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INCH-POUND

MIL-C-43455J
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SUPERSEDING
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8 August 1990

MILITARY SPECIFICATION

COAT, COLD WEATHER, FIELD

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

1. SCOPE

1.1 Scope. This specification covers one type of a straight front, cold weather, field coat made of water repellent fabrics.

* 1.2 Classification. The coat shall be of the following classes and sizes as specified (see 6.2).

Class 1 - Olive Green 107
Class 2 - Woodland Camouflage Printed
Class 3 - Deleted (see 6.8)
Class 4 - Desert Camouflage Printed (3 color)

Schedule of Sizes

X-Short	Short	Regular	Long
X-Small	X-Small	X-Small	X-Small
Small	Small	Small	Small
Medium	Medium	Medium	Medium
	Large	Large	Large
	X-Large	X-Large	X-Large

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

AMSC N/A FSC 8415

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2. APPLICABLE DOCUMENTS

2.1 Government documents.

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

SPECIFICATIONS

FEDERAL

A-A-50083	-	Bag, Plastic, Folded Garment
A-A-50186	-	Cloth, Buckram, Woven and Nonwoven
A-A-50198	-	Thread, Gimp, Cotton Buttonhole
A-A-50199	-	Thread, Polyester Core, Cotton- or Polyester-Covered
V-B-871	-	Button, Sewing Hole, and Button, Staple, (Plastic)
V-F-106	-	Fasteners, Slide, Interlocking
V-T-285	-	Thread, Polyester
DDD-L-20	-	Label: For Clothing, Equipage and Tentage, (General Use)
PPP-B-636	-	Boxes, Shipping, Fiberboard

MILITARY

MIL-B-371	-	Braid, Textile, Tubular
MIL-C-484	-	Cloth, Wind Resistant Oxford, Cotton, Quarpel Treated
MIL-T-3530	-	Thread and Twine; Mildew Resistant or Water Repellent Treated
MIL-C-3924	-	Cloth, Oxford, Cotton Warp and Nylon Filling, Quarpel Treated
MIL-F-10884	-	Fasteners, Snap
MIL-E-20652/1		Eyelets, Metallic, Rolled Flanged Type; and Eyelet Washer
MIL-F-21840	-	Fastener Tapes, Hook and Loop, Synthetic
MIL-L-35078	-	Loads, Unit: Preparation of Semiperishable Subsistence Items; Clothing, Personal Equipment and Equipage; General Specification For
MIL-C-43191	-	Cloth, Wind Resistant Sateen, Cotton and Nylon
MIL-C-43247	-	Cloth, Knitted, Nylon, Tubular, Stretch Type
MIL-C-43303	-	Cord, Elastic, Cotton
MIL-T-43566	-	Tape, Textile, Cotton or Polyester, General Purpose, Natural or in Colors
MIL-C-44296	-	Cloth, Fusibles

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STANDARDS

FEDERAL

FED-STD-595 - Colors Used in Government Procurement
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

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

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

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

D 3951 - Standard Practice for Commercial Packaging

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

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

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

3. REQUIREMENTS

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

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

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

* 3.3.1 Basic material.

* 3.3.1.1 Class 1. The basic material for the class 1 coat shall be Olive Green 107 conforming to class 2 of MIL-C-43191. The material for the hanging pockets shall be Olive Green 107 conforming to class 2 or dyed to ground shade conforming to class 3 of MIL-C-43191.

* 3.3.1.2 Class 2. The basic material for the class 2 coat shall be woodland camouflage printed, conforming to class 3 of MIL-C-43191. The material for the hanging pockets shall be woodland camouflage printed conforming to class 3, ground shade conforming to class 3 or Camouflage Green 483 conforming to class 2 of MIL-C-43191.

* 3.3.1.3 Class 4. The basic material for the class 4 coat shall be desert camouflage printed (3 color) conforming to class 5 of MIL-C-43191. The material for the hanging pockets shall be desert camouflage printed (3 color) conforming to class 5 or ground shade conforming to class 5 of MIL-C-43191.

* 3.3.2 Lining. The material for lining the coat and interlining the fronts shall conforming to type VI of MIL-C-484. The color for class 1 shall be Olive Green 107, for class 2 shall be Camouflage Green 483 and for class 4 shall be Tan 380. As an alternate, a fusible interlining conforming to type V, class 3, style B of MIL-C-44296 may be used.

* 3.3.3 Cotton-nylon oxford. The material for the hood for class 1 shall be Olive Green 107 conforming to class 2 of MIL-C-3924, for class 2 shall be woodland camouflage printed conforming to class 3 of MIL-C-3924 and for class 4 shall be desert camouflage printed (3 color) conforming to class 5 of MIL-C-3924.

* 3.3.4 Buckram. The material for interlining the collar and reinforcing snap fasteners, buttonholes and eyelets (see table II, operation 1.i.) shall be cotton buckram conforming to type I, natural or bleached of A-A-50186. As an alternate, a fusible material for interlining the collar conforming to type V, class 3, style B of MIL-C-44296 may be used.

3.3.4.1 Fusing press operating procedure and conditions. A single layer of fusible interlining shall be fused to a single layer of basic material on a dry electrically heated conveyor type fusing press which has the capacity of controlling and retaining pressure, dwell time, and temperature for a minimum of 8 hours. Pair or sandwich fusing which can create differential shrinkage, stitching, and uneven bonding shall not be permitted. A steam

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sourced fusing press shall not be allowed for any initial fusing operations. For optimum results, the fusible material manufacturers recommendations for fusing dwell time, pressure, and temperature, based upon the fusing equipment used and basic material being fused, shall be utilized. The temperature used in fusing shall not exceed 330°F so as to cause an objectionable color change or staining of the basic fabric. Basic preproduction and production maintenance procedures, including a fusing press information chart, shall be required to assure proper fusing press performance relative to temperature control, evenness in pressure head or roller contact, dwell time, cleanliness and bonding strength. The fusing process shall be controlled to ensure that the fused plies of material show no sign of bubbling or delamination initially or after three launderings when tested as specified in 4.4.2.4. Results of the production maintenance procedures shall be recorded on figure 2.

* 3.3.5 Knitted cloth. The knitted nylon cloth for the hood curtain shall conform to class 1 of MIL-C-43247, except that class 1 shall be Olive Green 107, class 2 shall be Camouflage Green 483 and class 4 shall be Tan 380. Colorfastness requirements for MIL-C-43247 shall not apply.

* 3.3.6 Cotton tape. The tape for the collar tab shall be 1 inch wide cotton tape conforming to type I, class 8 of MIL-T-43566. The color of the tape for class 1 shall be Olive Drab 7, for class 2 shall be Camouflage Green 483 and for class 4 shall be Tan 380.

* 3.3.7 Fasteners, nylon tape. The nylon tape fasteners shall conform to type II, class 1, 1 inch wide of MIL-F-21840. The color for class 1 shall be Olive Green 106, for class 2 shall be Camouflage Green 483 and for class 4 shall be Tan 380.

3.3.8 Braids, drawcord. The ends of the drawcords referred to in 3.3.8.1, 3.3.8.2 and 3.3.8.3 shall be dipped or impregnated with cellulose acetate or cellulose butyrate to prevent ravelling. Each dipped or impregnated end shall be at least 1/2 inch in length (see 4.4.1.1).

* 3.3.8.1 Bottom-coat drawcord. The cord for the drawcord at bottom of coat shall be a cotton elastic cord, 3/16 inch in diameter conforming to class 2 of MIL-C-43303. The color of the cord for class 1 shall be Olive Drab 7, for class 2 shall be Camouflage Green 483 and for class 4 shall be Tan 380.

* 3.3.8.2 Waist drawcord. The cotton braid for the waist drawcord shall be solid and tubular, 1/8 inch conforming to type IV, class 1 or 3/16 inch conforming to type V, class 1 of MIL-B-371. The color of the braid for class 1 shall be Olive Drab 7, for class 2 shall be Camouflage Green 483 and for class 4 shall be Tan 380.

* 3.3.8.3 Hood drawcord. The cotton braid for the hood drawcord shall be flat, 3/16 inch conforming to type III, class 1 of MIL-B-371. The color of the braid for the class 1 shall be Olive Drab 7, for class 2 shall be Camouflage Green 483 and for class 4 shall be Tan 380.

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* 3.3.9 Labels. Each coat shall have a combination identification - size label and an instruction label or combination size, identification, and instruction label conforming to type VI of DDD-L-20. The labels shall show fastness to laundering. The item description for class 1 shall be "Coat, Cold Weather, Field, Olive Green 107", for class 2 shall be "Coat, Cold Weather, Field, Woodland Camouflage Pattern", and for class 4 shall be "Coat, Cold Weather: Field, Desert Camouflage Pattern (3 Color)". The following cable numbers of the Standard Color Card of America are furnished for information and guidance as to the intensity of the shade desired for the labels. The label color for classes 1 and 2 shall be Medium Green, Cable Numbers 70034, 70130 or 70131 and for class 4 shall be Khaki, Cable Number 70188.

3.3.9.1 Combination identification - size label. The combination identification - size label shall be a combination of class 1 and class 2. The size information shall be printed in letters and numerals not less than 10-point and shall be as follows:

X-Small X-Short

Height: Up to 63 in.
Chest Mn: Up to 33 in.
Chest Wn: Up to 36 in.
Stock No.
NATO Size: 5060/7484

Small X-Short

Height: Up to 63 in.
Chest Mn: From 33 to 37 in.
Chest Wn: From 36 to 40 in.
Stock No.
NATO Size: 5060/8494

Medium X-Short

Height: Up to 63 in.
Chest Mn: From 37 to 41 in.
Chest Wn: From 40 to 44 in.
Stock No.
NATO Size: 5060/9404

X-Small Short

Height: From 63 to 67 in.
Chest Mn: Up to 33 in.
Chest Wn: Up to 36 in.
Stock No.
NATO Size: 6070/7484

Small Short

Height: From 63 to 67 in.
Chest Mn: From 33 to 37 in.
Chest Wn: From 36 to 40 in.
Stock No.
NATO Size: 6070/8494

Medium Short

Height: From 63 to 67 in.
Chest Mn: From 37 to 41 in.
Chest Wn: From 40 to 44 in.
Stock No.
NATO Size: 6070/9404

Large Short

Height: Up to 67 in.
Chest: From 41 to 45 in.
Stock No.
NATO Size: 6070/0414

X-Large Short

Height: Up to 67 in.
Chest: From 45 in. and up
Stock No.
NATO Size: 6070/1424

X-Small Regular

Height: From 67 to 71 in.
Chest Mn: Up to 33 in.
Chest Wn: Up to 36 in.
Stock No.
NATO Size: 7080/7484

Small Regular

Height: From 67 to 71 in.
Chest Mn: From 33 to 37 in.
Chest Wn: From 36 to 40 in.
Stock No.
NATO Size: 7080/8494

Medium Regular

Height: From 67 to 71 in.
Chest Mn: From 37 to 41 in.
Chest Wn: From 40 to 44 in.
Stock No.
NATO Size: 7080/9404

Large Regular

Height: From 67 to 71 in.
Chest: From 41 to 45 in.
Stock No.
NATO Size: 7080/0414

X-Large Regular

Height: From 67 to 71 in.
Chest: From 45 in. and up
Stock No.
NATO Size: 7080/1424

X-Small Long

Height: From 71 in. and up
Chest Mn: Up to 33 in.
Chest Wn: Up to 36 in.
Stock No.
NATO Size: 8090/7484

Small Long

Height: From 71 in. and up
Chest Mn: From 33 to 37 in.
Chest Wn: From 36 to 40 in.
Stock No.
NATO Size: 8090/8494

Medium Long

Height: From 71 in. and up
Chest Mn: From 37 to 41 in.
Chest Wn: From 40 to 44 in.
Stock No.
NATO Size: 8090/9404

Large Long

Height: From 71 in. and up
Chest: From 41 to 45 in.
Stock No.
NATO Size: 8090/0414

X-Large Long

Height: From 71 in. and up
Chest: From 45 in. and up
Stock No.
NATO Size: 8090/1424

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3.3.9.2 Instruction label. The instruction label shall conform to class 3 and contain the following information:

COAT, COLD WEATHER, FIELD

1. Wear as outer garment or as under-layer in cold dry climate.
2. Wear button-in liner for added insulation.
3. Adjust closures and drawcords to ventilate; avoid overheating of body.
4. When hood is used, lower extension shall be worn over neck opening, preventing water entering opening.
5. Brush snow or frost from garments before entering heated shelters.
6. For fast drying, remove liner from coat.
7. Do not expose to high temperature of a stove.
8. Lubricate slide fasteners with wax.
9. For cleaning and restoring of water repellency, return to laundry for machine washing in accordance with established procedures for quarpel treated garments.
10. Machine washing: User permanent press cycle. Wash in warm water using mild detergent.
11. Hand washing: Wash in warm water using mild detergent. DO NOT WRING OR TWIST. Rinse in clean warm water.
12. DO NOT USE CHLORINE BLEACH OR STARCH.
13. Drying: Dry at low heat (do not exceed 130°F). After drying, tumble at room temperature for 10 minutes. Remove immediately from dryer. To drip dry, remove from water and place on a rustproof hanger.
14. Pressing is acceptable provided the front flap of the coat overlaps the slide fastener and the temperature of the steam press does not exceed 300°F when using a hand iron, do not iron over collar slide fastener.

DO NOT REMOVE THIS LABEL

3.3.9.3 Combination size, identification, and instruction label. The identification label, size label and instruction label may be combined into one label, conforming to class 14. The three labels shall be printed as one continuous label with the size label first and the identification and instruction labels placed below the size label. The size and identification labels may be combined and the contents placed above the instruction label. A space of 1/2 inch minimum shall be maintained between the labels. In addition a solid line 1/16 inch minimum width shall extend across the entire label approximately in the middle of the 1/2 inch blank space.

3.3.10 Thread and gimp.

* 3.3.10.1 Thread. The thread shall be cotton-covered or polyester-covered polyester core thread conforming to A-A-50199, ticket numbers 30, 2 or 3 ply and 50, 2 ply for all seaming, stitching, buttonholes and button sewing and ticket number 70, 2 ply for overedging. As an alternate, either type IV or V, class 1, subclass B of V-T-285 may be used. Tex size 40 shall be used in

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lieu of ticket numbers 50 and 70 and Tex size 60 shall be used in lieu of ticket number 30. The thread shall be water-repellent treated in accordance with type II, class 3 of MIL-T-3530.

3.3.10.2 Gimp. The cotton gimp for reinforcing buttonholes shall conform to type I or type II, ticket number 8 of A-A-50198.

* 3.3.10.3 Color of thread and gimp. The thread and gimp for classes 1 and 2 shall be dyed Camouflage Green 483, approximating color chip 34094 of FED-STD-595 and for class 4 shall be Khaki P-1, C.A. 66019.

* 3.3.11 Buttons. The buttons shall be 30-line, 4-hole, conforming to type II, class D, style 26 of V-B-871. The color of the buttons for classes 1 and 2 shall be Olive Green BP and for class 4 shall be Tan AJ Cable 62028 and the finish shall be dull.

3.3.12 Fasteners, slide interlocking. The slide fasteners shall be fabricated in conformance to V-F-106.

3.3.12.1 Coat fronts. The slide fasteners for the coat fronts shall be either brass or plastic. The length of the slide fastener shall be 18-1/2, +1/4, -3/8 inches. The tape extension at top of slide fastener shall be not less than 1 inch.

3.3.12.1.1 Brass slide fastener. The brass slide fastener shall conform to type IV, style 8, size MHS; slider with wire stirrup pull.

3.3.12.1.2 Plastic slide fastener. The plastic slide fastener shall be an individual molded plastic element size H, possessing a 160 pound minimum crosswise breaking strength with a slider having an opening large enough to accommodate the 3/8 inch thong. The color of the chain, slider, pull and thong shall approximately match the tape (see 3.3.12.3).

3.3.12.2 Collar. The slide fastener for the collar shall be brass, type I, style 6, size MS slider with short tab pull, except that the tape shall be 9/16 ± 1/32 inch wide. The length of the slide fastener shall be 16-1/2, +3/16, -1/4 inches. As an alternate, an equivalent polyester (plastic) coil or ladder type continuous element monofilament slide fastener with an automatic slider may be used. The color of the chain, slider, pull and thong shall approximately match the tape (see 3.3.12.3).

* 3.3.12.3 Slide fastener tape. The tape for classes 1 and 2 shall be dyed Olive Drab, S, Cable No. 66519 and for class 4 shall be Khaki Shade P, Cable No. 66516. The dyed tape shall show fastness to light and laundering equal to or better than the standard sample. When no standard sample is available, the dyed tape shall show "good" fastness to light and laundering.

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3.3.13 Fasteners, snap. The snap fasteners shall conform to style 2A, brass, finish 2, male and female complete, consisting of stud and eyelet size 1 or 2 with button size 1 or 2 and socket conforming to MIL-F-10884, except an uncapped button may be used to attach the socket. As an alternate, a Universal Series 200, prong type, snap fastener may be used (see 6.5), except the material for the spring in the socket component shall conform to the requirements in MIL-F-10884 for spring temper.

3.3.14 Eyelets. The optional metal eyelets for the drawcord outlets shall conform to Part No. M20652/1 - BBE125 of MIL-E-20652/1 except that the size shall be 1/4 ± 1/32 inch inside diameter.

3.4 Design. The coat is a lined hip length design, having a bi-swing back; convertible stand-up collar with adjustable tab closure, four buttonholes and horizontal slide fastener closure on undercollar (exit for hood); attached hood (concealed between body layers) with drawcord adjustment; two piece set-in sleeves, adjustment tab cuff closure, and hand shield extension; shoulder loops with button closure; slide fastener fly front closure with snap fasteners; two bellows type breast pockets and two lower inside hanging pockets with snap fastener flap closures; waist and hem drawcords; and inside buttons for attaching of insulating liner.

3.5 Figures. Figures 1 and 2 are furnished for information purposes only. If there are any inconsistencies between the written specification and the figures, the written specification shall control.

3.5.1 Patterns. Standard patterns which provide an allowance of 3/8 inch for all seams, except double-lapped and double-stitched seams where 1/2 inch allowance is provided and for joining sleeve facing to bottom of sleeve where 1/4 inch allowance is provided, will be furnished by the Government to the contractor for cutting the working patterns. The working patterns shall be duplicates of the Government patterns which show size, placement of pockets and notches for proper assembly of all parts. The Government patterns and working patterns shall not be altered in any way.

3.5.2 List of pattern parts. The components of the coat shall be cut from materials specified in accordance with the number of parts indicated in table I.

TABLE I. List of pattern parts

Material	Nomenclature	Cut parts
	Coat	
Basic material (3.3.1)	Front	2
	Back	1
	Left front facing	1

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

Material	Nomenclature	Cut parts
	Coat (cont'd)	
Basic material (3.3.1) (cont'd)	Right front facing	1
	Top sleeve	2
	Under sleeve	2
	Bottom sleeve facing	2
	Topcollar	1
	Undercollar	1
	Breast pocket	2
	Breast pocket flap	2
	Breast pocket flap lining	2
	Lower pocket flap	2
	Lower pocket flap lining	2
	Lower hanging pocket 1/	2
	Lower pocket bearer 1/	2
	Lower pocket welt	2
	Waist tunnel strip 1/ 2/	1
	Shoulder loop	4
Cotton buckram cloth (3.3.4)	Collar interlining 3/	1
Fusible cloth (see 3.3.4)	Collar interlining (alternate)	1
	Lining	
Cotton oxford cloth (3.3.2)	Front	2
	Back	1
	Top sleeve	2
	Under sleeve	2
	Neck reinforcement 4/	1
	Front interlining	2
Fusible cloth (see 3.3.2)	Front interlining (alternate)	2
Cotton/nylon oxford cloth (3.3.3)	Hood	2
Nylon knitted cloth (3.3.5)	Hood curtain	1

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1/ For class 1, the pattern pieces may be cut from Olive Green 107 cloth conforming to class 2, or dyed ground shade cloth conforming to class 3 of MIL-C-43191. For class 2, the pattern pieces may be cut from woodland camouflage printed cloth conforming to class 3, or dyed ground shade cloth conforming to class 3, or dyed Camouflage Green 483 cloth conforming to class 2 of MIL-C-43191. For class 4, the pattern pieces may be cut from 3 color desert camouflage printed cloth conforming to class 5 or ground shade conforming to class 5 of MIL-C-43191.

2/ May be cut from cotton oxford lining or cotton/nylon oxford cloth.

3/ May be cut from cotton/nylon oxford cloth.

4/ May be cut from basic material cloth.

3.6 Construction.

3.6.1 Stitches, seam and stitching. All stitches, seams, and stitchings shall conform to FED-STD-751. The type of seam, stitching, and stitches per inch shall be as specified in table II. Seam allowances shall be maintained with seams sewn so that no raw edges, runoffs, pleats, or open seams occur. Where two or more methods for seams or stitch types are given for the same part of the operation, any one of them may be used. When stitch type 401 is used, the looper (underthread), shall be on the inside of the coat. Unless otherwise indicated, the gage of stitching for the double-lapped, double-stitched seams shall be 3/16 to 5/16 inch. The width of overedging specified in table II shall be 3/16 to 1/4 inch. The guide and knives for the overedge machines shall be set to trim only the ravelled edges of the fabric. All seams shall start and finish evenly.

3.6.1.1 Type 301 stitching. Ends of all stitchings shall be backstitched or overstitched not less than 1/4 inch except where ends are turned under or caught in other seams or stitching. Ends of a continuous line of stitching shall overlap not less than 1/2 inch. Thread tensions shall be maintained so that there will be no loose stitching resulting in loose bobbin or top thread or excessively tight stitching resulting in puckering of the materials sewn. The lock shall be imbedded in the materials sewn.

3.6.1.1.1 Repairs of type 301 stitching. Repairs of type 301 stitching shall be as follows:

a. When thread breaks, skipped stitches, run-offs, or bobbin runouts occur during sewing, the stitching shall be repaired by restarting the stitching a minimum of 1/2 inch back of the end of the stitching. 1/

b. Thread breaks or two or more consecutive skipped or run-off stitches noted during inspection of the item shall be repaired by overstitching. The stitching shall start a minimum of 1/2 inch in back of the defective area, continue over the defective area and continue a minimum

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of 1/2 inch beyond the defective area onto the existing stitching. Loose or excessively tight stitching shall be repaired by removing the defective stitching without damaging the materials and restitching in the required manner. 1/

1/ When making the above repairs, the ends of the stitching are not required to be backstitched.

3.6.1.2 Types 401, 502, 503, 515, 516, and 519 stitching. Thread tension shall be maintained so that there will be no loose or excessively tight stitching resulting in puckering of the materials sewn. All repairs shall be in accordance with 3.6.1.1.1a. and 3.6.1.1.1b. Type 301 stitching may be used in repairing type 401 stitching.

3.6.1.3 Thread ends. All thread ends shall be trimmed to 1/4 inch maximum length.

3.6.2 Bartacking. Unless otherwise specified, bartacks shall be as follows:

Length	Width	Tolerance Length	Tolerance Width	Stitches per bartack
1/2 inch	1/8 inch	± 1/16 inch	± 1/32 inch	28
1 inch	1/8 inch	± 1/16 inch	± 1/32 inch	42

Bartacking shall be free from thread breaks and loose or tight stitching.

3.6.3 Buttonholes. The buttonholes shall be the eyelet-end taper bar type, worked over gimp (see 3.3.10.2) with not less than four stitches at bar end (not counting the crossover stitch). The buttonholes shall finish with the purling on the outside of the coat. The finished cut lengths shall be 3/4 to 7/8 inch. The buttonholes shall be clean cut with the stitching securely caught in the fabric. Additive treatments or materials used to secure the ends of the stitching or to stiffen the fabric prior to stitching the buttonholes are prohibited.

3.7 Manufacturing operations requirements. The coat shall be manufactured in accordance with operations specified in table II. The contractor is not required to follow the exact sequence of operations. Any additional basting or holding stitching to facilitate manufacture is permissible, provided the thread is removed or does not show in the finished coat.

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

NO.	TABLE II. MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD		
					NEEDLE	BOBBIN/ LOOPER	COVER
1.	Cutting. a. Cut all parts of the coat (cotton/nylon sateen, cotton oxford, cotton-nylon oxford, cotton buckram and the knitted cloth) in strict accordance with patterns furnished which show directional lines, placement for components, and notches for proper assembly of parts. Directional lines shall be placed in the warp direction. The hood, waist tunnel strip, and pocket flap lining may be cut in the warp or filling direction. The pocket openings may be pre-cut (see operation 11.b.). b. Cut basic material parts of coat from one piece of material except lower pocket bearers and welts, flap linings, undercollar, underply of shoulder loops, waist tunnel strip, neck reinforcement, button and buttonhole reinforcement pieces, hood eyelet reinforcement pieces, hood tunnel piece, bottom sleeve facings, lower inside hanging pockets, and front interlining, which may be cut from ends. Parts cut from ends shall approximate the shade of the coat, except that the waist tunnel strip, front interlining (cotton oxford or fusible cloth), and reinforcement pieces need not approximate nor match the shade of the coat. c. Sleeve linings (cotton oxford) may be cut from ends but shall approximately match each other. d. Cut hood tunnel piece from cotton-nylon oxford on the bias, 1-3/4 ± 1/8 inches wide and of sufficient length to encompass the face opening. The tunnel piece may be strip cut and placed on rolls.						

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NO.	TABLE II. (cont'd) MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD NEEDLE	THREAD BOBBIN/ LOOPER	THREAD COVER
1.	Cutting. (cont'd)						
	e. Cut drawcords in lengths as follows (measurements in inches):						
	X-Small Small Medium Large X-Large Tolerance						
	Waist drawcord (one each) 44 48 52 56 60 ± 1						
	Bottom drawcord (one each) 50 54 58 62 66 + 2, - 1						
	Hood drawcord (one each) 34 34 34 34 34 ± 1						
	f. Impregnate or dip ends of drawcords (see 3.3.8).						
*	g. Cut 1 inch wide nylon tape fasteners in accordance with the following:						

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TABLE II. (cont'd)

NO.	MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD NEEDLE	THREAD BOBBIN/ LOOPER	THREAD COVER
1.	Cutting. (cont'd)						

Location	Portion of fastener	Cut Length (inches)	Number per coat	Operation reference
Collar tab	Loop	2-1/4 ± 1/8	1	6
Under-collar	Hook	1 to 1-1/8 2 to 2-1/4	1 1	9.g.(1) 9.g.(2)
Sleeve tab	Hook	1 to 1-1/8	2	23.i.
Bottom of sleeve facing	Loop	1 to 1-1/8	2	23.j.
Outside of under-arm	Loop	3 to 3-1/4	2	23.k.
Sleeve facing	Hook	1 to 1-1/8	2	24.b.

h. Cut the tape (see 3.3.6) for collar tab 2-3/4 ± 1/8 inches long (see operation 6).

i. Cut the reinforcement pieces for buttonholes and eyelets (where specified) from one ply of basic material or buckram, or two plies of the cotton oxford cloth.

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NO.	TABLE II. (cont'd) MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD		
					NEEDLE	BOBBIN/ LOOPER	COVER
1.	Cutting. (cont'd)						
*	j. Cut cotton-nylon sateen cloth (basic material) for class 1 coat with dull side (filling effect) of the fabric to finish on the outside of the garment.						
2.	Marking.						
	a. Mark, ticket, or bundle all outside parts of the coat and hood to insure a uniform shade or shades and size, except those cut from ends (see operation 1.b.). Mark, ticket, or bundle all lining parts for uniformity of size.						
	b. Any method of marking may be used except: (1) Metal fastening devices. (2) Sew-on tickets. (3) Adhesive type tickets which leave traces of adhesive on the material after removal of the tickets.						
3.	Replacement of defective components.						
	During the spreading, cutting, and manufacturing process, components having material defects or damages that are classified as defects in 4.4.3 shall be removed from production and replaced with nondefective and properly matched components.						
4.	Labeling.						
	Stitch labels on all four sides to the lining of coat as follows:	301	LSbj-1	8-14	30	30	

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NO.	MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD NEEDLE	THREAD BOBBIN/ LOOPER	THREAD COVER
4.	Labeling. (cont'd)						
	a. Instruction label to the right front and toward the bottom, 3 to 4 inches back of the facing.						
	b. Combination identification-size label to the back of lining (off-center), 1-1/2 to 2 inches down from the collar seam. Stitching shall not catch or restrict the back pleat.						
	c. Combination size, identification, and instruction label (when used) to be positioned as specified in operation 4.b.						
	d. The ends of label stitching shall be overlapped not less than three stitches.						
5.	Make four pocket flaps.						
	Finished appearance. Sockets shall be reinforced with one ply of buckram or basic material or two plies of the cotton oxford cloth cut not less than 1 inch by 1 inch.						
	a. Mark the position for socket of snap fastener on flap lining, as indicated by pattern, and clinch socket to lining of flap and reinforcement piece. A 1/4 inch off-center tolerance is permitted.						
	b. Join plies of each flap along side and bottom edges; turn, work out points and edges, and stitch flap 3/16 to 1/4 inch from side and bottom edges.	301 or 401 and 301	SSe-2(a) SSe-2(a) SSe-2(b)	8-14 8-14 10-14	30 30 30	30 50 30	

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6.	Make collar tab.						
	Fold loop portion of nylon fastener tape (see operation 1.g.) in half lengthwise; insert one end of the cotton tape (see operation 1.h.) into the full depth of the fold and stitch loop tape to cotton tape on three sides 1/16 to 1/8 inch from edges. The stitching may continue across the folded edge.	301 301	BSa-1 and OSf-1	10-14 10-14	30 30	30 30	
7.	Make hood.						
	Finished appearance. The hood shall have four pleats on back neck and two darts at top. The eyelets for drawcord shall be securely clinched through the reinforcement piece and hood. The drawcord shall not be caught in the stitching of the tunnel.						
	a. Place raw edges of darts together and stitch on outside of hood, 3/16 to 1/4 inch from raw edges, with stitch tapering to bottom end of dart.	301 or 401	SSae-2(a) SSae-2(a)	10-14 10-14	30 30	30 50	
	b. Fold pleat to inside at stitch line and edge stitch on inside of hood 1/4 to 3/8 inch from edge. Raw edge shall not be exposed on outside of hood.	301 or 401	SSae-2(b) SSae-2(b)	10-14 10-14	30 30	30 50	
	c. Join hood at center with a double-lapped and double-stitched seam.	301 or 401	LSc-2 LSc-2	10-14 10-14	30 30	30 50	
	d. Clinch eyelets through hood and double reinforcement piece of basic material at front opening positioned as indicated by marks on pattern.						
	or						

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TABLE II. (cont'd)

NO.	MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD		
					NEEDLE	BOBBIN/ LOOPER	COVER
7.	Make hood. (cont'd)						
	e. Make 1/2 to 5/8 inch cut length buttonhole parallel with the front of hood. The buttonhole shall be centered on the eyelet marks, and made through hood reinforcement piece of basic material positioned as indicated on patterns with eyelet end toward the bottom of the hood. The cut length shall be 1/2 to 5/8 inch.	Button-hole		44-56 per buttonhole including tacks	30	30	
	or						
	f. Make 3/16 to 1/4 inch diameter finished opening sewn through reinforcement piece.	Eyelet		21 per eyelet	30	30	
	g. Hood tunnel shall finish on inside of hood and shall finish 1 ± 1/8 inches wide. Either of the two methods may be followed:						
	h. Stitch tunnel piece to front edge of hood; turn and stitch 1/16 to 1/8 inch from edge.	301	SSe-2	10-14	30	30	
	i. Turn under raw edge of facing and stitch 1/16 to 1/8 inch from edge forming drawcord tunnel.	301	LSd-1	10-14	30	30	
	j. The inner edge may be pre-hemmed prior to performing operation 7.i.	301	EFa-1	10-14	30	30	
	or						
	k. Thread drawcord through eyelets and knot ends of drawcord. Drawcord may be inserted after operation 7.1. is performed.						

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7.	Make hood. (cont'd)						
	l. Turn in both raw edges of tunnel piece and raw edge of hood and double-stitch 1/16 to 1/8 inch from turned edges forming drawcord tunnel.	301	LSk-2	10-14	30	30	
	m. Place a 1/2 inch bartack across facing through hood joining seam catching drawcord in the stitching.	Bartack		28 per bartack	30	30	
	n. Overedge stitch bottom raw edge of hood.	502 or 503	SSa-1 SSa-1	6-8 6-8	70 1/ 70 1/	70 1/ 70 1/	
	o. Form pleats with outside folded edges toward the center seam of hood and prestitch across pleats 3-7/8 ± 1/8 inches from bottom edge. Stitching may extend across entire width of hood. (This operation may be performed when hood curtain is attached to hood.)	301		10-14	30	30	
	p. Thread drawcord through eyelets and knot ends of drawcord.						
	1/ or 40 conforming to type IV or V, class 1, subclass B of V-T-285.						
8.	Make hood curtain and stitch to hood.						
	a. Overedge stitch around all raw edges of hood curtain.	502 or 503	EFd-1 EFd-1	6-8 6-8	70 1/ 70 1/	70 1/ 70 1/	
	b. Overlap the top edge of hood curtain 3-7/8 ± 1/8 inches over the bottom edge of hood on inside and stitch hood curtain to hood 1/8 to 3/16 inch from edge beginning at back edge of tunnel strip. The ends of the curtain shall begin and finish at back	301	LSa-1	10-14	30	30	

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NO.	MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD NEEDLE	THREAD BOBBIN/ LOOPER	THREAD COVER
8.	Make hood curtain and stitch to hood. (cont'd)						
	edges of hood tunnel strip. The pleats of the hood shall be formed and caught in the stitching if not previously accomplished in operation 7.o.						
	1/ or 40 conforming to type IV or V, class 1, subclass B of V-T-285.						
9.	Make undercollar.						
	Finished appearance. The undercollar shall be interlined with buckram or alternate fusible and shall contain a slide fastener which shall finish flat and smooth without puckers. Slide of fastener shall finish on left side of collar (as worn) when fastener is closed.						
	a. Mark undercollar for slide fastener at marks indicated on patterns.						
	b. Center (± 1/8 inch off-center tolerance) buckram interlining under undercollar and seam together with a double row of parallel horizontal stitching across the length of the slide fastener cut mark. The rows of stitching shall be 1/4 to 3/8 inch gage with the two rows of stitching 1/8 to 3/16 inch from slide fastener cut mark.	301 or 401	SSa-2 SSa-2	8-14 8-14	30 30	30 50	
	or						

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NO.	MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD		
					NEEDLE	BOBBIN/ LOOPER	COVER
9.	Make undercollar. (cont'd)						
	c. When using the alternate fusible material for collar interlining, center the interlining under undercollar and fuse together for the entire length of the undercollar.						
	d. Cut slide fastener opening as an alternate, when fusible collar interlining is used the off center tolerance shall be ± 1/8 inch, tongue notching each end of opening.						
	e. Turn under raw edges of slide fastener opening 1/4 to 5/16 inch. Position folded edges of opening on slide fastener tape 1/8 to 3/16 inch from back edge of chain and stitch 1/16 to 3/32 inch along folded edges and ends of opening catching the tongue notched ends in the stitching.	301		10-14	30	30	
	f. Bartack both ends of slide fastener with a 1/2 inch bartack, with the stitching superimposed on edge stitching.	Bartack		28 per bartack	30	30	
	g. Stitch the two hook portions of nylon fastener tape on the undercollar as follows:	301	LSbj-1	10-14	30	30	
	(1) Position the 1 to 1-1/8 inch nylon fastener tape on the left end of undercollar (as worn) as indicated on pattern and stitch on all four sides, 1/16 to 1/8 inch from edges. Ends of stitching shall be overlapped at least three stitches.						
	(2) Position the 2 to 2-1/4 inch nylon fastener tape on the right end of undercollar (as worn) as						

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NO.	MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD NEEDLE	THREAD BOBBIN/ LOOPER	THREAD COVER
9.	Make undercollar. (cont'd)						
	indicated on pattern and stitch as indicated in operation 9.g. (1) or, tape may be stitched with two 1 inch box stitch patterns.						
	h. Position the tape end of collar tab on left end of undercollar, as indicated on pattern, and stitch or tack tab with a 1 inch bartack the width of tab to undercollar through interlining with stitching 1/8 to 3/16 inch from raw edge. Turn tab toward front and raise stitch or tack the tab with a 1 inch bartack 3/16 to 1/4 inch from folded edge.	301 or Bartack and 301	LSbl-2(a) LSbl-2(b)	10-14 42 per bartack 10-14	30 30 30	30 30 30	
	i. Make two vertical buttonholes in the undercollar and interlining, as indicated on pattern, with the inside edge of tapered end 1/2 ± 1/8 inch above collar seam. The purling shall finish on the inside of undercollar.	Button-hole		44-46 per buttonhole including tack	30	30	
10.	Make bi-swing back.						
	a. Form inside pleat of bi-swing, as indicated on pattern, with the material face to face and stitch 1/16 to 1/8 inch from folded edge.	301 or 401	OSf-1 OSf-1	8-14 8-14	30 30	30 50	
	b. Form outside pleat of bi-swing, as indicated on pattern, with the material back to back and stitch 1/16 to 1/8 inch from folded edge.	301	OSf-1	8-14	30	30	
	c. The bi-swing may be turned to finished position and stitched across shoulder 1/16 to 1/8 inch from raw edge.	301 or 401	SSa-1 SSa-1	6-14 6-14	30 30	30 50	

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10.	Make bi-swing back. (cont'd)						
	d. Stitch across bottom end of bi-swing pleat 1/2 to 1 inch from bottom edge and parallel with bottom edge. The stitching shall be through the two inner plies only.	301	SSa-1	8-14	30	30	
11.	Make and set lower pockets.						
	Finished appearance. The lower pockets shall be uniform in size, placement and appearance; the width of openings and depth of pockets shall be uniform. The flaps shall be uniformly set and stitched. The top of pockets shall extend to the waist tunnel and be caught in the bottom row of the waist tunnel stitching (see operation 16). The pockets shall not extend below bottom of coat.						
	a. Turn in lower raw edges of pocket bearers and welts and stitch to ends of applicable pocket piece positioned as indicated on pattern. Selvage edge need not be turned in.	301	LSd-1	10-14	30	30	
	b. When pocket opening is pre-cut.						
	(1) Fold coat at cut-opening so that lower seam allowance protrudes. Align the raw edge of the welt end of pocket and the cut edge of the opening and stitch welt (and top of pocket) to the lower part of pocket opening. Stitching should be 1/4 inch from the raw edge.	301	LSq-2(a)	10-14	30	30	

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NO.	MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD		
					NEEDLE	BOBBIN/ LOOPER	COVER
11.	Make and set lower pockets. (cont'd)						
	(2) Turn pocket to inside through opening forming a 3/8 to 1/2 inch wide welt and raise stitch 1/16 to 1/8 inch from welt to coat joining seam.	301	LSq-2(b)	10-14	30	30	
	(3) Fold coat at cut-opening so that top seam allowance protrudes. Position the pocket flap between the seam allowance of the opening and pocket bearer with the raw edge of the flap and the cut edge of the opening even. Stitch flap to the upper part of pocket opening 1/4 inch from raw edges.	301	LSq-2(a)	10-14	30	30	
	(4) Turn up coat front and raise stitch flap through all plies 3/16 to 1/4 inch from flap joining seam. Continue the stitching along both ends of opening with the tongues turned in and caught in the stitching.	301	LSq-2(b)	10-14	30	30	
	c. When pocket opening is not pre-cut.						
	(1) Position pocket flap to outside of coat front with the raw edges aligned with the cut-line, as indicated by pattern. Stitch flap to coat 1/4 inch from raw edge.	301	LSbl-2(a)	10-14	30	30	
	(2) Position welt end of pocket with the raw edge aligned with cut-line and stitch to front 1/4 inch from raw edge of welt (and top of pocket).	301	LSbl-2(a)	10-14	30	30	
	(3) Cut opening and tongue notch ends. Turn pocket to inside through opening forming a 3/8 to 1/2 inch welt, and raise stitch 1/16 to 1/8 inch from the welt to coat joining seam.	301		10-14	30	30	

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11.	Make and set lower pockets. (cont'd)						
	(4) Turn up pocket and stitch through seam allowance of cut-opening and raw edges of flap through bearer and underply of pocket.	301	LSbl-2(a)	10-14	30	30	
	d. Safety stitch the plies of pocket along sides and across bottom folded edge. The lower corners may be slightly rounded. If overedging is equipped with knife, the bottom folded edge of pocket shall not be cut.	515 or 516 or 519	SSa-2	10-14	50 (chain (all o stitch	50 1/ stitchi veredge ing thr	ng) eads)
	e. Applicable to construction in operation 11.c. only. Turn down flap and raise stitch through all plies 3/16 to 1/4 inch from flap joining seam. Continue the stitching above both ends with the tongues turned in and caught in the stitching.	301		10-14	30	30	
	f. Vertically bartack both ends of pocket opening with a 1/2 inch bartack superimposed on stitching.	Bartack		28 per bartack	30	30	
	g. Attach the stud part of snap fastener through front of coat and outer ply of pocket, to correspond with socket part on pocket flap.						
	1/ or 40 conforming to type IV or V, class 1, subclass B of V-T-285.						
12.	Make and set two breast pockets.						
	Finished appearance. The outside bellows patch pockets shall be uniform in appearance, without twists, puckers, pleats, or raw edges.						

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NO.	TABLE II. (cont'd) MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD		
					NEEDLE	BOBBIN/ LOOPER	COVER
12.	Make and set two breast pockets. (cont'd)						
	NOTE: The breast pocket shall be set on with fullness at the top of the pocket. The width of the top of the pocket shall be governed by the size of the finished flap.						
	a. Seam and raise stitch bottom corner of bellows portion of pockets, or stitch the corners with two rows of stitching 1/16 to 3/32 inch apart.	301 or 301	LSq-2 SSa-2	10-14 10-14	30 30	30 30	
	b. Form bellows along back and bottom ends of pocket and stitch 1/16 to 1/8 inch from inside and outside folded edges forming bellows.	301	OSf-1	10-14	30	30	
	c. Make a triangular hem at top of pocket 2 ± 1/4 inches wide at center with raw edge turned under and single stitch 1/16 to 1/8 inch from edge. The top back of the bellows shall be inserted within the hem and caught in the stitching.	301	EFb-1	10-14	30	30	
	d. Turn in the front edge of the pocket side and bottom raw edges of bellows portion of pocket and single stitch 1/16 to 1/8 inch from edge to fronts, as indicated on pattern. The raw edges of bellows portion of pocket may be turned in and stitched prior to joining pocket to front.	301	LSd-1	10-14	30	30	
	e. Bartack ends of pocket opening with vertical 1/2 inch bartacks superimposed on the edge stitching forming bellows at back end of pocket and superimposed on the stitching joining pocket to front at front edge of pocket.	Bartack		28 per bartack	30	30	

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NO.	MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD NEEDLE	THREAD BOBBIN/ LOOPER	THREAD COVER
12.	Make and set two breast pockets. (cont'd)						
	f. Bartack bottom corners of pocket with horizontal 1/2 inch bartacks superimposed on the stitching joining bellows portion at back end of pocket and superimposed on the stitching forming bellows at front edge of pocket. The bartack at back edge of pocket shall not close the bellows.	Bartack		28 per bartack	30	30	
	g. Attach stud part of snap fastener through pocket and hem to correspond with socket in flap.						
13.	Seam breast pocket flaps.						
	Finished appearance. The flaps shall be so positioned to cover ends of pocket and finish smooth and flat.						
	Seam flaps to coat 1/2 to 3/4 inch above pocket opening with the stitching 1/8 to 3/16 inch from edge. Turn flap down and raise stitching 3/16 to 1/4 inch, with the ends of stitching backstitched.	301	LSbl-2	10-14	30	30	
14.	Make shoulder loops.						
	Finished appearance. The loops shall finish smooth and flat and shall be uniform in appearance. The gage of stitching shall be uniform in width and the points shall be forced out. The shoulder loops shall finish not less than 6-1/2 inches long, measured from shoulder seam to point of loop (see operation 25.a.).						

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NO.	MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD NEEDLE	THREAD BOBBIN/ LOOPER	THREAD COVER
14.	Make shoulder loops. (cont'd)						
	a. Join plies of loop; turn, work out point and edges and stitch 3/16 to 1/4 inch from edges.	301 or 401 and 301	SSe-2(a) SSe-2(a) SSe-2(b)	8-14 8-14 10-14	30 30 30	30 50 30	
	b. Make a buttonhole in the center of each loop (1/8 inch off-center tolerance) with the inside edge of eyelet 1/2 + 1/8 inch from point of loop.	Button-hole		44-46 per buttonhole including tack	30	30	
15.	Join side and shoulder seams of coat.						
	a. Join side seams and shoulder seams with double-lapped and double-stitched seams. The back shall lap the fronts at side seams and the fronts shall lap the back at shoulder seams.	301 or 401	LSc-2 LSc-2	10-14 10-14	30 30	30 50	
	or						
	b. Join shoulder seams and side seams; and turn and raise stitch the back at side seams and fronts at shoulder seams 3/16 to 5/16 inch from turned edges.	301 or 401	LSq-2 LSq-2	10-14 10-14	30 30	30 50	
	c. Bartack lower end of bi-swing at side seam with a vertical 1/2 inch bartack superimposed on inner row of side seam stitching (double stitched seam), or the raise stitching.	Bartack		28 per bartack	30	30	
	d. Position the shoulder loops on shoulder with back edge of loop 3/4 to 1 inch back from shoulder seam and stitch raw edge of loop to edge of armhole.	301	SSa-1	8-14	30	30	

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NO.	MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD NEEDLE	THREAD BOBBIN/ LOOPER	THREAD COVER
16.	Attach waist tunnel for drawcords. Finished appearance. The drawcord shall not be caught in the tunnel stitching. The distance between the two rows of stitching shall be 7/8 to 1 inch.						
	a. Turn in top, bottom, and ends of the tunnel strip and stitch top and bottom of strip to inside of coat positioned as indicated on pattern, 1/16 to 1/8 inch from turned edges with drawcord inserted, catching the turn-in at end of strip in the stitching and the top of hanging pockets in the bottom row of tunnel stitching. Ends of tunnel strip may be prehemmed prior to attaching tunnel strip. The drawcord may be inserted into tunnel after strip has been attached to coat.	301 301	LSd-1 each edge EFa-1	8-14 10-14	30 30	30 30	
	or						
	b. In lieu of turning in the top and bottom raw edges, overedge stitch top and bottom edges, sides of the tunnel strip, and stitch to coat.	502 or 503 and 301	EFd-1 EFd-1 LSbj-1 each edge	6-8 6-8 10-14	50 1/ 50 1/ 50 1/	50 1/ 50 1/ 50 1/	
	c. Knot ends of drawcord.						
	1/ or 40 conforming to type IV or V, class 1, subclass B of V-T-285.						

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NO.	MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD NEEDLE	THREAD BOBBIN/ LOOPER	THREAD COVER
17.	Make front facing.						
	a. Seam facings to interlinings at front and back 1/8 to 3/16 inch from edges. (This operation may be omitted when joining fronts to facings in operation 19.a.).	301 or 401	SSa-1 SSa-1	8-14 8-14	30 30	30 50	
	b. Attach six snap fastener sockets through left facing and interlining positioned as indicated on pattern.						
	c. Sew three buttons through left facing and interlining positioned as indicated on pattern.	301 or 101		14-16 per button 14-16 per button	30 30	30	
18.	Join side and shoulder seams of lining and hem bottom.						
	a. Form pleat on back of lining at neck, as indicated on pattern. Position the neck reinforcement strip on the underside of lining at neck edge and stitch along shoulder and neck edges catching pleat in the stitching.	301	SSa-1	6-14	30	30	
	b. Join lining at side seams and shoulder seams with double-lapped and double-stitched seams. The seam may lap in either direction.	301 or 401	LSc-2 LSc-2	10-14 10-14	30 30	30 50	
	or						
	c. Join side seams and shoulder seams; turn and raise stitch seams 3/16 to 5/16 inch.	301 or 401	LSq-2 LSq-2	10-14 10-14	30 30	30 50	

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NO.	TABLE II. (cont'd) MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD		
					NEEDLE	BOBBIN/ LOOPER	COVER
18.	Join side and shoulder seams of lining and hem bottom. (cont'd)						
*	d. Turn in bottom of lining as indicated on pattern, and with the raw edge turned in stitch 1/16 to 1/8 inch from turned edge. The hem shall finish 5/8 to 3/4 inch wide.	301	EFb-1	10-14	30	30	
19.	Join lining fronts to facings.						
	a. Stitch front edge of the front piece of lining to facings; turn and raise stitch lining 1/16 to 1/8 inch from turned edge.	301 or 401	LSq-2 LSq-2	10-14 10-14	30 30	30 50	
	or						
	b. Join lining to facing with a double-lapped and double-stitched seam with the lining lapping the facings.	301 or 401	LSc-2 LSc-2	10-14 10-14	30 30	30 50	
20.	Make waist drawcord exits in lining.						
	Finished appearance. The cord exits shall be metal eyelets or made with buttonholes or sewn eyelets, with the purling on the side of the lining nearest the wearer and completely reinforced on the inside (see operation 1.i.).						
	a. Make one buttonhole in each front part of lining through reinforcement positioned as indicated on pattern, with the eyelet end toward the front opening of coat. The cut length shall be 1/2 to 5/8 inch.	Button-hole		44-46 per buttonhole including tack	30	30	
	or						

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TABLE II. (cont'd)

NO.	MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD NEEDLE	THREAD BOBBIN/ LOOPER	THREAD COVER
20.	Make waist drawcord exits in lining. (cont'd)						
	b. Make a 3/16 to 1/4 inch diameter finished opening sewn eyelet through reinforcement piece.	Eyelet		21 per eyelet	30	30	
	or						
	c. Clinch eyelets through fronts and reinforcement pieces.						
21.	Sew neck buttons on lining.						
	Sew two buttons to lining, positioned as indicated on pattern, through the neck reinforcement strip. The center of each button shall be 1/2 to 3/4 inch from collar seam.	301 or 101		14-16 per button 14-16 per button	30 30	30	
22.	Make sleeve linings.						
	a. Form two pleats on back arm seam, as indicated on pattern, and stitch across top edges. The pleats may be formed during operation 22.b. The fold of pleats on the side of the sleeve nearest the wearer shall be toward bottom of sleeve.	301	SSa-1	6-14	30	30	
	b. Join back arm seam and forearm seam with double-lapped and double-stitched seam. The pleats shall be caught in the stitching (see operation 22.a.).	301 or 401	LSc-2	10-14 10-14	30 30	30 50	
	or						

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NO.	MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD NEEDLE	THREAD BOBBIN/ LOOPER	THREAD COVER
22.	Make sleeve linings. (cont'd)						
	c. Join back arm seam and forearm seam with a single row of stitching with a 1/2 inch seam allowance. The pleats shall be caught in the stitching (see operation 22.a).	301 or 401	SSa-1 SSa-1	10-14 10-14	30 30	30 50	
23.	Make coat sleeves.						
	a. Form two pleats on back arm seam, as indicated on pattern, and stitch across top edges. The pleats may be formed during operation 23.h. The fold of pleat on outside of sleeve shall be toward bottom of sleeve.	301	SSa-1	6-14	30	30	
	or						
*	b. Join back arm seam of sleeve with a stitch, turn and raise stitch seam 3/16 to 1/4 inch from turned edge. The pleats shall be caught in the seaming stitches. The fold in the pleats on the outside of sleeve shall be toward the bottom of the sleeve.	301 or 401	LSq-2	10-14	30	30	
	c. Join forearm seam of sleeve with a stitch, turn and raise stitch seam, 3/16 to 1/4 inch from turned edge with top sleeve lapping the under sleeve.	301 or 401	LSq-2 LSq-2	10-14 10-14	30 30	30 50	
	or						
	d. Join forearm seam of sleeve with double-lapped and double-stitched seam.	301 or 401	LSc-2 LSc-2	10-14 10-14	30 30	30 50	
	e. Stitch facing to bottom of sleeve with stitching terminating at top edge of tab seam allowance.	301 or 401	SSe-2(a) SSe-2(a)	10-14 10-14	30 30	30 50	

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TABLE II. (cont'd)

NO.	MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD NEEDLE	THREAD BOBBIN/ LOOPER	THREAD COVER
23.	Make coat sleeves. (cont'd)						
	f. Trim seam allowance, turn facing to inside forcing out edges, and stitch 3/16 to 1/4 inch from edges of tab and facings.	301	SSe-2(b)	10-14	30	30	
	g. Place row of stitching across sleeve facing at base of point from bottom edge of tab to forearm seam.	301		10-14	30	30	
	h. Join back arm seam of sleeve with a double-lapped, double-stitched seam, 3/16 to 5/16 inch gage. The pleats shall be caught in the seaming (see operation 23.a).	301 or 401	LSc-2	10-14 10-14	30 30	30 50	
	i. Center (1/8 inch tolerance) a hook portion of nylon fastener tape (see operation 1.g.) on the underside of tab positioned 3/8 to 5/8 inch from pointed end and stitch to tab 1/16 to 1/8 inch from edges.	301	LSbj-1	10-14	30	30	
	j. Position a loop portion of nylon fastener tape (see operation 1.g.) to the inside bottom of sleeve facing, 3/8 to 5/8 inch from point of sleeve and centered (1/8 inch tolerance) with point, and stitch 1/16 to 1/8 inch from edges through facing and sleeve.	301	LSbj-1	10-14	30	30	
	k. Position a loop portion of nylon fastener tape (see operation 1.g.) on outside of underarm, even with the underarm joining seam with the top edge of tape parallel to top edge of facing and stitch to underarm 1/16 to 1/8 inch from edges.	301	LSbj-1	10-14	30	30	

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TABLE II. (cont'd)

NO.	MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD NEEDLE	THREAD BOBBIN/ LOOPER	THREAD COVER
23.	Make coat sleeves. (cont'd)						
	1. Place a horizontal 1/2 inch bartack at bottom of back arm seam, catching both rows of double-stitching. Place a vertical bartack parallel to back arm seam to reinforce top corner of tab, extending to line of stitching on tab.	Bartack		28 per bartack	30	30	
24.	Stitch sleeve lining to coat sleeves.						
	a. Insert sleeve lining into coat sleeve, turn under bottom raw edge of lining, overlap on sleeve facing 1/4 to 3/8 inch and stitch lining to sleeve 1/16 to 1/8 inch from turned edge. When applicable, excess lining material shall be evenly distributed on the coat sleeve by forming a pleat in the lining no greater than 3/8 inch on the bottom side of the sleeve only. The sleeve tab shall not be caught in the stitching. The bottom lining may be prehemmed.	301	LSb-1	10-14	30	30	
	b. Fold pointed end of sleeve to inside in line with stitching at base of point and locate position for the hook portion of nylon fastener tape (see operation 1.g.) to correspond to loop portion of fastener tape on sleeve facing.						
	c. Stitch hook portion of tape to inside of sleeve 1/16 to 1/8 inch from edges.	301	LSbj-1	10-14	30	30	
25.	Set sleeves of coat (outer shell).						
	a. Sew sleeve to armhole of coat with notches matching, distributing fullness and catching shoulder loop in the stitching, positioned as indicated on pattern.	301 or 401	LSq-2(a) LSq-2(a)	10-14 10-14	30 30	30 50	

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NO.	MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD NEEDLE	THREAD BOBBIN/ LOOPER	THREAD COVER
25.	Set sleeves of coat (outer shell). (cont'd)						
*	b. Turn sleeve to finished position, turn seam allowance toward shoulder and raise stitch around sleeve 3/16 to 1/4 inch from seam. The shoulder loops shall not be caught in raise stitching.	301	LSq-2	10-14	30	30	
26.	Join topcollar to lining.						
	Join topcollar to lining, turn collar to finished position and with the seam allowances toward top of collar raise stitch 1/16 to 1/8 inch from turned edge.	301 or 401 and 301	LSq-2(a) LSq-2(a) LSq-2(b)	10-14 10-14 10-14	30 30 30	30 50 30	
27.	Join undercollar and hood to coat.						
	Finished appearance. The collar shall finish smooth at neck line without being tight, puckered, twisted or pleated. Sequence of operations 27.a., 27.b., and 27.c. shall not be changed.						
	a. Position bottom edge of undercollar to coat and stitch collar to coat.	301 or 401	LSq-2(a) LSq-2(a)	10-14 10-14	30 30	30 50	
	b. Position bottom edge of hood curtain to inside bottom edge of undercollar as indicated by pattern, with front ends of curtain matching notches, and stitch curtain to undercollar.	301 or 401		10-14 10-14	30 30	30 50	
	or						
	c. Operations 27.a. and 27.b. may be combined into one operation.	301 or 401		10-14 10-14	30 30	30 50	

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NO.	MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD NEEDLE	THREAD BOBBIN/ LOOPER	THREAD COVER
27.	Join undercollar and hood to coat. (cont'd)						
	d. Turn up curtain and undercollar and raise stitch undercollar, 3/16 to 1/4 inch from turned edge.	301 or 401	LSq-2(b) LSq-2(b)	10-14 10-14	30 30	30 50	
28.	Set sleeve lining to coat lining.						
	Sew sleeve linings to coat lining at armhole, notches matching and distributing fullness. The seam allowance shall be inclosed between the outer shell and inner shell.	301 or 401	SSa-1 SSa-1	10-14 10-14	30 30	30 50	
29.	Sew inner shell to outer shell.						
	Finished appearance. The facings shall be uniformly stitched to fronts without distortion of the edges. The collar shall finish smooth and flat without twists, gathers, puckers or raw edges. The collar points shall be forced out and be uniform in appearance.						
	a. Seam inner shell to outer shell along fronts and around collar.	301 or 401	SSe-2(a) SSe-2(a)	10-14 10-14	30 30	30 50	
	b. Turn coat, work out collar points, and single stitch 3/16 to 1/4 inch from edge along fronts and around collar.	301	SSe-2(b)	10-14	30	30	
	c. Insert waist drawcord ends through lining drawcord exits.						

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NO.	MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD		
					NEEDLE	BOBBIN/ LOOPER	COVER
29.	Sew inner shell to outer shell. (cont'd)						
	d. Stitch top and undercollar together above the slide fastener with a row of stitching 5/8 to 3/4 inch from top edge of collar and with ends of stitching terminating at edge stitching of collar.	301		10-14	30	30	
30.	Make collar buttonholes.						
	Make a buttonhole through all plies of collar at each end, positioned diagonally, as indicated on patterns and the inside edge of eyelet 1/2 ± 1/8 inch from edge of collar point. The purling shall finish on the top collar.	Button-hole		44-46 per buttonhole including tack	30	30	
31.	Make exit buttonhole for bottom drawcord.						
	a. Make a 1/2 to 5/8 inch cut length horizontal buttonhole at bottom of left front, as indicated on pattern, through a reinforcement piece. The eyelet shall be toward the front opening.	Button-hole		44-46 per buttonhole including tack	30	30	
	b. Make a 3/16 to 1/4 inch diameter finished opening, sew eyelet through front and a reinforcement piece.	Eyelet		21 per eyelet	30	30	
	or						
	c. Clinch eyelet as indicated by mark on pattern through front and a reinforcement piece.						
32.	Hem bottom of coat, insert drawcord.						
	Finished appearance. The hem shall be uniform in width measuring 1 ± 1/4 inch wide, without pleats,						

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NO.	MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD NEEDLE	THREAD BOBBIN/ LOOPER	THREAD COVER
32.	Hem bottom of coat, insert drawcord. (cont'd)						
	puckers or twists. The drawcord shall not be caught in the stitching of the hem. The end of the drawcord shall be knotted to prevent return into the hem. The lining shall not be caught in the stitching.						
	a. Thread drawcord through exit buttonhole at bottom of coat. Drawcord may be threaded after formation of hem.						
	b. Turn up bottom of coat to the inside, as indicated on pattern, with the drawcord in the turn-up; turn in the raw edge and single stitch through coat with the stitching continued across end of left hem, the end of the right hem shall be partially closed and have an opening of 3/8 to 1/2 inch for drawcord exits.	301	EFb-1	10-14	30	30	
33.	Sew on slide fastener.						
	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 inch in length.						
	a. Position slide fastener on right front with front edge of scoops positioned as indicated on pattern, turn under top raw edge of tape and stitch through front, interlining and facing with two rows of stitching 3/16 to 1/4 inch apart and the back row of stitching 1/16 to 3/32 inch from back edge of tape and from the top to bottom of tape.	301	LSr-2(a)	10-14	30	30	

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TABLE II. (cont'd)

NO.	MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD		
					NEEDLE	BOBBIN/ LOOPER	COVER
33.	Sew on slide fastener. (cont'd)						
	b. Position slide fastener on left facing with front edge of scoops positioned as indicated on pattern, turn under top raw edge of tape and stitch through all plies 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 the top raw edge of tape may be turned under and caught in the stitching.	301		10-14	30	30	
	c. Bartack top of right and left fastener tapes with 1/2 inch vertical tacks superimposed on front rows of stitching next to scoops. Diagonal bartack may be used and shall catch both rows of double stitching.	Bartack		28 per bartack	30	30	
	d. Bartack bottom of slide fastener tapes with diagonal 1/2 inch bartack, catching both rows of double stitching and with top of bartack catching inner row of stitches.	Bartack		28 per bartack	30	30	
34.	Attach snap fasteners on right front.						
	a. Close slide fastener, mark position of six stud portions of snap fasteners on right front to correspond to sockets on left front. Open slide fastener, attach and clinch studs to right front as marked. The studs shall not catch the slide fastener tape.						
	b. Attach a socket portion of snap fastener to the underside of right front, as indicated on pattern. The socket shall be clinched through all plies.						

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NO.	MANUFACTURING OPERATIONS REQUIREMENTS	STITCH TYPE	SEAM AND STITCHING TYPE	STITCHES PER INCH	THREAD NEEDLE	THREAD BOBBIN/ LOOPER	THREAD COVER
35.	Sew on buttons.						
	a. Sew three buttons on inside of right fronts, through front, interlining and facing positioned as indicated on pattern.	301 or 101		14-16 per button 14-16 per button	30 30	30	
	b. Sew two buttons on the inside of each undersleeve at bottom edge of lining on forearm joining seam and back arm seam positioned 5/8 ± 1/8 inch from bottom edge of lining. The stitching shall go through all plies and measurements shall be taken from the center of the button.	301 or 101		14-16 per button 14-16 per button	30 30	30	
	c. Sew a button on outside of left front through all plies positioned as indicated on pattern to accommodate hood.	301 or 101		14-16 per button 14-16 per button	30 30	30	
	d. Sew a button on each shoulder seam (coat shell only) to correspond with the buttonhole in the shoulder loop. The loops shall lie flat and smooth.	301 or 101		14-16 per button 14-16 per button	30 30	30 30	
36.	Clean coats.						
	a. Trim all ends of stitching to 1/2 inch maximum length throughout (inside and outside) and remove loose threads from the coat.						
	b. Remove all spots, stains, and shade or size markings.						

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3.8 Finished measurements. The coat shall conform to the finished measurements shown in table III.

TABLE III. Finished measurements (inches)

	X-Short	Short	Regular	Long	Tolerance
1/2 Chest measurement 1/					
X-Small	20-3/4	20-3/4	20-3/4	20-3/4	± 3/4
Small	22-3/4	22-3/4	22-3/4	22-3/4	± 3/4
Medium	24-3/4	24-3/4	24-3/4	24-3/4	± 3/4
Large	--	26-3/4	26-3/4	26-3/4	± 3/4
X-Large	--	28-3/4	28-3/4	28-3/4	± 3/4
Back length 2/					
X-Small	28	29-1/2	31	32-1/2	± 1
Small	28-1/2	30	31-1/2	33	± 1
Medium	29	30-1/2	32	33-1/2	± 1
Large	--	31	32-1/2	34	± 1
X-Large	--	31-1/2	33	34-1/2	± 1
Sleeve length 3/					
X-Small	17-1/4	18-1/4	19-1/4	20-1/4	± 3/4
Small	17-1/4	18-1/4	19-1/4	20-1/4	± 3/4
Medium	17-1/4	18-1/4	19-1/4	20-1/4	± 3/4
Large	--	18-1/4	19-1/4	20-1/4	± 3/4
X-Large	--	18-1/4	19-1/4	20-1/4	± 3/4

1/ One-half chest measurement shall be measured at the base of the armhole, from folded edge to folded edge with front closed.

2/ The back length shall be measured along center back from undercollar seam to extreme bottom edge of coat.

3/ The sleeve length shall be measured from base of armhole along forearm seam to bottom of sleeve.

3.9 Workmanship. The end item shall conform to the quality of product established by this specification and the occurrence of defects shall not exceed the applicable acceptable quality levels.

4. QUALITY ASSURANCE PROVISIONS

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

4.1.1 Responsibility for compliance. All items shall meet all requirements of sections 3 and 5. The inspection set forth in this specification shall become 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 ensuring that all products or supplies submitted to the Government for acceptance comply with all requirements of the contract. Sampling inspection, as part of manufacturing operations, is an acceptable practice to ascertain conformance to requirements, however this does not authorize submission of known defective material, either indicated or actual, nor does it commit the Government to accept defective material.

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

4.1.3 Certificates of compliance. When certificates of compliance are submitted, the Government reserves the right to inspect such items to determine the validity of the certification.

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

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

4.3 First article inspection. When a first article is required (see 6.2), it shall be examined for the defects specified in 4.4.3 and 4.4.4.

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

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

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4.4.1.1 Certification. The contractor shall furnish a certificate of compliance stating that the ends of the drawcords conform to the requirements in 3.3.8.

4.4.2 Daily preproduction testing. The tests listed in table IV shall be performed each day prior to the start of production.

TABLE IV. Daily preproduction testing

Characteristic	Requirement	Test method
Fusing press settings and cleaning	3.3.4.1	4.4.2.1
Actual fusing temperature	3.3.4.1	4.4.2.2
Bonding strength	MIL-C-44296	4.4.2.3

4.4.2.1 Fusing press settings and cleaning. Before production begins each day, visually check all fusing machine settings for temperature, pressure and conveyor speed dwell time for conformance with manufacturer's recommendations. Nonconforming settings shall be adjusted accordingly. Actual settings will be recorded in the first column of figure 2. All portions of the fusing press in contact with the outershell material shall be cleaned once daily and confirmed on figure 2.

4.4.2.2 Actual fusing temperature. One swatch of outershell material, 8 inches in the machine direction and 11 inches in the cross-machine direction shall be cut from material to be used in the first of the days production. At the same time, one swatch of type V fusible material, 8 inches in the machine direction and 11 inches in the cross-machine direction shall be cut from material to be used in the first of the days production. All test swatches shall be cut into three equal parts of approximately 3.6 inches by 8 inches. The fusible test swatches may be cut slightly smaller in size to avoid fusing belt or head contamination. Sandwich a temperature strip (see 6.7) face down between one specimen of outershell material placed face down and a specimen of type V fusible material placed on top with the adhesive side down. The temperature strip shall be placed slightly within the fusible starter strip. All fusing tests shall have an approximate 1 inch by full width starter strip or non-fused area incorporated into the top portion of any given bond strength samples. This can be accomplished by placing a thin, non-adhesive material between the fusible interlining and outershell before fusing, or by folding the fusible onto itself. This sample shall be placed in the center of the fusing press conveyor or head with the outershell material down. Prepare two additional samples as described above using type V fusible material and place them on the left and right sides of the fusing head or conveyor belt, with the

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outershell material face down. After the fusing press is fully warmed up, run all samples through the fusing press, take the temperature of the strip specimens, determine the average of the three readings, and record the results in column 2 of figure 2. Retain each individual temperature reading in an organized, self-developed worksheet format. If the average falls outside of the fusible manufacturer's recommended range, or if there is a variance in excess of 10°F or 6°C between lanes, determine the cause, correct the problem, and repeat the testing process. Actual temperature and time shall be recorded in Chart A of figure 2.

4.4.2.3 Bonding strength. To determine bonding strength, trim all type V fusible swatches from the actual temperature test to 1 inch by 8 inch strips. Pinking shears shall not be used to cut strips. The outershell fabric of each shall be clamped at the top, and the fusible material pulled from the starter strips downwards in a vertical direction in a steady, continuous motion. A constant-rate-extension (CRE), or a constant-rate-traverse (CRT), or calibrated spring scale type tester may be used. If a spring scale type tester is used, it shall be calibrated once weekly. Any calibration procedure used shall assure an accuracy of 1/4 ounce or better, and the date of calibration shall be entered on figure 2. Average the three bonding strength readings in an organized self-developed worksheet format and record the averages on chart A of figure 2. If any individual reading fails to meet minimum bonding strength requirements, then cause must be determined, corrections made, and the material retested until the problem is resolved before commencing production. In case of bonding strength dispute see 6.6.

4.4.2.4 In-process fusing press maintenance and representative production testing. In-process tests listed in table V shall be performed. Actual fusing temperature and bonding strength testing shall be performed after every 4 hours of fusing production time. Pressure evenness and dwell time maintenance testing shall be performed once weekly. All representative production testing shall be performed once weekly. All testing shall be performed on outershell, and type V fusible materials, sampled from component lots to be consumed in the next 1000 units of end item production. Sample size, and acceptance/rejection criteria shall be as specified in the applicable test procedure. Tests shall include appearance before laundering and appearance and bonding strength after three launderings.

TABLE V. In-process fusing maintenance and representative production tests

Characteristic	Requirement	Test Procedure
Fusing press maintenance:		
Actual fusing temperature	3.3.4.1	4.4.2.2
Bonding strength	MIL-C-44296	4.4.2.3
Pressure evenness	3.3.4.1	4.4.2.5

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TABLE V. In-process fusing maintenance and representative production tests (cont'd)

Characteristic	Requirement	Test Procedure
Dwell time	3.3.4.1	4.4.2.5
Representative production: Appearance (before and after laundering)	3.3.4.1	4.4.2.6
Laundering bonding strength	4.4.2.4 and MIL-C-44296	4.4.2.6

4.4.2.5 Pressure evenness and dwell time. Cut five strips, 8 inches in the warp direction by 2 inches in the filling, of the outershell material and slightly smaller sized type V fusible material. Place each of the fusible strips, with the adhesive side down, on the top of the outershell material with the face side down and with a fusible starter strip (see 4.4.2.2). Arrange the five specimens on the fusing press conveyor belt alongside each other in five different lanes, consisting of extreme left, middle left, center, middle right, and extreme right. For head press equipment, place a specimen in each corner and one in the middle. Run the specimens through the fusing press and using a stop watch, mark the time elapsed between the time the leading edge of one of the specimens comes under pressure contact and the time it is released from the pressure contact. Enter the dwell time on figure 2. Remove the strips from the fusing machine when adequately cooled, cut fused outershell/fusible laminate to 1 inch in the filling direction, and perform the bonding test in 4.4.2.3 on all five specimens, recording the results for each specimen on figure 2. The dwell time should be consistent with the machine speed ratings, the fusible manufacturers recommended range and all five specimens should meet the minimum initial requirements for bond strength. Any variations shall be investigated for cause, corrections made, and the testing process repeated.

4.4.2.6 Laundered appearance and bonding strength. For testing, prepare an 8 inch in the warp by an 11 inch in the filling, outershell material specimen representative of each 1000 unit production end item lot. Prepare a slightly smaller sized type V fusible specimen and fuse in accordance with 4.4.2.1. Launder the fused sample three times in accordance with MIL-C-44296 requirements. Examine the test swatch for bubbling, delamination, or strike through and record observations on chart B of figure 2. Trim the swatch into three 1 inch by 8 inch strips and perform bonding strength tests using the bonding strength procedure in the preproduction testing in 4.4.2.2. Retain each individual bonding strength reading in an organized, self-developed worksheet format and record averages on chart B of figure 2. Any evidence of bubbling, delamination, or strike through, or bonding strength not meeting

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the requirements of MIL-C-44296 shall be investigated for cause, corrections made, and retesting performed before continuing production of the 1000 end items represented by the sample. At the conclusion of all tests, authorized initials shall be written in to verify contractor results.

4.4.3 End item visual examination. The end items shall be examined for the defects listed in table VI. The lot size shall be expressed in units of coats. The sample unit shall be one coat. The inspection level shall be II and the acceptable quality level (AQL), expressed in terms of defects per hundred units shall be 2.5 for major defects, 25.0 for major and minor A combined defects, and 65.0 for total (major, minor A and minor B combined) defects.

TABLE VI. End item visual defects

Examine	Defect	Classification Major	Minor A	Minor B
Material defects and damages	Smash, multiple float, or loose slub	101		
	Hole, cut, tear, burn, mend, or needle chew	102		
	Shade bar			301
	One or more exposed drill holes	103		
	Mottled or area of poor dye penetration extending more than 1/4 inch in any direction on outside part			302
	Misweave, loom stop/start or broken or missing pick or end			303
Shaded parts	Any outside part shaded except those parts cut from ends		201	
	Sleeve linings or other parts cut from ends (cited in operation 1.c) not matching each other			304
Cleanness	Any spot or stain on outside		202	
	Five or more thread ends of more than 1/2 inch on the outside or nine or more thread ends of 1/2 inch on the inside			305
	Two or more shade tickets not removed throughout the coat			306
	One or more shade stampings exposed or visible on the outside of coat		203	
	Any basting or holding threads visible on finished coat			307

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TABLE VI. End item visual defects (cont'd)

Examine	Defect	Classification Major	Minor A	Minor B
Component and assembly	Any component part or required operation omitted unless otherwise classified herein	104		
	Any operation not performed as specified (unless otherwise classified herein)		204	
Cutting	Any component part not cut in accordance with specified pattern and directional lines on pattern or not cut in accordance with document requirements	105		
Seams and stitchings	Accuracy of seaming:			
	- seam or component part twisted, puckered, or pleated (unless otherwise specified herein)			308
	- any part of coat caught in an unrelated operation or stitching		205	
	- end of stitching, when not caught in other seams or stitching, backtacked less than 1/4 inch			309
	- stitching overlapping ends of thread break less than 1/2 inch			310
	- ends of a continuous line of stitching overlapped less than three stitches on labels and box-stitching, or less than 1/2 inch on all other stitching			311
	Gage of stitching and seam allowances:			
	- irregular, i.e., unevenly gaged or corresponding stitchings not uniformly gaged (to be scored only when condition exists along major portion of seam)		206	
	- width not as specified or not within range of gage specified or varies more than 1/16 inch when no range is specified			312
	Stitches broken or missing on hems (except buttonholes):			
	- up to 1/2 inch inclusive			313
	- more than 1/2 inch		207	

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TABLE VI. End item visual defects (cont'd)

Examine	Defect	Classification Major	Minor A	Minor B
Seams and stitching (cont'd)	Skipped stitches (except buttonholes) or runoff stitches:			
	- 1/4 to 1/2 inch long (inclusive)			314
	- more than 1/2 inch		208	
	Raw edge more than 1/2 inch long:			
	- on outside		209	
	- on inside			315
	Seam or stitch type not as specified		210	
	Looper thread of 401 stitch type finishing on the outside of the coat	106		
	Stitches per inch (to be scored only when condition exists for a distance of more than 1/2 the length of the seam):			
	- more than maximum specified			316
	- less than minimum specified		211	
	Stitch tension:			
	Loose tension, resulting in a loose seam	107		
	Loose tension (exposed loops of top or bottom thread):			
	- for a distance of 2 to 4 inches inclusive			317
	- for a distance of more than 4 inches		212	
	Tight tension (stitches break when strain is applied in the direction of the seam or stitching)	108		
	Loose tension on bartack			318
	Direction of seam laps:			
	Outer shell (double-lapped seams):			
	- front overlapping back at side seam			319
	- back overlapping front at shoulder seam			320
	Inside of coat (double-lapped seam):			
	- facing overlapping lining			321
	Any other seam not turned in the direction specified			322
	Open seam:			
	On outside including undercollar (except buttonholes and hems):			
	- up to 1/4 inch			323

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TABLE VI. End item visual defects (cont'd)

Examine	Defect	Classification Major	Minor A	Minor B
Seams and stitching (cont'd)	- more than 1/4 but not more than 1 inch		213	
	- more than 1 inch	109		
	On inside:			
	- up to 2 inches inclusive			324
	- more than 2 inches		214	
	Selvage exposed on the outside of the seam		215	
Buttonholes and eyelets	One or more omitted or added	110		
	Not caught in fabric, causing stitches to pull away from fabric	111		
	Gimp omitted on one or more buttonholes			325
	One or more broken stitches:			
	- in two or more eyelets or buttonholes	112		
	- in one eyelet or buttonhole		216	
	More than two skipped stitches in one or more buttonholes or eyelets		217	
	Ragged edges			326
	Uncut buttonhole			327
	End of buttonhole insecurely tacked:			
	- on one buttonhole		218	
	- on two or more buttonholes	113		
	Metal eyelet (when used) not securely clinched or clinched tight cutting surrounding fabric		219	
	Buttonholes (except bottom hem and waist drawcord exits) less than 3/4 or more than 7/8 inch cut length		220	
	Eyelet barrel split			328
Buttons	Missing, loose, or broken:			
	- three or more buttons	114		
	- two buttons		221	
	- one button			329
	Inside front liner button(s) or left front hood button misplaced more than 1/2 inch from pattern mark		222	
	Stitching not locked at end of cycle (tug at loose end of thread when accessible to see if it will ravel)		223	

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TABLE VI. End item visual defects (cont'd)

Examine	Defect	Classification Major	Minor A	Minor B
Bartacks	Missing, insecure, or misplaced not serving intended purpose:			
	- more than two bartacks	115		
	- two bartacks		224	
	- one bartack (unless otherwise classified herein)			330
	Less than 7/16 or more than 9/16 inches long (except where tacking tape end to collar tab)			331
	Less than 15/16 or more than 1-1/16 inches long where tacking tape end to collar tab			332
Snap fasteners	Any omitted, mismated, broken, or bent	116		
	Any fastener not functioning properly, i.e., fails to snap closed, to provide a secure closure, or to open freely			333
	NOTE: The fasteners shall be snapped and unsnapped twice to determine whether parts of fastener separate freely and also effect a secure closure.			
	Clinched:			
	- excessively tight cutting adjacent material	117		
	- loosely, permitting any component to rotate freely, but not to the degree that any component can be expected to become detached during use		225	
	- loosely, to the degree that components can be expected to become detached during use	118		
	Incorrect style	119		
	Eyelet or button barrel splits:			
	- more than three		226	
	- three or less			334

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TABLE VI. End item visual defects (cont'd)

Examine	Defect	Classification Major	Minor A	Minor B
Drawcords (waist, bottom, and hood)	One or more omitted or caught in stitching	120		
	One or both ends of drawcord not dipped or impregnated less than 1/2 inch in length			335
	Knot at one or both ends omitted			336
Length of bottom drawcords	Cut length not within specified tolerance		227	
Length of waist drawcords	Cut length not within specified tolerance		228	
Length of hood drawcord	Cut length not within specified tolerance		229	
NOTE:	Drawcords shall be measured with knots untied.			
	Outside of coat			
Collar	Construction and setting:			
	Undercollar and hood curtain not joined to coat as specified	121		
	Undercollar or topcollar tight at neck seam causing puckering or pleating on front or back		230	
	Topcollar twisted, causing collar to have diagonal twist		231	
	Topcollar tight, causing edges to curl			337
	Fullness or puckering on topcollar		232	
	Collar ends poorly shaped or not uniform shape		233	
	Collar edge uneven or not forced out		234	
	Collar ends uneven in length by 3/8 inch or more		235	
	Collar off center by 1/2 inch or more		236	
	Stitching of undercollar to topcollar (at top of collar):			
	- omitted		237	
	- less than 5/8 or more than 3/4 inch from top edge of collar			338

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TABLE VI. End item visual defects (cont'd)

Examine	Defect	Classification Major	Minor A	Minor B
	Outside of coat (cont'd)			
Collar (cont'd)	Collar buttonholes (position and size):			
	- constructed other than in a diagonal position		238	
	- center of eyelet out of diagonal alignment with corner of collar by 1/4 inch or more, or positioned less than 3/8 inch or more than 5/8 inch from collar point		239	
	- constructed with purling not finished on topcollar			339
	Undercollar buttonholes (position and and size):			
	- less than 4 or more than 4-1/2 inches from center of collar		240	
	- end less than 3/8 or more than 5/8 inch from collar seam			340
	- purling not finishing on the inside of collar		241	
	Collar slide fastener:			
	- slide on right side of collar when fastener is closed			341
	- any part of assembly omitted, bent, broken, cracked, or otherwise defective affecting function	122		
	- back edge of chain less than 1/8 or more than 3/16 inch from folded edge of opening		242	
	- folded edge of opening set too close to chain not permitting slider to operate freely	123		
	- fastener not set on flat and smooth		243	
	- length of slide fastener chain less than 16-1/4 or more than 16-11/16 inches		244	
	Collar tab and nylon fasteners:			
	- collar tab finishing less than 2-7/16 or more than 2-11/16 inches long		245	

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TABLE VI. End item visual defects (cont'd)

Examine	Defect	Classification Major	Minor A	Minor B
	Outside of coat (cont'd)			
Collar (cont'd)	- tab twisted or not finishing flat			342
	- fastener not folded over end of tab full depth			343
	- Cut length of fasteners more than or less than tolerance specified			344
	- one or more fasteners missing	124		
	- fastener or tab misplaced, not serving intended purpose		246	
	- tab not finished toward front of coat			345
Front closure	Snap fasteners on fronts:			
	Bulge or twist on front between fasteners, affecting appearance:			
	- caused by more than two fasteners out of position	125		
	- caused by one or two fasteners out of position		247	
	One or more reversed, i.e., sockets on right front and studs on left facing	126		
	Fastener on left facing clinched through left front	127		
	Fastener on right front not clinched through facing	128		
	Fasteners misplaced, i.e., bulge on either front between fasteners and slide fastener when both are closed		248	
	Front facing tight, short, or twisted, causing fullness or twist on front		249	
	Slide fastener tape on right front caught by stud		250	
	Slide fastener:			
	- any part of assembly omitted, bent, broken, cracked, or otherwise defective, affecting function	129		
	- length of slide fastener less than 18-1/8 or more than 18-3/4 inches	130		
	- knot omitted on thong			346

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TABLE VI. End item visual defects (cont'd)

Examine	Defect	Classification Major	Minor A	Minor B
	Outside of coat (cont'd)			
Front closure (cont'd)	- tape stitching too close to metal chain not permitting slider to pass freely	131		
	- tape set on too loosely or too tightly causing noticeable bulging or twisting of tapes or of the front opening when closed			347
	- one or both bartacks at top end of tape omitted or both rows of stitching not caught in stitching when diagonal bartack is used			348
	- one or both bartacks at bottom end of tapes omitted or not placed in a diagonal position, catching both rows of stitching		251	
	- top raw edge of tape not turned under and caught in stitching		252	
	- tapes attached with less than two rows of stitching		253	
	- tape stitching not through shell and facing on right and left sides		254	
	Length of front opening:			
	Open fronts uneven in length:			
	- more than 1 inch	132		
	- 1/2 to 1 inch		255	
	Closed fronts uneven in length at bottom:			
	- left front shorter than right front by more than 1/2 inch	133		
	- left front shorter than right front 1/4 to 1/2 inch		256	
	- left front longer than right front by more than 3/8 inch		257	
Front body	Front edge uneven or not forced out		258	
Body linings	Tight, short, or twisted, causing fullness or twist on outside of front or back		259	
	Lining too long, exposed beyond bottom of coat			349

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TABLE VI. End item visual defects (cont'd)

Examine	Defect	Classification Major	Minor A	Minor B
	Outside of coat (cont'd)			
Sleeve linings	Tight, short, or twisted, causing fullness or twist on outside of sleeve			350
Pocket and flap	General construction:			
	- lining tight, short, or twisted, causing fullness or twist on flap or causing flap edge to curl		260	
	Flap poorly shaped		261	
	Breast pockets, or flaps, or lower pocket flaps out of alignment:			
	- by more than 1 inch	134		
	- 1/2 to 1 inch inclusive		262	
	Corner of pocket or flap not back-stitched		263	
	Corner of flap caught in bartack of pocket opening		264	
	Corner of lower pocket exposed beyond edge of flap:			
	- by more than 1/4 inch	135		
	- 1/8 to 1/4 inch inclusive		265	
Pocket and flap	Side edge of flap not covering edge of breast pocket by 3/16 inch or more		266	
	Snap fastener on pocket:			
	Fastener clinched through outside of flap	136		
	Fastener off center with point of flap by more than 1/4 inch			351
	Stud out of alignment with socket causing a twist, pull, or bulge, on pocket or flap		267	
	Fastener not clinched through front of inside hanging pocket	137		
	Breast pocket:			
	Flap placed less than 1/2 or more than 3/4 inch above pocket opening (measure from top of pocket to underside of flap)			352
	Pocket not parallel with front edge by 3/8 inch or more		268	

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TABLE VI. End item visual defects (cont'd)

Examine	Defect	Classification Major	Minor A	Minor B
	Outside of coat (cont'd)			
Pocket and flap (cont'd)	Poorly shaped or set on crookedly		269	
	Stitched to front with no fullness at opening		270	
	Edge of bellows not hemmed before setting to front			353
	Bellows stitched closed beyond end of bartack:			
	- by more than 1 inch	138		
	- by 1/8 to 1 inch inclusive		271	
	Hem less than 1-3/4 or more than 2-1/4 inches wide at center			354
	One or two bartacks missing		272	
	Lower pocket:			
	Top edge of welt at corners 3/16 inch or more below seam joining flap to fronts			355
	Lower edge of welt exposed 1/8 inch or more beyond side edge of flap		273	
	Hanging pocket too long, exposed below bottom of coat			356
	Welt finishing less than 3/8 or more than 1/2 inch wide			357
	Top of pocket not caught in the bottom of the waist tunnel stitching	139		
	Bottom folded edge of hanging pocket cut during overedge stitching operation	140		
	Pocket opening extending beyond flap on hanging pocket	141		
Waist tunnel	Construction and position:			
	Waist tunnel stitching less than 7/8 or more than 1 inch wide		274	
	Irregular in width or stitched crookedly		275	
	Outside shell shows bulge, twist, shortness, fullness, or delamination due to tunnel stitching		276	

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TABLE VI. End item visual defects (cont'd)

Examine	Defect	Classification Major	Minor A	Minor B
	Outside of coat (cont'd)			
Waist tunnel (cont'd)	Tunnel stitching out of alignment when coat is closed:			
	- by more than 3/4 inch		277	
	- by 3/8 to 3/4 inch inclusive			358
	End of tunnel strip not turned in and caught in stitching of strip			359
	Waist tunnel buttonhole or eyelet:			
	Reinforcement piece omitted		278	
	Constructed with purling not on side nearest the wearer		279	
	Eyelet of buttonhole not toward front edge of coat			360
	Cut length of buttonhole less than 1/2 or more than 5/8 inch long		280	
	Eyelet (when used) less than 3/16 or more than 1/4 inch diameter finished opening		281	
Back	Stitching across bottom end of bi-swing pleats not through inner plies only		282	
Hood	One or more pleats missing			361
	One or two darts missing		283	
	Raw edges of dart exposed on outside		284	
	One or both eyelets not securely clinched or clinched too tightly cutting the fabric		285	
	One or both eyelets not clinched through double reinforcement piece		286	
	Tunnel finishing less than 7/8 or more than 1-1/8 inches wide			362
	Tunnel finishing on outside of hood		287	
	Bottom of hood overlapped on hood curtain more than 4 or less than 3-3/4 inches (measured from line of stitching to bottom edge of hood at front ends)		288	

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TABLE VI. End item visual defects (cont'd)

Examine	Defect	Classification Major	Minor A	Minor B
	Outside of coat (cont'd)			
Sleeve	Construction and setting of sleeve:			
	Reversed, i.e., right sleeve set on left armhole	142		
	One or both pleats on undersleeve (at back arm seam) omitted		289	
	Outside folded edge of pleat folded toward top of sleeve			363
	Fullness at sleevehead not evenly distributed		290	
	Tight in armhole, causing puckers or pleats on front or back		291	
	Sleeve back seam unequally distanced from shoulder seam by 3/4 inch or more (outside)			364
	Undersleeve lapped on top sleeve at back arm seam			365
	Bottom sleeve twisted or finished with excessive fullness		292	
	Sleeve point or tab not forced out.			366
	Fastener misplaced not serving intended purpose			367
	One or more fasteners missing	143		
	Cut length of fasteners more than or less than tolerance specified			368
	Fasteners out of alignment distorting bottom of sleeve when fasteners are engaged		293	
	Sleeve tab caught in stitching of sleeve lining to sleeve		294	
Shoulder loops	Construction and position:			
	Misplaced, i.e., shoulder seam exposed	144		
	Misplaced, or button and buttonhole out of alignment, causing twist, bulge, or distortion on shoulder loop		295	
	Misplaced, i.e., one loop further forward or backward from position of other loop:			
	- more than 1 inch	145		

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TABLE VI. End item visual defects (cont'd)

Examine	Defect	Classification Major	Minor A	Minor B
	Outside of coat (cont'd)			
Shoulder loops (cont'd)	- more than 1/2 but not more than 1 inch		296	
	- 1/4 to 1/2 inch inclusive			369
	Back edge of loop less than 3/4 or more than 1 inch from shoulder seam edge			370
	Shoulder loop less than 6-1/2 inches long measured from shoulder seam to point of loop	146		
	Poorly shaped or both loops not shaped uniformly	147		
	Raise stitching or double stitching around armhole seam through loop	148		
	Shoulder loop button and buttonhole:			
	Out of alignment, causing a twist, bulge, or distortion on loop or excessive puckers on shoulder		297	
	Eyelet of buttonhole less than 3/8 or more than 5/8 inch from point of loop or off center by more than 1/8 inch			371
	Buttonhole purling on underside of loop			372
	Inside of coat			
Facing, front	Twisted, not affecting smoothness on outside of coat			373
	Twisted, affecting smoothness on outside of coat		298	
	Excessive fullness			374
Neck buttons and reinforcement piece	Top edge of center reinforcement piece not caught in collar or shoulder seam		299	
	Button stitching not caught through reinforcement piece:			
	- one button		201a	
	- two buttons	149		

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TABLE VI. End item visual defects (cont'd)

Examine	Defect	Classification Major	Minor A	Minor B
	Inside of coat (cont'd)			
Neck buttons and reinforcement piece (cont'd)	Two center neck buttons less than 1/2 or more than 3/4 inch from collar seam (measurement taken from center of button)			375
	Button stitching caught through outside surface of back:			
	- one button			376
	- two buttons	150		
Bottom tunnel construction	Hem less than 3/4 or more than 1-1/4 inches wide		202a	
	Stitching across end of left front edge of tunnel omitted or insecure			377
	Right end hem opening of coat less than 3/8 or more than 1/2 inch			378
	Bottom of coat twisted, pleated, or puckered		203a	
	Tunnel twisted not affecting smoothness on outside of coat			379
	Tunnel twisted affecting smoothness on outside of coat		204a	
Bottom tunnel buttonhole or eyelet	Less than 6 or more than 8 inches from edge		205a	
	Off center with width of hem by 1/4 inch or more		206a	
	Constructed through outside of coat	151		
	Reinforcement stay piece omitted	152		
	Not completely caught through stay piece		207a	
	Stitching forming hem caught through buttonhole or eyelet preventing use of same	153		
	Cut length of buttonhole less than 1/2 or more than 5/8 inch long		208a	
	Eyelet of buttonhole finishing toward back			380
	Eyelet (when used) less than 3/16 or more than 1/4 inch diameter finished opening		209a	

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TABLE VI. End item visual defects (cont'd)

Examine	Defect	Classification Major	Minor A	Minor B
	Inside of coat (cont'd)			
Body lining	Fullness, affecting appearance			381
	Lining seams out of alignment with seams of shell by more than 1/2 inch			382
	Bottom hem less than 5/8 or more than 3/4 inch wide			383
	Lining caught in bottom tunnel stitching			384
Sleeve lining	Too long causing a fold 1/2 inch or more at top edge of sleeve facing		210a	
	One or more pleats omitted		211a	
Bottom of sleeve lining buttons	Not placed on sleeve joining seams		212a	
	Placed less than 1/4 or more than 1/2 inch from bottom edge of lining (measurement taken from center of button)		213a	
Labels: Combination or instruction label	Missing, incorrect, or illegible	154		
	Not stitched on all four sides			385
	Instruction label not positioned on right front toward bottom less than 3 or more than 4 inches back of facing			386
	Combination size and identification label or combination size, identification and instruction label (when used) not positioned on back of lining off center, less than 1-1/2 or more than 2 inches down from collar seam			387
	Back pleat caught or restricted by combination label stitching		214a	
Fusing	Bubbling or delamination on fused components	155		
	Any strike through or bleed through		215a	
	Any resin transfer:			
	- on any fused component		216a	
	- on any non-fused component	156		

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TABLE VI. End item visual defects (cont'd)

Examine	Defect	Classification Major	Minor A	Minor B
	Inside of coat (cont'd)			
Fusing (cont'd)	Color fading of fused parts, i.e., fused parts shaded from rest of garment		217a	

4.4.4 End item dimensional examination. The end items shall be examined for conformance to the dimensions specified in table III. Any dimension not within the specified tolerance and any sleeve length uneven in length by 1/2 inch or more shall be classified as a defect. The lot size shall be expressed in units of coats. The sample unit shall be one coat. The inspection level shall be S-3 and the AQL, expressed in terms of defects per hundred units shall be 4.0.

4.4.5 Packaging examination. The fully packaged end items 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.

Examine	Defect
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 sealing or closure of flap, improper taping, loose strapping, or inadequate stapling Bulged or distorted container
Content	Number of coats per container is more or less than specified 1/

1/ For this defect, one shipping container shall be examined.

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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.

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

5. PACKAGING

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

5.1.1 Level A preservation. Each coat, with collar slide fastener closed shall be folded inside out with front even, the sleeves placed together and with the collar turned to the inside. The coat shall be further folded to achieve approximate dimensions of 23 by 14-1/2 inches. Each coat shall then be placed in a plastic bag conforming to A-A-50083.

5.1.2 Commercial preservation. Coats shall be preserved in accordance with ASTM D 3951.

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

* 5.2.1 Level A packing. Ten coats of one class and size only, preserved as specified in 5.1, shall be packed in a snug-fitting fiberboard shipping container conforming to style RSC-L, grade V2s of PPP-B-636. The inside of each shipping container shall be fitted with a box liner conforming to type CF, class weather-resistant, variety DW, grade V15c of PPP-B-636. The coats shall be packed flat, ten in depth within a shipping container. Inside dimensions of each shipping container shall approximate 23-1/2 inches in length, 15 inches in width, and 9-1/2 inches in depth for sizes X-Small through Medium and 23-1/2 inches in length, 15 inches in width, and 12 inches in depth for sizes Large and X-Large. Each shipping container shall be

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closed in accordance with method III, waterproofed in accordance with method V, and reinforced as specified in the appendix of PPP-B-636. Shipping containers shall be arranged in unit loads in accordance with MIL-L-35078 for the type and class of load specified (see 6.2). Strapping shall be limited to nonmetallic strapping for type II, class F loads.

* 5.2.2 Level B packing. Ten coats of one class and size only, preserved as specified in 5.1, shall be packed in a snug-fitting fiberboard shipping container conforming to style RSC-L, type CF (variety SW) or SF, class domestic, grade 275 of PPP-B-636. The inside of each shipping container shall be fitted with a box liner conforming to type CF, class domestic, variety DW, grade 275 of PPP-B-636. The coats shall be packed flat, ten in depth within a shipping container. Inside dimensions of each shipping container shall approximate 23-1/2 inches in length, 15 inches in width, and 9-1/2 inches in depth for sizes X-Small through Medium and 23-1/2 inches in length, 15 inches in width, and 12 inches in depth for sizes Large and X-Large. Each shipping container shall be closed in accordance with method II as specified in the appendix of PPP-B-636.

5.2.2.1 Weather-resistant fiberboard shipping containers. When specified (see 6.2), shipping containers 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.

5.2.3 Commercial packing. Coats, preserved as specified in 5.1, shall be packed in accordance with ASTM D 3951.

5.3 Palletization. When specified (see 6.2), coats packed as specified in 5.2.2 or 5.2.3 shall be palletized on a 4-way entry pallet in accordance with load type Ia of MIL-STD-147. Pallet types shall be type I (4-way entry), type IV, or type V in accordance with MIL-STD-147. Each prepared load shall be bonded with straps in accordance with bonding means C and D or film bonding means F or G. Pallet pattern shall be number 3 in accordance with 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.

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 coats are intended for wear by personnel of the Department of Defense.

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* 6.2 Acquisition requirements. Acquisition documents must specify the following:

a. Title, number, and date of this specification.
b. Class and size required (see 1.2).
c. Issue of DODISS to be cited in the solicitation, and if required, the specific issue of individual documents referenced (see 2.1.1 and 2.2).
d. When a first article is required (see 3.1, 4.3 and 6.3).
e. Levels of preservation and packing (see 5.1 and 5.2).
f. Type and class of unit load required (see 5.2.1).
g. When weather-resistant grade fiberboard shipping containers are required for level B packing (see 5.2.2.1).
h. When palletization is required (see 5.3).

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

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

6.5 Prong type snap fastener. A source of supply for the series 200 prong type snap fastener specified in 3.3.13 is Universal Fastener, P.O. Box 467, Lawrenceburg, KY 40343.

6.6 Bonding strength dispute procedure. In case of a dispute, the average of the first 3 inches of the five highest and five lowest bonding strength peaks from a chart recording on a CRE Tensile Tester, running at 12 in./min. shall determine the bonding strength. If splitting is observed, then just the highest peak shall be regarded as the bonding strength.

6.7 Temperature strip. Suggested sources for temperature strips are as follows:

MRCINC, Reatec Divsion, Telephone Number (215) 687-4300
Paper Thermometer Co., Telephone Number (603) 547-2034

Also, each fusible manufacturer supplies their own brand of temperature strips.

6.8 Supersession data. The class 3 desert camouflage pattern (6 color), cotton/nylon twill coat has been deleted as it is no longer required.

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* 6.9 Subject term (key word) listing.

Camouflage
Clothing
Desert
Fusible
Outerwear
Water repellent
Woodland

6.10 Changes from previous issue. The margins of this specification are marked with asterisks to indicate where changes (additions, modifications, corrections, deletions) from the previous issue were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content as written, irrespective of the marginal notations and relationship to the last previous issue.

Custodians:

Army - GL
Navy - NU
Air Force - 99

Review activities:

Army - MD
Navy - MC
Air Force - 82
DLA - CT

User activity:

Air Force - 45

Preparing activity:

Army - GL

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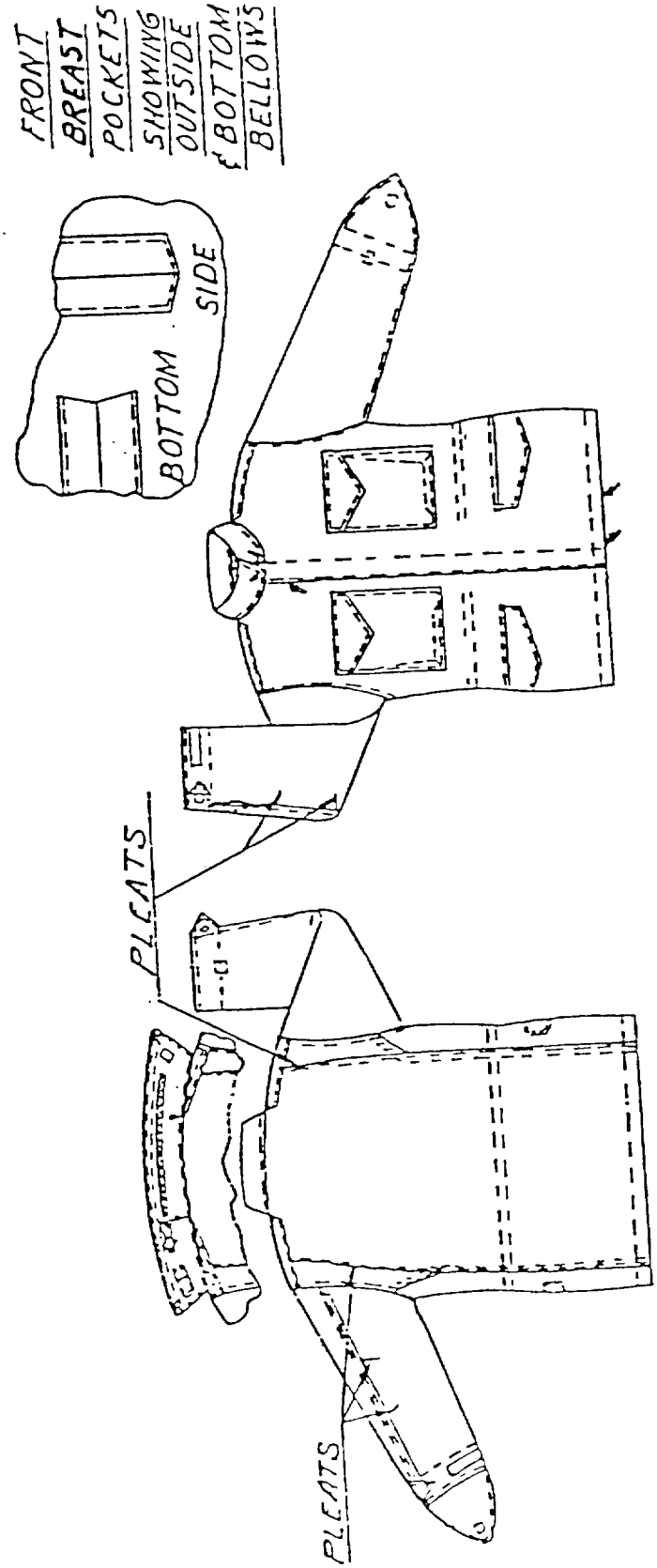

FIGURE 1 COAT, COLD WEATHER: FIELD

2-1-108E

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CONTRACT # - _____

CONTRACTOR - _____

QAR NAME _____

FUSING PRESS SETTINGS RECOMMENDED BY FUSIBLE MFG. _____

STYLE NO.: _____

TEMPERATURE, °F (°C) _____

PRESSURE, PSI (BAR) _____

DWELL TIME, SEC _____

CHART A

DATE DD/MM/YY	INITIAL DAILY TEST (AFTER MACHINE WARM UP)	(4 HOURS LATER)	FUSING PRESS CLEANLINESS (ONCE DAILY)
MS MT - P - DT / /	T_____ TE BS	T_____ TE BS	T_____ AI: _____
MS MT - P - DT / /	T_____ TE BS	T_____ TE BS	T_____ AI: _____
MS MT - P - DT / /	T_____ TE BS	T_____ TE BS	T_____ AI: _____
MS MT - P - DT / /	T_____ TE BS	T_____ TE BS	T_____ AI: _____
MS MT - P - DT / /	T_____ TE BS	T_____ TE BS	T_____ AI: _____
MS MT - P - DT / /	T_____ TE BS	T_____ TE BS	T_____ AI: _____

MIN RQMT: 2 LBS. (907 GMS) /INCH OR SPLIT

PRESSURE EVENNESS, BONDING STRENGTH
TEST ONCE WEEKLY
DATE:
/ / _____ AI _____

DWELL TIME, SEC.
TEST ONCE WEEKLY

DATE:	MACHINE SETTING	STOP WATCH READING
/ /		

AI _____

SPRING SCALE CALIBRATION
TEST ONCE WEEKLY
DATE:
/ / AI _____

CHART B

REPRESENTATIVE PRODUCTION UNITS/1,000	DATE DD/MM/YY	PROD. LOT #	BS AFTER 3 LAUNDER.	APPEAR AFTER 3 LAUNDER	AI
1 - 1,000	/ /				
1,001 - 2,000	/ /				
2,001 - 3,000	/ /				
3,001 - 4,000	/ /				
4,001 - 5,000	/ /				
5,001 - 6,000	/ /				
6,001 - 7,000	/ /				
7,001 - 8,000	/ /				
8,001 - 9,000	/ /				
9,001 - 10,000	/ /				

MIN RQMT: 1.5 LBS. (680 GMS)/INCH OR SPLIT GOOD

KEY:

AI - AUTHORIZED INITIALS TO VERIFY CONTRACTOR TESTS
BS - BONDING STRENGTH/ IN., AVE.
DT - DWELL TIME
MS - MACHINE SETTING
MT - MACHINE TEMPERATURE
P - PRESSURE
T - TIME
TE - TEMPERATURE STRIP READING, AVE.
APPEAR - APPEARANCE

FIGURE 2. FUSING PRESS MAINTENANCE/BONDING STRENGTH CHECK CHARTS - ONE WEEK PRE-PRODUCTION (CHART A) - REPRESENTATIVE PRODUCTION (CHART B)

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STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

INSTRUCTIONS

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

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

I RECOMMEND A CHANGE:	1. DOCUMENT NUMBER	2. DOCUMENT DATE (YYMMDD)
	MIL-C-43455J	1991 August 21

3. DOCUMENT TITLE

COAT, COLD WEATHER, FIELD

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	b. TELEPHONE (*Include Area Code*)	
U.S. Army Natick RD&E Center	(1) Commercial 508-651-4532	(2) AUTOVON/DSN 256-4532
c. ADDRESS (*Include Zip Code*) Commander, U.S. Army Natick RD&E Center ATTN: STRNC-IRT Natick, MA 01760-5019	IF YOU DO NOT RECEIVE A REPLY WITHIN 45 DAYS, CONTACT: Defense Quality and Standardization Office 5203 Leesburg Pike, Suite 1403, Falls Church, VA 22041-3466 Telephone (703) 756-2340 AUTOVON 289-2340	

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