



PAKISTAN NAVY SPECIFICATION 06/2021  
PROMULGATION DATE: 19 JULY 2021

# **BADGES FOR SSG(N) (PARA ADVENTURE, AIR BORNE, SKY DIVER, SSG (N), SSG (N) COMMAND WING)**

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**PROMULGATION ORDER**

1. This specification is hereby approved and promulgated for information, guidance and compliance by the relevant person.
2. The details contained in the specification are to be studied, interpreted and implemented with due regards to the interest of the Service.

**SUGGESTIONS FOR AMENDMENT**

1. The specification has been prepared to bring the test methods and procedures in line with up-to-date PN requirements and facilities held in Pakistan. CINS may request to amend any test requirement/ test procedure in light of the experience emanating from its inspection history, through the feedback form placed at Annex F. However, such an alteration will be effective when the amendment is promulgated by this Directorate, and will be effective on the contracts which materialize after the promulgation date of respective amendment

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### RECORD OF CHANGES /AMENDMENT

0101      **DESIGNATION**

1. Badges for SSG (N), (Para Adventure, Air Borne, Sky Diver, SSG (N), SSG (N) Command Wing).

0102      **USAGE**

1. These Badges will be worn SSG (N) on their relevant dresses.

0103      **INTRODUCTION**

1. This specification is prepared by Directorate of Indigenous Technical Development, Karachi, to provide necessary guidance to the potential manufacturers/ suppliers of the items mentioned herein. This specification is to be used for testing and deciding upon acceptance, or otherwise, of the items mentioned. Any alteration or addition in this specification can be suggested to ITD Directorate. However, it cannot be implemented without prior approval of DNS.

2. This specification booklet includes 06 Annexes and consists 27 pages, including the cover.

0104      **SCOPE**

1. This specification covers the technical/ manufacturing requirements of Badges for SSG (N) to be used by Pakistan Navy. It defines and lays down the quality, standards, and details of materials, workmanship and finish. It also defines briefly procedure of sampling, testing, inspection acceptance/ rejection, marking, preservation, packing and delivery etc.
2. The supplier/ manufacturer shall comply in every respect with the terms of this specification and ensure that the stores conform to it, in all respects.

0105      **RELATED DOCUMENTS**

1. The latest standards documents that have been referred to in this specification are:

a.	AATCC-20 A	Fiber Analysis – Qualitative
b.	AATCC 16	Color fastness to light
c.	ASTMD 3776	Test method for Mass per unit area of fabric
d.	ASTM D1874	Thickness of fabric
e.	ASTM E 1085	Embroidery thread Material
f.	ISO 105 J03	Method for calculating a color difference
g.	ISO-3801	Weight/sq meter in grams
h.	ISO 72112	Number of treads per unit length
j.	ISO 7211/1	Type of weave
k.	ISO 7211/2	Number of treads/ Inch
l.	ISO 7211/5	Determination of linear density of yarn removed from fabric
m.	ISO 105 C-10	Color fastness to Washing
n.	ISO 105-B02/BS 1006	Color fastness to Light
p.	ISO 105 D01	Color Fastness to Dry Cleaning
q.	ISO 105-E01	Color fastness to water

r.	ISO 105-E02	Color fastness to sea water
s.	ISO 105-E04	Color Fastness to Perspiration
t.	ISO-105-X12	Color Fastness to Rubbing
u.	Specification No P-SG/913	Naphthalene

0106      **TERMS & DEFINITIONS**

1. Definitions for the terms used in this standard are given at Annex A of this specification.

0107      **TECHNICAL DETAILS OF BADGES FOR SSG (N)**

1. The Technical Details of Badges for SSG (N) are mentioned at Annex B of this specification.

0108.      **DRAWINGS**

1. All dimension of drawing is given at Annex C

0109.      **GUIDELINES FOR MANUFACTURING OF SSG (N) BADGES**

1. The badges for SSG (N) are to be manufactured as per drawing at Annex C. The texture, feel and finish shall be best of its class and to the entire satisfaction of inspector.
2. Embroidery shall be done with Tilla (Zarri & Gijaa) as per drawing attached at Annex C of this specification.
3. Embroidery shall be neat. It shall be done by hand/ machine.
4. Base fabric and lining cloth shall be closely stitched with the P.C adhesion cloth/ Bukram Padding interlining to give a firm look.
5. The sewing/ stitching thread 2/31.5 Tex should match with the Base cloth i.e Pantone 19-4007 TCX and polyester.
6. Manufacture is liable to pay all the testing charges.
7. Metal wire used should be copper electroplated with silver and gold metals and same are finished with clear lacquer.
8. Embroidery shall be carried out with textile yarn described in Annex B.
9. Sewing shall be securely finished off.

**Note:** Card board/ paper may not be used as adhesive in interlining.

0110.      **QUALITY OF WORKMANSHIP AND FINISHING**

1. The Workmanship and finish of Badges for SSG (N) shall be equal to sealed pattern. It shall be best of class and to the entire satisfactory of the Inspector.

2. The Badges for SSG (N) shall conform to the sealed pattern in respect to all properties and quality not defined in this specification.

0111. **TESTING**

1. The material shall be subjected to tests laid down in this specification at Annex B and related documents. At least 10 x samples of Badges along with accessories for SSG (N) will be required to complete all the tests mentioned at Annex B of this specification. The material may also be subjected to such tests which are deemed necessary by the inspection authority in order to determine their suitability. Inspecting Authority reserves the right to get any B/R samples tested from any reputable Laboratory other than PN. However, any test considered important by Inspecting Authority other than Annex B may also be conducted in order to check its suitability.

0112. **DRAWING OF SSG (N) BADGES FROM LOTS/ BATCHES**

1. Sample quantity will depend upon lot/batch quantity. Samples quantity will be as per Annex E (AQL) or based on 100% Inspection as here to fore depending on discretion of Inspecting Authority.

0113. **TENDER SAMPLE**

1. Tender sample to be approved by TSR Committee.
2. For each contract 10 samples of Badges for "**each category**" SSG (N) shall be supplied by the manufacturer at the time of tendering along with samples of materials used in manufacturing of Badges for SSG (N) for inspection as follows:

a.	Woolen Cloth	03 meter
b.	Stitching thread	50 gms
c.	Embroidery thread	50 gm Tilla (Zarri & Gijaai)

0114. **ADVANCE SAMPLE**

1. Advance sample or pre-production sample, when required, shall be submitted in accordance with terms of the contract for inspection and testing as per Annex B, C & D and approved by CINS. The minimum quantities required are 10 x samples along with samples of materials used in manufacturing of Badges for SSG (N) as mentioned above.
2. Whenever Tender, advance or pre-production sample is not required, the suppliers / manufacturer are advised in their own interest to submit to the Inspecting Officer or his representative an initial delivery of One % of the contract or 10 x samples along with samples of accessories/ materials for inspection and testing.
3. The approval of the sample, authorizes the commencement of bulk production but does not relieve the suppliers/ manufactures from compliance with all the provisions of this specification.
4. One approved sample shall be properly sealed by INS and returned to the firm for guidance; rest of the approved sample shall be retained by INS for future use in bulk Inspection (if deemed necessary).

5. The Pre-production sample shall be manufactured by the manufacturer with the same facilitates which will be used for manufacture of the bulk items.
6. Firm shall provide advance sample along with quality verification reports from an accredited laboratory, whenever asked/ required by Inspecting authority to ensure compliance of quality assurance parameters during production/ final internal inspection.
7. Internal/ external inspection will be carried out by the manufacturer prior call for Naval Inspection at firm premises.

0115. **INSPECTION**

1. **Bulk Representative Sample** (B/R) random sampling will be carried out as per procedure/ criteria in vogue.
2. **Bulk Inspection** Bulk inspection will be carried out after satisfactory completion of Visual Examination and Testing of B/R Sample as per Annex B, C and D.
3. **Inspection of Badges for SSG (N)** 100% of the offered store shall be inspected. The guide lines for such examination/ inspection are listed at Annex D Stage inspection of Badges for SSG (N) may be carried out as considered appropriate by CINS.
4. **Inspection/ Acceptance and Rejection of Stores**. Inspection/ acceptance is to be carried out to the entire satisfaction of Chief Inspector of Naval Stores or as per instruction/ procedure laid down in unit/department Standing Order
  - a. The Badges for SSG (N) shall be examined for the correctness of material, shape, design, dimension, size, workmanship and finish.
  - b. Badges for SSG (N) shall be inspected especially for stitching and finishing, weaving defects, defective shape, discoloration/ fading, pinholes. Stitching, dimensions and embroidery of Badges for SSG (N) are to be especially checked.
  - c. CINS reserves the right to reject the whole supply in case, upon examination, material or packing of any sample or portion of the consignment is found NOT CONFORMING to this specification. All stores and packing NOT fully in accordance with this specification shall be rejected.
  - d. If on examination of 5% of any delivery, 20% of those examined from bulk supply are found NOT CONFORMING to this specification in respect of the pattern, dimensions, workmanship and finish, the whole consignment may be rejected without any compromise.
  - e. All stores and packing NOT fully in accordance with this specification shall be rejected.
  - f. Badges for SSG (N) with major defects as described in Annex D of this specification will be rejected.

5. **Responsibility for Inspection.** The supplier is responsible for the performance of all inspection requirements (examinations and tests) as specified herein. PN reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to ensure supplies and services conform to prescribed requirements.

6. **Responsibility for Compliance.** The inspection set forth in this specification shall become a part of the supplier's overall inspection system or quality program. The absence of any inspection requirements in the specification shall not relieve the contractor of the responsibility of ensuring that all products or supplies submitted to PN for acceptance comply with all requirements of the contract. Sampling inspection, as part of manufacturing operations, is an acceptable practice to ascertain conformance to requirements. However, this does not authorize submission of known defective material, either indicated or actual, nor does it commit PN to acceptance of defective stores (material).

7. **Replacement by the Contractor.** The supplier/ manufacturer is responsible for replacement of the consignment or any part thereof whenever it is found to be not conforming to this specification or does not curtain its quality till the useful life of an item. The supplies so tendered in replacement, shall be subjected to testing/Inspection and acceptance by the Inspecting Officer.

8. **Responsibility for Safety.** The supplier/ manufacturer is wholly responsible for the safety of supplies during inspection, storage at firm's premises, proper packing, dispatch and delivery up to consignee.

9. The CINS is the authority in all matters pertaining to Inspection.

#### **0116. STAMPING OF ACCEPTED/ REJECTED STORES BY THE INSPECTOR.**

1. While stamping of accepted/ rejected stores following instructions are to be followed:

- a. **Stamping of Accepted Stores.** The acceptable Badges for SSG (N) shall be stamped with Inspector's Individual Acceptance Mark's on inside of the quarter right side or as per instructions of inspecting officer. The stamping shall be legible.
- b. **Stamping of Rejected Stores.** The rejected Badges for SSG (N) shall be marked with Inspector's Rejection Mark to avoid re-submission by the supplier.
- c. The Inspector is the authority in all matters pertaining to inspection.

#### **0117. PACKING AND PRESERVATION DETAILS.**

1. Preservative treatment and quality of packing shall be examined/ tested as the inspector may consider necessary in order to determine whether they conform to this specification.

- a. **Preservation.** Badges for SSG (N) shall be preserved by using powder naphthalene during packing.
- b. **Packing Details.** The store when ordered to be delivered 'PACKED' shall be packed as following instructions:

- (1) Each Badges for SSG (N) shall be packed in butter paper, then in a suitable box in neat and tidy condition.
- (2) 500 x Badges for SSG (N) shall be further packed in a thick card board box.
- (3) Each card board box packing shall be securely and properly packed with packing list.

0118. **IDENTIFICATION LABEL.**

1. Each Badges for SSG (N) shall bear following minimum information written on polyethylene packing:

- a. Item name/ item description with size and NSN/ Patt No.
- b. Contract number and Date.
- c. Year of manufacture.
- d. Firm's name, initials, or trade mark.
- e. Batch no.

0119. **PACKING LIST.**

1. Firm is bound to provide a packing list of store offered for inspection along with the challan, which include complete details about the store i.e. Pattern No., Description of stores, size, quantity, contract No., and date, Challan No. date and I/Note No. or voucher no. and date, consignee, Manufacturer/firm's name, date of packing and packer's signature, QA certificate/ Lab test report from any accredited lab.

0120. **MARKING OF STORES.**

1. In addition to any special marking required by contract or order, the marking of packages shall be stenciled with quick drying Black ink/ Paint in accordance with Specification No. NS/MISC/002/80 with clearly defined characters as described below:

a. On Front and Top

- (1) Consignee Address.
- (2) Contract No and date.
- (3) Description of Stores Packed and NSN/ Patt No.
- (4) Stowage / Stacking Instructions.
- (5) Quantity of the Item packed.
- (6) Signature along with stamp of Packaging Manager/ rep of firm.

b. On Back

- (1) Manufacturers name / Firm's name.
- (2) Voucher No. or inspection note no. and date.
- (3) The No. of individual Package and the total No of Packages in the consignment joined by the word 'of' e.g. 2 of 300.
- (4) Weight of the package.
- (5) Month and year of packing.
- (6) Destination i.e. Railway station/ (Navy).

0121. **DELIVERY**

1. The consignment of store will be delivered in accordance with the terms of contract.
2. The store shall be delivered in Brand new, clean and dry condition.
3. The contractor/ manufacturer is fully responsible for the safety of the supplies during inspection, stage inspection, storage at firm's and consignee premises, proper packing, dispatch and delivery up to consignee.

XXXXSDXXXX

**MUHAMMAD AFSAR**  
Captain Pakistan Navy  
DID

**Annexes:**

A. Terms & Definitions	08
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**ANNEX A TO**  
**PN SPECIFICATION NO. 06/2021**  
**PROMULGATION DATE 19 JUL 21**

**TERMS & DEFINITIONS**

1. **CINS:** Chief Inspector of Naval Stores
2. **DITD :** Directorate of Indigenous Technical Development
3. **DNS:** Directorate of Naval Store.
4. **PNCSD:** Pakistan Navy Clothing Store Depot
5. **PNCTA:** Pakistan Navy Central Testing Authority
6. **Inspector:** The term inspector shall include the "Inspection Authority", inspecting officer and their representatives, duly authorized for the purpose of discharging inspection duties involved.
7. **Inspection Authority:** Chief Inspector of Naval Stores (CINS). His verdict in respect of Sealed Inspection matters is to be taken as final.
8. **Inspecting Officer:** An officer nominated by the CINS for carrying out inspection of stores supplied by the supplier, against a specified contract or order, in accordance with the particulars stipulated therein.
9. **Acceptance Quality Level (AQL):** It represent allowable limit/ tolerance of defects or non-conformities in an offered store/ lot/ batch. It represent in percentage, also known as Allowable Quality Limits.
10. **Minor Defects:** They are small insignificant issues that don't affect the function or form of the item. Highest tolerance of AQL has been set for minor defects.
11. **Major Defects:** They would likely result in product return but don't poses safety risk. AQL tolerance depend upon the description/ quality of finished product.

**ANNEX B TO**  
**PN SPECIFICATION NO. 06/2021**  
**PROMULGATION DATE 19 JUL 21**

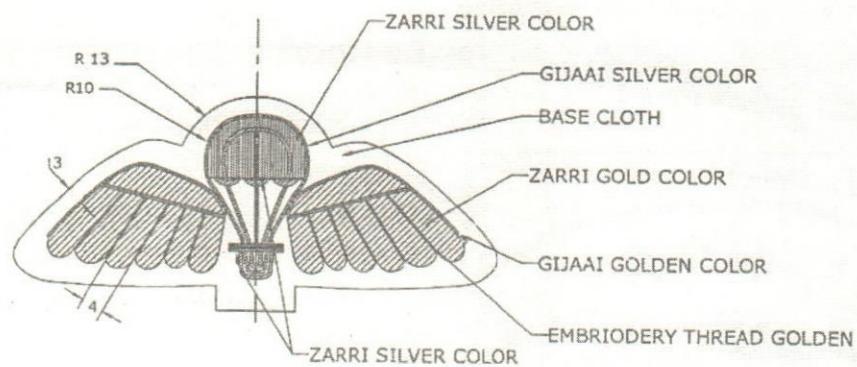
**TECHNICAL DETAILS OF BADGES FOR SSG (N)**

S NO	TESTS	METHODS	REQUIREMENT
1.	<b>BASE FABRIC MATERIAL SPECIFICATION</b>		<b>Badges for SSG (N)</b>
a.	Material	AATCC 20A	80% ± 02% Wool 20% ± 02% Cotton
b.	Linear Density Warp Weft	ISO 7211/5	6 <sup>s</sup> ± 1 <sup>s</sup> 8 <sup>s</sup> ± 1 <sup>s</sup>
c.	Weight/sq meter in grams	ISO-3801	315 gm ± 10 gm
d.	Thread/ Inch Warp Weft	ISO 7211/2	32 ± 02 27 ± 02
e.	Weave	ISO 7211/1	Plain (1x1)
f.	Colour (Pantone)	Visual analysis	19-4007 TCX
2.	<b>BASE FABRIC PERFORMANCE TESTING</b>		
a.	Color fastness to washing (a) Staining On attached pieces (1) Wool (2) Cotton (b) Change in Shade	ISO 105 C-10	4 or better
b.	Color fastness to light Change in shade	ISO 105-B02/BS 1006 UK/LN	4 or better 4 or better
c.	Color Fastness to dry cleaning	ISO 105 D01	4 or better
d.	Color Fastness to rubbing (1) Change in shade (2) Staining	ISO-105-X12	4 or better 4 or better
e.	Color Fastness to perspiration Acid & Alkali (1) Change in shade (2) Staining	ISO 105-E04	Acid 4 or better Alkali 4 or better 4 or better 4 or better
f.	Color fastness to Sea Water (a) Staining On attached pieces (1) Wool	ISO 105-E02	4 or better

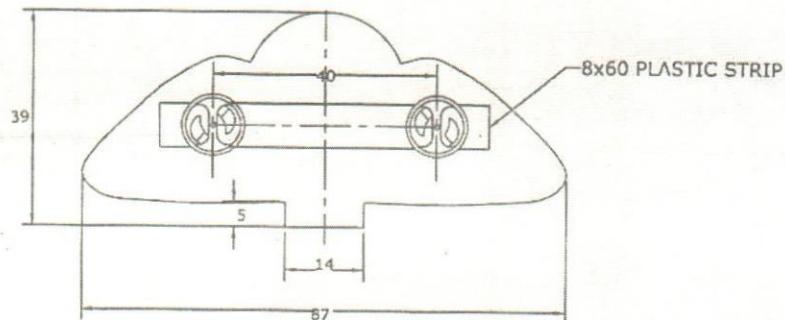
	(2) Cotton (b) Change in Shade		
<b>3. LINING CLOTH MATERIAL SPECIFICATION</b>			
a.	Material	AATCC 20A	PC Cloth/ Cotton
b.	Weight/sq Meter in grams	ISO-3801	160 ± 10gm
c.	Thread/inch (1) Warp (2) Weft	ISO 7211/2	140 ± 02 85 ± 02
d.	Weave	ISO 7211/1	Twill (2x2)
e.	Colour (Pantone Shade)	Visual analysis	18-1655 TCX
<b>4. LINING CLOTH PERFORMANCE TESTING</b>			
a.	Color fastness to Water (a) Staining on attached pieces (1) Wool (2) Cotton (b) Change in shade	ISO 105-E01	4 or better
b.	Color fastness to dry cleaning	ISO 105 D01	4 or better
c.	Color fastness to rubbing (1) Change in shade (2) Staining	ISO-105-X12	4 or better 4 or better
d.	Color fastness to perspiration (1) Change in shade (2) Staining	ISO 105-E04	Acid 4 or better 4 or better Alkali 4 or better 4 or better
e.	Color fastness to Sea Water (a) Staining on attached pieces (1) Wool (2) Cotton (b) Changes in shade	ISO 105-E02	4 or better
<b>5. INTERLINING MATERIAL SPECIFICATION</b>			
a.	Material	AATCC 20A	P.C adhesion cloth/ Bukram Padding
b.	Thickness	ASTM D1874	0.50 mm
<b>6. EMBROIDERY THREAD MATERIAL SPECIFICATION</b>			
a.	Material	ASTM E 1085	Zinc (0.09 %) coated copper wire
b.	Colour (Pantone) 1) Gijaai (Rich Golden color) 2) Gijaai (Silver color) 3) Zarri (Rich Golden color) 4) Zarri (Silver color)	Visual analysis	16-0836 TPX 14-5002 TPX 16-0836 TPX 14-5002 TPX

c.	Embroidery thread (Golden)	Visual analysis	16-0836 TCX
<b>7. STITCHING THREAD SPECIFICATION</b>			
a.	Material	AATCC 20 A	Polyester
b.	Construction	Visual analysis	02 cord each single
c.	Shade (Pantone) Black- Anthracite	Visual analysis	19-4007 TCX
<b>8. PLASTIC STRIP</b>			
a.	Material	ISO 23559	Polymeric Sheet
b.	Thickness	Visual analysis	2.5mm ± 0.5mm
<b>9. SECURING LOCK</b>			
a.	Material	Chemical Analysis	Commercial Brass (70:30)
b.	Thickness	Visual analysis	22 SWG
c.	Design/ Shape	Visual analysis	Butterfly

ANNEX "C" TO  
PN SPECIFICATION NO 05/2021  
PROMULGATION DATE 19July 2021

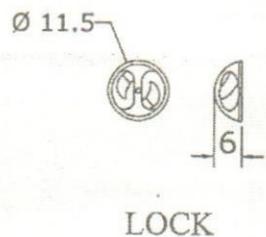


FRONT VIEW



BACK VIEW

1367

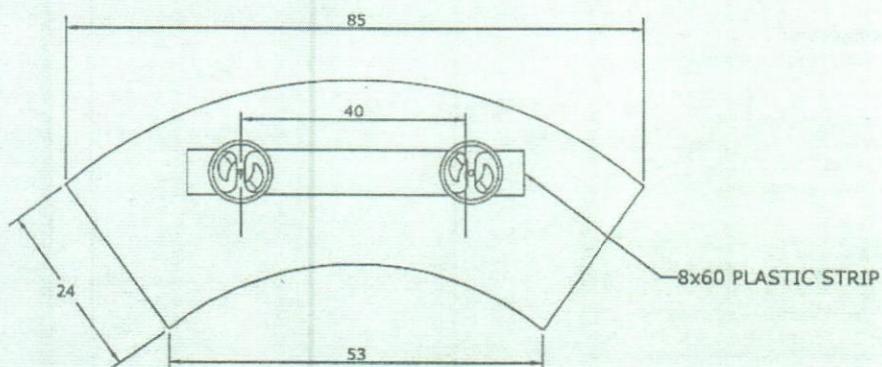
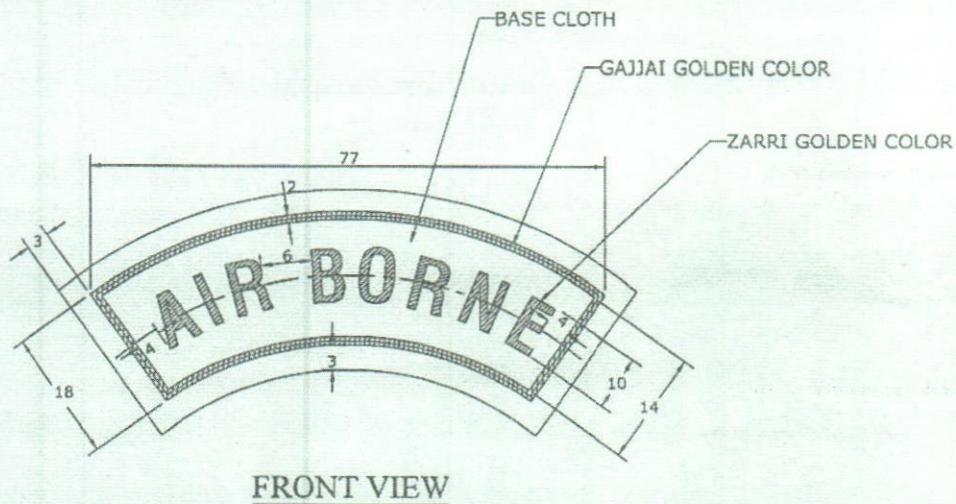


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NOTE:  
FOR FURTHER DETAILS SEE STOCK/APPROVED SAMPLE

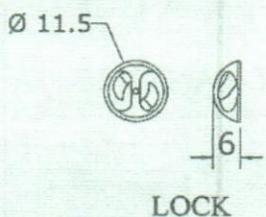
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TITLE: PARA ADVANTURE		
DWG.NO. TD-2560/2021	DIMENSIONS: mm	
DATE: 15 -03-2021	SCALE: 1:1	
DRAWN BY HD/M M.ASGHAR I/C DWG	CHECKED BY LT SANA KANWAL SO TEXTILE	APPROVED BY CAPTAIN MUHAMMAD AFSAR DITD

ANNEX "C" TO  
PN SPECIFICATION NO 06/2021  
PROMULGATION DATE 19July 2021



BACK VIEW

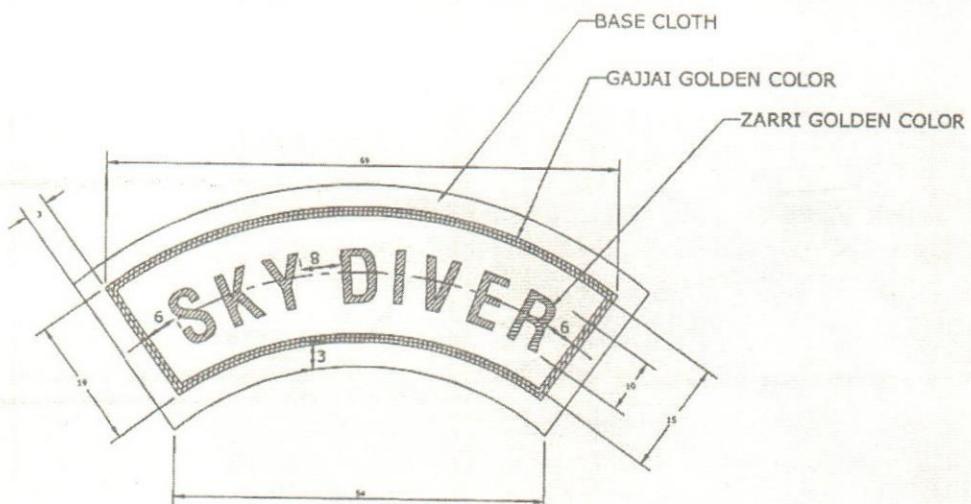
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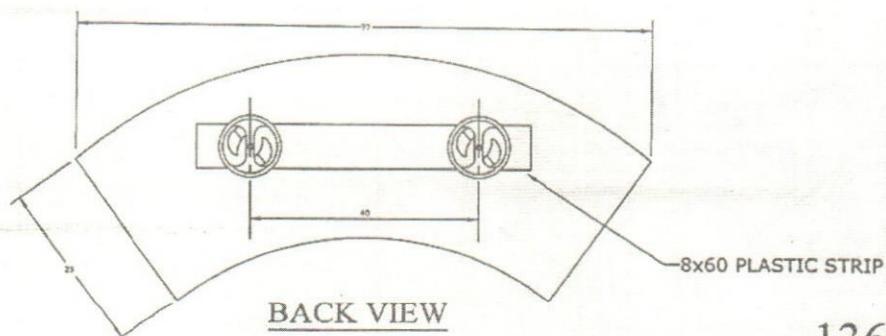
NOTE:  
FOR FURTHER DETAILS SEE STOCK/APPROVED SAMPLE

DITD KARACHI		
TITLE: AIR BORNE		
DWG.NO. TD-2556/2021	DIMENSIONS: mm	
DATE: 11-03-2021	SCALE: N.T.S	
DRAWN BY ADNAN NISAR D/MAN	CHECKED BY LT CDR SANA KANWAL SO, TEXTILE	APPROVED BY CAPTAIN MUHAMMAD AFSAR DITD

ANNEX "C" TO  
PN SPECIFICATION NO 06/2021  
PROMULGATION DATE 19 July 2021

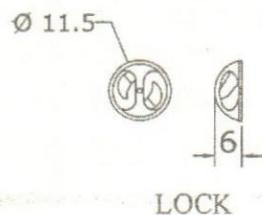


FRONT VIEW



BACK VIEW

1364

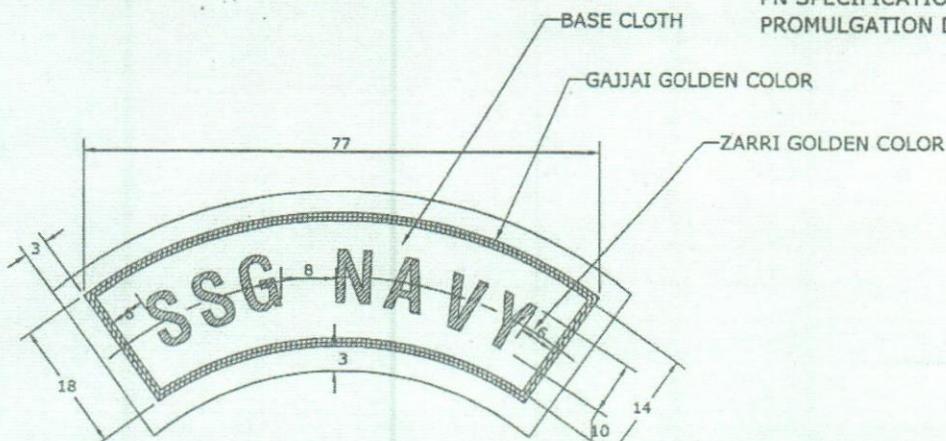


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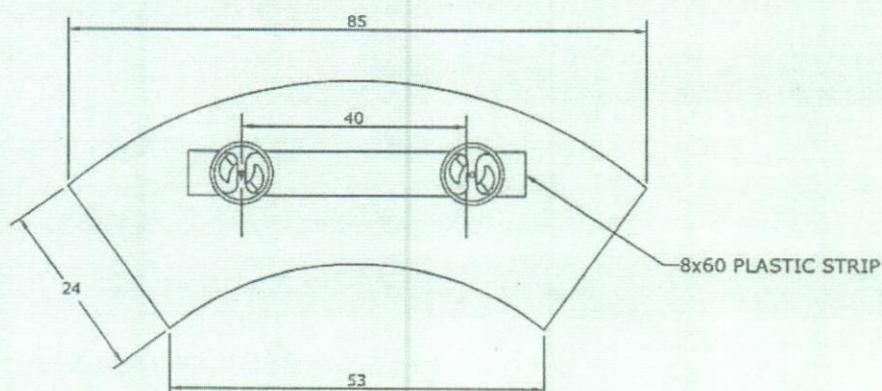
NOTE:  
FOR FURTHER DETAILS SEE STOCK/APPROVED SAMPLE

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TITLE: SKY DIVER		
DWG.NO. TD-2557/2021	DIMENSIONS: mm	
DATE: 11-03-2021	SCALE: N.T.S	
DRAWN BY ADNAN NISAR D/MAN	CHECKED BY LT CDR SANA KANWAL SO, TEXTILE	APPROVED BY CAPTAIN MUHAMMAD AFSAR DITD

ANNEX "C" TO  
PN SPECIFICATION NO 06/2021  
PROMULGATION DATE 19 July 2021



FRONT VIEW



BACK VIEW

1365

DITD KARACHI

TITLE:  
**SSG NAVY**

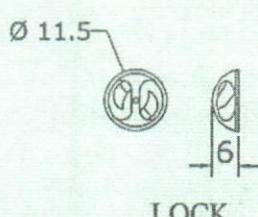
DWG.NO.	TD-2558/2021	DIMENSIONS: mm
DATE:	12-03-2021	SCALE: N.T.S

DRAWN BY	CHECKED BY	APPROVED BY
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ADNAN NISAR  
D/MAN

LT  
SANA KANWAL  
SO, TEXTILE

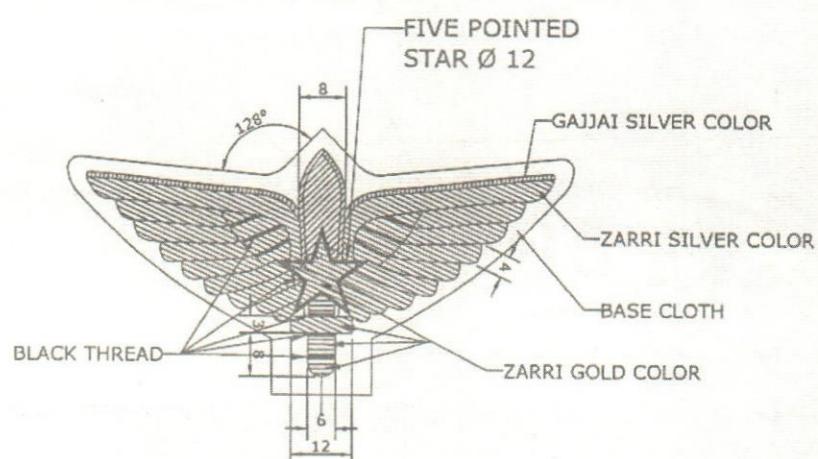
CAPTAIN  
MUHAMMAD AFSAR  
DITD



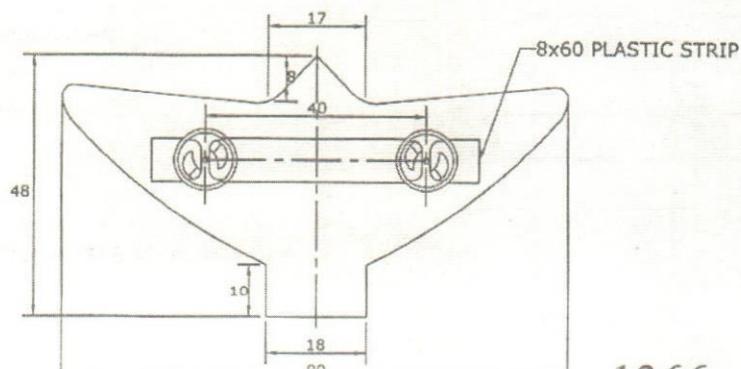
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NOTE:  
FOR FURTHER DETAILS SEE STOCK/APPROVED SAMPLE

ANNEX "C" TO  
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PROMULGATION DATE 19July 2021

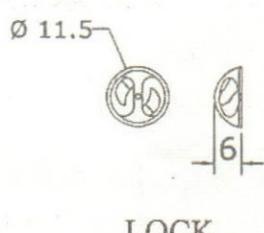


FRONT VIEW



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BACK VIEW



LOCK

NOTE:  
FOR FURTHER DETAILS SEE STOCK/APPROVED SAMPLE

DITD KARACHI		
TITLE:		SSG(N) COMMANDO WING
DWG.NO.	TD-2559/2021	DIMENSIONS: mm
DATE:	16-03-2021	SCALE: 1:1
DRAWN BY	CHECKED BY	APPROVED BY
HD/M M.ASGHAR I/C DWG	LT SANA KANWAL SO TEXTILE	CAPTAIN MUHAMMAD AFSAR DITD

**ANNEX D TO DITD**  
**PN SPECIFICATION NO. 06/2021**  
**PROMULGATION DATE 19 JUL 2021**

<b>GUIDELINE FOR INSPECTION – GENERAL DEFECTS</b>			
<b>S.No</b>	<b>Defects</b>	<b>Possible Cause</b>	<b>Type of Defects Major/Minor</b>
<b>1. FABRIC</b>			
a.	Barre: horizontal stripes of uniform or variable width in Fabric or periodic lateral irregularity	<ul style="list-style-type: none"> <li>Possible due to lower tension in one of the feeders, loops formed in the knitted cycle initiated by that particular feeder were slightly larger than the rest thus causing an embossed appearance in the form of stripes.</li> <li>Individual yarns differ w.r.t count properties or structure.</li> <li>Different course Length.</li> </ul>	Major
b.	Skewed fabric: The shape of the fabric is distorted. Wales and courses are angular.	<ul style="list-style-type: none"> <li>This can be a result of uneven take down roller setting. It is a generic feature of circular knits because of the spiral movement of the needles.</li> </ul>	Within allowable limit then minor otherwise major.
c.	Foreign Fly between loops of constructed fabric	<ul style="list-style-type: none"> <li>Unclean environment or improper maintenance of machine can cause fly to end up in the knitting zone where it becomes part of the fabric.</li> </ul>	Major if it is visible.
d.	Thin Yarn/ Thick yarn	<ul style="list-style-type: none"> <li>One of the feeder is receiving yarn from a spool that has finer yarn or coarser yarn.</li> </ul>	Major
e.	Horizontal band of different color on bottom	<ul style="list-style-type: none"> <li>This happens due to a change of bobbin in the knitting machine. Different lots of yarn can have slight shade variations which can produce shade differences in fabric.</li> </ul>	Major
f.	Laddering: Vertical stripes can be observed as longitude lineal gap in fabric	<ul style="list-style-type: none"> <li>Continued knitting with a broken needle.</li> <li>Incorrect closing of the hook by the latch.</li> <li>Shift latches and needles.</li> </ul>	Major
g.	Deliberate cut placed in fabric	A rib defect occurred during knitting which was detected by QC who placed a cut on the defect to	Major

		ensure that the garment does not go through further stages.	
h.	Hole: Crack of yarn or breakage	<ul style="list-style-type: none"> <li>High yarn irregularity, poorly lubricated yarn, weak knot or slub present in yarn.</li> </ul>	Depend upon the size. If it's visible and larger in size then its major.
<b>2. PRE-TREATMENT</b>			
a.	Pinhole	<ul style="list-style-type: none"> <li>The presence of <math>\text{Fe}^{2+}</math> ions accelerates peroxide bleaching. If the fabric has just residue on it or localized iron contamination the bleaching process will damage the fibers causing a hole.</li> </ul>	Depend upon the frequency of the fault, if it occur frequently then its major.
<b>3. DYEING</b>			
a.	Shade difference	<ul style="list-style-type: none"> <li>This occur due to the variation in dye or dyeing procedure.</li> <li>Improper cutting of pieces, bundling and numbering.</li> <li>Different batch mixing.</li> </ul>	Major
b.	Stain of oil, food, drink, ink etc.	<ul style="list-style-type: none"> <li>This occur due to spill of oil, ink, food, drinks on the garment.</li> </ul>	If it is easily washable then minor.
<b>4. STITCHING</b>			
a.	Seam puckering: gathering of a seam either just after sewing or after laundering.	<ul style="list-style-type: none"> <li>Due to uneven stitching on to plies of fabric, improper thread tension, wrong sewing thread etc.</li> </ul>	Minor when it is not visible
b.	Open Seam or broke seam: Portion of garment that has not been covered by sewing thread.	<ul style="list-style-type: none"> <li>Due to improper handling of the part/ piece of fabric, improper setting and timing between needle and looped or rook etc.</li> </ul>	Major
c.	Broken Stitch: Non continuous Sewing thread	<ul style="list-style-type: none"> <li>Due to improper timing or machine usage.</li> </ul>	Minor
d.	Drop stitched/ skipped Stitched Irregular stitching along the seam	<ul style="list-style-type: none"> <li>It appears due to improper handling of cut pieces or machine usage.</li> </ul>	Minor
<b>5. EMBROIDERY</b>			
a.	Needle Hole	<ul style="list-style-type: none"> <li>Occur due to incorrect type and size of needle.</li> <li>Lots of stitches at same spot.</li> <li>Recurring needle piercing.</li> </ul>	Minor if not visible
b.	Gaps	<ul style="list-style-type: none"> <li>Unusual Gaps occur in between the embroidery design.</li> </ul>	Minor if not visible
c.	Missed Trim	<ul style="list-style-type: none"> <li>When threads are left in the</li> </ul>	Major

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		embroidery design between the design	
d.	Improper placement of Embroidery design	<ul style="list-style-type: none"><li>• Due to incorrect placing of the design</li></ul>	Major

ANNEX E TO DITDPN SPECIFICATION NO. 06/2021PROMULGATION DATE 19 JUL 2021Acceptable Quality Levels (AQLS) Badges for SSG (N)

1. Acceptable Quality Level (AQL) is maximum average defective items in a lot or limit / percentage of defective items in product /offered store. It is expressed in a percentage. Number of average defective items is determined by following formula:

$$\text{Average defective item} = \frac{\text{No.of defective item found during inspection}}{\text{Total no.of item to be inspected}} \times 100$$

2. AQL process: it is used for inspection of finished product by the QC professionals. AQL standard is depend on the quality of the product to be inspected, random sampling, and experience of inspector Following AQL table is used to determine lot size/ offered store quantity, least No. of sample to be inspected, AQL%, and acceptance & rejection points:

<u>Lot/Batch Size</u>	<u>Sample Size</u>	<u>Materials</u>	<u>Finished Badges for SSG (N)</u>						
			Critical Defects		Major Defects		Minor Defects		
			<u>Ac</u>	<u>Re</u>	<u>Ac</u>	<u>Re</u>	<u>Ac</u>	<u>Re</u>	
2 - 8	2	0	1	0	1	0	1	0	1
9 ~ 15	3	0	1	0	1	0	1	0	1
16 ~ 25	5	0	1	0	1	1	2	1	2
26 ~ 50	8	0	1	0	1	1	2	1	2
51 ~ 90	13	1	2	1	2	1	2	2	3
91 ~ 150	20	1	2	1	2	2	3	3	4
151 ~ 280	32	2	3	2	3	3	4	5	6
281 ~ 500	50	3	4	3	4	5	6	7	8
501 ~ 1200	80	5	6	5	6	7	8	10	11
1201 ~ 3200	125	7	8	7	8	10	11	14	15
3201 ~ 10000	200	10	11	10	11	14	15	21	22
10001 ~ 35000	315	14	15	14	15	21	22	21	22
35001 ~ 150000	500	21	22	21	22	21	22	21	22
150001 ~ 500000	800	21	22	21	22	21	22	21	22
500001 ~ Over	1250	21	22	21	22	21	22	21	22

3. If the inspector have time constrain then AQL is beneficial/ helpful in inspection of whole lot/ offered store. It safe time, cost and give effective/ statistical result of product

/offered store. e.g. If inspector needs 1 minute to check the item , the quantity to be inspected is 2,500 items then it took 42 hours to check the whole consignment/ offered store. It means 26 days approx. for one store. Calculation is as follows:

$$\frac{1 \text{ min} \times 1 \text{ hr}}{1 \text{ item} \times 60 \text{ min}} \times 2,500 \text{ items} = 42 \text{ hrs} \cong 02 \text{ days}$$

After Implementing AQL standard so the sample taken from the lot/ offered store is 200 items/ sample:

$$\frac{1 \text{ min} \times 1 \text{ hr}}{1 \text{ item} \times 60 \text{ min}} \times 2,00 \text{ items} = 3.33 \text{ hrs} \cong \text{half quarter od a day}$$

4. Quality parameters/ AQL limits may be defined by Inspecting Authority (if deemed appropriate) and communicate to the manufacturer, so the manufacturer set their quality levels (AQL limits) accordingly for their internal audit. Therefore, good quality product is ready for inspection.

**ANNEX F TO DITD**  
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**PROMULGATION DATE 19 JUL 2021**

**FEED BACK FORM**

Unit Name: \_\_\_\_\_

Item Description#: \_\_\_\_\_

Issue/Problem occurred: \_\_\_\_\_

PN SPEC #: \_\_\_\_\_

Possibility to resolve Issue: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Any Other Remarks: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Note:

- It's good to give feedback for improvement in any clothing Item.
- Recurring problem will also be intimated through this form.

Name Stamp

**COUNTERSIGNED By CO/Admin Authority**

Name Stamp

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