeve hem more than 3/4 inch		X
5. Width of bottom hem less than 1 inch	X	
6. Width of bottom hem more than 1 1/4 inches		X
7. Elastic in back hem not positioned as specified	X	
8. Elastic caught in hem stitching		X
9. Fronts distorted, not abutted or bottoms uneven by more than 1/2 inch when bottom snap is fastened		X
10. Snap fastener assembly not as specified		X
11. Center front hems less than 3/4 inch	X	
12. Center front hems more than 1 inch		X

IX Sleeve tab(s) and take-up tape assemblies

1. Any part omitted or insecurely attached	X	
2. Any part misplaced or distorted:		

MIL-P-87098

Defect	Classification	
	Major	Minor
a. Not serving intended purpose	X	
b. Serving intended purpose		X
3. Sleeve tab or take-up tape assembly with a loose or unaffixed edge:		
a. Up to 1/4 inch inclusive in length or depth		X
b. More than 1/4 inch in length or depth	X	
X Pockets		
1. Set on crookedly or poorly shaped	X	
2. V-stay strip omitted or misplaced	X	
3. Bias tape V-stay strip (when applicable) contains more than two seams		X
4. Basic cloth V-stay strip (when applicable) spliced or seamed		X
5. Incorrect size, design or configuration		X
6. Irregular in width by 1/4 inch or more		X
XI Hood.		
a. <u>Outer hood.</u>		
1. Bottom hem less than 5/8 inch or more than 3/4 inch		X
2. Front hem less than 1/4 inch or more than 3/8 inch		X
3. Not attached to inner hood as specified	X	
b. <u>Inner hood.</u>		
1. Front edge binding omitted or insecurely attached	X	
2. Neck tab misplaced or distorted		
a. Not serving intended purpose	X	
b. Serving intended purpose		X
3. One or both sets of headset holes missing	X	
4. Adjustment strap omitted or insecurely attached	X	
5. Adjustment strap misplaced or distorted:		
a. Not serving intended purpose	X	
b. Serving intended purpose		X
6. Self material strips: one or more missing, misplaced or distorted	X	

MIL-P-87098

Defect	Classification	
	Major	Minor
9. Inner hood not attached to parka as specified	X	
XII. <u>Fronts.</u>		
1. Closed fronts uneven at top or bottom by 1/2 inch or more		X
XIII. <u>Hood drawcord.</u>		
1. Omitted	X	
2. Other than type specified	X	
3. Length not as specified	X	
4. Not knotted, or knot too small to prevent cord from slipping through grommet eye or end of tunnel		X
5. Not tipped at end		X
6. Caught in hem stitching, or otherwise non functional	X	
XIV. <u>Slide fastener assembly.</u>		
1. Stitching too close to chain, not permitting slider to pass freely	X	
2. Any part broken, bent or otherwise damaged or nonfunctional	X	
3. Length of slide fastener not as specified		X
4. Thong omitted or not as specified		X
5. Top of slide fastener less than 1 3/4 inches or more than 2 inches below top raw edge of moisture barrier flaps		X
6. Top teeth of left and right slide fastener chains out of alignment	X	
7. Tape or moisture barrier flaps set on too loose or too tight causing waviness, twisting or fullness when fastened		X
8. Top of slide fastener tape less than 7/8 inch or more than 1 1/8 inches from top raw edge of moisture barrier flaps		X
9. Top edge of moisture barrier flaps not even with neck edge of parka		X
10. Moisture barrier flaps positioned improperly: slide fastener will not function properly	X	
XV. <u>Eyelets, Grommets and Hooks.</u>		
1. Any omitted	X	
2. Any misplaced, not positioned or attached as specified		X
3. Finish omitted or not type specified		X

MIL-P-87098

Defect	Classification	
	Major	Minor
4. Any broken or malformed	X	
5. Any having a sharp or rough edge		X
6. Clinched		
a. Tightly, damaging or cutting adjacent material	X	
b. Loosely, permitting any component to rotate freely, but not to the degree that any component can be expected to become detached during use		X
c. Loosely, to the degree that any component can be expected to become detached during use	X	
XVI. <u>Label.</u>		
1. Missing, incorrect, or illegible	X	
2. Misplaced		X
3. Not securely cemented (when applicable)		X
XVII <u>Fastener Tape(s) (hook and pile)</u>		
1. Omitted	X	
2. Misplaced or not positioned as specified, i.e., not serving intended purpose	X	
3. Type, color or width not as specified		X
4. Stitched too close or too tight causing noticeable puckering or twist on outside	X	

4.4.2.2 Dimensional examination. The parka shall be examined for defects in dimensions in accordance with the following:

a. Any measurement deviating from nominal dimensions and tolerances as specified in Table II, shall be scored as a size measurement defect.

b. Sleeve lengths unequal in length by 1/2 inch or more, shall be scored as a size measurement defect.

4.4.2.3 Inspection levels and acceptable quality levels (AQL's). The inspection levels and the acceptable quality levels, expressed in defects per 100 units for visual and dimensional examination, shall be as follows:

	Inspection level	AQL's	
		Major	Total
For defects applicable to 4.4.2.1	II	2.5	15.0
For defects applicable to 4.4.2.2	S-3	-	4.0

4.4.3 Examination of packaging requirements. An examination shall be made to determine that packaging, packing, and marking complies with the Section 5

MIL-P-87098

requirements of this specification. Defects shall be scored in accordance with the list below. The sample unit shall be one shipping container fully prepared for delivery except that it need not be closed. Defects of closure listed below shall be examined on shipping containers fully prepared for delivery. The lot size shall be the number of shipping containers in the end item inspection lot. The inspection level shall be S-2 and the AQL shall be 2.5 defects per 100 units.

<u>Examine</u>	<u>Defects</u>
Marking (exterior and interior)	Omitted, incorrect, illegible, of improper size location, sequence or method of application
Materials	Any component missing, damaged, or not as specified
Workmanship	Inadequate application of components, such as incomplete closure of container flaps, improper taping, loose strapping, inadequate stapling, bulging or distortion of container, open and noncontinuous heat sealed seams of polyethylene bag, or incorrectly fabricated bag.
Content	Number of items per shipping container is more or less than required. Size shown on one or more items not as specified on shipping container. <u>1/</u>

1/ For this defect, one item from each shipping container in the sample shall be examined.

4.5 Testing of the end item. The methods of testing specified in FED-STD-191 whenever applicable and as listed in Table V, shall be followed. Tests shall be conducted on cemented seams cut from three finished parkas randomly selected for each assembled shipping lot. Failure of any of the specimens tested to meet either the individual or average test requirements shall be cause for rejection of the lot. Test reports shall contain the individual test values.

Table V - End item testing of cemented seams

Characteristic	Requirement paragraph	Test method	Number of tests per garment
Seam strength, initial	3.9	5100 <u>1/</u>	4
Seam adhesion, initial	3.9	5960 <u>2/</u>	3
Hydrostatic			
Initial	3.9	5512 <u>3/</u>	2
After 1 dry cleaning	3.9	5508 & 5512 <u>3/</u>	2
After 3 launderings (cotton)	3.9	5556 & 5512 <u>3/</u>	2

1/ A 4X6 inch test specimen shall be cut from a side, shoulder, sleeve and neck seam. The seam shall be centered equidistant from the clamps at right angles to the direction of the load application.

MIL-P-87098

- 2/ The result shall be calculated to the nearest 0.1 pound per inch by dividing the actual width of the seam tested into the actual test result recorded in pounds.
- 3/ Water pressure shall be applied to the lightly coated (green) side, with the seam centered directly over the opening of clamp.

4.6 Palletization examination. An examination shall be made to determine that the palletization complies with the section 5 requirements. Defects shall be scored in accordance with the list below. The sample unit shall be one palletized unit load fully packaged. The lot size shall be the number of palletized unit loads in the end item inspection lot. The inspection level shall be S-1 and the AQL, expressed in terms of defects per hundred units shall be 6.5 in accordance with MIL-STD-105.

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

5. PACKAGING

5.1 Preservation-packaging. Preservation-packaging shall be level A or C as specified (see 6.2).

5.1.1 Level A. Each parka, folded as specified below, shall be inserted into a clear polyethylene film bag of 0.0015 inch thickness (+ 25 percent tolerance). The bag shall be formed with heat sealed seams that are straight, continuous and parallel to each other and the formed edges of the bag. The bag may be fabricated from polyethylene film tubing or sheeting. The final closure of the bag shall be heat sealed, with the heat seal made as close as possible to the open end. A 1/4 inch diameter hole shall be made at one corner of the bag to allow excess air to escape. Alternatively, the final closure of the polyethylene bag may be accomplished by means of a tuck or reverse flap.

Method of folding:

- (1) Close slide fastener, neck tab and snap fastener.
- (2) Lay parka flat, face-side down and fold body in thirds lengthwise to a width of approximately 11 inches.
- (3) Fold the bottom of the parka up to meet the base of the inner hood.
- (4) Superimpose outer hood over inner hood. Fold the hood assembly down

MIL-P-87098

smooth and flat so that its width approximates 11 inches.

Each folded parka shall measure approximately 11 by 15 inches.

5.1.2 Level C. Parkas shall be preserved packaged to afford adequate protection against physical damage during shipment from the supply source to the first receiving activity. The contractor may use his standard practice when it meets this requirement.

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

5.2.1 Level A. Twenty (20) parkas, of one size only and packaged as specified in 5.1, shall be packed in a fiberboard shipping container conforming to Type CF, Class Weather-Resistant, Variety DW, Grade VI5c, Size 3A, of MIL-B-17757. The fiberboard for the box liner shall conform to Type CF, Class Domestic of MIL-B-17757. Level A packages shall be packed flat in two (2) tiers of ten (10) each, with each package reversed end to end and the length of the package parallel to the end panels of the container. Each container shall have the contents completely covered on the top and bottom with a sheet of commercial grade kraft paper. Toward the end of the contract, or when there are less than the required amount per container of the same size, mixed sizes may be packed within the same shipping container.

5.2.2 Level B. Twenty (20) parkas, of one size only and packaged as specified in 5.1, shall be packed in a fiberboard shipping container conforming to Type CF, Class Domestic, Variety DW, Grade 275, Size 3A, of MIL-B-17757. The fiberboard for the box liner shall conform to Type CF, Class Domestic, of MIL-B-17757. Level A packages shall be packed flat in two (2) tiers of ten (10) each, with each package reversed end to end and the length of the package parallel to the end panels of the container. Each container shall have the contents completely covered on the top and bottom with a sheet of commercial grade kraft paper. Toward the end of the contract, or when there are less than the required amount per container of the same size, mixed sizes may be packed within the same shipping container.

5.2.3 Level C. Item, packaged as specified in 5.1, shall be packed in a manner to insure carrier acceptance and safe delivery at destination at the lowest transportation rate for such supplies. Containers shall be in accordance with the U.S. Postal Service Manual, Uniform Freight Classification Rules, or National Motor Freight Classification Rules, as applicable.

5.2.4 Palletization. When specified (see 6.2) item, packed as specified shall be palletized on a 4-way entry pallet in accordance with load type Ia of MIL-STD-147. Each prepared load shall be bonded with primary and secondary straps in accordance with the bonding means C, K, and L or O or P. Pallet patterns shall be in accordance with the appendix of MIL-STD-147.

The pallet shall be 4-way, Type IV; Type V, Class 1, Size 2; or Type VIII, fabricated from wood groups I, II, III, or IV, Grade A of NN-P-71, or 4-way, Style 1, Size A, Type I, Class 1 fabricated from wood groups specified, of MIL-P-15011. Interlocking of loads shall be effected by reversing the pattern of each course. If the container is of a size which does not conform to any of the patterns specified in MIL-STD-147, the pallet pattern used shall first

MIL-P-87098

be approved by the contracting officer.

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

5.3.1 Polyethylene bagged packages. Polyethylene bagged packages shall have the following 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.

PARKA, WET WEATHER:

STOCK NO:

SIZE:

QUANTITY:

5.3.2 Labels, mixed sizes. Each shipping container, packed with mixed sizes, shall have securely attached to the end and side directly under the printing or stenciling, a white paper label 4 by 5 inches with the words "MIXED NSNS" plainly printed or stamped thereon and under these words shall be legibly printed or stamped the correct quantity and National Stock Numbers contained therein.

6. NOTES

6.1 Intended use. The waterproof parkas are intended for use in conjunction with the wet weather trousers, for protection of military personnel working in wet or wet/cold conditions.

6.2 Ordering data. Procurement documents should specify the following:

- a. Title, number, and date of this specification
- b. Sizes required (see 1.2)
- c. When first article inspection is required, (see 3.2) the item will be tested and should be a first article sample. The contracting officer should include specific instructions in acquisition documents regarding arrangement for examinations, quantity, and testing and approval.
- d. Selection of applicable levels of packaging and packing (see 5.1 and 5.2).
- e. When palletization is required (see 5.2.4).

6.3 Samples. For access to samples, address the procuring office issuing the invitation for bids.

6.4 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.

6.5 Subject term (key word) listing.

Clothing, wet/cold weather

Raingear

Seams, cemented and vulcanized

Style, jacket

Hooded

Waterproof

MIL-P-87098

Custodian:
Navy - NU

Preparing Activity:
Navy - NU

Review Activity:
DLA - CT

Project No. 8405-0025

User activities:
Navy - YD, CG

MIL-P-87098

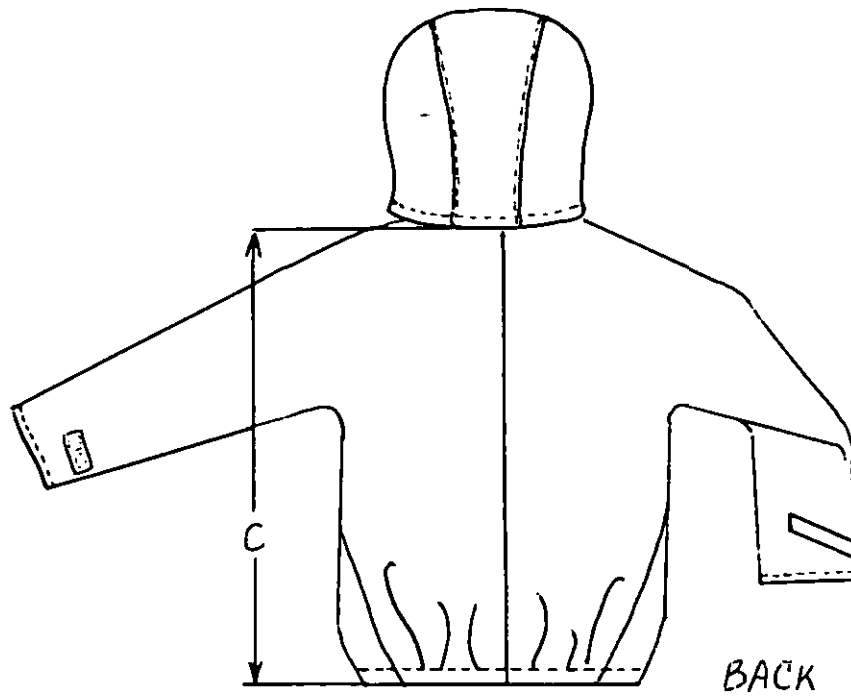
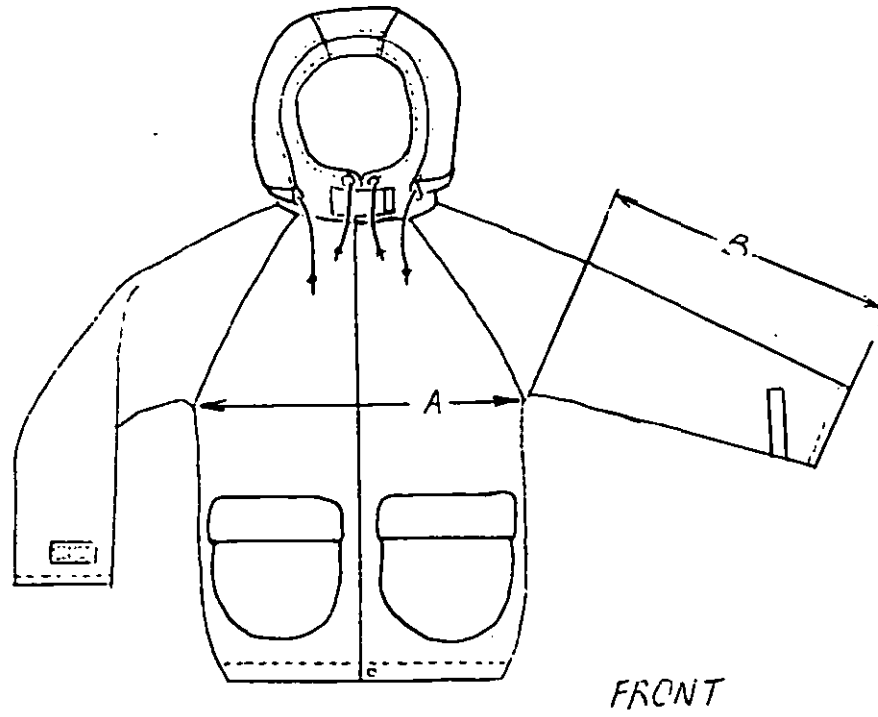
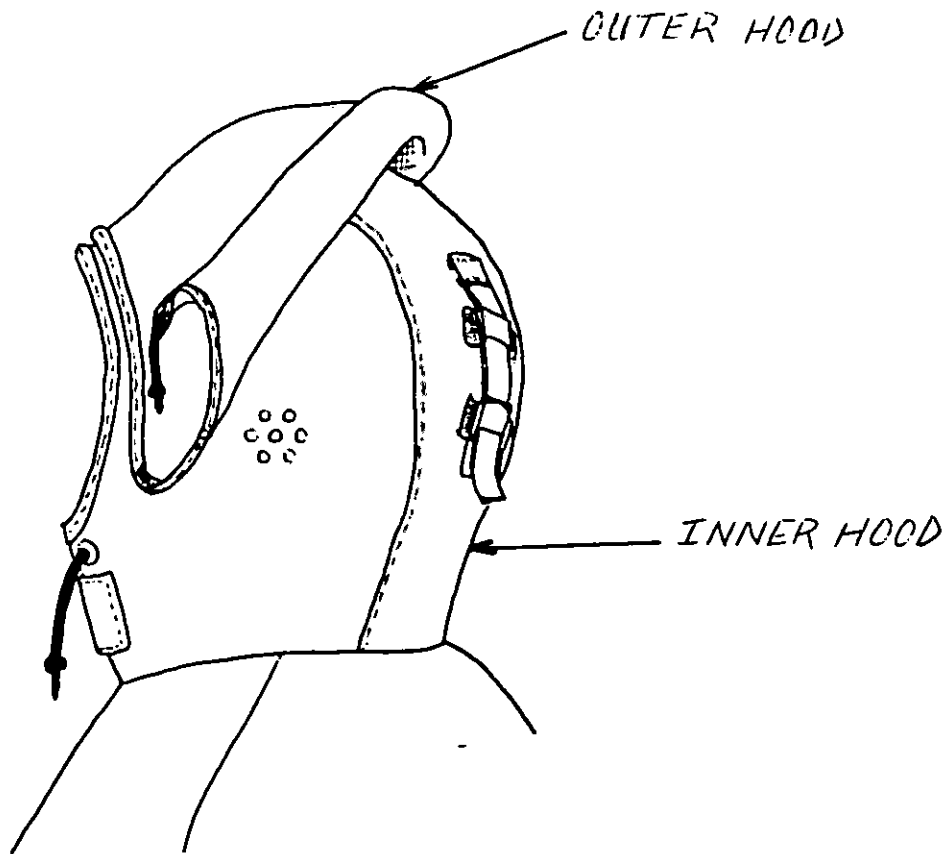


Figure 1 - Parka, Wet Weather

MIL-P-87098



HOOD ASSEMBLY

Figure 2 - Parka, Wet Weather

MIL-P-87098

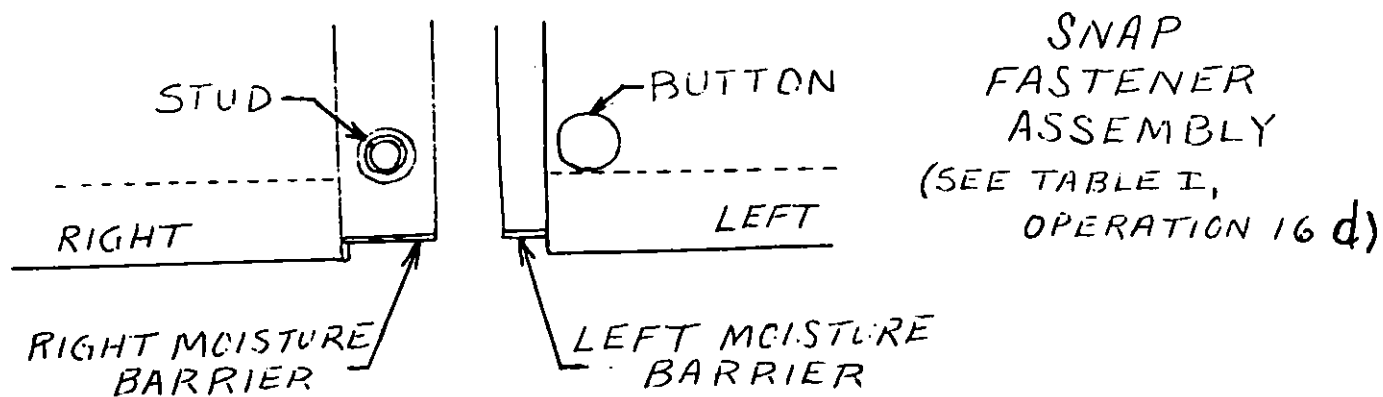
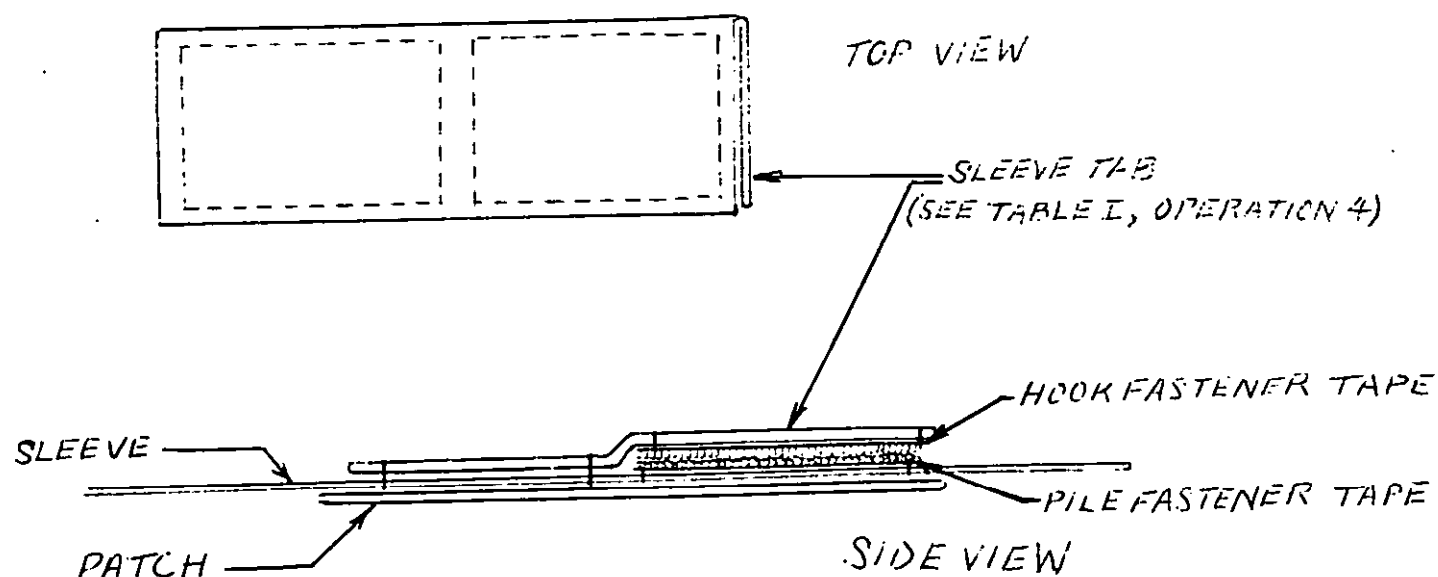
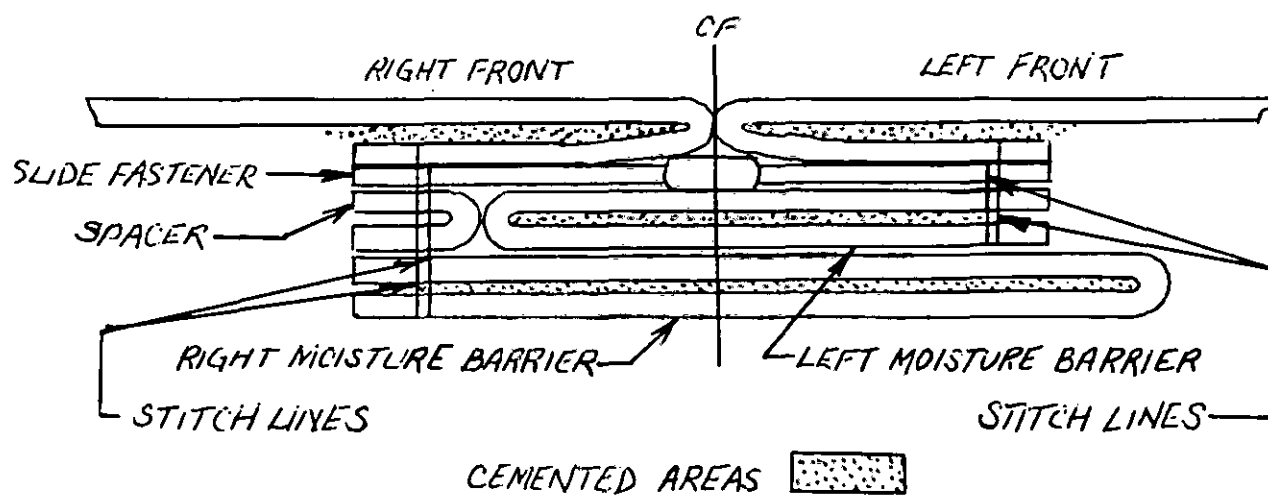
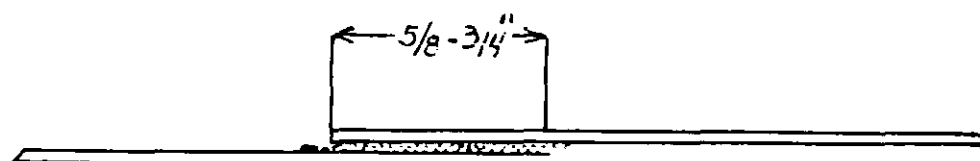


Figure 3 - Parka, Wet Weather

MIL-P-87098



FRONT OPENING ASSEMBLY
(SEE TABLE I, OPERATION 13)

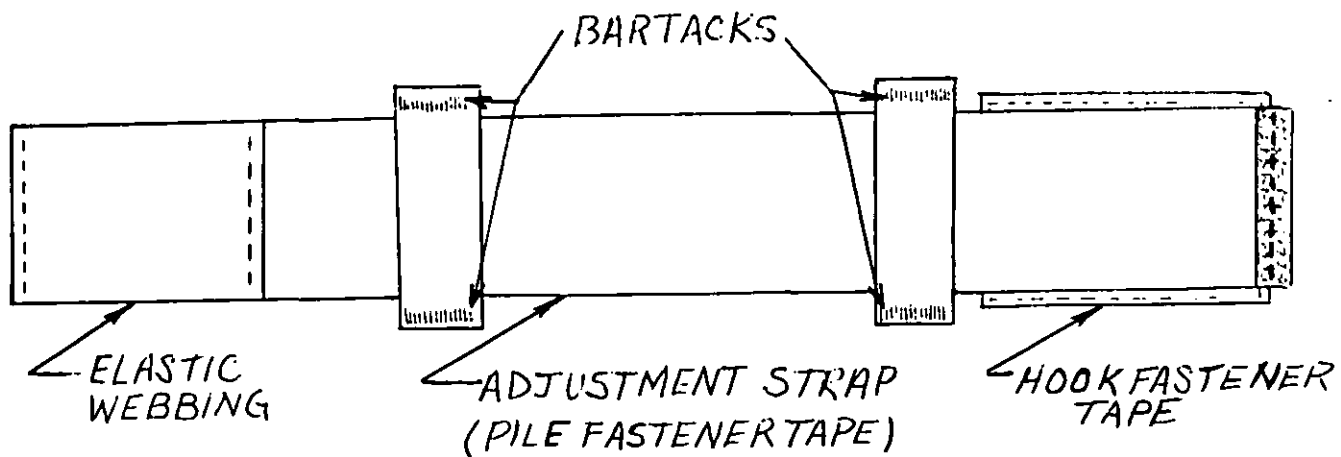


CEMENTED AREAS

LAPPED SEAM
(SEE TABLE I, OPERATION 12a)

Figure 4 - Parka, Wet Weather

MIL-P-87098



HOOD ADJUSTMENT ASSEMBLY
(SEE TABLE I, OPERATION 7b. THRU 7h)

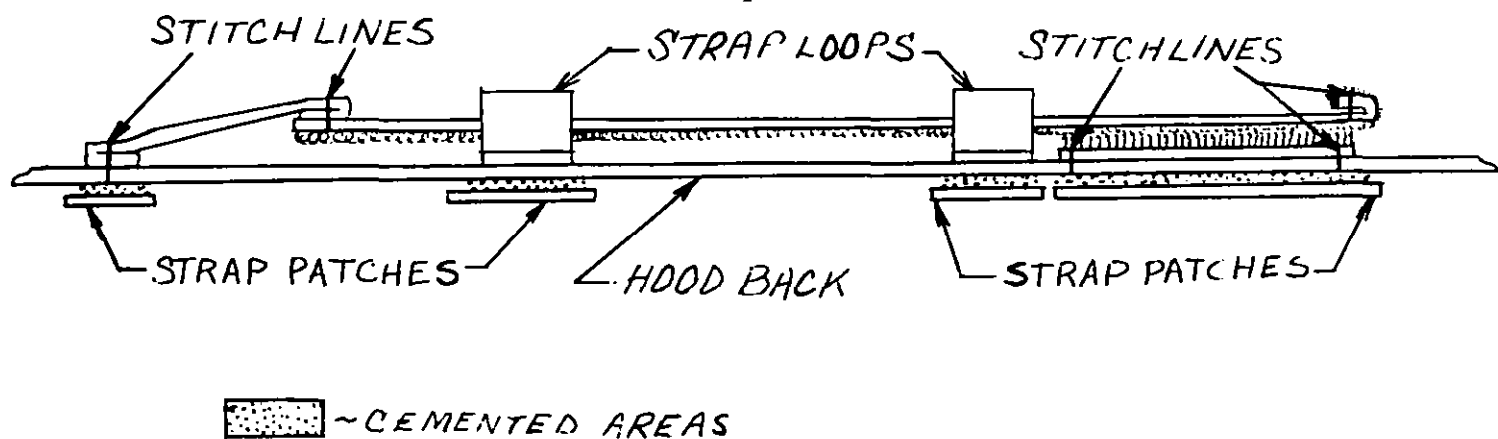
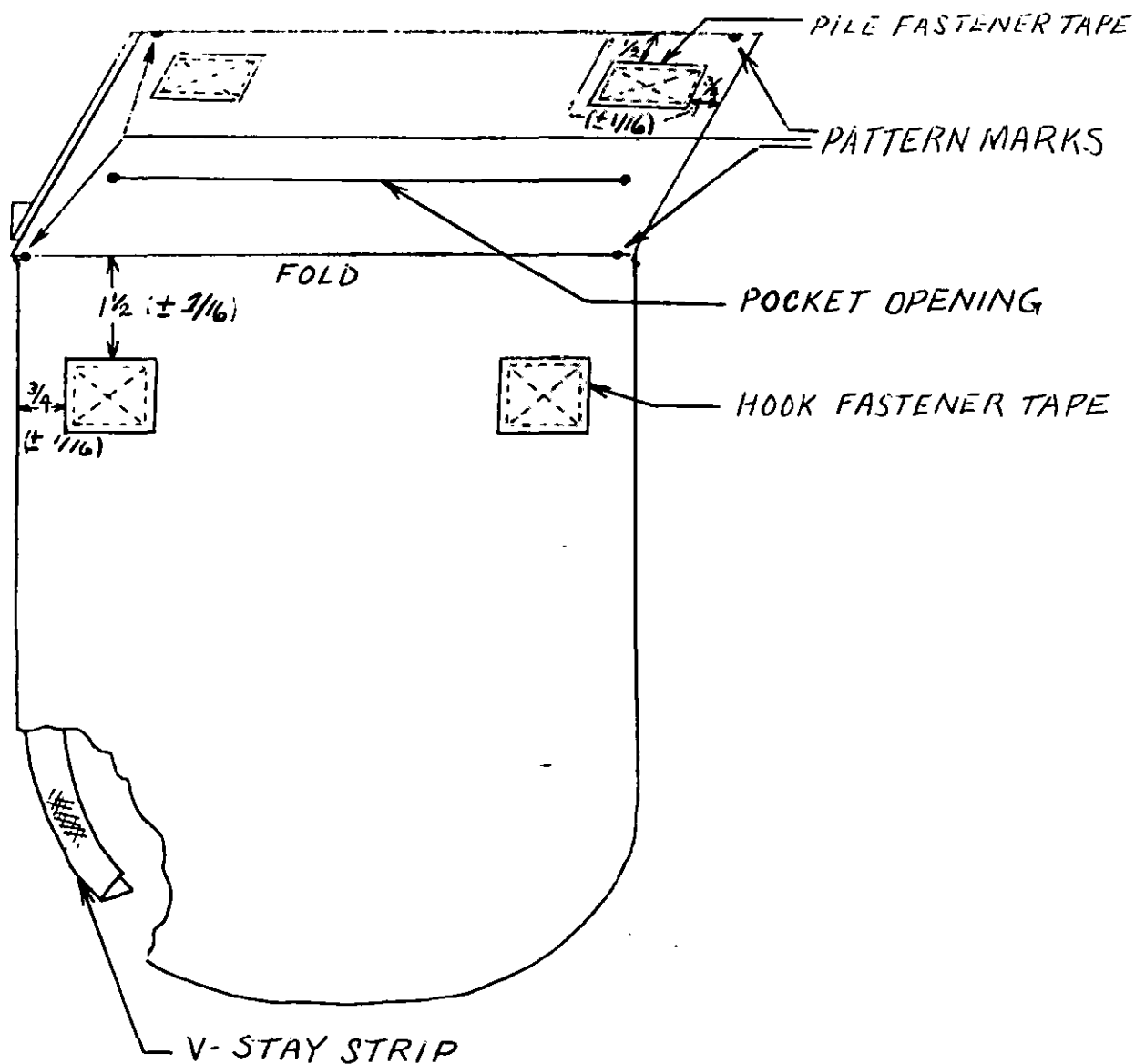


Figure 5 - Parka, Wet Weather

MIL-P-87098



POCKET ASSEMBLY
 (SEE TABLE I, OPERATIONS 5 & 6)

Figure 6 - Parka, Wet Weather

INSTRUCTIONS: In a continuing effort to make our standardization documents better, the DoD provides this form for use in submitting comments and suggestions for improvements. All users of military standardization documents are invited to provide suggestions. This form may be detached, folded along the lines indicated, taped along the loose edge (*DO NOT STAPLE*), and mailed. In block 6, be as specific as possible about particular problem areas such as wording which required interpretation, was too rigid, restrictive, loose, ambiguous, or was incompatible, and give proposed wording changes which would alleviate the problems. Enter in block 6 any remarks not related to a specific paragraph of the document. If block 7 is filled out, an acknowledgement will be mailed to you within 30 days to let you know that your comments were received and are being considered.

NOTE: This form may not be used to request copies of documents, nor to request waivers, deviations, or clarification of specification 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.

(Fold along this line)

(Fold along this line)

DEPARTMENT OF THE NAVY



NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

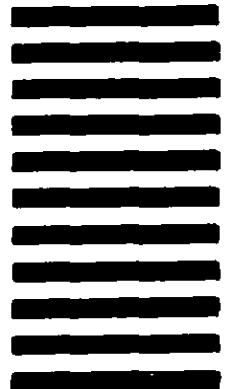
OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE \$300

BUSINESS REPLY MAIL

FIRST CLASS PERMIT NO. 12503 WASHINGTON D. C.

POSTAGE WILL BE PAID BY THE DEPARTMENT OF THE NAVY

Officer in Charge
Navy Clothing & Textile Research Facility
21 Strathmore Road (Code 50)
Natick, MA 01760-2490



STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL*(See Instructions - Reverse Side)*

1. DOCUMENT NUMBER MLL-P-87098		2. DOCUMENT TITLE PARKA, WET WEATHER	
3a. NAME OF SUBMITTING ORGANIZATION		4. TYPE OF ORGANIZATION (Mark one)	
b. ADDRESS (Street, City, State, ZIP Code)		<input type="checkbox"/> VENDOR	
		<input type="checkbox"/> USER	
		<input type="checkbox"/> MANUFACTURER	
		<input type="checkbox"/> OTHER (Specify): _____	
5. PROBLEM AREAS			
a. Paragraph Number and Wording:			
6. REMARKS			
7a. NAME OF SUBMITTER (Last, First, MI) - Optional		b. WORK TELEPHONE NUMBER (Include Area Code) - Optional	
c. MAILING ADDRESS (Street, City, State, ZIP Code) - Optional		8. DATE OF SUBMISSION (YYMMDD)	