

GENERAL HEADQUARTERS
ARMED FORCES OF THE PHILIPPINES
OFFICE OF THE QUARTERMASTER GENERAL
Camp General Emilio Aguinaldo
Quezon City

AFP SPECIFICATION

QM SPEC NR IC-21LHC
FEB 22 2010

Supersedes
QM SPEC NR C-73LHC
09 October 2009

LOUSY HAT, CAMOUFLAGE, 100% COTTON

1. SCOPE

1.1 Scope – This specification covers one (1) type of Lousy Hat, Camouflage, 100% Cotton for use of military personnel of the Armed Forces of the Philippines.

1.2 Grade – The finished lousy hat, camouflage, 100% cotton shall be of the quality and grade of product prescribed by this specification.

1.3 Size – The following are the sizes and measurements of the finished lousy hat, camouflage, 100% cotton in centimeters with a tolerance of + 0.3 cm in all sizes.

Sizes
53 cm
54 cm
55 cm
56 cm
57 cm
58 cm
59 cm

2. REQUIREMENTS

2.1 First Article - Two (2) samples of the finished lousy hat submitted to the Office of the Quartermaster General, AFP or equivalent office in the Major Services shall be subjected to first article inspection in accordance with para 3.1

2.2 Material

2.2.1 Basic Material – The fabric shall be 100% cotton, of suitable grade and staple length, ripstop weave, which is the same fabric as the Suit, Camouflage, Ripstop Weave (BDA) with the following construction requirements:

Thread Count/2.54 cm:

Warp ----- 90 ± 5
Filling ----- 50 ± 5

Yarn Count (cotton count)

Warp	-----	14 - 20
Filling	-----	14 - 20

Coarse Yarn (cotton count)

Warp	-----	5 - 7
Filling	-----	5 - 7

Weight, g/m2 ----- 230 ± 5

Thickness, mm ----- 0.40 - 0.45

Breaking Strength, kg
(Grab Method)

Warp	-----	40 (min)
Filling	-----	30 (min)

Tearing Strength, kg
(Tongue Method)

Warp	-----	3.0 (min)
Filling	-----	3.0 (min)

Flex Abrasion Resistance
(Nr of cycles until rupture)

Warp	-----	4,300 (min)
Filling	-----	3,500 (min)

Shrinkage, %

Warp	-----	3 (max)
Filling	-----	3 (max)

Colorfastness

Change in Color

Staining

Perspiration	Grade 4 (min)	Grade 4 (min)
Laundering	Grade 4 (min)	Grade 4 (min)

2.2.2 Color Quality - The camouflage color and shade shall conform to the "Standard BDA, Camouflage of the Philippine Army". The colors shall be tested through Data Color Spectra Flash Machine with a color difference of 2.0 (maximum)

PSTR ONLY

2.2.3 Dyeing and Printing – Dyeing for brown, black, green and khaki color shall be done after the yarns have been woven into cloth. Camouflage color shall be imparted to the cloth through printing using reactive dyes.

2.2.4 Ripstop Design - The ripstop design of square formation shall be 0.5 cm in width and 0.5 cm in length (± 0.2 cm).

2.2.5 Thread - The thread shall be nylon or polyester, olive drab (OD) in color, 2 ply (min), 220 denier with a breaking strength of not less than 1 kg.

2.2.6 Slide Keeper - The slide keeper, black in color, shall be made of hard rubber or hard plastic.

2.2.7 Chin Strap - The chin strap shall be made of nylon, polyester or olefin webbing, OD in color, 0.8 cm (± 0.1 cm) wide, not less than 60 cm long and must be sewed with bartack.

2.2.8 Belt Strap - The belt strap or belt head band shall be made of nylon, polyester or olefin webbing, 1.8 cm (± 0.2 cm) in width, Olive Drab (OD) in color. There shall be thirteen (13) belt straps.

2.2.9 Brim - The brim shall be 5 cm (± 1.0 cm) in width.

2.2.10 Stiffener - The stiffener of the brim shall be made of the same fabric as the basic material or equivalent.

2.3 Construction

2.3.1 The material of the lousy hat, camouflage, 100% cotton shall be cut in strict compliance with the design as shown in the attached illustration. Tolerance of + 0.3 cm is allowed for the sizes and measurement of the finished lousy hat.

2.3.2 Holes, Ventilating - The four (4) ventilating holes of the lousy hat, camouflage, 100% cotton shall have 5 to 7 mm inside diameter properly sewed at the edges. They shall be set as shown in the attached illustration.

2.3.3 Sewing - The brim shall have eight (8) lines of stitches with a distance evenly distributed.

2.4 Workmanship

2.4.1 Finish - The finished lousy hat, camouflage, 100% cotton shall be clear, free from all defects or blemish, which may affect its appearance or serviceability. Overall workmanship shall be the best known to the trade. Poor quality of sewing or workmanship shall be sufficient ground for rejection of the finished article.

2.4.2 Design - The lousy hat, camouflage, 100% cotton shall be of the design essentially the same as shown in the attached illustration.

2.4.3 Contractor's Label – Each lousy hat, camouflage, 100% cotton shall have a contractor's label imprinted on a piece of cloth with the use of black indelible ink or black waterproof paint. The label shall be sewed on the inside center part of the top hood.

2.4.3.1 Contents of Label - The contractor's label shall consist of the following:

LOUSY HAT, CAMOUFLAGE
QM SPEC NR
(Name of Contractor)
Size

2.4.3.2 Size of Label – The label in block type of lettering shall be printed using Arial Font, Size 10.

3. VERIFICATION

3.1 First Article Inspection – The contractor shall furnish two samples of the lousy hat, camouflage for first article inspection and approval as against the bid sample. The samples shall be subjected to tests and examination to verify if the requirements in para 2.2 through 2.4 are satisfied with reference to the attached test parameters and classification of defects for this document.

3.2 Sampling

3.2.1 Samples of materials, components and other items entering into the manufacture of the lousy hat, camouflage shall be taken at random from time to time by AFP inspectors for purposes of examination and test to determine compliance with the requirements of this specification.

3.2.2 Preproduction Sample – Before actual production starts, the contractor/manufacturer shall submit two pieces of lousy hat, camouflage to the Office of The Quartermaster General, AFP or equivalent office in the major services for approval as to workmanship, style and finish.

3.3 Inspection

3.3.1 Inspection may be conducted anytime throughout the entire process of manufacture to determine compliance with the requirements of this specification. The passing as satisfactory of any detail of construction or quality of materials used shall not relieve the contractor/manufacturer of the responsibility for faulty workmanship or defective material which may be discovered anytime prior to final acceptance.

3.3.2 Final inspection of the finished lousy hat, camouflage shall be conducted either at point of production or at point of delivery. In case of factory inspection, every facility shall be afforded to AFP inspectors by the manufacturer for the prosecution of their work.

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for Inspection – Unless otherwise specified in the contract or purchase order, the contractor is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract or purchase order, the contractor may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in this document where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements.

4.2 Responsibility for Compliance – All items must meet all requirements of Sections 2 and 3. The inspection set forth in this document shall become a part of the contractor's overall inspection system or quality program. The absence of any inspection requirements in the document shall not relieve the contractor of the responsibility of assuring that all product or supplies submitted to the Government for acceptance comply with all requirements of the contract.

4.3 Bid Samples – Two (2) pieces bid samples of lousy hat, camouflage shall be submitted to RDC, ASCOM, PA to determine the extent of compliance with this specification insofar as quality of materials used is concerned. The Office of The Quartermaster General, AFP or equivalent office in the major services shall determine the extent of compliance with this specification insofar as workmanship, style and finish are concerned.

5. PACKAGING AND PACKING

5.1 Packaging – Each lousy hat shall be placed in a transparent (cellophane) bag. The open end of the bag shall be folded and closed with transparent tape.

5.2 Packing – Two hundred (200) pieces of lousy hat of the same sizes shall be packed one on top of the other in a corrugated carton. The top cover, when closed shall be sealed with a binding tape and finally secured with nylon straps. The box shall be labeled as follows:

LOUSY HAT, CAMOUFLAGE
(Name of Contactor)
PO Nr
Quantity
Size

6. NOTES

6.1 The following percentage distribution corresponding to the sizes in para 1.3 shall serve as basis in the determination of the tariff sizes for the lousy hat.

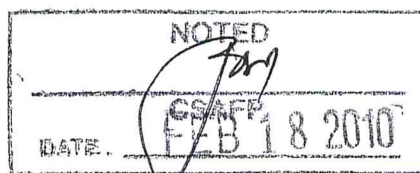
Percentage
2%
13%
15%
30%
28%
10%
2%

6.2 The contractor/manufacturer shall notify the Office of the Quartermaster General, AFP or equivalent office in the major services seven (7) days before actual production starts so that AFP inspector can be assigned to oversee the process of manufacture to be accepted and to insure the quality of materials to be used.

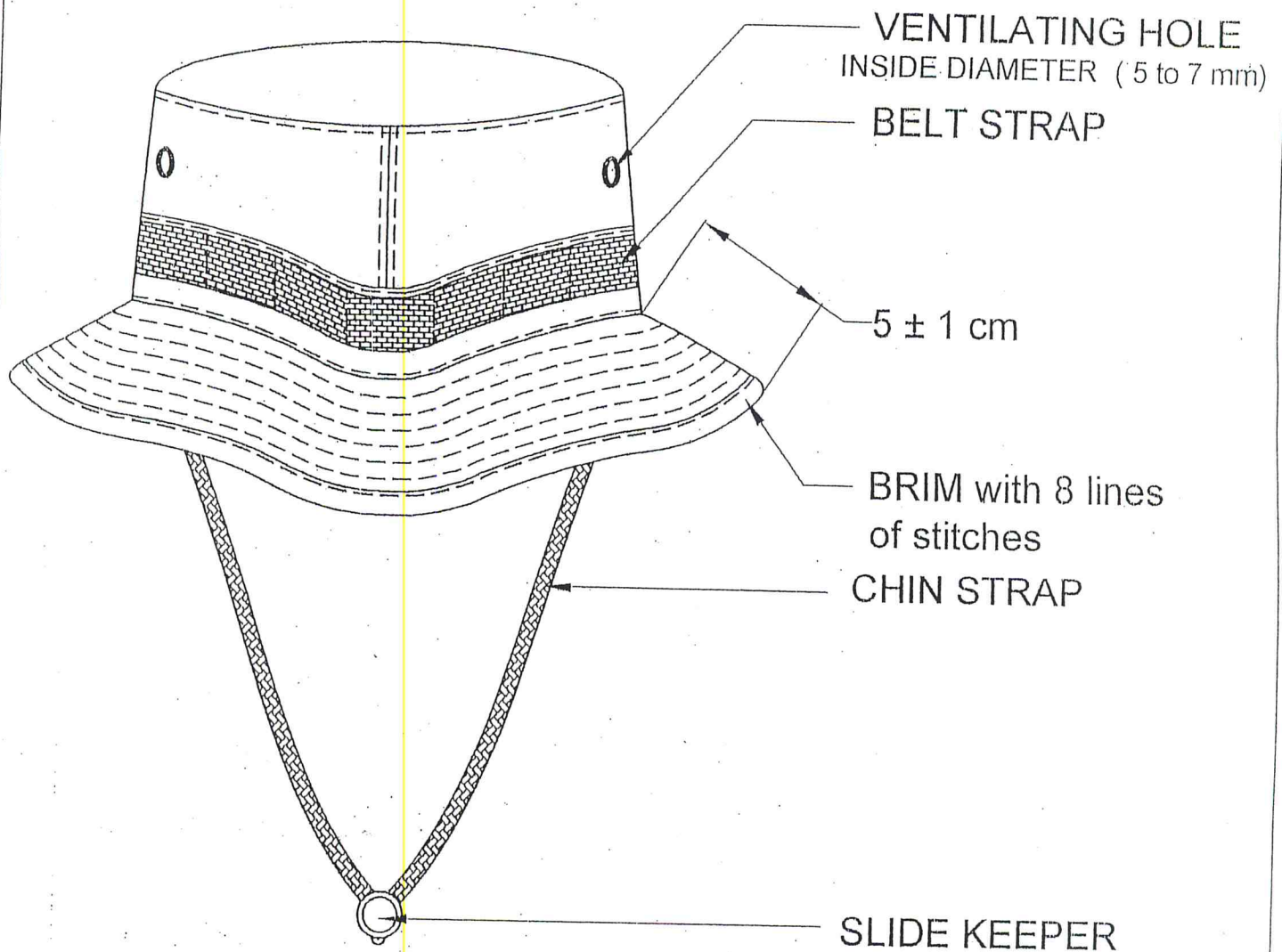
6.3 Any point not covered by this specification shall be governed by the attached illustration which shall be followed in every detail.



RAMON C CABAL
Colonel PA (GSC)
The Quartermaster General, AFP



LOUSY HAT, CAMOUFLAGE, 100% COTTON

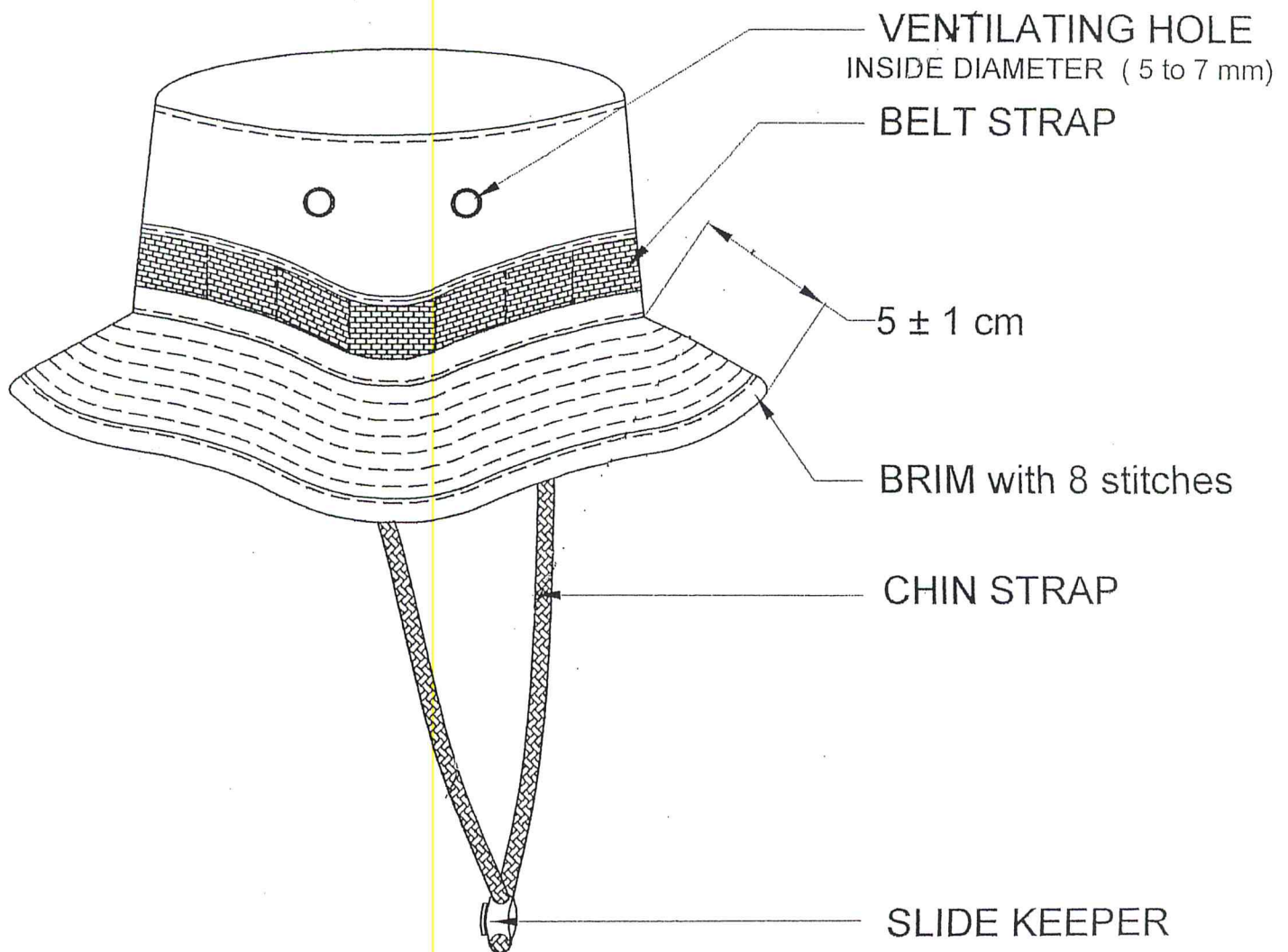


FRONT VIEW

LOUSY HAT, CAMOUFLAGE, 100% COTTON

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SIDE VIEW

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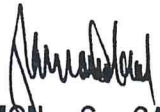
TEST PARAMETERS
LOUSY HAT, CAMOUFLAGE
FEB 22 '2010

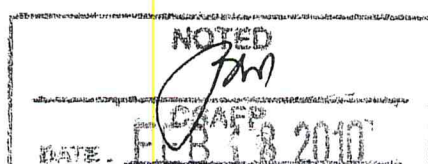
TEST PARAMETERS	QM SPEC NR IC-2LHC dtd <u>FEB 22 2010</u>	Classification	
		Major	Minor
Sizes, cm	53/54/55/56/57/58/59 (+ 0.3)	x	
Basic Material	100% Cotton	x	
Type of Weave	Plain with ripstop design		x
Thickness, mm	0.40 - 0.45		x
Thread Count/2.54 cm *			
Warp	85 - 95		x
Filling	45 - 55		x
Yarn Size, Cotton Count **			
Warp	14 - 20		x
Filling	14 - 20		x
Coarse Yarn, Cotton Count **			
Warp	5 - 7		x
Filling	5 - 7		x
Weight, g/m2	225 - 235		x
Breaking Strength, kg			
Warp	40 (minimum)	x	
Filling	30 (minimum)	x	
Tearing Strength, kg			
Warp	3 (minimum)	x	
Filling	3 (minimum)	x	
Flex Abrasion Resistance (No. of cycles until rupture)			
Warp	4,300 cycles (minimum)	x	
Filling	3,500 cycles (minimum)	x	
Shrinkage, %			
Warp	3 (maximum)	x	
Filling	3 (maximum)	x	
Colorfastness	AATC Gray Scale Rating		
Laundering	Change in Color - - - Grade 4 (minimum)	x	
	Staining - - - Grade 4 (minimum)		x
Perspiration	Change in Color - - - Grade 4 (minimum)	x	
	Staining - - - Grade 4 (minimum)		x
Dyeing and Printing	Camouflage color (brown, khaki, black & green)	x	
	imparted to the cloth through printing using reactive dyes		
Ripstop Design	The square formation shall be 0.5 cm in width and 0.5 cm in length (\pm 0.2)		x
Color Quality (Color Difference)	2.0 (maximum)	x	
Thread	Nylon or Polyester		x
Color	Olive Drab	x	
No. of Ply	2 (minimum)		x

TEST PARAMETERS	QM SPEC NR IC-2LHC dtd <u>FEB 22 2010</u>	Classification	
		Major	Minor
Yarn Size, Denier	220		X
Breaking Strength,kg	1 (minimum)	X	
Slide Keeper	Made of hard rubber or hard plastic	X	
Color	Black	X	
Chin Strap	nylon, polyester or olefin webbing	X	
	sewed with bartack		X
Color	Olive Drab (OD)	X	
Width, cm	0.8 ± 0.1		X
Length, cm	60 (minimum)		X
Belt Strap or Belt Head Band	nylon, polyester or olefin webbing	X	
Width, cm	1.8 ± 0.2		X
Color	Olive Drab, OD	X	
No. of Straps	13 straps	X	
Brim			
Width, cm	5.0 ± 1.0		X
Stitches for Brim	8 lines with a distance evenly distributed		X
Stiffener	Same fabric as the basic material or equivalent	X	
CONSTRUCTION			
Holes Ventilating	Four (4) ventilating holes	X	
	properly sewed at the edges and set as illustrated		X
Inside Diameter, mm	5-7		X
Contractor's Label	With contractor's label	X	
	Imprinted on a piece of cloth with the use of black	X	
	indelible ink or black waterproof paint		
Location	Sewed on the inside center part of the top hood		X
Contents of Label	LOUSY HAT, CAMOUFLAGE QM SPEC NR (Name of Contractor) Size		X
Size of Label	Arial Font, Size 10		X
Total Test Points		27	26

NOTE:

- * Any value greater than the upper limit of the range is not a defect but an improvement of the item and any value lesser than the lower limit of the range is considered minor defect.
- ** Any value lesser than the lower limit of the range is an improvement of the item and any value greater than the upper limit is considered minor defect.


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PHILIPPINE ARMY
OFFICE OF THE ARMY QUARTERMASTER
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LOUSY HAT, CAMOUFLAGE, 100% COTTON
QM SPEC NR IC-21LHC dtd 22 February 2010

TEST CRITERIA

FOR POST-QUALIFICATION TEST:

Destructive Testing Criteria based on Logistic Letter Directive Number SC-07-04 dtd 25 October 2007 para 5f.

TOTAL MINOR TEST POINTS	NO. OF ALLOWABLE DEFECTS	
	MAJOR	MINOR
17	0	1

1. No major defect allowed.
2. Maximum allowable minor defect is nine & 9/10 percent (9.9%) of total minor test points
"CONDUCTED"

FOR ACCEPTANCE TEST:

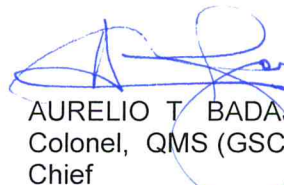
- I. Visual Inspection Criteria based on Mil Std 105E dtd 10 May 1989
- All defects noted in 1st and 2nd sampling are cumulative.
 - In case of rejection, destructive testing will not be conducted

Classification of Defects	TABLE III-A General Inspection Level I Code Letter J Double Sampling Plan for Normal Inspection				
	Lot size 3,200 – 10,000 pcs Sample Size: 50 pcs + 50 pcs	Number of Defects			
		1 st Sampling		2 nd Sampling	
	AQL	Accept	Reject	Accept	Reject
MAJOR	6.5	5	9	12	13
MINOR	25	11	16	26	27

- II. Destructive Testing Criteria based on Logistic Letter Directive Number SC-07-04 dtd 25 October 2007 para 5f.

TOTAL MINOR TEST POINTS	NO. OF ALLOWABLE DEFECTS	
	MAJOR	MINOR
17	0	1

1. No major defect allowed.
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VISUAL INSPECTION CHECKLIST

DESCRIPTION OF DEFECTS	CLASSIFICATION		FINDINGS
	MAJOR	MINOR	
1. Packing and Packaging a. Contents of carton label not as specified-item, Name of Contractor, PO Nr, Quantity and Size b. Quantity not as specified in the carton label. c. Lousy Hat actual size differs from carton label d. Each lousy hat not individually packed in a transparent cellophane bag.	x x	 x x	
2. Not camouflage in color	x		
3. Any component part missing: a. Slide Keeper b. Chin Strap c. Belt Strap d. Ventilating Holes	 x x x x		
4. Missing Contractor's Label	x		
5. Presence of dirt, stains and other defects: a. Affecting appearance b. Does not affect appearance	 x	 x	
6. Loose sewing/Untrimmed thread ends		x	


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QM SPEC NR IC-21 LHC dtd 22 February 2010

LIST OF REQUIRED PROTOTYPE SAMPLES AND SWATCH MATERIALS FOR
TESTING

1. **FOR POST QUALIFICATION TEST**

PROTOTYPE SAMPLES

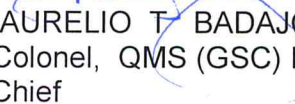
RDC – Two (2) pcs, any size but the two (2) pcs must be of the
same size

SWATCH MATERIALS (Minimum requirement)

Basic Material	-	3 m (full width)
Thread, Sewing	-	10 m

2. **FOR ACCEPTANCE TEST**

Two (2) pcs Lousy Hat – Picked at random from delivery


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