

MIL-STD-1492C
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~~SUPERSEDING~~
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10 March 1978

MILITARY STANDARD
PROVISIONS FOR EVALUATING QUALITY
OF MEN'S SHIRTS



AMSC N/A

FSC 8405

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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>CLASSIFICATION</u>	<u>TITLE</u>
MIL-S-3649	D	Shirt, Man's: Wool, Tropical Worsted; Khaki, Shade M-1
MIL-S-10858	SD	Shirt, Cold Weather, Field, Wool/Nylon, Olive Green 108
MIL-S-17618	D	Shirt, Man's (Polyester/Cotton, Tropical, Short Sleeve)
MIL-S-19984	D	Shirt, Man's: Khaki; with Quarter Length Sleeve
MIL-S-29149	D	Shirt, Man's, Polyester and Wool, Long Sleeve
MIL-S-43929	U	Shirt, Utility (Durable Press)
MIL-S-43939	D	Shirt, Man's, Polyester/Cotton, Durable Press
* MIL-S-44039	D	Shirt, Man's, Long Sleeve, Polyester/Cotton, Army Green 415, Durable Press
* MIL-S-44041	D	Shirt, Man's, Short Sleeve, Polyester-Cotton, Army Green 415, Durable Press
MIL-S-83154	D	Shirt, Man's, Wool-Polyester, Tropical, Blue
MIL-S-83333	D	Shirt, Man's, Short Sleeve, Polyester-Cotton (Durable Press)
* MIL-S-87214 (USAF)	D	Shirts, Men's: Long and Short Sleeves, Polyester/Cotton (Durable Press)
* MIL-S-87060	U	Shirts, Utility, Men's Chambray

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MIL-STD-1492C**1. SCOPE**

- * **1.1 Scope.** This document provides a standardized procedure for evaluating quality of men's shirts procured for the Department of Defense. It is intended to list, in a single document, defects irrespective of fabrics (i.e. cotton, wool, or synthetic) or end use.

1.2 Application. This document will be made applicable to contracts by references in the appropriate shirt specifications. The dress shirt documents require: (a) as a final step in the contractor's production control plan before formation of the lot, each dress shirt shall be examined, buttoned, pressed, and laid out flat on a table prior to folding for packaging and (b) a shirt containing a selected defect shall not be included in the end item lot. Selected defects are those defects listed in table IV which are identified by an asterisk (*) in the "Point value" column. The selected defects are listed individually in table V.

- * **1.3 Classification.** The shirts shall be of the following types:

D - Dress
SD - Semi-dress
U - Utility

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

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- * 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)

- * 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 obtained from The American Association of Textile Chemists and Colorists, P.O. Box 12215, Research Triangle Park, NC 27709.

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3. DEFINITIONS

- * 3.1 Fabric defects. The fabric defect definitions applicable to this standard are described in FED-STD-4. Fabric defects shall be clearly visible when examined with shirt lying flat on an inspection table at a distance of 3 feet.
- * 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 finished shirts.
- * 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 shirt.

3.5 Defective button. A button shall be considered defective when it has sharp, rough, cracked or split edge; has scratch, dent, blemish or imbedded air bubble(s) or foreign matter; or is badly shaded.
- * 3.6 Outside - inside. The terms outside and inside as used in this standard are defined as follows:

Outside: Any part of shirt that is visible when the completely buttoned and closed shirt is examined lying flat on an inspection table.

Inside: Any part of shirt that is not visible when the completely buttoned and closed shirt is examined lying flat on an inspection table.
- * 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 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.

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★ 4. GENERAL REQUIREMENTS

This section is not applicable to this standard.

★ 5. DETAILED REQUIREMENTS

- ★ 5.1 Purpose. This standard contains inspection provisions for end item examination, dimensional examination, and packaging examination for dress, semi-dress, and utility shirts. If there are any inconsistencies between the requirements of the appropriate shirt specification and the provisions of this standard, the shirt 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 IV are those defects having the most detrimental effect on the 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.

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.

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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 administering 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 tables I, II and III); or
- c. Production becomes irregular or delayed; or
- d. Other conditions warrant that normal inspection be instituted.

* 5.6 End item visual examination. The shirts 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 IV. 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 tables I Dress Shirt (D), II Semi-dress Shirt (SD) or III Utility Shirt (U), as applicable. The sample unit shall be one finished shirt. The lot shall be unacceptable if:

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

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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 (see 1.2) exceeds the maximum allowed for the sample size (see table I).

TABLE I Sampling provisions for end item visual examination of dress (D) shirts

		Sample size	Maximum acceptance number for selected defects (see 1.2)	Maximum acceptable point values	
Lot size				3 & 2 point defects	3, 2 & 1 point defects
Normal inspection	Up through 90	20	0	3 points	8 points
	91 - 150	32	0	5 points	11 points
	151 - 280	50	0	7 points	15 points
	281 - 500	80	0	12 points	23 points
	501 - 1200	125	1	16 points	32 points
	1201 - 3200	200	1	23 points	46 points
	3201 - 10,000	315	2	32 points	66 points
	10,001 - 35,000	500	3	45 points	95 points
	35,001 and over	800	5	68 points	140 points
Tightened inspection	Up through 150	32	0	3 points	7 points
	151 - 280	50	0	5 points	10 points
	281 - 500	80	0	7 points	15 points
	501 - 1200	125	1	12 points	22 points
	1201 - 3200	200	1	16 points	34 points
	3201 - 10,000	315	2	26 points	51 points
	10,001 - 35,000	500	3	39 points	78 points
	35,001 and over	800	5	58 points	117 points

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TABLE I Sampling provisions for end item visual examination of dress (D) shirts
(cont'd)

		Sample size	Maximum acceptance number for selected defects (see 1.2)	Maximum acceptable point values	
Lot size				3 & 2 point <u>1</u> / defects	3, 2 & 1 point defects
Reduced inspection	Up through 280	20	0	3-10 points	17 points
	281 - 500	32	0	5-13 points	21 points
	501 - 1200	50	0	8-15 points	25 points
	1201 - 3200	80	0	10-20 points	32 points
	3201 - 10,000	125	0	17-26 points	43 points
	10,001 - 35,000	200	1	23-32 points	54 points
	35,001 and over	315	2	32-41 points	75 points

1/ 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.

TABLE II. Sampling provisions for end item visual examination of semi-dress (SD) shirts

		Maximum acceptable point values		
Lot size	Sample size	3 & 2 point defects	3, 2 & 1 point defects	
Normal inspection	Up through 500	50	12 points	23 points
	501 - 1200	80	16 points	32 points
	1201 - 3200	125	23 points	46 points
	3201 - 10,000	200	32 points	66 points
	10,001 - 35,000	315	45 points	95 points
	35,001 and over	500	68 points	140 points
Tightened inspection	Up through 500	50	7 points	16 points
	501 - 1200	80	10 points	24 points
	1201 - 3200	125	16 points	34 points
	3201 - 10,000	200	26 points	51 points
	10,001 - 35,000	315	39 points	78 points
	35,001 and over	500	58 points	117 points

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TABLE II. Sampling provisions for end item visual examination of semi-dress (SD) shirts
(cont'd)

Lot size		Sample size	Maximum acceptable point values	
			3 & 2 point defects <u>1/</u>	3, 2 & 1 point defects
Reduced inspection	Up through 1200	32	8-15 points	25 points
	1201 - 3200	50	10-20 points	32 points
	3201 - 10,000	80	17-26 points	43 points
	10,001 - 35,000	125	23-32 points	54 points
	35,001 and over	200	32-41 points	75 points

1/ 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.

TABLE III. Sampling provisions for end item visual examination of utility (U) shirts

Lot size		Sample size	Maximum acceptable point values	
			3 & 2 point defects	3, 2 & 1 point defects
Normal inspection	Up through 500	50	18 points	25 points
	501 - 1200	80	25 points	36 points
	1201 - 3200	125	32 points	50 points
	3201 - 10,000	200	45 points	73 points
	10,001 and over	315	68 points	110 points
Tightened inspection	Up through 500	50	13 points	20 points
	501 - 1200	80	20 points	30 points
	1201 - 3200	125	32 points	40 points
	3201 - 10,000	200	45 points	58 points
	10,001 and over	315	68 points	88 points

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TABLE III. Sampling provisions for end item visual examination of utility (U) shirts
(cont'd)

		Maximum acceptable point values		
Lot size	Sample size	3 & 2 point defects <u>1/</u>	3, 2 & 1 point defects	
Reduced inspection	Up through 1200	32	13-20 points	25 points
	1201 - 3200	50	16-25 points	32 points
	3201 - 10,000	80	23-32 points	43 points
	10,001 and over	125	32-41 points	54 points

1/ 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.

* TABLE IV. End item visual defect point values

Defect	Point value		
	D	SD	U
I. <u>MATERIAL DEFECT AND DAMAGE</u>			
a. Any hole, cut, tear, smash, burn, drill hole <u>1/</u> , scorched area, multiple float or open place:			
1. On outside (see 3.6) (longest dimension in any direction):			
(a) Up to and including 1/4 inch	3	2	2
(b) More than 1/4 inch	*	3	3
2. On inside (see 3.6) longest dimension in any direction):			
(a) Up to and including 1/4 inch	1	1	1
(b) More than 1/4 inch	2	2	2

1/ Drill hole - This defect should not be scored when visible on the inside of the shirt, provided that the component as attached to outside of shirt fully covers the drill hole.

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TABLE IV. End item visual defect point values (cont'd)

Defect	Point value		
	D	SD	U
I. <u>MATERIAL DEFECT AND DAMAGE</u> (cont'd)			
* b. Knot or slub (see 3.2)	3	2	2
c. Misweave, area of no dye penetration, dye streak, missing yarn, broken yarn, visible mend, thin place or shade bar; on outside <u>1/</u>	3	3	2
d. Loose yarn, snagged thread, coarse yarn or woven in waste <u>1/</u>	2	1	1
e. Embedded crease of a permanent nature in cloth	3	2	2
f. Needle chew on outside (largest dimension in any direction):			
1. Up to and including 1/2 inch	2	2	2
2. More than 1/2 inch	3	3	3
II. <u>SHADED PART</u>			
a. Any part required to be cut from one piece of material, shaded	3	3	2
b. Any outside part cut from ends which does not approximate shade of the shirt	1	1	-
c. Variation in shade within an outside part or between outside parts. <u>1/</u>	3	2	1

1/ This defect shall not be scored on cuff lining, undercollars or underflaps or below bottom button for shirts normally worn in trousers.

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TABLE IV. End item visual defect point values (cont'd)

Defect	Point value		
	D	SD	U
III. <u>CLEANNESS</u>			
* a. Spot or stain on outside: <u>1/</u>			
1. Any spot or stain in Zone X	3	2	-
2. Any spot or stain in Zone Y larger than 1/4 inch in longest direction	2	1	1
b. Thread ends (on outside and inside):			
* 1. Three or more thread ends not trimmed to less than 1/4 inch on outside	2	1	-
* 2. Five or more thread ends not trimmed to less than 1/2 inch on inside	1	1	1
c. Two or more shade or size tickets not removed <u>2/</u>	1	1	1
d. One or more size or shade markings visible on outside <u>2/</u>	3	3	1
e. On durable press shirts prior to folding and packaging, shirt contains residual fiber particles, lint, dust or other foreign substance	1	1	1
IV. <u>CUTTING</u>			
a. Any component part not cut in conformance with specification requirement	3	3	3
V. <u>COMPONENT AND ASSEMBLY</u>			
a. Any component part omitted or required operation omitted (unless otherwise classified herein)	3	3	3

1/ For these defects use the zones shown in figures 1, 2 and 3.

2/ Shade tickets required on the shirt as a final operation are excluded.

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TABLE IV. End item visual defect point values (cont'd)

Defect	Point value		
	D	SD	U
V. <u>COMPONENT AND ASSEMBLY</u> (cont'd)			
b. Any component part twisted, distorted, pleated, misshaped, tight or full (unless otherwise classified herein)	2	2	2
c. Any component not as specified (type, size, color, etc.)	3	3	3
d. Any operation not performed as specified (unless otherwise classified herein)	1	1	1
e. The edge of any component part required to be forced out having folds (unless otherwise classified herein):			
1. More than 1/16 inch up to and including 1/8 inch	1	1	-
2. More than 1/8 inch	2	2	1
VI. <u>PRESSING</u>			
a. Omitted, poorly pressed, not pressed as specified or exhibiting a double crease line:			
1. On permanent crease or durable press	3	3	3
2. On other than permanent crease or durable press	2	2	1
3. On other than permanent crease or durable press below bottom button for shirts normally worn in trousers	1	1	-
b. Durable press or crease line not within specified limits or not positioned as specified	3	2	2
* c. Permanent crease (other than the specified crease):			
1. Occuring in Zone X	3	3	-
2. Occuring in Zone Y	1	1	2

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TABLE IV. End item visual defect point values (cont'd)

Defect	Point value		
	D	SD	U
VII. SEAMS AND STITCHING			
a. Accuracy of seaming:			
1. Seam irregular, twisted, pleated or wavy <u>1</u> /	2	1	1
2. Seam puckered (score only when on major portion of seam) (see 3.7)	1	1	1
3. Any part of shirt caught in an unrelated operation or stitching	2	2	2
4. End of stitching when not caught in other seams or stitching not backstitched as specified (except stitching for attaching labels and automatic stitching)	1	1	1
5. Thread break secured by stitching back of the break less than 1/2 inch	1	1	1
6. Ends of a continuous line of stitching not overlapped as specified	1	1	1
7. Not specified color thread used on outside of shirt	3	2	1
8. Stitching for attaching labels or automatic stitching not finished as specified	1	1	1
b. Gage of stitching and seam allowance:			
1. Gage irregular or not within range specified	1	1	1
2. Edge or raised stitching sewn too close to edge, resulting in damage of cloth	3	2	2
3. Seam allowance more than 1/16 inch more or less than specified	1	1	1

1/ Pleat at top of sleeve opening shall not be scored as a defect (applicable to long sleeve shirts only).

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TABLE IV. End item visual defect point values (cont'd)

Defect	Point value		
	D	SD	U
VII. <u>SEAMS AND STITCHING</u> (cont'd)			
c. Open seam:			
1. On all seams except bottom hem and label stitching:			
(a) Up to 1/2 inch inclusive	1	1	1
(b) More than 1/2 inch up to and including 3/4 inch	2	2	2
(c) More than 3/4 inch	3	3	3
2. Bottom hem more than 1/2 inch	1	1	1
3. Label stitching	1	1	1
d. Runoff:			
1. On joining seam, score as open seam			
2. Edge or raised stitching (when not resulting in an open seam):			
(a) Up to and including 1/2 inch	1	1	1
(b) More than 1/2 inch	2	2	2
e. Raw edge:			
1. On outside:			
(a) Up to and including 3/8 inch	1	1	1
(b) More than 3/8 inch	2	2	2
2. On inside:			
(a) More than 2 inches	2	2	2
(b) 1/4 inch up to and including 2 inches	1	1	1

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TABLE IV. End item visual defect point values (cont'd)

Defect	Point value		
	D	SD	U
VII. SEAMS AND STITCHING (cont'd)			
f. Seam and stitch type:			
1. Not specified seam or stitch type	2	2	2
2. Looper thread of 401 or 406 stitch type on outside	3	3	3
3. Any required line of stitching omitted	3	3	3
4. Any line of stitching not beginning or ending where specified (unless otherwise classified herein)	1	1	1
5. Any seam not lapped or finished as specified	2	1	1
g. Broken, missing or skipped stitches on edge or raised stitching (when seamed, turned and stitched):			
1. 1/4 inch up to and including 1/2 inch	1	1	1
2. More than 1/2 inch	2	1	1
h. Stitch tension:			
1. Loose tension resulting in a loose seam	3	3	3
2. Loose tension on raised or edge stitching resulting in exposed loose thread	1	1	1
3. Tight tension (stitches break when strain is applied in direction of seam or stitching)	3	3	3
i. Stitches per inch (to be scored only when the condition exists on more than half the length of seam or stitching):			
1. Less than the minimum	2	2	2
2. More than the maximum	1	1	1

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TABLE IV. End item visual defect point values (cont'd)

Defect	Point value		
	D	SD	U
VIII. <u>BUTTONHOLE</u>			
a. Omitted, misplaced, added, not specified type or not finished as specified	3	3	3
b. Gimp omitted, uncut buttonhole, or ends of gimp not pulled through to underside	2	2	1
c. Ragged edge, incomplete stitching, stitching not securely caught in fabric	2	2	2
d. One or more broken stitches or two or more skipped stitches in one or more buttonholes	2	1	1
e. Buttonhole stitching extending beyond bartack; stitches per buttonhole less than minimum specified	1	1	1
f. Finished cut length not as specified	1	1	1
* g. Two or more uncut yarns in button hole (not caught in overcast stitching)	2	2	2
IX. <u>BUTTON</u> - One or more			
a. Missing, broken, defective (see 3.5), misplaced, not positioned or attached as specified, or insecurely sewn	2	2	2
b. Shank wrapping (when required) omitted or loosely wrapped	-	-	1
c. Stitching on one or more not locked at end of cycle (tug at the loose end of the thread when accessible to determine if it will ravel)	1	1	1

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TABLE IV. End item visual defect point values (cont'd)

Defect	Point value		
	D	SD	U
X. <u>BARTACK OR TACK</u> - One or more			
a. Missing, insecure, misplaced, not specified size or type, or not serving intended purpose:			
1. Bartack for attachment	2	2	2
2. Bartack for reinforcement	1	1	2
b. Loose stitch tension	1	1	1
XI. <u>LABEL OR MARKING</u>			
a. Not attached or affixed as specified, misplaced or stitching through the printing			
	1	1	1
b. Missing, incorrect, illegible or strike through:			
1. Size label, instruction label or combination label	3	3	3
2. Identification label	1	1	1
XII. <u>COLLAR</u>			
a. Not uniform in size or shape - any point varying:			
1. More than 3/8 inch with corresponding point on matching part	*	3	3
2. 1/4 inch up to and including 3/8 inch with corresponding point on matching part	3	2	2
b. Collar point uneven in length by:			
1. 1/8 inch up to and including 1/4 inch	1	1	-
2. More than 1/4 inch up to and including 3/8 inch	2	2	1
3. More than 3/8 inch	*	3	2
c. Twisted, not smooth, too full, short or tight causing collar to turn out	3	3	2

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TABLE IV. End item visual defect point values (cont'd)

Defect	Point value		
	D	SD	U
XII. <u>COLLAR</u> (cont'd)			
d. Collar point not properly forced out	3	3	2
e. Collar off center by: <u>1</u> /			
1. More than 1/4 inch up to and including 3/8 inch	1	1	-
2. More than 3/8 inch	2	2	1
f. Collar tight causing puckers or pleats at neckline (see 3.7)	2	1	1
g. Edge of collar not properly forced out, i.e., having a fold of:			
1. 1/16 inch up to and including 1/8 inch in depth	1	1	1
2. More than 1/8 inch in depth	2	2	1
h. One or both collar stays missing	3	3	-
* 1. Special slotted stays improperly positioned	2	2	-
j. One or both collar stays not spot laminated at both ends of stay, if laminated stays are used	2	1	-
k. One or both stays positioned less than a 25-degree angle or more than a 30-degree angle from finished front of collar, or stay not fitted into point of collar within 1/4 inch of edge stitching at the point	2	1	-
l. End of collar stand finished more than 1/8 inch beyond front edge	3	2	-
m. Collar ends open less than 1/4 inch or open more than 3/4 inch when buttoned	3	2	-

1/ Center of collar is determined by aligning the two shoulder seams at junction of collar.

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TABLE IV. End item visual defect point values (cont'd)

Defect	Point value		
	D	SD	U
XII. <u>COLLAR</u> (cont'd)			
n. Edge of undercollar exposed beyond edge of top collar:			
1. 1/16 inch or more for a distance of 2 inches or more	3	2	1
2. Less than 1/16 inch on major portion of collar	2	-	-
o. Width of collar stand varying more than 3/16 inch when measured at the two shoulder seams at junction of collar	1	1	1
XIII. <u>SHOULDER LOOP</u>			
a. Not uniform in size or shape - any point varying:			
1. More than 3/8 inch with corresponding point on matching part	3	3	2
2. 1/4 inch up to and including 3/8 inch with corresponding point on matching part	2	2	1
b. Not positioned as specified or attached crookedly	2	2	1
c. Width at wide end or length not as specified	1	1	1
d. Loop tight, loose or badly distorted when buttoned	2	2	1
e. For MIL-S-83333 class 2 shirts only:			
1. Poorly shaped	2	-	-
2. Misplaced, i.e., loops on left shoulder vary in position from loops on right shoulder by more than 3/8 inch	3	-	-
3. Width of loops less than 1/4 inch or more than 5/16 inch	1	-	-
4. Distance from finish armhole seam to first loop less than 1-1/4 inches or more than 1-3/8 inches	2	-	-

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TABLE IV. End item visual defect point values (cont'd)

Defect	Point value		
	D	SD	U
XIII. <u>SHOULDER LOOP</u> (cont'd)			
5. Distance between loops less than 3-1/8 inches or more than 3-1/4 inches	2	-	-
6. Free opening of loop nearest armhole less than 1-1/8 inches or more than 1-3/8 inches	2	-	-
7. Free opening of loop nearest collar less than 7/8 inch or more than 1-1/8 inches	2	-	-
XIV. <u>FRONT</u>			
* a. Spacing between two or more buttonholes unequal by 1/4 inch or more <u>1/</u>	2	1	1
b. Two or more buttonholes out of vertical alignment by: <u>1/</u>			
1. 1/8 inch up to and including 1/4 inch	1	1	-
2. More than 1/4 inch	2	2	1
c. Front tight or short or front facing tight or twisted causing noticeable bulge or twist when shirt is buttoned	3	2	1
d. Front edge not folded straight with warp line (i.e., forming curve)	1	1	1
e. Lapel step more than 1-1/2 inches or less than 3/4 inch wide, or width of steps uneven by more than 1/4 inch	2	1	-
f. Uneven in length at bottom when buttoned by:			
1. More than 1/2 inch	1	1	1

1/ Button at collar stand, when applicable, is excluded.

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TABLE IV. End item visual defect point values (cont'd)

Defect	Point value		
	D	SD	U
XIV. <u>FRONT</u> (cont'd)			
g. Two or more buttons out of vertical alignment by:			
1. 1/8 inch up to and including 1/4 inch	1	1	-
2. More than 1/4 inch	2	2	1
* h. (When applicable) One or more flap buttonholes are out of alignment with corresponding front buttonhole by:			
1. More than 1/8 inch up to and including 1/4 inch	1	1	1
2. More than 1/4 inch	2	2	1
XV. <u>FRONT FACING</u>			
a. Facing not caught as specified	1	1	1
b. Back edge of facing not finished as specified	1	1	1
c. Width of facing not as specified	1	1	1
* d. Facing not smooth and flat, shows evidence of puckering	2	1	1
XVI. <u>POCKET OR FLAP</u>			
a. Not uniform in size or shape - any measurement varying from pocket to pocket or flap to flap by:			
1. More than 3/8 inch	*	3	3
2. 1/4 inch up to and including 3/8 inch	3	2	2
b. Out of alignment at any point from pocket to pocket or flap to flap by: (Determination may be made by a straight edge)			
1. More than 1/2 inch	*	3	3
2. More than 3/8 inch up to and including 1/2 inch	3	2	1
3. 1/4 inch up to and including 3/8 inch	2	2	-
* c. Any pocket or flap not shaped in accordance with template by more than 1/4 inch (1/8 on each side)	2	1	1

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TABLE IV. End item visual defect point values (cont'd)

Defect	Point value		
	D	SD	U
XVII. <u>POCKET</u>			
a. Pocket edge(s) not parallel to front edge of shirt by:			
1. More than 3/8 inch	*	3	3
2. More than 1/4 inch up to and including 3/8 inch	3	2	2
3. 3/16 inch up to and including 1/4 inch	2	1	1
b. Edge of pocket pleated or twisted	1	1	1
c. Pocket corner not secured as specified	1	1	1
d. Pocket width or depth not as specified	1	1	1
e. Width of pocket hem not as specified	1	1	1
f. Pocket hem not overedged (when applicable)	1	1	1
g. Pocket opening gapped	2	2	1
XVIII. <u>FLAP</u>			
a. Attached crookedly:			
1. Distance between sides of pocket and underside of opened flap vary by more than 1/8 inch	2	2	2
b. Width or length of flap not as specified	1	1	1
c. Pocket exposed beyond end of flap by 1/8 inch or more	2	2	1
d. Not properly forced out (when applicable)	2	2	1
e. Underside of flap not finished as specified	1	1	1
f. Edge of under flap exposed beyond edge of top flap:			
* 1. More than 3/16 inch through 1/4 inch	1	1	-
* 2. More than 1/4 inch	2	2	1

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TABLE IV. End item visual defect point values (cont'd)

Defect	Point value		
	D	SD	U
XVIII. <u>FLAP</u> (cont'd)			
g. Side edge(s) of flap extending beyond side edge(s) of pocket by:			
* 1. More than 3/16 inch through 1/4 inch	1	1	-
* 2. More than 1/4 inch	2	2	1
XIX. <u>PENCIL POCKET</u>			
a. Omitted or not positioned as specified	1	1	1
b. Stitching of pencil pocket not as specified	1	1	1
c. Corner of pencil pocket not securely tacked	1	1	1
XX. <u>ARMHOLE AND SLEEVE</u>			
a. Sleeve tight causing pleat or excessive puckers on front, back or sleeve (see 3.7)	2	2	2
b. End of armhole seam not staggered as specified, or staggered more than 3/8 inch when not specified (measurement taken from center to center of seams when double lapped and double stitched)	1	1	1
c. Sleeves reversed	3	3	3
d. Construction of sleeve opening:			
1. End of binding not securely caught in sleeve opening, i.e., can be easily pulled away	3	3	3
2. Bound edge of sleeve opening not turned to the inside at buttonhole end of cuff	1	1	1
3. Top of bound opening not stitched, tacked or bartacked across width of binding	1	1	1
4. Binding twisted or puckered	1	1	1

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TABLE IV. End item visual defect point values (cont'd)

Defect	Point value		
	D	SD	U
XX. <u>ARMHOLE AND SLEEVE</u> (cont'd)			
5. Binding less than 1/2 inch or more than 3/4 inch wide	1	1	1
6. Opening not within specified range	1	1	1
7. Sides of opening uneven in length by 1/4 inch or more (measured to top edge of cuff)	1	1	1
* 8. Fullness of sleeve bottom not taken up as specified	1	1	1
* 9. Placket length varies in length by:			
(a) 3/8 up to 1/2 inch inclusive	1	1	-
(b) more than 1/2 inch	2	1	-
XXI. <u>CUFF(S)</u>			
a. Construction and setting:			
1. Reversed, i.e., buttonhole on underside and button on top side	3	3	3
2. End of cuff finished beyond outer edge of sleeve opening by:			
(a) More than 1/8 inch	1	1	-
(b) More than 3/16 inch	1	1	1
3. Width less than specified:			
(a) By 1/8 inch up to and including 1/4 inch	1	1	-
(b) More than 1/4 inch	2	2	1
4. Irregular in width by 1/4 inch or more	1	1	1
5. Edge stitching on cuff not as specified	1	1	1
6. Buttonholes on cuff misplaced or not positioned as specified; out of alignment with other buttonholes resulting in bulge or twist on cuff when worn, applicable to French-style (four buttonhole) cuff only	3	-	-
XXII. <u>YOKE</u> Yoke and back not lapped as specified	1	1	1

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TABLE IV. End item visual defect point value (cont'd)

Defect	Point value		
	D	SD	U
XXIII. <u>CENTER PLAIT</u>			
a. Width not as specified	1	1	-
b. Irregular in width (varies more than 1/4 inch)	1	1	-
c. Front edge of plait extending beyond front edge of left front less than 1/8 inch or more than 1/4 inch	1	1	-
XXIV. <u>BOTTOM HEM AND SLEEVE HEM</u>			
a. Width not as specified	1	1	1
b. Irregular in width by 1/4 inch or more	1	1	1
c. Hem end extending more than 1/8 inch beyond front edge of shirt	2	1	1
d. Hem twisted, pleated or puckered (see 3.7)	1	1	1
XXV. <u>SLEEVE POCKET</u>			
a. Pocket pleated or twisted in stitching	-	-	1
b. Slide fastener, when closed, not toward top of sleeve	-	-	1
c. Edge of tape extending beyond edge of pocket by more than 1/8 inch	-	-	1
d. Thong not specified length or width	-	-	1
XXVI. <u>FUSIBLE</u> (when applicable)			
a. Omitted	*	3	1
b. Twisted causing puckers or pleats on outside of shirt	3	2	1
c. Any evidence of bleed through, delamination (such as bubbling), or color change	3	2	1
d. Applied in incorrect location (i.e. to underflap in lieu of top flap as required)	3	2	1

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TABLE V. Selected defects for dress (D) shirtsDefectMATERIAL DEFECT AND DAMAGE

- * Hole, cut, tear, smash, burn, drill hole, scorched area, multiple float or open place on outside (longest dimension in any direction), more than 1/4 inch.

COLLAR

Not uniform in size or shape, any point varying more than 3/8 inch with corresponding point on matching part.

Collar points uneven in length by more than 3/8 inch.

POCKET OR FLAP

Not uniform in size or shape, any point varying more than 3/8 inch with corresponding point on matching part.

Out of alignment by more than 1/2 inch

POCKET

Pocket edge not parallel to front edge of shirt by more than 3/8 inch

FUSIBLE (when applicable)

Omitted

- * 5.7 End item dimensional examination. The sample size for end item dimensional examination shall be based on lot size as shown in table VI. The shirts shall be examined for conformance to the dimensional requirements cited in the table of measurements of the appropriate shirt specification. When a measurement deviates from a dimension and tolerance specified, the shirt shall be penalized one point. Each shirt shall also be penalized one point when the sleeves are uneven in length by 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 shirt present in the lot should be represented in the sample selected for this examination.

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* TABLE VI. Sampling provisions for end item dimensional examination

Lot size	Sample size	Maximum acceptable point value
Up through 500	8	0
501 through 3,200	13	1
3,201 through 35,000	20	2
35,001 and up	32	3

- * 5.8 Packaging examination. The fully packaged shirts 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 container flaps, improper taping, loose strapping, inadequate stapling or improper adhesive application. Open and noncontinuous heat sealed seams in closure of polyethylene bag. <u>1/</u> Alternative closure of polyethylene bag not provided with tuck or reverse flap. <u>1/</u> Omission of vent hole in polyethylene bag. <u>1/</u> Incorrectly fabricated bag. <u>1/</u> Bulged or distorted container.
Content	Number of bundles or intermediate packages per shipping container is more or less than required. Number of shirts per bundle or intermediate package is more or less than required. <u>2/</u> Size shown on one or more shirts not as specified on shipping container. <u>2/</u>
Preservation (naphthalene flakes)	Improperly applied or missing. <u>1/</u>

1/ When applicable

2/ For this defect, one bundle or intermediate package from each 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 of defects and examination requirements encountered by Departments and Agencies of the Defense Department in the procurement of men's shirts.

* 6.2 Subject term (key word) listing.

Examination
Inspection
Shirts, Men's
Uniforms

* 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:

Army - GL

Review activities:

* Navy - MC
Air Force - 99, 82
DLA - CT

Project No. 8405-0048

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ZONE DEFECTS FOR DRESS SHIRTS

Zones X and Y shall apply only on the outside front and back as illustrated and as defined in 3.6

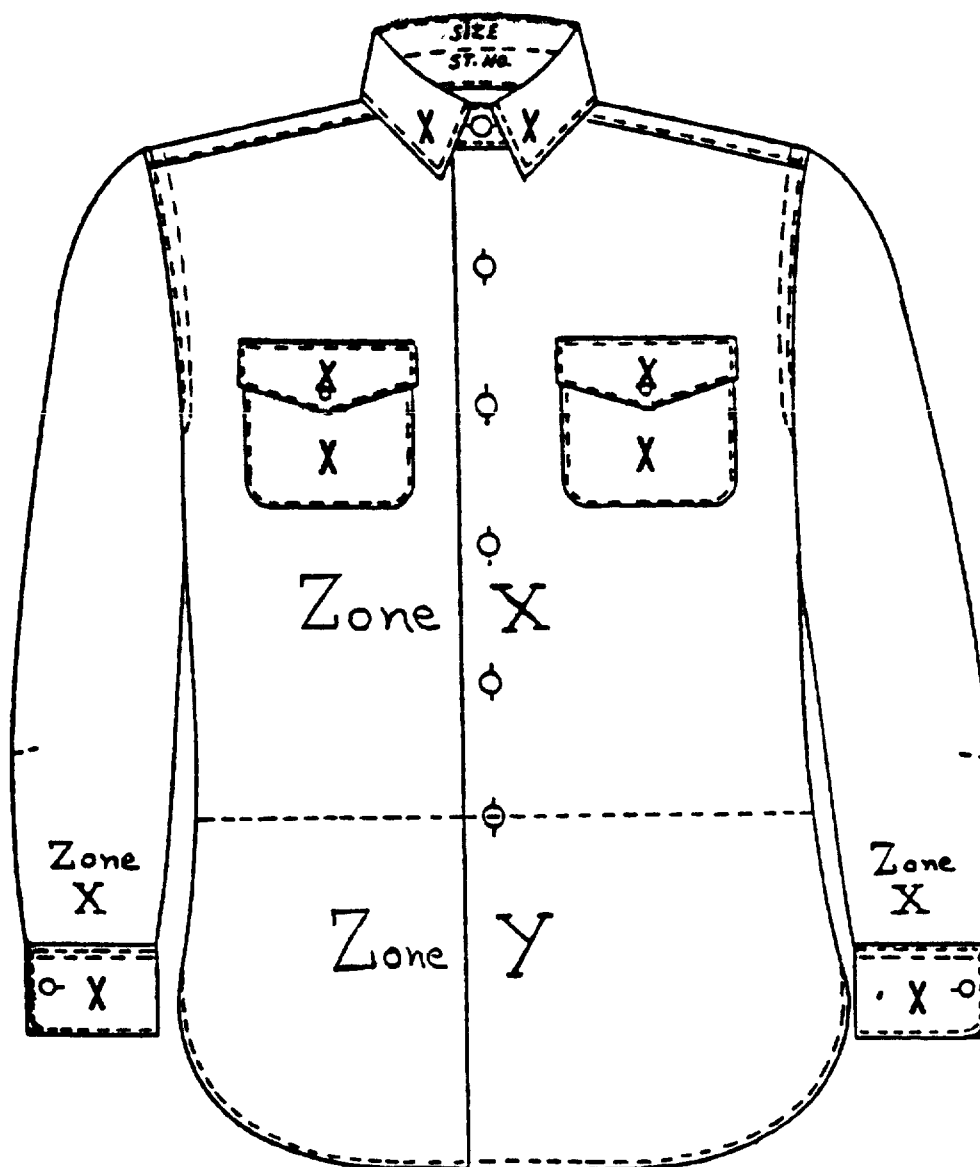


FIGURE 1

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ZONE DEFECTS FOR SEMI-DRESS SHIRTS

Zones X and Y shall apply only on the outside front and back as illustrated and as defined in 3.6

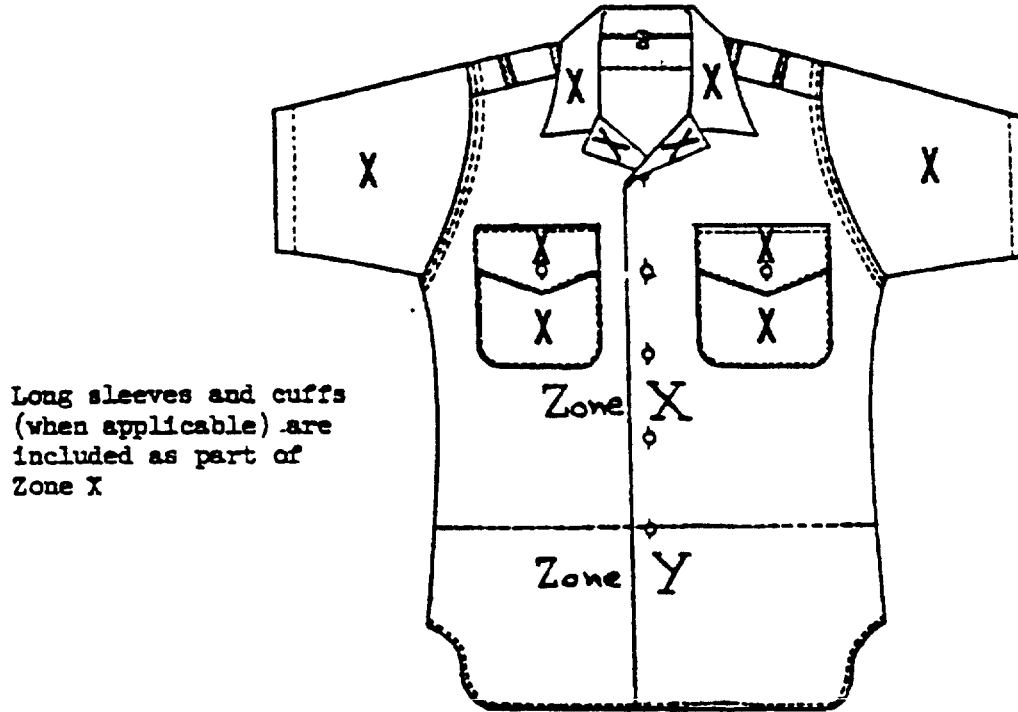
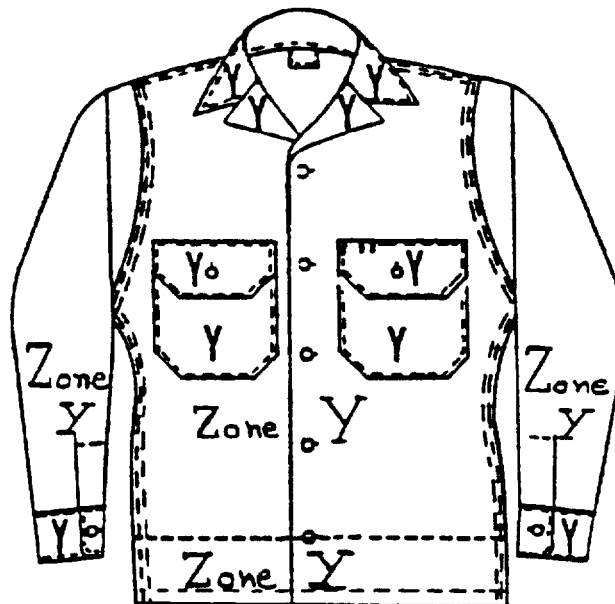


FIGURE 2

ZONE DEFECTS FOR UTILITY SHIRTS

Zone Y shall apply only on the outside front and back as illustrated and as defined in 3.6.



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FIGURE 3

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