

MIL-STD-1494B  
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MILITARY STANDARD  
PROVISIONS FOR EVALUATING QUALITY  
OF  
RAINCOATS



AMSC N/A

FSC 8405

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## MIL-STD-1494B

## FOREWORD

1. This military standard is approved for use by all Departments and Agencies of the Department of Defense.
- \* 2. Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: U.S. Army Natick Research, Development, and Engineering Center, Natick, MA 01760-5014 by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.
- \* 3. This document supplements the military specifications listed below. It provides a standard description for defects and standardizes examination requirements.

<u>SPECIFICATION</u>	<u>TITLE</u>
* MIL-R-24918	Raincoats, Men's, with Removable Liner (CG)
* MIL-R-24919	Raincoats, Women's, with Removable Liner (CG)
* MIL-C-24920	Coat, All-weather, Woman's, with Removable Liner
* MIL-C-24921	Coat, All-weather, Man's, with Removable Liner
MIL-R-43518	Raincoats, Men's, Quarpel
* MIL-R-43962	Coat, All-weather, Woman's Junior ROTC, with Removable Liner
MIL-C-43972	Coat, All Weather: Woman's Black, with Removable Liner
MIL-C-44030	Coat, All Weather: Man's Black, with Removable Liner
MIL-R-87110	Coat, All-weather: Man's, Blue, with Removable Liner
MIL-C-87170	Coat, All Weather, Woman's

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## 1. SCOPE

\* 1.1 Scope. The purpose of this document is to provide standardized provisions for evaluating the quality of raincoats, and removable liners (when applicable).

1.2 Application. This document will be made applicable to contracts by references in the appropriate raincoat specifications. These documents require that: (a) as a final step in the contractor's production control plan before formation of a lot, each raincoat shall be buttoned on a model form and examined for selected defects and (b) a raincoat containing a selected defect shall not be included in the end item lot. Selected defects are those defects in table II which are identified by an asterisk (\*) in the "Point value" column. The selected defects are listed individually in table III.

## \* 2. APPLICABLE DOCUMENTS

\* 2.1 Government documents.

\* 2.1.1 Standards. The following standards 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.

## STANDARDS

## FEDERAL

FED-STD-4 - Glossary of Fabric Imperfections

## MILITARY

MIL-STD-105 - Sampling Procedures and Tables for Inspection by Attributes

MIL-STD-109 - Quality Assurance Terms and Definitions

\* 2.2 Non-Government publications. The following document(s) form a part of this document to the extent specified herein. Unless otherwise specified, the issues of the documents which are DoD adopted are those listed in the issue of the DODISS specified in the solicitation. Unless otherwise specified, the issues of documents not listed in the DODISS are the issues of the non-Government documents which are current on the date of the solicitation.

AATCC Photographic Comparative Rating of Single and Double Needle Seams  
(Method 88B, two photos)

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- \* 2.3 Order of precedence. In the event of a conflict between the text of this document and the references cited herein, the text of this document shall take precedence. Nothing in this document, however, shall supersede applicable laws and regulations unless a specific exemption has been obtained.
- \* 2.4 Source of documents.
  - \* 2.4.1 Government standards. Copies of the referenced federal and military standards are available from the Department of Defense Single Stock Point, Commanding Officer, Naval Publications and Forms Center, 5801 Tabor Avenue, Philadelphia, PA 19120-5099. For specific acquisition functions, these documents should be obtained from the contracting activity or as directed by the contracting activity.
  - \* 2.4.2 Non-Government publications. Non-Government documents are generally available for reference from libraries and technical groups. The documents listed may be obtained as follows:

AATCC Photographic Comparative Rating of Single and Double Needle Seams  
(Method 88B, two photos):

Copies may be purchased from The American Association of Textile Chemists and Colorists, P.O. Box 12215, Research Triangle Park, NC 27709.

3. DEFINITIONS

- 3.1 Fabric defects. Definitions of fabric defects, where applicable, shall be in accordance with FED-STD-4.
- 3.2 Knots and slubs. Only knots and slubs that exceed the limits specified in the basic cloth specification shall be scored as defects in evaluating quality of the raincoat.
- \* 3.3 Open seam. A seam shall be classified as open when one or more stitches joining a seam are broken or runoff, or when two or more continuous skipped stitches occur. Double stitched seams and safety stitches are considered open when one or both rows of the stitching are open.
- 3.4 Raw edge. A raw edge is defined as any edge not finished as specified including any protruding edge on the outside of the raincoat.
- 3.5 Defective button. A button shall be considered defective when it has a sharp, rough, cracked or split edge; has scratch, dent, blemish or imbedded air bubble(s) or foreign matter; or is badly shaded.

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- \* 3.6 Outside - inside. The terms outside and inside as used in this standard are defined as follows:

**Outside:** Any part of raincoat (including undersleeve) that is visible when the completely buttoned raincoat is observed on the model form with collar in both the up and down position. When applicable, shoulder loops, and the area on raincoat covered by overlap of back vent are considered part of the outside.

**Inside:** Any part of raincoat that is not visible when the completely buttoned raincoat is observed on the model form with collar in both the up and down position.

- \* 3.7 Puckering. In the course of the sampling examination, seams suspected of being puckered shall be examined at a distance of 3 feet in comparison with the AATCC photographic comparative rating for seams. Puckering on a major portion of the suspect seam that has a rating of less than 4 for single needle seams or double needle seams shall be scored as a puckered seam.

3.8 Quality assurance terms and procedures. Definitions of quality assurance terms and procedures, where applicable, shall be in accordance with MIL-STD-105 and MIL-STD-109.

\*

#### 4. GENERAL REQUIREMENTS

This section is not applicable to this standard.

\*

#### 5. DETAILED REQUIREMENTS

- \* 5.1 Purpose. This document contains inspection provisions for end item examination, dimensional examination, and packaging examination for raincoats. If there are any inconsistencies between the requirements of the appropriate specification and the provisions of this standard, the specification shall control. This standard assigns to the listed defects, point values of 1, 2, or 3 depending on degree of severity. The higher point values are assigned to those defects having more detrimental effect on the appearance or serviceability of the item. The defects identified by an asterisk (\*) in the "Point Value" column of table II are those defects having the most detrimental effect on appearance or serviceability of the item.

5.2 Inspection procedures. Inspection procedures shall be as specified in MIL-STD-105 except where otherwise indicated in this document.

5.3 Initiation of inspection. Normal inspection shall be used at the start of inspection unless otherwise directed by the responsible procurement quality assurance element administering the contract.

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5.4 Continuation of inspection. Normal, tightened or reduced inspection shall continue unchanged on successive lots except where switching procedures in 5.5 require a change.

5.5 Switching procedures.

5.5.1 Normal to tightened. When normal inspection is in effect, tightened inspection shall be instituted when two out of five consecutive lots have been rejected on original inspection (i.e., ignoring resubmitted lots for this procedure).

5.5.2 Tightened to normal. When tightened inspection is in effect, normal inspection shall be instituted when five consecutive lots have been considered acceptable on original inspection.

5.5.3 Normal to reduced. When normal inspection is in effect, reduced inspection shall be instituted providing that all of the following conditions are satisfied:

a. The preceding 10 lots have been on normal inspection and none have been rejected on original inspection; and

b. The total number of points for 3 and 2 point defects in the samples from the preceding 10 lots is equal to or less than 60 percent of the total maximum acceptable point values for 3 and 2 point defects from the preceding 10 lots; and

c. The total number of points for 3, 2 and 1 point defects in the sample from the preceding 10 lots is equal to or less than 75 percent of the total maximum acceptable point values for 3, 2 and 1 point defects from the preceding 10 lots; and

d. Production is at a steady rate; and

e. Reduced inspection is considered desirable by the procurement quality assurance element administrating the contract.

5.5.4 Reduced to normal. When reduced inspection is in effect, normal inspection shall be instituted if any of the following occur on original inspection:

a. A lot is rejected; or

b. A lot is considered acceptable but exceeds the applicable first value (see 1/ to table I); or

c. Production becomes irregular or delayed; or

d. Other conditions warrant that normal inspection be instituted.



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\* 5.6 End item visual examination. The raincoats and liners (when applicable), shall be examined as indicated in section 3 for all defects except puckering. The puckering examination shall be as described in 3.7. All defects shall be assigned point values as indicated in table II. The sample size shall be based on lot size, and the acceptance values for 3 and 2 point defects and total (3, 2 and 1 point) defects shall be as specified in table I. The sample unit shall be one finished raincoat. The lot shall be unacceptable if:

a. The point value for 3 and 2 point defects exceeds the applicable maximum acceptable point value; or

b. The point value for total (3, 2 and 1 point) defects exceeds the applicable maximum acceptable point value; or

c. The number of selected defects (asterisk \* defect) exceeds the maximum allowed for the sample size (see table I).

\* 5.6.1 Examination conditions. Defects I through IX are general defects. Defects X through XVIII (excluding X.c.1) shall be inspected with the raincoat completely buttoned and buckled on a form. Defects X.c.1 and XIX through XXXI shall be inspected with the raincoat spread out on the inspection table.

\* TABLE I Sampling provisions for end item visual examination

Lot size	Sample size	Maximum acceptance number for selected defects (see 1.2)	Maximum acceptable point values	
			3 & 2 point defects	3, 2 & 1 point defects
Normal inspection	Up through 90	20	5 points	11 points
	91 - 150	32	7 points	17 points
	151 - 280	50	11 points	22 points
	281 - 500	80	14 points	31 points
	501 - 1200	125	23 points	44 points
	1201 - 3200	200	29 points	60 points
	3201 - 10,000	315	42 points	91 points
	10,001 - 35,000	500	60 points	135 points
	35,001 and over	800	91 points	203 points

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\* TABLE I Sampling provisions for end item visual examination (cont'd)

	Lot size	Sample size	Maximum acceptance number for selected defects (see 1.2)	Maximum acceptable point values	
				3 & 2 point defects	3, 2 & 1 point defects
Tightened inspection	Up through 90	20	0	4 points	8 points
	91 - 150	32	0	5 points	12 points
	151 - 280	50	0	8 points	17 points
	281 - 500	80	0	11 points	23 points
	501 - 1200	125	1	17 points	35 points
	1201 - 3200	200	1	22 points	52 points
	3201 - 10,000	315	2	36 points	77 points
	10,001 - 35,000	500	3	54 points	115 points
35,001 and over	800	5	81 points	173 points	

  

	Lot size	Sample size	Maximum acceptance number for selected defects (see 1.2)	Maximum acceptable point values	
				3 & 2 point <sup>1/</sup> defects	3, 2 & 1 point defects
Reduced inspection	Up through 280	20	0	3-7 points	11 points
	281 - 500	32	0	6-12 points	20 points
	501 - 1200	50	0	10-16 points	24 points
	1201 - 3200	80	0	12-21 points	39 points
	3201 - 10,000	125	1	21-30 points	52 points
	10,001 - 35,000	200	1	27-37 points	77 points
	35,001 and over	315	2	37-48 points	115 points

<sup>1/</sup> If the first value is exceeded but the second value has not been exceeded, accept the lot but reinstate normal inspection (see 5.5.4b). The second value is the maximum acceptable point value.

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\* TABLE II. End item visual defect point values

Defect	Point Value
<b>I. <u>MATERIAL DEFECTS AND WORKMANSHIP DAMAGE</u></b>	
a. Hole, cut, tear, smash, mend, burn, scorched area or open place:	
1. On outside	3
2. On inside (longest dimension in any direction):	
(a) - up to 1/4 inch, inclusive	1
(b) - more than 1/4 inch	2
b. Misweave, area of no dye penetration, dye streak, missing yarn, broken yarn, visible mend, thin place, shade bar; more than 1/2 inch (largest dimension in any direction) on outside	2
c. Loose yarn, snagged thread, coarse yarn or woven in waste; more than 1 inch (largest dimension in any direction) on outside	1
d. Permanent fold, pleat or crease in cloth (when caught in seaming or stitching) on outside	3
e. Needle chew:	
1. Up to 1/2 inch, inclusive	2
2. More than 1/2 inch	3
f. Knot or slub (see 3.2)	2
<b>II. <u>SHADED PART</u></b>	
a. On outside	
1. Any part shaded from the other parts (except parts which may be cut from ends)	3
2. Variation in shade within a part (except parts which may be cut from ends)	2
3. Part cut from ends badly shaded	1
b. On inside	
1. Lining - badly shaded except sleeve lining	2
2. Sleeve lining - not matching or badly shaded	1
3. Liner - badly shaded	2
<b>III. <u>PRESSING</u></b>	
a. Pressing omitted for any specified operation (unless otherwise specified herein)	3
b. Sleeve not pressed as specified	1
c. Length of crease press not as specified	1
d. Edge of collar, lapel or front not pressed solid, smooth and flat	1

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\* TABLE II. End item visual defect point values (cont'd)

Defect	Point Value
<b>III. <u>PRESSING</u> (cont'd)</b>	
e. Fold of back pleat not pressed as specified	1
f. Wrinkles, creases or pressing impressions not removed	1
<b>IV. <u>CLEANNESS</u></b>	
a. Spot or stain on outside:	
1. Up to $\frac{1}{4}$ inch inclusive in longest direction	2
2. More than $\frac{1}{4}$ inch in longest direction	3
b. Any marking exposed or visible on outside	3
c. Five or more thread ends on outside not trimmed to $\frac{3}{8}$ inch or less	1
d. Two or more shade or size tickets not removed	1
e. Basting thread (including monofilament thread or fragments of monofilament thread) not completely removed from outside	1
* f. Fusible resin visible on outside:	
1. Up to $\frac{1}{4}$ inch inclusive in longest direction	2
2. More than $\frac{1}{4}$ inch in longest direction	3
* g. Fusible resin visible on inside:	
1. Up to $\frac{1}{4}$ inch inclusive in longest direction	1
2. More than $\frac{1}{4}$ inch in longest direction	2
<b>V. <u>COMPONENT AND ASSEMBLY</u></b>	
a. Any component part or operation omitted (unless otherwise classified herein)	3
b. Any component not as specified	3
c. Any component part tight, twisted, distorted, pleated or full (unless otherwise classified herein)	2
d. Any operation not as specified (unless otherwise classified herein)	2
e. The edge of any component part required to be forced out having folds of more than $\frac{1}{8}$ inch (unless otherwise classified herein)	2
* f. Twill line of any outside part not running in specified direction	2

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\* TABLE II. End item visual defect point values (cont'd)

Defect	Point Value
<b>VI. <u>CUTTING</u></b>	
a. Any component part not cut in accordance with specified pattern, directional lines on patterns or not in accordance with specification requirements	3
* b. Any component part visible on the outside of the raincoat cut with the glossy side not to the outside	3
<b>VII. <u>SEAMS AND STITCHING</u></b>	
a. Accuracy of seaming:	
1. Seam puckered (score only when on major portion of seam (see 3.7))	1
2. Seam irregular, pleated or wavy (unless otherwise classified herein)	2
3. Any part of raincoat caught in an unrelated operation or stitching	2
4. End of stitching when not caught in other seams or stitching not backstitched as specified (except attaching labels and automatic stitching)	1
5. Thread break secured by stitching back of the break less than $\frac{1}{2}$ inch	1
6. Ends of a continuous line of stitching overlapped less than $\frac{1}{2}$ inch	1
7. Not specified color thread used on outside	2
8. Stitching attaching labels or automatic stitching not finished as specified	1
b. Gage of stitching and seam allowance:	
1. Edge, top or raised stitching sewn too close to edge resulting in damage to cloth	3
2. Seam allowance not as specified by $\frac{1}{8}$ inch or more (score only when condition exists on more than $\frac{1}{2}$ the length of the seam)	1
3. Irregular or not within range specified or varies more than $\frac{1}{16}$ inch when no range is specified (score only when condition exists on more than $\frac{1}{2}$ the length of the seam)	1
c. Open seam (see 3.3):	
1. Outside	
(a) - up to $\frac{1}{4}$ inch inclusive	1
(b) - more than $\frac{1}{4}$ inch up to $\frac{3}{4}$ inch inclusive	2
(c) - more than $\frac{3}{4}$ inch	3

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\* TABLE II. End item visual defect point values (cont'd)

Defect	Point Value
<b>VII. SEAMS AND STITCHING (cont'd)</b>	
c. Open seam (see 3.3): (cont'd)	
2. On inside and liner	
(a) - up to 2 inches inclusive	1
(b) - more than 2 inches	2
d. Runoff, skipped or broken stitch:	
1. Joining seam - use (open seam) classification	-
2. Edge, top or raised stitching (more than $\frac{1}{4}$ inch)	1
e. Raw edge (see 3.4): <u>1/</u>	
1. On outside:	
(a) - up to $\frac{3}{4}$ inch inclusive	2
(b) - more than $\frac{3}{4}$ inch	3
2. On inside and liner:	
(a) - $\frac{1}{4}$ inch up to 2 inches	1
(b) - more than 2 inches	2
f. Seam and stitch type:	
1. Not specified seam or stitch type	3
2. Looper thread of 401 or 406 stitch type on outside	3
3. Any line of stitching omitted or insecure	3
4. Any line of stitching not beginning or ending where specified (unless otherwise classified herein)	1
5. Any seam not lapped as specified	2
g. Stitch tension:	
1. Loose tension resulting in a loose seam	3
2. Loose tension on raised or edge stitching resulting in exposed loops of lower or top thread	1
3. Tight tension (stitches break when normal strain is applied in the direction of the seam or stitching)	3
h. Stitches per inch (score only when condition exists on more than $\frac{1}{2}$ the length of seam):	
1. More than the maximum specified	1
2. Less than the minimum specified:	
(a) - by one or two stitches	1
(b) - by three or more stitches	2

1/ Raw edge resulting from missing, incomplete or loose serging shall be scored as a raw edge on inside.

~~MIL-STD-1494B~~\* TABLE II. End item visual defect point values (cont'd)

Defect	Point Value
<b>VII. SEAMS AND STITCHING (cont'd)</b>	
i. Bartack, backtack, tack or tacking (except buttonhole bartack):	
1. Missing, insecure, misplaced, not serving intended purpose or not specified size or type	1
2. Loose stitch tension	1
j. Needle perforations more than 1 inch in length	1
<b>VIII. <u>BUTTONHOLE</u></b>	
a. Omitted, added, not specified type or not finished as specified	3
b. Misplaced or not positioned as specified; out of alignment resulting in bulge or twist when buttoned	3
c. Gimp omitted, uncut buttonhole, end of gimp not pulled through to underside of cut first square bar buttonhole, incomplete stitching or stitching not securely caught in fabric	2
d. Ragged edge, broken stitch or two or more skipped stitches:	
1. On outside	2
2. On inside	1
e. Buttonhole stitching extending beyond bartack, or stitches per buttonhole not as specified:	
1. On outside	2
2. On inside	1
f. Purling not finished on the side specified	2
g. Buttonhole stitching not uniform and even	1
h. Bartack missing, loose or misplaced (not serving intended purpose)	2
i. Stitches per buttonhole or bartack less than specified minimum number by:	
1. One to three stitches	1
2. Four or more stitches	2
<b>IX. <u>BUTTON (INCLUDING STAY BUTTON)</u></b>	
a. Omitted, broken or defective (see 3.5)	2
b. Out of horizontal or vertical alignment by:	
1. 3/16 inch up to 3/8 inch	1
2. More than 3/8 inch	2

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\* TABLE II. End item visual defect point values (cont'd)

Defect	Point Value
<b>IX. <u>BUTTON (INCLUDING STAY BUTTON)</u> (cont'd)</b>	
c. Misplaced, loose, not attached as specified or insecurely sewn	1
d. Tacking stitches omitted or insecure (hand sewn)	1
* e. Shank wrapping (when required) omitted, loose or insecurely wrapped:	
1. One or two wrappings	1
2. Three or more wrappings	2
f. Stitching on button not locked at end of cycle (tug at loose end of the thread when accessible to determine whether it will ravel)	1
g. Any part of raincoat puckered or pleated by button sewing	1
<b>* X. <u>COLLAR OR LAPEL</u></b>	
a. Not uniform in size or shape - any point varying:	
1. More than $\frac{1}{4}$ inch with corresponding point on matching part	*
2. More than $\frac{1}{8}$ inch up to $\frac{1}{4}$ inch inclusive with corresponding point on matching part	3
* 3. More than $\frac{1}{16}$ up to $\frac{1}{8}$ inch inclusive with corresponding point on matching part	2
b. Twisted, not smooth and flat, short or tight causing collar or lapel to turn out	3
c. Collar:	
* 1. Collar length or width varying from finished shaper by:	
(a) - $\frac{1}{8}$ inch up to $\frac{1}{4}$ inch inclusive	1
(b) - more than $\frac{1}{4}$ inch up to $\frac{3}{8}$ inch inclusive	2
(c) - more than $\frac{3}{8}$ inch	3
2. Collar off center by $\frac{1}{4}$ inch or more $\frac{1}{2}$	2
3. Collar tight causing puckers or pleats at neckline	2
4. Edge of collar not properly forced out, i.e., having a fold of more than $\frac{1}{8}$ inch in depth	2
5. Collar stand tight causing puckers on undercollar	1
6. Quilting not as specified	1
7. Finished width of collarstand at center back not as specified	2
8. Finished length or width of collar tab not as specified	1

$\frac{1}{2}$ / Center of collar is determined by aligning the two shoulder seams at junction of collar.



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\* TABLE II. End item visual defect point values (cont'd)

Defect	Point Value
* X. <u>COLLAR OR LAPEL (cont'd)</u>	
9. Buttonhole not positioned as specified at finished end of collar tab	1
10 Undercollar exposed along collar edge for a length of $\frac{1}{2}$ inch or more	1
d. Lapel:	
1. Left and right lapel varying in length by:	
(a) - more than $\frac{1}{4}$ inch up to $\frac{1}{2}$ inch inclusive	2
(b) - more than $\frac{1}{2}$ inch	3
2. Width of lapel step not as specified, or width of step uneven by more than $\frac{1}{4}$ inch	2
XI. <u>FRONT AND FRONT FACING</u>	
a. Front facing excessively full, tight or twisted:	
1. At lapel	3
2. Below lapel	2
b. Front facing short, tight or twisted causing fullness or twist on front or causing lapel end to curl up	3
c. Front facing too long causing bottom corner of front to curl up	3
d. Front tight or short, button out of alignment with buttonhole, or front facing tight or twisted causing noticeable bulge or twist	2
e. Fronts uneven in length at bottom or top by:	
1. More than $\frac{1}{4}$ inch up to $\frac{1}{2}$ inch inclusive	1
2. More than $\frac{1}{2}$ inch	2
f. Stitching forming fly front not specified distance from front edge	2
g. Two or more buttonholes out of vertical alignment by:	
1. $\frac{1}{8}$ inch to $\frac{1}{4}$ inch inclusive	1
2. More than $\frac{1}{4}$ inch	2
h. Spacing between two or more buttonholes unequal by $\frac{1}{4}$ inch or more	1
i. Front edge not folded straight with warp line	1
j. Top edge of storm tab not stitched or bartacked to facing	1
k. Reinforcement piece omitted on storm tab	1
l. Front edge irregular, stretched uneven	1
m. Fly stitching tapering to a curve at bottom, not as specified	1
n. Front facing exposed beyond edge of front for a length of 1 inch or more	1

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\* TABLE II. End item visual defect point values (cont'd)

Defect	Point Value
<b>XI. <u>FRONT AND FRONT FACING (cont'd)</u></b>	
o. Front of coat pleated or puckered at corner of pocket welt	1
p. Front part exposed along lapel edge	1
<b>XII. <u>POCKET</u></b>	
a. Pockets out of alignment (in any direction) or misplaced by:	
1. More than $\frac{1}{2}$ inch	*
2. More than $\frac{3}{8}$ inch up to $\frac{1}{2}$ inch inclusive	3
3. $\frac{1}{4}$ inch up to $\frac{3}{8}$ inch inclusive	2
b. Pocket notch exposed on outside	2
c. Pocket welt:	
1. Not uniform in size and shape - any point varying:	
(a) - more than $\frac{3}{8}$ inch with corresponding point	3
(b) - $\frac{1}{4}$ inch up to $\frac{3}{8}$ inch with corresponding point	2
2. Twisted or full (not finished smooth, flat and even)	2
3. Inner pocket welt exposed along top or bottom edge of pocket welt	1
4. Length or width not as specified by:	
(a) - $\frac{1}{8}$ inch up to $\frac{1}{4}$ inch inclusive	1
(b) - more than $\frac{1}{4}$ inch up to $\frac{3}{8}$ inch inclusive	2
(c) - more than $\frac{3}{8}$ inch	3
5. Welt stitching not as specified	2
6. Back edge of welt short causing pleat or puckers on front or too loose causing welt to gap	2
7. Interlining omitted	2
d. Pocket opening:	
1. Not smooth and flat	2
2. Tape omitted	2
3. End not caught in welt stitching	2
e. Front of hanging pocket not stitched under facing	2
<b>XIII. <u>SHOULDER CONSTRUCTION</u></b>	
a. Improperly joined or set causing front or back of shoulder to twist	3
* b. Any component tight, twisted, pleated, creased, full or puckered	2

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\* TABLE II. End item visual defect point values (cont'd)

Defect	Point Value
<b>XIV. <u>SHOULDER LOOP</u></b>	
a. Not uniform in size or shape - any point varying:	
1. More than 3/8 inch with corresponding point on matching part	3
2. 1/4 inch up to 3/8 inch (inclusive) with corresponding point on matching part	2
b. Loop reversed, seam on upper side	3
c. Loop tight, loose or badly distorted when buttoned	2
d. Interlining short, tight or twisted affecting appearance of loop	2
e. Not positioned as specified or attached crookedly	1
f. Width at wide end or length not as specified	1
g. Buttonhole not centered or positioned from finished end of loop as specified	1
h. Shoulder loop keeper(s) less than 2 or more than 2-1/4 inches long	1
i. Shoulder loop keeper not attached or not positioned properly	1
<b>XV. <u>FRONT SHIELD</u></b>	
a. Not shaped as specified	2
b. Not positioned as specified	2
c. Button not aligned with buttonhole causing a bulge or twist on shield or front of raincoat when buttoned	2
d. Buttonhole not positioned horizontally	2
e. Purling on buttonhole on the underside of the storm shield	2
f. Front edge extending into neck seam at shoulder seam	1
<b>XVI. <u>SLEEVE</u></b>	
a. Sleeve lining twisted, tight or short causing fullness or twist on outside of sleeve	3
b. Sleeve tight in lower front armhole causing a bulge, break or twist in sleeve	3
c. Raw end of stripping not turned under and stitched or bartacked as specified	2
d. Sleeve fullness at armholes misplaced, affecting appearance	2
e. Sleeve tight at armholes, causing ridges, puckers or pleat on outside	2
f. Width of stripping not as specified	1
g. Yoke joining seam not spread open at armhole seam	1

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\* TABLE II. End item visual defect point values (cont'd)

Defect	Point Value
<b>XVI. <u>SLEEVE</u> (cont'd)</b>	
h. Button not centered or spaced as specified on topsleeve seam at bottom of sleeve	1
i. Underarm seam of sleeve staggered more than 3/8 inch with side seam at armhole	1
j. Interlining twisted, tight or pleated causing puckering on outside of sleeve clearly noticeable	1
<b>XVII. <u>BACK PLEAT OR VENT</u></b>	
a. Vent opening reversed	3
b. Boxstitching omitted or not as specified	3
c. Row of stitching across top of vent opening omitted, insecure or not as specified	3
d. Buttonhole not positioned as specified	2
e. Raw edge at top of pleat exposed below double row of stitching	1
f. Lengths uneven by 1/4 inch or more	1
g. Point of facing out of alignment with center back joining seam by more than 1/8 inch	1
h. Width of vent turnback less than specified	1
<b>XVIII. <u>SLEEVE TAB</u></b>	
a. Edge of tab not parallel to bottom edge of sleeve by more than 1/4 inch	2
b. Placed uneven distance from bottom of sleeve by more than 1/4 inch	2
c. Button not aligned with buttonhole causing a bulge or twist in sleeve or tab when fastened	2
d. Length or width of tab not as specified	1
e. Buttonhole off center by more than 1/8 inch	1
f. Buttonhole not positioned as specified	1
g. Not attached or not positioned as specified	1
h. Out of alignment by more than 1/4 inch	1
<b>XIX. <u>DART OR PLEAT</u></b>	
a. Omitted or not specified type	3
b. Not positioned as specified	2
c. Length of darts uneven in length by 1/2 inch or more	1
d. Bulge at tapered end of dart	1
e. Depth of pleat at top end of back lining not as specified	1

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\* TABLE II. End item visual defect point values (cont'd)

Defect	Point Value
<b>XX. LINING</b>	
a. Twisted, tight or short causing bulge or twist on front	3
b. Too long causing lining to sag at bottom	2
c. Any required tack or bartack on sleeve lining omitted, unsecured or not positioned as specified	2
d. Bottom edge or hem not finished as specified	1
e. Tacking of facing to pocket omitted, insecure or not positioned as specified	1
f. Depth of pleat in yoke not as specified	1
g. Stitches tacking lining to outer shell caught through outside causing impression marks	1
h. Joined shoulder seam of yoke lining not pressed open and flat	1
<b>XXI. BELT</b>	
a. Buckle defective	3
b. Buckle stitching insecure	2
c. Belt keeper or belt safety-strap not securely caught in belt joining seam	2
d. Irregular in width by more than 1/8 inch	1
e. End poorly shaped	1
f. Belt in reversed position	1
g. Twisted or puckered	1
h. Width not as specified	1
i. Belt keeper tight, constricting belt; or width of keeper not as specified	1
<b>XXII. BELT LOOP</b>	
a. Finished length or width not as specified	1
b. Not positioned as specified by more than 1/2 inch	1
c. Loop not attached as specified	1
d. Belt loop set at an angle, more than 1/2 inch off the perpendicular	1
<b>XXIII. BELT SAFETY-STRAP</b>	
a. Finished length or width not as specified	1
b. Misplaced, i.e., stitched to belt so that belt buckle cannot be positioned at front center when fronts are buttoned	2

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\* TABLE II. End item visual defect point values (cont'd)

Defect	Point Value
<b>XXIII. <u>BELT SAFETY-STRAP</u> (cont'd)</b>	
c. Button stitching exposed on outside of belt	1
d. Not positioned through belt loop, i.e., not serving intended purpose	1
e. Belt safety strap extends below bottom edge of belt	1
<b>XXIV. <u>HANGER LOOP</u></b>	
a. Finished width or length not as specified	1
b. Not positioned as specified, by more than $\frac{1}{4}$ inch	1
c. Not attached as specified	1
d. Insecure	1
<b>* XXV. <u>FUSIBLE TAPE AND FUSIBLE INTERLINING</u></b>	
a. Omitted	3
b. Twisted causing puckers, pleats or twists on the outside of raincoat	3
c. Any evidence of bleed through, bubbling, delamination or color change	3
d. Not positioned or stitched as specified	2
e. Exposed	2
<b>XXVI. <u>HEM</u></b>	
a. Twisted or pleated	2
b. Puckers	1
c. Width of hem not as specified	1
<b>XXVII. <u>LABEL</u></b>	
a. Missing, incorrect or illegible:	
1. Size label, instruction or combination label	3
2. Identification label	1
b. Not attached as specified, misplaced or stitching through the printing	1

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\* TABLE II. End item visual defect point values (cont'd)

Defect	Point Value
<b>XXVIII. LINER</b>	
a. Size shown on liner not same as raincoat	1
b. Liner tight or short causing puckering of raincoat	3
c. Ends of binding not caught in bartack or stitching	1
d. Fabric not securely caught in binding	2
e. Fronts uneven in length by more than 3/4 inch	2
f. Vent flaps uneven in length by more than 3/8 inch	1
g. Finished width of binding not as specified	1
h. Binding finishing at top of vent	1
i. Ends of binding overlapped less than 1/2 inch	1
j. End of binding on sleeve bottom not finishing at top arm seam or not formed into a loop to accommodate a 24 line button	2
<b>XXIX. SLIDE FASTENER</b>	
a. Slide fastener not type, style, size, type of pull or finish required	3
b. Slide fastener does not function properly- pull detaches, slider binds or sticks, or chain unmeshes	3
c. Slider positioned on right side of liner	3
d. Slide fastener not positioned as specified	2
e. Ends of slide fastener unequal in distance from bottom edge of liner by more than 1 inch	2
f. Slide fastener pull tab not on outside (pile side) of liner	2
g. Slide fastener tape stitched too close to metal chain not permitting slider to move freely	2
h. Slide fastener tapes wavy or puckered (too tight or too full)	2
i. Slide fastener separating pin not on right facing of raincoat	1
j. Slide fastener retainer not on right side of liner (as worn)	1
k. Raincoat or liner twisted or distorted when slide fastener is engaged	3
<b>XXX. ARMHOLE</b>	
a. Stretched causing excessive fullness on back between shoulders and underarm	2
b. Crooked or puckered seam	2
* c. Any component part on or around armhole that is tight, twisted, pleated, creased, full or puckered	2

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\* TABLE II. End item visual defect point values (cont'd)

Defect	Point Value
XXXI. <u>COLLAR CLOSURE (POSITION OF LAPEL BUTTON)</u>	
a. Misplaced on right front causing a noticeable bulge or twist on fronts when buttoned	2
b. Misplaced on right front causing collar ends to overlap or causing an opening of more than 1 inch between collar ends when buttoned	2

TABLE III. Selected defects

Defect
* <u>COLLAR OR LAPEL</u>
Not uniform in size or shape - any point varying more than $\frac{1}{4}$ inch with corresponding point on matching part
<u>POCKETS</u>
Out of alignment (in any direction) or misplaced by more than $\frac{1}{4}$ inch

- \* 5.7 End item dimensional examination. The sample size for the raincoat and liner (when applicable) shall be based on lot size as shown in table IV. The raincoats shall be examined for conformance to the dimensional requirements cited in the table of measurements of the appropriate raincoat specification. When a measurement deviates from a dimension and tolerance specified, the raincoat shall be penalized one point. Each sample unit shall also be penalized one point when the sleeves are uneven in length by  $\frac{1}{2}$  inch or more. The lot shall be unacceptable if the total point value resulting from this examination exceeds the maximum acceptable point value for the lot. Each size of raincoat present in the lot should be represented in the sample selected for this examination.

\* TABLE IV. Sampling provisions for end item dimensional examination

Lot size	Sample size	Maximum acceptable point values
Up through 500	8	1
501 through 3,200	13	2
3,201 through 35,000	20	3
35,001 and up	32	4



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- \* 5.8 Packaging examination. The fully packaged raincoat shall be examined for the defects listed below. The sample size shall be five shipping containers, fully packaged. The lot shall be unacceptable if one or more defects are found.

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

1/ When applicable

2/ For this defect, one intermediate package from each shipping container in the sample shall be examined.

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\* 6. INFORMATION FOR GUIDANCE ONLY

\* (This section contains information of a general or explanatory nature which is helpful, but is not mandatory.)

\* 6.1 Intended use. This document is intended to provide a standard description for defects and examination requirements encountered by Departments and Agencies of the Defense Department in the procurement of raincoats.

\* 6.2 Subject term (key word) listing.

Examination  
Inspection  
Overcoat, Man's and Woman's  
Raincoat

\* 6.3 Changes from previous issue. The margins of this document are marked with an asterisk (\*) 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, irrespective of the marginal notations and relationship to the last previous issue.

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\* Army - GL  
Navy - NU  
Air Force - 11

Preparing activity:

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\* Navy - MC  
\* Air Force - 82, 99  
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