



Royal Canadian Mounted Police
Gendarmerie royale du Canada

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Specification

Trousers, Windsuit, Bicycle

This document has 16 pages including the drawings.

This document was created in English.

The document is available in English and French.

English/Anglais
Français/French

The photograph on this page is for reference only.



RCMP VIEWING SAMPLE

A viewing sample, when available, will be supplied to the successful bidder.

This will be used for the guidance of the manufacturer in all factors not covered by this specification or referred to therein. Variation from the specification may appear in the sample in which case the specification shall govern.

It may be obtained from:

Royal Canadian Mounted Police
ATTN: Uniform and Equipment Program
(440 Coventry Road, Warehouse Building)
1200 Vanier Parkway
Ottawa, Ontario
K1A 0R2

It will be sent “prepaid” and is to be returned “prepaid”.

The viewing sample shall be returned to the RCMP in the same condition as received by the manufacturer. Lost or damaged viewing samples shall be replaced by an identical item or the RCMP shall be reimbursed for the cost of an acceptable replacement.

SPECIFICATION
Trousers, Windsuit, Bicycle

1. Definitions

- 1.1 This specification shall govern the manufacture and inspection of the Trousers, Windsuit, Bicycle. The specific item covered under this specification with stock number is as follows:
- i. 8282 – Trousers, Windsuit, Bicycle/Pantalon coupe-vent de cycliste
 - ii. 8283 – 000 Trousers, Windsuit, Bicycle, Specials,/Pantalon coupe-vent de cycliste, tailles spéciales
- 1.2 This specification, drawing, viewing sample, or other information issued in connection therewith, may only be used for specific enquiries, solicitations, or orders placed on behalf of the Royal Canadian Mounted Police.
- 1.3 This specification supersedes all previous specifications for R.C.M.P. Trousers, Windsuit, Bicycle.
- 1.4 This specification has been translated into French from this original English language document.

2. Applicable Specifications

- 2.1 The following publications are applicable to this specification and to the issues in effect on the date of the solicitation, unless otherwise specified.
- 2.2 CAN/CGSB 4.2, Textile Test Methods; 9.2-M90 (R2013), 12.1-2016, 58-2004, 19.1-2004 R2013, 22-2004 (2013), 26.2-94 (R2012)
- 2.3 CSA-Z96-15 High-Visibility Safety Apparel
- 2.4 CAN/CGSB 4.131-93, Thread, Polyester, Polyester or Cotton Covered
- 2.5 CAN/CGSB 86.1-2003 Care Labelling of Textiles
- 2.6 ASTM Standard Practices; ASTM E1164-12e1, ASTM E308-15, ASTM E808-01 (2016), ASTM E809-08 (2013), ASTM D5169-98 (2015), ASTM D5170-98 (2015)
- 2.7 AATCC Test Methods; 16.3-2014, 135-2015

2.8 ISO 105-B02:2014

2.9 Dupont Stretch 074

3. **General Requirements**

3.1 The article or material covered by this specification shall be free from material and manufacturing defects that may affect its appearance or serviceability. In all particulars not covered by this specification or contract documents, production shall be equivalent in all respects to the viewing sample.

3.2 **Design** – Trousers, Windsuit, Bicycle shall be a semi-fitted pant designed to be worn while riding a bicycle. The trousers are designed to meet CAN/CSA Z96-15 requirements for a Class 3, Level 2 garment when worn in conjunction with the Jacket, Windsuit, Bicycle or the Jacket, High Visibility.

4. **Detail Requirements**

4.1 **Components**

4.1.1 **Shell Material** – The shell material shall be 100% polyester, twill weave with mechanical (weft) stretch, $130\text{g/m}^2 \pm 8\text{g/m}^2$, fluorescent yellow-green and dark navy blue in colour meeting the requirements as outlined in Table I and Table II. Doubletex Inc. fabric Synergi SD2 with DWR (colours: fluorescent yellow-green #10899A and navy #285043) is known to meet the above requirements.

4.1.2 **Lining Material** – The lining material shall be 100% warp knitted polyester, $70\text{g/m}^2 \pm 8\text{g/m}^2$, black in colour, equal in all respects to the viewing sample.

4.1.3 **Fleece** – 100% polyester fleece, single velour face, jersey back, $213\text{g/m}^2 \pm 8\text{g/m}^2$, colour black, equivalent to viewing sample.

4.1.4 **Retroreflective Markings** – The retroreflective markings shall be exposed, wide angle, retroreflective lens, silver material in the form of a heat transfer film, 5cm wide. It shall meet all the retroreflective performance requirements outlined in Section 6, meeting Table 5 in the CAN/CSA Z96-15 High-Visibility Safety Apparel standard. All retroreflective markings shall meet a minimum coefficient of retro reflection, R_A , that are determined in accordance with the procedures defined in

ASTM E808-01 (2016) and E809-08 (2013). 3M Scotchlite™ 8725N silver material in the form of a heat transfer film is known to meet these requirements.

- 4.1.5 **Slide Fasteners** – For trouser leg openings, trouser pockets, and trouser fly opening shall be a closed end coil type slide fastener, black in colour, with a semi-locking slider, YKK 72305: 45 CF DS1 V3 (only).

4.1.5.1 **Slide Fastener Lengths**

Slide Fastener	Size	Length
Side Seam	XS-XXXL	10"
Fly	XS-S	6 ½"
	M-XL	7"
	XXL-XXXL	7 ½"

- 4.1.6 **Hook and Loop Tape** – Shall be woven nylon, black in colour, with a high life cycle. The combined hook and loop shall have no less than 8 P.S.I initial lengthwise shear strength when tested to ASTM D5169-98 (2015), standard test method for shear strength (dynamic method) of hook and loop touch fasteners. The initial peel strength shall not be less than 1 P.I.W when tested to ASTM D5170-98 (2015) standard test method for peel strength (T method) of hook and loop touch fasteners. After 1000 cycles the combined hook and loop shall be not less than 5 P.I.W with a minimum lengthwise shear of 4 P.S.I.

- 4.1.7 **Dome Fasteners** – The dome fasteners shall be a standard type 24 ligne fastener. All metal parts to be brass with a 15mm matte black, powdered coated cap, Universal SW61 (only).

- 4.1.8 **Thread** – The thread shall be polyester wrap, polyester core, Tex 50, Class B of matching colour, meeting CAN/CGSB 4.131-93.

- 4.2 **Size and Dimensions** – Trousers, Windsuit, Bicycle to this specification shall be supplied in the sizes specified by the RCMP and to the dimensions given in the scale of measurements and drawings forming part of this specification.

4.3 **Construction**

- 4.3.1 **Stitching** - All stitching shall be lockstitch. There shall be no less than three or more than four stitches per centimetre. The beginning and ending of all stitching shall be securely backstitch tacked, unless secured by other stitching.

- 4.3.2 **Interior Body** – The trousers shall be fully lined on the interior with the knit material specified in para. 4.1.2.
- 4.3.3 **Waistband** – The waistband, constructed from navy shell material as specified in para. 4.1.1, and shall be 4.5 cm wide when finished. It shall be fully elasticized at the back and flat at the front, opening at the fly front. The front fly shall be secured with a dome fastener as per para. 4.1.7 and centered on the waistband opening as shown in drawing #1. Five (5) adjustable hook and loop tape secured belt loops shall be sewn to the trouser, the top of the loops positioned at the top of the waistband and the bottom of the loops secured to the trouser body. Two (2) loops on the front of the waistband and three (3) on the back as shown in drawings #1 and #2. The waistband shall be constructed and dimensioned as per the drawings and scale of measurements.
- 4.3.4 **Fly Front Opening** – The fly front, fly front curtain and the inner fly facing shall be constructed from navy shell material specified in para. 4.1.1. There shall be a slide fastener in accordance with para. 4.1.5 and lengths as per the scale of measurements. The fly front opening at the waistband shall be equipped with a dome fastener as per para. 4.1.7. The front fly shall be constructed and dimensioned as per the scale of measurements and drawings.
- 4.3.5 **Pockets** – The trouser shall have two vertical pockets positioned and dimensioned as per scale of measurements and viewing sample with slide fasteners as specified in para. 4.1.5. The slider shall be in an upright position when the pocket is closed. The pocket bag shall be made from material as specified in para. 4.1.1 and shall be dimensioned as per the drawings and the viewing sample.
- 4.3.6 **Side Seams** – Both side seams from waistband to hem shall have a stripe 3.5cm wide made from the shell material in para. 4.1.1 in the fluorescent yellow colour. The stripe shall be set on the front side of the garment. The bottom portion of the side seam shall be equipped with a slide fastener as specified in para. 4.1.5, the length of the slide fastener shall be as per the scale of measurements.
- 4.3.7 **Legs** – The front of both leg panels shall have an insert panel at the knees made of the shell material specified in para. 4.1.1, in the navy colour, and lined with the fleece specified in para. 4.1.3. The seam allowances from the insert panel shall be turned towards the leg panels and topstitched with a 6mm gauge. The front to back of each trouser leg at the calf level shall have a panel 10.5 cm in height and constructed of a single layer of shell material in para. 4.1.1 in the fluorescent yellow colour positioned 14cm above the hem. The panel shall be topstitched at the top

and bottom with a 2mm gauge. A 5 cm wide piece of retro-reflective material as specified in para. 4.1.4 shall be heat applied to the face side 2.5cm from the finished edge. The leg hem shall be 3.5 cm finished with the raw edge folded under 1 cm and stitched down on the folded edge using a 3mm gauge. Both legs shall have a 9 cm long adjustment strap attached to the bottom portion of the front leg stripe as shown in drawing #1 with a 7 cm x 2.5 cm piece of hook tape for adjustability. The back portion of the trouser leg shall have the corresponding 15 cm x 2.5 cm piece of loop tape to secure the adjustment strap.

- 4.3.8 **Retroreflective Pattern** - The retroreflective as specified in para. 4.1.4 shall be heat transferred to the shell material and positioned as per drawing #1. Each leg shall have one retroreflective stripe circling the lower trouser leg. All retroreflective material shall be permanently attached to the shell material by means of heat sealing. No stitching shall be employed in attaching the retroreflective material, and the heat-sealing shall endure for the life of the garment. Retroreflective material shall not cover other retroreflective material in order to provide the best bond between the retroreflective material and the shell material. There shall be no loose or unbonded edges, or loss of film.
- 4.3.9 **Identification Label** – The trousers shall have a durable blank label 7.5 cm x 2 cm applied separately below the marking and cleaning label used for the inscription of the wearers’ name.
- 4.3.10 **Marking & Cleaning Instructions Label** – The trousers shall have a durable label positioned and sewn to the bottom of the inside pocket bag as shown in drawing #2. The text shall be permanent inks of a contrasting colour and shall withstand the life of the garment with no apparent change in appearance. All text except for the RCMP stock number and size shall be in size 6 font. The RCMP stock number and size shall appear in size 8 font. The manufacturer’s identification shall not appear anywhere on the garment except where indicated on the label. The label shall contain the following information in English and French:
1. Item name in English as written in para. 1.1.
 2. Item name in French as written in para. 1.1.
 3. RCMP stock number - reference contract documents. (Ex. 8280 000)
 4. Size and height group of the article, combining the size designation referenced in the English and French contract documents. (Ex. L/R - G/R)
 5. Date of manufacture, in numeric format year/month (Ex. 2017/11)
 6. Your manufacturer identification (Company name or number).
 7. Print information as shown below.

1		
2		
3		
4		
5		
6		
7		
	Machine wash - warm (40°C)	Laver à la machine – à l'eau tiède (40°C)
	Do Not use fabric softener or chlorine bleach	Ne pas utiliser d'agent assouplissant ou d'agent de blanchiment
	Tumble dry- low	Séchage par culbutage – à température basse
	Steam iron – low	Repassage à vapeur - à température basse
	DO NOT DRY CLEAN.	NE PAS NETTOYER À SEC.
	Trousers, when worn with 8280 Jacket, Windsuit, Bicycle meet: CAN/CSA Z96-15 Class 3, Level 2 Fluorescent Yellow-Green	Le pantalon, lorsque porté avec le blouson coupe-vent de cycliste 8280, doit respecter la Norme Z96-15 de la CAN/CSA Classe 3, Niveau 2 Jaune-vert fluorescent

Note: The manufacturer's identification shall not appear anywhere on the garment except on the garment label as indicated.

5. Quality Assurance Provisions

- 5.1 **Responsibility for Inspection** – Unless otherwise stipulated in the contract, it is the prime contractor's responsibility to satisfy the RCMP, Uniform and Equipment Program that the material and services being supplied conform to this specification. This may be accomplished by performing the tests specified in this specification or by demonstrating to the satisfaction of the RCMP, Uniform and Equipment Program that conformity to this specification of manufacturing processes is assured. The contractor shall use any independent, North American, ISO 9001 certified and ISO 17025 "Textile" certified testing facilities.
- 5.2 The RCMP, Uniform and Equipment Program reserves the right to perform any inspection considered necessary to ensure the material and services conform to the specified requirements. For the purpose of inspection, a portion of each delivery not exceeding two percent or two out of any number delivered under 100 may be put to tests that could destroy the articles. If found to be inferior or not in accordance with this specification, all articles so destroyed shall be replaced by others of proper quality and pattern at the expense of the contractor. The entire delivery may also be rejected if it is found that articles previously rejected due to non-repairable defects are redelivered for inspection.
- 5.3 The contractor will be promptly notified when any articles are not accepted and such articles will be returned at the contractor's risk and expense.

6. **Scale of Measurement Definitions and Location References**

(Refer to the Scale of Measurements and Drawing No. 3).

- 6.1 **Waist Circumference, Relaxed** – With the waistband closed, the waist shall be the total circumference from centre front to centre front, centered in the middle of the waistband, with the elastic relaxed. (A)
- 6.2 **Waist Circumference, Stretched** – With the waistband closed, the waist shall be the total circumference from centre front to centre front, centered in the middle of the waistband, with the elastic stretched. (B)
- 6.3 **Inseam** – When placed flat, the inseam shall be measured from the crotch seam, along the leg seam, to the bottom of the trouser hem. (C)
- 6.4 **Outseam, including Waistband** – When placed flat, the outseam shall be measured from the top edge of the waistband, along the leg seam, to the bottom of the trouser hem. (D)
- 6.5 **Knee Circumference** – The trouser leg shall be folded in half so the hem meets the crotch seam. The knee shall be measured across the trouser at the fold. The result shall be doubled to measure total circumference. (E)
- 6.6 **Leg Bottom Circumference** – The leg bottom shall be measured at the bottom edge of the trouser hem. The result shall be doubled to measure total circumference. (F)
- 6.7 **Seat Circumference** – When placed flat, the seat shall be measured across the trousers at the widest part. The result shall be doubled to measure total circumference. (G)
- 6.8 **Front Rise** – The front rise shall be measured from the top edge of the waistband along the front rise seam to the crotch point. (H)

Scale of Measurements

SIZE DESIGNATION		BODY MEASUREMENTS		GARMENT MEASUREMENTS							
Height	Size	Waist Over Shirt		Waist Circumference Relaxed	Waist Circumference Stretched	Inseam	Outseam Including Waistband	Knee Circumference	Leg Bottom Circumference	Seat Circumference	Front Rise
		Inches	cm								
Regular 170 - 179cm (5'7" - 5'10")	XS	25 - 27	63.5 - 68.5	61.5	81.5	77	104	44	38	114	31.5
	S	28 - 30	71 - 76	69	89	78.5	106	46	38	121.5	32
	M	31 - 33	78.75 - 83.5	76.5	96.5	80	108	48	40	129	32.5
	L	34 - 36	86.5 - 91	84	104	81.5	110	50	40	136.5	33
	XL	37 - 39	94 - 98.5	91.5	111.5	83	112	52	42	144	33.5
	XXL	40 - 42	101.5 - 106	99	119	84.5	114	54	42	151.5	34
	XXXL	43 - 45	109.25 - 113.5	106.5	126.5	86	116	56	44	159	34.5
TOLERANCE: ±				1.5	1.5	1.0	1.5	0.5	0.5	1.5	1.0
MEASUREMENT LOCATION				A	B	C	D	E	F	G	H

NOTE: All dimensions are in centimetres unless otherwise indicated.

TABLE I
Properties of Shell Material – All Colours

	TEST	RCMP REQUIREMENT	TEST METHOD
1	Breaking Strength (N)	Warp: 450 Weft: 650	<ul style="list-style-type: none"> • CAN/CGSB-4.2 No. 9.2-M90 (R2013)
2	Tear Strength (N)	Warp: 13 Weft: 24	<ul style="list-style-type: none"> • CAN/CGSB-4.2 No.12.1-2016
3	Dimensional Change after machine washing	Warp: 2.0% max. Weft: 2.0% max.	<ul style="list-style-type: none"> • CAN/CGSB-4.2 No. 58-2004 After 5 cycle (I) (F) OR • AATCC 135-2015 (1) (II) (Aiii)
4	Colourfastness To Washing	Grey Scale 4 or better	<ul style="list-style-type: none"> • CAN/CGSB-4.2 No.19.1-2004 (R2013), test no. 2
5	Colourfastness To Crocking - Dry - Wet	Dry: Grey Scale 3 or better Wet: Grey Scale 3 or better	<ul style="list-style-type: none"> • CAN/CGSB-4.2 No.22-2004 (2013)
6	Water Repellency - Initial - After 3 launderings	Initial: 100% After 3 launderings: no less than 90%	<ul style="list-style-type: none"> • CAN/CGSB-4.2 No. 26.2-94 (R2012)
7	Stretch (%) Weft Only	Warp: N/A Weft: 18% ± 2%	<ul style="list-style-type: none"> • Dupont Stretch 074
8	Colour Fastness - To Light (Xenon)	Light fastness shall be equal or better than Grade 4 by Grey Scale for Colour change after 40 AATCC Fading Units.	<ul style="list-style-type: none"> • AATCC 16.3-2014 Test Option 3 OR • ISO 105-B02:2014

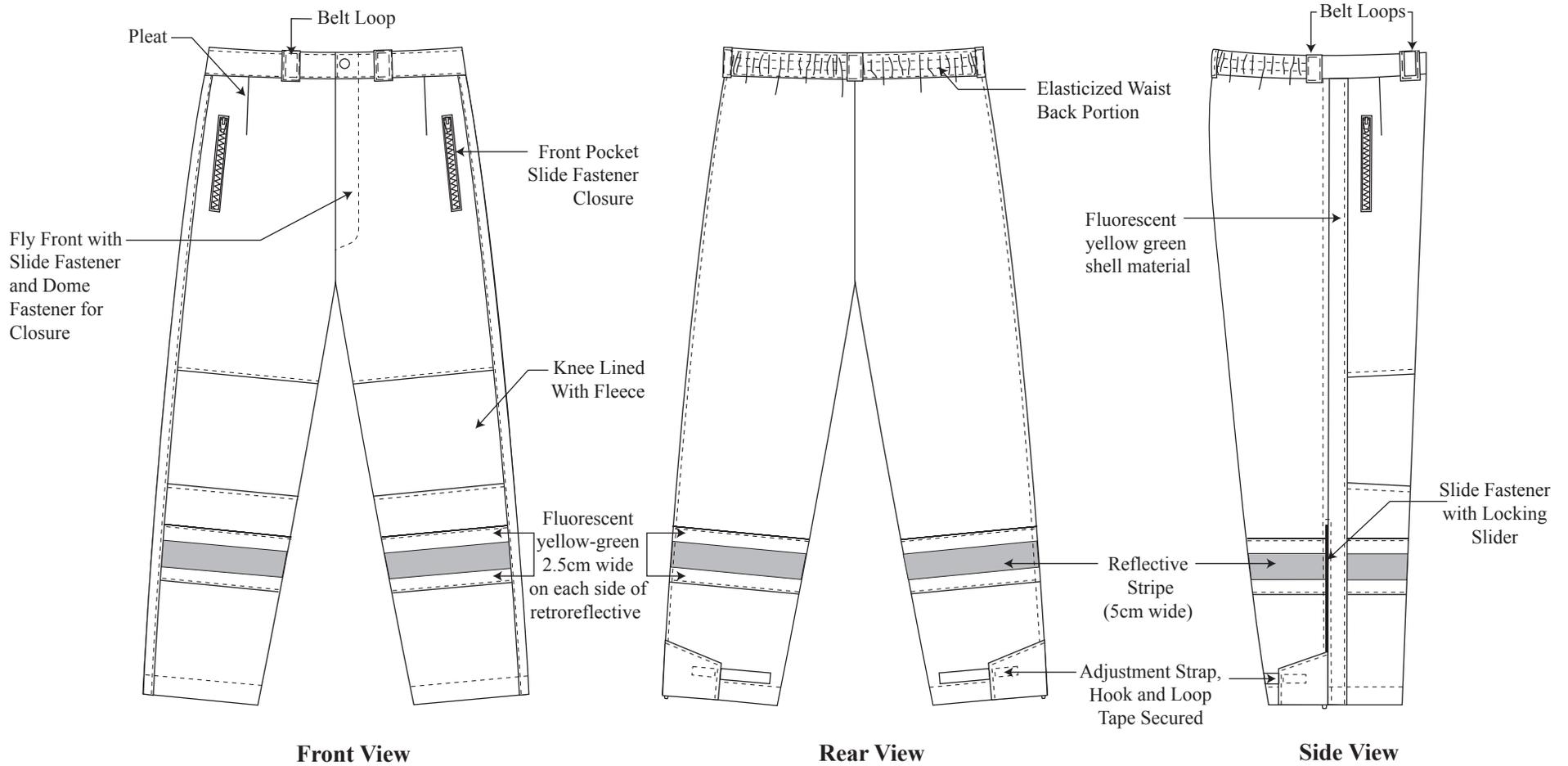
TABLE II
Properties of Shell Material
Fluorescent Yellow-Green Colour ONLY

CSA-Z96-15 High Visibility Apparel Requirements			
	TEST	RCMP REQUIREMENT	TEST METHOD
1	Background - Material Colour	<u>Initial:</u> CSA-Z96-15, Table 2A - Fluorescent yellow-green <u>After colourfastness to light (AATCC 16.3-2014 Test Option 3, 40 AATCC Fading Units):</u> CSA-Z96-15, Table 2A - Fluorescent yellow-green	ASTM E1164-12
2	Colour Fastness - To Light (Xenon)	Light fastness shall be equal or better than Grade 4 by Grey Scale for Colour change after 40 AATCC Fading Units.	<ul style="list-style-type: none"> • AATCC 16.3-2014 Test Option 3 OR • ISO 105-B02:2014

Drawing # 1

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Windsuit, Bicycle, Trousers



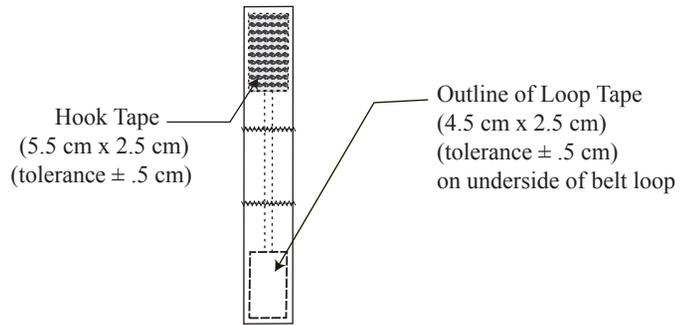
NOT TO SCALE

All measurements are shown in centimeters unless otherwise indicated
± 0.5 cm tolerance acceptable unless otherwise indicated.

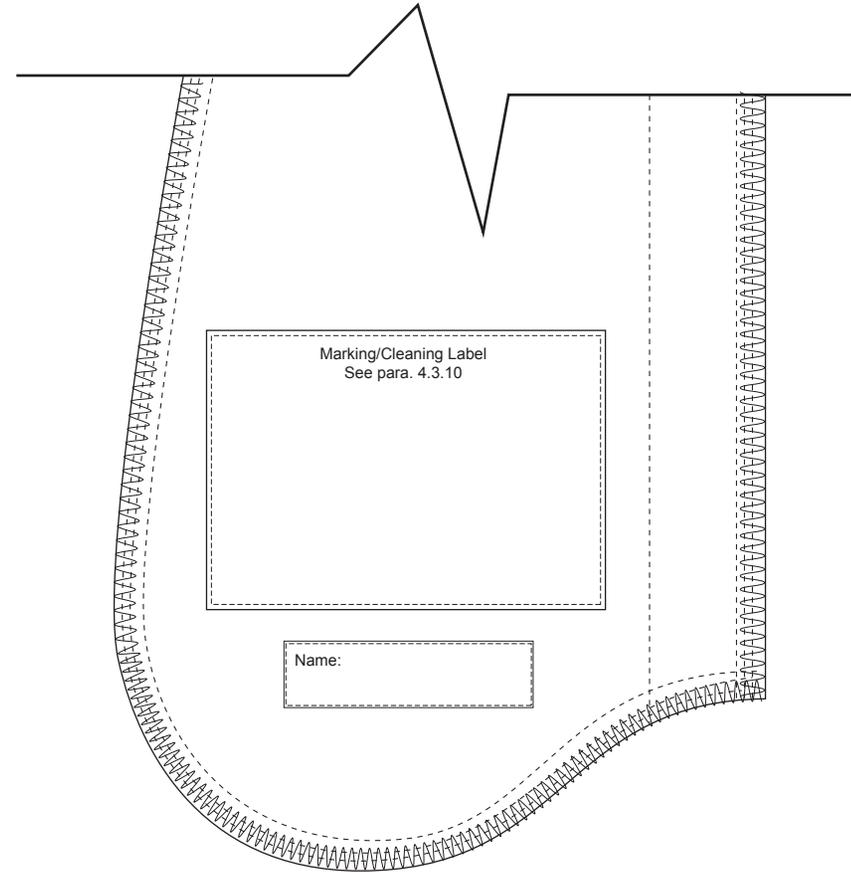
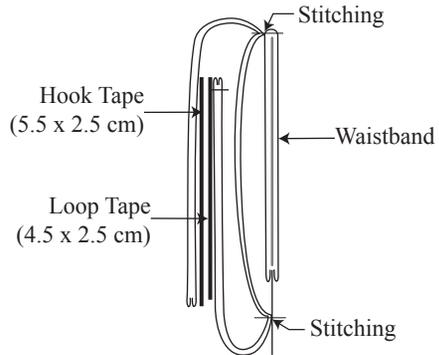
Drawing # 2

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Windsuit, Bicycle, Trousers



Belt Loop Details



Pocket, Interior View

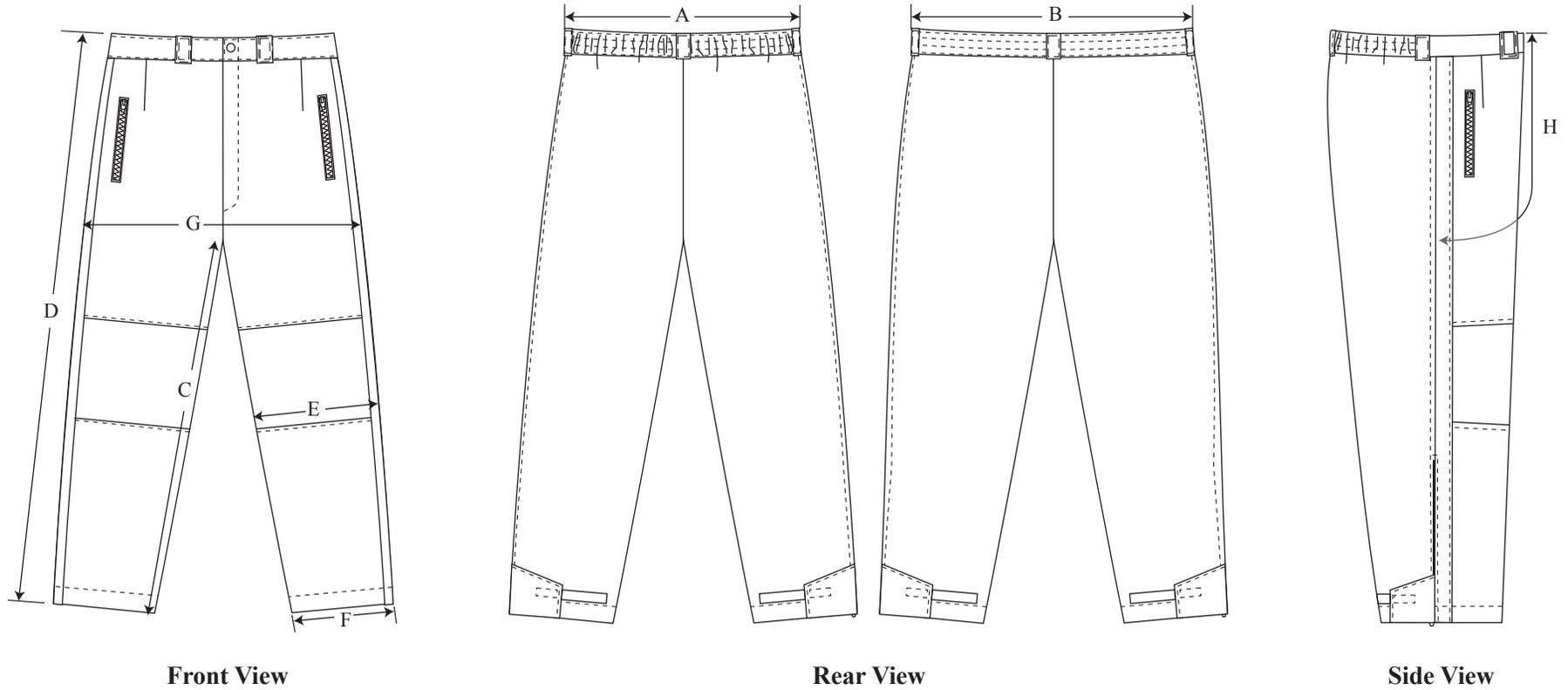
NOT TO SCALE

All measurements are shown in centimeters unless otherwise indicated
 ± 0.5 cm tolerance acceptable unless otherwise indicated.

Drawing # 3

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Windsuit, Bicycle, Trousers
Measurement Location Chart



NOT TO SCALE