

INCH-POUND

MIL-DTL-29611  
26 September 1996

## DETAIL SPECIFICATION

### VEST, SURVIVAL, AIRCREWMEN'S, (AIRSAVE)

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 and inspections for the AIRSAVE (Aircrew Integrated Recovery Survival, Armor, Vest and Equipment), survival vest designed to integrate with soft and hard body armor, chemical protective systems, oxygen systems, flotation systems, and survival equipment

1.2 Classification. The vest will come in one size that is adjustable to fit all size aircrew, in all conditions, and in the following types and subassemblies:

##### 1.2.1 Types.

- Type I - With hoisting harness
- Type II - Without hoisting harness

##### 1.2.2 Subassemblies.

- General Pocket
- Knife Pocket
- Radio Pocket
- HEED Pocket
- Pistol Holster Pocket with Ammo Keeper

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Commander, Naval Air Warfare Center Aircraft Division, Code 414100 B120-3, Highway 547, Lakehurst, NJ 08733-5100, 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 8415

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**2. APPLICABLE DOCUMENTS.**

2.1 General. The documents listed in this section are specified in sections 3 and 4 of this specification. This section does not include documents cited in other sections of this specification or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements documents cited in sections 3 and 4 of this specification, whether or not they are listed.

**2.2 Government documents.**

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

**SPECIFICATIONS****FEDERAL**

A-A-50041	-	Snap Link, Mountain Piton, Locking and Non-locking
A-A-55620	-	Loops, Slide (For Equipage)
V-F-106	-	Fastener, Slide, Interlocking
V-T-295	-	Thread, Nylon

**DEPARTMENT OF DEFENSE**

MIL-C-3953	-	Cloth, Duck, Nylon
MIL-W-4088	-	Webbing, Textile, Woven Nylon
MIL-C-5040	-	Cord, Fibrous, Nylon
MIL-W-5664	-	Webbing, Textile, Elastic
MIL-C-8061	-	Cloth, Nylon, Raschel Knit
MIL-K-8662	-	Knife, Hunting, Sheathed, Survival, Pilot's (Validated)
MIL-F-21840	-	Fastener Tapes, Hook and Pile, Synthetic
MIL-B-29604	-	Body Armor, Soft, Small Arms Protective, PRU-60A/P22P-15
MIL-B-29605	-	Body Armor, Hard, Small Arms Protective, PRU-61A/P22P-15
MIL-W-43668	-	Webbing, Textile, Textured or Multifilament Nylon
MIL-W-43685	-	Webbing and Tape, Textile, Aramid Fiber
MIL-C-43842	-	Cloth, Oxford, Aramid

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## STANDARDS

## FEDERAL

FED-STD-191      Textile Text Methods

## MILITARY

MS22019	-	Adapter, Parachute Harness, Reversible Quick-Fit
MS27980	-	Fasteners, Snap, Style 2 (Regular Wire Spring Clamp Type)
MS27983	-	Fastener, Snap, Style 4
MS51925	-	Ring, Dee - Medium
MS70101	-	Adapter, Reversible, Quick Fit, 500 lb, 1-3/4 Inch

(Unless otherwise indicated, copies of the above specifications are available from the Standardization Document Order Desk, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094.)

2.2.2 Other Government documents, drawings, and publications. The following other Government documents, drawings, and publications form a part of this document to the extent specified herein. Unless otherwise specified, the issues are those cited in the solicitation.

## NAVAL AIR SYSTEMS COMMAND DRAWINGS

3561AS101	-	Aircrew Integrated Recovery Survival, Armor, Vest, and Equipment (AIRSAVE)
3561AS301	-	Survival Vest Assembly
3561AS302	-	Survival Vest Sub-Assembly
3561AS303	-	Hoisting Harness Assemblies
3561AS304	-	D-Ring Retaining Flap Assembly
3561AS305	-	Identification Label
3561AS308	-	Oxygen/CBR Attachment Assembly
3561AS309	-	Flashlight Attachment Assembly
3561AS310	-	General Pocket Assembly
3561AS311	-	Radio Pocket Assembly
3561AS312	-	Knife Pocket Assembly

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## NAVAL AIR SYSTEMS COMMAND DRAWINGS (Cont'd)

3561AS313	-	Pistol/Ammunition Pocket Assembly
3561AS314	-	HEED Pocket Assembly

(Unless otherwise specified, copies of drawings required by contractors in connection with specific acquisition functions should be obtained from the contracting activity, or as directed by the contracting officer.)

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, supersedes applicable laws and regulations unless a specific exemption has been obtained.

### 3. REQUIREMENTS

3.1 First article. When specified (see 6.2), a sample shall be subjected to first article inspection in accordance with 4.2.

3.2 Materials and components. The materials and components shall conform to applicable specifications, patterns, and drawings and shall be as specified herein. Equivalent materials and parts require approval by the Naval Air Warfare Center Aircraft Division, Code 4.6.2, Patuxent River, Maryland 20670-5304. Requests for use of equivalent items shall be submitted to the Contracting Officer. Recycled materials may be used (see 6.6).

3.2.1 Vest components. The vest components shall be constructed with the materials specified in 3.2.1.1 through 3.2.1.14.

3.2.1.1 Base fabric. The base fabric for the vest and the inside pockets shall be raschel knit nylon mesh conforming to MIL-C-8061, Color 106 Olive Green. The mesh shall be fire resistant (FR) treated with a chemical coating and shall be tested in accordance with 4.5.

3.2.1.2 Modular Pockets. The vest shall come with the following modular pockets: knife, radio, and general pockets, and when requested to the HEED pocket and pistol holster pocket with ammo keeper, and attached inside pockets. The modular pockets shall form the subassemblies of the vest. The pockets and the inside pocket flaps shall be fabricated from aramid oxford cloth conforming to MIL-C-43842, Class I, Color 106 Olive Green. Modular pockets shall be provided unattached to vest.

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3.2.1.2.1 Fit gage set. The fit gage set shall consist of the general, knife, and radio, and if requested, HEED and pistol gages. The set shall be used to verify pocket fabrication and dimensions. The set shall be manufactured from any hard wood material (see 4.4.3). Gages shall have a tolerance of  $\pm 1/8$  inch. The following shall be used as gages.

Knife - Gage in accordance with figure 1

Pistol - Gage in accordance with figure 2

Clip - Block of dimensions: 3 x 1 1/2 x 1 inches

Radio - Block of dimensions: 7 x 1 1/2 x 4 inches

HEED - Cylinder with the following dimensions: Diameter 2 inches, Height 10 inches

General - Block of dimensions: 2 3/4 x 1 1/2 x 4 inches

3.2.1.3 Stiffener. The stiffener used to give rigidity and strength to the radio, HEED, and pistol pockets shall conform to MIL-C-3953, Color 106 Olive Green.

3.2.1.4 Webbing. The webbing used for modular survival item pocket attachment to the vest and LPU strap fabrication shall conform to MIL-W-43668, Type III, 1 inch wide, Color 106 Olive Green. The webbing shall be fire resistant (FR) treated with a chemical coating and shall be tested in accordance with 4.5.

3.2.1.5 Elastic webbing. The elastic webbing used for the fabrication of the HEED pocket, ammo pocket and hoisting keepers shall conform to MIL-W-5664, Type I, Class I, 1 inch wide, Color 106 Olive Green.

3.2.1.6 Webbing, aramid binding. The woven binding tape used for fabrication of the vest shall be 1 inch wide conforming to MIL-W-43685, Type II, Color 106 Olive Green.

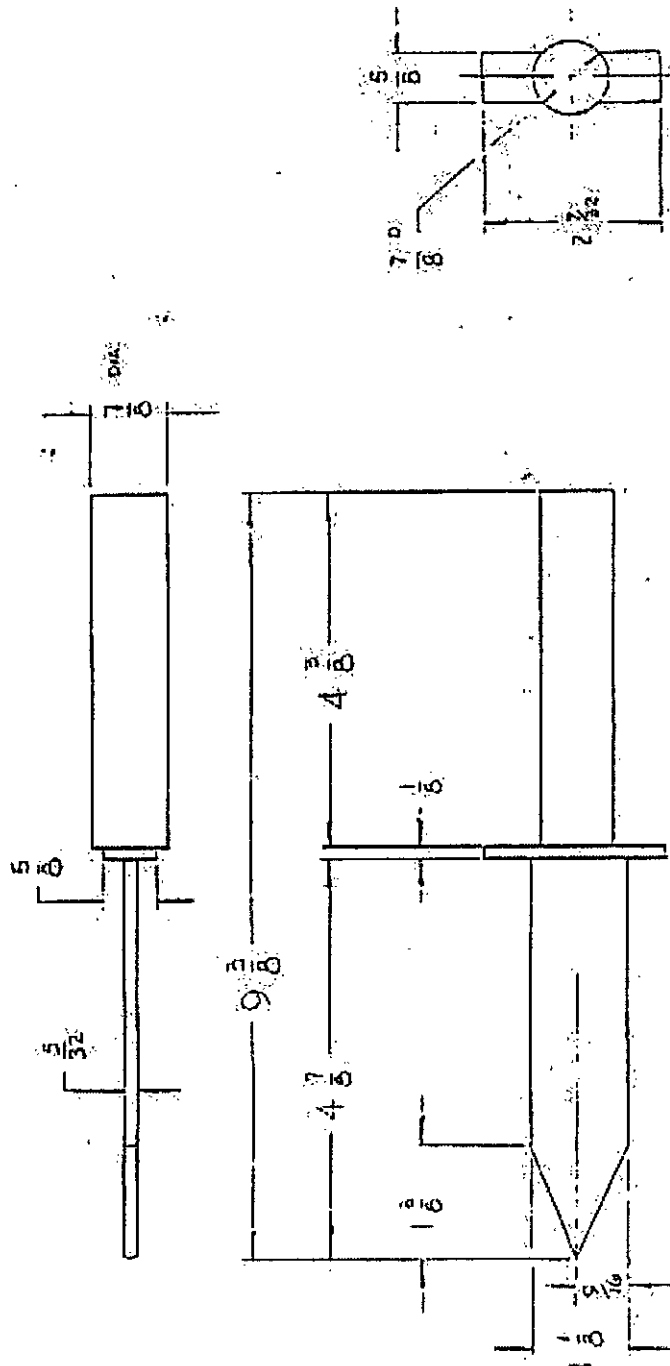
3.2.1.7 Fastener tapes. The hook and pile fastener tapes used to fabricate the vest shall conform to MIL-F-21840, Type II, Class I, Color 106 Olive Green.

3.2.1.8 Slide fastener. The slide fastener used to fabricate the survival vest shall be heavy weight with plastic teeth and a metal slide conforming to V-F-106, Type IV, Style 15.

3.2.1.9 Loop-locs. The loop-locs used for connecting the body armor to the vest shall be to part number 01004-20-21883 of ITW Waterbury, 952 S. Main Street, Waterbury, CT 06721, Cage No. 82399 or equal.

3.2.1.10 Snap fasteners. Omnidirectional snap fasteners used to fabricate the vest and pockets shall conform to MS27980, Style 2, and unidirectional snap fasteners shall conform to MS27983, Style 4.

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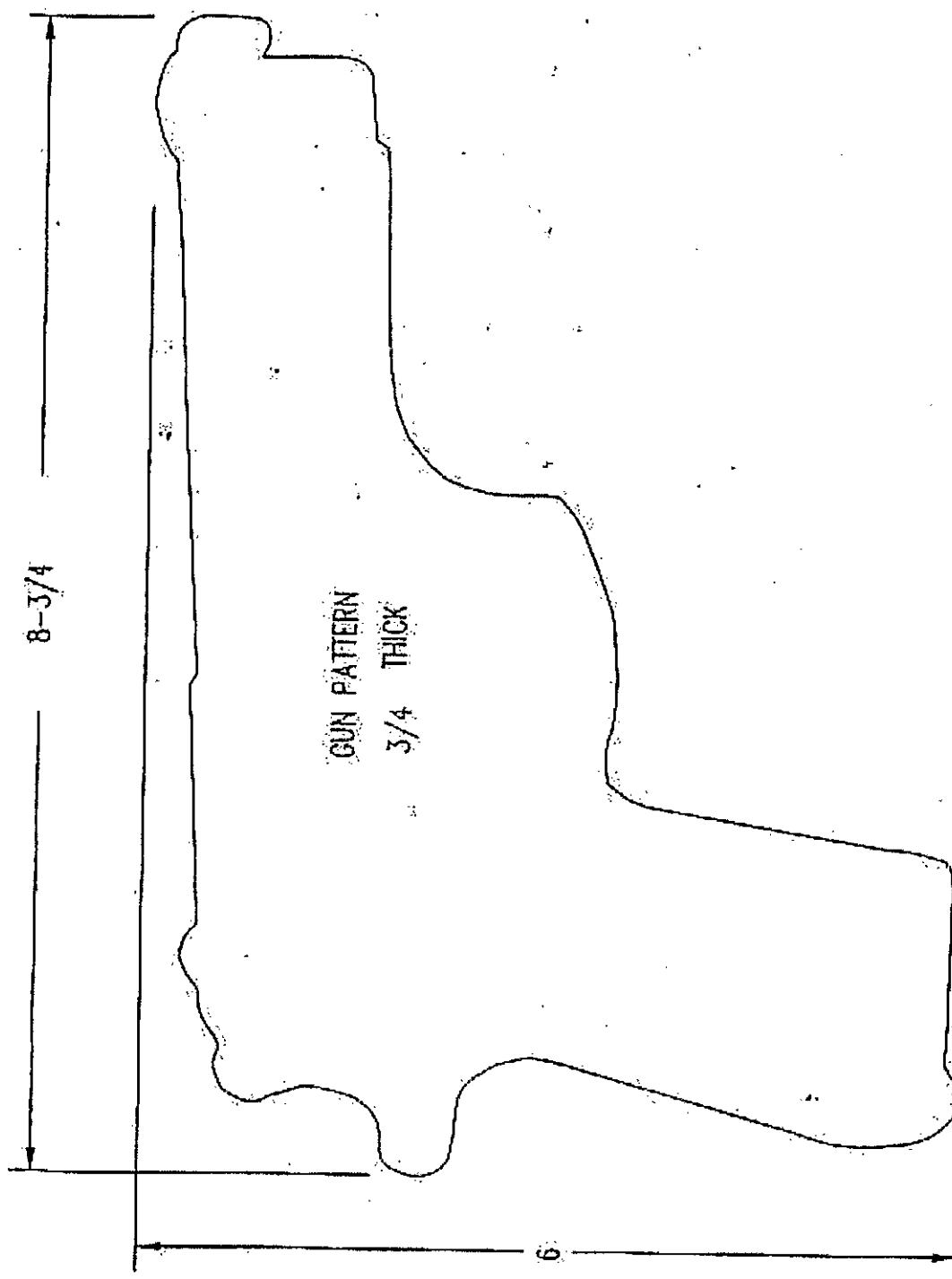


Note:

1. All dimensions in inches.

FIGURE 1. Knife gage dimensions.

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Note:

1. All dimensions in inches.

FIGURE 2. Gun gage dimensions.

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3.2.1.11 LPU-21/and 23/P collar lobe attachment D-rings. The D-rings use to fabricate the collar lobe attachment shall be in accordance with MS51925.

3.2.1.12 LPU-21/and 23/P collar lobe attachment slide loops. The slide loops used to fabricate the collar lobe attachment shall be in accordance with A-A-55620.

3.2.1.13 Knife sheath. The knife sheath shall conform to MIL-K-8662, except that it shall not contain the sharpening stone, sharpening stone pocket, nylon laces, lace holes, and slots for insertion of belt.

3.2.1.14 Thread. The nylon thread used to fabricate the hoisting harness shall be in accordance with V-T-295, Class I, Type I, Size 6. All other thread shall be V-T-295.Type II, Class A, Size E.

3.2.1.15 Attachments.

3.2.1.15.1 Oxygen/CBR attachment. The oxygen/CBR attachment shall be in accordance with applicable drawings. The webbing used for fabrication of this attachment shall conform to MIL-W-43668, Type III, 1 inch wide.

3.2.1.15.2 Flashlight attachment. The flashlight attachment shall be in accordance with applicable drawings. The webbings used for fabrication of this attachment shall conform to MIL-W-43668, Type III, 1 inch wide and MIL-W-5664, Type I, Class 1, 1 inch wide.

3.2.2 Hoisting harness. The integral hoisting harness shall be constructed with the materials specified in 3.2.1.14 and 3.2.2.1 through 3.2.2.4.

3.2.2.1 Harness webbing. The webbing used to fabricate the hoisting harness assembly shall be 1 23/32 inch wide nylon conforming to MIL-W-4088, Type XIII, Color 106 Olive Green.

3.2.2.2 Snaplink. The snaplink used for hoisting shall be D-shaped, non-locking, conforming to A-A-50041, Type III.

3.2.2.3 Friction adapters. The friction adapters used to fabricate the hoisting harness shall conform to MS70101 for the chest adapter and MS22019 for the leg adapters.

3.2.2.4 Harness retainer cord and pocket tether loops. The harness retainer cord used to fabricate the hoisting harness assembly and pocket tether loops shall conform to MIL-C-5040, Type IIA, Nylon Cord, Coreless, Color 106, Olive Green.



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3.3 Design and construction. The mesh vest shall have four sewn-in inside pockets and various modular removable pockets. The modular pockets shall be unattached when delivered. The vest shall be adjustable under each arm and in the back by reeving together overlapping vest panels. The vest shall integrate with the soft body armor in accordance with MIL-B-29605 and hard body armor in accordance with MIL-B-29604. Drill holes are prohibited. The design and construction of the vests shall conform to the patterns, figures 3 and 4, and the drawings listed herein:

3561AS101	3561AS304	3561AS310	3561AS314
3561AS301	3561AS305	3561AS311	
3561AS302	3561AS308	3561AS312	
3561AS303	3561AS309	3561AS313	

3.3.1 Cut edges. The cut edges of the nylon webbings, cords, and tapes, except for the hook and loop fastener tapes, shall be seared, prior to the fabrication of the vests and pockets, to prevent fraying. No sharp edges shall be formed. The cut edges of the aramid cloth, shall be overedged stitched (serged) except those that are completely covered by aramid binding tape, hook and loop fastener tapes, or are completely encased by the seam construction.

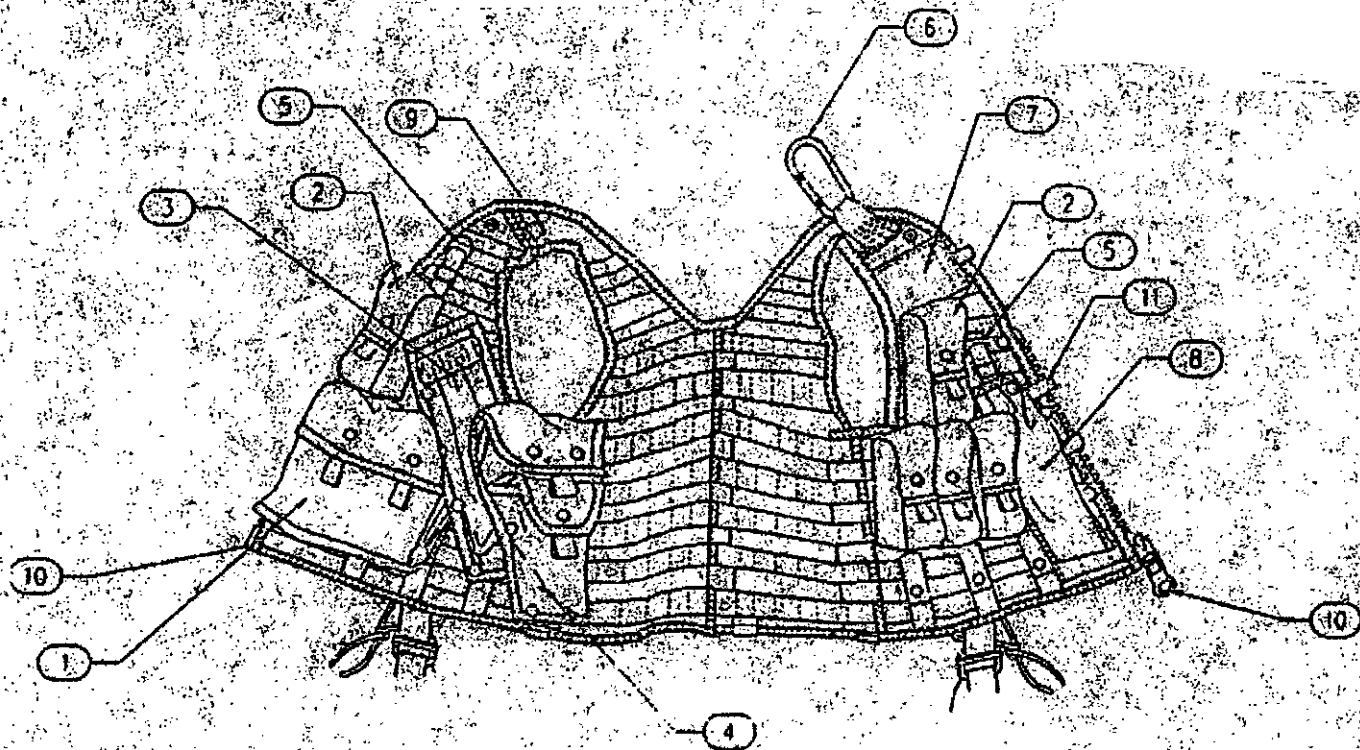
3.3.1.1 Patterns. Standard patterns shall be furnished to the contractor for use in cutting working patterns (see 6.4). The working patterns shall be identical to the government patterns. Minor modifications are permitted where necessary when using automatic equipment, provided these modifications shall not alter the dimensional serviceability or appearance requirements cited in the solicitation. The modular pockets have a 3/8 inch seam allowance, except where binding is required.

3.3.1.2 List of pattern parts and applicable materials.

3.3.1.2.1 Cloth, nylon, raschel knit, (MIL-C-8064 with FR coating, Color 106 Olive Green).

<u>Nomenclature</u>	<u>Cut</u>	<u>Pattern No.</u>
Vest, Front	2	3561AS380-1, Right / 3561AS380-2, Left
Vest, Back	2	3561AS380-3, Right / 3561AS380-4, Left
Inside Upper Pocket	2	3561AS380-7, Left / 3561AS380-8, Right
Inside Lower Pocket	2	3561AS380-9, Left / 3561AS380-10, Right

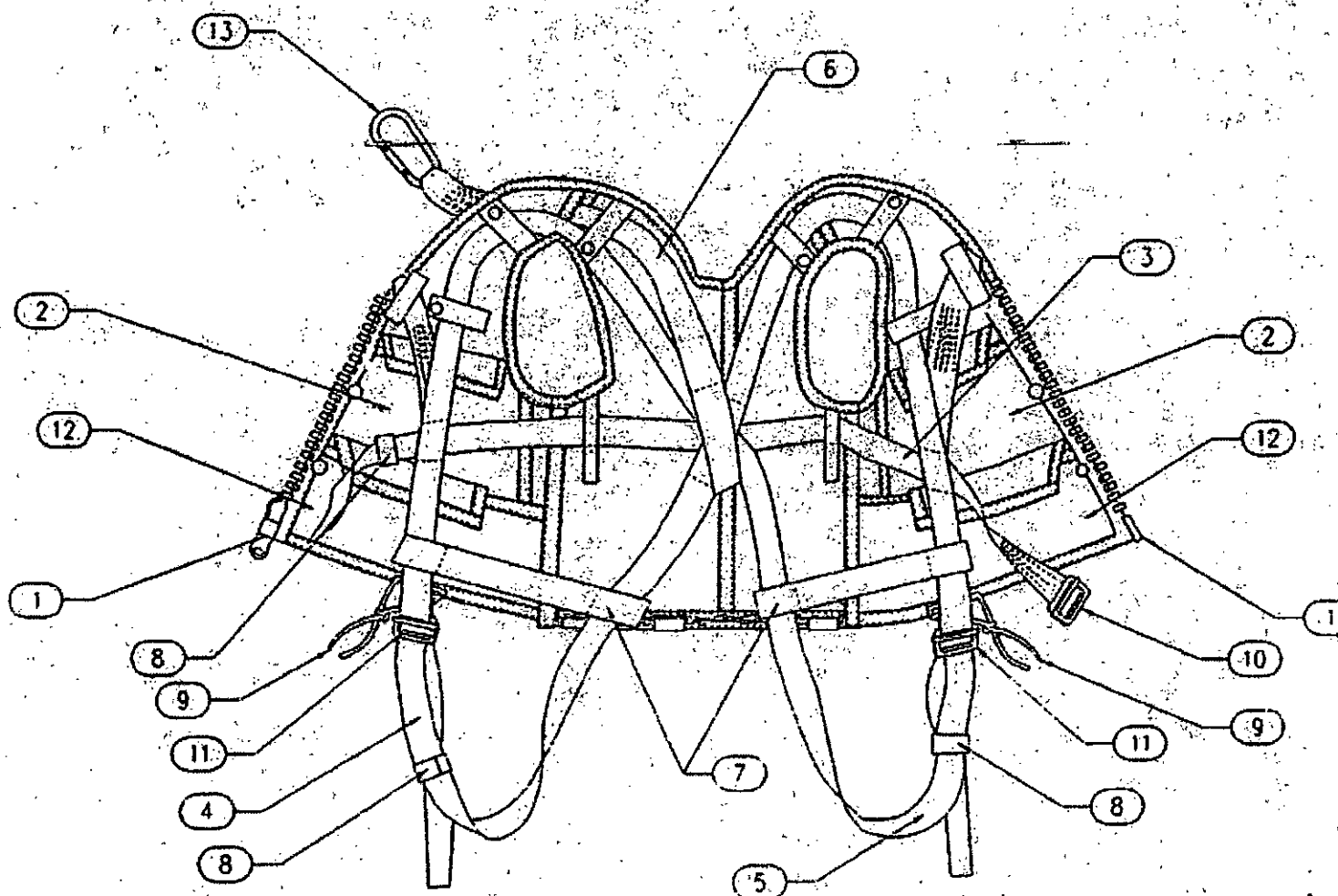
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- |  |                           |
|--|---------------------------|
| 1. Radio Pocket                              | 6. Snap-Link              |
| 2. General Pocket                            | 7. Snap-Link Cover        |
| 3. HEED Pocket                               | 8. Knife Pocket           |
| 4. Pistol Holster Pocket<br>with Ammo Keeper | 9. Loop-Locs              |
| 5. Collar Lobe Attachment                    | 10. Slide Fastener        |
|  | 11. Flashlight Attachment |

**FIGURE 3. AIRSAVE vest (outside view).**

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- |                                |   |
|--------------------------------|---|
| 1. Slide Fastener              | 9. Harness Retainer Cord                      |
| 2. Inside Pockets (Water Bags) | 10. Friction Adapter (Chest)                  |
| 3. Chest Strap                 | 11. Friction Adapters (Legs)                  |
| 4. Right Leg Strap             | 12. Inside Pockets (General Kit, Medical Kit) |
| 5. Left Leg Strap              | 13. Snap Link                                 |
| 6. Lift Strap                  |   |
| 7. Leg Strap Retainer          |   |
| 8. Harness Keeper              |   |

**FIGURE 4. AIRSAVE vest (inside view) with hoisting harness.**

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3.3.1.2.2 Cloth, aramid oxford (MIL-C-43842, Class I, Color 106 Olive Green).

<u>Nomenclature</u>	<u>Cut</u>	<u>Pattern No.</u>
Upper and Lower Pocket Flap	2	3561AS380-5, Left / 3561AS380-6, Right
D-Ring Retaining Flap	1	3561AS380-11
General Pocket	5	3561AS390-1
Radio Pocket	1	3561AS391-1
Knife Pocket	1	3561AS392-1
Pistol Holster Panel	1	3561AS393-1
Magazine Pouch Panel	1	3561AS393-2
HEED Pocket Front	1	3561AS394-1
HEED Pocket Back	1	3561AS394-2

3.3.1.2.3 Cloth, Duck, Nylon (MIL-C-3953, Color 106 Olive Green).

<u>Nomenclature</u>	<u>Cut</u>	<u>Pattern No.</u>
Radio Pocket Stiffener	1	3561AS391-2
Pistol/Ammo Pocket Stiffener	1	3561AS393-3
HEED Pocket Stiffener	1	3561AS394-3

3.3.1.2.4 Webbing, Textile, (MIL-W-43668 with FR coating, Type III, Color 106 Olive Green).

<u>Nomenclature</u>	<u>Cut</u>	<u>Pattern No.</u>
Pistol/Ammo Pocket - Inside Webbing 1	1	3561AS393-4
Pistol/Ammo Pocket - Inside Webbing 2	1	3561AS393-5
Pistol/Ammo Pocket - Inside Webbing 3	1	3561AS393-6
Pistol/Ammo Pocket - Inside Webbing 4	1	3561AS393-7
Pistol/Ammo Pocket - Outside Webbing 1	1	3561AS393-8
Pistol/Ammo Pocket - Outside Webbing 2	1	3561AS393-9
Pistol/Ammo Pocket - Outside Webbing 3	2	3561AS393-10
HEED Pocket - Inside Webbing 1	1	3561AS394-4
HEED Pocket - Inside Webbing 2	3	3561AS394-5
HEED Pocket - Outside Webbing 1	1	3561AS394-6
HEED Pocket - Outside Webbing 2	3	3561AS394-7

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3.3.1.2.5 Templates.Nomenclature

Vest, Front  
Vest, Inside Front  
Vest, Back  
Vest, Inside Back

3.3.2 Stitches, seams, and stitchings. All the seams used in the fabrication of the vests shall conform to the applicable drawings. Except for the overedge stitching, the stitching in the vest shall be accomplished with Stitch Type 301. Each row of stitching shall be straight and parallel to the seam edge. The straightness of the stitching, in any row, shall be maintained within a tolerance of plus or minus 1/32 inch. The overedge stitching shall be accomplished with Stitch Type 502, 503, 504, or 505. The thread and stitching used in fabrication shall conform to applicable drawing requirements.

3.3.2.1 Thread breaks and ends of seams. All the thread ends shall be trimmed to 1/4 inch or less. No raw edges are permitted on exterior of vest. The cut edges of the binding tape shall be turned under. The thread tension shall be maintained so that there shall be no loose or tight stitching.

3.3.2.1.1 Repairs of stitching. Repairs of stitching shall be as follows:

- a. When thread breaks, skipped stitches, run-offs, or bobbin run-outs occur during stitching, the stitching shall be repaired by restarting the stitching a minimum of 1 inch back of the end of the stitching.
- b. Thread breaks or two or more consecutive skipped or run-off stitches noted during inspection of the item shall be repaired by overstitching. The stitching shall start a minimum of 1/2 inch in back of the defective area, continue over the defective area onto the existing stitching. Loose or excessively tight stitching shall be repaired by removing the defective stitching without damaging the materials, and restitching in the required manner.

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

3.3.3 Bartacking. The location and length of the bartacks shall conform to applicable drawing requirements.

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3.4 Identification labels. Identification labels shall conform to applicable drawing requirement.

3.5 Markings. The markings shall be legible and durable upper case black letters and Arabic numerals and shall be thoroughly dry prior to packaging. The markings shall be lusterless and the letters and numerals shall be sharply defined (see 6.2). The markings shall be accomplished by using such methods and materials as shall be resistant to erasure or fading under the condition of usage. The marking medium shall not contain any materials which are deleterious to the substance being marked.

3.6 Color. The color of the vests and components shall conform to applicable drawing requirements.

3.7 Flame resistance. Materials that have been fire resistant (FR) treated shall have a zero afterflame time, a zero afterglow time, and a maximum char length of 4 inches when tested as specified in 4.5.

3.8 Workmanship. Completed vests shall be free of all loose thread, lint, and foreign matter. Vests shall be uniform in quality and shall be free from irregularities or defects that could adversely affect performance or durability.

#### 4. VERIFICATION

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

- a. First article inspection (see 4.2).
- b. Conformance inspection (see 4.3).

4.2 First article inspection. The first article inspection shall be performed on the vest or subassemblies and the fit gage set. The inspection shall be in accordance with table I.

4.2.1 First article units. The fit gage set and vests or subassemblies selected as sample units from the first article lot shall be thoroughly checked for dimensional and visual conformance to this specification. The sample size of the first article lot shall be specified in the contract. The samples shall be representative of the construction, workmanship, components, and materials to be used during production. The first article inspection samples shall be furnished to the Government as directed by the contract (see 6.2).

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TABLE I. First article inspection.

Inspection	Paragraph	
	Requirement	Method
Vest:		
Visual examination	Section 3	4.4.1
Dimensional examination	Section 3	4.4.2
Pocket size examination	Section 3	4.4.3
Flame resistance	3.7	4.5
Fit gage set:		
Visual examination	3.2.1.2.1	4.4.1
Dimensional examination	3.2.1.2.1	4.4.1
Subassemblies:		
Visual examination	Section 3	4.4.1
Dimensional examination	Section 3	4.4.1
Pocket size examination	Section 3	4.4.3
Flame resistance	3.7	4.5

4.3 Conformance inspection. When the first article inspection has been waived for the vest or subassemblies, the fit gage set shall become part of the conformance inspection. It shall be inspected prior to any first lot examination for acceptance. The conformance inspection shall be performed on the vest or subassemblies. The inspection shall conform to table I.

4.3.1 Certificate of compliance. Where certificates of compliance are submitted in accordance with 4.5, they shall contain verifiable actual test and inspection data. The Government reserves the right to inspect and test the cloth to verify the validity of the certification.

#### 4.4 Inspection methods.

4.4.1 End item visual examination for vest, subassemblies, and fit gages. The vest and the fit gage set shall be examined for the defects listed in table II.

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TABLE II. End item visual defects.

Defect	Classification		
	Critical	Major	Minor
<b><u>GENERAL</u></b>			
a. Any hole, including drill holes, cut, tear, mend, burn, or weakening defect such as smash, multiple float, loose slub, needle chew or abraded area.	1		
b. Color of any component not as specified.			201
c. Shaded parts, shade bar, spot, or stain.			202
d. Any thread end more than 3/8 inch or loose thread ends not removed.			203
e. Any cut edge of the nylon cord, webbing, or tape, except for the hook and loop fastener tapes, not seared or any sharp edge formed by the searing. <u>1/</u>	2		204
f. Any cut edge of the nylon duck cloth not overedged stitched (serged). <u>1/</u>	3		205
g. Any cord or webbing used for the harness, belt, or pockets not fabricated from one continuous length.			206
h. Less than 25 percent of the hooks or pile flattened or missing from any fastener tape closure area.			207
i. 25 percent or more of the hooks or pile flattened or missing from any fastener tape closure area.		101	
j. Any hook or loop tape misplaced, not serving the intended purpose.	4		
<b><u>METALLIC/PLASTIC COMPONENTS</u></b>			
a. Any surface rough, misaligned, or contains any crack, nick, burr, sharp edge, dent, or sliver.	5		
b. Any surface unclean or contains embedded foreign matter.			208
c. Any loose, detached, or otherwise not securely retained.	6		
d. Any malformed, corroded, fractured, broken, chipped, bent, or distorted.	7		



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TABLE II. End item visual defects.

Defect	Classification		
	Critical	Major	Minor
e. Any improperly finished or finish missing.			209
f. Any snap fastener improperly clinched resulting in cutting of the cloth, tape, or webbing, as applicable.	8		
g. Any snap fastener mismatched. <u>2/</u>			210
h. Any part of the slide fastener assembly bent, broken, slider not located at specified position when the slide fastener is closed, or the movement of the slider is interfered with. <u>3/</u>	9		
<u>COMPONENTS AND ASSEMBLY</u>			
a. Any component not specified.	10		
b. Any component part, or required operation omitted.	11		
c. Any operation improperly performed.		102	
<u>SEAMS AND STITCHING</u>			
a. <u>Accuracy of Seaming:</u>			
1. Any seam, hem, or attachment of any component twisted, puckered, pleated, or caught in an unrelated operation or stitching; any seam edge not properly forced out or containing any fold. <u>1/</u>	12		211
2. <u>Ends of stitching that are not caught in other seams or stitching:</u>			
(a) Not securely backstitched.	13		
(b) Secure but backstitched for a distance less than 1/2 inch.			212
(c) Backstitching not overlapped on itself.			213
3. <u>Thread breaks:</u>			
(a) Not securely overstitched.	14		
(b) Secure but overstitched for a distance less than one inch.			214
b. <u>Gage of stitching:</u> <u>4/</u>			

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TABLE II. End item visual defects.

Defect	Classification		
	Critical	Major	Minor
1. Any stitching irregular, unevenly gaged, or various stitchings not uniform.			215
c. <u>Open seams:</u> 5/			
1. <u>Other than on any hem:</u>			
(a) Up to and including 1/4 inch.			216
(b) More than 1/4 inch but not more than one inch.			217
(c) More than one inch.	15		
2. <u>On any hem:</u>			
(a) 1/2 inch or less.			218
(b) More than 1/2 inch			219
d. <u>Raw edges:</u> 6/			
1. More than 1/4 inch but not more than one inch.			220
2. More than one inch.			221
e. <u>Seam and stitch type:</u>			
1. Not specified seam or stitch. 1/	16		222
f. <u>Stitch tension:</u> 7/			
1. Loose tension resulting in a loose seam or tight tension resulting in breaking of the stitches, when normal pull is applied.	17		
g. <u>Stitches per inch:</u> 8/			
1. <u>Stitches more or less than specified:</u>			

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TABLE II. End item visual defects.

Defect	Classification		
	Critical	Major	Minor
(a) One or 2	18		223
(b) Three			224
(c) More than 3			
h. <u>Bartacks:</u>			
1. Any loose or misplaced, not serving the intended purpose.			225
<u>MARKINGS</u>			
a. Any missing, incomplete, incorrect or illegible.			226
b. Improperly located.			227
<u>FIT GAGE SET</u>			
a. Any dimension of gage not as specified.		103	
b. Any material for gage not as specified.		104	
c. Any individual gage missing from set.		105	
d. Configuration of pistol gage and knife gage does not conform to figure.		106	

- 1/ The defect shall be considered critical when it seriously affects the serviceability or appearance; otherwise, it is to be classified as a minor defect.
- 2/ The snap fasteners shall be checked for proper function and attachment by snapping closed and unsnapping each snap fastener at least three times.
- 3/ The slide fasteners shall be checked for proper function by opening and closing each slide fastener at least three times along its entire length.

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- 4/ The gage of stitching defect shall be scored only when the condition exists on the major portion of any row of stitching.
- 5/ A seam shall be classified as open when one or more stitches, joining a seam, are broken or when two or more continuous skipped stitches or run-offs occur. On double-stitched seams, a seam shall be classified as open when either one or both sides of the seam contains any of the aforementioned defects for a single stitched seam.
- 6/ Any edge that should be turned under and is not, but is securely caught in the stitching, shall be classified as a raw edge. Any raw edge that is not securely caught in the stitching shall be classified as an open seam.
- 7/ Puckering is evidence of tight tension or gathering of the material. When puckering is evident, and not caused by the gathering of the material, the seam or hem, as applicable, shall be inspected by exerting normal pull in the direction of the stitching. Gathering of the material shall be classified as a accuracy of seaming defect.
- 8/ The stitches per inch defects shall be scored only when the condition exists on the major portion of any row of stitching.

4.4.2 End item dimensional examination. The end item shall be examined for the defects listed in table III.

4.4.3 Pocket size examination. After fabrication of the pockets, an in-process fit examination shall be performed. Samples from each lot shall be selected. The respective gage shall be placed into its pocket and the pocket shall be snapped closed providing a secure fit. After subassemblies have been attached to the vest or when the subassemblies are procured separately, a pocket size examination shall be performed on the selected units and examined for the defects listed in table IV.

4.5 Flame resistance. Materials that have been FR treated shall be tested in accordance with FED-STD-191, Method 5903.1, and shall pass the requirements of 3.7. Unless otherwise stated, a certificate of compliance shall be submitted and will be acceptable for the stated requirements.

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TABLE III. End item dimensional defects.

Examine	Defect	Classification	
		Major	Minor
Measure the components, location of the components, width of the seams and hems, and length and width of the assembled vest.	NOTE: The vest to be measured shall be laid flat, without tension, on a smooth, flat surface so that any creases or wrinkles shall not affect the measurement. The dimension of the vest and components, location of the components, and width of the seams and hems shall be determined by a yardstick, metal tape, or by any suitable measuring device.		
	Any measurement deviating from the dimensions and tolerance as specified in the applicable drawings shall be enumerated as a dimensional defect.	107	

TABLE IV. End item fit defects.

Examine	Defect	Classification	
		Critical	Major
Fit of gage: Fit of the applicable gage into its corresponding pocket of the finished vest and closure of the pocket flap	NOTE: The vest fit examination shall be performed with the components for which the vest is designed. The inspector shall insert the components into their designated pockets without effort and the pocket flaps shall be closed to ensure a proper fit. Pockets, gage fails to fit properly within pocket		
	Pockets too small	19	
	Pocket too large		108
	Pocket flaps too small	20	
	Pocket flaps too large		109

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## 5. PACKAGING

5.1 Packaging. For acquisition purposes, the packaging requirements shall be as specified in the contract or order (see 6.2). When actual packaging of materiel is to be performed by DoD personnel, these personnel need to contact the responsible packaging activity to ascertain requisite packaging requirements. Packaging requirements are maintained by the Inventory Control Point's packaging activity within the Military Department or Defense Agency, or within the Military Department's System Command. Packaging data retrieval is available from the managing Military Department's or Defense Agency's automated packaging files, CD-ROM products, or by contacting the responsible packaging activity.

## 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 vest covered by this specification is intended to be worn as part of the AIRSAVE system for military aircrewmembers. It is intended to provide a modular pocket system and a platform for both soft and hard body armor.

6.2 Acquisition requirements. Acquisition documents should specify the following:

- a. Title, number, and date of this specification, including any amendments.
- b. Issue of DoDISS to be cited in the solicitation, and if required, the specific issue of individual documents referenced (see 2.2.1).
- c. Type, subassemblies, and quantity desired.
- d. Applicable drawings, including revisions, and patterns.
- e. Government part number and National Stock Number.
- f. Whether first article inspection is required (see 4.2.1).
- g. Name and address of the first article inspection facility (see 4.2.1); and the name and address of the Government activity responsible for conducting the first article inspection program.
- h. Levels of preservation and packaging.

6.3 First article. When first article inspection (see 3.1) is required, the contracting officer should provide specific guidance to offerors whether the item(s) should be a first article sample, a first production item, or a standard production item from the contractor's current inventory, and the number of items to be tested as specified in 4.2.1. The contracting officer should include

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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 rely on such production or test, must furnish evidence with the bid that prior Government approval is presently appropriate for the pending contract. Bidders should not submit alternate bids unless specifically requested to do so in the solicitation.

6.4 Patterns and drawings. For access to patterns and drawings, address the acquiring activity issuing the invitation for bids.

6.5 Subject terms (key word) listing.

AIRSAVE  
Armor, body  
Armor, integrated protection  
Pocket, modular  
Protection system

6.6 Recycled material. It is encouraged that recycled material be used when practical as long as it meets the requirements of the document (see 3.2).

## CONCLUDING MATERIAL

Custodians:  
Army - GL  
Navy - AS

Preparing Activity  
Navy-AS  
(Project 8415-0100)

Review Activities:  
Navy - NU  
DLA - CT