SAMPLE

INCH-POUND
GL/PD-06-03
28 December 2007

PURCHASE DESCRIPTION

JACKET, FLEECE COLD WEATHER (GEN III)

1. SCOPE.

1.1 Scope. This document covers the requirements for double needle bar raschel warp knit, high pile, double velour jacket shall be used to provide the environmental protection, user comfort; lightweight and durability needed for wear in field, combat, and operation other than war.

2. CLASSIFICATION. The fleece jacket shall be color Foliage Green. The fleece shirt shall be of one type in the following sizes:

Extra Small – Short
Extra Small – Regular

Small – Short
Small - Regular
Small – Long

Medium - Regular
Medium – Long

Large - Regular
Large - Long

Extra Large - Regular
Extra Large - Long
Extra Large – Extra Long

Double Extra Large - Regular
Double Extra Large – Long
Double Extra Large – Extra Long

3. SALIENT CHARACTERISTICS.

3.1 Description. The fleece jacket has a center front opening with a one way slide fastener closure backed by a wind protection flap. It also has a collar, raglan sleeves with stretch grid fleece side panels, two internal upper chest pockets, two exterior hand-warmer pockets, and nylon reinforcements at the shoulder, collar and elbows. Nylon/lycra binding is used on bottoms of the sleeves and the jacket bottom. The slide fastener has a thong. This design provides a garment that is lightweight, low bulk, has environmental protection, and comfort.

3.2 Materials.

3.2.1 Basic material, side panel material and pocket material.

3.2.1.1 Basic Material. The basic material for the fleece jacket shall be 100% virgin filament polyester, color Foliage Green 504. The construction shall be a double needle bar raschel warp knit, high pile, double velour. The fabric shall conform to the physical requirements specified in Table I when tested as specified in Table I. Unless otherwise specified, the fabric shall be conditioned and tested in accordance with ASTM D-1776.

TABLE I. Material Requirements.

CHARACTERISTIC	REQUIREMENT	TEST METHOD
Fiber Identification	100% Polyester	AATCC-20 1/
Weight, oz. per square yard	6.4 ± 0.6	ASTM D-3776 (Method C)
Thickness, inch (max): Initial After laundering	 0.12 0.12	 ASTM D-1777 1/ AATCC –135, (1)(III)(A)ii, 3 cycles and ASTM D-1777 1/
Wales and courses per inch	22 ± 1	ASTM D-3887
Pile Height, inch Face & Back	 3/32 - 7/32	 5.6.3 2/
Air Permeability, ft^3/ft^2/min (min)	350	ASTM D-737
Colorfastness to: Laundering, rating	 3.0 - 4.0	 AATCC -61, Option 2a, 3 cycles
Crocking, rating (min)	Dry – 4.0 /Wet – 3.0	AATCC- 8
Light (Xenon), rating (min)	4	AATCC -16, Option E (170 kj)
Dimensional Stability, percent (max): Wale Course	 5.0 8.0	AATCC–135, (1)(III)(A)ii, 3 cycles
Stretch, Course direction, percent (min)	30	ASTM – 2594 (Loose Fit)
Compressed volume, cubic inches (max)	21.0	5.6.1
Thermal insulation, Clo (min)	1.3	5.6.2
Color	Foliage Green 504	3/
Toxicity	4/	5/

1/ At pressure of 0.6 pounds per square inch.
2/ Certificate of compliance
3/ Color Matching. The color and appearance of the material shall match the standard sample when viewed using the AATCC Evaluation Procedure 9, Option A, with sources simulating artificial daylight D75 illuminant with a color temperature of 7500 ± 200 K illumination of 100 ± 20 foot candles, and shall be a good match to the standard sample under incandescent lamplight at 2856 ± 200K.
4/ The finished cloth shall not present a dermal health hazard when used as intended and tested as specified in footnote 5/.
5/ Toxicity assessment. The contractor must furnish information, which certifies that the finished product is composed of materials, which have been safely used commercially or provided sufficient toxicity data to show compatibility with prolonged, direct skin contact. At a minimum, toxicity data should include results from a primary dermal irritation study in laboratory animals and a repeated insult human patch test (Modified Draize Procedure) (See 7.3.3). The latter must be conducted under the supervision of a qualified dermatologist using at least 100 free-living individuals. All finishes/chemicals used to process the garment shall be identified and accompanied by the appropriate Material Safety Data Sheet (MSDS) information. The use of chemicals recognized by the Environmental Protection Agency (EPD) as human carcinogens is prohibited.

3.2.1.2 Side Panel Material. The side panel material for the fleece jacket shall be 93% polyester and 7% spandex circular knit plaited jersey, heavyweight jersey with stretch. The plaited circular knit construction shall provide dimensional moisture management via both yarn denier differential face to back in the construction and chemical treatment. The jersey face shall be durable and low pilling. The color of the fabric shall be Foliage Green 504. The fabric shall conform to the physical requirements specified in Table II when tested as specified in Table II. Unless otherwise specified, the fabric shall be conditioned and tested in accordance with ASTM D-1776.

TABLE II. Side Panel Material requirements

CHARACTERISTIC	REQUIREMENT	TEST METHOD
Fiber Content	93% Polyester and 7% Spandex	AATCC-20 1/
Knit Type	Plaited Grid Jersey Circular Knit Heavy Weight Solid with face to back yarn denier gradient 1:2 differential for dimensional moisture management plus wicking chemical treatment.	Visual
Weight (oz. per square yard)	6.6 ± 0.6	ASTM D-3776
Colorfastness to:		
Laundering, rating (min)	4.0	AATCC – 61, Option 2a, 3 cycles, grade polyester only
Crocking, rating (min)	Dry - 4.0; Wet - 3.0	AATCC - 8
Light, rating (Xenon)(min)	Good - 4	AATCC - 16, Option E (85 kJ)

Dimensional Stability, % (max) – Wale Course	 5.0 5.0	AATCC–135, (1)(III)(A)ii, 3 cycles
Pilling on jersey face (min): Initial After Laundering	 4.0 4.0	 ASTM D-3512 AATCC – 135, 3 Cycles, (1), III, (A), ii & ASTM D-3512
Water sorption and wicking	Pass	5.6.4
Air Permeability, $ft^3/ft^2/min$ (min)	150	ASTM D-737
Thickness, inch	0.06 -0.11	ASTM D-1777 2/
Stretch, percent Wale Course	 30 – 80 70 – 120	ASTM D-2594 (Loose Fit)
Compressed Volume, cubic inches (max)	18	5.6.1
Thermal insulation, Clo (min)	0.8	5.6.2
Color	Foliage Green 504	3/
Toxicity	4/	5/

1/ Certificate of Compliance.
2/ At pressure of 0.6 pounds per square inch.
3/ Color Matching. The color and appearance of the material shall match the standard sample when viewed using the AATCC Evaluation Procedure 9, Option A, with sources simulating artificial daylight D75 illuminant with a color temperature of 7500 ± 200 K illumination of 100 ± 20 foot candles, and shall be a good match to the standard sample under incandescent lamplight at 2856 ± 200K.
4/ The finished cloth shall not present a dermal health hazard when used as intended and tested as specified in footnote 5/.
5/ Toxicity assessment. The contractor must furnish information, which certifies that the finished product is composed of materials, which have been safely used commercially or provided sufficient toxicity data to show compatibility with prolonged, direct skin contact. At a minimum, toxicity data should include results from a primary dermal irritation study in laboratory animals and a repeated insult human patch test (Modified Draize Procedure) (See 7.3.3). The latter must be conducted under the supervision of a qualified dermatologist using at least 100 free-living individuals. All finishes/chemicals used to process the garment shall be identified and accompanied by the appropriate Material Safety Data Sheet (MSDS) information. The use of chemicals recognized by the Environmental Protection Agency (EPD) as human carcinogens is prohibited.

3.2.1.3 Mesh Tricot pocket material. Fabric shall be Tricot knit mesh of 100% polyester or equal. The color shall be Foliage Green 504. The fabric cloth shall meet the physical requirements specified in Table III when tested as specified in 3.2.2.

TABLE III. Mesh Pocket Material - Physical Requirements.

Characteristics	Requirement	Test Method
Weight (oz./sq yd)	2.0 ± 0.2	ASTM D-3776 (Method C)
Dimensional Stability, percent (max.)		AATCC–135, (1)(III)(A)ii, 3 cycles
Warp Filling	5.0 5.0	
Colorfastness:		
Laundering	Equal to or better than "4" rating on AATCC Gray Scale for Color Change	AATCC -61, Option 2a, 3 cycles
Crocking	Equal to or better than "4" rating on AATCC Gray Scale for Color Change	AATCC- 8
Perspiration	Equal to or better than "4" rating on AATCC Gray Scale for Color Change	AATCC-15
Light	Equal to or better than the standard sample or not less than AATCC chromatic transference scale rating of 3.5	AATCC - 16, Option E (85 kJ)
Toxicity	1/	2/

1/ The finished cloth shall not present a dermal health hazard when used as intended.
2/ Toxicity assessment. The contractor must furnish information, which certifies that the finished product is composed of materials, which have been safely used commercially or provided sufficient toxicity data to show compatibility with prolonged, direct skin contact. At a minimum, toxicity data should include results from a primary dermal irritation study in laboratory animals and a repeated insult human patch test (Modified Draize Procedure) (See 7.3.3). The latter must be conducted under the supervision of a qualified dermatologist using at least 100 free-living individuals. All finishes/chemicals used to process the garment shall be identified and accompanied by the appropriate Material Safety Data Sheet (MSDS) information. The use of chemicals recognized by the Environmental Protection Agency (EPD) as human carcinogens is prohibited.

3.2.3 Thread. Thread for needle and bobbin (looper) shall be commercial 100% textured polyester thread, conforming to Type I, Class 1 of A-A-52095. The color of the thread shall match Foliage Green 504.

3.2.4 Labels. The jacket shall have a label in accordance with Type VI, Class 14 of MIL-DTL-32075. The color of the labels shall approximate the ground shade of the basic fabric or white. In addition it shall contain a bar coding label in accordance with Type VIII and Class 17.

3.2.4.1 The combination size, identification and instruction label for the jacket. The top (only) of the combination size and identification label shall be sewn on inside center back (+/- 1 inch off center) and caught in collar closing seam. The instruction label shall be sewn on left chest mesh pocket and stitched on all four sides. The printed labels shall be facing the body and it shall not be visible from the outside when in use. The instruction label shall include the following information:

Machine or Hand Wash Warm,
Tumble dry low or Line Dry
Do Not Bleach
Do Not Use Fabric Softeners
Do not Iron

3.2.9 Slide fasteners.

3.2.9.1 Center front slide fastener. The center front closure shall use an individual element molded fastener with single slider, size 5-7 with a minimum crosswise breaking strength of 130 lbs., 9/16 inch wide tape, Foliage Green 504 color, conforming to type IV, style 6 of A-A-55634. The lengths of the center front, slide fasteners for the various size-length jackets shall be as shown in Table VIII, line item 6.

3.2.9.2 Slide fastener thongs. The thongs for all slide fasteners shall be a 1/8 inch diameter, Foliage Green 504, non-elastic nylon cord.

3.2.10 Fastener Tape, Hook and Loop. The loop fastener tape for the name tape shall be 1-inch wide, Foliage Green 504 color and conform to type II, class 1 of A-A-55126. The loop tape shall be 5-¼ inches in length ± ¼ inch. The loop fastener tape for the rank patch shall be 2 inches wide, Foliage Green 504 color. The tape shall be 2 inches in length ± ¼ inch.

3.2.11 Webbing, Elastic. The elastic webbing for the mesh pocket opening shall be ¾-inch wide and Foliage Green 504 color. The lengths of the inside pocket elastic cut length, for the various size-length jackets shall be as shown in Table VIII, line item 8.

3.2.12 Hanger Tape The tape for the hanger loop shall be flat nylon, Foliage Green 504, 3/8-inch in width and conform to the type 3, class 1 or 2 requirements of MIL-T-5038. The hanger tape shall be 6 ± ¼ inches for all sizes.

3.2.13 Binding. The binding for sleeve cuff and waist hem shall be a tricot knit weighing 4.1 ± 0.2 oz. per sq. yd. with a fiber blend of 90% nylon and 10% Lycra®, slit into a 1-1/2 inch wide binding strip. The color of the thread shall match Foliage Green 504.

3.2.14 Reinforcing material, Shoulders and Elbows. The reinforcing material shall be Foliage Green 504, plain weave, 4-ply Taslan. The material shall conform to the requirements in the following Table IV when tested as specified.

Table IV. Shoulder and Elbow Reinforcing Material - Physical Requirements

CHARACTERISTIC	REQUIREMENT	TEST METHOD
Weight, oz/sq.yd	4.3 +/- 0.3	ASTM D-3776, Opt. C
Yarns per Inch (min) Warp Filling	 158 50	ASTM D-3775

Table IV. Shoulder, Collar and Elbow Reinforcing Material - Physical Requirements (Cont'd)

CHARACTERISTIC	REQUIREMENT	TEST METHOD
Breaking Strength, lbs (min) Warp Filling	 160 180	ASTM D-5034
Dimensional Stability, %(max) Warp Filling	 5.0 2.0	 AATCC-135, Table I, (3), (III), (A) iii
Colorfastness to laundering, rating (min)	4.0	AATCC-61, Test 1A and AATCC Gray Scale for Staining

3.2.15 Lower pocket lining. The material for the lower pocket lining shall be a brushed tricot of 100% polyester or equal. The color shall be Foliage Green 504. The material shall conform to the following requirements when tested as specified.

Lower Pocket Lining Material - Physical Requirements

CHARACTERISTIC	REQUIREMENT	TEST METHOD
Weight, oz/sq.yd	3.3 +/- 0.2	ASTM D-3776, Opt. C
Yarns per Inch (min) Warp Filling	 158 50	 ASTM D-3775
Dimensional Stability, %(max) Warp Filling	 5.0 5.0	 AATCC-135, Table I, (3), (III), (A) iii
Colorfastness to:		
Laundering, rating (min)	4.0	AATCC-61, Test IIA and AATCC Gray Scale for Staining
Crocking (min)	4.0	AATCC-8
Perspiration (min)	4.0	AATCC-15
Light, after 40 hrs. (min)	4.0	AATCC-16, E

3.3 Patterns. The government shall furnish a complete set of patterns or a master pattern with grade rules, to maintain uniformity and consistency in manufacturing. Seam allowances shall be as specified in Table VIII. The government patterns shall be used to create the contractor's working patterns. Minor modifications are permitted to accommodate manufacturing procedures however the design and finished measurements shall be maintained.

TABLE V. Cutters Must (List of Pattern Parts)

	PIECE NAME	FABRIC	QTY
1	FLCJKT_BACK	SELF	CUT 1
2	FLCJKT_LEFT FRONT	SELF	CUT 1 FACE UP
3	FLCJKT_RIGHT FRONT	SELF	CUT 1 FACE UP
4	FLCJKT_SLEEVE	SELF	CUT 2
5	FLCJKT_TOP COLLAR	SELF	CUT 1
6	FLCJKT_BTM PKT TRIM	CONTRAST #1	CUT 2
7	FLCJKT_ZIPFLAP TOP EXTENSION	CONTRAST #1	CUT 1 FACE UP
8	FLCJKT_UNDER COLLAR	CONTRAST #1	CUT 1 FACE UP
9	FLCJKT_SHOULDER PROT	CONTRAST #1	CUT 2
10	FLCJKT_SLV ELB PATCH	CONTRAST #1	CUT 2
11	FLCJKT_TOP INSIDE PKT	CONTRAST #2	CUT 2
12	FLCJKT_ZIPFLAP TOP	CONTRAST #3	CUT 1 FACE UP
13	FLCJKT_ZIPFLAP UNDER	CONTRAST #3	CUT 1 FACE UP
14	FLCJKT_SIDE PANEL	CONTRAST #3	CUT 2
15	FLCJKT_BOTTOM PKT	PKT MTL	CUT 2
	COMMENTS BELOW:		
	SELF = BASIC SHELL MATERIAL CONTRAST #1 = NYLON TASLAN CONTRAST #2 = TRICOT KNIT MESH CONTRAST #3 = MEDIUM WEIGHT GRID FLEECE FABRIC CONTRAST #4 = TRICOT KNIT BINDING FABRIC (SEE 3.2.13) PKT MTL = BRUSHED TRICOT KNIT (SEE 3.2.15)		

3.4 Construction. End item construction and appearance shall conform to figures denoted JACKET, FLEECE COLD WEATHER (GEN III) -VIEW 1, JACKET, FLEECE COLD WEATHER (GEN III) - VIEW 2, and JACKET, FLEECE COLD WEATHER (GEN III)-VIEW 3.

3.4.1 Seaming. The seams shall be consistent, exhibit a uniform appearance and conform to the ASTM D-6193, Stitch Types listed in Table VI below. The stitching shall be 9-12 stitches per inch. The backside of all seams (inside garment) shall be overlocked. All material edges shall not ravel; edges may be turned-in, turned-under, serged or seared to prevent raveling.

Table VI. Seams and Stitch Type

Seaming Areas	Seam Type	Stitch Type
Attach Taslan facing to finish front bottom pocket.	LScv-3	301
Folding both upper edges of the mesh pockets 1" to the back side over ¾" wide elastic, stitch through elastic and mesh along edge of elastic. Sew top mesh pocket to bottom tricot pocket. Attach care label to outside of left pocket.-	SSa-1	301
Attach pocket assembly to jacket fronts, along sides finishing front taslin pocket and front zipper edge. Sew pocket at seam through front connecting all layers.	SSa-1	301
Attach all fastener hook and loop per pattern placement: 1" x 5 ¼" fastener loop to both jacket fronts and 2" x 2" fastener loop centered directly over the 1" x 5 ¼" fastener loop (on right side only).	LSbj-1	301
Fold grid fleece zipper flap in half, grid inside, and stitch curves with ¼" seam.	SSbf-3	301
Turn zipper flap to right side (grid side showing) and topstitch finished edge with double-needle machine.	SSc-1	301
Overedge raw edge of zipper flap and front edges	SSa-1	504
Attach taslan elbow patches to sleeve backs .	LSd-1	301
Attach raglan sleeves to front and back of body with double-needle serger.	SSa-2	516
Topstitch raglan sleeve seams on both front and back with ¼" seams from neckline to underarm.	SSa-1	301
Attach side gussets to sleeve/jacket fronts with double-needle serger. Close sleeves and sides with double-needle serger.	SSa-2	516
Turn gusset serge seams toward front and back, then top stitch around gusset with ¼" seam.	SSa-1	301
Attach top edge of taslan collar to top edge of fleece collar with single-needle serger.	SSa-1	504
Turn down serged collar seam and raise-stitch, catching seam.	SSa-1	301
Set undercollar to neckline with single-needle serger. Overedge bottom of fleece collar and bottom edge of jacket with single-needle serger.	SSa-1	504
Set binding on sleeve bottoms, overlapping tail to secure.	BSc-1	301
Turn binding tail to inside of sleeve and bartack.	Bartack	
Attach front zipper with wind protection flap (on left side) from just above top of undercollar ending 1" from bottom edge. Attach fleece collar to inside along zippers, right sides together.	LSba-2 (a & b)	301
Hem bottom of jacket with 1" hem on double-needle hemmer, no top rocker.	EFa-2	605
Turn collar to right side and close at neckline, with size label, and hanger tape at center back. Topstitch around zipper and collar with ¼" seam.	SSa-1	301
Thread non-elastic nylon cord thong in zipper sliders and tie.	Hand	

Loop fastener tape shall be stitched on the loop pile and not on the selvage. Bartacks shall be added for reinforcement as follows and as shown in JACKET, FLEECE COLD WEATHER (GEN III) -VIEW 1, JACKET, FLEECE COLD WEATHER (GEN III) -VIEW 2:

Bartack Location	**Bartack Length, Inch**	**Quantity per Garment**
Pocket Ends	5/8	4

Sleeve Hem	5/8	2
Sleeve Binding Tail	5/8	2

4. REGULATORY REQUIREMENTS

4.1 Recycled, Recovered, or Environmentally Preferable Materials. Recycled, recovered, or environmentally preferable materials should be used to the maximum extent possible provided that the material meets or exceeds the operational and maintenance requirements, and promotes economically advantageous life cycle costs.

5. PRODUCT CONFORMANCE

5.1 Product Conformance. The product provided shall meet the salient characteristic of Purchase Description, and shall conform to the cited patterns, specifications, standards and quality assurance practices. The Government reserves the right to require proof of such conformance.

5.2 Ouality Conformance Inspection. Sampling for inspection shall be performed in accordance with ANSI/ASQ Z1.4, as specified in the contract or order.

5.3 Component and End Item Inspection. In accordance with 5.1, components and end items shall be tested in accordance with all the requirements of referenced documents unless otherwise excluded, amended, modified, or qualified in this document or applicable procurement documents. The Government reserves the right to inspect all components and end items to determine conformance to requirements.

5.4 End Item Visual Examination. The Jacket shall be examined for the major defects listed in Table VII as defined in FED-STD-4.

TABLE VII. End item visual examination

		Classification	
Examination	Defect	Major	Minor
Material defects and damages	Any smash, multiple float or loose slub	101	
	Cut, tear, mend, burn, needle chew, or hole	102	
	Misweave, area of poor dye penetration, dyestreak, broken or missing yarn, visible mend, thin place or shade bar 1/	103	201
Cleanliness	Any spot, streak, or stain of a permanent nature on a any portion of garment which would be visible when the garment is worn.		202
	Removable spot, streak, or stain on outside of garment		203
	Thread ends not trimmed throughout garment		204
	Any holding or basting threads visible on outside of the finished garment, when applicable		205
Component and assembly	Any defective component 1/	104	206
	Any component part omitted	105	
	Any required operation omitted or improperly performed 1/	106	207

TABLE VII. End item visual examination (Cont'd)

		Classification	
Examination	Defect	Major	Minor
Drawcord	Any drawcord caught in hem or tunnel stitching restricting use of drawcord	107	
	Any end not heat seared		208
	Any drawcord omitted	108	
	Any end not knotted		209
	Any drawcord insufficient in length	109	
	Any barrel lock omitted		210
	Not caught in center bartack, when specified		211
Slide fastener	Any part of slide fastener bent, broken, otherwise defective	110	
	Not closing as specified	111	
	Length not as specified	112	
	Color not as specified		212
	Thong not as specified		213
Snap fastener	Any part of assembly missing, mismated, broken, cracked, bent, not securely clinched, affecting function:		
	- two or more snap fasteners	113	
	- one snap fastener		214
	One or more clinched too tightly cutting surrounding fabric	114	
	Loose, i.e., socket or stud spins freely or wobbles in connection portions		215
	One or more having rough or sharp edge	115	
Wrist tabs	Missing	116	
	Improperly located 1/	117	216
Labels	Missing, illegible, or incorrect	118	
	Incorrectly placed or attached		217
Accuracy of seaming	Seam twisted, pleated, seaming or puckered 1/	119	218
	Part of garment caught in any unrelated operation or stitching 1/	120	219
	Thread break secured by stitching back of the break less than ½ inch		220
	Ends of all seams and stitchings when not caught in other seams or stitching, uneven or backtacked less than ½ inch		221
	Color not as specified		222
	Gage of stitching uneven or not as specified		223
	Edge of seam tape less than 1/8 inch from seam allowance	121	
	Seam tape lifting off fabric	122	
	Visible scorching (heat degradation of fabric) in excess of 3/16 inch width or ½ inch in length at any location along a taped seam	123	

TABLE VII. End item visual examination (Cont'd)

		Classification	
Examination	Defect	Major	Minor
Open seams	More than 1/8 inch up to ¼ inch		224
	More than ¼ inch	124	
	NOTE: One or more broken or two or more continuous skipped or run-off stitches constitute an open seam. On double stitched seams, a seam is considered open when one or both sides of the seam are open. Raw edge not securely caught in stitching shall be classified as an open seam		
Seams and stitching	Not specified seam or stitch type		225
	Missing, broken or skipped stitches 1/	125	226
Stitch tension	Loose tension in any area:		
	- more than 1-inch but not more than 2-inches		227
	- more than 2-inches	126	
	Tight tension (stitches break when normal strain is applied to the seam or stitching)	127	
	Missing, broken, or skipped stitches 1/	128	
Stitches per inch (to be scored only when the condition exists on major portion of the seam)	Less than minimum specified:		
	- one stitch		228
	- two or more stitches	129	
	More than maximum specified		229
Pockets and flaps	Flap attached crookedly, i.e., distance between sides of pocket and underside of opened flap varies more than ¼-inch		230
	Pocket or flap poorly shaped		231
	Flap not covering front or back edge of pocket by 3/16 inch or more		232
	Insignia tab set crookedly		233
	Pocket divider not properly placed		234
Heat sealed seams and non-wicking buffer	Any seam tape not located as specified		
	Non-wicking buffer missing	130	
	Non-wicking buffer not properly placed	131	
	Any seam tape not 1/8 inch overlap on each side of sewn seam	132	
	Any seam tape not overlapped ¾ inch minimum	133	
	Any required stitching not covered by seam tape		236
	Any needle punctures that have not been repaired using heat sealing tape		237
	Any area of the laminate knit fabric bordering the seam tape that is melted exposing laminate film	134	
Repairs	Any heat sealing repairs extending beyond 25 inches in length	135	
	More than five repairs on any one item 1/	136	
Seam tape adhesion	Seam tape lifting off fabric within ¾ inch of seam 1/	137	
	Visible scorching (heat degradation of the fabric on the laminate) in excess of 3/16 inch in width or ½ inch in length at any location along a taped seam	138	

TABLE VII. End item visual examination (Cont'd)

		Classification	
Examination	Defect	Major	Minor
Shaded part	Variation in shade within an outside part 1/	139	238
	Any part required to be cut form one piece on material shaded 1/	140	239
	NOTE: Parts suspected as being shaded shall be examined at a distance of 3 feet against the background of the other parts and colors of the garment. When the shade difference is readily discernible under these examining conditions, it shall be scored as a shaded part.		
Fronts	Hem uneven by ¼ inch or more at bottom when fastened		240
Length of fronts	Uneven by ¼ inch or more at neck when fastened		241
	Flaps uneven by more than ¼ inch when fastened		242
	Left flap less than ¼ inch longer at bottom than right flap when fastened		243
Bartacks	Bartack omitted	141	
	Any bartack not in specified location, insecure, or not serving intended purpose:		
	- more than two	142	
	- two or less		244
	Any loose stitching, incomplete or broken		245
	Length or width not as specified		246
Hood flap	Snaps not in locations specified	143	
	Loop fasteners not in locations specified	144	
	Not heat sealed	145	
Label/tag	Barcode omitted or not readable by scanner		247
	Human-readable-interpretation (HRI)) omitted or illegible		248
	Not attached to location specified		249
	Causes damage to the garment	146	
Fastener tape hook & pile	Not properly placed	147	
	Not specified length		250

1/ This defect shall be scored as major when seriously affecting serviceability and as a minor when affecting serviceability but not seriously.

5.5 Finished Dimensions**.** The finished Jacket shall conform to the measurements listed in the Table VIII.

TABLE VIII. Finished Dimensions (Measurements in Inches)

REGULAR		**XS**	**S**	**M**	**L**	**XL**	**2XL**	**TOL +/-**
1	ACROSS CHEST 1/	22	24	26	28	30	32	-0.25" , +0.5"
2	SWEEP 2/	19	21	23	25	27	29	10/
3	BACK LENGTH **3/**	27	27 1/2	28	28 1/2	29	29 1/2	-0.5", +0.5"
4	SLEEVE LENGTH FROM CB **4/**	33	33 3/4	34 1/2	35 1/4	36	36 3/4	-0.5", +0.5"
5	CUFF OPENING 5/	4	4 ¼	4 ½	4 ¾	5	5 ¼	-0.25", +0.25"
6	CF ZIPPER LENGTH **6/**	27 1/2	28	28 1/2	29	29 1/2	30	-0.5", +0.5"
7	COLLAR WIDTH AT CF 8/	3 3/4	3 3/4	3 3/4	3 3/4	3 3/4	3 3/4	-0.25", +0.25"
8	INSIDE PKT ELASTIC CUT LENGTH 8/	8 1/2	9 1/2	10 1/2	11 1/2	12 1/2	13 1/2	-0.25", +0.25"
9	OUTSIDE PKT OPENING 9/	7	7	7	7	7	7	-0.25", +0.5"
SHORT		**XS**	**S**					
2	BACK LENGTH 3/	26	26 1/2					-0.5", +0.5"
4	SLEEVE LENGTH FROM CB 4/	31 1/2	32 1/4					-0.5", +0.5"
6	CF ZIPPER LENGTH 6/	26 1/2	27					-0.5", +0.5"
LONG			**S**	**M**	**L**	**XL**	**2XL**	
2	BACK LENGTH 3/		28 1/2	29	29 1/2	30	30 1/2	-0.5", +0.5"
4	SLEEVE LENGTH FROM CB 4/		35 1/4	36	36 3/4	37 1/2	38 1/4	-0.5", +0.5"
6	CF ZIPPER LENGTH 6/		29	29 1/2	30	30 1/2	31	-0.5", +0.5"
XLONG						**XL**	**2XL**	
2	BACK LENGTH 3/					31	31 1/2	-0.5", +0.5"
4	SLEEVE LENGTH FROM CB 4/					39	39 3/4	-0.5", +0.5"
6	CF ZIPPER LENGTH 6/					31 1/2	32	-0.5", +0.5"
	1/ Across chest measurement is taken folded from edge to edge at the bottom of armhole							
	2/ Sweep measurement is taken from folded edge to folded edge, 2-1/2" above the top of the binding tape.							
	3/ Back Length Measurement is taken from bottom of center back neck straight to hem							
	4/ Sleeve length from CB is taken from bottom of center back neck straight to the bottom of sleeve binding with sleeve extended out flat taking care to pull the Taslan elbow patch flat and straighten out sleeve bottom binding.							
	5/ Cuff Opening is taken from edge to edge at sleeve hem							
	6/ CF zipper length should be measured by holding zipper tightly at top and bottom, then stretching zipper completely flat and, while holding taught, place against a calibrated steel ruler.							
	9/ Outside pocket opening measurement is taken from bartack to bartack							
	8/ For construction only							
	10/ XS: ±5/8"; S and M: ±3/4"; L and XL: +3/4", -1"; 2XL: +7/8", -1 3/8"							
	SEAM ALLOWANCE: 3/8": all seams except for - 1/4": neckline and 1/2": elbow patch							

5.6 Fabric testing methods.

5.6.1 Compressed Volume Test Method.

Summary: Fabric compressibility is measured by using a standard fabric area that is subjected to a standard pressure or force while contained in standard cylinder. The test does not account for any trim types that might impact a fabric's packability in the finished form. Its purpose is to standardize fabric area, pressure applied, and limiting volume to determine a volume that is achieved when a particular fabric is exposed to a standard set of compression conditions.

Sample: One specimen, 20" x 20", shall be cut from the fabric to be tested.

Apparatus: A tensile tester (in accordance with ASTM D-5034) shall be used. A compression attachment consisting of a lower attachment is a 3.5" inner diameter and 13" high cylinder that is etched along the outside of the cylinder 12" from the inner bottom of the cylinder. The upper attachment is a plunger made of similar material that is approximately 3.25" in diameter and drilled with holes to allow for airflow out during the test.

Method: The 20" x 20" fabric specimen is folded in half once and then rolled. It is placed in the cylinder below the 12" etch line. The plunger is lowered to the 12" etch line and the test commences. The plunger descends at a rate of 24 in/min. Once a resistant force of 45 pounds is achieved the plunger shall be stopped and the distance traveled by the plunger is subtracted from 12" to determine the compressed height. The fabric should not have escaped through the small area between the inside of the cylinder and the plunger during the test. If it did the fabric should be removed, shaken out, re-rolled, and retested. If there is any indication of permanent deformation another sample should be taken. Fabric volume in the compresses condition is then determined by the following equation: Volume (cubic inches) = 9.621 x compressed height (in inches).

5.6.2 Thermal Insulation Test. Thermal conductivity shall be tested as follows:

Apparatus: A Reeves Brothers Thermal Conductivity tester shall be used. The tester consists of a highly insulated chamber containing an air circulating device and electrical heaters. One end of the chamber is closed by the test specimen. Electrical input controls and temperature measuring means are external.

Procedure: A 16" x 16" test specimen is clamped to the face of the preheated test chamber with the insulated side of the specimen facing inwardly. Starting temperature is noted and the test is continued until equilibrium of the inside temperature is reached as noted by identical readings of temperature at 30 minute intervals with a fixed electrical input of 70 watts. The test is conducted in a constant temperature room.

Results: Results are reported in terms of temperature rise over room temperature. The highest the reading the greater the insulation value of the sample tested.

5.6.3 Pile Height Determination: The pile and height of the fleece material shall be measured as follows:

The test specimen shall be a 4-inch by 4-inch piece of the fabric. The specimen shall be placed on a hard, flat surface with the side to be evaluated facing up. The pile of the fabric shall then be brushed with a comb to ensure that the pile is straight up and not matted or distorted. At the cut edge of the specimen and using a ruler, measure the pile height extending from the plane of the knitted fabric (beginning at the

wales and courses) to the nearest 1/32-inch. Three test specimens shall be evaluated for each side of the fabric. The pile height shall be the average of the three determinations made on each side of each of the test specimens; results shall be reported separately for each of the face and back sides of the fabric.

5.6.4 Water sorption and wicking. Water sorption and wicking shall be determined using the following procedure:

Fabric specimens shall be conditioned in accordance with ASTM-D-1776 and tested in that environment. The specimen size shall be 6-inches by 6-inches; three (3), separate specimens shall be used for each of the face side and back side tests. A fabric shall be considered Passing only when tests on both the face side and the back side meet the respective test pass/fail criteria on all individual specimens tested.

1. Face side wicking test. The test specimen shall be laid flat on a glass plate with back side up (i.e., inner or skin surface when used in a garment). One (1) drop of 0.10 $\pm$ 0.01 milliliters of distilled water at $70^{o}F \pm 2^{o}F$ shall be placed in the center of the test specimen using a pipettor and a stopwatch/timer immediately started. The test specimen shall then be immediately turned over on the glass plate with test specimen face side up. The diameter of the wicked water area (denoted by a darkened water mark) shall be measured at a total elapsed time of 10 seconds. The specimen shall be considered passing if the diameter of the wicked water area (darkened water mark) is equal to or greater than 1-3/16 inches.

2. Back side sorption test. The test specimen shall be laid flat on a glass plate with back side up (i.e., inner or skin surface when used in a garment). One (1) drop of 0.10 $\pm$ 0.01 milliliters of distilled water at $70^{o}F \pm 2^{o}F$ shall be placed in the center of the test specimen using a pipettor and a stopwatch/timer immediately started. The water (denoted as a darkened water mark) shall be observed and the time for the water mark to disappear (water sorption, denoted as a lightened water mark approximating the shade of the basic material) shall be recorded. The specimen shall be considered passing if the water sorption (disappearance of the darkened water mark) is 10 seconds or less.

6. PACKAGING

6.1 Packaging. For acquisition purposes, the packaging requirements shall be as specified in the contract or order. When actual packaging of material is to be performed by DoD or in-house contractor 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 activities within the Military Department or Defense Agency, or within the military service's system commands. 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.

7. NOTES.

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory unless otherwise stated in the contract or purchase order.)

7.1 Intended use. The GEN III, Fleece Jacket is for wear by soldiers for additional warmth. The jacket is a component of the Third Generation, Extended Cold Weather Clothing System.

7.2 Acceptance criteria. Acceptance criteria shall be as stated in the contract or order.

7.3 Reference documents.

7.3.1 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 shall be those listed in the issue of the department of Defense Index of Specifications and Standards (DoDISS) and supplement thereto, cited in solicitation.

SPECIFICATIONS

MILITARY

MIL-T-5038	-	Tape, Textile, Nylon

COMMERCIAL ITEM DESCRIPTION

A-A-50199	-	Thread, Cotton Covered, Polyester Core
A-A-52095	-	Thread, Polyester
A-A-55126	-	Fastener Tape, Hook, and Loop
A-A-55634	-	Fasteners, Slide

(Copies of Military and Federal documents are available from: Standardization Documents Order Desk, Bldg 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094)

7.3.2 Other Government documents, drawings, and publications

FEDERAL TRADE COMMISSION

Rules and Regulations Under the Textile Fiber Products Identification Act

(Copies are available online at www.ftc.gov or from the Federal Trade Commission, 600 Pennsylvania Avenue, N.W., Washington, DC 20580-0001)

7.3.3 Non-Government publications. The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issue of documents which are DOD adopted shall be those in the issue of the Acquisition Streamlining and Standardization Information System (ASSIST) database cited in the solicitation. Unless otherwise specified, the issues of documents not listed in the ASSIST are the documents cited in the solicitation.

AMERICAN SOCIETY FOR TESTING AND MATERIALS

ASTM D-737 Standard Test Method for Air Permeability of Textile Fabrics
ASTM D-1776 Standard Practice for Conditioning Textiles for Testing
ASTM D-1777 Standard Test Method for Thickness of Textile Materials
ASTM D-2594 Standard Test Method for Stretch Properties of Knitted Fabrics Having Low Power
ASTM D-3775 Standard Test Method for Thickness of Textile Materials
ASTM D-3776 Standard Test Method for Mass Per Unit Area (Weight) of Fabric
ASTM D-3887 Specification for Tolerances for Knitted Fabrics
ASTM D-5034 Standard Test Method for Breaking Force and Elongation of Textiles (Grab)
ASTM D-6193 Stitch and Seam Types

ASTM D-3951 Standard Practice for Commercial Packaging

(For all inquires please contact the American Society for Testing and Materials, 100 Barr Harbor, West Conshohocken, PA 19428-2959). Website address http://www.astm.org.

AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS

AATCC – 8 Colorfastness to Crocking: AATCC Crockmeter Method
AATCC – 15 Colorfastness to Perspiration-Related to ISO 105-E04
AATCC - 16 Colorfastness to Light
AATCC - 20 Fiber Analysis: Qualitative
AATCC - 61 Colorfastness to Laundering, Home and Commercial: Accelerated.
AATCC -135 Dimensional Changes in Automatic Home Laundering of Woven and Knit Fabrics
AATCC Evaluation Procedure-2 Gray Scale for Staining
AATCC Evaluation Procedure-9 Visual Assessment of Color Difference of Textiles

(For all inquiries please contact the American Association of Textile Chemists and Colorists, P.O. Box 12215, Triangle Park, NC 27709-2215.)

AMERICAN NATIONAL STANDARDS INSTITUTE

ANSI/ASQ Z1.4 - Sampling Procedures and Tables for Inspection of Attributes

(For all inquires please contact the American National Standards Institute, 25 West 43rd Street, 4th Floor, New York, NY 10036. Website address http://www.ansi.org.)

MISCELLANEOUS

Principle and Methods of Toxicology, A Wallace Hayes (editor), pp 394-396, 1989.

(Copies of this document is available from Raven Press, 1185 Avenue of the Americas, New York, NY 10036)

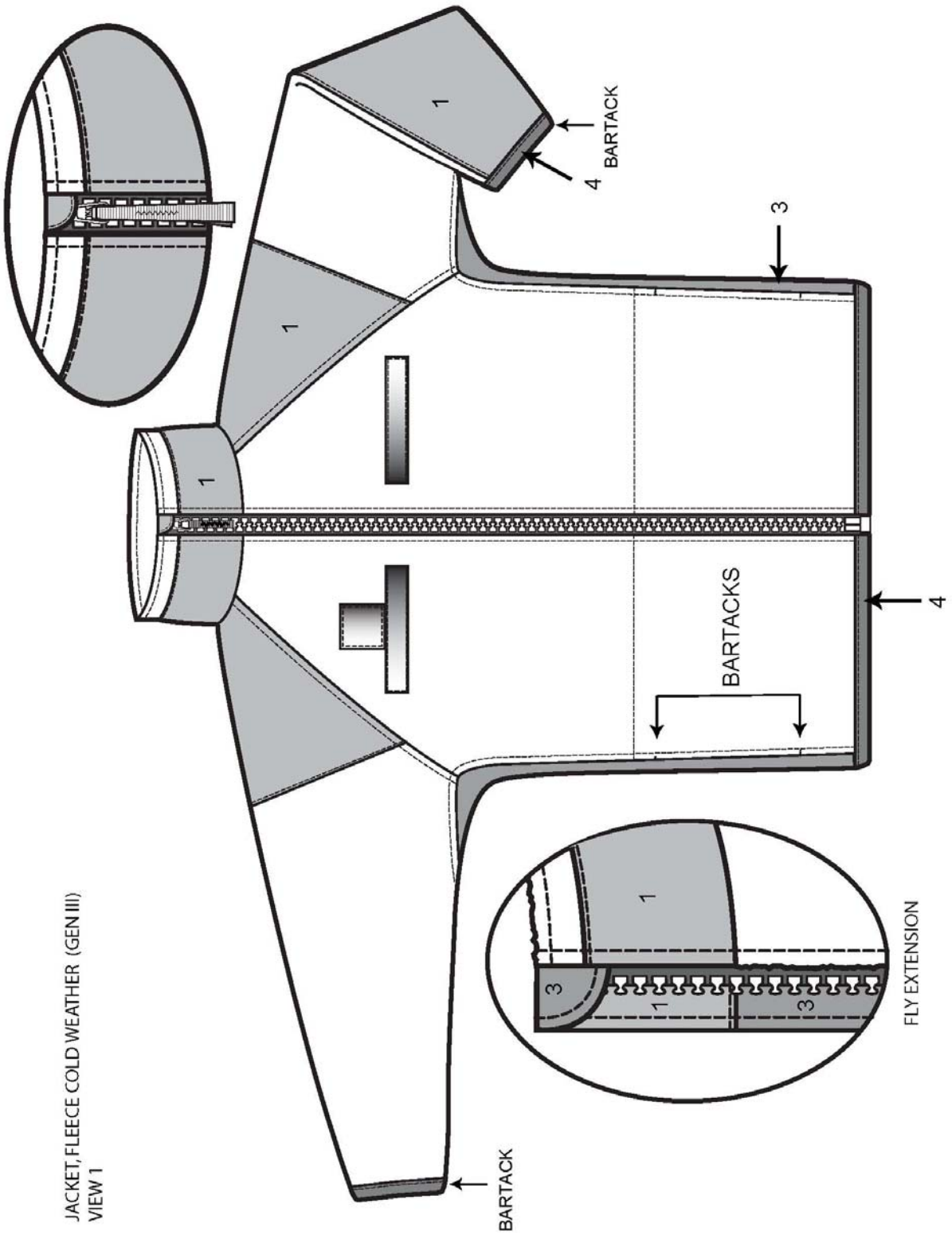
Marzulli, F. and H. Maibach, "Contact Allergy: Predictive Testing in Humans," Advances in Modern Toxicology, Volume 4, pp 353-372, 1977.

(Copies of this document are available from the U.S. Army Center for Health Promotion and Preventative Medicine, ATTN: MCHB-DC-TTE, Bldg., E-2100, Aberdeen Proving Ground, MD 21010-5422.)

CUSTODIAN:
Army – GL

PREPARING ACTIVITY:
Army - GL

Project No. 8415-


JACKET, FLEECE COLD WEATHER (GEN III)
VIEW 1
BARTACK
BARTACKS
FLY EXTENSION
1
3
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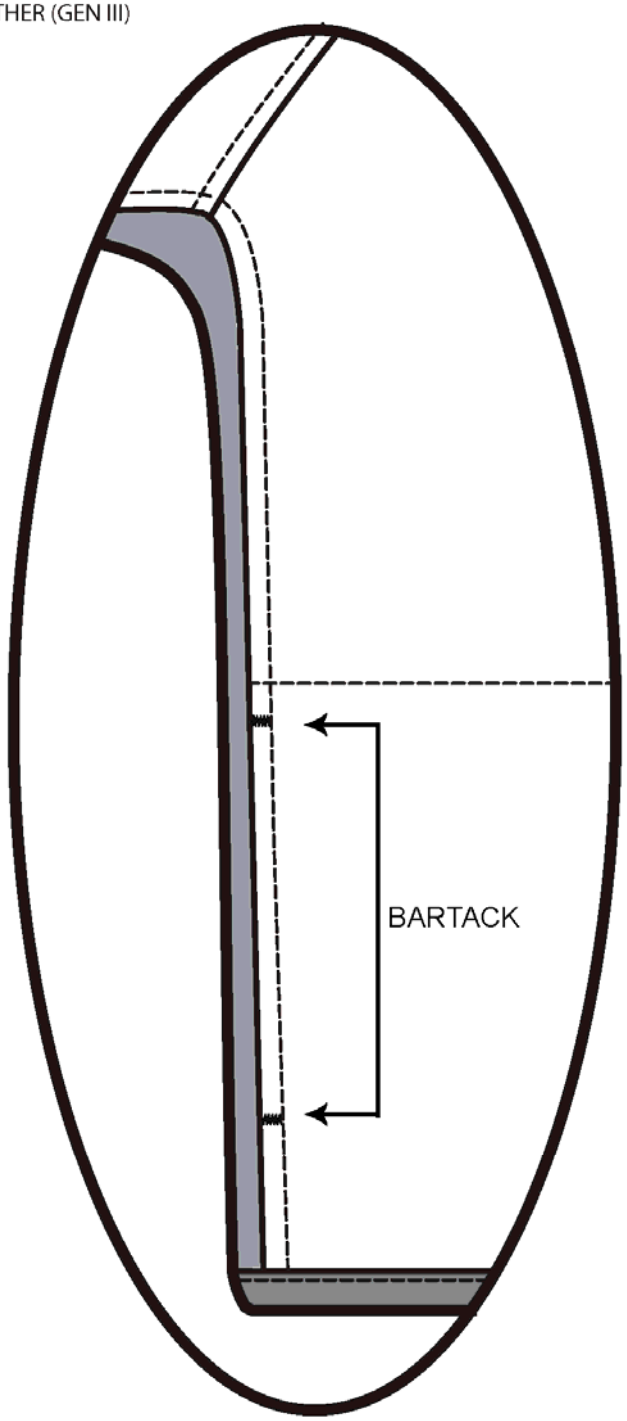
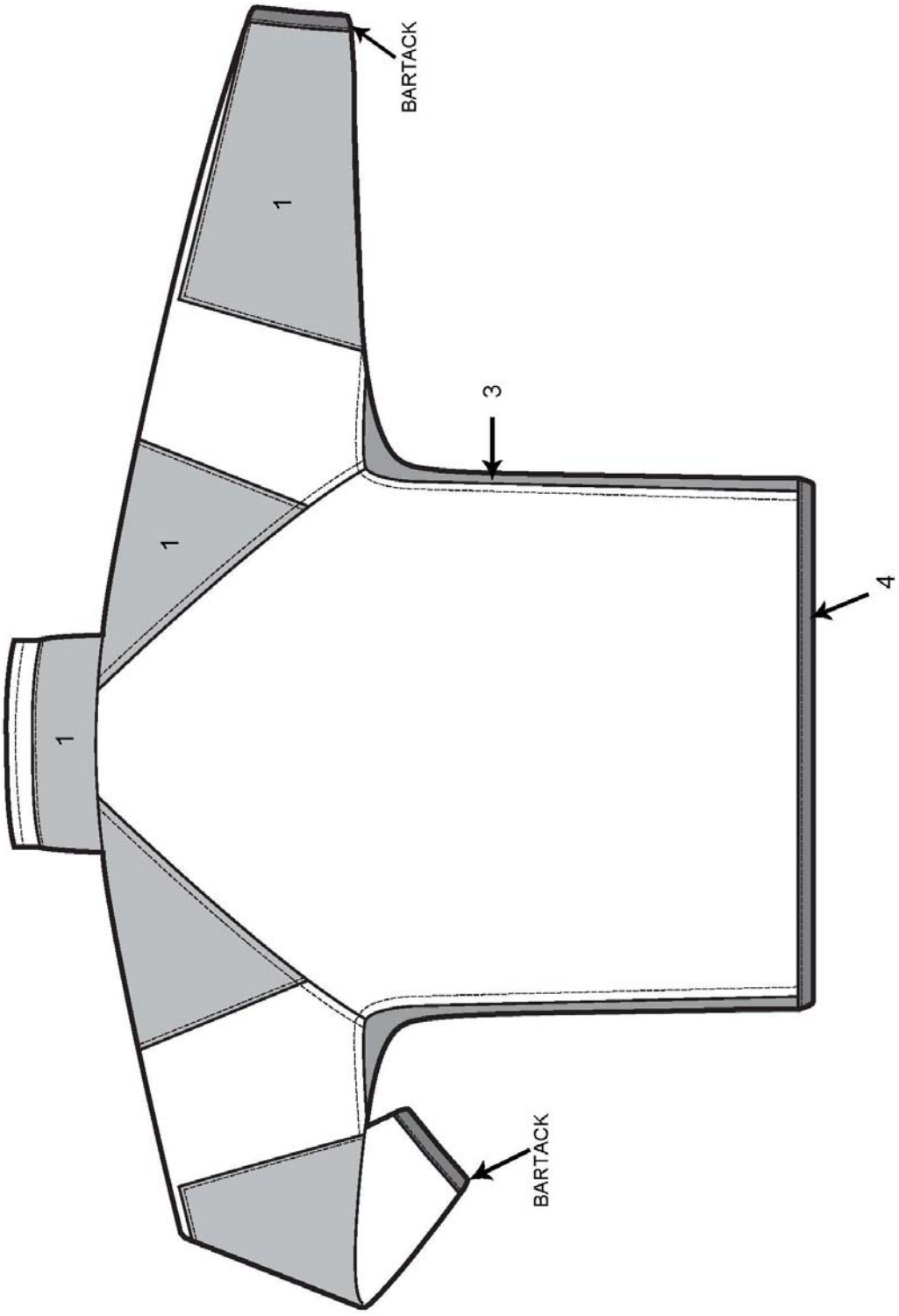
JACKET FLEECE COLD WEATHER (GEN III)
VIEW 2





JACKET, FLEECE COLD WEATHER (GEN III)

VIEW 3