



PAKISTAN NAVY SPECIFICATION NO. 04/2017  
PROMULGATION DATE: 28 MARCH 2022

## **CAMOUFLAGE JOCKEY/ SEA CAP** **FOR DRESS NO.4**

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**PROMULGATION ORDER**

1. This specification is hereby approved and promulgated for information, guidance and compliance by all concerned.
2. Details contained in the specification are to be studied and implemented with due regard to 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 G. 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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**REVISION NOTE**

The specifications have 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 G. However, such an alteration will be effective when the amendment is promulgated by this Directorate, and will be effective on the contracts which are materialized after the promulgation date of respective amendment.

**PN SPECIFICATION 04/2017  
(CAMOUFLAGE JOCKEY/ SEA CAP FOR OFFICERS AND CPOs/  
SAILORS)**

**0101. DESIGNATION**

1. Camouflage Jockey / Sea Cap for Officers and CPOs/ Sailors.

**0102. USAGE**

1. This Jockey/ Sea Cap will be used by Officers and CPOs/ Sailors of Pakistan Navy in lieu of Beret Black with Dress No 4 vide NHQ letter PN/NS Dte/03/296748 dated 19 September 16.

**0103. INTRODUCTION**

Read: PN/DID/03/13316702 dated 23 May 2022.

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 DITD. This specification is revision of PN Specifications 04/2017 promulgated on 04 May 2017. **This Specifications supersedes and replace Annex E and F i.e Technical Detail of Camouflage Jockey Cap/ Sea Cap & manufacturing details of Camouflage Jockey Cap/ Sea Cap, respectively of PN Specifications 01/2018 promulgated on 28 March 2018.** These specifications are based on the requirement of Pakistan Navy.

2. This specification booklet includes 07 Annexes and consists of 32 pages, including the cover.

**0104. SCOPE**

1. This specification covers the manufacturing/ inspection requirements of Camouflage Jockey/ Sea Cap to be used by Officers and CPOs/ Sailors of Pakistan Navy. This specification lays down the standard to which the stores shown under designation above should conform. It defines and lays down the quality, standard and details of materials, workmanship and finish. It also lays down the details of sampling, testing, inspection 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-20A   | Determination of fiber quality.      |
| b. | AATCC-8     | Color fastness to crocking.          |
| c. | ASTM D 1667 | Flexible cellular materials.         |
| d. | ASTM D 1777 | Standard test methods for thickness. |

|     |                      |  |
|-----|----------------------|--|
|     | opt 5                |  |
| e.  | ASTM D 3776<br>opt D | Standard test methods for mass per unit area (weight) fabric.  |
| f.  | ASTM D 5034          | Tearing strength of fabric.  |
| g.  | ASTM D2256           | Elongation, strength and tenacity of thread  |
| h.  | ASTM D 5170          | Peel strength for hook and loops.  |
| j.  | ASTM D 5169          | Shear strength for hook and loops.   |
| k.  | ISO-105-C10<br>(C3)  | Color fastness to washing.   |
| l.  | ISO-105-E02          | Colour fastness to Seawater test.  |
| m.  | ISO-105-E04          | Colour fastness to Perspiration.   |
| p.  | ISO 6330 (4N)        | Domestic washing and drying procedures for textile testing.  |
| q.  | ISO-105-X12          | Colour fastness to Rubbing test.   |
| r.  | ISO-7211/1           | Determination of Weave pattern.  |
| s.  | ISO-7211/2           | Determination of number of thread per unit length.   |
| t.  | ISO-7211/5           | Determination of linear density of yarn removed from fabric.   |
| u.  | ISO-3801             | Determination of mass per unit length and area.  |
| v.  | ISO-13934            | Tensile properties of fabrics Determination of maximum force and elongation at maximum force using the strip method. |
| w.  | ISO-2589             | Determination of thickness.  |
| x.  | ISO-3801             | Weight per Sq. mtr.  |
| y.  | BS EN ISO 12945-2    | Determination of fabric propensity to surface fuzzing and to pilling.  |
| z.  | BS EN ISO 12947-2    | Determination of the abrasion resistance of fabrics by the Martindale method.  |
| aa. | BS EN 25077          | Determination of Dimensional Change in washing and drying.   |
| ab. | Mil spec A-A-55126B  | Fasteners tapes Hook loop synthetic.   |

**0106. DEFINITIONS & ABBREVIATIONS**

- Definitions for the terms used in this standard are given at Annex A.

**0107. TECHNICAL DETAILS OF CAMOUFLAGE JOCKEY/ SEA CAP**

- The technical details of Camouflage Jockey/ Sea Cap are given at Annex B of this specification.

**0108. MEASUREMENT SCHEDULE**

- The measurement schedule of Camouflage Jockey/ Sea Cap are given at Annex C of this specification.

**0109. MANUFACTURING DETAILS OF CAMOUFLAGE JOCKEY / SEA CAP**

1. Camouflage Jockey/ Sea Cap shall be fabricated in accordance with the measurement schedule and drawings as illustrated in the drawing at Annex C and D, respectively.
2. It is a 6 triangular panels attached with each other with a D shape panel at front to form Jockey Cap as per Annex B. The panels are stitched with each other using double needle stitch neatly using 10-12 SPI.
3. Piping used on inner side of Cap is 10mm wide and both sweat absorbing band & lining should be Black in color.
4. Base fabric should be used at upper and lower side polymeric peak.
5. Velcro tape (fasteners tapes Hook loop synthetic) used for adjustment of cap shall be 2.5 cm i.a.w Mil spec A-A-55126B. The color of Velcro and embroidery on eyelets shall be Black in color.
6. The dia of top Button is 17mm ± 1mm and it is covered with same fabric used in upper of cap.
7. Care label and identification label may be attached with the sweat absorbing band.

**0110. QUALITY OF WORKMANSHIP AND FINISHING**

1. Workmanship and finish of the Camouflage Jockey/ Sea Cap shall be as per drawing and it shall be best of its class and to the entire satisfaction of the inspector.

**0111. TESTING**

1. The material shall be subjected to tests laid down in this specification at Annex B and related documents. At least 03 x meters fabric and two Camouflage Jockey / Sea Caps 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. TENDER SAMPLE**

1. Tender sample to be approved by INS.
2. For each contract 05 samples of Camouflage Jockey/ Sea Cap along with 05 meters fabric shall be supplied by the manufacturer at the time of tendering along with samples of materials used in manufacturing of caps for inspection.

**0113. ADVANCE SAMPLE**

1. Advance sample or pre-production sample, when required, shall be submitted in accordance with terms of the contract for inspection, testing and approval by CINS. The minimum quantities required for Camouflage Jockey / Sea Cap are as follows:

|    |  |                |
|----|--|----------------|
| a. | Cloth Camouflage                       | 05 meter       |
| b. | Jockey / Sea Caps                      | 03 of any size |
| c. | Sewing thread polyester                | 50 gm          |
| d. | Embroidery thread                      | 50 gm          |
| e. | Velcro tape                            | 1 meter        |
| f. | Transparent adhesive tape 10 cm        | 1 roll         |
| g. | Transparent adhesive tape 2.54 cm      | 1 roll         |
| h. | Carton (7ply)                          | 1              |
| j. | Polyethylene sheet for packing of caps | 06 Nos         |

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 01 % of the contract or 10 pairs of Camouflage Jockey/ Sea Cap, whichever are more along with samples of materials for inspection.

3. The approval of the sample mentioned in Para 11 & 12 authorizes the commencement of bulk production but does not relieve the suppliers/ manufacturers from compliance with all the provisions of this specification. 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.

4. The pre-production sample shall be manufactured by the manufacturer with the same facilities which will be used for manufacturing of the bulk items.

5. Firm shall provide advance sample along with quality verification reports of Camouflage Jockey/ Sea Cap from an accredited laboratory to ensure in process inspection/ quality procedure of the firm.

**0114. INSPECTION**

1. **Bulk Representative Sample:** B/R random sampling will be carried out as per rules in vogue.

2. **Bulk Inspection:** Bulk inspection will be carried out after satisfactory completion of Visual Examination and Testing of B/R Sample.

3. **Inspection of Camouflage Jockey/ Sea Cap:** 100% of the offered store shall be inspected. The common defects for such examination/ inspection are listed at Annex E.

4. **Inspection/ Acceptance and Rejection of Stores:** Inspection/ acceptance is to be carried out to the satisfaction of Chief Inspector Naval Stores.

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- a. The Camouflage Jockey/ Sea Cap shall be examined for the correctness of material, shape, design, dimension, size, workmanship and finish.
- b. All Camouflage Jockey/ Sea Cap shall be inspected especially for stitching and finishing, weaving defects, defective shape, discoloration/ fading, pinholes. Stitching and embroidery of Camouflage Jockey/ Sea Caps 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.
- 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. Camouflage Jockey/ Sea Cap with major defects as described in Annex E 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. 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.

**0115. STAMPING OF ACCEPTED/ REJECTED STORES BY THE INSPECTOR**

1. Following instructions are to be followed:

- a. **Stamping of Accepted Stores**: Each acceptable Camouflage Jockey/ Sea Cap shall be stamped with Inspector's Individual Acceptance Mark. The stamping shall be legible.
- b. **Stamping of Rejected Stores**: The rejected Camouflage Jockey/ Sea Cap 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.

**0116. SPECIAL INSTRUCTIONS**

1. **Care Label Instructions**: Care instructions in English and Urdu shall be attached with each Camouflage Jockey/ Sea Cap as indicated in the drawing and have minimum requirement as follows:

- a. Washing procedure e.g. gentle cycle machine wash.
- b. Ironing procedure e.g. Warm iron.
- c. Drying procedure e.g. Air dry.
- d. Any prohibition e.g. Do not bleach and dry clean etc.

**0117. PACKING DETAILS**

1. The store when ordered to be delivered 'PACKED' shall be packed as per following instructions:

- a. 10 x Camouflage Jockey /Sea Caps shall be packed in a neat, dry and clean condition in standard polyethylene packing of 0.035 mm thickness. These bags shall be sealed with transparent adhesive tape of 2.54 cm with thickness of 0.04-0.05 mm.
- b. 30 x such bundles (300 caps) shall be packed in Carton Corrugated Card board box (07 ply).
- c. Each Carton shall contain one size of Camouflage Sea Caps only.
- d. Each Box Board packing shall be securely and properly packed with transparent adhesive tape of 10 cm with thickness of 0.04-0.05 mm.

**0118. IDENTIFICATION LABEL**

1. Each Camouflage Jockey/ Sea Cap shall bear following minimum information on the label attached with Camouflage Jockey/ Sea Cap, as indicated in drawing at Annex D of this specification:

- a. Item name/ item description with NSN/Pattern No.
- b. Material Composition and Size.
- c. Contract number and Date.
- d. Year of manufacturing.
- e. Contractor's name, initials, or trade mark.
- f. Batch no.

**0119. PACKING LIST**

1. Firm is bound to provide a packing list of store offered for inspection alongwith the challan, which include complete details about the store i.e. Pattern No., Designation, quality packed, size, quantity, contract No, and Date, Challan No. and Date. A packing list shall be enclosed after completion of inspection with each packed box giving full details about the stores packed i.e. Pattern No., Designation, quality packed, size, quantity, contract No, and date, I/Note No. or voucher No. and date, consignee, consignor, date of packing and packer's signature.

**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) Catalogue No and Designation of the store packed.
  - (2) Contract No and date.
  - (3) Quantity of the Item packed.
- b. On Back
  - (1) Consignee address.
  - (2) Designation i.e Railway Station.
  - (3) Weight of the Package.
  - (4) The No. of individual Package and the total No of Packages in the consignment joined by the Word 'of' e.g. 2 of 300.
- c. On Bottom
  - (1) Consignor's Name.
  - (2) Voucher No. or inspection note no. and date.
  - (3) Month and year of packing.

**0121. DELIVERY**

1. The consignment of store will be delivered in accordance with the terms of contract.

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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, storage at firms premises proper packing, dispatch and delivery up to consignee.

XXXXSDXXXX

**MUHAMMAD AFSAR**  
Captain Pakistan Navy  
Director

**Annexes:**

|  |    |
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Distribution:

CINS  
DP (N)  
DNS  
CO PNCSD

## DEFINITIONS & ABBREVIATIONS

### 1. DEFINITIONS

a. Following definitions are used in this specification and will be adopted for use:

(1) **Inspector.** The term inspector shall include the "Inspection Authority", Inspecting Officers and their representatives, duly authorized for the purpose of discharging inspection duties involved.

(2) **Inspection Authority.** Chief Inspector of Naval Stores (CINS). His verdict in respect of Sealed Inspection matters is to be taken as final.

(3) **Inspecting Officers.** An Officers 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.

(4) **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.

(5) **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.

(6) **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.

### 2. ABBREVIATIONS

a. Following abbreviations are used in this specification and will be adopted for use:

(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.

**ANNEX B TO****PN SPECIFICATION NO.04/2017****PROMULGATION DATE 28 MAR 22****TECHNICAL DETAILS OF CAMOUFLAGE JOCKEY/ SEA CAP**

| S NO | ITEMS   | INTERNATIONAL STANDARDS | RESULTS  |         |                 |      |   |  |  |  |
|------|---|-------------------------|--|---------|-----------------|------|---|--|--|--|
| 1.   | <b>BASE FABRIC MATERIAL SPECIFICATION</b>   |                         |  |         |                 |      |   |  |  |  |
| a.   | Material  | AATCC-20A               | As per PN Specification No. 01/2018<br>100% Cotton (AFLOAT) and 02/2018<br>(ASHORE) 60% Cotton 40% Polyester |         |                 |      |   |  |  |  |
| b.   | Thread per inch<br>(1) Wrap<br>(2) Weft   | ISO-7211/2              | $76 \pm 2$<br>$65 \pm 2$   |         |                 |      |   |  |  |  |
| c.   | Linear Density<br>(1) Wrap<br>(2) Weft  | ISO-7211/5              | $39^{\text{s}} \pm 2^{\text{s}}$<br>$39^{\text{s}} \pm 2^{\text{s}}$   |         |                 |      |   |  |  |  |
| d.   | Color fastness to perspiration<br>(1) Change in shade<br>(2) Staining                                   | ISO-105 E04             | <b>Acidic</b>  |         | <b>Alkaline</b> |      |   |  |  |  |
|      |   |                         | GS 4 or better   |         | GS 4 or better  |      |   |  |  |  |
| e.   | Color fastness to sea water<br>(1) Change in shade<br>(2) Staining                                      | ISO-105 E02             | GS: 4 or better<br>GS: 4 or better   |         |                 |      |   |  |  |  |
| f.   | Color fastness to rubbing<br>(1) Dry<br>(2) Wet   | AATCC-8                 | GS: 4 or better<br>GS: 4 or better   |         |                 |      |   |  |  |  |
| g.   | Tensile Strength<br>(1) Wrap<br>(2) Weft  | ISO-13934               | $340 \pm 5$ N<br>$319 \pm 5$ N   |         |                 |      |   |  |  |  |
| h.   | Weight  | ISO-3801                | GSM=74.5 ± 3 gms   |         |                 |      |   |  |  |  |
| j.   | Weave Pattern   | ISO-7211/1              | 1x1 (Plain)  |         |                 |      |   |  |  |  |
| k.   | Shade<br>(1) Black<br>(2) Dark Grey<br>(3) Medium Grey<br>(4) Light Grey<br>(5) Grey<br>(6) Pastel Grey | Visual Analysis         | Color  | Pantone | L               | a    | b |  |  |  |
|      |   |                         | 19-1101 TCX  | 30.96   | 2.44            | 0.82 |   |  |  |  |
|      |   |                         | 18-4006 TCX  | 49.64   | 0.26            | 0.75 |   |  |  |  |
|      |   |                         | 17-4405 TCX  | 54.41   | -0.17           | 0.28 |   |  |  |  |
|      |   |                         | 15-4003 TCX  | 65.30   | -0.31           | 2.28 |   |  |  |  |
|      |   |                         | 16-4702 TCX  | 72.92   | -1.23           | 3.12 |   |  |  |  |
|      |   |                         | 13-4303 TCX  | 77.34   | -0.64           | 3.25 |   |  |  |  |
| l.   | Color Difference  | $(\Delta E \leq 1)$     |  |         |                 |      |   |  |  |  |
| m.   | Nature of Dye   | Chemical Analysis       | Sulphur dye  |         |                 |      |   |  |  |  |
| n.   | Shrinkage %   | ISO-6330 (4N)           |  |         |                 |      |   |  |  |  |

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|    |   |                             |   |
|----|---|-----------------------------|---|
|    | (1) Wrap<br>(2) Weft  | BSEN 25077                  | -0.64% ± 0.05%<br>-0.50% ± 0.05%  |
| 2. | <b>ABSORBENT FABRIC</b>   |                             |   |
| a. | Material  | AATCC-20A                   | 20% Cotton<br>80 % Polyester  |
| b. | Thread per inch<br>(1) Wrap<br>(2) Weft                                       | ISO-7211/2                  | 75 ± 2<br>50 ± 2  |
| c. | Linear Density<br>(1) Wrap<br>(2) Weft  | ISO-7211/2                  | 37 <sup>s</sup> ± 2 <sup>s</sup><br>37 <sup>s</sup> ± 2 <sup>s</sup>  |
| d. | Color fastness to perspiration<br>(1) Change in shade<br>(2) Staining         | ISO-105 E04                 | <b>Acidic</b> <b>Alkaline</b><br>GS: 4 or better      GS: 4 or better<br>GS: 4 or better      GS: 4 or better |
| e. | Color fastness to sea water<br>(1) Change in shade<br>(2) Staining            | ISO-105 E02                 | GS: 4 or better<br>GS: 4 or better  |
| f. | Color fastness to rubbing<br>(1) Dry<br>(2) Wet                               | AATCC-20A                   | GS: 4 or better<br>GS: 4 or better  |
| g. | Tensile Strength<br>(1) Wrap<br>(2) Weft                                      | ISO-13934                   | 516 ± 10 N<br>373 ± 5 N   |
| h. | Weight  | ISO-3801                    | GSM=76.5 ± 3 gms  |
| j. | Weave Pattern   | ISO-7211/1                  | 1x1 (Plain)   |
| k. | Shade   | Visual Analysis             | Black Pantone# 19-4006 TCX  |
| l. | Nature of Dye   | Chemical Analysis           | Sulphur dye   |
| m. | Shrinkage %<br>(1) Wrap<br>(2) Weft   | ISO-6330 (4N)<br>BSEN 25077 | -0.94% ± 0.05%<br>-0.50% ± 0.05%  |
| 3. | <b>STITCHING THREAD MATERIAL SPECIFICATION</b>                                |                             |   |
| a. | Material  | AATCC-20A                   | Polyester   |
| b. | Color   | Visual Analysis             | Light grey Pantone # 15-4003 TCX  |
| c. | Count of yarn   | ISO-7211/5                  | 3/22 Tex ± 3%   |
| d. | Construction  | Visual Analysis             | 3 cord each single  |
| 4. | <b>STITCHING THREAD PERFORMANCE TESTING</b>                                   |                             |   |
| a. | Color fastness to washing (Test No. 3)<br>(1) Change in Shade<br>(2) Staining | ISO-105-C10 (C3)            | GS: 4<br>GS: 4  |

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|     |   |                           |   |
|-----|---|---------------------------|---|
|     | b. Strength, cN   | ASTM D2256                | 2680 ± 10   |
|     | c. Tenacity, cN/Tex   |                           | 39.24 ± 3   |
|     | d. Elongation %   |                           | 18.53 ± 2   |
| 5.  | <b><u>PLASTIC PEAK MATERIAL SPECIFICATION</u></b>                               |                           |   |
|     | a. Material   | Identification of Plastic | Plastic (virgin)  |
|     | b. Thickness  | ISO-2589                  | 1.5 -1.7 mm   |
|     | c. Hardness   | IRHD                      | 97 ± 1 IRHD   |
|     | d. Density  | ASTM D 1667               | 0.92 g/cc ± 0.01  |
| 6.  | <b><u>CARE LABEL MATERIAL SPECIFICATION</u></b>                                 |                           |   |
|     | a. Material   | AATCC-20A                 | Polyester with visible printing which remain satisfactory after washing test. |
|     | b. Shade  | Visual Analysis           | Nearest to ground fabric color i.e. light grey                                |
| 7.  | <b><u>EMBROIDERY THREAD MATERIAL SPECIFICATION</u></b>                          |                           |   |
|     | a. Colour   | Visual Analysis           | Black Pantone# 19-4006 TCX  |
|     | b. Material   | AATCC-20A                 | Viscose   |
|     | c. Count of yarn  | ISO-7211/5                | 2/44 <sup>s</sup> ± 2   |
| 8.  | <b><u>EMBROIDERY THREAD PERFORMANCE TESTING</u></b>                             |                           |   |
|     | a. Colour fastness to washing Test No. 3<br>(1) Change in Shade<br>(2) Staining | ISO-105-C10 (C3)          | GS: 4<br>GS: 4  |
|     |   |                           |   |
| 9.  | <b><u>VELCRO TAPE MATERIAL SPECIFICATION</u></b>                                |                           |   |
|     | a. Material<br>(1) Male (Hook)<br>(2) Female (Loop)                             | AATCC-20A                 | Nylon<br>Nylon  |
|     | b. Colour   | Visual Analysis           | Light Grey Pantone # 15-4003 TCX or matching with the base cloth              |
| 10. | <b><u>VELCRO TAPE PERFORMANCE TESTING</u></b>                                   |                           |   |
|     | a. Before Sticking/unsticking 300 times at 300 g                                | Visual Analysis           | Satisfactory  |
|     | b. After Sticking/unsticking 300 times at 300 g                                 |                           | Satisfactory  |
|     | c. Class – I for hook and loops   | AATCC-20A                 | 100% Nylon with selvage   |
|     | d. Type – II  |                           | 5.8 mil 300 denier hook   |
|     | e. Width  |                           | 1 inch  |
|     | f. Thickness ()<br>(1) Hook<br>(2) Loop   | ASTM D 1777, opt 5        | 0.05 in (min)<br>0.095 in (min)   |
|     | g. Weight Grams/linear yard ()<br>(1) Hook                                      | ASTM D 3776 opt D         | 4.7   |

## REVISED PN SPECIFICATION NO. 04/2017

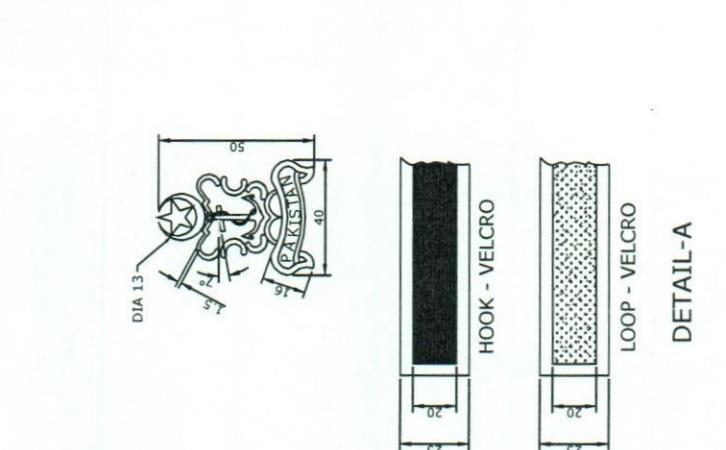
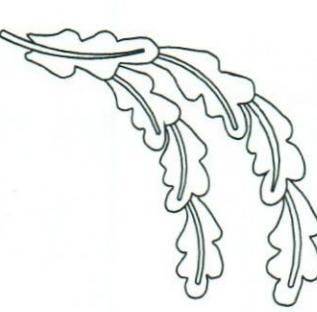
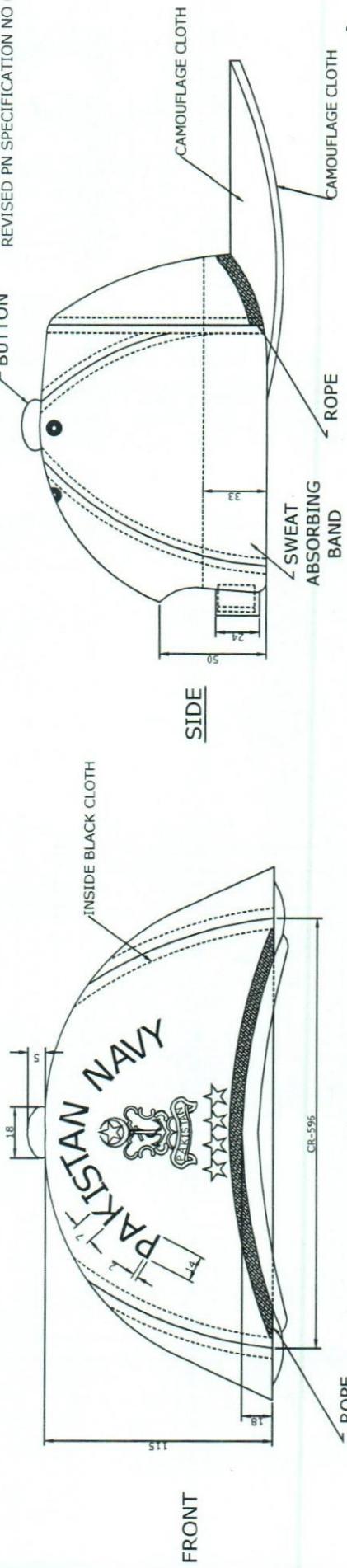
|     |  |                         |                            |
|-----|--|-------------------------|----------------------------|
|     | (2) Loop   |                         | 5.9                        |
| 11. | h. Breaking strength<br>lbs (min) ()<br>(1) Hook<br>(2) Loop                         | ASTM D 5034             | 100<br>75                  |
|     | j. Peel strength<br>lbs/inch/ (min)<br>(1) Before wash<br>(2) After 03<br>laundrings | ASTM D 5170             | 1-1.5<br>1.0               |
|     | k. Shear strength,<br>(1) Before wash<br>(2) After 03<br>laundrings                  | ASTM D 5169             | 10<br>10                   |
|     | l. Fray resistance<br>after 03 laundrings  | Mil spec A-A-<br>55126B | No fraying observed        |
| 12. | <b><u>DORI</u></b>   |                         |                            |
|     | a. Circumference   | Physical Analysis       | 0.5"                       |
|     | b. Wt/ Linear mtr  | ISO-3801                | 3.87 gm                    |
|     | c. Material  | AATCC-20A               | Polyester                  |
|     | d. Construction  | Visual Analysis         | 06 cords                   |
|     | e. Colour  | Visual Analysis         | Black Pantone# 19-4006 TCX |
|     | f. Nature of Dye   | Chemical Analysis       | Disperse Dye               |
| 13. | <b><u>FOAM (USED AT INNER SIDE OF FRONT)</u></b>                                     |                         |                            |
|     | a. Material  | AATCC-20A               | Polyester                  |
|     | b. Thickness   | ISO-2589                | 4.66 mm                    |
|     | c. Density   | ASTM D-1667             | 0.032 g/cc                 |
|     | d. Shade   | Visual Analysis         | Off White                  |
| 14. | <b><u>FOAM (USED WITH ABSORBENT FABRIC)</u></b>                                      |                         |                            |
|     | a. Material  | AATCC-20A               | Polyester                  |
|     | b. Thickness   | ISO-2589                | 2.15 mm                    |
|     | c. Density   | ASTM D-1667             | 0.018 g/cc                 |
|     | d. Shade   | Visual Analysis         | Light Grey                 |

**MEASUREMENTS AND DIMENSIONS**

| S. No | DESCRIPTION                   | SIZE (CM) |    |    |    | TOLERANCE |
|-------|-------------------------------|-----------|----|----|----|-----------|
| a.    | Internal circumference        | 55        | 57 | 59 | 61 | ±0.5      |
| b.    | Peak width from center        | 7.5       |    |    |    | ±0.2      |
| c.    | Peak width from edges         | 13        |    |    |    | ±0.2      |
| d.    | Peak Length from bottom edges | 16        |    |    |    | ±0.2      |
| e.    | Peak length from top edges    | 18        |    |    |    | ±0.2      |
| f.    | Height of cap                 | 12        |    |    |    | ±0.5      |

**Note:**

The tolerances are given only for made up caps to cover the stitching allowance. Manufacturer will ensure exact size.

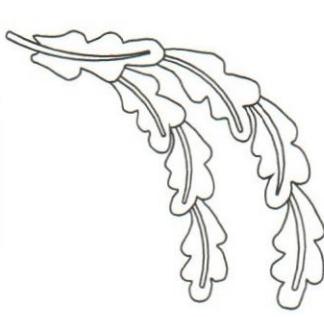
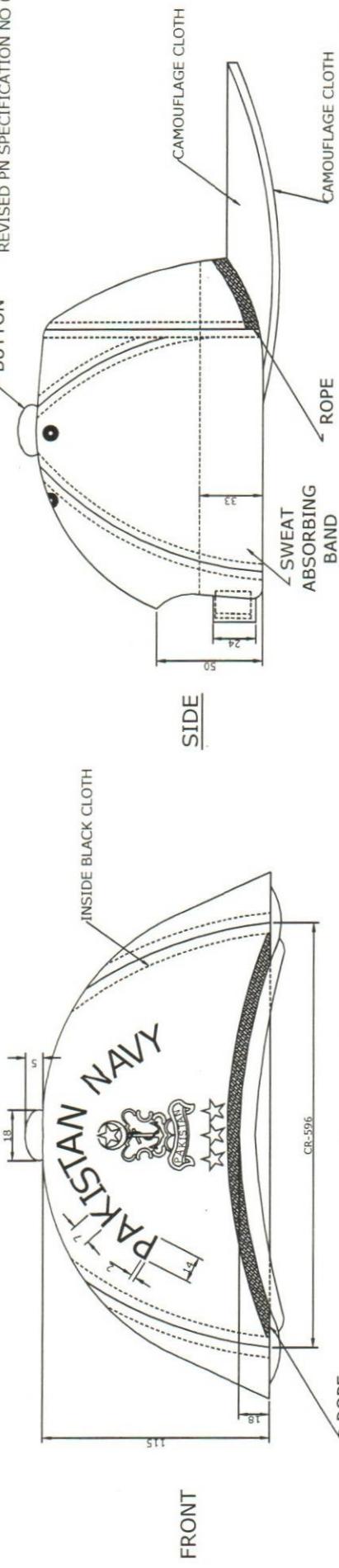


1446

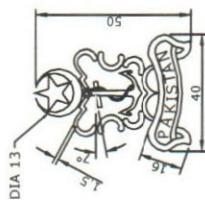
**DITD KARACHI**  
**TITLE: CAMOUFLAGE JOCKEY CAP**  
(FOUR STAR)

| DWG. NO. |             | TD-2638/2022 | DIMENSIONS: mm |                    |
|----------|-------------|--------------|----------------|--------------------|
| DRAWN BY |             | 25-03-2022   | SCALE:         | NTS                |
| --SD--   |             |              | CHECKED BY     | FINALIZED BY       |
| HDM      | LTCR        | --SD--       | --SD--         |                    |
| M.ASGHAR | SANA KANWAL |              |                | CAPTAIN            |
| I/c DWG  | SO, TEXTILE |              |                | MUHAMMAD AFSAR DID |

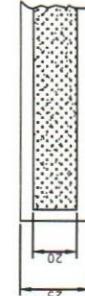
NOTE:  
FOR FURTHER DETAILS SEE STOCK/APPROVED SAMPLE



1438



HOOK - VELCRO



LOOP - VELCRO

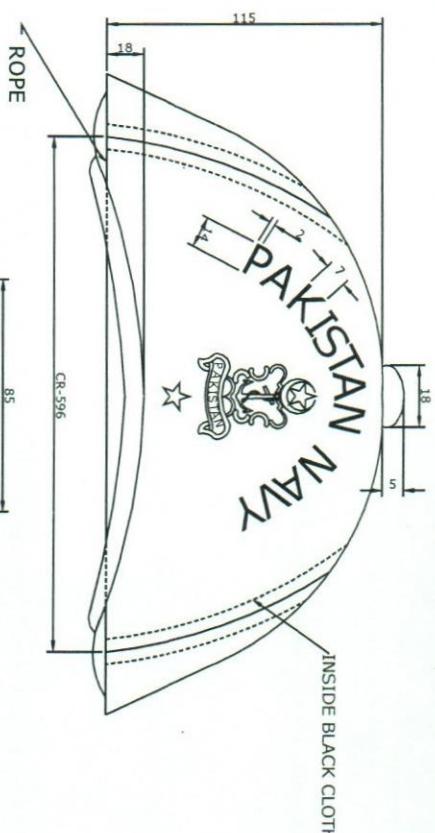


**DITD KARACHI**  
**TITLE: CAMOUFLAGE JOCKEY CAP**  
**(THREE STAR)**

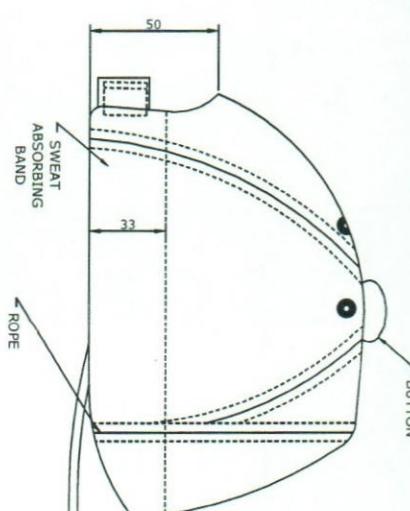
| DWG.NO.                   | TD-2630/2022                                   | DIMENSIONS: mm                             |
|---------------------------|--|--|
| DATE:                     | 02-03-2022                                     | SCALE: NTS                                 |
| DRAWN BY                  | CHECKED BY                                     | FINALIZED BY                               |
| -SD--<br>HDM<br>M. ASGHAR | --SD--<br>LT CDR<br>SANA KANWAL<br>SO, TEXTILE | --SD--<br>CAPTAIN<br>MUHAMMAD AFSAR<br>DID |

NOTE:  
FOR FURTHER DETAILS SEE P/N APPROVED SAMPLE

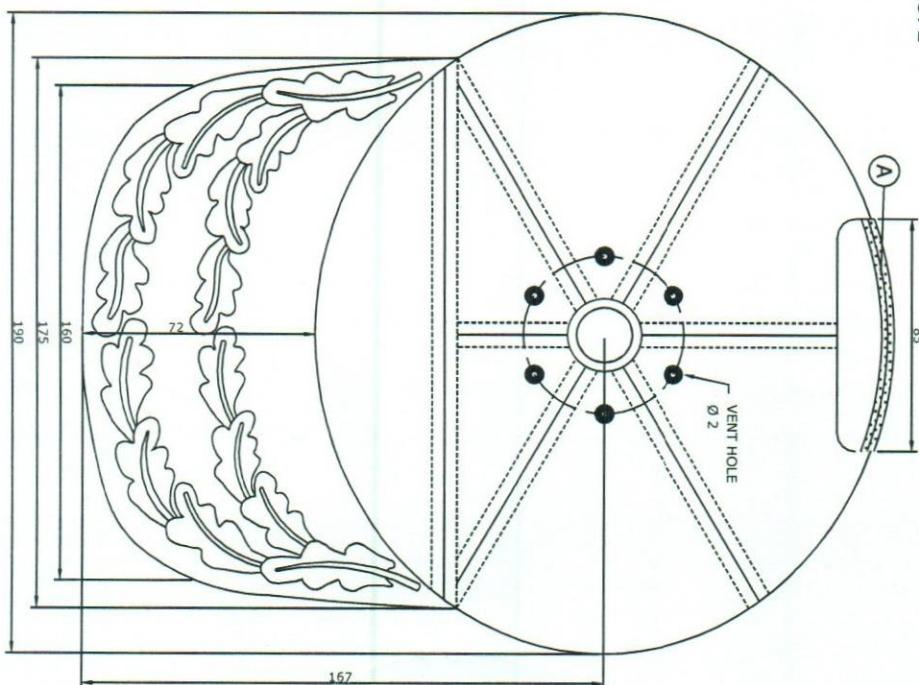
FRONT



SIDE



TOP

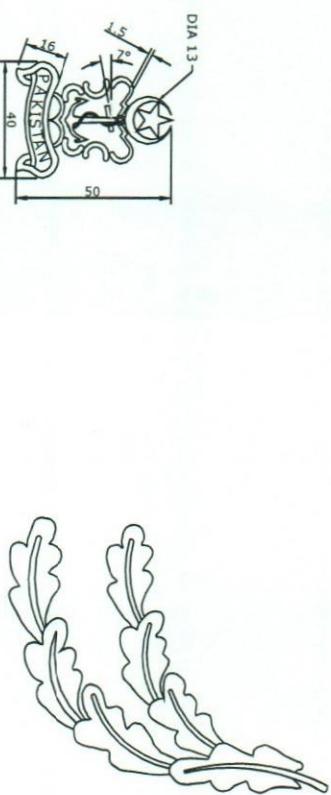


DETAIL-A

## D I T D K A R A C H I

TITLE: CAMOUFLAGE JOCKEY CAP  
(ONE STAR)

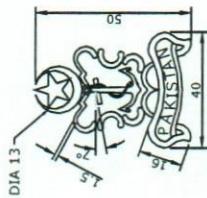
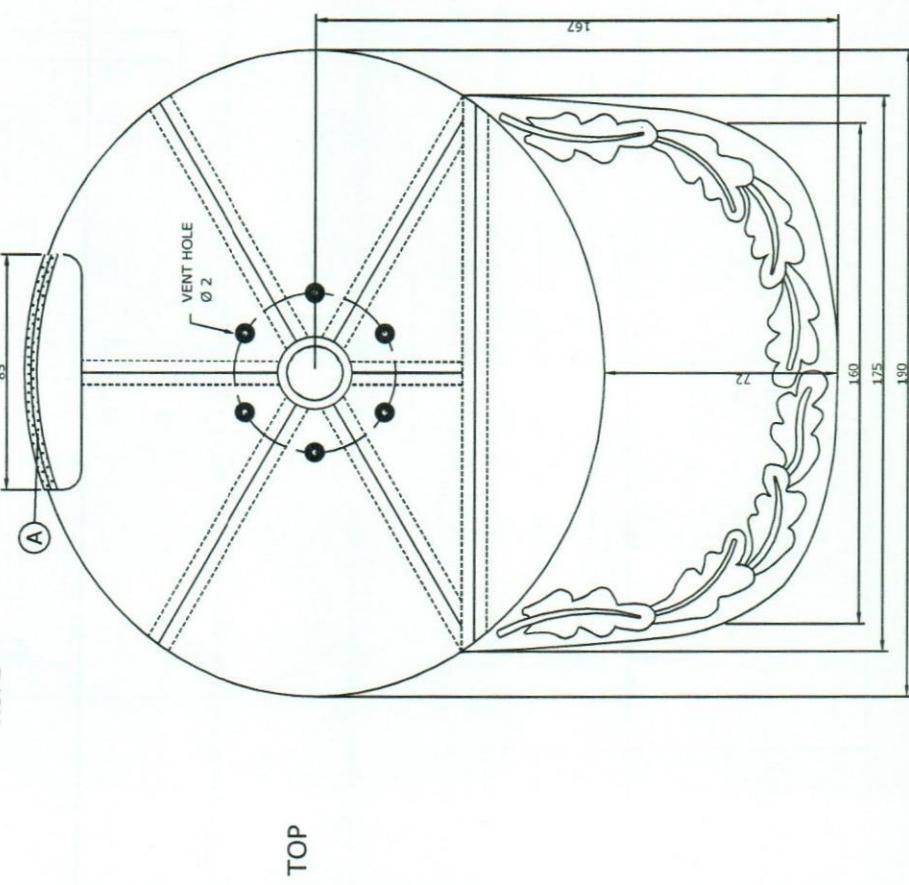
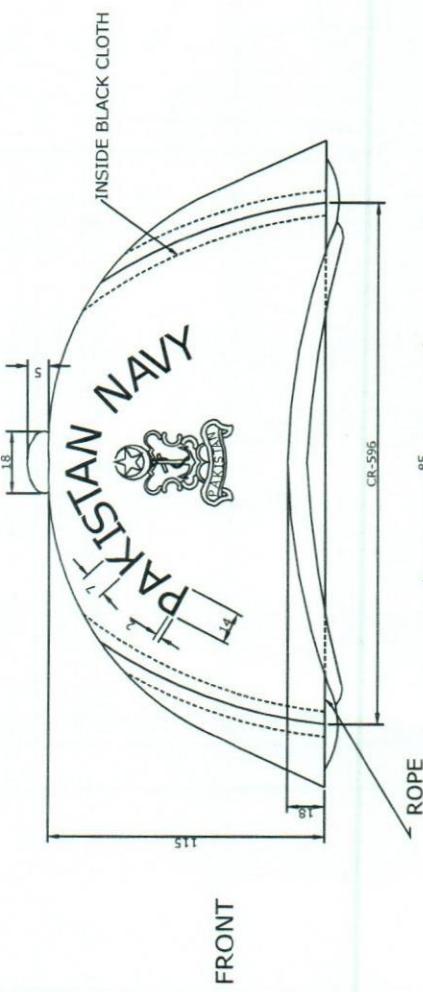
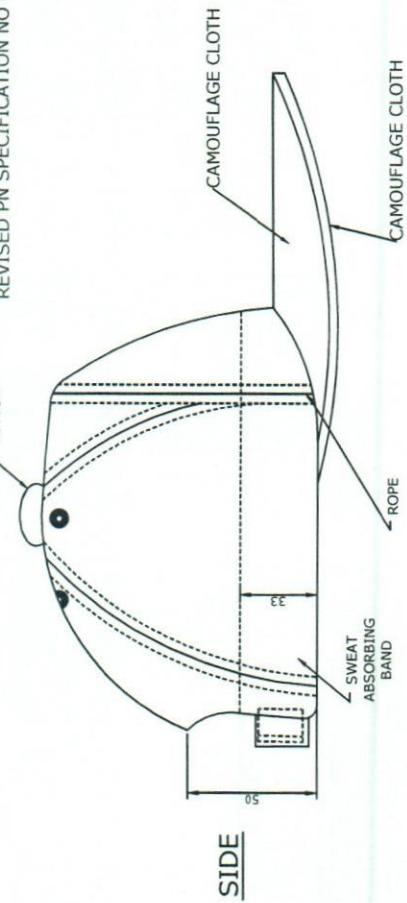
NOTE:  
FOR FURTHER DETAILS SEE STOCK/APPROVED SAMPLE



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| DWG.NO.      | TD-2628/2022                               | DIMENSIONS: | mm   |
|--------------|--|-------------|--|
| DATE:        | 01-03-2022                                 | SCALE:      | NTS  |
| DRAWN BY     | --SD--<br>HDM<br>M. ASGHAR<br>I/c DWG      | CHECKED BY  | --SD--<br>LT CDR<br>SANA KANWAL<br>SO, TEXTILE |
| FINALIZED BY | --SD--<br>CAPTAIN<br>MUHAMMAD AFSAR<br>DID | RELEASER    | --SD--   |



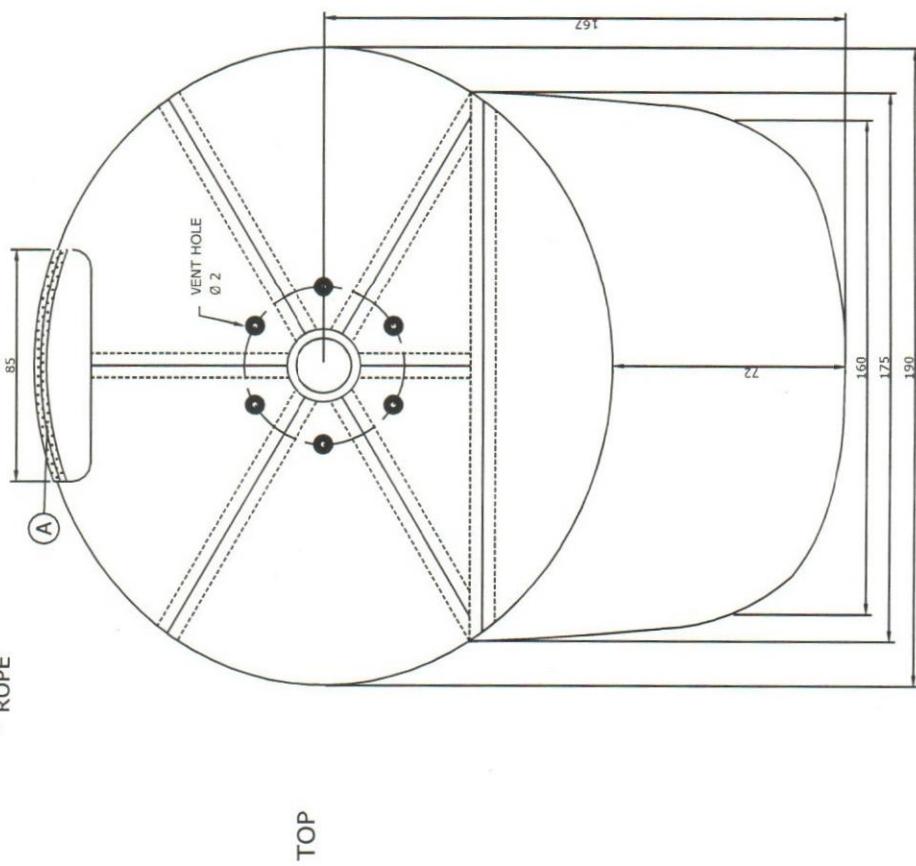
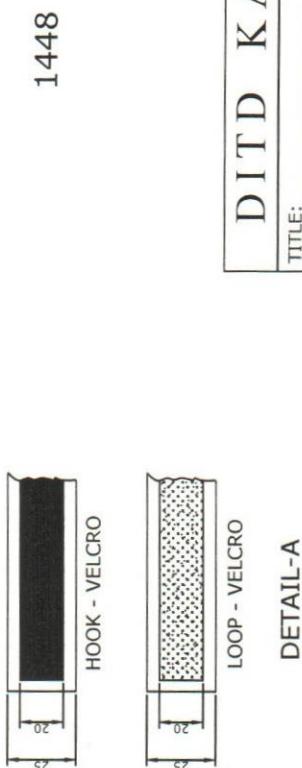
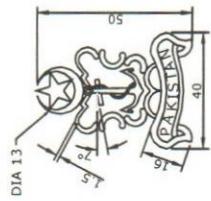
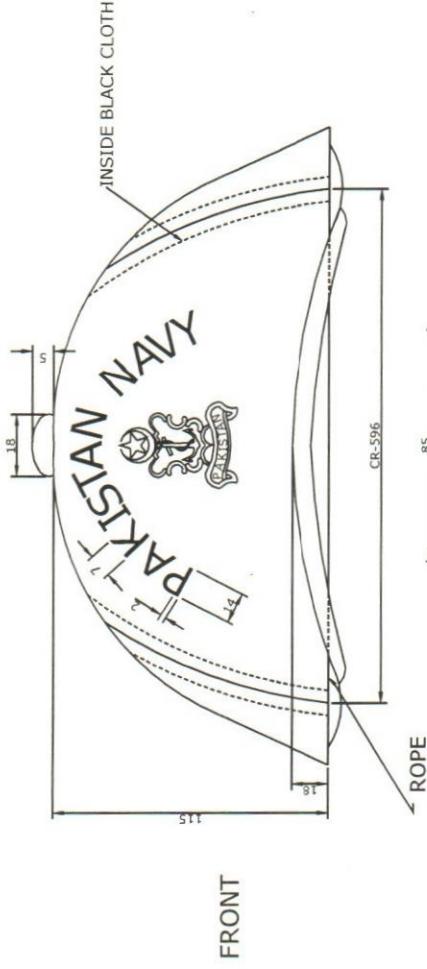
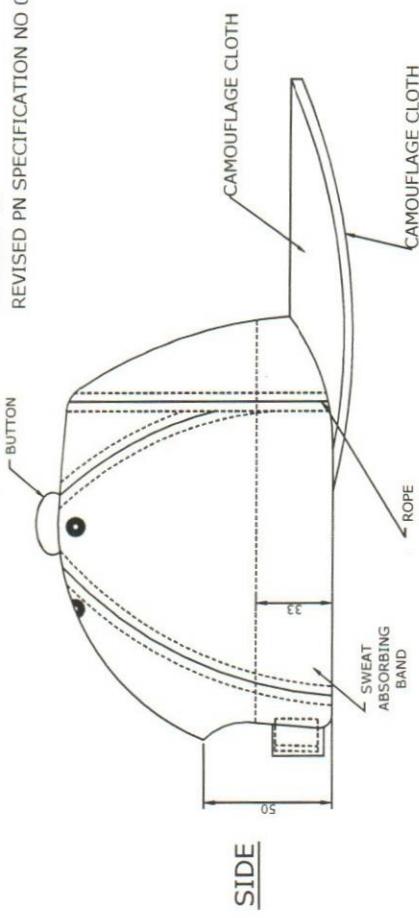


1447

**DITD KARACHI**  
**TITLE: CAMOUFLAGE JOCKEY CAP**  
(CAPT./CDR)

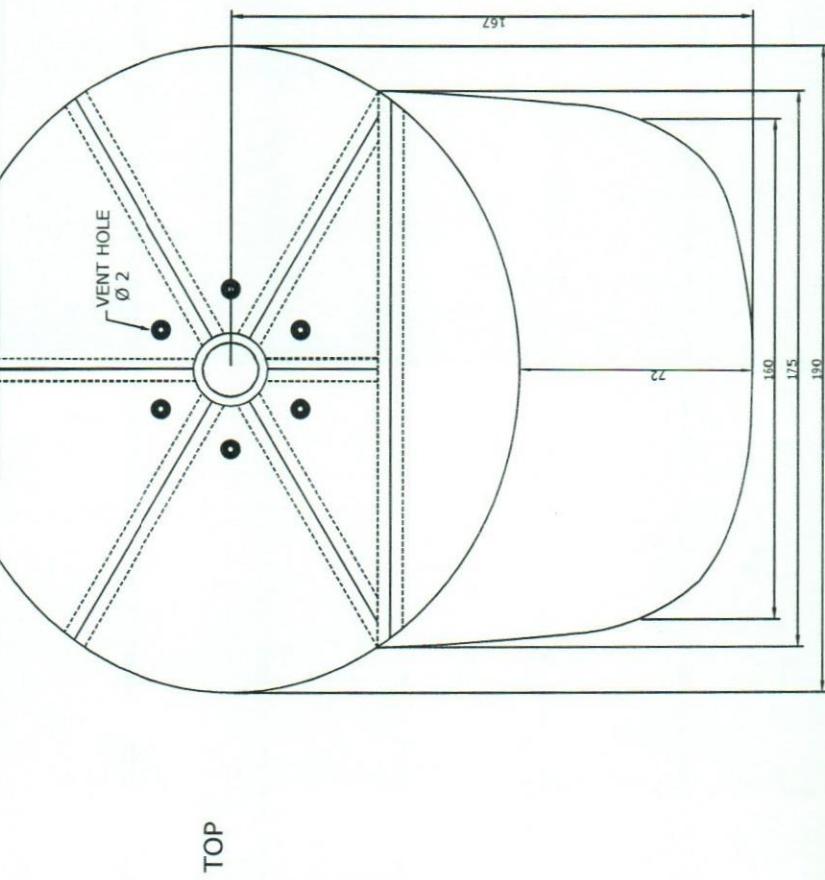
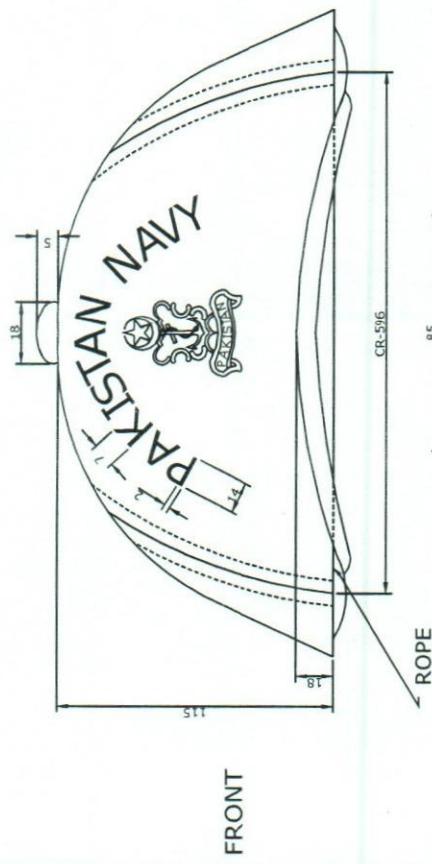
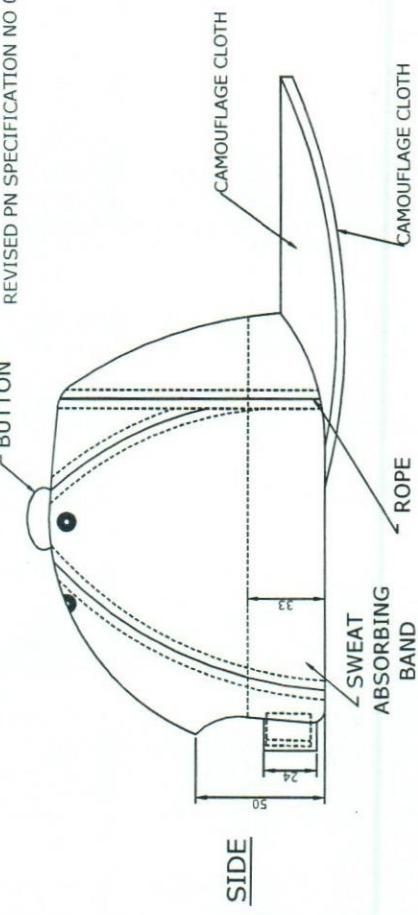
|                            |                                      |                                  |
|----------------------------|--------------------------------------|----------------------------------|
| DWG. NO.                   | TD-2639/2022                         | DIMENSIONS: mm                   |
| DATE:                      | 25-03-2022                           | SCALE: NTS                       |
| DRAWN BY                   | CHECKED BY                           | FINALIZED BY                     |
| --SD--                     | --SD--                               | --SD--                           |
| HDM<br>M.ASGHAR<br>I/C DWG | LT CDR<br>SANA KANWAL<br>SO, TEXTILE | CAPTAIN<br>MUHAMMAD AFSAR<br>DID |

NOTE:  
FOR FURTHER DETAILS SEE STOCK/APPROVED SAMPLE

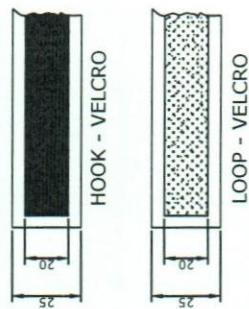
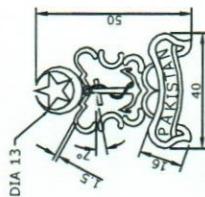


| DIT D KARACHI                                 |                                       |                                  |  |
|---|---------------------------------------|----------------------------------|--|
| TITLE: CAMOUFLAGE JOCKEY CAP (LT CDR & BELOW) |                                       |                                  |  |
| DWG. NO. TD-2640/2022                         | DIMENSIONS: mm                        | NTS                              |  |
| DATE: 25-03-2022                              | SCALE:                                | -SD-                             |  |
| DRAWN BY                                      | CHECKED BY                            | FINALIZED BY                     |  |
| -SD-  | -SD-                                  | -SD-                             |  |
| HDM<br>M.ASGHAR<br>I/c DWG                    | LT CDR<br>SANAN KANWAL<br>SO, TEXTILE | CAPTAIN<br>MUHAMMAD AFSAR<br>DID |  |

NOTE:  
FOR FURTHER DETAILS SEE STOCK/APPROVED SAMPLE



1439



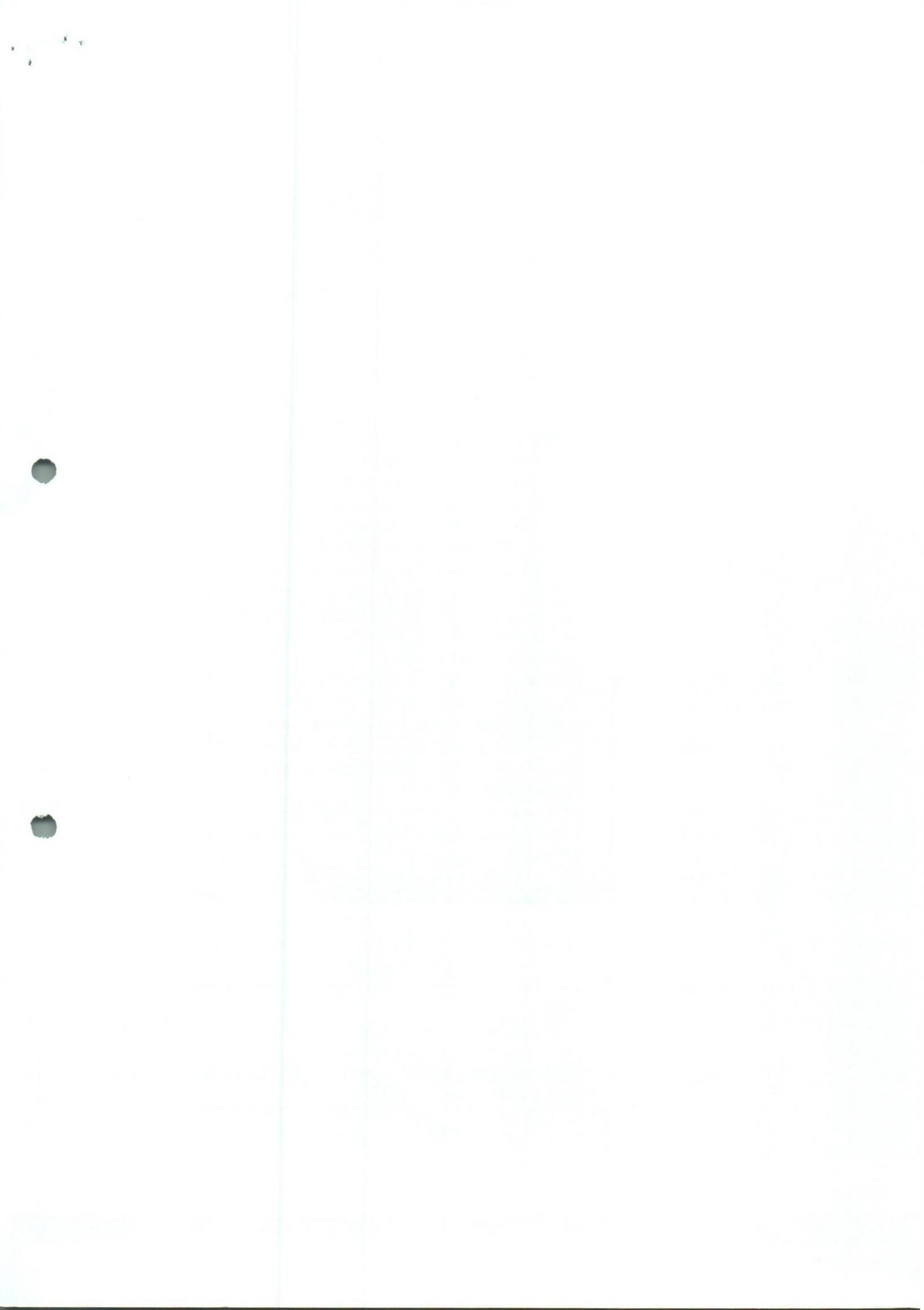
DETAIL-A

**DITD KARACHI**  
**TITLE: CAMOUFLAGE JOCKEY CAP**  
(CPO's/SAILOR'S)

| DWG. NO.                   | TD-2631/2022                       | DIMENSIONS: mm                   |     |
|----------------------------|------------------------------------|----------------------------------|-----|
| DATE:                      | 02-03-2022                         | SCALE:                           | NTS |
| DRAWN BY                   | CHECKED BY                         | FINALIZED BY                     |     |
| --SD--                     | --SD--                             | --SD--                           |     |
| HDM<br>M.ASGHAR<br>I/c DWG | LTCR<br>SANA KANWAL<br>SO, TEXTILE | CAPTAIN<br>MUHAMMAD AFSAR<br>DID |     |

NOTE:  
FOR FURTHER DETAILS SEE STOCK/APPROVED SAMPLE





COMMON DEFECTS

| S.No          | Defects  | Definition  |
|---------------|--|---|
| <b>FABRIC</b> |  |   |
| a.            | <b>Abrasion Mark (bruise, Chafe Mark or rub)</b> | An area of fabric damaged by friction Damaged due to a braded or uneven surface in a machine.   |
| b.            | <b>Baggy or wavy cloth</b>                       | Cloth that will not lie flat on a Cutting Table Tight or loose yarn either in warp or filling (weft).   |
| c.            | <b>Barré Mark</b>                                | An unintentional, repetitive visual pattern of continuous bars and stripes usually parallel to the filling of woven fabric. Barré can be caused by physical, optical, or dye differences in the yarns, geometric differences in the fabric structure, or by any combination of these differences. |
| d.            | <b>Blotch</b>                                    | An off colored area of any shape caused by grease or Oil. (Syn. oil spot).Cause due to leakage/ slippage from machine.  |
| e.            | <b>Bow</b>                                       | A fabric condition resulting when filling yarns are displaced from a line perpendicular to the selvages and form one or more arcs across the width of fabric.   |
| f.            | <b>Broken filament</b>                           | In multifilament yarn, breaks in one or more filaments.   |
| g.            | <b>Clip mark</b>                                 | An open place causing a streak of variable length approximately parallel of the length of width.  |
| h.            | <b>Decanting Mark</b>                            | A crease marks or impression extending across the cloth near the beginning or end of a piece due to the thickness of the fabric leader seam.  |
| j.            | <b>Double Pick</b>                               | In woven fabrics, two picks wrongly place in the same place.  |
| k.            | <b>Draw Back</b>                                 | A weave distortion characterized by tight and stack places in the same warp yarn.   |
| l.            | <b>End out</b>                                   | A void caused by a missing warp yarn.   |
| m.            | <b>Float</b>                                     | In woven fabrics, the portion of a warp or filling yarn that extends unbound over two or more warp or filling yarns.  |
| n.            | <b>Filling Band</b>                              | In woven fabrics, visual defect across the width due to a change occurring in the yarn for a large number of picks.   |
| p.            | <b>Frosting</b>                                  | A change in color in a limited area of fabric cause by abrasive wear.   |
| q.            | <b>Hole</b>                                      | In fabric, imperfection, wear one or more yarn or sufficiently damaged to create an aperture.   |
| r.            | <b>Fuzzy</b>                                     | Characterized by a hair appearance due to protruding broken fibers or filaments.  |

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|     |                          |  |
|-----|--------------------------|--|
| s.  | <b>Let-off Mark</b>      | In woven fabrics, a corrugated defect pattern distributed across the fabric width.   |
| t.  | <b>Loom fly</b>          | Waste fibers create during weaving that are woven into a fabric.   |
| u.  | <b>Loop Salvage</b>      | An improperly woven salvage of uneven width or a salvage containing irregular filling loops extending beyond the outside edges.                          |
| v.  | <b>Messiness</b>         | Surface distortion in a fabric characterized by objectionable unevenness due to many minor deformations.   |
| w.  | <b>Pin Hole</b>          | In fabric, a very small hole, approximately the size of the a cross section of the pin.  |
| x.  | <b>Pin Mark</b>          | A series of holes near the edge parallel with the lengthwise direction of a fabric caused by the holding device on the pin tender frame.                 |
| y.  | <b>Reed Mark</b>         | In woven fabric, a creak between groups of ends, either continues or at intervals.   |
| z.  | <b>Scalloped Salvage</b> | An abrupt, narrow indentation in the salvage.  |
| aa. | <b>Salvage Mark</b>      | In finished cloth, a lengthwise crease mark along the salvage caused by an edge being folded or doubled.   |
| ab. | <b>Shiner</b>            | A streak, usually short, caused of a lustrous section of filament yarn.  |
| ac. | <b>Smash</b>             | In woven fabrics, relatively large hole characterized by broken warn ends and floating picks.  |
| ad. | <b>Skew</b>              | A fabric condition resulting when filling yarns are angularly displace from a line perpendicular to the edge or side of the fabric.                      |
| ae. | <b>Snag</b>              | In fabrics, a yarn or part of a yarn pulled or plucked from the surface.   |
| af. | <b>Thin Place</b>        | In fabric, appearance characterized by a small area of loosely placed yarn or by a congregation of thin yarn as compared to the adjacent construction.   |
| ag. | <b>Tight Salvage</b>     | In woven fabrics, salvage yarn shorter than warp yarn in the body of the fabric.   |
| ah. | <b>Streak</b>            | An extended unintentionally strips narrow width, often a single yarn.  |
| aj. | <b>Tram Mage</b>         | In woven crepes, a puckered area in which a filling yarn has twist running in the same direction for several picks instead of alternating S and Z twist. |
| ak. | <b>Temple Mark</b>       | In woven fabrics, small holes or distortions adjacent to the salvage.  |
| al. | <b>Tender Mark</b>       | A visible deformation on the side edge or body of a fabric due to pressure for clips or pins.  |
| am. | <b>Shaded Parts</b>      | Any garment portion puckered, twisted, or pleated at joining seam.<br>Quality of any part not as per specification.<br>Any part shaded or any shade bar. |

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|     |                            |  |
|-----|----------------------------|--|
|     |                            | Any panel mismatch with other panels   |
| an. | <b>Color</b>               | Color of embroidery or fabric fades out, not as per specification.<br>Color of any part not as per specification.  |
| ap. | <b>Cleanliness</b>         | Any slub, spot, or stain on outer side.<br>Threads ends not trimmed or loose threads ends not removed (to be scored only when condition exists on major portion of Jockey Cap).<br>Any identification stamping visible on outer side.<br>Poor Workmanship. |
| aq. | <b>Seams and Stitching</b> | Velcro stitched poorly.<br>Any twisted, puckered, or pleated.<br>Stitching tension tight resulting in breakage of stitches when normal pull is applied.<br>Poor embroidery on eyelets and Pak Navy logo.   |
| ar. | <b>Packing and Marking</b> | Sample are not packed and marked as mentioned in the specification.<br>Poor marking and packing.<br>Identification label and care label not provided   |

**ANNEX F TO****PN SPECIFICATION NO 04/2017****PROMULGATION DATE 28 MAR 22****ACCEPTABLE QUALITY LEVELS (AQLs)**

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 / garment by the QC professionals. AQL standard is depend on the quality of the product to be inspected, random sampling, and experience of inspector. Normally lower figure AQL standard e.g. 01% is used for high quality products/ narrow width fabric and high figure AQL standard e.g. 10% for low quality product/ garment. AQL standard 2.5% means that allowable limit of defective item is 2.5 % of total items inspected .Usually AQL 2.5% is used for major defects, AQL 4.0 % is used for minor defects and AQL 6.5% is used for slight defects, however zero acceptance for critical defects Allowable limit of Major defects are less than minor defects and it depends upon nature of item /offered store. It can be less than 01% or greater than 10%. Following AQL table is used to determine lot size/ offered store quantity, least No. of sample to be inspected, AQL %, and acceptance & rejection points:

| <b><u>SINGLE SAMPLING PLAN FOR NORMAL INSPECTION OR AS PER ORDER<br/>OF INSPECTING OFFICER</u></b> |  |   |      |   |      |      |      |       |       |       |       |      |  |     |  |
|--|--|---|------|---|------|------|------|-------|-------|-------|-------|------|--|-----|--|
| Lot size   | Least No.<br>of sample<br>to be<br>Inspected | Allowable Quality levels( AQL) %              |      |   |      |      |      |       |       |       |       |      |  |     |  |
|  |  | • Acceptable/ Allowable defective sample (Ac) |      | • Rejected /Exceed allowable limit of defective item (Re) |      | 1.5% |      | 2.5%  |       | 04%   |       | 6.5% |  | 10% |  |
|  |  | Ac  | Re   | Ac  | Re   | Ac   | Re   | Ac    | Re    | Ac    | Re    |      |  |     |  |
| 281-500  | 20-80  | 1-3   | 2-4  | 1-5   | 2-6  | 2-7  | 3-8  | 3-10  | 4-11  | 5-14  | 6-15  |      |  |     |  |
| 501-1200   | 32-125                                       | 1-5   | 2-6  | 2-7   | 3-8  | 3-10 | 4-11 | 5-14  | 6-15  | 7-21  | 8-22  |      |  |     |  |
| 1201-3200  | 50-200                                       | 2-7   | 3-8  | 3-10  | 4-11 | 5-14 | 6-15 | 7-21  | 8-22  | 10-21 | 11-22 |      |  |     |  |
| 3201-10000   | 80-315                                       | 3-10  | 4-11 | 5-14  | 6-15 | 7-21 | 8-22 | 10-21 | 11-22 | 14-21 | 15-22 |      |  |     |  |

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|                   |          |           |           |           |           |           |           |           |           |    |    |
|-------------------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----|----|
| 10001-<br>35000   | 125-500  | 5-<br>14  | 6-<br>15  | 7-<br>21  | 8-<br>22  | 10-<br>21 | 11-<br>22 | 14-<br>21 | 15-<br>22 | 21 | 22 |
| 35001-<br>150000  | 200-800  | 7-<br>21  | 8-<br>22  | 10-<br>21 | 11-<br>22 | 14-<br>21 | 15-<br>22 | 21        | 22        | 21 | 22 |
| 150001-<br>500000 | 315-1250 | 10-<br>21 | 11-<br>22 | 14-<br>21 | 15-<br>22 | 21        | 22        | 21        | 22        | 21 | 22 |
| 500001-<br>above  | 500-2000 | 14-<br>21 | 15-<br>22 | 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 5 minutes to check the item , the quantity to be inspected is 2,500 items then it took 208 hours to check the whole consignment/ offered store.it means 26 days approx. for one store. Calculation is as follows:

$$\frac{5 \text{ min} \times 1 \text{ hr}}{1 \text{ item} \times 60 \text{ min}} \times 2,500 \text{ items} = 208.33 \text{ hrs} \cong 26 \text{ days}$$

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

$$\frac{5 \text{ min} \times 1 \text{ hr}}{1 \text{ item} \times 60 \text{ min}} \times 2,00 \text{ items} = 16.66 \text{ hrs} \cong 02 \text{ days}$$

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.

REVISED PN SPECIFICATION NO. 04/2017  
ANNEX G TO  
PN SPECIFICATION NO 04/2017  
PROMULGATION DATE 28 MAR 22

**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

REVISED PN SPECIFICATION NO. 04/2017

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**MOST IMMEDIATE**

DID  
OFFICE OF NRDI (ITD  
WING)

PN/DID/03/13316702

58455

See Distribution

23 May 2022

**AMENDMENTS IN REVISED PN SPECIFICATIONS OF 04/2017 (CAMOUFLAGE  
JOCKEY/ SEA CAP)**

Reference:

A. PN/NS Dte/03/3712212 dated: 19 May 2022

It is intimated that proposed amendments in revised PN Specifications 04/2017 (Camouflage Jockey/ Sea Cap) have been approved by NHQ (NS Dte) vide Reference above. Same are enclosed and hereby promulgated for further necessary action, please.

MUHAMMAD AFSAR  
Capt PN  
DID

Encl(s):

1. Amendments in PN Specifications No 04/2017

Distribution:

External:

Action:

NS Dte  
Attn: DDNS II

plz discuss.

CO

**RESTRICTED**

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DP Navy  
Attn: ADP 33 PRE AND  
POST

Chief Inspector of Naval  
Stores  
Attn: I O CLOTHING CINS

Information:

DNS

DP NAVY

Chief Inspector of Naval  
Stores  
Attn: DCINS

CSD N  
Attn: CO PNCSD

Internal:

Information:

DID  
Attn: SO TEXTILE

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PN/DID/03/13316702 approved by DID Capt PN Muhammad Afsar on 23 May 2022

Note: Computer generated documents do not require signature

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## AMENDEMENTS IN REVISED PN SPECIFICATION 04/2017

FOR:

| Article No | ITEM  |
|------------|---|
| 0103.      | <b>INTRODUCTION</b><br>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 DITD. This specification is revision of PN Specifications 04/2017 promulgated on 04 May 2017. These specifications are based on the requirement of Pakistan Navy. |

READ:

| Article No | ITEM  |
|------------|---|
| 0103.      | <b>INTRODUCTION</b><br>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 DITD. This specification is revision of PN Specifications 04/2017 promulgated on 04 May 2017. <b>This Specifications supersedes and replace Annex E and F i.e Technical Detail of Camouflage Jockey Cap/ Sea Cap &amp; manufacturing details of Camouflage Jockey Cap/ Sea Cap, respectively of PN Specifications 01/2018 promulgated on 28 March 2018.</b> These specifications are based on the requirement of Pakistan Navy. |