

NOT MEASUREMENT SENSITIVE

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MILITARY SPECIFICATION

FLAGS AND PENNANTS

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

1. SCOPE

1.1 Scope. This specification covers the general requirements for flags and pennants, other than the US National flags, used by the Department of Defense. The detailed requirements for a given flag will be covered by the drawing for that specific flag.

1.2 Classification. Flags and pennants shall be of the following materials and styles as specified (see 6.2):

MATERIALS.

Cotton Bunting
Nylon, Lightweight Bunting
Nylon, Heavyweight Bunting
Nylon-Wool Bunting
Acrylic Bunting
Rayon Banner Cloth
Nylon Cloth, Fluorescent

STYLES (Design application)

Appliqued
Hand Embroidered
Machine Embroidered
Screen Printed (not applicable to acrylic flags)
Combination of above, as specified

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be used in improving this document should be addressed to: Director, The Institute Of Heraldry, U.S. Army, Cameron Station, Alexandria, VA 22304-5050, by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A

FSC 8345

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

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1.2.1 Headings. The heading for the flags and pennants shall be of the following types and classes as specified (see 6.2 and 6.5):

Type I--Duck

Class 1--With distance line (except for acrylic flags)

Class 1A--With distance line (for acrylic flags)

Class 2--With grommets

Class 3--With distance line and thimbles

Class 4--With grommets and leather tabs

Type II--Tube and tunnel type (with cotton sheeting lining and leather tab)

Type III--Hemmed

Class 1--With tapes

Class 2--With leather tabs

2. APPLICABLE DOCUMENTS

2.1 Government documents.

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

SPECIFICATIONS

FEDERAL

V-T-276--Thread, Cotton

V-T-285--Thread, Polyester

V-T-295--Thread, Nylon

V-T-301--Thread, Silk

KK-L-2004--Leather, Cattlehide, Deerskin And Horsehide, Chrome Tanned

UU-P-268--Paper, Kraft, Wrapping

UU-P-553--Paper, Wrapping, Tissue

CCC-C-419--Cloth, Duck, Cotton, Unbleached, Plied-yarns, Army And Numbered

CCC-C-430--Cloth, Sheeting, Cotton, And Polyester And Cotton

CCC-C-439--Cloth, Bunting, Cotton, Mercerized

CCC-C-447--Cloth, Percale, Cotton

CCC-C-476--Cloth, Bunting, Nylon, And Nylon And Wool

DDD-L-20--Label, For Clothing, Equipage, And Tentage, (General Use)

PPP-B-636--Box, Shipping, Fiberboard

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MILITARY

MIL-H-226--Halyard, Signal, Braided, Treated
MIL-C-606--Cloth, Banner, Rayon
MIL-T-713--Twine, Fibrous Impregnated, Lacing And Tying
MIL-T-2283--Tape, Textile, Nylon, Woven, White or Dyed
MIL-F-2310--Fringe, Ornamental, Rayon
MIL-C-3636--Cord And Tassel, Flag
MIL-H-15021--Hook, Snap Bolt, Swivel-Eye, And Rings
MIL-G-16491--Grommet, Metallic
MIL-R-17343--Rope, Nylon
MIL-C-22775--Cloth, Bunting, Acrylic
MIL-L-40051--Leather, Cattlehide, For Glove Leather
MIL-T-43566--Tape, Textile, Cotton or Polyester, General
Purpose, Natural or In Colors

STANDARDS

FEDERAL

FED-STD-191--Textile Test Methods
FED-STD-751--Stitches, Seams, And Stitchings

MILITARY

MIL-STD-105--Sampling Procedures And Tables for Inspec-
tion By Attributes
MIL-STD-129--Marking For Shipment And Storage
MIL-STD-147--Palletized Unit Load
MIL-STD-2073/1--DOD Material Procedures For Development
And Application Of Packaging Requirements

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

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

The Institute of Heraldry Drawings
5-1-45 Series - Flag Headings

2.2 Other publications. The following documents form a part of this specification to the extent specified herein. Unless otherwise specified, the issues of the documents which are DOD adopted shall be those listed in the issue of the DODISS specified

in the solicitation. Unless otherwise specified, the issues of documents not listed in the DODISS shall be the issue of the non-government documents which is current on the date of the solicitation.

THE COLOR ASSOCIATION OF THE UNITED STATES

The Standard Color Reference of America, Tenth Edition
United States Army Color Card, The Official Colors for
Branches, Agencies, etc.

DOD Standard Shades for Heraldic Yarns for Embroidery
and Ribbons, 1974.

DOD Standard Color of Official Standardized Shades for
Sewing Threads, 1968.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM-D-3951 - Standard Practice for Commerical
Packaging.

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

(Application for copies of the color references should be
addressed to the Color Association of the United States, 343 Lex-
ington Avenue, New York, New York 10016-0927).

(Nongovernment standards and other publications are normally
available from the organizations which prepare or which distri-
bute 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 specification and the reference cited herein,
(except for associated detail specifications, specification
sheets or MS standards) the text of this specification shall take
precedence. Nothing in this specification, however, shall super-
seede applicable laws and regulations unless a specific exemption
has been obtained.

3. REQUIREMENTS

3.1 Standard sample. Unless otherwise specified (see 6.2),
samples shall be furnished by the contracting officer to be used
for guidance, information and as a standard for design and work-
manship. Variation from this specification may appear in the

guide samples in which event the specification shall govern.

3.2 First article. Unless otherwise specified in the contract or purchase order, a sample shall be subjected to first article inspection (see 4.4 and 6.4).

3.3 Materials. Materials shall conform to the referenced specifications and the requirements specified herein.

3.3.1 Basic flag materials.

3.3.1.1 Cotton bunting. The cotton bunting shall conform to CCC-C-439.

3.3.1.2 Lightweight nylon bunting. Lightweight nylon bunting shall conform to type I, class A of CCC-C-476. At the option of the manufacturer, heavyweight or lightweight nylon bunting conforming to material cited in 3.3.1.3 may be substituted for the lightweight nylon bunting except when the design is screen printed. All other requirements applicable to flags made of lightweight nylon shall apply.

3.3.1.3 Heavyweight nylon bunting. Heavyweight nylon bunting shall conform to type I, class B of CCC-C-476, except that paragraph 3.6.1 shall be deleted and the following substituted: The finish of the nylon bunting shall be equal to, or better than, the standard sample.

3.3.1.4 Nylon-wool bunting. Nylon-wool bunting shall conform to type II of CCC-C-476.

3.3.1.5 Rayon. The rayon banner cloth shall conform to MIL-C-606.

3.3.1.6 Fluorescent nylon cloth. The fluorescent nylon cloth shall be 200 denier nylon in both warp and filling, 3.0+ 1/2 ounce per square yard, plain weave and heat treated. Fabric shall be fluorescent under ultra-violet light.

3.3.1.7 Cotton percale. Cotton percale shall conform to CCC-C-447.

3.3.1.8 Acrylic bunting. Acrylic bunting shall conform to MIL-C-22775.

3.3.2 Duck. The duck used for the heading shall be white or in the gray, shall weigh not less 8.25 ounces per square yard, have 2 ply yarn in both warp and filling, and shall have a breaking strength of not less than 105 pounds in the warp and 100 pounds in the filling direction when tested as specified for type

III, 8.25 ounce duck in CCC-C-419.

3.3.3 Sheeting.

3.3.3.1 Tube heading lining. Unless otherwise specified, the cotton sheeting used for lining the tube heading shall conform to type I or II, class 1, style A or B of CCC-C-430.

3.3.3.2 Sheeting for insignia, stars or other symbols.

3.3.3.2.1 Cotton and mixed nylon-wool flags. Unless otherwise specified, insignia, stars, or other symbols for cotton or mixed nylon-wool flags shall be made from cotton sheeting conforming to type II, class 1, style A of CCC-C-430. The insignia, stars or other symbols may be sized or stiffened to aid in sewing, provided the agent does not have a deleterious effect on appearance or serviceability.

3.3.3.2.2 Nylon flags. Unless otherwise specified, insignia, stars, or other symbols for nylon flags shall be made from lightweight nylon conforming to type I, classes A or B of CCC-C-476. The insignia, stars, and other symbols may be sized or stiffened to aid in sewing provided the agent does not have a deleterious effect on appearance or serviceability.

3.3.3.2.3 Rayon flags and acrylic flags and pennant. Unless otherwise specified, insignia, stars, and other symbols for rayon flags and acrylic flags and pennants shall be made from the same material as the flag.

3.3.4. Thread.

3.3.4.1 Cotton. Cotton thread shall conform to V-T-276. The types and sizes of thread shall be as specified in Table I.

TABLE I COTTON thread sizes.

<u>Flag or Flag component</u>	<u>Type</u>	<u>Ticket #</u>	<u>Ply</u>	<u>Finish</u>
Cotton bunting flags	IA	50	3	Soft
Rayon or Fluorescent nylon flags	IC	B	3	-
Distance lines	IIIA or IIIB	-	16/4	Soft or glazed
Cotton duck headings	IA or IB	-	10/3	Soft or glazed
Applique of cotton design components nylon-wool flag	IA	50	3	Soft

3.3.4.2 Nylon. Nylon thread shall conform to V-T-295. The thread for sewing nylon-wool flags and the hems, and reinforcement patches of the nylon flags shall be machine twist or twisted bonded multicord, conforming to type I or II, class 1, size B, 2 or 3 ply nylon thread. The thread used for sewing nylon flags, except for the hem and reinforcement patches, shall be type I or II, size A or B, 3 ply nylon thread.

3.3.4.3 Silk.

3.3.4.3.1 Hand embroidery. The silk thread for hand embroidery shall conform to type IV or V-T-301 with the following exceptions to the requirements:

Commercial designation	Minimum average length per ounce (yard)	Minimum average breaking strength (pound)
A	1000	3.0
FF	233	11.0

As an alternate a ss mercerized and gassed cotton yarn may be used in lieu of the silk thread and may be substituted as follows:

<u>Silk Thread</u>	<u>Cotton Size</u>
A Type	20/2
FF Type	10/2

See paragraph 3.3.4.3.2 for colorfastness requirements for above cotton yarn.

3.3.4.3.2 Colorfastness for embroidery cotton yarn. As an alternate 20/2 ss mercerized and gassed cotton yarn may be used in lieu of the silk thread and shall show good colorfastness to wet-dry cleaning, water, light, and crocking.

3.3.4.4 Rayon. Rayon thread used in Bonnax machine embroidery shall be 600 denier, continuous filament, regenerated cellulose (viscose or cuprammonium) rayon thread. The thread shall have not less than 460 yards per ounce and a breaking strength of not less than 2.3 pounds.

3.3.4.5 Polyester. Polyester thread for sewing acrylic flags and pennants shall conform to type I, class A, letter size B, 3 ply of V-T-285 and shall be white in color.

3.3.4.6 Color and colorfastness. Unless otherwise specified, the color of the thread shall match the color of the material on which it is used. Except for reinforcement patches, multicolored flags and pennants made of cloth other than acrylic

bunting may be sewn with white thread or thread of the predominant color. Acrylic flags and pennants shall be sewn with white thread. The thread for duck headings shall be white or unbleached. When a fringe is specified, the color of the thread visible on the face of the fringe shall match the color of the fringe. Fringe attachment threads for multicolored flags, visible on the reverse side of the flag shall match the predominant color of the base material. The colorfastness requirements of the thread used shall be equal to or better than the material on which it is used, as described in 3.4.1.1.1.

3.3.5 Distance Lines. The distance lines shall be 1/4 inch in diameter nylon rope conforming to MIL-R-17343 or 1/4 inch in diameter twisted or solid braided polypropylene rope having a minimum breaking strength of 1000 pounds as shown on the applicable drawing.

3.3.5.1 Twine. The twine used in wrapping the free end of the distance line shall be waxed twine conforming to type N, class 3 of MIL-T-713.

3.3.6 Tape. Tape shall be 1/2 inch nylon tape conforming to MIL-T-2283.

3.3.7 Snap hook and ring. The snap hooks and rings shall conform to MIL-H-15021. Unless otherwise specified on the applicable drawing, the snap hook may conform to either type I or type II.

3.3.8 Grommets. Grommets shall conform to type II or III, class 1 of MIL-G-16491.

3.3.9 Leather. Leather for the tabs shall conform to type I, class 2 of KK-L-2004, 3 to 4 ounces when measured on a Woburn Gauge or type II of MIL-L-40051. When natural colored leather is used, the crocking requirements shall not apply.

3.3.10 Fringe. Except for automobile flags and unless otherwise specified, the fringe shall conform to class 2 of MIL-F-2310. The fringe for automobile flags, when specified, shall conform to class 1 of MIL-F-2310. The color of the fringe shall be as specified on the applicable drawing.

3.3.11 Webbing. When specified, the webbing used for reinforcement of type I, class 3 headings shall conform to type I, class 1 or 2 of MIL-T-43566, and shall be of the width specified on the applicable drawing.

3.3.12 Cord and tassels. When specified (see 6.2), cord and tassels shall conform to MIL-C-3636 and the applicable

drawing.

3.3.13 Thimbles. Thimbles shall be galvanized steel and of the type used for 1/4 inch in diameter wire rope. They shall be semi-circular at the closed end and tapering at free ends.

3.4 Design and tolerance. The design and size of the flags and pennants shall be as specified on the applicable drawing. Unless otherwise specified on the drawing, a tolerance of plus or minus 5 percent shall be allowed for all dimensions exceeding 2 inches except that maximum and minimum measurement of dimensions on a single flag may not differ more than 2 percent of the required dimensions and both be within 5 percent tolerance. For dimensions 2 inches or under, a tolerance of plus or minus 1/8 inch will be allowed.

3.4.1 Components of design. Components of the design shall be applied by one or a combination of methods specified herein and as specified on the applicable drawing. The methods of application are appliqueing, hand embroidery, machine embroidery and screen printing. Screen printing does not apply to acrylic flags. Components of the design shall be clearly distinguishable and identically oriented on each side with respect to the heading or staff end of the flag when screen printed with penetrating dye or embroidered and the designs are symmetrical. The components, except for lettering, should therefore appear reversed on the reverse side, as if printed through from the face side. Appliqued designs shall appear proper on each side of the flag. Unless otherwise specified on the drawing, lettering shall read from left-to-right on both sides of the flag. The face side of the flag shall be designated as the side visible when the heading is on the viewers left. Unless otherwise specified and except for acrylic flags or where components of design are printed on percale, when appliqueing is used as the method of design application, the thread used for appliqueing shall match the color of the design component. Unless otherwise specified components of design printed on percale shall be appliqued with thread matching the basic color of the percale. Components of design for acrylic flags and pennants shall be appliqued with white polyester thread specified in 3.3.4.5.

3.4.1.1 Color. The colors shall be as designated on the applicable drawing and shall conform to approved shade standard samples as furnished or designated by the contracting officer. If the cable numbers cited on the applicable drawings are not the numbers cited in the latest edition of the Standard Color Reference of America, the number will be converted to the current cable number. When cable number 70001 is cited, the number will be converted to 80001. When cable numbers are referenced in the applicable drawing and shade standards are not furnished by the

procuring activity, the standards may be obtained from color cards issued by or directly from The Color Association of the United States, Incorporated (see 2.2). Screen printed designs and colors shall be designated by the applicable drawing. The colorant system for the screen printed design shall be such as to maintain the essential textile appearance of the base material upon which design is printed. The dye shall not adversely effect the hand of the fabric. Coatings are not allowed except with the express approval of the contracting officer. When prints are required to register (on face and back of a given flag or pennant), the appearance of the print, when viewed by through-lighting shall be undistorted due to displacement of the print on one side in relation to that on the other side of the fabric. When prints are applied to fabric subsequently to be applied to a flag or pennant by sewing, some strike-through of the print is permissible provided that it does not adversely affect the appearance of the print on the finished flag or pennant. When a penetrating dye is used, the resulting color on the face shall match the color specified on the applicable drawing. A slight change in color will be allowed on the reverse side.

3.4.1.1.1 Colorfastness. The colorfastness of the base materials of flags and pennants, shall be in accordance with the requirements of the applicable specification for the material. When screen printed designs are specified, the design shall be obtained by the use of such colorants as will provide a degree of colorfastness equal to or better than that of the dyed basic fabric of the flag or pennant. When the brilliance of the color is such as to require the use of naphthol colors, or when black areas are involved, the colorfastness to crocking may be fair. Rating on an adjective basis will be performed only when a standard sample of reference of the exact material is not provided.

3.5 Construction. Flags and pennants shall be constructed in accordance with the applicable drawing and the requirements specified herein.

3.5.1 Basic construction. Unless otherwise specified, all flags and pennants shall have the warp of the basic material running in the fly, or horizontal, direction of the flag. All raw edges shall be hemmed. A selvage end may be used at the top or bottom edge of the flag or pennant except that flags or pennants manufactured from all nylon, acrylic bunting, or rayon banner cloth shall be hemmed on all edges. Hems shall be turned to the back side of the flag except that hems on all fringed flags shall be turned to the front side of the flag. The ends of all stitching shall be backstitched not less than one inch when not caught in seam or other stitching. Except for flags and pennants of acrylic bunting when the size of the pennant necessitates the piecing of the basic material, the seam, whenever possible, shall

be in the center two-thirds of the material being pieced. Where the size of an acrylic flag or pennant necessitates the piecing of the material, the base cloth may be used with the warp thread running in the vertical or hoist direction except that code and pennant flags with the letters Y, M, and V and the numerals 4, 5, and 6 shall have material for the strip cut on a bias and set in on the straight of the material.

3.5.2 Headings. Unless otherwise shown on the applicable drawing, headings for the flags and pennants shall be as specified herein.

3.5.2.1 Type I. Type I headings shall be fabricated from duck specified in 3.3.2 and the requirements specified herein.

3.5.2.1.1 Class 1. Type I, class 1 heading shall be constructed in accordance with the details and dimensions shown on figure 1 and as specified herein. The headings shall be made by cutting a piece of duck 6 inches wide and 2 inches longer than the hoist of the flag. The edges and ends of the duck strip shall be turned-in 1 inch and the duck doubled over to form a 2 inch wide heading. The hoist end of the flag shall be turned-under 3/4 inch and may be sewn with a single row of stitching. The folded end of the flag shall then be inserted between the edges of the duck for a distance of 1 inch so that the ends of the flag shall not be exposed. With the turned-in sides and ends of the duck even, the hoist end of the flag and the open side of the heading shall be stitched with a minimum of three rows of equidistant stitching 1/4 to 3/8 inch gauge (1/8 inch stitching margin). The flag or pennant shall have a distance line specified in 3.3.5, running through the heading. The line at the top of the heading shall pass through a ring specified in 3.3.7, doubled back and superimposed upon itself and sewn with zigzag stitches through both thicknesses of the line for a minimum distance of 2 inches. The line shall then be drawn into the heading until the ring is approximately flush with the outer edge of the heading. The top of the heading shall then be closed by two rows of stitches 1/4 to 1/2 gauge inch, either up to or through the halyard. The distance line shall be secured within the heading by zigzag stitches at the top, center and bottom for a minimum of 2 inches at each location. The lower end of the heading shall then be closed by two rows of stitching in the same manner as the top. The snap hook specified in 3.3.7, shall be attached to the distance line by passing the line through the swivel loop, doubled back and superimposed upon itself for a distance of not less than 2 inches and sewn by zigzag stitching for a minimum of 2 inches. Zigzag stitching at the top and bottom of the line shall pass through both thicknesses of the distance line. Prior to zigzag stitching, the free end of the distance line shall be whipped for a distance of not less than 1/2 inch with not less

than 8 turns using waxed twine specified in 3.3.5.1. The overall length of the extended portion of the distance line and snap hook, measured from the lower edge of the heading shall be 9 inches for signal flags and pennants and 24 inches for all others. Distance lines for flags and pennants having an area of less than 16 square feet shall be 3/4 inch in circumference; distance lines for flags and pennants with an area of 16 square feet and larger shall be 1 inch in circumference unless otherwise specified on the applicable drawing. The stitch type shall be as specified in Table II. At the option of the manufacturer, a type I, class 1A heading may be used as an alternate method of construction.

3.5.2.1.2 Class 1A. Type I, class 1A headings shall be constructed as specified in 3.5.2.1.1 with the following exceptions:

- a. The heading shall be constructed in accordance with the details and dimensions of figure 2. The heading shall be stitched to the hoist end with four rows of stitching and a stitching margin of 1/8 inch. The stitching gauge shall be 1/4 to 3/8 inch.
- b. The distance line shall be fabricated from 1/4 inch diameter nylon rope specified in 3.3.5.
- c. The width of the zigzag stitching shall cover no less than one half the diameter of each strand of rope. The ends of the zigzag stitching shall be firmly secured by backstitching or overstitching or by increasing the number of stitches per inch at the ends for a minimum of 1/4 inch.
- d. The turned back end of the distance line shall be zigzag stitched from the snap hook to the free end of the distance line within the heading.
- e. The free end of the nylon rope shall be whipped as specified in 3.5.2.1.1 or may be taped or fused at the ends to prevent raveling. Both cutting and fusing of the nylon rope may be accomplished in one operation if a hot wire or blade is used for the operation.

3.5.2.1.3 Class 2. The construction and dimensions shall be as specified for type I, class 2 headings on figure 1. Stitch type shall be as specified in Table II. The heading shall be made with a piece of duck 6 inches wide and 5 inches longer than the flag hoist to which it is to be attached. Both side edges shall be turned-in 1 inch and both ends turned-in 2-1/2 inches. The hoist end of the flag shall be turned under 3/4 inch and may

be sewn with a single row of stitching. The folded ends of the inserted flag hoist shall not be exposed. The raw edges of the ends of the duck strip shall be closed with a single row of stitching using a 1/8 inch stitching margin or as an alternate, the rows of stitching may be placed after the duck strip is doubled over. The duck strip shall then be doubled over to form a finished heading 2 inches wide. With the sides and ends of the duck strip even, two rows of stitching (not less than 3/16 inch stitching gauge, 1/8 inch stitching margin) shall be sewn through all thicknesses. Single rows of stitching shall be placed along the centerfold edge and ends of the duck strip using a 1/8 to 1/4 inch stitching margin. The duck heading shall be finished by securely clinching two No. 2 grommets specified in 3.3.8 in positions shown on figure 1 for type I, class 2 headings.

3.5.2.1.4 Class 3 (distance line with thimble). The construction and dimensions of the class 3 heading shall be as specified for class 1 headings as shown on figure 3 except that the heading shall be fitted with a 1/4 inch galvanized steel thimble specified in 3.3.13 at each end so as to provide a loop not less than 1-1/4 inches in length. The snap hooks and rings specified for class 1 heading shall be omitted.

3.5.2.1.5 Class 4. The construction and dimensions shall be as specified for type I, class 4 headings on figure 4. Seam type shall be as specified in Table II. The heading shall be made on duck specified in 3.3.2, cut 8 inches wide and 5 inches longer than the hoist of the flag. The hoist end of the flag shall be positioned 1 inch in from the side edge of the duck, 2-1/2 inches from each end and stitched with one row of stitching. The side edge of the duck attached to the flag shall be turned-in 1 inch so that a 1 inch strip of flag material the same length as the hoist shall be folded inside the turned-in duck fold as shown on the applicable drawing for type 1, class 4 headings. The opposite side edge of the duck shall also be turned-in 1 inch. The ends of the duck strip shall be turned-in 2-1/2 inches. The raw edges of the top and bottom duck ends shall be stitched closed with a single row of stitching with a 1/8 inch stitching margin. A tab of leather specified in 3.3.9, 3/4 inch plus or minus 1/16 inch wide and not less than 2 inches long, having a slit and eyelet 3/4 inch plus or minus 1/16 inch long for fastening tab over a knob or button of the flagstaff shall be centered and placed flush with each end of the duck heading as shown on the applicable drawing. The tabs shall be secured through the two thicknesses of duck by box stitching as shown on the applicable drawing. Stitching shall be securely backstitched. Four No. 2 grommets specified in 3.3.8, shall be clinched into position as indicated on applicable drawing. The duck heading shall be doubled over to form a heading width of at least 2-3/4 inches. Position the sides and the ends of duck evenly, with the grommet holes

aligned, and sew two rows of stitching not less than 1/16 inch gauge, 1/8 inch margin through all thicknesses.

3.5.2.2 Type II. The heading shall be of the tube or tunnel type for insertion of a flagstaff, and shall be made with cotton sheeting specified in 3.3.3.1. The construction and dimensions shall be as specified for type II headings on figure 5. Stitch type shall be as specified in Table II. The sheeting shall be 6 inches wide and 5 inches longer than the hoist of the flag except for the guidons, for which the sheeting shall be cut down proportionately in the width so that a 2-1/4 inch heading is formed. Each end shall be folded under 2-1/2 inches. The sheeting shall be fitted with a tab of leather specified in 3.3.9, at each end. Each tab shall be 3/4 inch plus or minus 1/16 inch wide, and not less than 2 inches long. Each tab shall have a slit and eyelet 3/4 inch plus or minus 1/16 inch long for fastening over a knob or a button on the flagstaff. The slit and eyelet shall be centered on the width of the tab shown on the applicable drawing. The tab shall be placed within the heading and centered opposite the stitching of the hem. The tab shall be secured through the two thicknesses of lining by box stitching as shown on the applicable drawing. As an alternate, the leather tabs may be secured by stitching through both lining and heading material. Stitching shall be securely backstitched. The contractor's label specified in 3.8 shall be affixed at the same time the tabs are placed on the sheeting. The sheeting strip shall be placed on the back of the flag at the hoist end with the folded ends of the strip flush with the hemmed or selvage edges of the flag at the top and attached thereto by a single row of stitching across each folded end of the strip. The raw edge of the stitching shall be placed 1/2 inch from the raw edge of the flag. The tube or tunnel shall then be formed by hemming the hoist end of the flag with the sheeting strip inside. Sheetting may also be seamed separately with a 1/2 inch seam to form a tunnel. Turn under hoist edge of flag 1/2 inch and insert under folded side edge of sheeting strip. Turn under and stitch with a single or double row of stitching (3/16 inch margin), which shall pass through both the turned edge of the flag and both edges of the unseamed or seamed lining strip. The flat width of the finished hem shall be not less than 2-3/4 inches except for guidons which shall not be less than 2-1/4 inches.

3.5.2.3 Type III. Flags without duck or cotton sheeting headings shall have the hoist end of the flag hemmed and shall be constructed in accordance with one of the following subparagraphs as specified.

3.5.2.3.1 Class I. The construction and dimensions shall be as specified for type III, class I headings on figure 6. Stitch type shall be as specified in two rows of stitching.

Nylon tape specified in 3.3.6, shall be cut 12 inches long, doubled end-to-end so as to form tie-tapes and attached to the hem with two rows of stitching. One tape shall be attached 1 inch from the top of the hem and the other 1 inch from the bottom. The tapes shall overlap the full width of the hem and be arranged so as to facilitate the tying of the flag to a flagstaff.

3.5.2.3.2 Class 2. The automobile flags (and other flags when required) shall have the hoist end hemmed after insertion of leather tabs specified for type III, class 2 headings on figure 6. Two rectangular leather tabs 1-3/8 inch long and 5/8 inch wide shall be located and secured within the hem as shown on figure 6.

3.5.3 Stitching of fringe. When fringe is specified for flags, a continuous length of the fringe conforming to 3.3.10, shall be stitched to the front side of the flag at the top, fly and bottom edge of the flag and completely around each end of the heading. The fringe shall be neatly turned under and caught in the heading stitching. Selvage edges at top and bottom shall be hemmed with type EFa-1 stitching, cut edges with EFb-1 stitching. The stitching used to attach the fringe may be incorporated in the formation of the hem. As an alternate, edges may be hemmed with an EFa-1 stitching and turned over prior to attachment of fringe. The fringe shall be superimposed on the hem and evenly attached around the flag with a single row of stitching through the center of the fringe using seam type LSa-1, except that automobile flags will have fringe attached with three rows of stitching, seam type LSa-1.

3.6 Stitches, seams and stitching. Unless otherwise specified, stitches, seams, and stitching shall conform to FED-STD-751 and as shown in Table II.

TABLE II Stitches, seams and stitching.

Section of flag or pennant	Type of seam or stitching	Minimum hem width (Inch)	Stitch Type	Stitches per inch
Hem:				
Top and bottom:				
Flags with fringe	EFa-1 or EFb-1	3/32-3/16	301	12
Flags, nylon	EFa-1 or EFb-1	3/16	301	12
All other flags <u>1/</u>	EFb-1 or EFb-2	3/8	301	12
Tail or fly end:				
Flags with fringe	EFb-1	3/32 - 3/16	301	12
Semaphmore, wigwag and flags with type II headings				
All other flags	EFb-2	1/2	301	12
Reinforcement patches	EFb-3 or EFb-4	3/4	301	12
Seams: <u>5/</u>	LSd-1 or LSd-2	-	301	12
Cross and fly	LSc-2	-	301	12
Bias	LSr-2 or LSc-2	-	301	12
Applied design:				
Cotton <u>3/</u>	-	-	304	24
Nylon, Nylon-Wool, Acrylic <u>4/</u>	-	-	304	28 to 32
Rayon <u>2/</u>	-	-	304	58
Headings:				
Type I				
(Ducks):				
		(Heading width)		
Class 1	3.5.2.1.1	2	301	6
Class 1A	3.5.2.1.2	2	301	6
Class 2	3.5.2.1.3	2	301	6
Class 3	3.5.2.1.4	2	301	6
Class 4	3.5.2.1.5	2-3/4	301	6
Type II				
(Tunnel type) for all flags except guidons				
Guidons	3.5.2.2	2-3/4	301	12
Guidons	3.5.2.2	2-1/4	301	12
Type III				
(hemmed):				
Class 1	3.5.2.3.1	1/2	301	12
Class 2	3.5.2.3.2	1-1/4 <u>+1/4</u>	301	12
Distance lines	-	-	304, 308 or hand stitched	6
Fringe	LSa-1	-	301	12

1/ Seam types of the same letter designation (e.g., EFb, LSd) are the same seams and differ only in the number of rows of stitching as designated by the number following the dash (e.g., EFb-1, EFb-2 or LSd-1, LSd-2).

2/ Throw of stitch 1/16 inch (unless otherwise specified on drawing).

3/ Throw of stitch 1/8 inch (unless otherwise specified on drawing). A 1/16 inch throw is permitted if stitching area is restricted in size.

4/ Throw of stitch 1/6 to 1/8 inch (unless otherwise specified on drawing).

5/ As an alternative, seams of signal flags and signal pennants may be stitched with a combination of SSa-2 seam and a LSa-2 seam. After completion of the SSa-2 seam with stitch type 515, the edge shall be smoothed and the seam type LSa-2, stitch type 301, shall be applied within 1/8 inch from the edge with a 1/4 inch guage. The throw of the SSa-2 seam shall be 3/8 inch. The SSa-2 and LSa-2 shall have a minimum of 12 stitches per inch.

3.7 Reinforcement patches. Reinforcement patches are not required on flags with type II and III headings, on flags with a hoist of 24 inches or less; on pennants made from acrylic bunting; and except for sizes 3-1/2, 4, and 6, on signal flags made from acrylic bunting. When required, all patches shall be located on the reverse side of the flag or pennant and shall be fabricated of the same material in the same color as that of the section to be reinforced. All exposed edges shall be turned under a minimum of 1/4 inch and securely stitched.

3.7.1 Cotton and nylon-wool bunting flags. Reinforcement patches on cotton and nylon-wool bunting flags with type I headings shall be sewn to each corner at the hoist end of the flag and shall extend within the heading the same distance as the flag base. The size of the reinforcement patches shall be as shown on the applicable drawing or at the option of the manufacturer; the patches may be 4 inches square for flags with hoist lengths of 2 to 3 feet or 6 inches square for flags with hoist over 3 feet. The size of the patch shall be as near the required size as possible.

3.7.2 Nylon and acrylic bunting flags. Reinforcement patches for flags with type I heading made from nylon or acrylic bunting shall be sewn in each corner of the fly end of the flag. The patches shall be in the shape of right angle triangles with the apex (90 degree angle) located at each corner of the fly end of the flag. The size of the reinforcement patches shall be as shown on figure 8. Sewing of the patches to the fly end of the flag shall be accomplished by folding the top or bottom edge (as applicable) of the flag base 3/8 inch over the patch and then re-folding both plies of fabric over 3/8 inch (see figure 7) and

stitching 1/16 inch from the inner and outer edges of the fold to form the top and bottom hems. The fly end hem shall be formed by folding the edge of the base material 3/4 inch over the patch and then refolding both plies of fabric over 3/4 inch (see figure 7) and stitching the hem with three evenly spaced rows of stitches. The outer rows of stitching shall be not more than 1/16 inch from the outer edges of the hem.

3.8 Marking. All flags and pennants having type I headings shall be marked on the heading in accordance with type IV, class 9 of DDD-L-20, with letters appropriate to the size of the heading but not more than 3/4 inch high. The lettering shall run along the length of the heading, beginning immediately below the upper grommet on class 2 headings, and in a corresponding position on all other type I headings. Marking shall contain information required for class 5 labels and shall be equal to class 8 labels in fastness of printing. For type II heading, the contractor shall affix adjacent to top leather strap a label conforming to type I, class 5 of DDD-L-20.

3.9 Workmanship. Flags and pennants shall be clean, well-made, and shall meet the acceptable quality levels established by this specification. All stitching which is not caught up by a seam or other stitching shall be backstitched a minimum of one inch. Thread tension shall be maintained throughout and all thread ends shall be trimmed.

4. QUALITY ASSURANCE PROVISIONS

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

4.1.1 Responsibility for compliance. All items 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 assuring that all products or supplies submitted to the Government for acceptance comply with all requirements of the contract. Sampling in quality conformance does not authorize submission of known defective

material, either indicated or actual, nor does it commit the Government to acceptance of defective material.

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

- a. First article inspection (see 4.4).
- b. Quality conformance inspection (see 4.5).

4.3 Inspection conditions. Unless otherwise specified, all inspections shall be performed in accordance with the test conditions specified in applicable test method document or applicable paragraph(s) in the specification.

4.4 First article inspection. Inspection and testing of the first article sample shall be made on a completely finished item for all provisions of this specification applicable to the end product examination and test.

4.5 Quality conformance inspection. Inspection shall be in accordance with provisions set forth in MIL-STD-105, except where otherwise indicated.

4.5.1 Quality assurance inspection. Inspection shall be in accordance with the provisions set forth in MIL-STD-105 except when otherwise specified hereafter.

4.6 Component and material inspection. In addition to the quality assurance provisions of the subsidiary specifications and drawings, inspection shall be performed on components and materials as specified herein.

4.6.1 Testing of component. In addition to the quality assurance provisions of the subsidiary specifications and standards, inspection shall be performed on components and materials listed in Table III. The inspection level shall be S-1 and the acceptable quality level (AQL) shall be 6.5 defects per hundred units. The sample unit for the inspection shall be one cone or spool.

TABLE III Component testing.

Component and lot expressed in terms of	Characteristic	Req't ref	Test method <u>1/</u>	Rqm't individual unit	Appl to lot average	#deter per sample unit
Silk embroidery thread (1 cone or spool)	Breaking strength	3.3.4.3.1	4104	-	X	-
	Length weight	3.3.4.3.1	4010	-	X	-
Cotton yarn	Color-fastness to:					
	Wet-dry cleaning	3.3.4.3.2	5622	-	-	-
	Water	3.3.4.3.2	5630	-	-	-
	Light	3.3.4.3.2	5660	-	-	-
	Crocking	3.3.4.3.2	5651	-	-	-
Bonnaz embroidery thread (1 cone or spool)	Ply <u>2/</u>	3.3.4.4	Visual	X	-	1
	Breaking strength	3.3.4.4	4102	-	X	-
	Length-weight	3.3.4.4	4010	-	X	-
	Material <u>2/</u> identification	3.3.4.4	Std comm'l	X	-	1

1/ Test will be in accordance with FED-STD-191.

2/ Results reported as pass or fail.

4.6.2. In process inspection. Inspection shall be performed at any point or during any phase of the manufacturing process to determine whether operation or assemblies are accomplished as specified. The Government reserves the right to exclude from consideration for acceptance any material for which in-process inspection has indicated non-conformance. In-process inspection shall be conducted to see that accomplishment of the following is in accordance with the specification requirements.

<u>Requirement, operation or assembly</u>	<u>Requirement paragraph</u>
Heading construction	3.5.2 thru 3.5.2.3.2, as applicable
Machine thread shall be checked at the machine to determine that threads, as specified, are used.	3.3.4 thru 3.3.4.6, as applicable
Turn-in and turn-under of seams, hems, reinforcement patches and headings.	3.5.2 thru 3.5.2.3.2 and 3.7 thru 3.7.2, as applicable

4.6.3 Intermediate inspection.

4.6.3.1 Testing of the intermediate product. Testing of the partially fabricated flag or pennant shall be performed in accordance with Table IV for the characteristics shown therein. The sample unit shall be one screen printed design for appliqued flags or one screen printed flag base as applicable, prior to sewing into the completed flag. The inspection level shall be S-1 and the acceptable quality level (AQL) for each characteristic shall be 6.5 defects per hundred units. All requirements shall be applicable to the sample unit.

TABLE IV Testing of intermediate product.

Screen printed designs for:	Color-fastness to:	Req't para	Test method <u>3/</u>
Cotton, nylon and nylon-wool flags	Light	3.4.1.1.1	5660
	Crocking	3.4.1.1.1	5651
	Water	3.4.1.1.1	5630
Rayon	Light	3.4.1.1.1	5660 <u>1/</u>
	Crocking	3.4.1.1.1	5651
	Water	3.4.1.1.1	5630 <u>2/</u>
	Wet-dry cleaning	3.4.1.1.1	5622

1/ In the event of a dispute resulting from test method 5660, or as a result of suspected anomalous behavior of certain dye types or formulations, the contracting officer may authorize the exposure to natural light in accordance with method 5662.

2/ Method 5630 shall be used except the test temperature shall be 23.9 degrees to 29.4 degrees C. (75 degrees to 85 degrees F).

3/ Test method in accordance with FED-STD-191.

4.6.4 Inspection of the end item.

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4.6.4.1 Visual examination of flags and pennants. The defects found during examination shall be classified in accordance with 4.6.4.1.1 and 4.6.4.1.2. The lots shall be inspected in accordance with 4.3.3.1.1. The unit of product for these examinations shall be one flag or pennant, as applicable.

4.6.4.1.1 Examination of flags or pennants for defects in material, design, construction, workmanship and marking. Examination shall be made at a distance of 18 to 40 inches with good illumination except for functional defects which, by their nature, require closer examination. Defects designated by an asterisk (*) shall be classified as major when seriously affecting serviceability or appearance and minor when affecting serviceability or appearance, but not seriously.

Examine	Defect	Classification		
		Major	*	Minor
Quality of cloth:				
Type	Any component not fabricated of specified material.....	-	*	-
Color	Basic color other than specified.....	x	-	-
	Off shade	-	*	-
Material	Hole, cut, tear, smash, or weak place.....	-	*	-
	Spot, stains, streaks, or shade bars (considering the use position)	-	*	-
	Two or more contiguous broken, missing ends or picks in cotton, acrylic, nylon and nylon-wool cloth.....	x	-	-
	Two or more contiguous broken, missing ends or picks in rayon cloth	x	-	-
	Double pick, course pick or misspick clearly noticeable	-	*	-
	Slub, slough-off, float or skips	-	*	-
Quality of distance line:				
Type	Not fabricated or specified material.....	-	-	x

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Examine	Defect	Classification		
		Major	*	Minor
Braiding	Uneven or loose resulting in weak place	x	-	-
	Any cut, chafing, fraying, or abrasion.....	-	*	-
Quality of metal components: Snap hook and ring	Not fabricated of specified material.....	-	-	x
	Snap hook does not work freely; binds or catches when being opened or closed	-	*	-
Grommets	Broken, cracked or malformed.....	-	*	-
	Broken, cracked or malformed	-	*	-
Quality of leather components	Contains rough or sharp edges	-	-	x
	Not fabricated of specified leather	-	-	x
Quality of fringe and cord and tassels	Hole (other than required), cut, tear, or weak place	x	-	-
	Material, type, construction, color, or color combination, not as specified.....	-	*	-
Screen printing	Frayed edges	-	*	-
	Spotted, stained or soiled	-	*	-
	Cut or tear	-	*	-
	Wood mould not completely covered with braiding	-	-	x
	Wood mould loosely or unevenly covered.....	-	-	x
	Any part of design omitted	-	*	-

Examine	Defect	Classification			
		Major	*	Minor	
Construction and workmanship (general)	Coating used in lieu of dye	x	-	-	
	Poor registration, over printing or feathering	-	*	-	
	Wrong color, or arrangement of colors	x	-	-	
	Dye used in screen printing adversely affects hand of fabric	-	*	-	
	Dye bronzed or mottled to extent of affecting appearance at 6 feet	-	*	-	
	Poor penetration of dye from front to back	-	*	-	
	Operation omitted or not accomplished as specified	-	*	-	
	Flag pieced where piecing is prohibited	x	-	-	
	Component is not the required type, class, or size	-	*	-	
	Warp threads of the basic material of the flag in other than the fly direction of the flag, except as permitted in 3.5.1	-	*	-	
	Stitches, seams and stitching	Wrong type of seam, stitches or stitching	-	*	-
		Wrong color of thread	-	*	-
Row of stitches partially or completely missing		-	*	-	
Wrong stitching gauge or margin		-	*	-	

Examine	Defect	Classification		
		Major	*	Minor
	Seams improperly formed, material caught in unrelated stitching operation	-	*	-
	Ends of stitching not backstitched at least 1 inch (when not caught in other seams or stitching)...	-	*	-
	Run-offs resulting in open seam	-	*	-
	Needle chews	-	*	-
	Any raw edge exceeding 1/2 inch in length	-	-	x
	Loose stitch tension resulting in a loosely secured seam or thread lying on surface of seam	x	-	-
	Tight stitch tension (stitches break when normal pull is exerted in lengthwise direction of seam or stitching)	x	-	-
	Stitches per inch for seam, hems and reinforcement patches: --four or more stitches less than specified	x	-	-
	--one to three stitches less than specified	-	-	x
	Stitches per inch for duck headings: --two or more stitches less than specified	x	-	-
	--one stitch less than specified	-	-	x
	Stitches per inch for appliqueing: --five or more stitches less than specified	x	-	-
	--one to four stitches less than specified	-	-	x

Examine	Defect	Classification		
		Major	*	Minor
<p>NOTE: Variation in the number of stitches per inch caused by the operator speeding up the machine or pulling fabric, such as sewing over heavy places, or in turning corners shall be classified as follows: Majors to minors, minors to no defect.</p>				
	Seam twisted, pleated or puckered	-	*	-
	More than two continuous skipped stitches	-	*	-
	Broken stitches in heading seam causing an unstitched length of one inch or more	x	-	-
	Broken stitches in heading seam causing an unstitched length of less than 1 inch	-	-	x
	Broken stitches in any other seam causing an unstitched length of less than 1/2 inch	-	-	x
Embroidery Design (insignia, emblem, stars, lettering, etc.)	Broken stitches	-	*	-
	Not applied as specified	x	-	-
	Design or parts of design reversed or inverted	x	-	-
	Design misplaced or in wrong location.....	-	*	-
	Lettering does not read from right-to-left on both sides (unless otherwise specified)	x	-	-
	Design not oriented on each side as specified	x	-	-

Examine	Defect	Classification		
		Major	*	Minor
	Pattern marks used for location of design visible on finished product.....	-	*	-
	Design or insignia not neatly trimmed.....	-	*	-
	Evidence that sizing or stiffening agent used as an aid in sewing has deleterious effect	-	*	-
Hems	Nylon or acrylic flags not hemmed on all edges	X	-	-
	Hem uneven	-	*	-
	Hem on wrong side of flag	-	-	X
Reinforcement patches	Positioned on face side of flag	-	-	X
	Portion of patch at heading not inserted within the headings as specified	-	-	X
	Patch not the same material or color as section reinforced	-	*	-
	Size or shape of patch not as specified	-	*	-
Fringe	Not completely attached as specified.....	X	-	-
	Ends of fringe not caught in heading stitching	-	-	X
	Not one continuous length	-	-	X
	Not stitched to the front side of flag	-	-	X
	Not evenly attached around the flag.....	-	-	X

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Examine	Defect	Classification		
		Major	*	Minor
Heading (type I, class 1 or 1A), or class 3, as applicable	Stitching of fringe not through center portion of the fringe heading	-	*	-
	One half of fringe not visible on reverse side of flag	-	*	-
	Lower end of line not passed through snap hook and sewed to itself	x	-	-
	Length of zigzag stitching not as specified	-	-	x
	Zigzag stitching not sewn completely through all thicknesses of heading and line at any of the required locations	-	*	-
	Lower edge of ring more than 1/2 inch above or within the upper end of heading	-	-	x
	Ends of heading not closed by two rows of stitching up to distance line	-	*	-
	Free end of distance line not whipped, fused or taped as specified	-	*	-
	Sides and ends of duck headings out of alignment	-	*	-
	Heading (type I, class 2)	Grommet clinched excessively tight, cutting fabric	x	-

Examine	Defect	Classification			
		Major	*	Minor	
Heading (type I, class 4)	Grommet improperly set, e.g., clinched too loosely allowing grommet to rotate	-	-	x	
	Sides and ends of duck out of alignment	-	*	-	
	Grommets clinched excessively tight cutting fabric	x	-	-	
	Grommets improperly located	-	*	-	
	Sides and ends of duck heading not properly aligned	-	*	-	
	Grommet improperly set, e.g., clinched too loosely allowing grommet to rotate	-	-	x	
	Leather tab not positioned and attached as shown on drawing	-	-	x	
	Heading (type II)	Sheeting all or partially missing	x	-	-
		Heading improperly formed, e.g., both edges of the sheeting or hoist end of flag not caught entire length by heading seam	-	-	x
		Leather tabs not positioned and attached as shown on drawing	-	-	x
Heading seam not formed on back of flag		-	-	x	
Heading (type III, class 1)		Tie tape missing	x	-	-

Examine	Defect	Classification		
		Major	*	Minor
Heading (type III, class 2)	Tie tape not positioned or attached as specified	-	-	x
	Hemmed heading not as shown on drawing	-	*	-
Marking	Leather tab not positioned and attached as shown on drawing	-	*	-
	Missing, incorrect, illegible, text incomplete, marking in wrong location, size of lettering not as specified, or color marking not as specified	-	-	x
Label	Text incomplete or incorrect, not attached as specified, not in location specified, or not in position specified	-	-	x

4.6.4.1.2 Examination of flag or pennant for defects in dimensions.

Examine	Defect	Classification	
		Major	Minor
Overall length (minus heading): overall width of basic flag or pennant	Not within the specified tolerance (plus or minus 5 percent or plus or minus 5/8 inch per foot)	x	-

Examine	Defect	Classification	
		Major	Minor
Width of heading	Varies from specified finished width by:		
	-1/2 inch or more from specified width.....	x	-
Design (emblems, stars, insignia, lettering, etc.)	-more than 1/4 inch but less than 1/2 inch of the specified width	-	x
	Dimensions of design or any part thereof out of balance or not in symmetrical alignment (check by comparing with approved samples or drawing):		
	-seriously affecting serviceability or appearance	x	-
	-affecting serviceability or appearance but not seriously	-	x

4.6.4.1.3 Inspection levels and acceptable quality levels-(AQL's). The inspection levels and the AQL's expressed in defect per hundred units shall be as follows:

	Inspection level	Major	AQL	Total
For defects applicable to 4.6.4.1.1	I	4.0		10.0
For defects applicable to 4.6.4.1.2	S-3	6.5		15.0

4.6.5 Examination of count of flags and pennants in intermediate containers. Flags and pennants packaged for shipment shall be examined to determine conformance with package markings and specified quantity. The sample unit for this examination shall be one box (interior package). Any box containing less than the specified or marked quantity of flags and pennants shall be classified as a defect. The inspection level shall be S-2 and the AQL shall be 4.0 defects per hundred units.

4.6.6 Examination of preparation for delivery requirements.

An examination shall be made to determine that packaging, packing and marking requirements of section 5 of this specification are complied with. Defects shall be scored in accordance with the list below. The sample unit shall be scored in accordance with the list below. The sample unit shall be one shipping container fully prepared for delivery with the exception that it need not be sealed. Defects of closure listed below shall be examined on shipping containers fully prepared for delivery. The lot size shall be the number shipping containers in the end item inspection lot. The inspection level shall be S-2 and the AQL shall be 4.0 defects per hundred units.

<u>Examine</u>	<u>Defects</u>
Marking (exterior and interior)	Omitted, incorrect, illegible, of improper size, location, sequence or method application.
Materials	Any component missing. Any component damaged, affecting serviceability.
Workmanship	Inadequate application of components, such as incomplete closure of case liners, container flaps, loose strapping, inadequate strapping. Bulging or distortion of containers.
Weight	Net weight exceeds requirement.

4.6.7 Palletization examination. An examination shall be made to determine that the palletization is in compliance with the section 5 requirements. Defects shall be scored in accordance with the list below. The sample unit shall be one palletized unit load fully packaged. The lot size shall be the number of palletized unit loads in the inspection lot. The inspection level shall be S-1 and the acceptable quality level (AQL), expressed in terms of defects per hundred units, shall be 6.5.

<u>Examine</u>	<u>Defects</u>
Finished dimensions	Length, width, or height exceeds specified maximum requirements.
Palletization	Pallet pattern not as specified. Interlocking of loads not as specified. Load not bonded with required straps as specified.
Weight	Exceeds maximum load limits.

ExamineDefects

Marking

Omitted; incorrect; illegible;
of improper size, location,
sequence, or method of application.

5. PACKAGING

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

5.1.1 Level A. Flags and pennants made of nylon-wool shall be thoroughly dusted over the entire area with flake naphthalene, before being packaged (see 6.3). Flags requiring distance lines shall have the exposed portion of all attached hardware wrapped or covered in polyethylene film 0.002 inch thick (minimum).

5.1.1.2 Unit packaging.

5.1.1.2.1 Flags and pennants of nylon, nylon-wool, acrylic and cotton bunting. Each flag or pennant, preserved as specified in 5.1.1, shall be compactly folded or folded and rolled and then placed in a snug-fitting transparent, end-opening, polyethylene bag. The polyethylene film shall be 0.003 inch thick. All seams and closures shall be made by heat sealing. Prior to or during the heat sealing operation, excess air within the bag shall be expelled. Closure shall be in accordance with the appendix of the applicable specification.

5.1.1.2.2 Flags and pennants of rayon banner cloth. Each flag or pennant shall be laid out flat on two thicknesses of tissue paper conforming to type I, grade A, class 1 of UU-P-553. Tissue paper shall overlap all edges of flag or pennant a minimum of two inches. Each flag or pennant combined with overlapping tissue paper, shall be rolled open width on a chipboard tube. The tissue overlapping the tube ends shall be tucked inside the tube ends. Each flag or pennant shall be tightly wrapped with 50-pound minimum basis weight kraft paper conforming to grade B of UU-P-268. The closure shall be sealed with 2-inch minimum width gummed paper tape. Each wrapped flag or pennant shall then be individually packaged in a snug-fitting box conforming to PPP-B-636, class domestic, style optional. Closure shall be in accordance with the appendix of the box specification.

5.1.1.3 Intermediate packaging. Unless otherwise specified, flags or pennants of one material, type, style and class only, unit packaged as specified in 5.1.1.2, shall be neatly stacked and packaged in multiples of 12 within a snug-fitting intermediate fiberboard container conforming to class domestic, style RCS-L, grade 275 of PPP-B-636. The net weight of contents

in each container shall not exceed 65 pounds. Closure shall be in accordance with the appendix of the specification.

5.1.2 Level C. Assembled flags, preserved as specified in 5.1, shall be packed in accordance with the applicable requirements of MIL-STD-2073-1.

5.1.3 Commercial. Assembled flags, preserved as specified in 5.1, shall be packed in accordance with the applicable requirements of ASTM-D-3951.

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

5.2.1 Level A. Flags and pennants packaged as specified in 5.1, shall be packed in a snug-fitting shipping container conforming to W5c, W5s, V3c or V3s, of PPP-B-636. Closure shall be in accordance with the applicable container specification.

5.2.2 Level B. Flags and pennants packaged as specified in 5.1.1.3, shall be acceptable as level B pack.

5.2.3 Level C. Assembled flags, preserved as specified in 5.1, shall be packed in accordance with the applicable requirements of MIL-STD-2073-1.

5.2.4 Commercial. Assembled flags, preserved as specified in 5.1, shall be packed in accordance with the applicable requirements of ASTM-D-3951.

5.3 Palletization. Items packed as specified shall be palletized on a 4-way entry pallet in accordance with load type 1A of MIL-STD-147. Each prepared load shall be bonded with primary and secondary straps in accordance with bonding means C, K and L, O or P. Pallet pattern shall be in accordance with the appendix of MIL-STD-147. The pallet shall be 4-way, type I, class 1, style 1.

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

5.4.1 Polyethylene bagged packages. Polyethylene bagged packages shall have the required information legibly printed or stamped in black on the bag across the center face, or on a white paper label inserted within the bag as to permit ready identification. The bag or label shall indicate the following:

STOCK NUMBER
NOMENCLATURE
QUANTITY

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 flags and pennants covered by this specification are intended to be used by individuals and Military organizations for identification or signaling.

6.2 Acquisition requirements. Procurement documents should specify the following:

- (a) Title, number and date of this specification.
- (b) When a first article is required (see 3.2).
- (c) Title of flag or pennant required.
- (d) Applicable drawing.
- (e) Type of heading required (see 3.5.2, 6.6 and applicable drawing).
- (f) When a cord and tassel are required (see 3.3.12 and applicable drawing).
- (g) When a fringe is required (see 3.3.10 and applicable drawing).
- (h) Type of distance line required (see 3.3.5 and applicable drawing).
- (i) Selection of applicable levels of packaging and packing (see 5.1 and 5.2).
- (j) Cable number if different than cited on the flag drawing.
- (k) Type of fabric required if other than cited on flag drawing.

6.3 Napthalene flake requirements. The napthalene flake requirement (see 5.1.1) is not applicable when Government furnished material of wool or part wool content has been moth treated.

6.4 Samples. For access to samples, address the contracting activity issuing the invitation to bid.

6.5 Screen printing. With screen printed application, experience has shown that the type of colorants which provide a degree of colorfastness equal to that of the basic shades of the flag or pennant are derived from the following classes: Cellulosic fabrics; vat dyed in all cases except for U.S. Army Scarlet, U.S. Army Maroon and other reds which can be matched only with naphthol dyes. Cellulose reactive dyes and resin-bonded pigment systems may be used successfully in lieu of vat dyes and naphthol dyes. For nylon and nylon-wool buntings, acid and neutral premetallized types have been used.

6.6 Headings. Headings covered by this specification are as shown on the drawings and/or figures below:

<u>Heading</u>	<u>Drawing</u>	<u>Figure</u>
Type I		
Class 1	5-1-45A	Figure 1
Class 1A	5-1-45H	Figure 2
Class 2	5-1-45B	Figure 1
Class 3	5-1-45G	Figure 3
Class 4	5-1-45D	Figure 4
Type II	5-1-45E	Figure 5
Type III		
Class 1	5-1-45F	Figure 6
Class 2	5-1-45F	Figure 6

6.7 First article. When a first article inspection is required, the item should be a first article sample or it may be a standard production item from the contractor's current inventory as specified in 4.4. The first article should consist of one completed flag. The contracting officer should include specific instructions in acquisition documents regarding arrangements for examinations, approval of first article test results and disposition of first articles. Invitations for bids should provide that the Government reserves the right to waive the requirement for samples for first article inspection to those bidders offering a product which has been previously acquired or tested by the Government, and that bidders offering such products, who wish to reply on such production or test, must furnish evidence with the bid that prior Government approval is presently appropriate for the pending contract.

6.8 Subject term (key word) listing.

Embroidered
Bonnaz

Screen printed
Applique
Distance line
Heading

6.9 Changes from previous issue. Asterisks or vertical lines are not used in this revision to identify changes because of the numerous changes.

Custodians:

Army - IH

Navy - NU

Air Force - 11

Review Activities:

Air Force - 99

DLA - CT

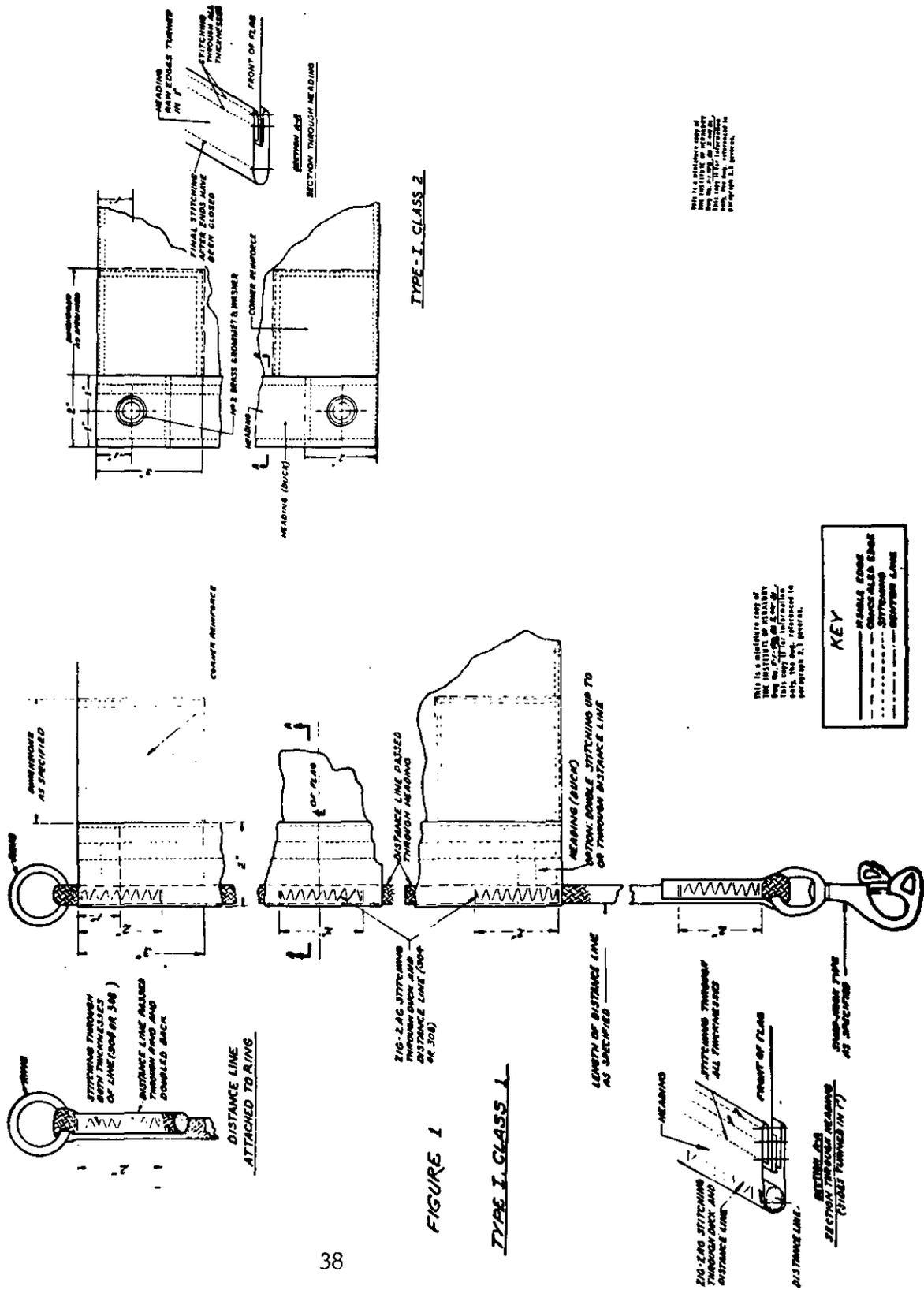
User Activities:

Air Force - 45

Preparing Activity:

Army - IH

(Project No. 8345-0174)



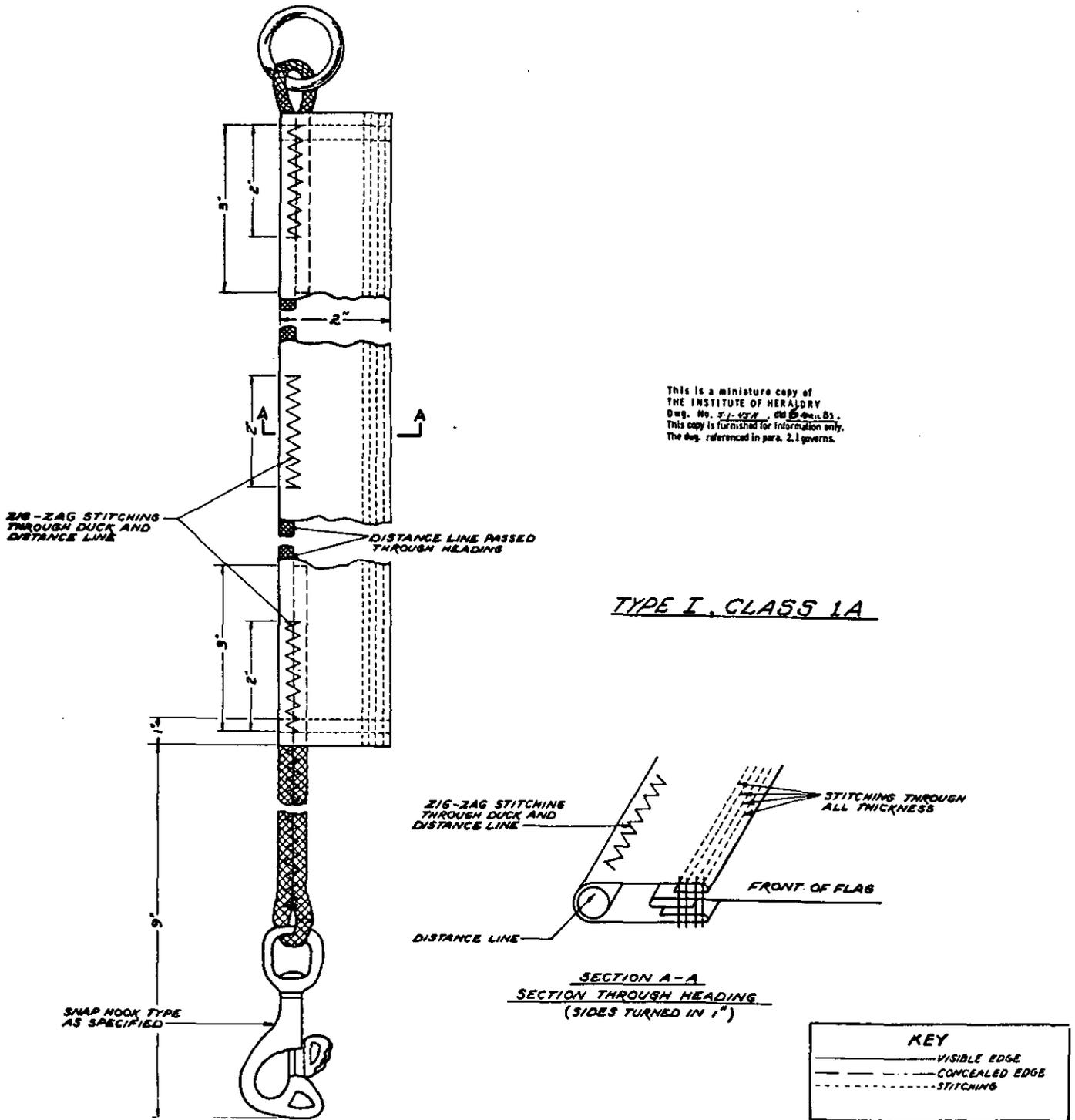
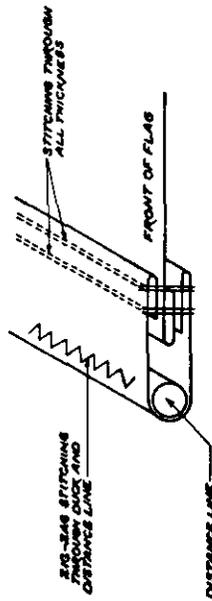
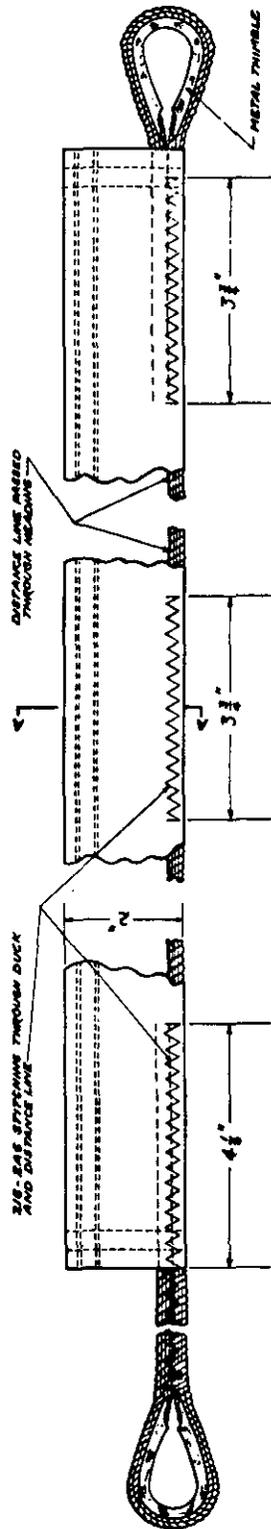


FIGURE 2



SECTION A-A
SECTION THROUGH MEADINE
(SIDES TURNED IN)

KEY	
—	VISIBLE EDGE
- - -	CONCEALED EDGE
~ ~ ~	STITCHING

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TYPE I, CLASS 3

FIGURE 3

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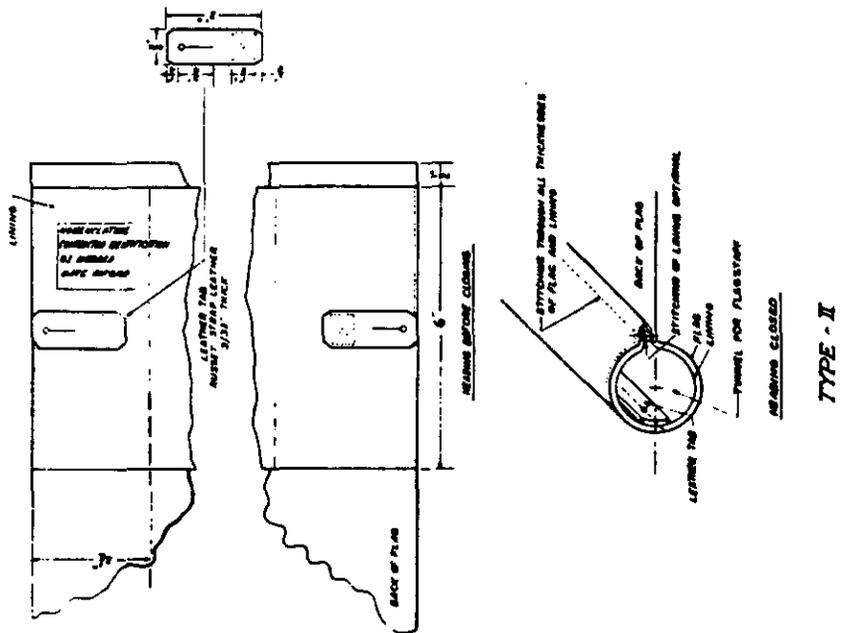
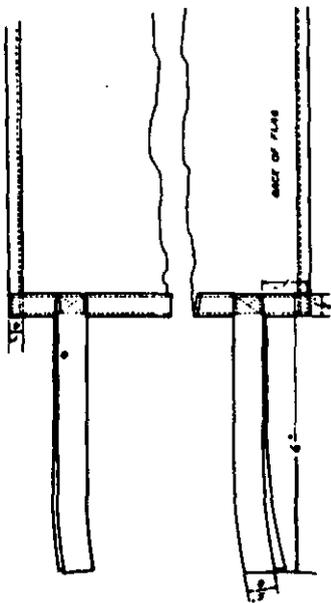


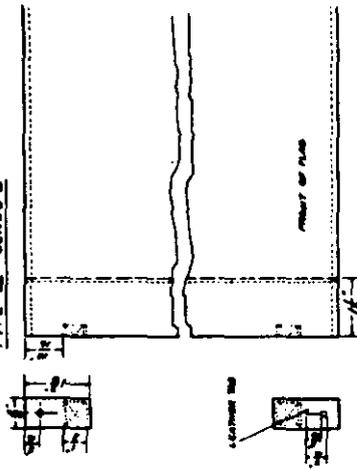
FIGURE 5

This is a standard copy of
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 reproduction of the original
 drawing. It is a copy of the
 drawing as it appears in
 the original drawing.

TYPE III CLASS I



TYPE III CLASS II



KEY	
—	FRONT VIEW
- - -	REAR VIEW
· · ·	SECTION LINE
· · ·	CENTER LINE

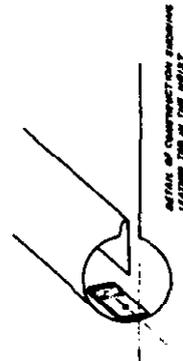
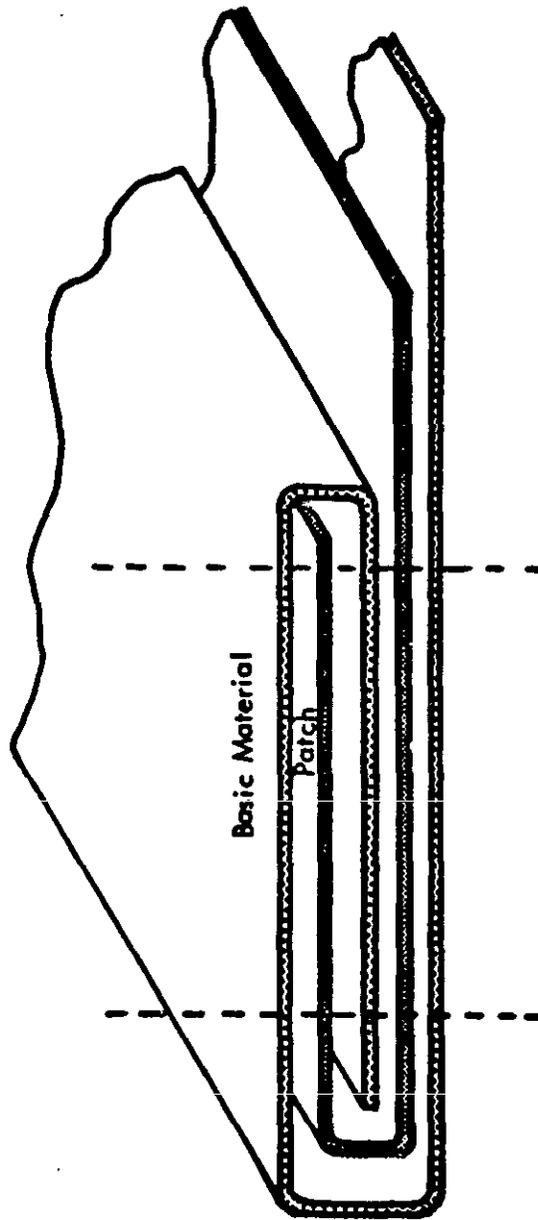
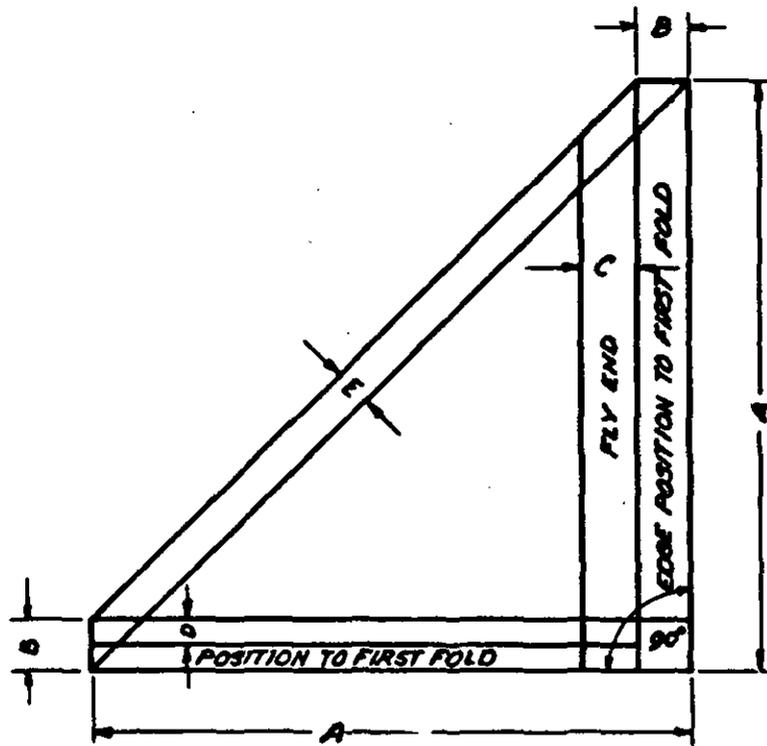


FIGURE 6



SEWING OF REINFORCEMENT PATCHES TO THE
FLY CORNERS OF FLAG

FIGURE 7



REINFORCEMENT PATCH

FLAG SIZE	DIMENSIONS IN INCHES				
	A	B	C	D	E
3 1/2	10 1/4	3/4	3/4	3/8	1/2
4	9 1/4	3/4	3/4	3/8	1/2
6	8 1/4	3/4	3/4	3/8	1/2

FIGURE 8

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(See Instructions - Reverse Side)

1. DOCUMENT NUMBER
MIL-F-2692G

2. DOCUMENT TITLE
Flags And Pennants

3a. NAME OF SUBMITTING ORGANIZATION

4. TYPE OF ORGANIZATION (Mark one)

VENDOR

USER

MANUFACTURER

OTHER (Specify): _____

b. ADDRESS (Street, City, State, ZIP Code)

5. PROBLEM AREAS

a. Paragraph Number and Wording:

b. Recommended Wording:

c. Reason/Rationale for Recommendation:

6. REMARKS

7a. NAME OF SUBMITTER (Last, First, MI) - Optional

b. WORK TELEPHONE NUMBER (Include Area Code) - Optional

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