

INCH-POUND

MIL-F-43833D

14 February 1990

SUPERSEDING

MIL-F-43833C

24 June 1986

## MILITARY SPECIFICATION

### FIELD PACK, COMBAT, NYLON, MEDIUM, LC-2

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

#### 1. SCOPE

1.1 Scope. This specification covers one type of medium size combat field pack fabricated from nylon duck.

1.2 Classification. The field packs shall be of the following classes as specified (see 6.2).

Class 1 - Woodland Camouflage Printed

Class 2 - Olive Green 106

#### 2. APPLICABLE DOCUMENTS

##### 2.1 Government documents.

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

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: US Army Natick Research, Development and Engineering Center, Natick, MA 01760-5014, by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A

FSC 8465

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## SPECIFICATIONS

## FEDERAL

- A-A-203 - Paper, Kraft, Untreated
- V-I-285 - Thread, Polyester
- DDD-L-20 - Label: for Clothing, Equipage, and Tentage,  
(General Use)
- PPP-B-636 - Boxes, Shipping, Fiberboard

## MILITARY

- MIL-B-543 - Buckles, Tongueless and Web Strap
- MIL-R-3390 - Rings, Dee
- MIL-W-4088 - Webbing, Textile, Woven Nylon
- MIL-T-5038 - Tape, Textile and Webbing, Textile,  
Reinforcing, Nylon
- MIL-C-5040 - Cord, Fibrous, Nylon
- MIL-C-7219 - Cloth, Duck, Nylon
- MIL-H-9890 - Hardware, Individual Load Carrying  
Equipment: and Hardware, Miscellaneous
- MIL-F-10884 - Fasteners, Snap
- MIL-G-16491 - Grommet, Metallic, General Specification For
- MIL-E-20652/1- Eyelets, Metallic, Rolled Flange Type;  
and Eyelet Washer
- MIL-E-20652/3- Eyelets, Metallic, Telescopic Type
- MIL-F-21840 - Fastener Tapes, Hook and Loop, Synthetic
- MIL-W-27265 - Webbing, Textile, Woven Nylon Impregnated
- MIL-L-35078 - Loads, Unit: Preparation of Semiperishable  
Subsistence Items; Clothing, Personal Equipment and  
Equipage; General Specification For
- MIL-C-43375 - Cloth, Duck, Nylon, 12.5 Ounce
- MIL-W-43668 - Webbing, Textile, Textured or  
Multifilament
- MIL-C-43906 - Cloth, Coated, Nylon, Polyurethane  
Double Coated

## STANDARDS

## FEDERAL

- FED-STD-751 - Stitches, Seams, and Stitchings

## MILITARY

- MIL-STD-105 - Sampling Procedures and Tables  
for Inspection by Attributes
- MIL-STD-129 - Marking for Shipment and Storage
- MIL-STD-147 - Palletized Unit Loads
- MIL-STD-731 - Quality of Wood Members for Containers and Pallets

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

2.1.2 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.

## DRAWINGS

## U.S. ARMY NATICK RESEARCH, DEVELOPMENT AND ENGINEERING CENTER

- 2-2-344 - Field Pack, Combat, Nylon, Medium, LC-2;  
Assembly, Front and Side View
- 2-2-345 - Field Pack, Combat, Nylon, Medium, LC-2;  
Assembly, Back and Bottom View
- 2-2-346 - Field Pack, Combat, Nylon, Medium, LC-2;  
Sections
- 2-2-347 - Field Pack, Combat, Nylon, Medium, LC-2;  
Pattern, Main Panel
- 2-2-348 - Field Pack, Combat, Nylon, Medium, LC-2;  
Patterns, Back Panel, Pouch Flaps,  
Reinforcement Upper and Lower, and Details
- 2-2-349 - Field Pack, Combat, Nylon, Medium, LC-2;  
Patterns, Radio Pocket and Main Panel  
Reinforcement and Details
- 2-2-350 - Field Pack, Combat, Nylon, Medium, LC-2;  
Patterns, Pocket, Pocket Reinforcement  
and Pocket Flap and Details
- 2-2-357 - Field Pack, Combat, Nylon, Medium and Large,  
LC-2; Frame Pocket Assembly and Details

(Copies of drawings are available from the U.S. Army Natick Research, Development, and Engineering Center, STRNC-EMSS, Natick, MA 01760-5014.)

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

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## AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

- D 1056 - Specification for Flexible Cellular Materials,  
Sponge or Expanded Rubber
- D 3951 - Standard Practice for Commercial Packaging

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

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

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

### 3. REQUIREMENTS

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

3.2 Guide samples. Guide samples, when furnished, are solely for guidance and information (see 6.4). Variation from this specification may appear in the samples, in which case this specification shall govern.

3.3 Materials and components. Materials and components shall be as specified on the applicable drawings and as specified herein. For materials or components for which it is stated "or equal", if the contractor proposes to use an item considered to be equal to the material or component specified, prior to its use the contractor shall furnish a sample of the material or component with supporting data to the contracting officer for subsequent evaluation by the responsible military agency. It is encouraged that recycled material be used when practical as long it meets the requirements of this specification.

3.3.1 Cloth, duck, nylon, 7.25 ounce. The nylon duck for all cloth components, except the cover of the frame pocket pad, shall conform to type III, class 5 woodland camouflage printed, or type III, class 3 dyed Olive Green 106 of MIL-C-7219 except that the requirement for water resistance after three launderings shall not apply. The shrinkage shall be not greater than 3.5 percent, and the air permeability shall be not greater than 4.0 cu. ft./min./sq. ft. (see 6.8).

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3.3.2 Cloth, duck, nylon, 12.5 ounce. The nylon duck for the cover of the frame pocket pad shall be dyed Olive Green 106 and shall conform to class 2 of MIL-C-43375 except that only "fair" fastness to laundering shall be required, the shrinkage shall be not greater than 3.5 percent, and the air permeability shall be not greater than 4.0 cu. ft./min./sq. ft. (see 6.8).

3.3.3 Cloth, coated, nylon, polyurethane double coated. The coated cloth for the pouch flap liner shall conform to type I of MIL-C-43906.

3.3.4 Webbing, nylon.

3.3.4.1 Webbing, 3/4-inch and 2-1/4 inch widths. The 3/4-inch and 2-1/4 inch nylon webbing shall be dyed Olive Drab 7 and shall conform to types Ia and VIIIC, respectively, of MIL-W-4088. The types Ia and VIIIC nylon webbing shall be resin impregnated conforming to class R treatment of MIL-W-27265.

3.3.4.2 Webbing, 1-inch width. The 1-inch nylon webbing shall be dyed Olive Drab 7 and shall conform to type III of MIL-W-43668.

3.3.5 Tape, nylon, 1-inch width. The 1-inch nylon tape shall be dyed Olive Drab 7 and shall conform to type III of MIL-T-5038.

3.3.6 Pad, foam. The foam pad shall be 1/2-inch thick and shall conform to Grade RE41 of ASTM D 1056.

3.3.7 Cord, nylon. The nylon cord shall be Olive Drab 7 and shall conform to type II of MIL-C-5040.

3.3.8 Thread, polyester. The polyester thread shall conform to type I, class 1, sub-class B of V-T-285. Sizes shall be as follows:

For all stitching except overedging, bartacking, binding and W-W stitching	Size F
For W-W stitching	Size FF
For prestitching, binding, overedging, and bartacking	Size E
For looper thread when 401 stitching is used for closing	Size E

The thread shall be dyed Olive Drab S-1 (C.A. 66022) and shall show fastness to weathering equal to or better than the standard sample (see 6.4). When no standard sample is available, the thread shall show "good" fastness to weathering.

3.3.9 Fastener tape, hook and loop, nylon. The nylon tape fastener shall be 1-inch wide, Olive Green 106 conforming to type II, class 1 of MIL-F-21840.

3.3.10 Eyelets, aluminum, black. The black enameled aluminum eyelets shall conform to dash No. ABE131 of MIL-E-20652/1.

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3.3.11 Eyelets, metallic, with washers. The brass eyelets and washers shall conform to dash numbers BBE117 and BBW101 respectively, of MIL-E-20652/1. An alternate telescopic eyelet with washer conforming to dash number BBT 307 and BBT 308 of MIL-E-20652/3 may be used.

3.3.12 Fasteners, snap. The snap fasteners shall conform to style 2, finish 2 of MIL-F-10884.

3.3.13 Fastener loops. The fastener loops shall conform to type IV (without clip) of MIL-H-9890. Ends of the loop shall be welded.

3.3.14 Grommets, metallic. The grommets shall be brass, black chemical finish conforming to type III, class 3, size No. 0 of MIL-G-16491.

3.3.15 Clamp, cord, plastic. The cord clamp shall consist of a lock body and lockwheel. The lock body shall conform to Fastex No. 238-390703-00-5612, color GN 604, or equal, and the lock wheel shall conform to Fastex No. 238-082051-00-0101, or equal (see 6.6).

3.3.16 Buckle, non-slip, w/spring, 1-inch. The buckle shall consist of a body and lever section made of corrosion resistant steel, type 430, and a spring made of corrosion resistant steel, type 301-302, and shall conform to Waterbury Buckle Company No. 240, Prentice Corp. No. 3841 or equal (see 6.7). The buckle shall have a dull, black oxide finish (see 4.4.1.1).

3.3.17 Buckle, non-slip, steel. The 1-inch steel non-slip buckle shall conform to type V, class 3 of MIL-B-543.

3.3.18 Rings, dee. The dee ring shall be configuration "K", 1 by 3/4-inch, class 1 or class 2 of MIL-R-3390.

3.4 Construction. The construction shall conform in all respects to the drawings listed in 2.1.2 and as specified herein.

3.4.1 Stitches, seams and stitchings. All seams and stitching, except bartacking, shall conform to FED-STD-751 as follows:

For all stitching except overedge stitching, binding, and piecing	Stitch type 301 or 401, 8 to 10 stitches per inch
For prestitching and stitching the binding	Stitch type 301, 8 to 10 stitches per inch
For piecing stitching	Stitch type 301, 8 to 10 stitches per inch, seam type SSa-1, stitching margin of 1/2-inch

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For overedge stitching,  
3/16-inch minimum gage

Stitch type 503, 504 or 602  
8 to 12 stitches per inch

Edges of the main panel unit (with panel reinforcement) and back panel unit (with upper and lower panel reinforcements) shall be overedged separately before closing seam is applied. The frame pocket panels shall be overedged separately as indicated on drawing.

3.4.1.1 Type 301 stitching. Ends of all stitching shall be backstitched or overstitched not less than 1-inch (1/2-inch for box, box-x, and W-W stitching) except where ends are turned under or caught in other seams or stitching. Thread tension shall be maintained so that there will be no loose bobbin or top thread or excessively tight stitching resulting in puckering of the materials sewn. The interlock shall be imbedded in the materials sewed.

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

a. When thread breaks or bobbin run-outs occur during stitching, except presewing, the stitching shall be repaired by restarting the stitching a minimum of 1-inch (1/2-inch for box, box-x, and W-W stitching) back of the end of the stitching.

b. Except for prestitching, thread breaks or two or more consecutive skipped or run-off stitches noted during inspection of the item (in-process or end item) shall be repaired by overstitching. The stitching shall start a minimum of 1-inch in back of the defective area (1/2-inch on box, box-x and W-W stitching), continue a minimum of 1-inch beyond the defective area on to 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. When damaged thread has been removed, needle holes do not constitute damage to the material.

(When making repairs a. and b. above, the ends of the stitching are not required to be backstitched.)

3.4.1.2 Type 401 stitching. Thread tension shall be maintained so that there will be no loose stitching. Both ends of all seams or stitching produced with 401 stitch type, when not turned under in a hem or held down by other stitching, shall have a 1/2 to 3/4-inch chain extending beyond each end. All repairs shall be in accordance with 3.4.1.1.1a and 3.4.1.1.1b. Repairs may be made using 301 stitch type.

3.4.1.3 Types 503, 504, and 602 stitching. Thread tension shall be maintained so that there will be no loose stitching. All repairs shall be in accordance with 3.4.1.1.1a and 3.4.1.1.1b except substitute 3/4-inch for 1-inch wherever 1-inch appears.

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

<u>Length</u>	<u>Width</u>	<u>Tolerance</u>		<u>Stitches per bartack</u>
		<u>Length</u>	<u>Width</u>	
1/2-inch	1/8-inch	+1/16-inch	+1/32-inch	28
3/4-inch	1/8-inch	+1/16-inch	+1/32-inch	42
1-inch	1/8-inch	+1/16-inch	+1/32-inch	42
1-5/16 inch	1/8-inch	+1/16-inch	+1/32-inch	52 to 56
2-inch	1/8-inch	+1/16-inch	+1/32-inch	80 to 84

Bartacking shall be free from thread breaks and loose stitching.

3.4.1.5 Automatic stitching. Automatic stitching machines may be used to perform any of the stitch patterns provided the requirements for the stitch pattern, stitches per inch, size and type of thread are met; and at least three or more tying, overlapping or backstitches are used to secure the ends of stitching.

3.4.1.6 Thread ends. All thread ends that are visible on the finished item shall be trimmed to a maximum length of 1/4-inch.

3.4.1.7 Lubrication of thread. There shall be no lubrication of the thread by any means, prior to or during sewing (see 4.4.1.1).

3.4.2 Setting of eyelets. A hole shall be prepunched before inserting the eyelet. The hole shall be smaller than the outside diameter of the eyelet barrel so that the barrel must be forced through the hole. The eyelet shall be securely clinched without splitting in a manner that will prevent detachment from or cutting of the adjacent material. Unless otherwise specified, the washer may be on either side of components on which installed.

3.4.2.1 Eyelets, with washer, brass. The eyelets with washer shall be securely clinched in a manner that will prevent detachment from or cutting of the adjacent material. The eyelets shall be clinched without splitting.

3.4.2.2 Eyelets, aluminum. The aluminum eyelets specified in 3.3.10 shall be installed using score setting dies conforming to J. C. Rhodes, part number 1-KW-1KL and 101Y-Klom or Stimpson Co., Part Numbr A2744-7 or equal (see 6.5). The eyelet shall be securely set in a manner that will prevent detachment from, or cutting of, the adjacent material. The clinched portion of the eyelet shall be on the inside of the assembly.

3.4.3 Setting of grommets. Holes shall be prepunched to receive the grommets. Holes prepunched to receive the grommets shall be smaller than the outside diameter of the grommet barrel so that the barrel must be forced through the hole. The grommet shall be securely clinched without cutting the adjacent material.



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3.4.4 Setting of snap fasteners. A hole shall be prepunched before inserting the male or female part of the snap fasteners. The hole shall be smaller than the outside diameter of the fastener barrel so that the barrel must be forced through the hole. The hole shall not be punched in the setting operation with the button or eyelet barrel. The fasteners shall be securely clinched without cutting the adjacent materials and no more than three splits shall occur in the button or eyelet barrels.

3.4.5 Fusing of ends of nylon cord and webbing. All ends of nylon webbing and cord shall be fused. The apparatus used to fuse the webbing ends shall be capable of providing sufficient heat to provide a smooth edge and with the cut ends of the webbing yarns all fused together. Fusing of the webbing ends shall be accomplished prior to being assembled for stitching.

3.4.6 Location marks. Location marks shall not be drilled. Printed markings shall not be more than 1/32-inch in width.

3.4.7 Repairs. Repairs such as mends, darns, patches, or splices are not permitted on the field pack.

3.4.8 Piecing. The nylon duck for the reinforcements of the main panel and for the reinforcements of the back panel may be pieced once only, either in the length or in the width direction (see 3.4.1). The pieced reinforcements shall be attached to the main or back panels so that the pieced seams are not exposed on the inside of the panels.

3.4.9 Replacement of defective components. During the spreading, cutting, and manufacturing process, components of the field pack having material defects or damages that are classified as defects in 4.4.3 shall be removed from production and replaced with nondefective and properly matched components.

3.5 Markings. The identification markings shall be applied in the location shown on the drawing and shall conform to type IV, class 5 of DDD-L-20. The item description marking shall read "FIELD PACK, COMBAT, NYLON, MEDIUM, LC-2." The letters "US" shall be applied in the location and in the size characters indicated on the drawing and shall conform to type IV, class 9 of DDD-L-20. Fastness of class 9 marking shall be as specified for class 5 marking. The instruction marking for hand washing the field pack shall be applied directly on the polyurethane coated cloth as shown on the drawing and shall conform to type IV, class 3 of DDD-L-20 and shall show colorfastness to laundering. The hand washing instructions shall be printed in letters 1/8-inch high. The contents of the hand washing instructions shall be as follows:

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FIELD PACK, COMBAT, NYLON, MEDIUM LC-2

Hand Washing:

1. Scrape dirt/dust from item using a brush or flat stick which will not cut fabric/webbing.
2. Wash item in a pail of warm water using mild detergent or soap.
3. Rinse "thoroughly" in clean warm water.
4. DO NOT USE CHLORINE BLEACH, YELLOW SOAP, CLEANING FLUIDS OR SOLVENTS - WILL DISCOLOR/DETERIORATE THE ITEM.
5. Dry item in shade or indoors.
6. DO NOT DRY IN DIRECT SUNLIGHT, DIRECT HEAT OR OPEN FLAME.
7. DO NOT LAUNDRY OR DRY ITEM IN FIXED/COMMERCIAL/HOME-TYPE LAUNDRY EQUIPMENT.
8. DO NOT ATTEMPT TO DYE ITEM OR REPAIR IT. TURN IT IN FOR REPAIR/REPLACEMENT.

3.6 Patterns. Standard patterns for textile components other than tape or webbing are shown full scale on drawings and provide allowances for all seams and shall be used for making working patterns. The standard patterns shall not be altered in any way.

3.7 Workmanship. The field pack shall conform to the quality of product established by this specification.

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

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

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

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

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

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

4.3 First article inspection. When a first article is required (see 3.1 and 6.2), it shall be examined for the defects specified in 4.4.3, 4.4.4, and 4.4.5.

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

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

4.4.1.1 Component and material certification. The contractor shall furnish a certificate of compliance for the finish on the non-slip buckle specified in 3.3.16 and for the requirement of 3.4.1.7 prohibiting the use of thread lubricants prior to or during sewing.

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4.4.2 In-process inspection. Inspection shall be made at any point or during any phase of the manufacturing operation to determine whether cut lengths and cut parts (detailed below), markings for location of components, and location of assembled component parts are in accordance with specified requirements. In addition, inspection shall be made to determine that prepunched holes for receiving eyelets, grommets, and snap fasteners are smaller than the outside diameter of the hardware barrel. Whenever nonconformance is noted, correction shall be made to the parts affected and lot in process. Components which cannot be corrected shall be removed from production.

<u>Examine</u>	<u>Material</u>	<u>Component</u>	<u>Drawing</u>	
Cut length	Webbing, nylon, type III, 1-inch	Strap, pocket radio	2-2-349	
		Strap, pocket	2-2-350	
		Strap, securing	2-2-347	
	Webbing, nylon type VIIIC, 2-1/4 inch	Hanger, equipment upper	2-2-350	
	Webbing, nylon, type Ia, 3/4-inch	Reinforcement, pocket	2-2-349	
Cut part	Cord, nylon, type II	Cord, drawstring	2-2-344	
		Cloth, nylon, type III, class 3 or class 5, 7.25 oz.	Panel, main	2-2-347
			Panel, pocket	2-2-350
			Flap, pocket	2-2-350
			Panel, back	2-2-348
	Pocket, radio	2-2-349		
	Cloth, nylon, class 2, 12.5 oz.	Cover, frame pocket	2-2-357	
	Pad, foam	Pad, frame pocket	2-2-357	
Cloth, coated, nylon	Flap, pouch liner	2-2-348		

4.4.3 End item visual examination. The end items shall be examined for the defects listed in table I. The lot size shall be expressed in units of field packs. The sample unit shall be one field pack. The inspection level shall be II and the acceptable quality level (AQL), expressed in terms of defects per hundred units, shall be 2.5 for major defects and 15 for total (major and minor combined) defects.

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TABLE I. End item visual defects

Examine	Defect	Classification	
		Major	Minor
Fabric	Hole, cut, tear, smash, broken or missing yarn, or open place clearly visible at normal inspection distance (approximately 3 feet)	101	
	Shade bar or abrasion mark		201
Cloth, coated nylon polyurethane double coated	Defective or partially omitted coating of pouch flap lining material		202
Webbing or tape	Any hole, cut, tear, or smash	102	
	Not firmly and tightly woven	103	
	Edges frayed or scalloped	104	
	Multiple floats		203
	Abrasion mark, slub, or broken end or pick		204
	Cut ends of webbing not fused as specified	105	
Hardware (general)	Broken or malformed failing to serve intended purpose, corroded area, burr, or sharp edge	106	
	Finish omitted or not as specified: - on brass or aluminum components		205
	- on steel components	107	
	Area of partial or no finish		206
	Any required component improperly installed causing failure to serve intended purpose	108	
	Not assembled as specified	109	
Snap fasteners	Size or type not as specified	110	
	Any fastener not functioning properly i.e., fails to snap closed, provide a secure closure, or open freely	111	
	Clinched excessively tight, cutting adjacent material	112	

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

Examine	Defect	Classification	
		Major	Minor
Snap fasteners (cont'd)	Clinched loosely, permitting any component to rotate freely but not to the degree that any component can be expected to become detached during use		207
	Clinched loosely to the degree that components can be expected to become detached during use	113	
	Incorrect style	114	
	More than three splits in eyelet or button barrels		208
	NOTE: The fasteners shall be snapped and unsnapped twice to determine whether parts of fastener separate freely and also effect a secure closure.		
	NOTE: Incomplete roll of end of button or eyelet barrel is evidence of improper and insecure clinching.		
Drawstrings and cords	Cut, chafed, or abraded	115	
	Ends not fused		209
Pouch drawstring cord	Not threaded through grommets or knotted as specified		210
	Omitted	116	
Clamp, cord	Reversed		211
Adjusting tie cords	One cord omitted		212
	Two or more cords omitted	117	
Brass grommets and eyelets	Clinched excessively tight, cutting adjacent material	118	
	Insecurely clinched to degree that grommet or eyelet may be detached from material	119	
	Washer installed on incorrect side of material		213
	Eyelet barrel split		214

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

Examine	Defect	Classification	
		Major	Minor
Eyelet, aluminum	Insecurely clinched; clinched excessively tight, cutting fabric	120	
	Not set with scored setting	121	
	Installed with scored side on outside		215
Loop, fastener	Ends not welded	122	
Open seam	1/2-inch or less		216
	More than 1/2-inch	123	
	NOTE: A seam shall be classified as an open seam when one or more stitches joining a seam are broken, or when two or more consecutive skipped or run-off stitches occur. On double stitched seams, a seam shall be con- sidered open when either one or both sides of the seam are open.		
Raw edge (on edge required to be finished)	More than 1/2-inch when securely caught in stitching		217
	NOTE: Raw edge not securely caught in stitching shall be classified as open seam.		
Run-off	(see open seam)		
Seam and stitch type	Wrong seam or stitch type	124	
Bartacks	Any bartack omitted	125	
	Any bartack not as specified or not in specified location		218
	Loose stitching, incomplete, or broken		219

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

Examine	Defect	Classification	
		Major	Minor
Stitch tension	Loose, resulting in a loose bobbin or top thread		220
	Excessively tight, resulting in puckering of material		221
Stitches per inch	One or two stitches less than minimum specified		222
	Three or more stitches less than minimum specified	126	
	One or more stitches in excess of maximum specified		223
	NOTE: Variation in the number of stitches per inch caused by operator speeding up the machine and pulling the material in order to sew over heavy places or in turning corners, shall be classified as follows:		
	(a) Within the minor defect classification - no defect		
	(b) Within the major defect classification - minor defect		
Stitching ends	Not secured as specified		224
Thread breaks, skipped stitches, or runoffs	Not overstitched as specified		225
	NOTE: Thread breaks or two or more consecutive skipped or runoff stitches not overstitched shall be classified as open seams.		
Rows of stitching	Any row missing except on box, box-x, and W-W stitching	127	
	On box, box-x, and W-W stitching:		
	- one row of stitching omitted		226
	- two or more rows of stitching omitted	128	



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

Examine	Defect	Classification	
		Major	Minor
Components and assembly	Any component part omitted or not as specified or any operation omitted or not as specified (unless otherwise classified herein)	129	
	Needle chews	130	
	Any mend, darn, patch, splice, or other unauthorized repair	131	
	Any material pleated or caught in stitch line where not specified		227
Piecing	Any reinforcement of the main or back panels constructed of more than two parts		228
Binding	Loosely applied but not exposing raw edge of material		229
	Loosely applied exposing raw edge of material	132	
	Ends of binding on pocket flap not caught in seams		230
Hangers	Ends of webbing not caught in side seams where required	133	
Reinforcements, webbing	Missing or not located as specified	134	
Darts (on pouch and pocket flaps)	One or more omitted		231
	Not formed and sewn separately on pouch flap pocket as specified	135	
Pouch and pocket bottoms	Single ply construction	136	
	Stitching attaching sides of pocket pouch not sewn through reinforcements	137	
Pocket and flaps	Pocket or flap not formed as specified		232
	Flaps improperly set or distorted failing to effect a full and smooth closure	138	

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

Examine	Defect	Classification	
		Major	Minor
Cleanness	Grease, oil, dirt or ink stains, clearly noticeable		233
	Thread ends not trimmed to 1/4-inch maximum length		234
Location markings	Drilled		235
	Printed marking more than 1/32-inch in width or not covered by component part		236
Markings: US, identification, and instructions	Omitted, incorrect, illegible, misplaced, or size of characters not as specified		237

4.4.4 End item dimensional examination. The end items shall be examined for the defects listed in table II. Only those dimensions that can be evaluated without damaging or disassembling the end items shall be examined. The lot size shall be expressed in units of field packs. The sample unit shall be one field pack. The inspection level shall be S-3 and the AQL, expressed in terms of defects per hundred units, shall be 6.5 for major defects and 15 for total (major and minor combined) defects.

TABLE II End item dimensional defects

Examine	Defects	Classification	
		Major	Minor
Dimensions (overall)	Smaller than nominal dimensions less applicable minus tolerance indicated on drawings, but not smaller than nominal dimensions less twice the applicable minus tolerance		201
	Smaller than nominal dimensions less twice the applicable minus tolerance	101	
	Larger than nominal dimensions and applicable plus tolerance		202
Component and location dimensions	Not within specified tolerance		203

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TABLE II End item dimensional defects (cont'd)

Examine	Defects	Classification	
		Major	Minor
Box stitching and W-W stitching	Dimensions not as specified		204
Stitch margin and gauge	Not within specified tolerance		205
Brass eyelets	Not spaced on equipment hangers within specified dimensions		206
Frame tie down strap	Not centered on pack by more than 1-inch	102	
Securing straps	Not specified distance apart by more than 1/2-inch	103	
Pocket and flaps	Not parallel to each other by more than 1/4-inch		207
Frame pocket assembly	Out of horizontal or vertical alignment with back panel by 1/2-inch or more	104	
Grommets	Set off center on hems by more than 1/4-inch		208

4.4.5 End item fit examination. The end items shall be examined for the defects listed in table III. The lot size shall be expressed in units of field packs. The sample unit shall be one field pack. The inspection level shall be S-3 and the AQL, expressed in terms of defects per hundred units, shall be 0.65.

TABLE III End item fit examination

Examine	Defect
Fit of gauge in radio pocket (gauge is to simulate the size of AN/PRC25 or 77 radios)	Pocket too small, i.e., gauge fails to fit into radio pocket
	NOTE: Fit examination shall be performed with an 11 by 11 by 5-1/2 inch gauge. The gauge shall be fully inserted in the radio pocket without effort other than that required to overcome friction between the gauge and pocket

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TABLE III End item fit examination (cont'd)

<u>Examine</u>	<u>Defect</u>
Fit of frame in frame pocket	Pocket too small, i.e., top of frame fails to fit in padded frame pocket
	NOTE: Fit examination shall be performed with Frame, Pack, Ground Troops, Lightweight, LC-1 (see 6.4). The following shall be performed to determine fit of frame in pocket: <ol style="list-style-type: none"> <li>1. Position field pack with back facing upward.</li> <li>2. With back of frame toward field pack, insert top in pocket. The frame shall be fully inserted without effort other than that required to overcome friction between the frame and pocket.</li> </ol>

4.4.6 Packaging examination. The fully packaged end items shall be examined for the defects listed below. The lot size shall be expressed in units of shipping containers. The sample unit shall be one shipping container fully packaged. The inspection level shall be S-2 and the AQL, expressed in terms of defects per hundred units, shall be 2.5.

<u>Examine</u>	<u>Defect</u>
Marking (exterior and interior)	Omitted; incorrect; illegible; of improper size, location, sequence, or method of application
Materials	Any component missing, damaged, or not as specified
Workmanship	Inadequate application of components, such as: incomplete sealing or closure of flap, improper taping, loose strapping, or inadequate stapling Bulged or distorted container
Content	Number of field packs per shipping container is more or less than required

4.4.7 Palletization examination. The fully packaged and palletized end items shall be examined for the defects listed below. The lot size shall be expressed in units of palletized unit loads. The sample unit shall be one palletized unit load, fully packaged. The inspection level shall be S-1 and the AQL, expressed in terms of defects per hundred units, shall be 6.5.

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<u>Examine</u>	<u>Defects</u>
Finished dimensions	Length, width, or height exceeds specified maximum requirement
Palletization	Pallet pattern not as specified Interlocking of loads not as specified Load not bonded as specified
Weight	Exceeds maximum load limits
Marking	Omitted; incorrect; illegible; of improper size, location, sequence, or method of application

## 5. PACKAGING

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

5.1.1 Level A packing. Fifteen field packs, laid out flat with all the outside flaps closed, shall be neatly packed (alternately reversed top to bottom) one on top of the other within a fiberboard shipping container conforming to style RSC-L, grade V2s of PPP-B-636. The inside of each shipping container shall be fitted with a box liner conforming to type CF, class weather-resistant, variety DW, grade V15c of PPP-B-636. Inside dimensions of each container shall approximate 22 inches in length, 20 inches in width, and 15 inches in depth. Approximate dimensions are furnished as a guide only. Each container shall have the contents completely covered on the top and bottom with a sheet of 30-pound minimum basis weight kraft paper conforming to A-A-203. Each shipping container shall be closed in accordance with method III, water-proofed in accordance with method V, and reinforced as specified in the appendix of PPP-B-636 except that the inspection shall be in accordance with 4.4.6. Shipping containers shall be arranged in unit loads in accordance with MIL-L-35078 for the type and class of load specified (see 6.2). Strapping shall be limited to nonmetallic strapping, except for type II, class F loads.

5.1.2 Level B packing. Fifteen field packs, laid out flat with all the outside flaps closed, shall be neatly packed (alternately reversed top to bottom) one on top of the other within a fiberboard shipping container conforming to style RSC-L, type CF (variety SW) or SF, class domestic, grade 275 of PPP-B-636. The inside of each shipping container shall be fitted with a box liner conforming to type CF, class domestic, variety DW, grade 275 of PPP-B-636. Inside dimensions of each shipping container shall approximate 22 inches in length, 20 inches in width, and 15 inches in depth. Approximate dimensions are furnished as a guide only. Each container shall have the contents completely covered on the top and bottom with a sheet of 30-pound

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minimum basis weight kraft paper conforming to A-A-203. Each shipping container shall be closed in accordance with method II as specified in the appendix of PPP-B-636, except that the inspection shall be in accordance with 4.4.6.

5.1.2.1 Weather-resistant containers. When specified (see 6.2), the fiberboard shipping container shall be a grade V3c, V3s, or V4s fiberboard box fabricated in accordance with PPP-B-636 and closed in accordance with method III as specified in the appendix of PPP-B-636, except that the inspection shall be in accordance with 4.4.6.

5.1.3 Commercial packing. Field packs shall be packed in accordance with ASTM D 3951.

5.2 Palletization. When specified (see 6.2), field packs, packed as specified in 5.1.2 or 5.1.3, shall be palletized on a 4-way entry pallet in accordance with load type Ia of MIL-STD-147. Pallet types shall be type I (4 way entry), type IV, or type V in accordance with MIL-STD-147. Pallets shall be fabricated from wood groups I, II, III, or IV of MIL-STD-731. Each prepared load shall be bonded with primary and secondary straps in accordance with bonding means C and D or film bonding means F or G. Pallet pattern shall be number 6 in accordance with the appendix of MIL-STD-147. Interlocking of loads shall be effected by reversing the pattern of each course.

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

## 6. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

6.1 Intended use. The field pack, consisting of a pouch with drawcord closure and three outside pockets, is designed to carry existence loads which include clothing, personal items, and rations. Hangers are provided for carrying individual equipment and extra ammunition. The pouch has a separate pocket to accommodate the AN/PRC 25 or 77 radio. The field pack is carried on the soldier's back by attaching to Frame, Pack, Ground Troops, Riveted, Lightweight, M-1972 or directly on the back after transfer of shoulder straps from the frame to the field pack.

6.2 Acquisition requirements. Acquisition documents must specify the following:

- a. Title, number, and date of this specification.
- b. Class required (see 1.2).

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- c. Issue of DODISS to be cited in the solicitation, and if required, the specific issue of individual documents referenced (see 2.1.1 and 2.2).
- d. When a first article is required (see 3.1., 4.3, and 6.3).
- e. Level of packing (see 5.1).
- f. Type and class of unit load required (see 5.1.1).
- g. When weather-resistant grade fiberboard shipping containers are required for level B packing (see 5.1.2.1).
- h. When palletization is required (see 5.2).

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

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

6.5 Die, eyelet, score setting. Sources of supply for the score setting eyelet dies specified in 3.4.2.2 are: J. C. Rhodes and Company, Box B - 962, New Bedford, MA 02745; and Stimpson Company, Inc., Bayport, NY 11705.

6.6 Clamp, cord. A source of supply for the clamp, cord, lock body and lockwheel specified in 3.3.15 is available from Fastex Division, Illinois Tool, Inc., 195 Algonquin Road, Des Plaines, IL 60016.

6.7 Buckle, nonslip. Sources of supply for the 1-inch non-slip buckles specified in 3.3.16 are: Waterbury Buckle Company, Waterbury, CT 06720; and Prentice Corp., 34 Lexington Drive, Laconia, NH 03246.

6.8 Edge fraying prevention of nylon cloth. Cut edges of nylon cloth specified in 3.3.1 and 3.3.2 are subject to fraying during the process of handling the cut parts during fabrication of the field pack. It has been found that fusing of the cut edges of the cloth will prevent fraying.

6.9 International standardization agreement. Certain provisions of this document are the subject of international standardization agreement as cited in NATO, STANAG No. 2311. When amendment, revision, or cancellation of this document is proposed which will effect or violate the international agreement concerned, the preparing activity will take appropriate reconciliation action through international standardization channels including departmental standardization offices, if required.

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6.10 Subject term (key word) listing.

Ammunition carrier  
Clothing carrier  
Personal items carrier  
Radio carrier  
Rations carrier

6.11 Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extensiveness of the changes.

Custodians:

Army - GL  
Navy - NU  
Air Force - 99

Preparing activity:

Army - GL  
(Project 8465-0024)

Review activities:

Army - MD  
Air Force - 82  
DLA - CT

User activities:

Navy - MC, YD  
Air Force - 45



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

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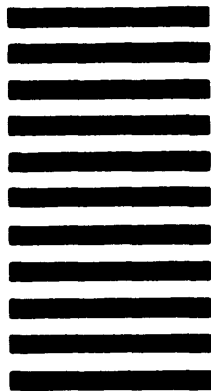
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## STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

*(See Instructions - Reverse Side)*

<b>1. DOCUMENT NUMBER</b> MIL-F-43833D	<b>2. DOCUMENT TITLE</b> Field Pack, Combat, Nylon, Medium, LC-2
<b>3a. NAME OF SUBMITTING ORGANIZATION</b>  _____	<b>4. TYPE OF ORGANIZATION (Mark one)</b> <input type="checkbox"/> VENDOR  <input type="checkbox"/> USER  <input type="checkbox"/> MANUFACTURER  <input type="checkbox"/> OTHER (Specify): _____
<b>b. ADDRESS (Street, City, State, ZIP Code)</b>  _____	
<b>5. PROBLEM AREAS</b> <b>a. Paragraph Number and Wording:</b>          <b>b. Recommended Wording:</b>          <b>c. Reason/Rationale for Recommendation:</b>          	
<b>6. REMARKS</b>          	
<b>7a. NAME OF SUBMITTER (Last, First, MI) - Optional</b>  _____	<b>b. WORK TELEPHONE NUMBER (Include Area Code) - Optional</b>  _____
<b>c. MAILING ADDRESS (Street, City, State, ZIP Code) - Optional</b>  _____	<b>8. DATE OF SUBMISSION (YYMMDD)</b>  _____