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AVIS

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MANUFACTURING DATA FOR COAT, COLD WEATHER, MULTICAM®

1.0 SCOPE

1.1 Scope

This Manufacturing Data covers the materials, design, construction and inspection requirements for the Coat, Cold Weather, MULTICAM® for use by the Canadian Special Operations Forces Command (CANSOFCOM).

1.2 Intended Use

This Coat, Cold Weather, MULTICAM® is worn with the Trousers, Cold Weather, MULTICAM®.

1.3 Classification

Coats covered by this Manufacturing Data are classified as follows: Coat, Cold Weather, MULTICAM®.

2.0 GENERAL

2.1 Intellectual Property

The information, data, know-how, formulas, algorithms, software, processes, systems, methods, designs, text, works, figures, tables, sketches, photographs, plans, drawings, specifications, samples, reports, names, inventions and/or ideas contained herein (hereinafter “Intellectual Property”) is the exclusive property of Her Majesty The Queen in Right of Canada as represented by the Minister of National Defence (hereinafter referred as “DND”). No one has the right to reproduce, disclose, disseminate, or utilize, in any manner or in any form, this Intellectual Property, or any part thereof, without the prior written consent of DND. For further information on the restrictions applicable to this Intellectual Property, or to request consent from DND, please contact the Contracting Authority.

2.2 Applicable Documents

The following documents form part of this Manufacturing Data to the extent specified, and are supportive of this Manufacturing Data when referenced; all other document references are to be considered supplemental information only. In the event of a conflict between the documents referenced and the contents of this Manufacturing Data, then the contents of this Manufacturing Data must take precedence:

DND Specifications and Standards (provided upon request)

- CF-B-854 Buttons, Nylon
- D-80-001-028/SF-001 Specification for Cord, Plaited, Spun, Synthetic Fibre

- D-80-001-055/SF-001 Specification for Label, Clothing and Equipment
- D-83-001-005/SF-001 Fastener, Slide, Interlocking
- D-LM-008-002/SF-001 Specification for Marking for Storage and Shipment

DND Drawings (provided upon request)

- 2811 Strap and Button Assembly, 45-Ligne
- 373118 Button, Nylon, Slotted, 30-Ligne
- 389556 Button, Bar, Plastic, 45-Ligne
- 8790166 Strap and Button Arrangement, 30-Ligne, Type I
- CS-149 Socket, Fastener
- CS-150 Studs, Fastener
- CS-151 Eyelet, Fastener
- CS-153 Button, Fastener

CAN/CGSB Standards (email: ncr.cgsb-ongc@pwgsc.gc.ca)

- CAN/CGSB-4.2-M Textile Text Methods
- CAN/CGSB-4.131-M Cotton-Covered or Polyester-Covered, Polyester Thread
- CAN/CGSB-4.139 Polyester Staple Thread
- CAN/CGSB-54.1-M Stitches and Seams, Parts I and II
- CAN/CGSB-86.1-2003 Care Labelling of Textiles
- 4-GP-80Ma Cotton Thread

American Society for the Testing of Materials (www.astm.org)

- D 5736 Standard Test Method for Thickness of Highloft Nonwoven Fabrics
- D 6242 Standard Test Method for Mass Unit Area of Nonwoven Fabrics

International Standards Organization (ISO) (www.iso.org)

- ISO 11092 Textiles - Physiological Effects - Measurement of Thermal and Water Vapour Resistance Under Steady-State Conditions (Sweating Guarded Hot-Plate Test)

FED Standards (Download Documents: <http://assist.daps.dla.mil/quicksearch/>)

- FED-STD-595C - Colors Used in Government Procurement
- A-A-55126B Commercial Item Description - Fastener Tapes, Hook and Loop, Synthetic

2.2.1 Order of Precedence

The order of preference is as follows:

- (a) In the event of inconsistency between contract documents, such as contract, Manufacturing Data, drawing and sealed pattern, the order of precedence shall be contract, Manufacturing Data, drawing and sealed patterns;
- (b) In the event of a conflict between the text of this manufacturing data and the references cited herein, the text of this manufacturing data must take precedence;

- (c) In the event of inconsistency within this manufacturing data, the Contracting Authority must be contacted for clarification; and
- (d) Nothing in this document supersedes applicable laws and regulations, unless a specific exemption has been obtained.

2.3 Material Standards

The following material standards are supplemental to this standard:

- (a) Specification for Cloth, Nylon/Cotton, MULTICAM®, Oil and Water Repellent Treated;
- (b) Specification for Waterproof Moisture Vapour Permeable (WMVP) Barrier Fabric;
- (c) Specification for Cloth, Taffeta, Nylon; and
- (d) Specification for Cloth, Plain Weave, Nylon.

2.4 Definitions

Earth Tone	By definition, earth tone is considered a color scheme that draws from a color palette of browns, tans, grays, greens, oranges, whites and some reds. The colors in an earth tone scheme are muted and flat in an emulation of the natural colors found in soils, moss, trees and rocks. For the purpose of this specification, the earth tone color (where specified) must be based on the predominantly brown, tan and gray color series (lusterless) within FED STD-595C, where those colors do not include any elements of orange, red and white.
Hook and Loop Fastener	A fastening consisting of two strips of nylon fabric, one having hooked threads and the other a coarse surface, that form a strong bond when pressed together, trademarked under the name VELCRO®.
MULTICAM®	A proprietary design for a computer generated digital camouflage pattern patented by Crye Precision Ltd.
Slide Fastener	A fastener for locking together two toothed edges by means of a sliding tab, commonly referred to as a zipper.

2.5 Layout Sketches

Schematic layout sketches for the Coats are included as part of this Annex. The sketches are designed to provide a general layout of the Coats only. They are not to scale and are not representative of the style, fit, colour scheme or form of the final garment. The following sketches are included in Appendix 1:

- (a) Figure 1: Front and Back View;
- (b) Figure 2: Garment Components - Dimensions;
- (c) Figure 3: Front Cargo Pocket System;
- (d) Figure 4: Chest and Sleeve Pockets System;
- (e) Figure 5: Front Fly System;
- (f) Figure 6: Underarm Venting System;

- (g) Figure 7: Flap Closure for Back Yoke;
- (h) Figure 8: Hood;
- (i) Figure 9: Lining Details; and
- (j) Figure 10: Marking and Care Label.

2.6 Patterns

DND will provide patterns as follows:

- (a) Sealed pattern: CANSOFCOM - Coat, Cold Weather, MULTICAM® (Sealed for construction and design only); and
- (b) Paper patterns - DSSPM paper patterns for all sizes under Style Code CALCW06 - Coat, Combat, CADPAT™ (TW), Integrated Clothing Ensemble (ICE). Size 7040 (Regular/Medium) will be used for tendering purposes.

Note: The paper patterns for the Coat, Combat, CADPAT™ (TW), Integrated Clothing Ensemble (ICE) are to be used for the construction of the Coat, Cold Weather, MULTICAM®. The paper patterns have the following deviations:

- The strap for the rank slip-on on the front of the jacket has been deleted and replaced by a loop fastener patch;
- The ear defender retaining tabs in the cargo pockets have been deleted;
- The magazine pouches in the cargo pockets have been deleted;
- The carrying pouch has been deleted; and
- The carrying strap has been deleted.

3.0 **REQUIREMENTS**

3.1 Design

The design must be in accordance with Sealed Patterns and must incorporate the following features:

- (a) Loose fitting;
- (b) Front closure with slide fastener and covered buttoning fly system;
- (c) Two (2) piece sleeves with elbow patches and band cuff finish;
- (d) Underarm vent with slide fastener closures;
- (e) Loop fastener tape on right chest for placement of name tape;
- (f) Loop fastener tape on outside front fly for placement of rank patch;
- (g) Chest pockets with covered slide fastener closure;
- (h) Pencil pocket inside left chest pocket;

- (i) Cargo pockets;
- (j) Pocket with covered slide fastener on right sleeve;
- (k) Shoulder tab on left sleeve for detachable Canadian flag;
- (l) Front yoke;
- (m) Draw cords in waist and hem;
- (n) Stowaway hood with storage at the base of collar;
- (o) Full interlining of a waterproof, moisture vapour permeable membrane; and
- (p) Full quilted insulation lining.

Note: Unless otherwise specified, these garments must be governed by the Scale of Measurements at Appendix 2.

3.2 Materials

The following applies:

- (a) Shell Material - The shell material must be Cloth, Nylon/Cotton, MULTICAM®, Oil and Water Repellent Treated;
- (b) Barrier Layer - The barrier layer material must be Waterproof Moisture Vapour Permeable (WMVP) Barrier Fabric;
- (c) Lining Material - Taffeta - The coat lining material must be Cloth, Taffeta, Nylon;
- (d) Insulation - The following applies:
 - i. The batting must be a commercially available product made from synthetic Fibers, manufactured for use in outerwear garments meant to provide a high degree of cold weather protection;
 - ii. The integrity of the batting must be maintained through the normal service life of the garments, through wear and tear of motion, abrasion between layers of cloth, frequent stuff packing and unpacking, etc. No thin spots, lumping, clumping, curling, slipping, or changes in dimensional stability over time are allowed;
 - iii. There must be no fiber migration of the batting through the fabric;
 - iv. The batting and any accompanying scrim must:
 - a. Be launderable at high temperatures up to 70°C, in domestic machines, coin operated machines, commercial or field laundries; and
 - b. Be machine tumble dryable at high temperatures up to 75°C;
 - v. Any scrim, quilting, surface treatment, or other addition to the actual insulation batting must be compatible with the batting and must not degrade its performance;
 - vi. Any scrim, quilting, etc. required for the necessary performance of the batting when in the garment must be incorporated; and
 - vii. The batting must be in compliance with Table 1. Testing must be conducted on the batting alone, without any scrim or lining material attached;

Table 1: Requirements for Insulation

Property	Test Method	Requirement
Fiber Content – Batting	CAN/CGSB-4.2-M Test Method 14	100% polyester
Fiber Content – Scrim (if applicable)	CAN/CGSB-4.2-M Test Method 14	100% polyester
Mass (g/m ²) – batting only	ASTM D 6242	Maximum: 120
Thickness (mm)	ASTM D 5736 (0.014 kPa pressure)	Maximum: 20
CLO (CLO/g/m ²)	ISO 11092 (dry)	Minimum: 0.02

Note: PRIMALOFT® Silver (100 g/m²) has been known to meet these requirements.

- (e) Lining Material - Nylon - The lining material used for pocket linings and the binding for the hand warmer pockets must be Cloth, Plain Weave, Nylon;
- (f) Sealing Tape - The sealing tape must be:
- i. Commercially available tape compatible with the WMVP Barrier Fabric; and
 - ii. Be a non-florescent earth-tone colour that matches the barrier fabric;
- (g) Handwarmer Fleece - The handwarmer fleece fabric must:
- i. Be commercially available fleece knitted from 100% filament polyester yarns, the cloth double faced, veloured and sheared;
 - ii. Have a maximum mass of 275 g/m²
 - iii. Have a maximum thickness of 6.3 mm (0.25 in) and minimum thickness of 5.8 mm (0.23 in) when measured under 0.03 kPa pressure according to CAN/CGSB-4.2 Method 37;
 - iv. Have a maximum dimensional change of 7% in the warp direction and 5% in the weft direction, with the total shrinkage for both directions not to exceed 10%, when laundered according to the conditions prescribed for the garment; and
 - v. Be a non-florescent earth-tone colour;
- (h) Tricot Material - The material used as some pocket bags and the bottom gusset must be commercially available porous nylon tricot, in accordance with Table 2;

Table 2: Technical requirements for Tricot Material

Description	100% dull nylon tricot, 2 bar knit	
Gauge	32	
Wales	40 per inch	Tolerance ± 3
Courses	41 per inch	Tolerance ± 2
Weight	85 g/m ²	Tolerance ± 5%
Colour	Non-Florescent Earthtone	

- (i) Hook and Loop Fastener Tape - The hook and loop fastener tape must:
- i. Be Type II, Class 1 100% nylon in accordance with A-A-55126B;
 - ii. Be a non-florescent earth tone colour to match the MULTICAM® camouflage pattern; and

- iii. Available in the following widths:
 - a. 18 mm (0.75 in);
 - b. 25 mm (1 in);
 - c. 38 mm (1.5 in); and
 - d. 50 mm (2 ins);

- (j) Slide Fasteners (Non Water Resistant) - The slide fasteners must be as follows:
 - i. Front closure:
 - a. Be Class 4, Type 9 moulded chain type with a long pull; and
 - b. Have plastic interlocking members, automatic lock sliders and 100% polyester tape in accordance with D- 83-001-005/SF-001;
 - ii. Handwarmer Pockets:
 - a. Be Class 3, Type 1 monofilament (coil) chain type with a regular pull; and
 - b. Have monofilament (coil) members, automatic lock sliders and 100% polyester tape with in accordance with D- 83-001-005/SF-001;
 - iii. Breast Pockets:
 - a. Be Class 3, Type 15 moulded chain type with stoppers at both ends and a wire swivel pull; and
 - b. Have plastic interlocking members, automatic lock sliders and 100% polyester tape in accordance with D- 83-001-005/SF-001;
 - iv. Sleeve Pockets:
 - a. Be Class 3, Type 1 moulded chain type with a wire swivel pull; and
 - b. Have plastic interlocking members, automatic lock sliders and 100% polyester tape in accordance with D- 83-001-005/SF-001;
 - v. Underarm Ventilation on Shell:
 - a. Be Class 2, Type 11 monofilament (coil) center opening chain type with a regular pull; and
 - b. Have monofilament (coil) members, automatic lock sliders and 100% polyester tape with in accordance with D- 83-001-005/SF-001;
 - vi. Be a non-florescent earth tone colour to match the MULTICAM® camouflage pattern; and

- (k) Slide Fasteners (Water Resistant) - The slide fasteners for the underarm ventilation (in WMVP membrane liner only) must:
 - i. Be Class 2, Type 11 monofilament (coil) chain type with a regular pull;
 - ii. Have automatic lock sliders and 100% polyester tape coated with a polyurethane (PU) coating not less than 2.5 mils thick in accordance with D- 83-001-005/SF-001; and
 - iii. Be a non-florescent earth tone colour to match the MULTICAM® camouflage pattern;

- (l) Webbing Tape - The webbing tape must be:
 - i. Commercially available webbing, 100% polypropylene; and
 - ii. A non-florescent earth tone colour to match the MULTICAM® camouflage pattern;

- (m) Herringbone Twill Tape - The herringbone twill tape for the reinforcement for snap fasteners (where required) must be:
 - i. Commercially available 100% polyester woven edge twill tape, herringbone weave;
 - ii. Width: 2.5 cm (1 in); and
 - iii. A non-florescent earth tone colour to match the MULTICAM® camouflage pattern;

- (n) Elastic Cord - The elastic cord must:
 - i. Be commercially available elastic cord in accordance with Table 3;

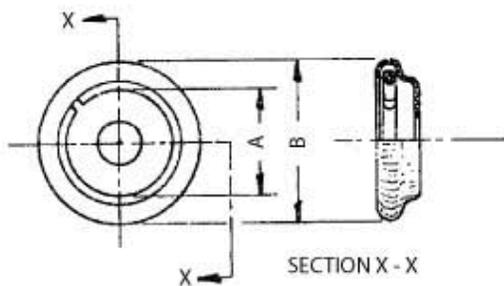
- ii. Have the finished ends, minimum of 19.1 mm (0.75 in) in length), dipped in an acetate film to prevent ravelling; and
- iii. Be a non-florescent earth tone colour to match the MULTICAM® camouflage pattern;

Table 3: Technical requirements for Elastic Cord

Diameter	3.5 mm
Weight	23.7 m/kg
Sheath	16 carriers
Core	16 ends of 34's square cut rubber
Picks per centimetre	28.4
Stretch (%)	190% ±10%
Covered yarn	600D polyester

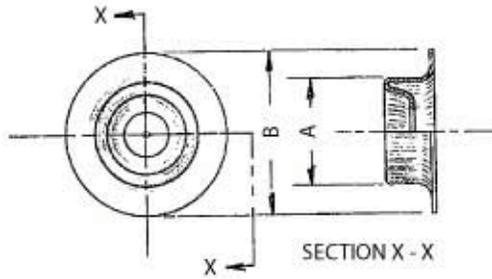
- (o) Draw Cord - The draw cord for the hood, waist and slide fastener pulls must:
 - i. Be Cord, Plaited, Spun Synthetic Fibre, Type I in accordance with D-80-001-028/SF-001; and
 - ii. Be a non-florescent earth tone colour to match the MULTICAM® camouflage pattern;
- (p) Drawcord Locks - The drawcord locks for the hood, waist and bottom hem must:
 - i. Be commercially available, wheel type, black acetyl; and
 - ii. Have dimensions as follows:
 - a. Hood and waist (quantity two (2) each):
 - 1. Size: 3.2 mm (0.125 in);
 - 2. Length: 22.3 mm (0.875 in);
 - 3. Width: 20.3 mm (0.8125 in); and
 - 4. Depth: 5 mm (0.21875 in);
 - b. Bottom hem (quantity two (2)):
 - 1. Size: 4.8 mm (10.1875 in);
 - 2. Length: 32 mm (1.25 in);
 - 3. Width: 25 mm (1 in); and
 - 4. Depth: 6.4 mm (0.25 in);
- (q) Snap Fasteners - Snap fasteners must be regular spring clamp type in brass with a black finish and a phosphor bronze spring as detailed in the following drawings:

Drawing 1: CS-149 - Socket Fastener



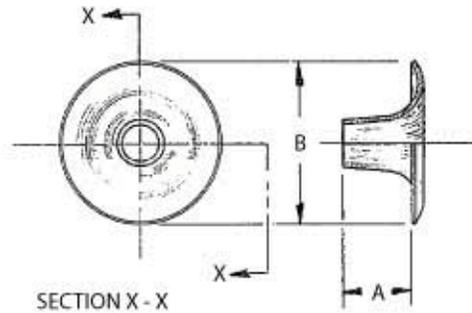
Inside diameter "A"	8.7 mm (0.3425 in)
Outside diameter "B"	14.3 mm 0.5625 in)

Drawing 2: CS-150 - Stud Fastener



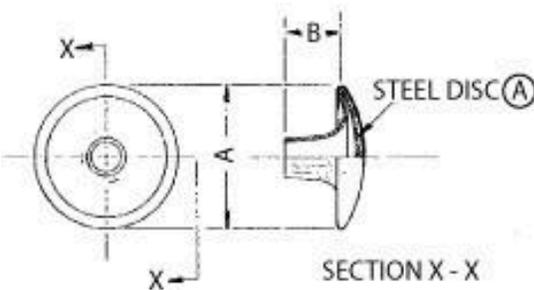
Diameter "A"	9.5 mm (0.375 in)
Diameter "B"	14.3 mm 0.5625 in)

Drawing 3: CS-151 - Eyelet Fastener



Barrel Length Diameter "A"	6.3 mm (0.25 in)
Flange Diameter "B"	14.3 mm (0.5625 in)

Drawing 4: CS-153 - Button Fastener



Diameter "A"	Ligne	24
	Diameter	15.5 mm (0.609 in)
Diameter "B"	Barrel Length	4.4 mm (0.172 in)

- (r) **Buttons** - The buttons must:
- i. Be nylon conforming to specification CF-B-854 and drawing 373118 (30-ligne) or 389556 (45-ligne); and
 - ii. Be a non-florescent earth tone colour to match the MULTICAM® camouflage pattern;
- (s) **Thread** - The following applies:
- i. The thread for seaming, stitching, buttonholes and bartacks must:
 - a. Be cotton-covered or polyester-covered, polyester thread (R50 Tex) conforming to CAN/CGSB-4.131-M; and
 - b. Be a non-florescent earth tone colour to match the MULTICAM® camouflage pattern;
 - ii. The thread for seaming and serging the lining, interlining and pocket linings must:
 - a. Be polyester staple thread (R40 Tex) conforming to CAN/CGSB-4.139; and
 - b. Be a non-florescent earth tone colour to match the MULTICAM® camouflage pattern;
 - iii. The thread for quilting the lining must:
 - a. Be Nylon 70/2 thread conforming to 4-GP-85Ma on the nylon taffeta side of the quilt;

- b. Be polyester staple thread in accordance with CAN/CGSB-4.139 on the backing side of the quilt; and
 - c. Match the colour of the lining material being used;
 - iv. Unless otherwise specified, all other garment components must be matched for thread colour;
- (t) **Buttonhole Gimp** - The buttonhole gimp must:
- i. Be 100% cotton, 3 cord soft finish, R210 Tex, conforming to 4-GP-80Ma, Type 2A; and
 - ii. Be a non-florescent earth tone colour to match the MULTICAM® camouflage pattern;
- (u) All material must be sourced and supplied by the Contractor.

3.3 **Sizing**

The Coats must be available in the following sizes in accordance with the Scale of Measurements at Appendix 2:

Height (in)	Chest (in)					
	32	36	40	44	48	52
64	X	X	X			
67		X	X	X	X	
70		X	X	X	X	X
73		X	X	X	X	X
76			X	X	X	X

Size	NSN
A/A	8415-20-012-3894
6432	8415-20-012-3895
6436	8415-20-012-3896
6440	8415-20-012-3897
6736	8415-20-012-3898
6740	8415-20-012-3899
6744	8415-20-012-3900
6748	8415-20-012-3901
7036	8415-20-012-3902
7040	8415-20-012-3903
7044	8415-20-012-3904
7048	8415-20-012-3905
7052	8415-20-012-3906
7336	8415-20-012-3907
7340	8415-20-012-3908
7344	8415-20-012-3909
7348	8415-20-012-3910
7352	8415-20-012-3911
7640	8415-20-012-3912
7644	8415-20-012-3913

7648	8415-20-012-3914
7652	8415-20-012-3915

The Coats must also be available in special/extended sizes where the above sizes are not suitable.

3.4 Cutting

The following applies:

- (a) The Coats must be cut using duplicates of Government supplied paper patterns as follows:
 - i. Paper patterns include seam allowance but do not include 'make-up' allowance; and
 - ii. The Contractor is responsible for adding 'make-up' allowance to suit their production methods without changing the design, grade or requirements for the Coats;

Note: Paper patterns will not be supplied to the Contractor for special/extended sizes.

- (b) The shell parts of the Coats must:
 - i. Be cut and used in accordance with best commercial standards;
 - ii. Be cut in the direction of the warp as shown on the paper patterns; and
 - iii. Be cut from the same piece of shell material with the exception of the pencil pocket, chest pocket slide fastener stay, chest pocket facing, cargo pocket welt, all buttoning portions of flaps including the button straps, which may be cut from separate lays or ends of shell material.

3.5 Sewing

The following applies:

- (a) Seams must be as follows:
 - i. Conform to CAN/CGSB-54.1-M; and
 - ii. Be a minimum of 9.5 mm (0.375 in) wide unless otherwise specified;
- (b) Stitching must be as follows:
 - i. Be either lock stitched Type 301 or chain stitch Type 401 (unless otherwise specified) conforming to CAN/CGSB-54.1-M, having not less than eight (8) nor more than ten (10) stitches per 2.5 cm (1 in);
 - ii. For double-needle stitched, needles set 6.4 mm (0.25 in) apart;
 - iii. Ends of all lock stitched seams and stitching, also breaks in thread, securely backstitched; and
 - iv. Present a regular even appearance without fabric pucker and be free from skips that may result from faulty machine thread tension or other stitching malfunctions;
;Where double-lapped seams are specified, the needles must be set 6.4 mm (0.25 in) apart
- (c) Where double-lapped seams are specified, the needles must be set 6.4 mm (0.25 in) apart conforming to numerical designation 2.04.03 of CAN/CGSB-54.1-M;
- (d) Where seaming, turning and stitching is specified, the edges must be properly worked out before stitching;
- (e) Where seaming and serging is specified, this may be done in one or two operations;
- (f) All exposed raw edges must be serge finished with any 500 series, with not less than 10 stitches per inch (2.5 cm)

- (g) Buttonholes must:
 - i. Be gimp reinforced eyelet type with not less than 22 stitches per 2.5 cm (1 in);
 - ii. Have ends fishtailed or bartacked; and
 - iii. When buttonholes are used for water drainage purposes, only the eyelet of the buttonhole is to be cut;
- (h) Hook and loop fastener tape must:
 - i. Be stitched around all edges 3.2 mm (0.125 in) gauge, taking care to ensure stitching is formed into the hook and loop portion of the tape;
 - ii. For tapes wider than 3.8 cm (1.5 in) stitched around all edges and through the centre or have a 'X' enclosed in the box; and
 - iii. For best results, a ball point needle, size 110 (#18) should be used;
- (i) Bartacks, unless specified otherwise, must be 12.7 mm (0.5 in) long and have not less than twenty (20) cover stitches; and
- (j) Button and strap assemblies (where specified) must:
 - i. Have buttons threaded with a strap of shell material in accordance with Drawing 8790166 for 30-ligne buttons or Drawing 2811 for 45-ligne buttons; and
 - ii. Have straps as follows:
 - a. Seam type numerical designation 8.06.02 or 8.19.01;
 - b. Finished width of 8 mm (0.3125 in); and
 - c. Attached with bartacks;

3.6 Snap Fasteners

When inlaying snap fasteners, reinforcement under the shell material may be added as required. Careful consideration must be given to the attaching force of the snap fastener machine to ensure that all parts of the snap fastener will remain attached and functional for the life of the garment.

3.7 Seam Sealing

When specified, seams must be sealed in a manner that will ensure the integrity of the waterproof barrier layer in the garment. The following requirements must be met:

Table 4: Requirements for Visual and Physical Examination

Construction Detail	Test Method	Unacceptable Faults
Seams	Visual Examination	<ul style="list-style-type: none"> – Tape which is not centered across the width of the seam; – Delamination along edges of tape, over seam allowance and stitching or across the width of the tape; – Bubbling; – Blistering; – Puckering; – Melting; and/or – Ends of threads which have not been trimmed.
Ends and Joins	Visual Examination	<ul style="list-style-type: none"> – Loose ends and corners which have not bonded; – Rough edges or beads at the ends; and – An overlap at a join of less than 19.1 mm (0.75 in).
Drill holes and	Visual	<ul style="list-style-type: none"> – Left uncovered without a designated exception.

stitching lines not in seams	Examination	
Stiffness of seamed area	Physical Examination	– Marked increase of stiffness.

3.8 Quilting

The taffeta lining and the insulation must be quilted together in accordance with the insulation supplier's instructions. Quilt stitching should be kept to a minimum to optimise the thermal value of the insulation. Ideally, the quilt pattern should not be smaller than a 30 cm (12 in) diamond pattern.

3.9 Marking and Care Label

The Coats must include a Marking and Care Label (see Figure 10), in French and English, as follows:

- (a) A label, sized to include all of the information detailed in this section, positioned on the bottom of the right front lining on the inside on the Coat, as per the Sealed Sample, and stitched around all edges;
- (b) Light sand in colour with black printing in characters not less than 3.2 mm (0.125 in) nor more than 6.4 mm (0.25 in) in height, with the exception of the size identification which must be twice the height;
- (c) Care symbols in accordance with CAN/CGSB-86.1-2003 including the following:
 - i. Table 1 – Washing – Symbol 6;
 - ii. Table 2 – Bleaching – Symbol 3;
 - iii. Table 3 – Drying – Symbol 3;
 - iv. Table 4 – Ironing/Pressing – Symbol 5; and
 - v. Table 5 – Professional Textile Care – Symbol 3;
- (d) Marking label in accordance with D-80-001-055/SF-001 including the following:
 - i. Nomenclature in English and French:

COAT, COLD WEATHER, MULTICAM®
MANTEAU, TEMP FROID, MULTICAM®
 - ii. NATO Stock Number as required for each size;
 - iii. Size by height and chest;
 - iv. NATO size designation;
 - v. Contract Number;
 - vi. Name of Contractor and/or Sub-Contractor as applicable (no logos or trademarks);
 - vii. Month/Year of manufacture;
 - viii. Fiber content;
 - ix. Care Symbols (in black ink);
 - x. Care instructions in English and French as follows:
 - a. Dry clean only when proper laundering fails to remove soil. / Nettoyage à sec lorsque le blanchiment approprié ne parvient pas à enlever la saleté; and
 - b. Do not stitch or puncture the membrane in this garment. / Ne pas coudre ou perforer la membrane interne imperméable;
 - xi. User Identification;
- (e) Include a bar code in accordance with D-LM-008-002/SF-001, Appendix 3 that identifies the NATO stock number.

3.10 Construction

The Coats are to be manufactured in accordance with the following requirements:

- (a) **General** - The Coats must consist of a full-length front opening Coat with full-length arms constructed of the shell material;
- (b) **Collar** - The Coats must have a high flat collar that rises above the shoulders as follows (see Figure 2):
 - i. Include a top (inner) collar as follows:
 - a. Constructed from one (1) ply of shell material and one (1) ply of barrier membrane handled as one layer; and
 - b. Seamed and serged to the neck edge of the lining;
 - ii. Include an under (outer) collar as follows:
 - a. Constructed from two (2) plies of shell material stitched together with alternating rows of stitching;
 - b. Include four (4) 30-ligne button and strap assemblies as follows:
 - 1. Positioned along the front edge of the collar, effecting proper closure with buttonholes on the hood; and
 - 2. Bartacked in place;
 - c. Seamed and serged to the neck edge of the shell with the flap for the back yoke included in the seaming of the under collar to the back neck edge;
 - iii. Include a hanger loop constructed of shell material as follows:
 - a. Made on an automatic looping machine;
 - b. Width: 7.9 mm (0.3125 in);
 - c. Functional Length: 5 cm (2 in); and
 - d. Centered on the top collar at the back neckline and basted into place for better handling; and
 - e. Turned up towards the collar and bartacked to the collar, 6.4 mm (0.25 in) from the neck seam;
- (c) **Front Yoke** - The Coats must have a front left and right yokes as follows:
 - i. Constructed from one (1) ply of shell material; and
 - ii. Placed on its respective front with bottom edge turned under and double needle stitched with the top of the slide fastener and slide fastener cover of the front chest pocket caught in this seam;
- (d) **Front Closure** - The Coats must have a slide fastener front closure with a fly as follows (see Figure 5):
 - i. Both sides of the slide fastener are placed face down on their respective side of the center front and stitched into place;
 - ii. Include a fly guard as follows:
 - a. Constructed from one (1) ply of shell material and one (1) ply of barrier membrane;
 - b. With right sides together, the shell and barrier are seamed across both ends, turned right side out and stitched 6.4 mm (0.25 in) gauge; and
 - c. The fly guard is seamed to the right front edge, 6.4 mm (0.25 in) from the top collar raw edge with slide fastener sandwiched between both pieces;
 - iii. Include an underfly on the right side as follows:
 - a. Constructed from one (1) ply of shell material and one (1) ply of barrier membrane;

- b. Shell material folded lengthwise, wrong sides together, including the barrier membrane in the middle and seamed across each end;
 - c. Turned inside out and stitched 6.4 mm (0.25 in) gauge;
 - d. Raw edge to be serged;
 - e. Include five (5) 45-ligne button and loop assemblies as follows:
 - 1. Made in accordance with Drawing 2811 and seamed to the underfly;
 - 2. Centered in the width of the underfly with top and bottom loops at 6.4 mm (0.25 in) from the end edges;
 - 3. The third button is then centered between the top and bottom buttons, and the remaining buttons placed equidistant between them; and
 - 4. Loop straps to be bartacked to the underfly;
 - f. Underfly is then placed face down on the right front, 19.1 mm (0.75 in) behind center front, with the top edge directly under the collar seam; and
 - g. The underfly is seamed to the front at 4.8 mm (0.1875 in) gauge, then pressed over and stitched 6.4 mm (0.25 in) gauge;
- iv. Include a buttoning fly and fly cover on the left side as follows:
- a. Buttoning fly as follows:
 - 1. Constructed from one (1) ply of shell material folded in half right sides together and seamed across each end;
 - 2. Turned inside out and stitched 6.4 mm (0.25 in) gauge along the ends and folded edge; and
 - 3. Include five (5) buttonholes to fit a 45-ligne button, worked into the buttoning fly as indicated on the paper patterns;
 - b. Fly cover as follows:
 - 1. Constructed from one (1) ply of shell material and one (1) ply of barrier membrane;
 - 2. The buttoning fly is centered under the fly cover and stitched 6.4 mm (0.25 in) gauge across each end;
 - 3. Four (4) separate rows of stitches that extend the width of the buttoning fly are placed horizontally, centered between each buttonhole;
 - 4. Shell material folded lengthwise, wrong sides together, including the barrier membrane and buttoning fly and seamed across each end;
 - 5. Turned inside out and stitched 6.4 mm (0.25 in) gauge ensuring the buttoning fly is not caught in this seam;
 - 6. Raw edge to be serged together;
 - 7. Left fly is then placed right sides together on the left front, 19.1 mm (0.75 in) behind center front, with the top edge directly under the collar seam; and
 - 8. The left fly is seamed to the front at 4.8 mm (0.1875 in) gauge, then pressed over and stitched 6.4 mm (0.25 in) gauge;
- (e) **Back Yoke** - The Coats must have a back left and right yokes as follows (see Figure 7):
- i. Constructed from one (1) ply of shell material with the lower edge of the back yoke serged;
 - ii. Include a hood pocket on the back upper portion of the Coat between the yoke and barrier layer;
 - iii. Include a hood pocket flap as follows:
 - a. Constructed from two (2) plies of shell material;
 - b. Seamed around the side and lower edge, turned, properly worked out and topstitched 6.4 mm (0.25 in) gauge;
 - c. Include a piece of hook fastener tape as follows:

1. Positioned on the underside of the flap to effect proper closure with the loop tape on the back yoke and stitched around all edges; and
 2. 2.5 cm (1 in) wide and length in accordance with the paper patterns;
 - iv. Include a piece of loop fastener tape measuring 2.5 cm (1 in) wide and 12.7 mm (0.5 in) shorter than the hood pocket flap fastener tape, stitched below the neck edge of the yoke to secure the flap when the hood is in use;
 - v. Include a piece of loop fastener tape measuring 2.5 cm (1 in) wide and 12.7 mm (0.5 in) shorter than the hood pocket flap fastener tape, stitched to the garment back below the neck edge of the yoke to secure the flap when the hood is stowed;
 - vi. With the shoulder, neck and armhole edges aligned, the lower edge of the yoke is double-needle stitched to the inside of the garment back, in a straight line; and
 - vii. The center part of the yoke should remain unstitched to provide a drainage channel for the hood pocket;
- (f) **Shoulders** - The front and back are joined together along the shoulder seam with a double-lapped seam, with the front overlapping the back on the outside;
- (g) **Sleeves** - The Coats must have two-piece set-in sleeves as follows:
- i. Constructed from one (1) ply of shell material with a sleeve lining constructed from one (1) ply of the nylon lining material and a middle layer consisting of one (1) ply of the barrier layer material;
 - ii. The top and under sleeve are joined together as follows:
 - a. Along the elbow seam with a double-lapped seam, with the top sleeve overlapping the under sleeve on the outside; and
 - b. A double-lapped seam in a continuous operation through the side seam, with the back overlapping the front and the back tape of the slide fastener on the underarm venting system caught in this seam;
 - iii. Include a slide fastener vent system at the underarm seam as follows (see Figure 6);
 - a. Underarm vent opening on the front portion of the garment to be properly worked out; and
 - b. A two-way slide fastener is centered under the vent opening and double-needle stitched across each end and front edge;
 - iv. Sleeves joined to their respective armholes with a double-lapped seam, with the body overlapping the sleeve on the outside ;
 - v. Include an elbow reinforcement patches as follows:
 - a. Constructed from one (1) ply of shell material; and
 - b. Each elbow patch placed on their respective sleeve piece, face up with raw edges folded under and double-needle stitched to the sleeve; and
 - vi. Include a band cuff with hook and loop closure as follows (see Figure 2):
 - a. Constructed from one (1) ply of shell material and one (1) interlining layer of shell material;
 - b. Include a piece of hook fastener tape measuring 4.5 cm (1.75 in) long by 3.8 cm (1.5 in) wide, cut to fit the shape of the cuff extension, centered in the under layer of the cuff, stitched around all edges and reinforced along the center;
 - c. Include a piece of loop fastener tape measuring 3.8 cm (1.5 in) wide by 11.4 cm (4.5 in) long centered on the outside cuff 19.1 mm (0.75 in) behind the straight end, stitched around all edges and reinforced along the center;
 - d. Cuff to be seamed across the square end and around the point and cuff extension, turned, properly worked out and double-needle stitched along bottom, sides and extension at 3.2 mm (0.125 in) gauge;

- e. Include two (2) deep pleats measuring 12.7 mm (0.5 in) each, folded in the lower edge of the sleeve, 5 cm (2 in) on each side of the elbow seam;
- f. With the pointed end of the cuff toward the elbow seam, the cuff is seamed to the lower edge of the sleeve from the inside, taking care to include the lining, barrier and pleats in the seam; and
- g. Cuff is then folded down and double-needle stitched with the straight end of the cuff stitched to the cuff extension, 6.9 cm (2.75 in) from the point;
- vii. Include a tab on the left shoulder as follows (see Figure 2):
 - a. Finished size 5.7 cm (2.25 in) high by 5 cm (2 in) wide constructed from two (2) plies of shell material seamed, turned and stitched 6.4 mm (0.25 in) gauge;
 - b. Include a piece of loop fastener tape measuring 5.0 cm (2 in) wide by 5.0 cm (2 in) long centered and stitched to the underside of the tab;
 - c. Include a piece of loop fastener tape measuring 5 cm (2 in) long by 2.5 cm (1 in) wide placed over the bottom portion of the topside tab and stitched around all edges;
 - d. Attached to the Coat at the upper outer side of the sleeve, centred over the left sleeve cap and basted in place to facilitate joining; and
 - e. Include a piece of hook fastener tape measuring 5.0 cm (2 in) wide by 5.0 cm (2 in) long stitched to the left sleeve cap, positioned to affect proper closure with the shoulder tab;
- (h) **Pockets** - The Coats must have pockets as follows:
 - i. **Lower Front Cargo Pockets** - A cargo pocket on the front of each hip as follows (see Figure 3):
 - a. Constructed as follows:
 - 1. One (1) ply of nylon for the back wall; and
 - 2. Shell material with a lining of nylon material for the front (outer) side;
 - b. With raw edges folded under, the back pocket wall of nylon is stitched to each lower front 3.2 mm (0.125 in) gauge;
 - c. The edges of the pocket may be seamed together for better handling as required;
 - d. A 45-ligne button and loop assembly is placed vertically on the front wall of the lower pocket, positioned to effect proper closure with flap;
 - e. The top edge of the side walls of the pocket are to have envelope folds, including both the shell and lining material, creating a 19.1 mm (0.75 in) pleat;
 - f. Include a pocket welt constructed from one (1) ply of shell material, folded in half with raw edges turned under and seamed to the top edge of the cargo pocket assembly 3.2 mm (0.125 in) gauge;
 - g. The pocket assembly, including the lining and pocket welt, is then serged together along the side and bottom edges;
 - h. Include two (2) drainage type buttonholes on the bottom of the cargo pocket, through both layers;
 - i. The two (2) lower bellows cuts are to be seamed and serged with both the shell and lining caught in the seam;
 - j. The pocket assembly is then centered over the back pocket wall of nylon as indicated on paper patterns, with side and bottom edges folded under and seamed 3.2 mm (0.125 in) gauge, with the stitching starting and ending 3.2 cm (1.25 in) below the top edge of either side of the welt;
 - k. Include a covered buttoning flap as follows:
 - 1. Consist of two (2) parts, a covering flap and a buttoning flap, both constructed from shell material;

2. With right sides together, the buttoning flap and buttoning flap facing seamed along the buttoning opening, turned inside out with corners properly worked out and stitched 3.2 mm (0.125 in) gauge;
 3. A vertical buttonhole to fit a 45-ligne button is then placed 15.8 mm (0.625 in) from pointed end;
 4. With right sides together, the buttoning flap facing and flap facing is then seamed along each side of the flap facing 9.5 mm (0.375 in) gauge ensuring only the facings are caught in the stitching;
 5. A bartack is then placed at both corners of the opening;
 6. With right sides together, the flap is then seamed along the outer edges to the flap facing with the buttoning flap assembly sandwiched between the flap pieces during this operation such that they are partially caught in the seam;
 7. The flap assembly is then turned inside out and stitched 6.4 mm (0.25 in) gauge; and
 8. Attached to the garment as follows:
 - a. The flap is seamed above the pocket assembly, as indicated on the paper patterns; and
 - b. Both ends of the welt is folded under and securely backstitched or bartacked to the pocket flap, through all layers ensuring the flap effects proper closure with button assembly on pocket;
1. Include a hand warmer pocket with a covered slide fastener closure placed at the front of each cargo pocket as follows:
1. Have a front lining constructed of fleece and a back wall constructed of nylon tricot;
 2. Placed on the right side of the lower pocket piece, with a 17.7 cm (7 in) long slide fastener sandwiched between both pieces such that the slide fastener opens from top to bottom;
 3. The pocket opening seamed and pocket lining turned inside and stitched 3.2 mm (0.125 in) along the pocket opening;
 4. With the corners of the opening properly worked out, the slide fastener cover is folded under to form a 2.5 cm (1 in) hem;
 5. With the hand warmer pocket and slide fastener cover placed over the tricot backing, the slide fastener cover is centered over the slide fastener and stitched through all layers;
 6. The bottom edge of the nylon tricot and the fleece is double-needle stitched to the front wall of the cargo pocket; and
 7. The hand warmer pocket is then seamed on each side to the side walls, then the side walls are pressed outward and double-needle stitched;
- ii. Right Sleeve Pocket - Angled semi-bellow pockets on the upper exterior portion of the right sleeve as follows (see Figure 4):
- a. Constructed from one (1) ply of shell material;
 - b. The front edge of the sleeve pocket is turned under to form a self-facing and cover 3.2 cm (1.25 in) wide;
 - c. The front edge of the cover double-needle topstitched;
 - d. One (1) side of the 15.2 cm (6 in) long slide fastener tape is centered under the cover and double-needle stitched to the raw edge of the facing such that the slide fastener opens from top to bottom;
 - e. The bellows corner is seamed, the pocket is positioned on the sleeve in accordance with the paper patterns, and the other side of the slide fastener tape is then double-needle stitched to the sleeve;

- f. With the outer edges and the ends of the slide fastener tape turned under, the pocket is stitched 1/16-inch (1.6 mm) gauge to the sleeve; and
- g. Include bartacks as follows:
 - 1. Horizontal bartack at the top of the pocket opening; and
 - 2. Vertical bartack at the bottom of the pocket opening;
- iii. Front Chest Pockets - Pockets on the upper exterior portion of the left and right sides of the chest as follows (see Figure 4):
 - a. Include an inner pocket bag as follows:
 - 1. Constructed from one (1) ply of tricot material;
 - 2. The pocket bag is positioned under the slide fastener and pocket opening and double-needle stitched along the edge closest to the center front and across the bottom of the pocket opening; and
 - 3. The stitching is to intersect with the stitching on the other side of the opening and continue in a straight line to the waistline to join the pocket bag to the shell;
 - b. Include a 22.8 cm (9 in) long slide fastener, closing from bottom to top, as follows:
 - 1. With raw edges serged, the slide fastener stay is seamed to the pocket opening, corners properly worked out and turned inside;
 - 2. The chest pocket facing is placed over the pocket bag, with the inside raw edge turned under and stitched 1.6 mm (0.0625 in) gauge;
 - 3. The remaining edges are serged with the pocket bag edges;
 - 4. With the slide fastener centered under the pocket opening, the outside edge of the pocket opening is double-needle stitched; and
 - 5. Include a slide fastener cover as follows:
 - a. Constructed from one (1) ply of shell material, folded in three (3) and double-needle stitched along the inner edge and across the top end;
 - b. With the slide fastener cover centered over the slide fastener, the other edge is double needle stitched and the bottom end straight stitched to the shell of the coat; and
 - c. A horizontal bartack is placed at the bottom of the opening;
 - c. Include a pencil pocket in the left pocket only as follows:
 - 1. Constructed from one (1) ply of shell material;
 - 2. With the top edge folded inside, the raw edge is turned under and stitched 6.4 mm (0.25 in) gauge;
 - 3. With the pencil pocket positioned on the inner pocket bag, the bottom edge is turned under and stitched 1.6 mm (0.0625 in) gauge and the top corner on each side securely backstitched; and
 - 4. Include a row of stitching down the center of the pocket parallel to the edge (creating two (2) pencil pockets), securely backstitched on either end;
 - d. Include pocket loops as follows:
 - 1. Loops to be constructed from one (1) ply of lining material on a looping machine;
 - 2. 6.4 mm (0.25 in) wide 10 cm (4 in) long;
 - 3. Positioned at the top inside of the chest pocket 2.5 cm (1 in) from the slide fastener; and
 - 4. Captured in the top seam of the pocket;

- (i) **Hook and Loop Fastener Tape Patches** - The Coats must have hook and loop tape fastener patches as follows (see Figure 2):
- i. **Name Tape Patch** - A piece of loop fastener tape measuring 15.2 cm (6 in) long by 2.5 cm (1 in) wide positioned on the bottom of the right side front yoke piece and stitched around all edges; and
 - ii. **Rank Patch** - As follows:
 - a. Constructed from one (1) piece of loop fastener tape 9 cm (3.5 in) long by 5 cm (2 in) wide;
 - b. Centred horizontally onto the outer left fly cover with the top of the patch positioned 22.8 cm (9 in) below the top of the fly; and
 - c. Stitched to the outer layer of the fly around all edges and through the centre (i.e., have an 'X' enclosed in the box);
- (j) **Waist Suppression** - The Coats must have a waist suppression system as follows:
- i. A waist drawcord channel and waist drawcord channel reinforcement as follows:
 - a. Constructed from one (1) ply of shell material;
 - b. Include two (2) buttonholes for drawcord outlets positioned on the channel reinforcement as indicated on paper patterns as follows:
 1. Reinforced with a layer of shell material or barrier fabric measuring 8.9 cm (3.5 in) long by 3.2 cm (1.25 in) wide; and
 2. Only the eyelet to be cut;
 - ii. With raw edges together, the channel and channel reinforcement to be seamed together and the channel folded back about 7.5 cm (3 in) to form the pockets for the drawcord locks;
 - iii. The draw cord is securely stitched or bartacked through all plies, at center back;
 - iv. With top and bottom edges folded under, the channel is then centered over the waistline on the outside shell and stitched 1.6 mm (0.0625 in) gauge, with the drawcord included in the channel but not included in the stitching, and the top edges of the pocket flaps included in the bottom stitching of the channel; and
 - v. The finished drawcord is to protrude 17-17.5 cm (6-7 in) from each buttonhole, threaded through the wheel locks, knotted and fused to prevent ravelling;
- (k) **Bottom Hem** - The Coats must have a bottom hem with a drawcord as follows:
- i. Include four (4) drainage type buttonholes for the draw cord outlets as follows:
 - a. Each located 2.5 cm (1 in) above the raw bottom edge of the hem as indicated on the paper patterns;
 - b. Two (2) buttonholes placed 5 cm (2 in) from the front closure on either side;
 - c. Two (2) buttonholes 5 cm (2 in) apart at center back;
 - d. Reinforced with shell material, twill tape or barrier membrane measuring 6.3 cm (2.1 in) long by 2.5 cm (1 in) wide, worked into the bottom hem; and
 - e. Only the eyelet of the buttonhole to be cut;
 - ii. The elastic drawcord is placed under the hem area and threaded through the buttonholes;
 - iii. The hem is folded up 3.8 cm (1.5 in), with raw edge folded under and stitched 3.2 mm (0.125 in) gauge, with the lining gusset caught in the seam and the drawcord included in the hem channel but not caught in the stitching such that the finished hem channel measures 2.8 cm (1.125 in) wide;
 - iv. The finished drawcord is to protrude 17-17.5 cm (6-7 in) from each front buttonhole, threaded through the wheel locks, knotted and the ends dipped in an acetate film for at least 19.1 mm (0.75 in) to prevent ravelling;
- (l) **Barrier Lining** - The Coats must have an interlining barrier layer as follows:

- i. Constructed from Waterproof Moisture Vapour Permeable (WMVP) Barrier Fabric;
 - ii. Barrier pieces seamed and sealed with tape along the shoulder seams, the neck seam at the collar, the elbow seams and the armhole seams;
 - iii. A two-way water resistant slide fastener is included on the front portion of the barrier at each underarm (see Figure 6) with the polyurethane treated side of the slide fastener facing the inside of the garment;
 - iv. With the corners properly worked out, the top and under sleeves are seamed in one continuous operation through the side seam; and
 - v. All seams and slide fastener stitching sealed;
- (m) **Lining** - The Coats must have a lining as follows (see Figure 9):
- i. Constructed from the quilted taffeta lining and insulation;
 - ii. Front and back lining seamed and serged together at the shoulders;
 - iii. Elbow seams of the sleeves seamed and serged together;
 - iv. Sleeves seamed and serged to the lining armhole inside markings, as indicated on the paper patterns;
 - v. Underarm seams seamed and serged from bottom to side marking, and sleeve marking to cuff, leaving an opening for the underarm gusset;
 - vi. Include a tricot nylon gusset seamed and serged to the underarm;
 - vii. Include pockets on the upper interior portion of the left and right sides of the chest as follows:
 - a. Two (2) pieces of hook fastener tape measuring 12.7 cm (5 in) long by 19.1 mm (0.75 in) wide seamed to the front lining, as indicated on the paper patterns;
 - b. Raw edges of the pocket must be serged and turned under;
 - c. Two (2) pieces of loop fastener tape measuring 12.7 cm (5 in) long by 19.1 mm (0.75 in) wide is stitched to the inside front corner for the pocket opening; and
 - d. The pocket is double-needle stitched to the front lining up to 12.7 mm (0.5 in) into loop tape on both sides of the pocket opening;
 - viii. The top edge of the lower back lining turned under and double-needle stitched to the outside of the back lining;
 - ix. The side edges of the lower back lining and the back lining topstitched together, forming a pleat 5 cm (2 in) deep in the area over the slide fastener;
 - x. Joined to the Coat as follows:
 - a. Lining and barrier as follows:
 1. Lining and barrier seamed together around the sides and top edges of the underarm vent opening, and turned right side out; and
 2. The outer edges matched and aligned so that the two layers can be handled as one;
 - b. Include a bottom gusset as follows:
 1. Seamed to the bottom edge of the lining and barrier; and
 2. Turned and stitched 6.4 mm (0.25 in) gauge;
 - c. Lining and shell as follows:
 1. With right sides facing, the lining and shell seamed together along the center front and collar with the front seam including the fly guard; and
 2. Edges turned out and properly worked out, then stitched 6.4 mm (0.25 in) gauge; and
- (n) **Hood** - The Coats must have a hood as follows (see Figure 8):
- i. Shell crown and sides constructed from one (1) ply of shell material as follows:
 - a. Hood crown to be seamed to the hood sides with a double-lapped seam with the crown overlapping the sides on the outside;

- b. Midpoint of the hood drawcord is securely attached to the midpoint of the hood back channel; and
 - c. The hood back channel is positioned on the inside of the hood and stitched in place to form a 2.5 cm (1 in) channel with each row of stitching starting and ending 3.2 cm (1.25 in) from neck and front edges;
 - ii. Hood interlining constructed from one (1) ply of nylon material with the layers for the crown and sides of the hood seamed together and sealed;
 - iii. The shell and interlining are seamed together along the outer edge, turned inside out, with corner properly worked out and stitched 3.2 mm (0.125 in) gauge around the outer edge;
 - iv. Include a front channel as follows:
 - a. Front facing seamed to the front outer edge of the hood and turned inside;
 - b. The inner edge of the facing must be seamed to the hood, forming a 2.5 cm (1 in) channel, with the stitching starting and ending 5.0 cm (2 in) from the neck edge; and
 - c. A buttonhole is to be worked in each hood front corner for drawcord outlets;
 - v. Include a hood drawcord as follows:
 - a. The front channel drawcord is threaded through the front channel with both drawcord ends passing through the buttonhole drawcord outlets;
 - b. The ends of the drawcords are threaded through the wheel locks, securely knotted twice, and the ends heat fused to prevent ravelling; and
 - c. When the channels are fully extended, the drawcords extend from the drawcord outlets 8.9 cm (3.5 in);
 - vi. Include four (4) buttonholes to fit a 30-ligne button positioned along the neck edge of the hood, effecting proper closure with buttons on the collar of the garment; and
 - vii. Joined to the coat as follows:
 - a. The neck edge of the hood is pleated and seamed to the back neck of the garment and serged;
 - b. The back neck facing is seamed to the back neck of the garment, turned to the inside and topstitched 6.4 mm (0.25 in) gauge; and
 - c. The outer edge of the facing is turned under and stitched to the garment back 3.2 mm (0.125 in) gauge;
- (o) **Slide Fastener Thongs** - Each slide fastener pull, with the exception of the underarm slide fastener pulls, must have a thong as follows:
 - i. A length of drawcord threaded through each slide fastener pull, tied with a single knot at the pull tab and knotted again at the thong end;
 - ii. Ends of the drawcords fused to prevent ravelling; and
 - iii. Finished functional length: 6.3 cm (2.5 in).

Appendix 1 **LAYOUT SKETCHES**

Figure 1: Front and Back View

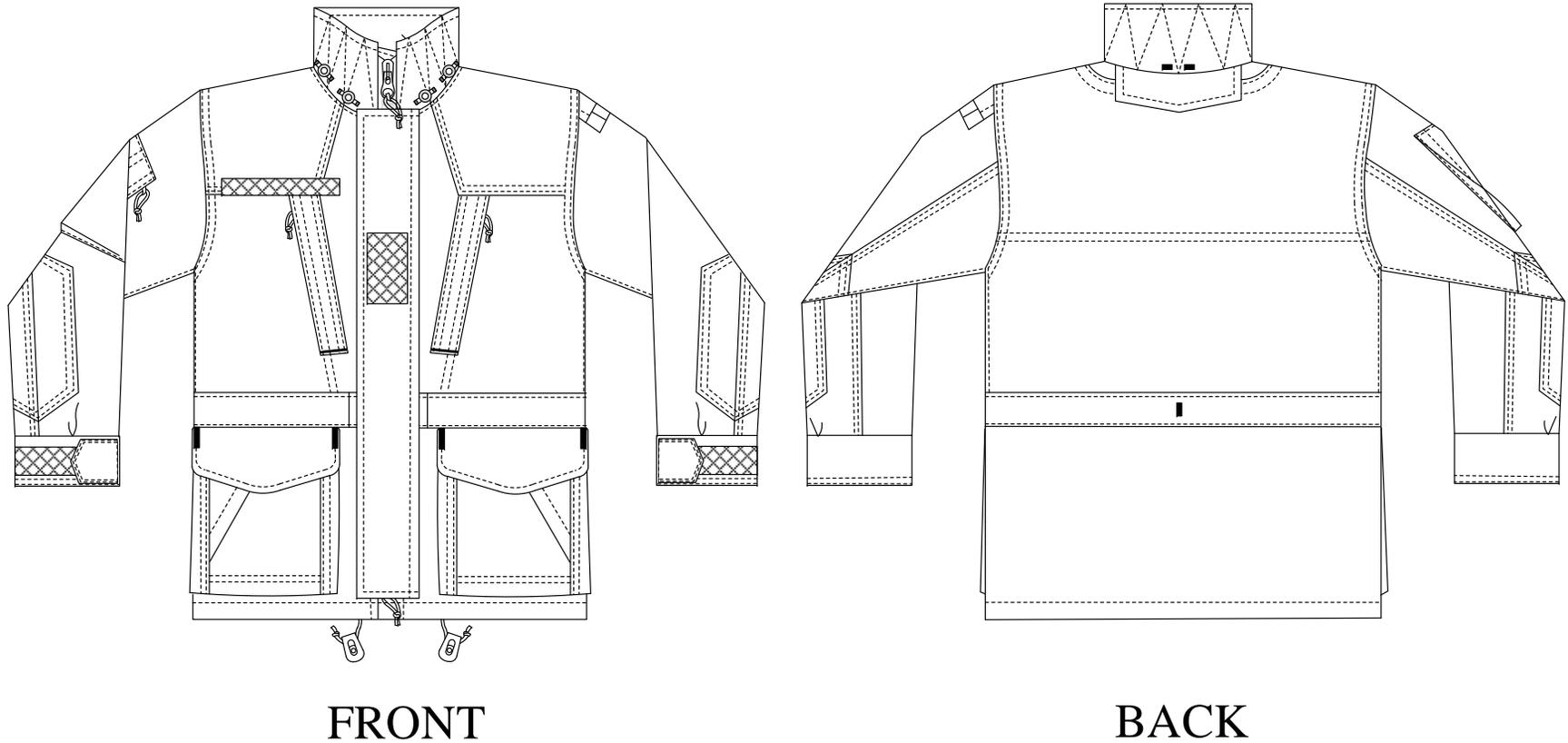


Figure 2: Garment Components - Dimensions

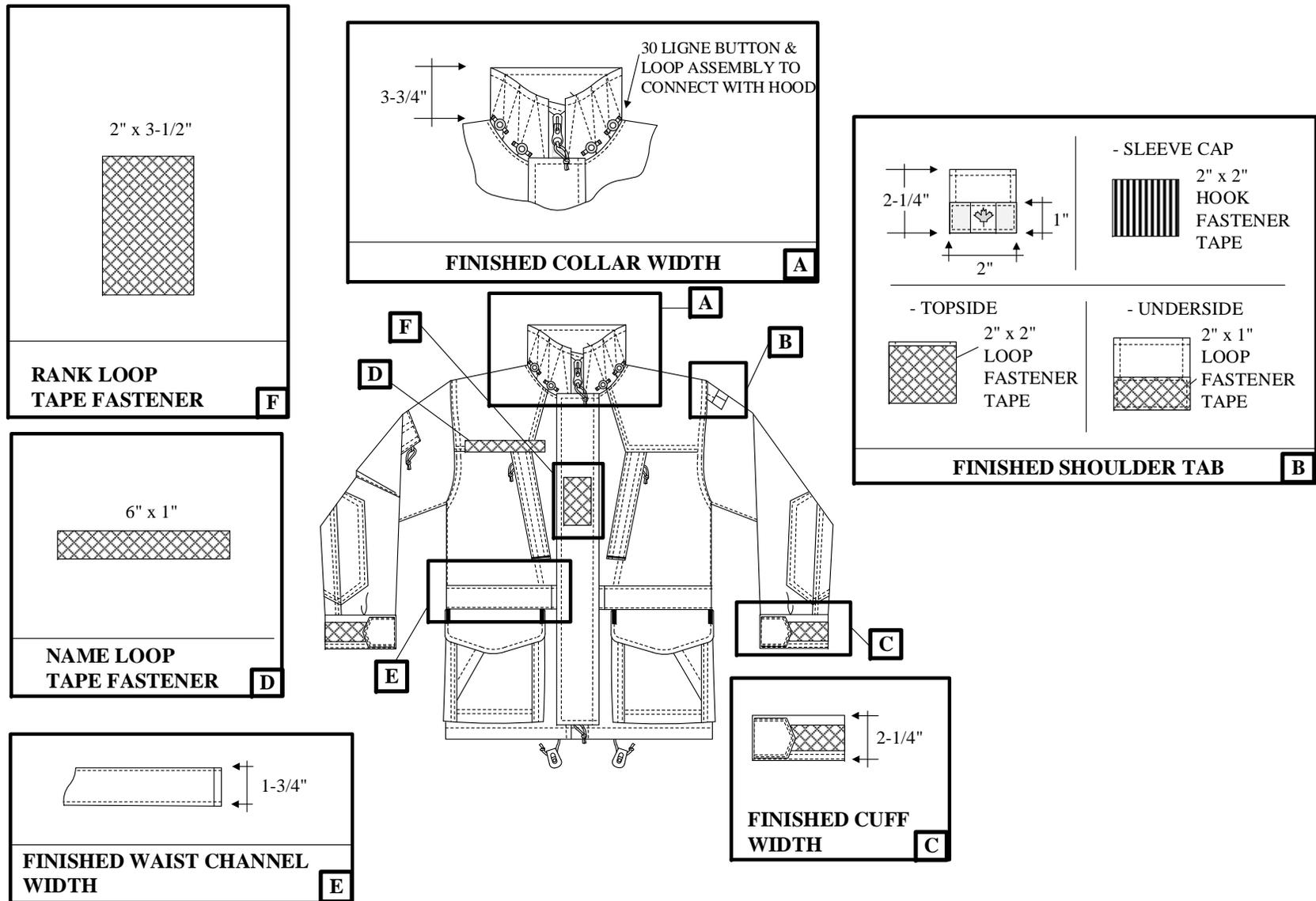


Figure 3: Front Cargo Pocket System

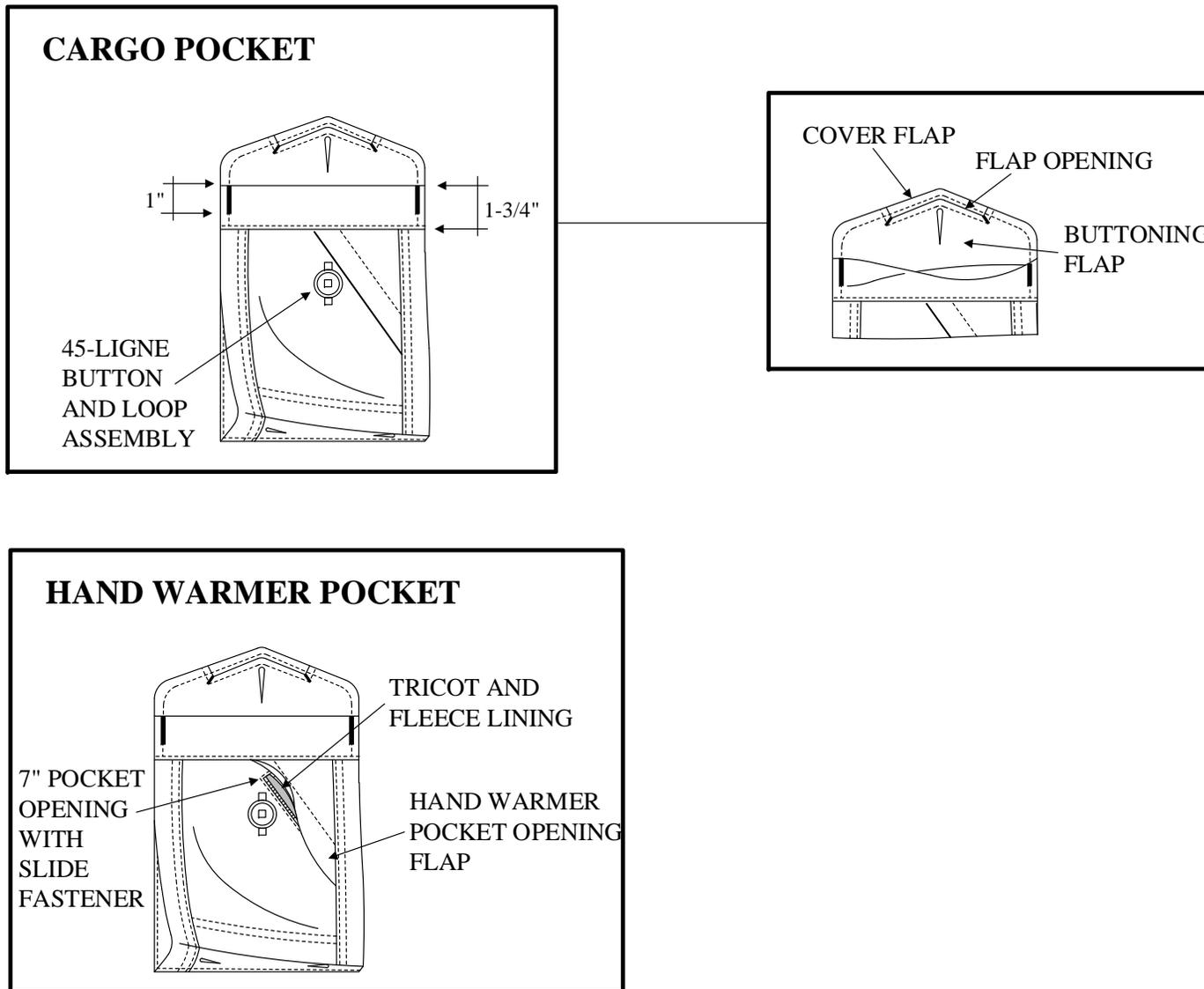


Figure 4: Chest and Sleeve Pockets System

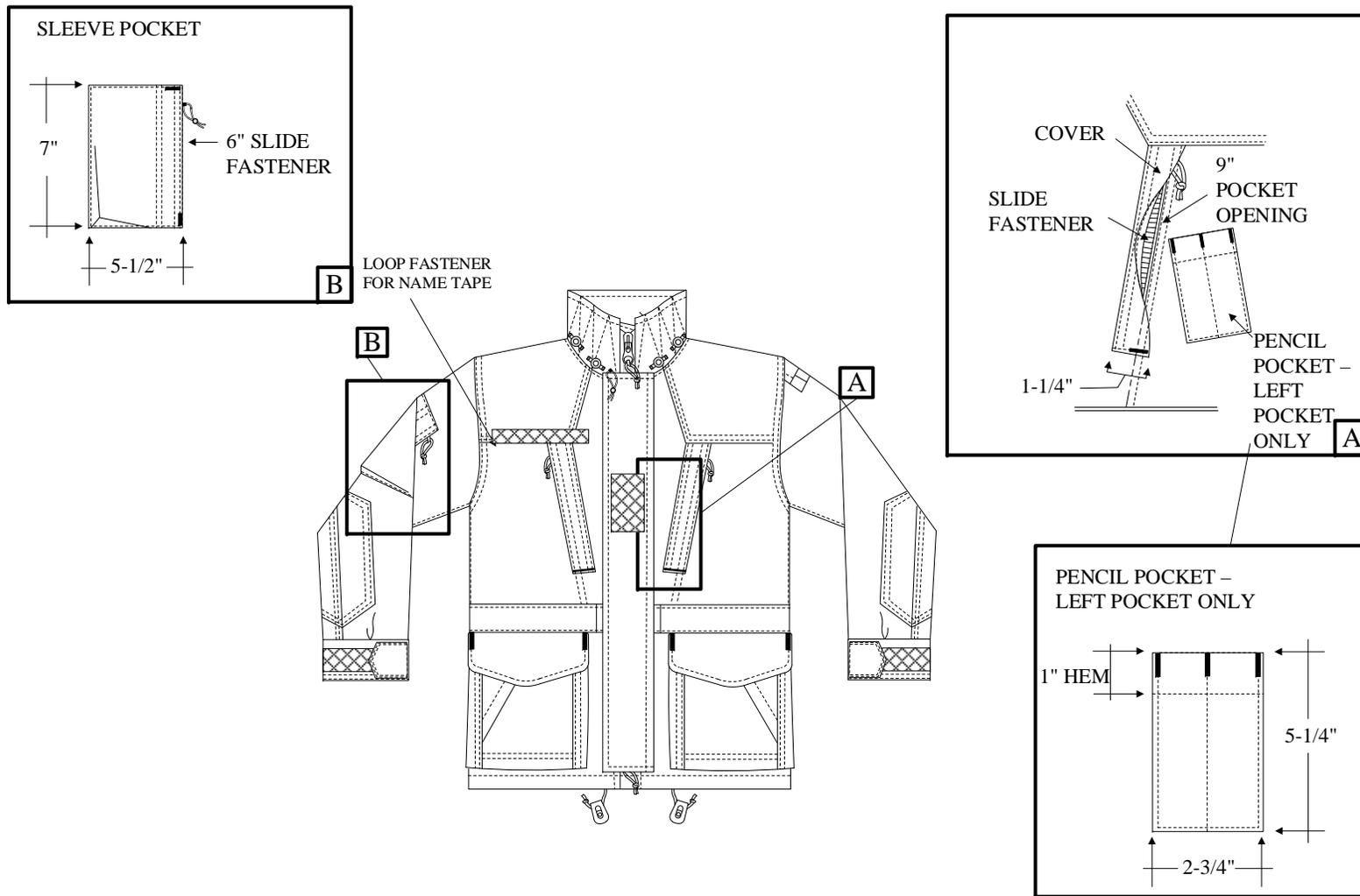


Figure 5: Front Fly System

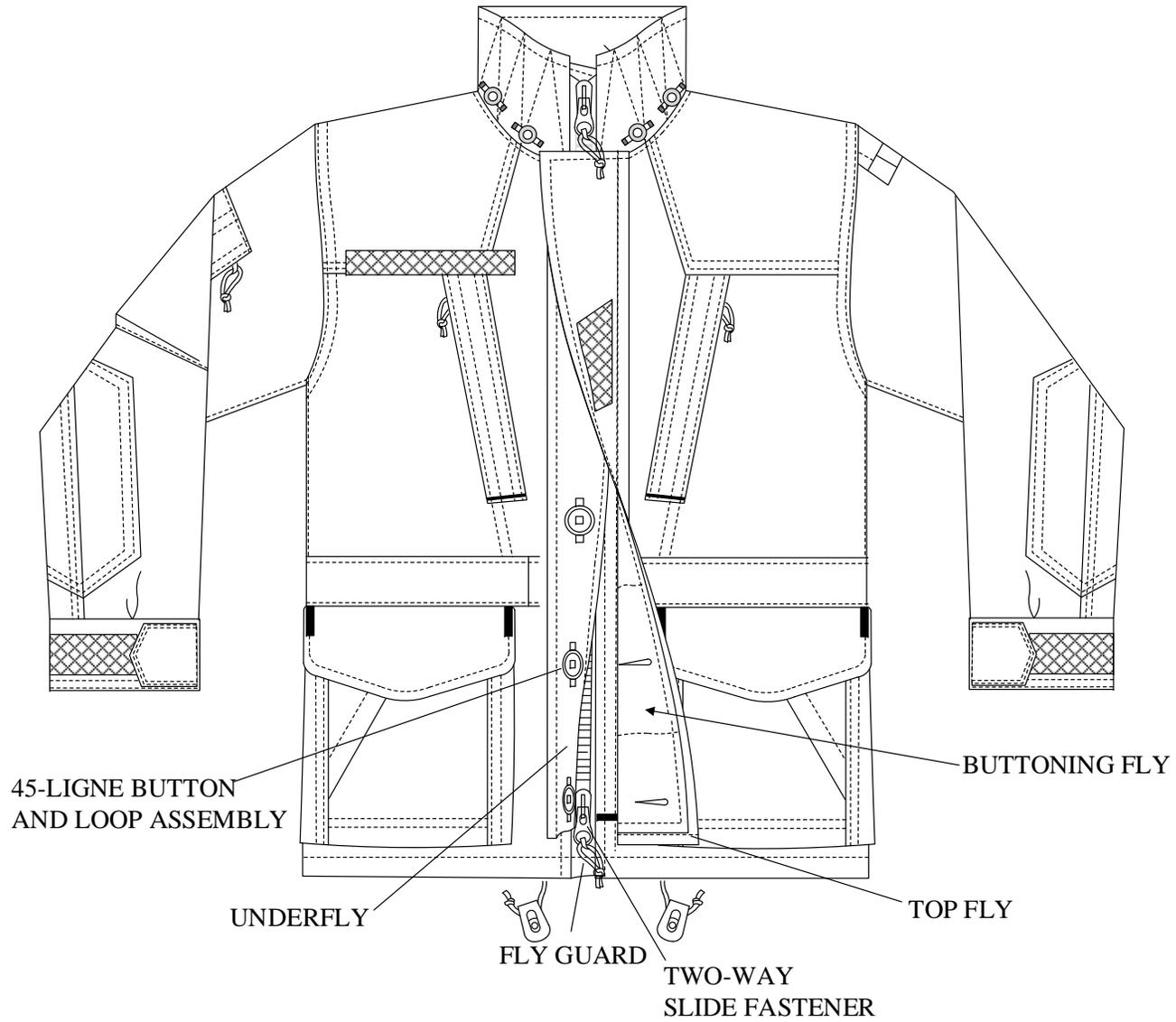


Figure 6: Underarm Venting System

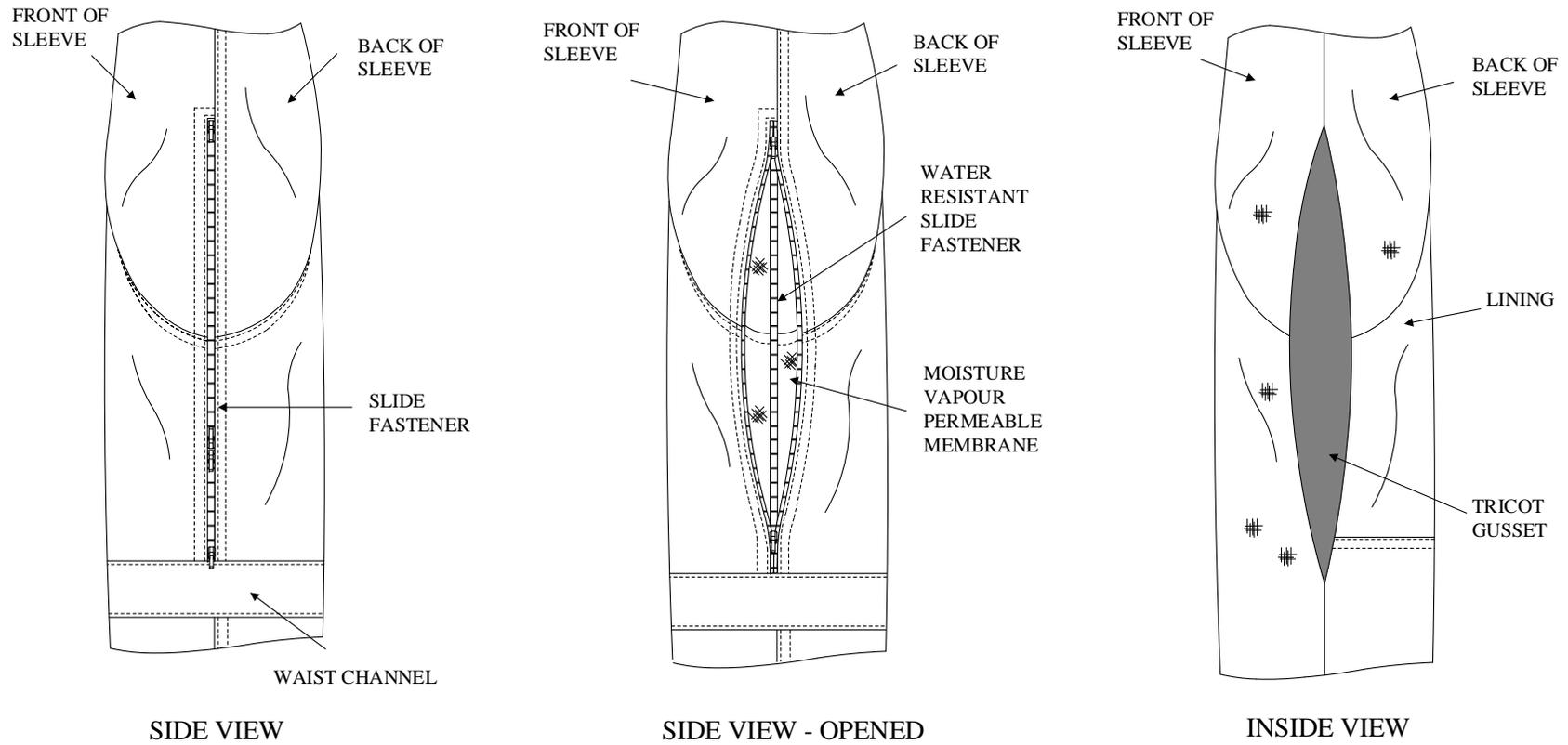
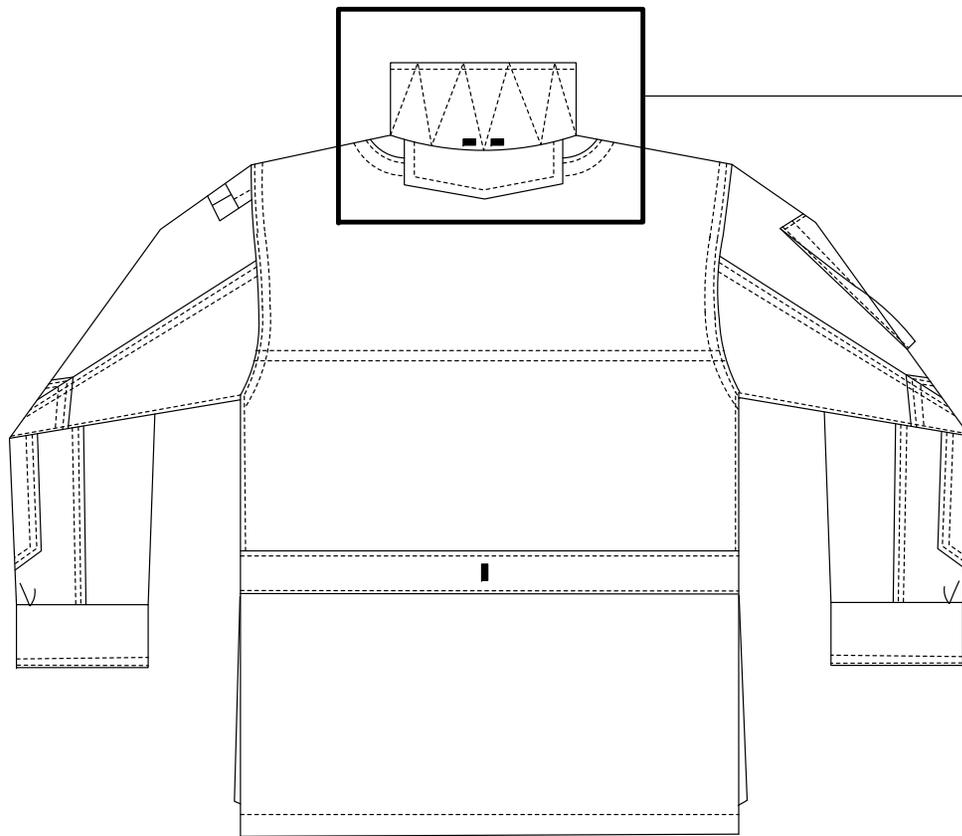


Figure 7: Flap Closure for Back Yoke



FINISHED FLAP DIMENSIONS

WIDTH AT
CENTER
BACK - 2"

A diagram of a finished flap, showing a curved shape with a dashed line indicating the width at the center back. A vertical double-headed arrow indicates the measurement.

BACK YOKE CLOSURE

A detailed diagram of the back yoke closure mechanism. It shows a central panel with a yoke opening and two side panels. The closure is achieved using hook fastener tape and loop fastener tape. The diagram is labeled with the following terms:

- HOOK FASTENER TAPE
- BACK YOKE OPENING
- LOOP FASTENER TAPE

Figure 8: Hood

BACK VIEW

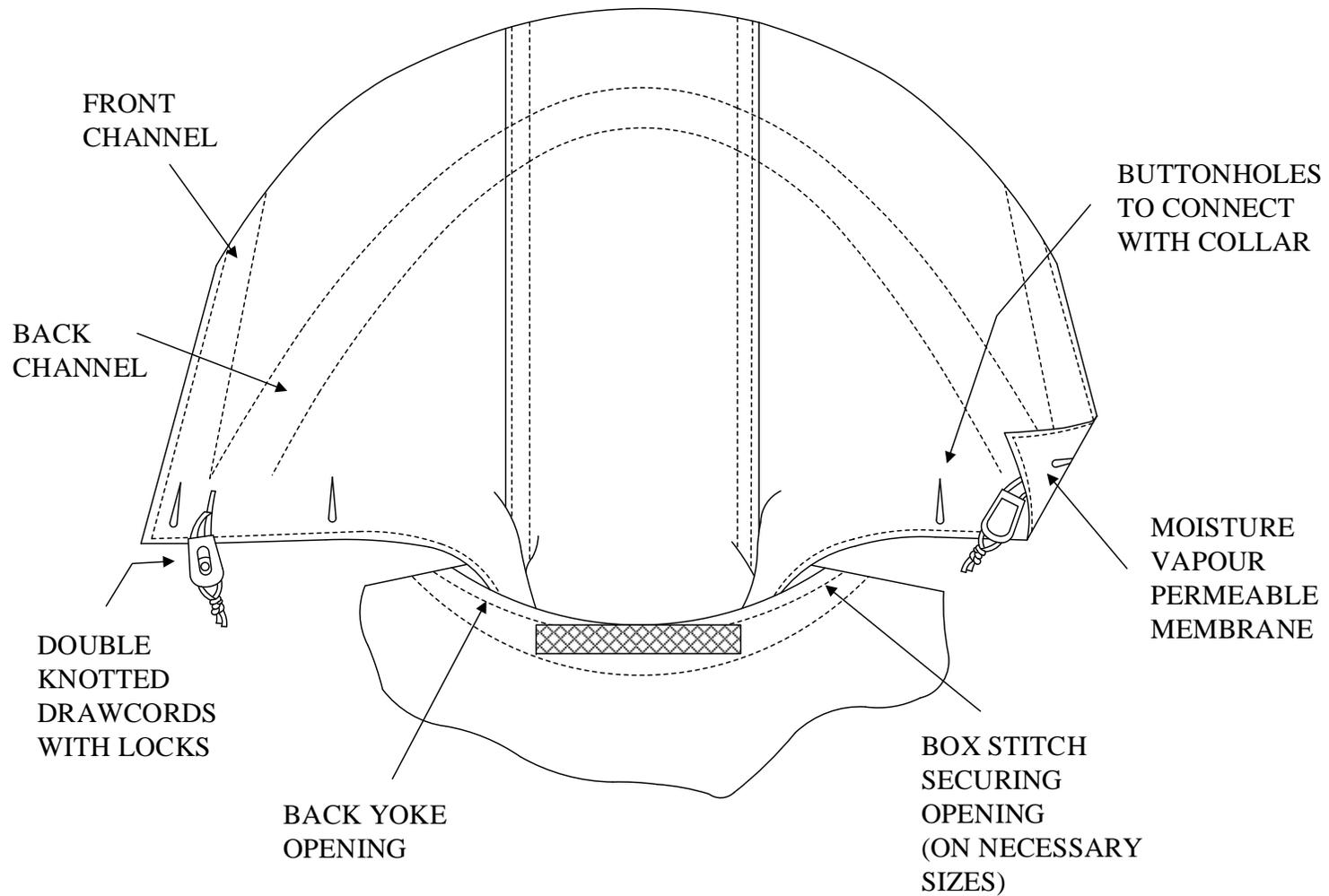
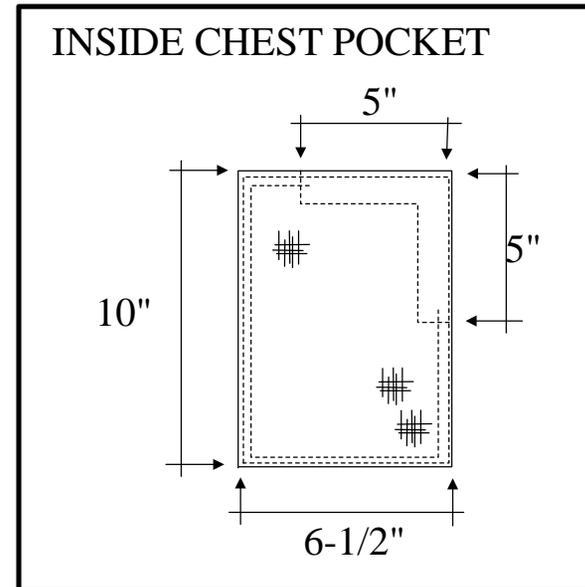
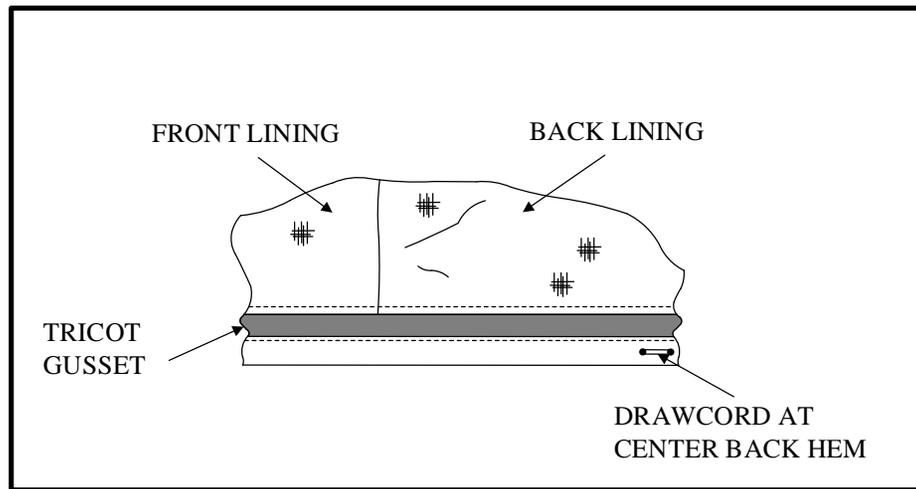


Figure 9: Lining Details



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Figure 10: Marking and Care Label

ITEM & CONTRACT INFO	ARTICLET INFO SUR LE CONTRAT	<p>COAT, COLD WEATHER, MULTICAM® MANTEAU, TEMP FROID, MULTICAM® NSN/NNO: 8415-20-XXX-XXXX</p> <p>SIZE/TAILLE 7040</p> <p>NATO SIZE/TAILLE OTAN: XXXX-XXX CONTRACT NO./NO. DE CONTRAT: WXXXX-XXXXXXX ABC CONTRACTOR NAME/NOM DE L'ENTREPRENEUR: Jones & Company DATE OF/DE MANUFACTURE: MM/YY FIBRE CONTENT: XXXXXXXXXXXX</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  40 C </div> <div style="text-align: center;">  Tumble dry on low heat. / Séchage par culbutage T/basse. </div> <div style="text-align: center;">  Iron at low temperature. Do not steam press. / Repasser a T/basse. Ne pas repasser a la vapeur. </div> <div style="text-align: center;">  Do not bleach. / Ne pas javeliser. </div> <div style="text-align: center;">  Do not dry-clean. / Ne pas nettoyer à sec. </div> </div> <hr/> <p>1. DRY CLEAN ONLY WHEN PROPER LAUNDERING FAILS TO REMOVE SOIL. 2. DO NOT STITCH OR PUNCTURE THE MEMBRANE IN THIS GARMENT.</p> <hr/> <p>1. NETTOYAGE A SEC LORSQUE LE BLANCHIMENT APPROPRIÉ NE PARVENT PAS A ENLEVER LA SALETÉ. 2. NE PAS COUDRE OU PERFORER LA MEMBRANE INTERNE IMPERMÉABLE.</p> <hr/> <p>I.D. _____</p>
CARE SYMBOLS	SYMBOLS D'ENTRETIEN	
CARE INSTRUCTIONS	CONSIGNES D'ENTRETIEN	
USERID	ID DE L'UTILISATEUR	

Appendix 2 SCALE OF MEASUREMENTS

MEASUREMENTS OF BODY				MEASUREMENTS OF GARMENT														
				GIRTH MEASUREMENTS SLIDE FASTENER CLOSED			FULL LENGTH TO BOTTOM		SLEEVES			HOOD		SLIDE FASTENER LENGTH AT CENTRE FRONT	SLIDE FASTENER LENGTH AT UNDER- ARM			
SIZES BY HEIGHT AND CHEST	NATO SIZES	HEIGHT WITHOUT SHOES	CHEST OVER SHIRT	CHEST	WAIST FULLY EX- TENDED	BOTTOM FULLY EX- TENDED	CENTRE FRONT FROM COLLAR	CENTRE BACK FROM BASE OF HOOD	COLLAR EDGE TO EDGE AT NECK SEAM	WIDTH AT BACK IN LINE WITH BACK SLEEVE SEAM	LENGTH AT UNDER ARM SEAM INCLUDING CUFF	WIDTH AT SCYE	LENGTH OF CUFF FULLY EXTENDED			FRONT OPENING EDGE TO EDGE	FRONT TO BACK OVER CROWN	
6432	5060-7585	5'1"	X- SHORT	29-32	44	41	27	29	18	18 1/4	21 1/2	21 1/2	10 1/2	30	23	28	14	
6436	5060-8595	to		33-36	48	45		29 1/8	19	19 3/4		22 1/2	11		23 1/4			
6440	5060-9505	5'3-1/2"		37-40	52	49		29 1/4	20	21 1/4		23 1/2	11 1/2		23 1/2			
6736	6070-8595	5'4" to 5'6 1/2"	SHORT	33-36	48	45	28 1/2	30 5/8	19	19 3/4	22 1/2	23 1/4	11	30	23 1/4	29 1/2	14	
6740	6070-9505			37-40	52	49		50	30 3/4	20		21 1/4	24 1/4		11 1/2			23 1/2
6744	6070-0515			41-44	56	53		54	30 7/8	21		22 3/4	25 1/4		12			23 3/4
6748	6070-1525			45-48	60	57		58	31	22		24 1/4	26 1/4		12 1/2			24
7036	7080-8595	5' 7" to 5'9 1/2"	REG	33-36	48	45	30	32 1/8	19	19 3/4	23 1/2	24	11	30	23 1/4	31	14	
7040	7080-9505			37-40	52	49		50	32 1/4	20		21 1/4	25		11 1/2			23 1/2
7044	7080-0515			41-44	56	53		54	32 3/8	21		22 3/4	26		12			23 3/4
7048	7080-1525			45-48	60	57		58	32 1/2	22		24 1/4	27		12 1/2			24
7052	7080-2535			49-52	64	61		62	32 5/8	23		25 3/4	28		13			24 1/4
7336	8090-8595	5' 10" to 6' 1/2"	TALL	33-36	48	45	31 1/2	33 5/8	19	19 3/4	24 1/2	24 3/4	11	30	23 1/4	32 1/2	14	
7340	8090-9505			37-40	52	49		50	33 3/4	20		21 1/4	25 3/4		11 1/2			23 1/2
7344	8090-0515			41-44	56	53		54	33 7/8	21		22 3/4	26 3/4		12			23 3/4
7348	8090-1525			45-48	60	57		58	34	22		24 1/4	27 3/4		12 1/2			24
7352	8090-2535			49-52	64	61		62	34 1/8	23		25 3/4	28 3/4		13			24 1/4
7640	9000-9505	6' 1" to 6'3 1/2"	X-TALL	37-40	52	49	33	35 1/4	20	21 1/4	25 1/2	26 1/2	11 1/2	30	23 1/2	34	14	
7644	9000-0515			41-44	56	53		54	35 3/8	21		22 3/4	27 1/2		12			23 3/4
7648	9000-1525			45-48	60	57		58	35 1/2	22		24 1/4	28 1/2		12 1/2			24
7652	9000-2535			49-52	64	61		62	35 5/8	23		25 3/4	29 1/2		13			24 1/4
TOLERANCE PLUS OR MINUS				1"	1"	1"	3/4	3/4	1/2	1/2	1/2	1/2	1/4	1/2	1/4	0	0	