



**Technical Specification for
GLENGARRY
Wool, Knitted, Various**

Defence Clothing
Integrated Project Team

PROPERTY OF :-
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PREFACE

TABLE 1 – PRODUCT LIST

Item Name	GLENGARRY,Wool, Knitted, Various	
Development File No	D/DCTA/P1158 (ST)	
Product Support File No.	D/DCTA/452/024 (QPS)	
NATO Stock No.	Description	Pattern No.
8405-99-137-8694 to 8708	Blue: with scarlet tourie	21090A
8405-99-137-8726 to 8740	Blue: with scarlet and white diced band and scarlet tourie	21092A
8405-99-137-8742 to 8756	Blue: with scarlet, dark green and white diced band and scarlet tourie	21093
8405-99-137-8758 to 8771	Green: with black tourie	21094A

Any colour shown in this document is for representation and must not be used for colour matching.

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TABLE 2 – ISSUE RECORD

Issue No.	Comments	Issue Date
08	Reformatted spec to DE&S template. Updated Pattern number for NSN range 8405-99-137-8694 to 8708, pattern 21090 to 21090A	18 July 2007
07	Colour fastness test requirements amended.	20 May 2003
06	Reformatted, Related specifications and documents revisited, Changes in sizing of the dicing and update pattern number 21092 to 21092A	25 April 2003
05	Reformatted without technical change.	26 June 2001

PART 1

1. THE PRODUCT

a. Use of the product : A Glengarry made from wool material, for wear by Scottish Regiments. The Schedule provides for fifteen stock sizes.

FIGURE 1. Example of Glengarry wool Knitted with Scarlet Tourie. Pattern No. 21090



Front and left hand side as worn.



Back and right hand side as worn

FIGURE 2. Example of Glengarry Wool Knitted with Scarlet and White diced band and Scarlet Tourie. Pattern No. 21092A



Front and left hand side as worn.



Back and right hand side as worn

TABLE 3 – RELATED SPECIFICATIONS AND DOCUMENTS

Specification/Document	Detail
BS EN ISO 105 Part B02 D01 E01	Textiles - Tests for colour fastness Tests for Colour Fastness. Colour Fastness to Artificial Light: Xenon Arc Fading Lamp test. Colour Fastness to Dry Cleaning. Colour Fastness to Water
BS EN 12590	Textiles. Industrial sewing threads made wholly or partly from synthetic fibres
BS EN 20139	Textiles - Standard atmospheres for conditioning and testing
BS 2471	Methods of test for textiles – woven fabrics – determination of mass per unit length and mass per unit area
BS 3870 Parts 1 and 2	Stitches and seams
BS 4560	Fabrics for linings in uniform clothing
BS 4736	Determination of dimensional changes of fabrics induced by cold water immersion
BS 4973 Part 4	Interlinings. Specification for Woven Sew-In Interlinings.
BS 5742	Textile labels requiring to be washed and / or dry cleaned
UK/SC/4667	Ribbon, textile black

2. PATTERNS.

a. Master Patterns The DC IPT at Caversfield holds a Master Pattern for this product. Potential contractors may view the pattern on site by arrangement with the DC IPT Commercial Department.

b. Standard Patterns A Standard Pattern may be obtained from the DC IPT Technical Information Office and may be used to provide the criteria for all materials, components and manufacturing features not fully defined in this specification.

PART 23. PRODUCT DESIGN

a. Product Description. A wedge shaped knitted Headdress with Tourie and Tails.

TABLE 4 – PRODUCT COMPONENTS

4.1 Body Fabric	<ul style="list-style-type: none"> Wool, knitted and finished in accordance with Table 5 Clause 5.1 and to comply with the requirements of Table 8
4.2 Diced Bands	<ul style="list-style-type: none"> Wool to comply with the colour fastness requirements of Table 8. Design and colours as described in Table 5, clause 5.3,
4.3 Tourie	<ul style="list-style-type: none"> Wool, 2 ply, colours as specified in Table 1, on Pattern No 21092A and 21093 scarlet to match the colour in dicing band. Colours to comply with colour fastness requirements of Table 8.
4.4 Lining	<ul style="list-style-type: none"> Cloth, cotton, silesia plain weave, Black, FS, SF, Pattern No. 8715B to BS 4560, Ref 1.3, Not to be sulphur dyed or an alternative approved by the DCT IPT
4.5 Band Stiffener	<ul style="list-style-type: none"> Cloth, buckram flax and jute No. 2, Pattern No. 8320A, WS4 (L6), to BS 4973 Part 4, NATO Stock No.8305-99-942-8282.
4.6 Ribbon for Binding and Tails	<ul style="list-style-type: none"> Ribbon, Black, 32mm wide, Pattern No 9477A, to specification UK/SC/4667, NATO Stock No.8305-99-125-0905 or 22mm binding for Pattern Numbers 21092A and 21093 Pattern Number 9477A to guide.
4.7 Ribbon for Rosette	<ul style="list-style-type: none"> Ribbon, Black, 70mm wide, Pattern No.9480A, to Specification UK/SC/4667, NATO Stock No.8305-99-125-0908
4.8 Identification Label	<ul style="list-style-type: none"> Fabric, marking and attachment to comply with the requirements of BS 5742 Paragraph 3
4.9 Threads for all purposes	<ul style="list-style-type: none"> Polyester and cotton, to BS EN 12590 Metric Ticket No.75, Shade to match main material. Or an alternative approved by the DC IPT

TABLE 5 PRODUCT CONSTRUCTION

5.1 Body fabric	<ul style="list-style-type: none"> • Wool, knitted from an all-wool yarn which may include a proportion of selected reclaimed wool in the blend, provided the quality of the finished body is not thereby impaired. • It is to be dyed to match the shade of the Standard Pattern. • Fabric is to be milled and lightly sheared to give the same finish as that of the Standard Pattern. • The finished body is to comply with the requirements of the Table 8
5.2 Lining	<ul style="list-style-type: none"> • The lining of the side crown may be cut in two parts with the joins made at the centre front and centre back of the Glengarry. The seam joining the side crown lining to the tip is to be made at the turn of the crown.
5.3 Diced bands	<ul style="list-style-type: none"> • For Pattern No.21093 the dicing is to be arranged in three rows; the top and bottom rows are to be alternative scarlet and white and the centre row dark green and scarlet. The dice forming the pattern is to be approximately 11mm square when measured after the Glengarry is blocked. • For Pattern No.21092A the dicing is to be arranged in three rows; each row alternating scarlet and white. The dice forming the pattern is to be approximately 14mm square when measured after the Glengarry is blocked. • Colours of dicing to match appropriate Standard Pattern. • The number of dice squares on the bands are to comply with Table 7. • In no instance are two dice of similar colour to be placed together. • The joining of the diced band is not to be evident and is to be placed under the rosette. • It is essential that the join between one row of dicing and the next is to finish exactly on the front crease edge in all instances.
5.4 Crown	<ul style="list-style-type: none"> • Indent depth midway along the length of the crease edge 6.5cm • Stitching depth 1.2cm around crown split • The crown split stitching is to penetrate all layers and not be evident on the outside of the Glengarry.

TABLE 5 PRODUCT CONSTRUCTION Continued

5.5 Stiffener for crown	<ul style="list-style-type: none"> • The buckram stiffener is to be cut to the depth of the side crown and of the correct length for the head size of the Glengarry. • The stiffener, bonded to the body fabric with a good quality rubber solution which may contain mineral matter not exceeding 40 parts, by weight to 60 parts by weight of rubber. • The lower edge of the stiffener and lining is to be secured by the stitching of the ribbon binding. • An inverted 'V' shaped opening, 3cm deep, is to be cut at the back of the Glengarry and be bound with ribbon. • The bottom edge shape is to form a curve from a straight line to 1.5cm high at the centre of the Glengarry
5.6 Binding	<ul style="list-style-type: none"> • The lower edge of the side crown is to be bound with ribbon using seam type 3.03.07 of BS 3870 and have the raw ends sewn in with the binding of the 'V' shaped opening. • The width of the binding when finished is to be 1.3cm for Pattern Nos. 21092A and 21093. • The width of the binding when finished is to be 2.3cm for Pattern Nos.21090A and 21094A.

TABLE 5 PRODUCT CONSTRUCTION Continued

5.7 Tails	<ul style="list-style-type: none"> • The tails are to be crossed over (left over right as worn) and machine stitched together forming the shape of a diamond measuring approx. 6cm top to bottom by 3cm side to side. The top of the diamond is to start approx. 3cm from the centre back of the glengarry. On pattern number 21090A the points of the tails are to face inwards, all other patterns the tails face outward. • The tails are to be joined to the Glengarry by turning the raw edges in and box tacked to each side of the opening, with the bottom edge level with the lower edge of the Glengarry.
5.8 Rosette	<ul style="list-style-type: none"> • The rosette is to be formed with two layers of ribbon, all edges being raw to form a 0.5cm fringe. The top layer being gathered at the centre. • The rosette is to be tacked by hand at both ends to the left side crown (as worn) with the front edge approx. 5.5cm from the centre from of the Glengarry (measured to the middle of the front edge). For patterns 21092A and 21093 the bottom edge of the rosette is to be positioned at the top of the binding. For patterns 21094A and 21090A the bottom edge of the rosette is to be positioned 1cm up from the bottom edge. • Dimensions as stated in Table 7
5.9 Tourie	<ul style="list-style-type: none"> • The Tourie is to be securely sewn to the crown of the Glengarry and be positioned midway on the crease edge.
5.10 General	<ul style="list-style-type: none"> • The Glengarry is to be free from all ends of sewing threads, be blocked and pressed and delivered in a clean condition.
5.11 Seams and stitching to BS 3870	<ul style="list-style-type: none"> • Machine stitching is to be stitch type 301, with at least eight but not more than ten stitches per 2cm.

TABLE 6 – SCHEDULE OF NATO STOCK NUMBERS AND ACTUAL BODY MEASUREMENTS

Size No and internal circumference of binding	Pattern No 21090A NSN's 8405-99-137	Pattern No 21092A NSN's 8405-99-137	Pattern No 21093 NSN's 8405-99-137	Pattern No 21094A NSN's 8405-99-137
48	8694	8726	8742	8758
49	8695	8727	8743	8759
50	8696	8728	8744	8760
51	8697	8729	8745	8761
52	8698	8730	8746	8762
53	8699	8731	8747	8763
54	8700	8732	8748	8764
55	8701	8733	8749	8765
56	8702	8734	8750	8766
57	8703	8735	8751	8767
58	8704	8736	8752	8768
59	8705	8737	8753	8769
60	8706	8738	8754	8770
61	8707	8739	8755	8771
62	8708	8740	8756	8772

TABLE 7 – MEASUREMENTS AND TOLERANCES

Size No and internal circumference of binding	Measurements of Glengarry								
	Depth of Body			Tail Ribbon		Rosette		Number of Diced Squares	
	Front	Centre	Back	Width	Length	Length	Height	Pattern Number 21093	Pattern Number 21092A
48	6.4	10.2	5.8	3.2	33	9	7	50	40
49									
50									
51									
52									
53									
54									
55								56	44
56									
57									
58								62	48
59									
60									
61									
62									

TABLE 8 – REQUIREMENTS FOR THE FINISHED BODY, DICING AND TOURIE

PROPERTIES	REQUIREMENTS	METHOD OF TEST
Finished Mass of body g/m ²	590 +- 30	BS 2471 Method 5
Relaxation to shrinkage	2% max	As detailed below

Method of Test BS EN ISO 105					
B02		E01		D01	
Light (xenon)		Water		Dry Cleaning	
Colour change	Staining	Colour change	Staining	Colour change	Staining
4-5	-	4-5	4	4	-

TABLE 9 - METHODS OF TEST TO DETERMINE RELAXATION SHRINKAGE

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|--|
| <ul style="list-style-type: none"> A specimen of knitted fabric, prepared by cutting around the circumference of the crown, is to be conditioned in the Standard Atmosphere for Conditioning and Testing, as described in BS EN 20139, for 24 hours immediately prior to testing. The specimen is then to be laid flat and one pair of datum lines, 20cm apart, are to be marked on the fabric and a second pair, also 20cm apart, are to be marked at right angles to the first. |
| <ul style="list-style-type: none"> The specimen is to be tested to BS 4736, Section 8-test procedure up to and including Section 8.3. |
| <ul style="list-style-type: none"> Condition the specimen in the Standard Atmosphere for testing textiles until it reaches equilibrium, then measure the distance between the marks as previously, and calculate the percentage linear shrinkage. |

4. LABELLING REQUIREMENTS. The size number, NATO Stock Number and the contract number is to be either:
- Clearly marked on a label attached at the side crown lining, or
 - Pressure sensitive self adhesive labels may be used.

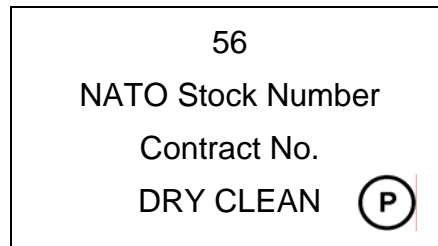


FIGURE 3 Example Identification, marking and Care label

The size number is to be 12mm high and the remainder of characters no less 6mm high.