

PRIVATE SPECIFICATION

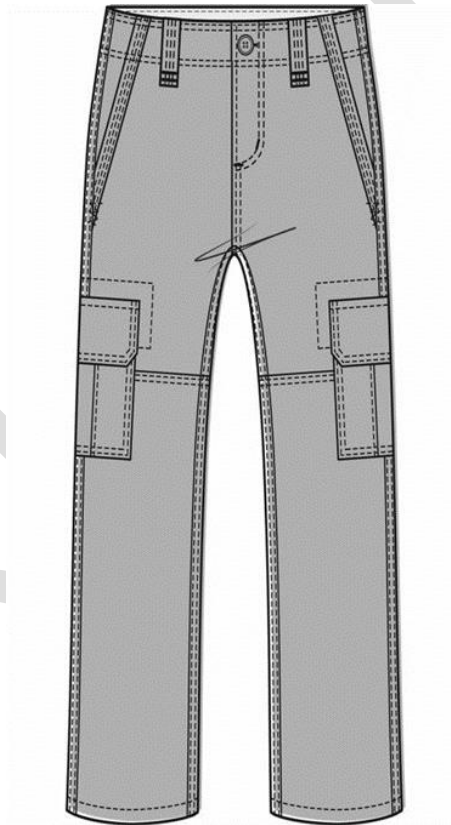
Prepared for



SOUTH AFRICAN AIRWAYS

A STAR ALLIANCE MEMBER 

CARGO PANTS - UNISEX



Item Number: xxx

Document Number: SAA xxx

Version 01.0/February 2023

1. Scope

This specification¹ covers the material, design, cut and make of trousers for both male and female personnel of the South African Airways.

2. Definitions and Abbreviations

For the purpose of this specification the definitions given in SANS 10371 "Terms and definitions for clothing" and the following shall apply:

acceptable: acceptable to the South African Airways

nominal: subject to the tolerances normal to good manufacturing practice

- ✓ **SANS:** South African National Standard
- ✓ **SABS :** South African Bureau of Standards
- ✓ **Personal Protective Equipment:** Specialized Clothing or equipment worn by employees for protection against health and safety hazards. Personal Protective equipment is designed to protect many parts of the body, i.e., eyes, head, face, hands, feet and ears.
- ✓ **Hazard:** A source of or exposure to danger.
- ✓ **Employer:** A person designated as the employer in terms of the Occupational Health and Safety Act.
- ✓ **Risk:** The probability that injury or damage will occur.
- ✓ **occupational injury:** means personal injury sustained as a result of an accident;
- ✓ **Occupational diseases:** means any disease arising out of and contracted in the course of an employee's employment;
- ✓ **GSM –** Short for "grams per square meter," this refers to a fabric's weight is a good measure of density; the higher the GSM the more resistant the fabric is to tearing.
- ✓ **Woven –** Fabric with yarns placed at right angles; threads are woven over and under each other. Nonwoven fabrics are usually more affordable because they are faster to manufacture.
- ✓ **Rayon –** The generic name for a cellulose-based fiber; Rayon is similar to cotton or linen.
- ✓ **Twill –** A fabric that shows a distinct diagonal stripe; this design is often found in denim.
- ✓ **Spandex -** synthetic fibre or fabric made from a polymer containing polyurethane, used in the manufacture of elastic clothing.

3. Style

The style is as follows:

- Separate waistband
- plain fronts
 - ✓ fasten with metal-type button on front closure
 - ✓ fastens with button and buttonhole
 - ✓ centre back seam
 - ✓ seven (7) belt loops
- a front slide fastener
- Colour to be an acceptable match to the colour of the outer material
- plain bottom hem -1,5cm
- two swing/slanted pockets
- two side leg pockets with box pleats
- two hip/ back pockets with flaps and velcrose closure
- triple stitched back seam, inside and side seam

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- Supplied in one colour, i. e black (as specified in the order or contract)
- Back right pocket to be embroidered with colour logo “South African Airways”

¹ This private specification has been compiled by National Private Specifications (Pty) Ltd. privatespecs@vodamail.co.za

Illustrations are not to scale and are for guidance only.

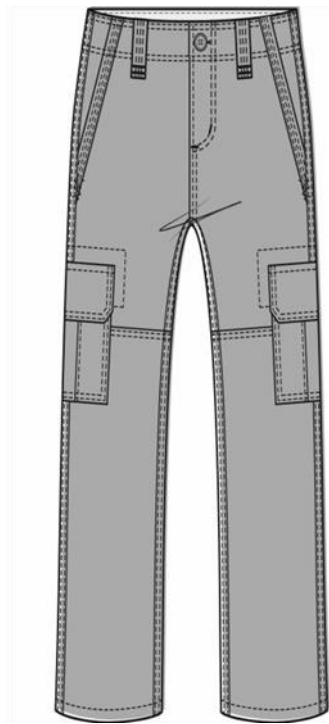


Figure 1 – Front

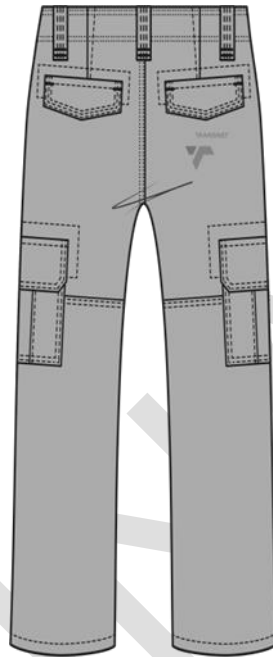


Figure 2 - Back

5. Client Furnished Materials

No materials will be supplied by the South African Airways.

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6. Component Materials

The following materials shall be supplied and used by the manufacturer. Trim charts shall also be submitted by the manufacturer (see Annex A).

NOTE: All components listed below shall be manufactured in the Republic of South Africa. In instances where the raw material and/or finished components are not available in the Republic of South Africa, the onus shall be on the bidder to apply for exemption certificates from DTI. Exemption certificates, where relevant, shall be submitted together with each bid.

6.1 Outer material

- to comply with the requirements for type D59 fabrics"
- 100% Cotton
- 240-250gsm
- supplied in one colour options, SAA Dark Navy (as given In the order or contract)

6.2 Slide fasteners

- to comply with the requirements of Class B slide fasteners of SANS 1822 "Slide fasteners" - One way closed-end (see 4.2 (a) (1) of SANS 1822) – normal design.
- colour to be an acceptable match to the colour of the outer material
- a typical example of a suitable product is supplied by YKK 1
- spiral/chain
- locking puller and slider

6.1 Waistband lining

- acceptable interlining covered with pocketing
- bias cut and to incorporate a rubber Insert of nominal width of 10 mm □ Colour to be an acceptable match to the colour of the outer material.
- Capable of withstanding the same washing and drying procedures as specified for the outer material

6.2 Pocketing

- to comply with the requirements for type PP48 of SANS 1387-10 "Woven cotton and similar apparel fabrics - Part 10: Pocketing" OR an acceptable polyester/cotton alternative with the same performance requirements as specified for PP 48
- colour to be an acceptable match to the colour of the outer material (or black)

6.3 Buttons

- Four-hole." Metal button
- Of nominal and acceptable diameter
- colour to be an acceptable match to the colour of the outer material

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6.4 Sewing thread

- To comply with relevant requirements of SANS 1362
- colour to be an acceptable match to the colour with which it is used
- sewing and top-stitching thread:
 - polyester-and-cotton core-spun or staple polyester ☐ Ticket No 80.
- overlocking thread:
 - Crimp-textured polyester or crimp-textured polyamide
 - ticket No 140

The selection of interlining of appropriate mass per unit to be determined by consultation with the supplier of the interlining. The manufacturer will be held responsible for the performance of the interlining.

7. Workmanship

The cargo trousers shall be:

- • cut and made with first-class workmanship throughout
- • of uniform and acceptable make, colour and finish

Shall be free from:

- • defects, that affect their appearance or may affect their serviceability (or both)
- • marks, spots
- • and stains, incurred in the making-up

Seams and stitches shall be:

- • smooth and uniform
- • free from twists, pleats and puckers
- • sufficiently extensible to avoid seam cracking and undue shrinkage in use

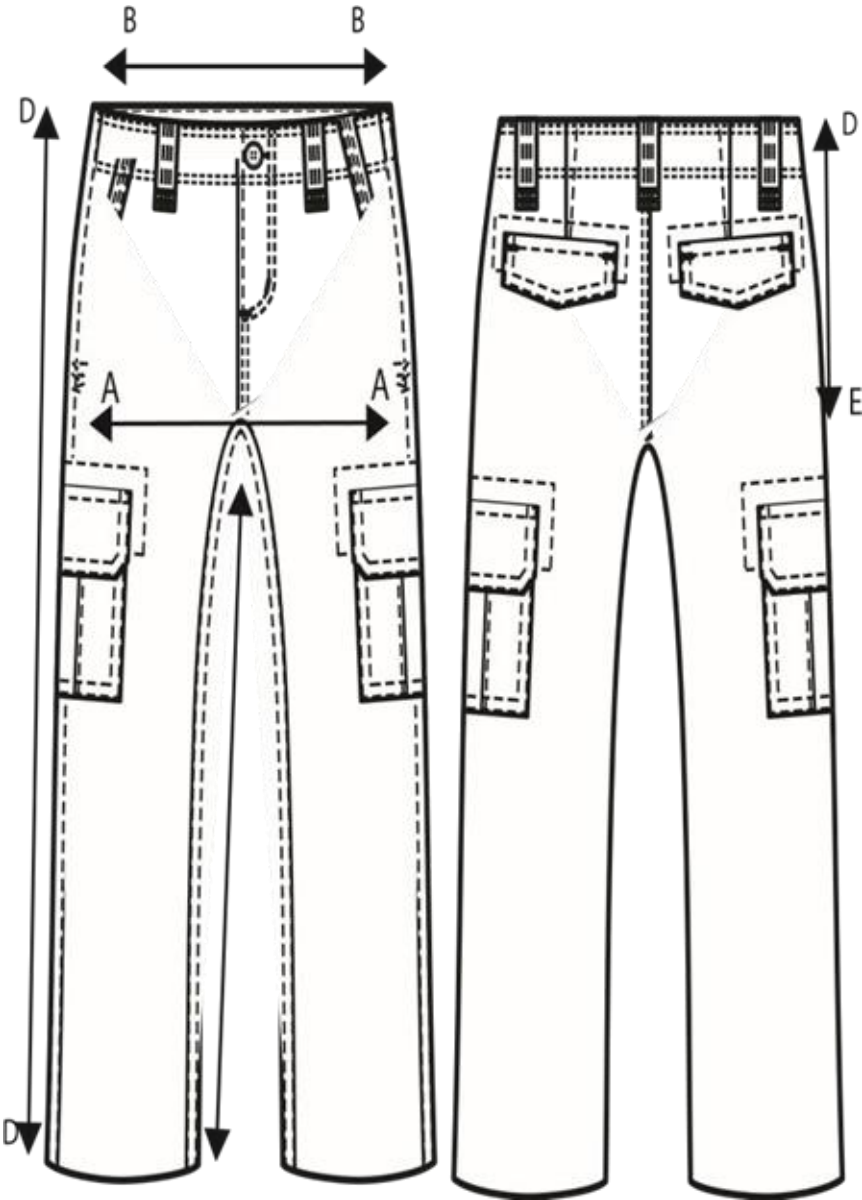
Ends of sewing shall be:

- • trimmed and loose threads removed
- • back-tacked if unsecured

8. Sizes and Dimensions

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Trouser Measurement



Measuring Point		Description
A -A	waist circumference	Measure across at the top edge of the waistband and multiply by two.

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D-D-D	Seat circumference	Measure in a V-formation, mark 20 cm - 22 cm below the waistband at centre front and at both side seams and measure the width of the garment, at seat level (widest point) with pleats open, and multiply by two.
B-B	Inside leg length	Measure from the crotch seam to the bottom edge of the leg
A-C	Outside leg Circumference	Measure from the top edge of the waistband to the bottom edge of the leg.
B-C	Bottom hem circumference	Measure across the width at the bottom edge of the garment and multiply by two
E-E	knee circumference	Fold leg up with bottom hem in line with the crotch. Measure across the width, 5 cm above the fold, and multiply by two.

Table 1 - Size Chart

1	2	3	4			5			6	7
			Nominal finished garment measurements, cm							
Size designation (1)	To fit waist of user in cm	Waist (2)	Inside leg			Outside leg			Seat	Trousers Bottom
			S	R	L	S	R	L		
28	72	73	74	79	84	100	106	112	103	38
30	77	78	74	79	84	101	107	113	108	38
32	82	83	74	79	84	101	107	113	113	40
34	87	88	74	79	84	102	1-8	114	118	40
36	92	83	74	79	84	102	108	114	123	42
38	97	98	74	79	84	103	109	115	128	42
40	102	103	74	79	84	103	1-9	115	133	43
42	107	108	74	79	84	104	110	116	138	43
44	112	113	74	79	84	104	110	116	143	44
46	117	118	74	79	84	105	111	117	148	44
48	122	123	74	79	84	105	111	117	153	46
50	127	128	74	79	84	106	112	118	158	46
52	132	133	74	79	84	106	112	118	163	48
1) Based on the waist circumference in centimetres of the intended wearer.										

9. Make

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Illustrations are not to scale and for guidance only, and unless inconsistent with the text, all measurements are nominal.

9.1 Fronts

Fronts to:

- have a button opening
- fasten with a slide fastener
- each have a slanted side pocket
- knee circumference of trousers to measure 56 cm on size 34, when measured in accordance with the method as given in section 10, and graded proportionally on smaller and larger sizes

The button opening to be:

- lined with outer material
- interlined with interlining
- of finished width 50 mm
- sewn down 32 mm • 35 mm from the front edge
- Fitted with a slide fastener
- overlapping left over right
- vertically bar-tacked at the bottom
- overlocked along the inner raw edges

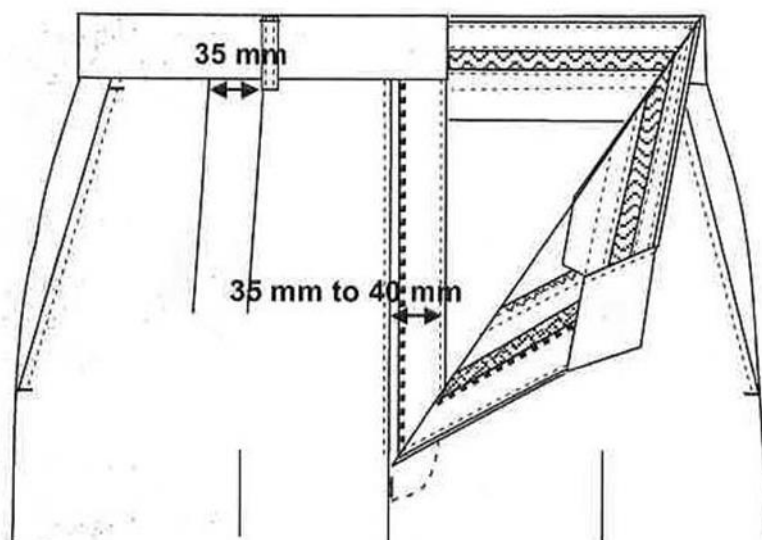


Figure 3: front Fly

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9.2 Back

- fitted with two hip pockets (refer to as when worn)
- have a dart of appropriate length and position

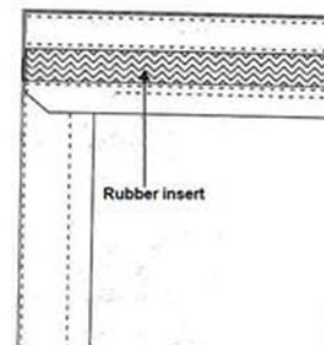
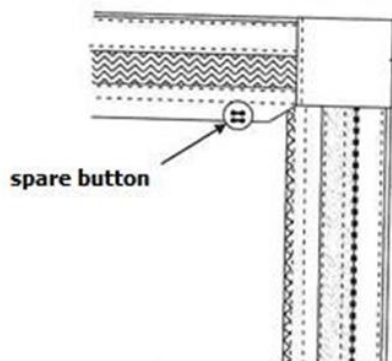
9.3 Waistband

Waistband to:

- be cut separately and sewn on
- be of finished width 38 mm- 42 mm
- be lined with waistband lining, turned inwards and sewn down
- be interlined with interlining
- be fitted with belt loops

Front Edge:

- To be straight
- To be folded to the inside as shown in figure 4 and boxed
- Fitted with a spare button on the inside as shown below. .
- fitted with the button on the outside and button holes
 - ✓ buttons to be appropriately positioned
 - ✓ Button to be in a corresponding position to the button-hole.



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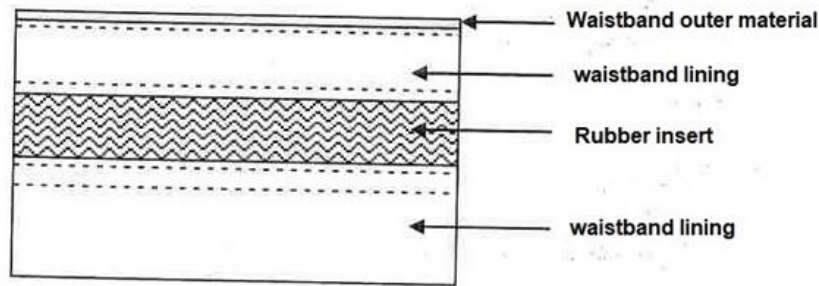


Figure 5: Waistband

9.4 Pockets

Each pair of trousers to have:

Two side-slanted pockets:

Each side/slanted pocket mouth:

- to be slanted
- to be positioned with the top edge of mouth opening 30 mm forward of the side seam ➤ to have a Facing:
 - ✓ sewn-on or folded to the inside
 - ✓ of finished width 40 mm (minimum), measured at the top edge and tapering to 15 mm at the bottom edge
 - ✓ Raw edges to be overlooked
 - ✓ laid on top and sewn to the upper pocket bag
- be horizontally bar-tacked on each end of the pocket mouth
 - ✓ top bar-tack to be positioned 8 mm - 10 mm below the waistband
 - ✓ bottom bar tack to be in line with the bottom edge
 - ✓ of length 10 mm
- to be top-stitched; 3 mm from free edge
- to be of finished length 18 cm (when measured between the bar-tacks)
- to be stayed with stay-tape or interlining
- have a bearer
 - ✓ of outer material,
 - ✓ of finished width 70 mm (measured at the top edge)
 - ✓ tapering to 40 mm (measured below the lower bar-tack)
 - ✓ raw edges to be overlooked
 - ✓ sewn on top and sewn to the lower pocket bag
 - ✓ to extend to at least 30 mm below the lower mouth opening bar-tack

Each pocket bag to be:

- of double folded pocketing
- swing type
- bagged out and stitched down 7 mm
- of finished width (measured below the lower bar-tack):

✓ 16cm on trousers of size designation 34 (87 cm) and smaller

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✓ 17cm on trousers .of size designation 36 **(92 cm) and larger**

➤ of finished depth 16 cm (measured below the lower bar-tack) ➤ carried to the waistband lining (upper edges of pocket bags)

Two Hip/back pocket:

The pocket mouth to:

➤ be centered at the base of the right back dart
➤ be a single jetted pocket, with jet of finished depth 10 mm - 12 mm
➤ be vertically bar-tacked on each end ➤ stayed with stay-tape or interlining ➤ be of finished length:

✓ 13.5cm on trousers of size designation 34 **(87 cm) and smaller**

✓ 14.5 cm on trousers of size designation 36 **(92 cm) and larger**

➤ have a bearer:

✓ of outer material
✓ of finished minimum depth 50 mm
✓ raw edges to be overlocked and stitched to the pocket bag
✓ Fitted with a flap and velcrose closure and of such a length as to neatly accommodate the pocket.

➤ Right hip pocket be fitted with an embroidered design:

✓ registered Transnet National Ports Authority logo
✓ embroidered with colour embroidery thread
✓ centrally positioned between the bottom edge of the pocket flap and the bottom edge of the pocket ✓
Centered in the width of the pocket.

The pocket bag to be:

➤ of pocketing
➤ of finished width

✓ 16cm on trousers of size designation 34 **(87 cm) and smaller**
✓ 17cm on trousers of size designation 36 **(92 cm) and larger**

➤ of finished depth 19cm (measured from the top edge of the jet to the bottom hem)
➤ carried to the waistband lining (upper edges of pocket bags)
➤ bagged out and stitched down 7 mm

Two side le pockets with box pleats:

The pocket mouth to:

➤ be of finished length:

✓ 15.5cm on trousers of size designation 34 **(87 cm) and smaller**

✓ 16.5 cm on trousers of size designation 36 **(92 cm) and larger**

➤ Be fitted with a flap of nominal size.

➤ be fitted with velcrose closure of nominal size ➤ Box pleats to be vertically centered and positioned.

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9.5 Belt Loops

Belt loops to be:

- of double folded outer material
- of finished width 10 mm- 12 mm and top-stitched 2 mm from free edges ➤ of finished length 45 mm (measured between the bar-tack and bottom fold)
- secured in the waistband seam:
 - ✓ turned up, turned in and bar-tacked 2 mm from the top edge of the waistband
 - ✓ turned-in top edge to be level with top edge of waistband
- number of belt loops to be as given in figures 6 and 7

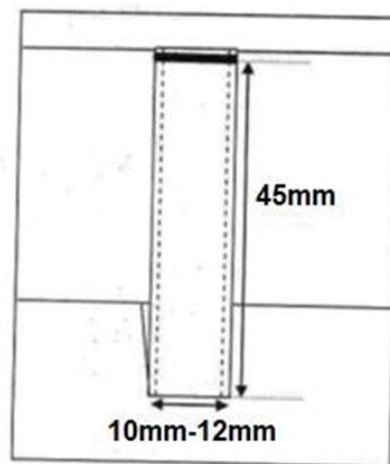


Figure 5: Belt loop

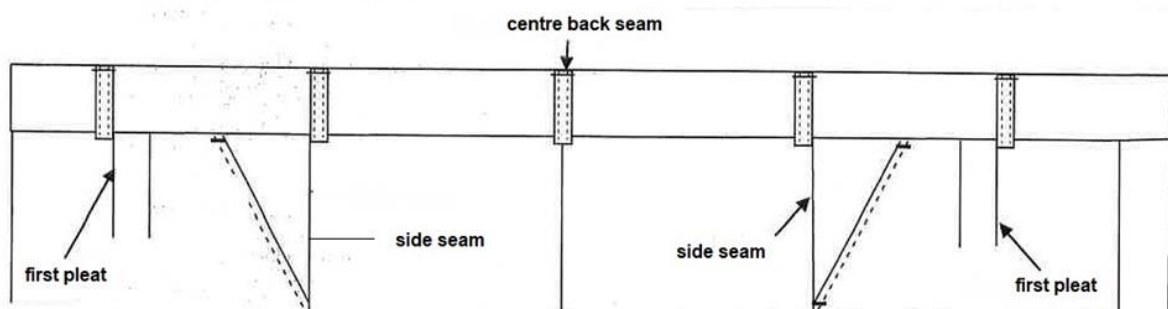


Figure 6: position of 5 belt loops - size designation 34 (87cm) and smaller)

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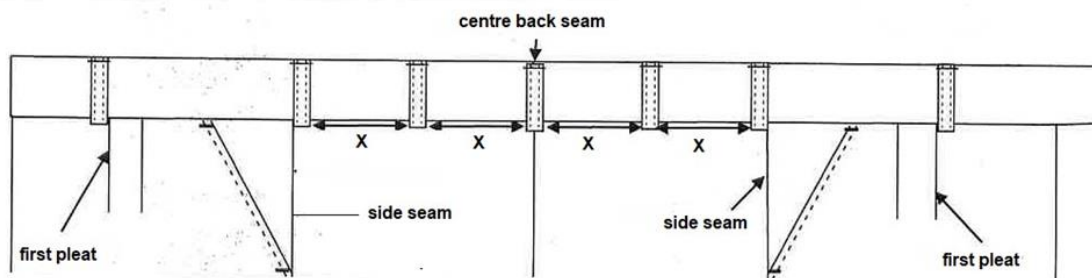
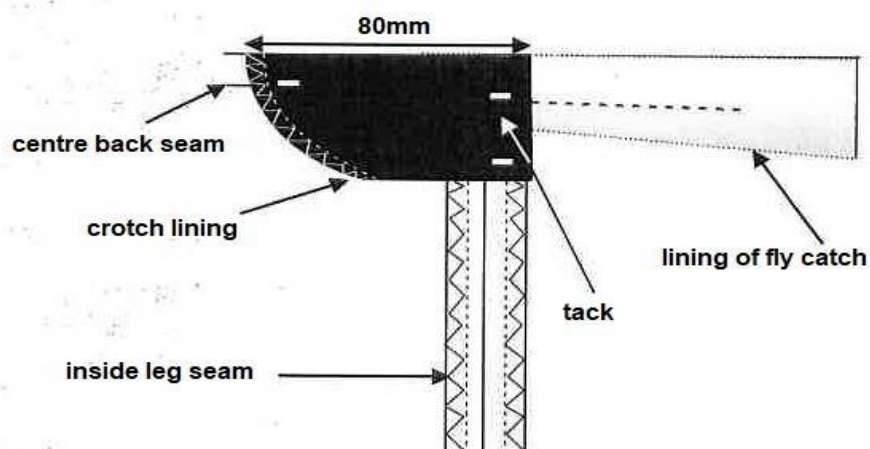


Figure 7: Position of 7 belt loops - size designation 36 (92cm) and larger

9.6 Crotch lining

Seams at the crotch shall be covered with pocketing:

- Oval-shaped
- double folded
- of cut dimensions 16 cm x 12 cm
- over-locked along all raw edges
- positioned on top of the crotch seam and folded over to the inside leg seams ✓ Outer corners of lining to be folded inwards and tacked to the inside leg seams.



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9.7 Back-Rise seam

- Seam allowance edges of the back rise seams shall be bound with tape or pocketing of nominal width 5mm after attachment.

9.8 Bottoms

The trouser bottoms to be:

- Plain
- of finished depth 50 mm
- blind-felled
- raw edges to be overlocked

10 Stitches, seams and stitching

10.1 Stitches

Main seaming: Safety stitch and single needle lock stitch

Over locking stitch: three thread over-locking stitch

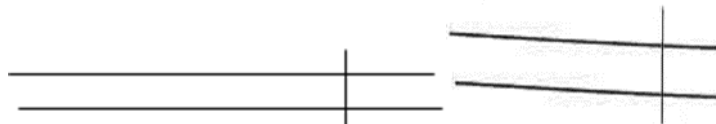
Hem: blind stitches

Other stitches: single needle lock stitch

10.2 Seams

Seams to be least 10 mm wide but centre back seam shall be at least 15 mm wide

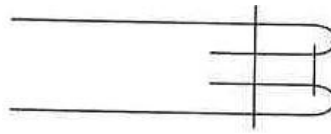
Side seam, Inside leg seam and seat seam: seam type SSa and pressed open



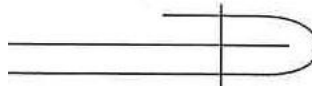
Superimpose two or more plies of material and seam with the appropriate number of rows of stitches positioned at the specific distance(s) from the aligned edges.

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Side pocket mouth opening to be one of the following: Seam type SSe-2 or SSbc-1

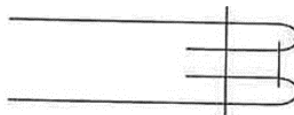


Form seam Type SSa-1, using two plies of material. Then turn back each ply at the seam and seam through the turned edges with the appropriate number of rows of stitches.



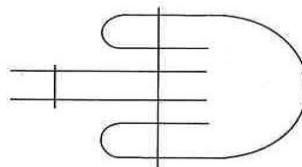
Superimpose two plies of material, turn the specified width at the edge of one ply over the edge of the second ply, and seam with the appropriate number of rows of stitches.

Pocket bag edges: seam type SSe-2



Form seam Type SSa-1, using two plies of material. Then turn back each ply at the seam and seam through the turned edges with the appropriate number of rows of stitches.

Front crotch seam: seam type BSc-2



Turn in both edges of a binding strip, fold it round the aligned edges of plies of material, seam with one row of stitches, and seam the plies material with another row of stitches, positioned clear of the strip. (BSe-2)

Other seam type: seam type SSa.

10.3 Stitching

All exposed raw edges: stitching type EFd



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Stitch over the edge of a ply of material with one row of stitches

Trousers bottom hem: stitching type EFd, followed by EFi



Fold back the edge of a ply of material and so stitch with one row of stitches that the stitches over edge the edge, the needle only partially penetrates the body material, and the stitches do not show on the outer surface of the material.

10.4 Number of Stitches

Seaming and top stitching: 40 ± 4 per 10 cm

Over locking: 32 ± 4 per 10 cm

Bar tracks: 18 ± 1 per 1 cm

Buttons: 16 ± 1 per button

Button holes: 12 ± 1 per 1 cm

11. Garments Labels

11.1 Label identification and Properties

All labels shall:

- be woven white rayon fabric labels that are printed
- comply with SANS 1309 "Printed labels for textiles"
 - information to be in legible and indelible block letters of height at least 3 mm
- permanently secured
- be such that they outlast the garments (including the markings)

11.2 Garment Label

Each garment shall have, permanently secured and sewn in with the collar seam, a label that provides the following information:

- the word in capital letters: "SOUTH AFRICAN AIRWAYS"
- fabric composition
- size designation e.g. 97 (38)
- year of Manufacture

11.3 Printed care-labelling

Each label shall provide the following information:

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- appropriate care instructions (in accordance with SANS 10011 "Care-labelling of textile piece- goods, textile articles and clothing") in words and symbols
- state the fibre composition of the fabric in accordance with the requirements of SANS 10235 "Fibre content labelling of textiles and textile products"
- state the country of origin, e.g. Made in South Africa
- the VAT number of the supplier

NOTE: *This label may be a separate label that is sewn in with the side seam OR a loop label with the above information printed on the back of the garment label.*

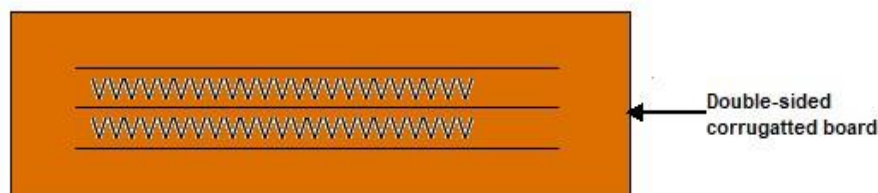
12. Packaging and marking of packaging

12.1 Packing

NOTE: *Supplier to remove all sober labelling on the garments before delivery.*

The garments shall be:

- delivered in a pressed and commercially dry condition
- so packed that they will not be damaged in transit or in storage
- neatly folded in packs of 3 with the same size designation and packed in a plastics envelope of suitable size and shape
- unless otherwise specified in the order or contract, acceptably packed for transportation in acceptable bulk containers that comply with the following:
 - Coffin type boxes with a base and lid
 - double sided corrugated board boxes



Contents of bulk container:

Only garments of the same style and size designation in plastic envelopes are to be packed in the same bulk container.

NOTE: *Different sizes may NOT be packed together in a bulk container. The last bulk container of EACH SPECIFIC SIZE per consignment may contain QUANTITIES that deviate from the prescribed amount of garments. If this is the case, the supplier will mark this container with a clearly visible red sticker at each outer end of the lid for easy identification.*

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12.2 Marking

12.2.1 Plastic envelopes

Each envelope to be clearly marked with the following information (sticker type label):

- The item description,
- The size designation.
- Quantity
- The gender,
- Department description, i.e. Transnet National Ports Authority

12.2.2 Bulk containers

Each bulk container shall have a label (A-4 size) securely attached to the outside of EACH side of the lid of the coffin type container. This label shall be visible when the containers are stacked and shall provide the information in legible and indelible markings as follows:

- the item description
- the size designation
- Quantity
- the gender,
- Organisation/Division, i.e. "South African Airways"
- the year of manufacture (YOM)
- mass of the packed container
- the invoice number(s)
- the total mass of the packed container
- the manufacturer's name or trade mark or both
- the order number or contract number

NOTE: *In addition to the above information, each side of the lid shall have an arrow indicating "This side up"*

12.3 Additional marking

When so required by South African Airways, garments, envelopes or containers (or any combination of these) to bear information additional to that specified above.

13. Normative references

13.1 Special Conditions of tender

Unless otherwise stated, the South African Bureau of Standards shall be the Inspecting authority.

- i. ***Any applications for deviations from drawings or the specification, or any laid down process, treatment or procedures as set out in this specification, must be made to the South African Airways and verified by the SABS². All applications must be submitted in writing.***
- ii. Three pre-production sample garments in different sizes, shall have been inspected, tested and approved by the inspecting authority before bulk production is commenced. Each one of these samples shall be accompanied by a

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trim chart containing a sample of each component material and the relevant certificates. It shall be the duty of the manufacturer to give adequate notice to the inspecting authority of the availability of these samples.

- iii. The Garments shall be subject to inspection during the course of manufacture. The inspector shall, during normal working hours, be given all reasonable facilities for carrying out his duties and shall have the right of entry into the contractor's factory and the factory or works of any subcontractor where work on garments supplied to this specification may be in progress
- iv. The contractor shall inspect the finished garments for compliance with the specification before submitting them to the inspecting authority for final inspection.
- v. Before acceptance, the garments shall have been inspected and tested by the inspecting authority and found to comply with the requirements of the specification.

13.2 Test Method for bursting strength and resistance to actinic degradation (retained bursting strength).

B-1. Apparatus

B-1.1 Bursting strength testing machine, as described in SANS 13938-1

B-1.2 Xenon arc fading lamp, as described in SANS 105.B02

B-1.3 Blue wool reference standard, as described in SANS 105-b02

B-2. Test specimens

From each of five widely separated areas of the test sample cut at least two specimens, each of size at least 150 mm x 150 mm. Divide the specimens into two sets, each set consisting of one specimen cut from each area. Retain the first set for testing the original bursting strength and subject the second set to the test for retained bursting strength.

14.3 CKS 129 - Colours

Due to the fact that colours can change over a period of time, any colour standard which has been registered for a period of SEVEN YEARS or more shall be considered obsolete. These standards shall then be allocated an archived status (as opposed to current status) and re- registration shall be required.

NOTE: Before fabric is sent to SABS for colour registration purposes, the successful bidder shall confirm with SABS whether a submission is required or not.

A. The following scenarios require a submission of three metres of fabric from the successful bidder:

- 1. A colour standard is archived.
- 2. First time registration is required
- 3. Colour swatch stock at the SABS

B. Requirements for the submission of fabric as identified in A:

- 1. The colour shall be as agreed upon between South African Airways and the successful bidder.
- 2. The fabric and embroidery thread shall be used to make new colour swatches, which shall be the responsibility of SABS.

Table 1 – Outer material requirements

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9.9 Waistband lining

- 9.9.1 acceptable interlining covered with pocketing
- 9.9.2 bias cut and to incorporate a rubber insert of nominal width of 10 mm
- 9.9.3 colour to be black
- 9.9.4 capable of withstanding the same washing and drying procedures as specified for the outer material

9.10 Pocketing

- 9.10.1 to comply with the requirements for type PP48 of SANS 1387-10 "Woven cotton and similar apparel fabrics – Part 10: Pocketing" OR an acceptable polyester/cotton alternative that is fit for purpose
- 9.10.2 capable of withstanding the same washing and drying procedures as specified for the outer material
- 9.10.3 colour to be black

9.11 Hook and bar

- 9.11.1 metal with a smooth finish
- 9.11.2 intrinsically corrosion resistant
- 9.11.3 bar to be of nominal length 13 mm

9.12 Buttons

- 9.12.1 four-hole plastics that complies with SANS 1457 "Plastics buttons"
- 9.12.2 nominal diameter of 15 mm
- 9.12.3 dope-dyed
- 9.12.4 fully impregnated
- 9.12.5 colour to be an acceptable match to the colour of the outer material

9.13 Threads

- 9.13.1 to comply with relevant requirements of SANS 1362
- 9.13.2 colour to be an acceptable match to the colour with which it is used

sewing and top-stitching thread:

- 9.13.3 polyester-and-cotton core-spun or staple polyester
- 9.13.4 ticket No 80

overlocking thread:

- 9.13.5 crimp-textured polyester or crimp-textured polyamide
- 9.13.6 ticket No 140

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7. Workmanship

The trousers shall be:

- cut and made with first-class workmanship throughout
- of uniform and acceptable make, colour and finish

Shall be free from:

- defects, that affect their appearance or may affect their serviceability (or both)
- marks
- spots
- stains, incurred in the making-up

Seams and stitches shall be:

- smooth and uniform
- free from twists, pleats and puckers
- sufficiently extensible to avoid seam cracking and undue shrinkage in use

Ends of sewing shall be:

- trimmed and loose threads removed
- back-tacked if unsecured

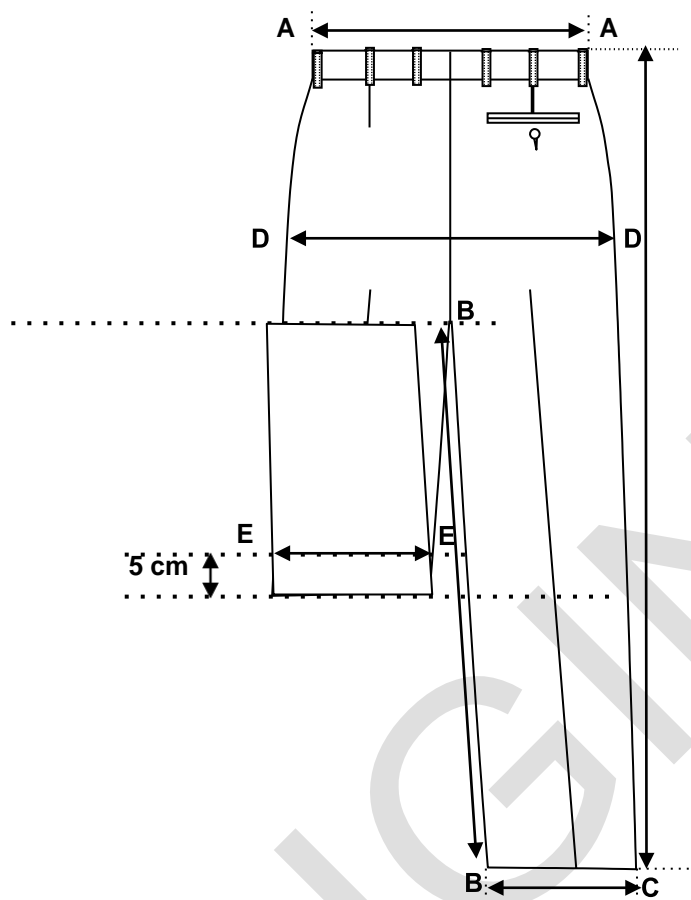
Points not defined in the specification that requires assessing at inspection:

- Place the trousers on a dummy and check the following points:
 - Is the front and back balance correct?
 - Is the appearance neat and clean?
 - Is the top-stitching neat?

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8. Sizes and dimensions

Trousers measurements:



Trouser measurements:

MEASURING POINT		DESCRIPTION
A – A	Waist circumference	Measure across at the top edge of the waistband and multiply by two.
D – D	Seat circumference	Measure across the width of the garment with open pleats, at seat level (widest point), and multiply by two.
B – B	Inside leg length	Measure from the crotch seam to the bottom edge of the leg.
A – C	Outside leg length	Measure from the top edge of the waistband to the bottom edge of the leg.
B – C	Bottom hem circumference	Measure across the width at the bottom edge of the garment and multiply by two.
E – E	Knee circumference	Fold leg up with bottom hem in line with the crotch. Measure across the width, 5 cm above the fold, and multiply by two.

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Table 2 - size range

1	2	3	4		5		6	7	8
Size designation ¹	To fit waist in cm	Nominal finished garment measurements, cm							
		Waist	Inside leg		Outside leg		Seat	Bottoms	Knee circumference
			RR	RL	RR	RL			
28	72	72	79	84	106	112	98	42	49,5
30	77	77	79	84	107	113	103	44	51
32	82	82	79	84	107	113	108	44	52,5
34	87	87	79	84	108	114	113	46	54
36	92	92	79	84	108	114	118	46	55,5
38	97	97	79	84	109	115	123	48	57
40	102	102	79	84	109	115	128	48	58,5
42	107	107	79	84	110	116	133	48	60
44	112	112	79	84	110	116	138	50	61,5
46	117	117	79	84	111	117	143	50	63
48	122	122	79	84	111	117	148	52	64,5
50	127	127	79	84	112	118	153	52	66

¹Based on the waist circumference of the intended wearer (given in inches).

9. Make

Illustrations are not to scale and are for guidance only, and unless inconsistent with the text, all measurements are nominal.

9.1 Fronts

Fronts to:

- have a fly opening
- fasten with a slide fastener
- each have one reverse pleat
- each have a slanted side pocket
- have a fob pocket (**right front only**)

The fly to be:

- lined with outer material
- interlined with interlining
- of finished width 45 mm
- sewn down 30 mm from the front edge

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- fitted with a slide fastener
- overlapping left over right
- vertically bar-tacked at the bottom
- bound with pocketing along the inner raw edges

The fly-catch to:

- be of outer material
- be lined with pocketing
 - folded to width of 20 mm below bar-tack
 - carried through to crotch
 - stitched to crotch
- incorporate a french bearer
 - grown-on, shaped at the free-end
 - of finished width 75 mm (measured from the fly-catch seam to the outer point of the french bearer), tapering to 35 mm (see figure 3)
 - fitted with a buttonhole in the free end
 - trouser type
 - 18 mm long
 - horizontal
 - positioned with the eye 8 mm below the waistband seam (centres)
 - eye of buttonhole to be positioned 10 mm from the front edge
 - neatly made
 - gimped and barred

The pleat to be:

- a reverse pleat
- stitched down 35 mm on inside
- of finished depth 20 mm
- positioned in line with crease line

The right front to have:

- a fob pocket

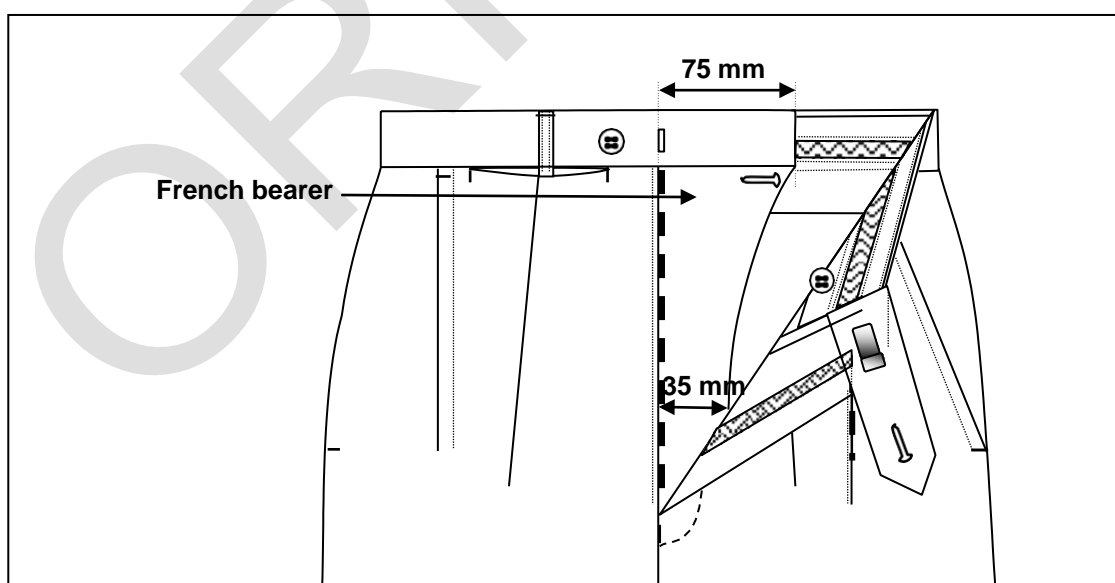


Figure 3 – Front fly

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9.2 Back

- right back to be fitted with a hip pocket (refer to as when worn)
- have a dart
 - of nominal finished length 70 mm
 - appropriately positioned
- one spare button attached to the back of the care label

9.3 Waistband

Waistband to:

- be cut separately and sewn on
- be of finished width 38 mm - 42 mm
- be lined with waistband lining
 - turned inwards
 - sewn down
- be interlined with interlining
- be fitted with belt loops

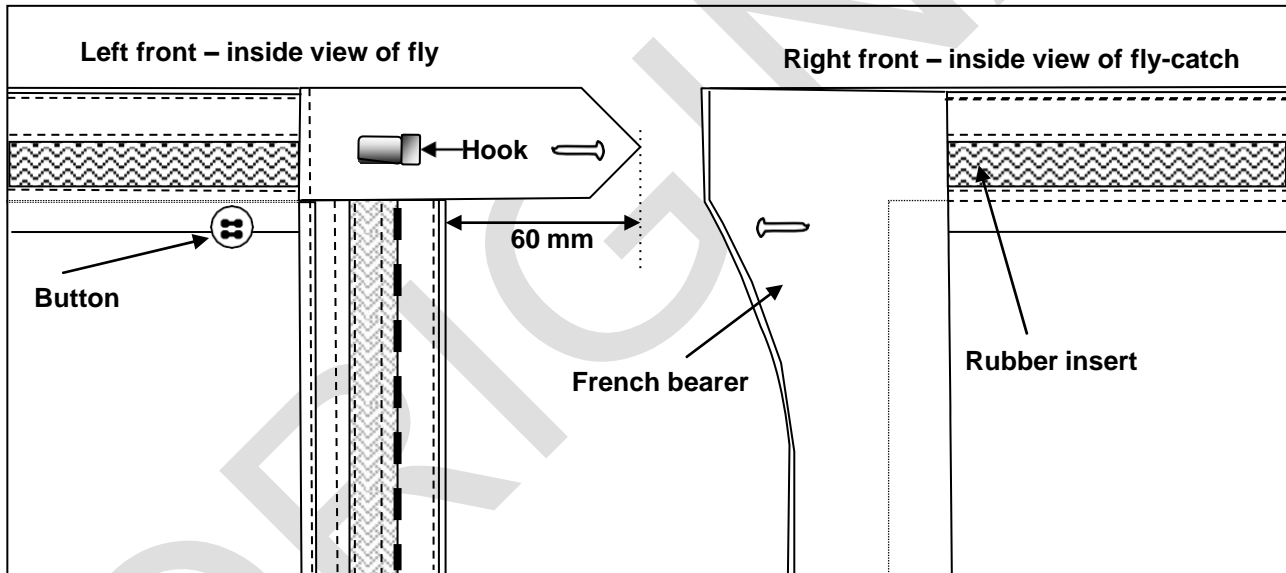


Figure 4 – Inside view of fly and fly-catch

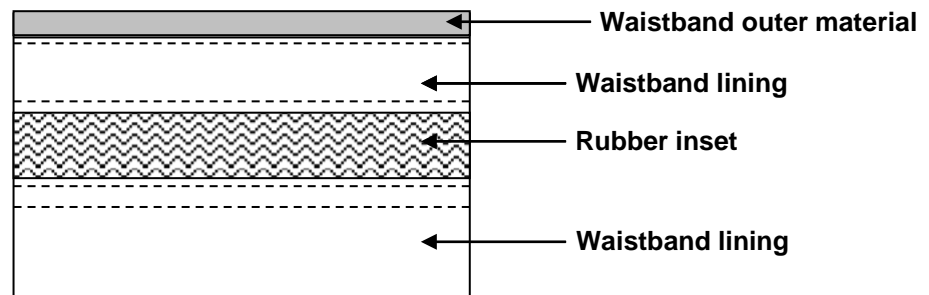


Figure 5 – Waistband

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Left front edge:

- have a mitred extension
 - extension to be lined with outer material that shall extend to the bound edge of the fly
 - of finished length 60 mm (see figure 4)
 - mitred point to be of finished length 20 mm
 - to be fitted with a buttonhole
 - to be of finished length 18 mm
 - trouser type, horizontal
 - neatly made, gimped and barred
 - positioned with eye of buttonhole 15 mm from the front edge
- fitted with the hook section of the hook and bar-unit on inside (not visible on outside)
 - hook to be in line with the slide fastener

Right front edge:

- to be straight
- lined with pocketing
- front edge to be boxed
- fitted with the bar section of the hook and bar-unit on outside
 - hook to be in line with the slide fastener
- be fitted with a button on the outside
 - in a corresponding position to the buttonhole in the front extension

9.4 Pockets

Each pair of trousers to have:

- two side pockets
- one hip pockets
- one fob pocket

Side pockets

Each pocket mouth:

- to be slanted
- to be positioned with the top edge of mouth opening 35 mm forward of the side seam
- to have a facing
 - cut-on and folded to the inside
 - of finished width 40 mm, measured at the top edge (minimum) and tapering to 15 mm at the bottom edge
 - raw edges to be overlocked
 - sewn on top of the upper pocket bag
- be horizontally bar-tacked on each end of the pocket mouth
 - top bar-tack to be positioned 10 mm below the waistband
 - bottom bar-tack to be in line with the bottom edge
 - bar-tacks not to extend beyond the mouth top-stitching
- to be top-stitched 7 mm from free edge
- to be of finished length (when measured between the bar-tacks)
 - 17 cm on trousers of size designation 34 (**87 cm**) and smaller
 - 18 cm on trousers of size designation 36 (**92 cm**) and larger
- to be stayed with staytape or interlining
- have a bearer

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- of outer material
- of finished width 80 mm (measured at the top edge)
- tapering to 40 mm (measured 40 mm below the lower bar-tack)
- raw edges to be folded in and attached to the pocket bags with a 1 mm top-stitching

Each pocket bag to be:

- of double folded pocketing
- swing type
- raw edges to be bound with bias-cut binding (pocketing or alternatively acceptable pre-shrunk binding)
- of finished width (measured below the lower bar-tack):
 - 17 cm on trousers of size designation 34 (**87 cm**) and smaller
 - 18 cm on trousers of size designation 36 (**92 cm**) and larger
- of finished depth 14 cm (measured below the lower bar-tack)
- carried to the waistband lining (upper edges of pocket bags)

Hip pocket

The pocket mouth to:

- be appropriately positioned at the base of the right back dart
- be double-jetted and the finished width of each jet shall be 5 mm
- be vertically bar-tacked on each end
- stayed with staytape or interlining
- be of finished length:
 - 14 cm on trousers of size designation 34 (**87 cm**) and smaller
 - 15 cm on trousers of size designation 36 (**92 cm**) and larger
- have a bearer
 - of outer material
 - of finished depth 55 mm
 - raw edges to be overlocked and stitched to the pocket bag
 - fitted with a button that shall be in a corresponding position to the buttonhole in the hip pocket
- be fitted with a trouser type buttonhole
 - of length 18 mm
 - vertical, neatly gimped and barred
 - positioned with the eye of the buttonhole 12 mm below the pocket mouth opening (centre of mouth)

The pocket bag to be:

- of pocketing
- of finished width
 - 15 cm on trousers of size designation 34 (**87 cm**) and smaller
 - 17 cm on trousers of size designation 36 (**92 cm**) and larger
- of finished depth 15 cm (measured from the top edge of the lower jet to the bottom hem)
- carried to the waistband lining (upper edges of pocket bags)
- raw edges to be bound with bias-cut binding (pocketing or alternately acceptable pre-shrunk binding)

Fob pocket

The fob pocket to:

- be positioned in the waistband-to-body seam
- have a pocket bag of outer material
 - of finished width and depth 85 mm
 - upper ends to be carried into the waistband
- have a pocket mouth of length 75 mm

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- be vertically bar-tacked at each mouth end
- raw edges to be bound with bias-cut binding (pocketing or alternately acceptable pre-shrunk binding)

9.5 Belt loops

- of double folded outer material
- of finished width 12 mm and top-stitched 2 mm from free edges
- of finished length 45 mm (measured between the bar-tacks)
- secured in the waistband seam
 - turned up, turned in and bar-tacked 2 mm from the top edge of the waistband
 - turned-in top edge to be level with top edge of waistband
- number of belt loops to be as given in figures 6 and 7

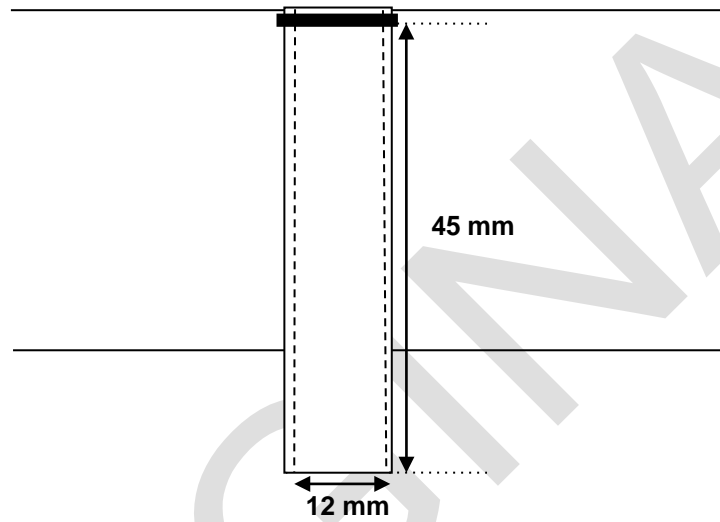


Figure 5 – Belt loop

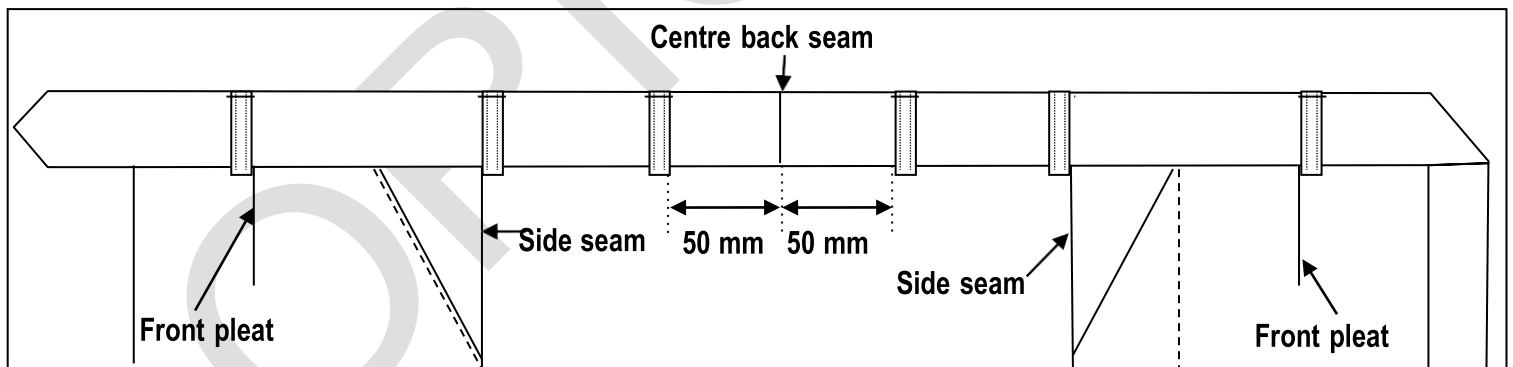


Figure 6 – Positioning of six belt loops: size designation 34 (87 cm) and smaller

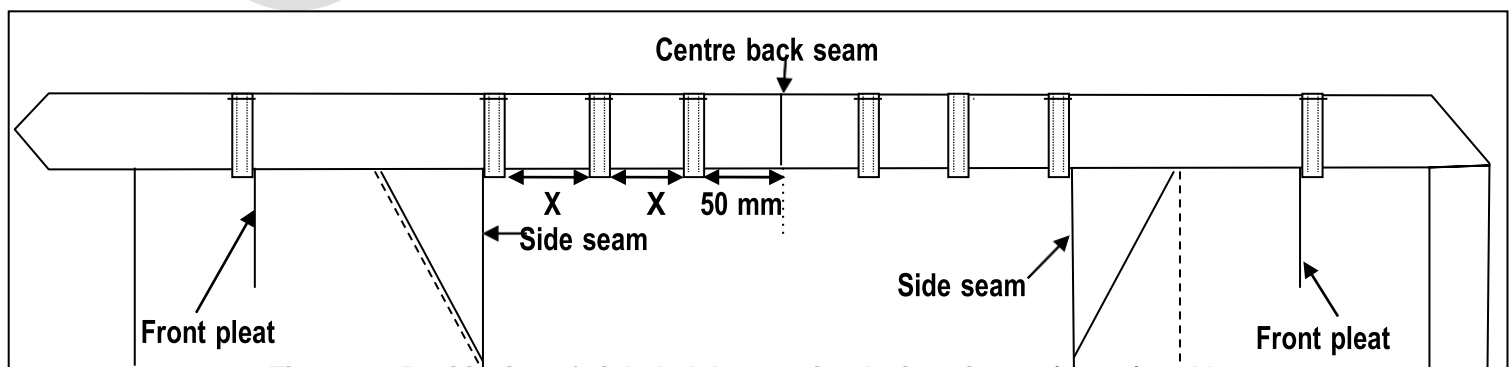


Figure 7 – Positioning of eight belt loops: size designation 36 (92 cm) and larger

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9.6 Inlays

- to be at waistband, waistband lining and centre back seat seam
- to be of finished width 35 mm (70 mm = total width)

9.7 Bottoms

The bottoms to be:

- plain
- of finished depth 50 mm
- blind-felled
- raw edges to be overlocked

10. Stitches, Seams and Stitchings

10.1 Stitches

Main seaming: single needle lock stitch

overlocking: three-thread overlocking stitch

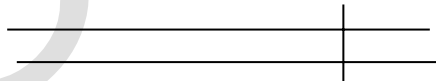
hem: blind stitches

other stitches: single needle lock stitch

10.2 Seams

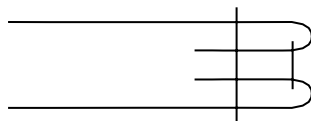
Seams to be at least 10 mm wide:

Side seams, inside leg seam and seat seams: seam type SSa and pressed open



Superimpose two or more plies of material and seam with the appropriate number of rows of stitches positioned at the specific distance(s) from the aligned edges.

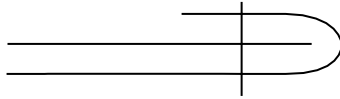
Fob pocket mouth: seam type SSe-2



Form seam Type SSa-1, using two plies of material. Then turn back each ply at the seam and seam through the turned edges with the appropriate number of rows of stitches.

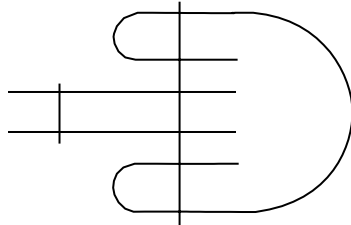
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Side pocket mouths: stitching type SSbc-1



Superimpose two plies of material, turn the specified width at the edge of one ply over the edge of the second ply, and seam with the appropriate number of rows of stitches.

Crotch seam and edges of all pocket bags: seam type BSe-2



Turn in both edges of a binding strip, fold it round the aligned edges of plies of material, seam with one row of stitches, and seam the plies of material with another row of stitches, positioned clear of the strip. (BSe-2)

Other seams: seam type SSa

10.3 Stitchings

all exposed raw edges: stitching type EFd



Stitch over the edge of a ply of material with one row of stitches.

Bottom hems: stitching type EFd, followed by EFI



Fold back the edge of a ply of material and so stitch with one row of stitches that the stitches overedge the edge, the needle only partially penetrates the body material, and the stitches do not show on the outer surface of the material.

10.4 Number of stitches

seaming: 40 ± 4 per 10 cm

overlocking: 32 ± 4 per 10 cm

blind-felling: 32 ± 4 per 10 cm

bar-tacks: 18 ± 2 per 1 cm

buttons: 16 ± 1 per button

buttonholes: 12 ± 1 per 1 cm

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11. Garment labels

NOTE: Tender samples shall be fitted with a printed label displaying the manufacturer's name or trade mark and size.

11.1 Label identification and Properties

Each garment shall be fitted with the labels as given in table 3:

Table 3 – Label identification

Type		Requirements
1.	a woven logo jacquard label	See 11.2
2.	a woven jacquard size label	See 11.3
3.	a garment specific printed woven fabric label*	See 11.4
4.	a care-label*	See 11.5
5.	a paperboard swing tag	See 11.6
*These two labels may be separate labels or a single loop label.		

11.2 Jacquard logo label

Each label shall:

- be a woven jacquard label
- edges to be properly finished to prevent fraying
- information to be in legible and indelible block letters of height at least 3 mm
- permanently secured and sewn to the hip pocket bag
- be such that it shall outlast the garment
- include the following information:
 - the manufacturer's name or trade mark or both
 - the registered full-colour SAA logo at top of label (see figure below)



11.3 Jacquard size label

Each label shall:

- be a woven jacquard loop label
- edges to be properly finished to prevent fraying
- information to be in legible and indelible block letters of height at least 3 mm
- sewn together with the side edge of the jacquard logo label
- be such that it shall outlast the garment

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11.4 Printed garment labels

Each label shall:

- be white woven rayon label that is printed
- comply with SANS 1309 "Printed labels for textiles"
 - information to be in legible and indelible block letters of height at least 3 mm
- permanently secured and sewn to the back facing
- be such that they outlast the garments (including the markings)
- include the following information:
 - the item number
 - order number
 - the month and year of manufacture
 - the VAT no of the contractor
 - the country of origin, i.e. "Made in the RSA"

11.5 Printed care-labelling

Each label shall:

- be white woven rayon label that is printed
- comply with SANS 1309 "Printed labels for textiles"
 - information to be in legible and indelible block letters of height at least 3 mm
- permanently secured to the side seam
- be such that they outlast the garments (including the markings)
- to provide appropriate care instructions (in accordance with SANS 10011 "Care-labelling of textile piece-goods, textile articles and clothing") in words and symbols
- provide the fibre composition of the fabric in accordance with the requirements of SANS 10235 "Fibre content labelling of textiles and textile products"

11.6 Printed swing tags

Each swing tag shall:

- be a white cardboard printed label
- information to be in legible and indelible block letters of height at least 3 mm
- include the following information:
 - the size designation
 - the item number
 - the item description
 - the month and year of manufacture
 - the order number

12. Packaging and marking of packaging

12.1 Packing

12.1.1 The trousers shall be:

- delivered in a pressed and commercially dry condition
- so packed that they will not be damaged in transit or in storage
- individually placed on a hanger and packed in a plastics envelope of suitable size and shape
- unless otherwise specified in the order or contract, acceptably packed for transportation in bulk containers

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12.1.2 Trousers:

- of the same size designation to be packed together in a bulk container (unless quantities ordered are such that packing together of the same size only is not justified)
- of different size designations may also be packed together to accommodate the last part of an order or contract

12.2 Marking

12.2.1 Plastics envelopes

Each envelope to be clearly marked with the following information:

- the item number
- the item description
- size designation
- the order number
- month and year of manufacture

12.2.2 Bulk containers

Each bulk container shall have a label securely attached to the outside. This label shall be visible when the containers are stacked and shall provide the information in legible and indelible markings as follows:

- the manufacturer's name or trade mark or both
- the order number or contract number
- the item description
- the item number
- the size designation
- the quantity of the item
- the **month and year** of manufacture
- the order number
- the box number, e.g. "1 of 5"
- the total mass of the packed container
- the Inspection Certificate Number

12.3 Additional marking

When so required by the South African Airways, trousers, plastics envelopes or containers (or any combination of these) to bear information additional to that specified above.

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13. Normative References

The following documents contain provisions which, through reference in this text, constitute provisions of this specification. All documents are subject to revision and, since any reference to a document is deemed to be a reference to the latest edition of that document, parties to agreements based on this specification are encouraged to take steps to ensure the use of the most recent editions of the documents indicated below. Information on currently valid national, international and CKS documents may be obtained from the South African Bureau of Standards⁴.

CKS 129, *Colours for textiles.*

CKS 627, *Fusible interlinings.*

ISO 3175-2, *Textiles - Professional care, drycleaning and wetcleaning of fabrics and garments -- Part 2: Procedure for testing performance when cleaning and finishing using tetrachloroethene.*

SANS 79, *Textiles – Mass per unit area of conditioned fabrics.*

SANS 82, *Width of a textile fabric in a piece or roll.*

SANS 105-B02/ISO 105-B02, *Textiles – Tests for colour fastness – Part B02: Colour fastness to artificial light: Xenon arc fading lamp.*

SANS 105-C10/ISO 105-C10, *Textiles - Tests for colour fastness Part C10: Colour fastness to washing with soap or soap and soda.*

SANS 105-D01, *Textiles - Tests for colour fastness Part D01: Colour fastness to dry cleaning.*

SANS 105-E04/ISO 105-E04, *Textiles – Tests for colour fastness – Part E04: Colour fastness to perspiration.*

SANS 105-X12, *Textiles - Tests for colour fastness Part X12: Colour fastness to rubbing.*

SANS 960, *Textiles - Dimensional stability during washing and drying procedures.*

SANS 1309, *Printed labels for textiles.*

SANS 1362, *Sewing threads.*

SANS 1822, *Slide fasteners.*

SANS 1833-1, *Textiles - Quantitative chemical analysis Part 1: General principles of testing.*

SANS 1833-4, *Textiles - Quantitative chemical analysis Part 4: Mixtures of certain protein and certain other fibres (method using hypochlorite).*

SANS 5113, *Non-fibrous material content of wool.*

SANS 5726, *Seaming properties of woven textile fabrics.*

SANS 6116, *Resistance of textile fabrics to pilling and fuzzing (Random tumble method).*

SANS 7211-2, *Textiles - Woven fabrics - Construction - Methods of analysis Part 2: Determination of number of threads per unit length.*

SANS 10011, *Care-labelling of textile piece-goods, textile articles and clothing.*

SANS 10076-5, *The assessment of defects in textile piece-goods and made-up articles Part 5: Defects in woven woollen and worsted piece-goods.*

SANS 10235, *Fibre-content labelling of textiles and textile products.*

⁴ **SABS: Tel. +27 (0) 12 4287911**
www.sabs.co.za

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SANS 10371, *Terms and definitions for clothing.*

SANS 11108, *Washing pretreatment of textile fabrics.*

SANS 13934-1/ISO 13934-1, *Tensile properties of fabrics, Part 1: Determination of maximum force and elongation at maximum force using the strip method.*

ANNEX A

(Normative)

Special conditions of tender

A-1 GENERAL

A-1.1 Unless otherwise stated, the South African Bureau of Standards shall be the inspecting authority.

Any applications for deviations from drawings or the specification, or any laid down process, treatment or procedures as set out in this specification, must be made to the SA Airways and verified by the SABS⁵. All applications must be submitted in writing.

A-1.2 Three pre-production sample trousers in different sizes, shall have been inspected, tested and approved by the inspecting authority before bulk production is commenced. Each one of these samples shall be accompanied by a trim chart containing a sample of each component material (as given in 6) and the relevant certificates. It shall be the duty of the manufacturer to give adequate notice to the inspecting authority of the availability of these samples.

A-1.3 The trousers shall be subject to inspection during the course of manufacture. The inspector shall, during normal working hours, be given all reasonable facilities for carrying out his duties and shall have the right of entry into the contractor's factory and the factory or works of any subcontractor where work on trousers supplied to this specification may be in progress

A-1.4 The contractor shall inspect the finished trousers for compliance with the specification before submitting them to the inspecting authority for final inspection.

A-1.5 Before acceptance, the trousers shall have been inspected and tested by the inspecting authority and found to comply with the requirements of the specification.

A-2 DOCUMENTATION

One container of each consignment shall be marked "DOCUMENTS" and in addition to the trousers, shall contain the following:

- a) The packaging slip or delivery note;
- b) where applicable the inspection certificate(s);
- c) a copy of the invoice containing the following information:
 - the order number
 - the financial authority number
 - a full description of the consignment, i.e. Order Number, quantity, etc

⁵ **SABS Inspection Authority: (Tel) 012 4287371;**

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ANNEX B
(Normative)
CKS 129 Colours

Due to the fact that colours can change over a period of time, any colour standard which has been registered for a period of SEVEN YEARS or more shall be considered obsolete. These standards shall then be allocated an archived status (as opposed to current status) and re-registration shall be required.

A. The following scenarios require a submission of three metres of fabric from the fabric supplier:

1. A colour standard is archived.
2. First time registration is required (CKS 129 colour number does not exist).
3. Colour swatch stock at the SABS is no longer available.

B. Requirements for the submission of fabric as identified in A:

1. The colour shall be as agreed upon between South African Airways and the successful tenderer.
2. The fabric shall be used to make new colour swatches which shall be the responsibility of the SABS.
3. The cost of the three metres of fabric shall be incorporated in the relevant tender submission.

HISTORY SHEET				
VERSION	DATE	AMENDMENTS/HISTORY	CHECKED	
			NAME	INIT.
01.0	March 2010	First release		
02.0	March 2014	Change outer material Add rubber insert in waistband Align design detail with new sample		

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