

HEADQUARTERS
PHILIPPINE ARMY
OFFICE OF THE ARMY QUARTERMASTER
Fort Andres Bonifacio, Metro Manila

PA SPECIFICATION

QM SPEC NR IE-22BTM

Amendment - 1

APR 20 2018

Interim

BACKPACK, TACTICAL MOLLE, PHILARPAT

This Amendment forms part of **PA QM SPEC NR IE-22BTM** dated **10 June 2017** and is mandatory for use of all procuring agencies of the Philippine Army.


1. Page 1, Para 2.2.1 Basic Material – Add the word **“Colorless”** before the word/s **“...coating on the reverse side and conforming to the following requirements.”**

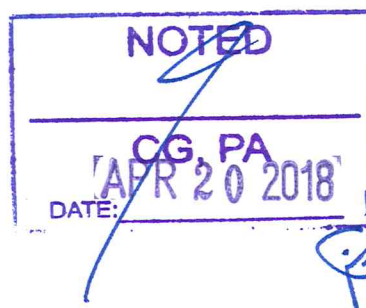
2. Page 1, Para 2.2.1 Basic Material – Include the requirement of color quality on PHILARPAT color (**beige, black, light green and dark green**) and design, to read:

Color Quality (PHILARPAT)¹

Color Difference

2.5 (maximum)


AURELIO T BADAJOS
Colonel GSC (QMS) PA
Chief



1. The color quality test shall be based on PHILARPAT, BDU color.

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BACKPACK, TACTICAL MOLLE, PHILARPAT

1. SCOPE:

1.1 Scope - This specification covers one (1) type of Backpack, Tactical MOLLE that is extendable and with rain cover for use of military personnel of the Philippine Army in various types of operation. MOLLE stands for Modular Lightweight Load-Carrying Equipment.

1.2 Grade - The finished Backpack shall conform to the quality and grade of product prescribed by this specification.

1.3 Size - There shall be one size for the Backpack and the measurements of the finished Backpack is as shown in the attached illustration.

2. REQUIREMENTS

2.1 First Article - One (1) finished sample of Backpack, Tactical MOLLE shall be submitted to the Office of the Army Quartermaster for first article inspection in accordance with para 3.1.

2.2 Materials

2.2.1 Basic Material - The basic material shall be nylon canvas, PHILARPAT with coating on the reverse side and conforming to the following requirements.

Type of Weave	-	Plain
Thread Count/2.54 cm:		
Warp	-	34 (minimum)
Filling	-	27 (minimum)
Yarn Size, Denier:		
Warp	-	1,350 (minimum)
Filling	-	1,200 (minimum)
Thickness, mm	-	0.60 (minimum)
Weight, g/m	-	400 (maximum)

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Breaking Strength, kg		
Warp	-	330 (minimum)
Filling	-	280 (minimum)
Water Repellency, % (Spray Method)	-	80% (minimum)
Water Resistance, grams of water absorbed by blotter	-	0

2.2.2 Lining – The lining shall be made of polyester fabric, olive drab (OD) and shall conform to the following requirements:

Type of Weave	-	Plain
Thread Count/2.54 cm:		
Warp	-	90 (minimum)
Filling	-	65 (minimum)
Yarn Size, Denier:		
Warp	-	85 (minimum)
Filling	-	80 (minimum)
Thickness, mm	-	0.20 (maximum)
Weight, g/m	-	70 (maximum)
Breaking Strength, kg		
Warp	-	40 (minimum)
Filling	-	35 (minimum)

2.2.3 Mesh – The mesh material shall be made of two (2) layered materials. The top and bottom layers are OD, knitted breathable polyester mesh and shall conform to the following requirements:

No. of Holes per 2.54 cm ²	-	50 (minimum)
Thickness, mm	-	3.0 (maximum)
Weight, g/m ²	-	250 (maximum)
Bursting Strength , kg/cm ²	-	18 (minimum)



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2.2.4 Straps – All straps shall be made of polyester webbing, olive drab (OD), and shall conform to the following requirements:

Parameters	Strap # 1	Strap # 2	Strap # 3
Width, cm	5.0 ± 0.2	2.5 ± 0.2	2.0 ± 0.2
Thickness, mm	1.0 – 1.5	1.0 – 1.5	1.0 – 1.5
Type of Weave	Plain-Double	Plain-Double	Plain-Double
Breaking Strength, kg	1,000 (minimum)	700 (minimum)	500 (minimum)

2.2.5 Binding Tape - The binding tape shall be made of nylon or polyester webbing, OD and shall conform with the following requirements:

Type of Weave	-	Plain-Double
Width, cm	-	2.0 ± 0.5
Thickness, mm	-	0.7 (minimum)

2.2.6 Padding - The padding material for the shoulder, waist and back/inside of the backpack shall be made of rubberized foam neatly covered with the same material and mesh as specified in para 2.2.1 and 2.2.3, properly shaped and formed as illustrated and shall conform to the following requirements:

Parameters	Padding # 1	Padding # 2
Thickness, mm	10.0 – 11.0	2.5 – 3.5

2.2.7 Elastic Cord – The elastic cord shall be made of nylon or polyester, OD in color with diameter of 3.0 ± 0.5 mm and a minimum breaking strength of 25.0 kg.

2.2.8 Plastic Buckles Accessories – The following plastic buckles accessories shall be made of hard plastic material, Olive Drab in color and shall conform with the following requirements:

Quick Release Buckle (small)	- 7 pieces
Length, cm	- 5.4 ± 0.2
Width, cm	- 2.6 ± 0.2
Thickness, mm	- 11.3 ± 1.0
Breaking Strength, kg	- 45 (minimum)
Quick Release Buckle (medium)	- 2 pieces
Length, cm	- 6.3 ± 0.2
Width, cm	- 3.2 ± 0.2
Thickness, mm	- 12.0 ± 1.0
Breaking Strength, kg	- 45 (minimum)



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Quick Release Buckle (large)	- 1 piece
Length, cm	- 8.0 ± 0.2
Width, cm	- 6.0 ± 0.2
Thickness, mm	- 15.0 ± 1.0
Breaking Strength, kg	- 100 (minimum)
D-Ring	- 2 pieces
Length, cm	- 3.4 ± 0.2
Width, cm	- 2.8 ± 0.2
Thickness, mm	- 4.0 ± 0.2
Tri-bar Adjustable Buckle (small)	- 3 pieces
Length, cm	- 2.4 ± 0.2
Width, mm	- 3.4 ± 0.2
Accommodation width, cm	- 2.9 ± 0.2
Tri-bar Adjustable Buckle (large)	- 1 piece
Length, cm	- 3.2 ± 0.2
Width, cm	- 6.1 ± 0.2
Accommodation width, cm	- 5.2 ± 0.2
Ladder Lock	- 4 pieces
Length, cm	- 4.5 ± 0.2
Width, cm	- 3.4 ± 0.2
Wire Side Adjustable Buckle	- 2 pieces
Length, cm	- 2.8 ± 0.2
Width, cm	- 4.2 ± 0.2
Accommodation width	
Wire Side, cm	- 2.1 ± 0.2
Adjustable Bar, cm	- 2.7 ± 0.2
Bungee Cord Lock	- 1 piece
Length, cm	- 2.8 ± 0.2
Width, cm	- 1.5 ± 0.2

2.2.9 Zipper – The zipper to be used for the main pocket and extension shall be heavy duty nylon No. 8 -10, and No. 4 – 5 for each pocket, olive drab in color and shall be concealed by basic material, olive drab in color.

2.2.10 Thread Sewing – The thread to be used for all stitching shall be made of polyester or nylon Olive Drab in color 2 ply (minimum), and with a breaking strength of not less than 1.5kg.

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2.3 Construction

2.3.1 Make Body and Bottom – The body and the bottom of backpack shall be cut from the basic material as specified in para 2.2.1, to the correct size and shape giving necessary allowance for hems. The upper body of the backpack shall be provided with two (2) heavy duty nylon zipper, no 8 - 10, 69.0 ± 3.0 cm long for closure and shall be concealed with the basic material 3.5 ± 0.2 cm width. The inside of the backpack shall be provided with padding #2 on one side covered with lining material as specified in para 2.2.2. Join the ends of the fabric and lining material with a binding tape and sewed in a double-lapped seam. The dimension of the backpack is shown on Annex A.

2.3.1.1 The back of the Backpack shall be provided with padding #1 cut on size and shape in accordance to the design in the attached illustration. The padding shall be covered with mesh material as prescribed in para 2.2.3. The padding shall be placed at the back of the backpack and sewn over the basic material to elevate the padding and provide cushioning and ventilation to the back of the user, as illustrated.

2.3.2 Shoulder Strap Padding – The two (2) pieces shoulder strap shall be provided with padding #1 constructed with the material as specified in para 2.2.6 and shall be covered with the basic material on the face side and mesh on the reverse side, as illustrated. The shoulder strap padding shall be connected to the bottom strap (strap #2) with a length of 50 cm (minimum) using a ladder lock adjustable buckle.

2.3.2.1 Modular Strap – Each shoulder strap padding shall have modular straps (strap #2), sewn along the length of each padding and the lower ends of the strap is attached to the ladder lock buckle to connect with the bottom strap as specified in para 2.3.2, while the upper end of the strap is sewn jointly with the shoulder strap padding. Each shoulder strap shall be provided with one (1) tri-bar adjustable buckle, one (1) d-ring and one (1) wire side adjustable buckle place symmetrically on the left and right of the shoulder strap padding. The wire side adjustable buckle shall serve as attachment of the quick release buckle (small) from the horizontal chest strap through a joining loop using strap #3.

2.3.2.2 Shoulder Adjustment/Compression Strap – the shoulder strap padding specified in para 2.3.2 shall be provided with an adjustment strap using strap #2. The lower ends of the strap shall be inserted to the tri-bar adjustable buckle together with the modular strap specified in para 2.3.2.1 and the upper ends of the strap shall be inserted to the ladder lock adjustable buckle that was sewn jointly in the carrying strap #2.

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2.3.2.3 Horizontal Chest Strap – The Horizontal Chest strap shall be made of strap #3. The left portion of the chest strap shall have a fixed length of 4.0 ± 1.0 cm, inserted to the wire side adjustable buckle, while the right portion shall be adjustable and shall have a minimum length of 23.0 cm when extended fully while inserted to the other wire side adjustable buckle as illustrated. The left and right portion of the horizontal chest strap shall be attached to the respective wire side adjustable buckle. The female quick release buckle shall be attached to the left portion of the wire side adjustable buckle via strap #3, while the male quick release buckle shall be attached to the right portion of the wire side adjustable buckle via strap #3, as illustrated.

2.3.3 Belt Waist Strap – The belt waist strap is composed of two (2) straps #1, 50.0 ± 2.0 cm long each and sewn at each end of the hip padding 5.5 ± 0.5 cm from the longest edge. The strap is provided with quick release buckle (large) and Tri-bar Adjustable Buckle as specified in 2.2.8. The excess portion of the strap shall firmly be secured with a strap keeper, olive drab in color.

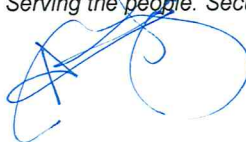
2.3.4 Hip Padding – The hip padding is cut in accordance to size and shape as shown in the attached illustration. It shall cover with the basic material on the face side and mesh material on the reverse/back side. The edges of which are sewn with a binding tape as specified in para 2.2.5.

2.3.5 Carrying Straps – There shall be two (2) carrying straps. Carrying strap #1 is made of strap #1, folded in the middle and sewn at the sides. It is placed and sewn just above the shoulder strap padding. Carrying strap #2 is made of strap #1, placed and sewn at the top of the backpack, as illustrated. It shall double with strap #2 and with bar tacks. The length of carrying strap is shown in Annex A.

2.3.6 Velcro Tape – it shall have a Velcro tape (hook and loop), Olive Drab (OD) in color sewn in the top of the backpack parallel to carrying strap #2, as illustrated. The dimension is 5.0 ± 0.5 cm long and has a width of 12.0 ± 0.5 cm.

2.3.7 Backpack Rain Cover – The backpack cover shall be made of lining material as specified in para 2.2.2 with coating on the reverse side and placed/attached inside the pocket located at the bottom of the backpack enclosed with a no. 4-5 zipper and with a length of 15.0 ± 2.0 cm. The backpack cover shall be attached in a tri-bar adjustable buckle via strap #2, 22.0 cm (minimum) in length for adjustment. The edge of the backpack cover shall have 2.5 ± 0.2 cm width garter, olive drab in color to serve as binding tape and better grip/fit in the backpack when in used. The seam of the backpack cover shall be sewn with a binding tape specified in para 2.2.5.

2.3.8 Extension – The material for the bag extension shall be made of the basic material sewn at the back portion of the backpack and shall be provided with zipper No. 8 – 10 for closure and opening of the backpack extension, as illustrated.



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2.3.9 Utility pouch – The utility pouch shall be made of lining material as specified in para 2.2.2. It shall be placed/attached inside of the 20.0 ± 2.0 cm long slash pocket located between of the two (2) front pockets, as illustrated. The slash pocket shall have a no. 4-5 zipper for opening and closure. The utility pouch shall be provided with two (2) straps #3, 23.0 ± 0.5 cm long sewn both on the lower side of the pouch with quick release buckle (male) that will corresponds in the quick release buckle (female) that are sewn on each of the lower side of the backpack, as illustrated. The opening edge of the utility pouch shall be provided with elastic cord, eyelet and a bungee cord lock for closure. The dimension of the utility pouch is shown in the attach illustration.

2.3.10 Inside Pocket – The inside pocket shall be one-piece made from the lining material specified in para 2.2.2 double thickness with padding #2 in the inside. The height of the pocket is 32.0 ± 3.0 cm and the width shall be measured based on the width and cut of the back of the backpack. It shall be sewed jointly by a binding tape along the edge of the seam on the back of the backpack.

2.3.11 Front Pockets – The two (2) sewn front pockets shall be made of the basic material and provided with two (2) heavy duty nylon zippers, No. 4 - 5 for closure.

2.3.11.1 Front Pockets (small) – two (2) modular straps (strap # 2) are sewn and bar tacked on the front of the pocket. The inside of the pocket shall have a lining and the seam is joined with a binding tape.

2.3.11.2 Front Pockets (big) – Four (4) modular straps (strap # 2) are sewn and bar tacked on the front of the pocket. The inside of the pocket shall have a lining and the seam is joined with a binding tape. The zipper shall be concealed with the basic material.

2.3.12 Side Pockets – The three (3) side pockets shall be made of the basic material and provided with two (2) heavy duty nylon zipper, No. 4 – 5 each for closure and concealed with the basic material. It shall have a lining inside the pocket and the joining seam is sewn with a binding tape. The dimensions of the three pockets are shown in the attach illustration.

2.3.12.1 Side Pocket (small) – Three (3) MOLLE webbing straps (strap #2) are sewn and bar tacked on the front and back of the pocket. There shall be two (2) MOLLE attachment strap (strap #2), 24.0 ± 1.0 cm long, sewn and bar tacked on the back of the pocket. One end of the MOLLE attachment strap shall be folded to serve as lock during attachment of pocket to the MOLLE webbing strap in the side part of the backpack, as illustrated.



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2.3.12.2 Side Pocket (medium) - Three (3) MOLLE webbing strap (strap #2) are sewn and bar tacked on the front and the back of the pocket. There shall be two (2) MOLLE attachment strap (strap #2), 24.0 ± 1.0 cm long, sewn and bar tacked on the back of the pocket. One end of the MOLLE attachment strap shall be folded to serve as lock during attachment of pocket to the MOLLE webbing strap in the side part of the backpack, as illustrated.

2.3.12.3 Side Pocket (long) - Six (6) MOLLE webbing strap (strap #2) are sewn and bar tacked on the front and the back of the pocket. There shall be four (4) MOLLE attachment strap (strap #2), 24.0 ± 1.0 cm long. The two (2) attachment straps are sewn and bar tacked on the upper portion of the back pocket while the other two (2) attachment straps are sewn and bar tacked on the middle of the back of the pocket. One end of the MOLLE attachment strap shall be folded to serve as lock during attachment of pocket to the MOLLE webbing strap in the side part of the backpack, as illustrated.

2.3.13 Bottom MOLLE webbing Straps – The bottom of the backpack shall be provided with two (2) MOLLE webbing straps (strap #2), 48.0 ± 2.0 cm to serve as reinforcement for the bottom part of the backpack.

2.3.14 Side MOLLE webbing Straps – Each side of the backpack shall be provided with six (6) MOLLE webbing strap for attachment of the pocket, as illustrated.

2.3.15 Quick Release Buckle (small) – there shall be a quick release buckle (small) sewn in the seam on each of the middle front side (both left and right) and upper front side (both left and right) portion of the backpack. It is placed symmetrically on the left and right portion of the backpack, as illustrated. It shall be used as attachment for additional accessories in the backpack.

2.3.16 Compression Strap – the Backpack shall be provided with compression strap by using a quick release buckle (medium). The two (2) compression strap shall be sewn at each side of the backpack align at both ends of the zipper main pocket. It shall be attached by forming a loop and the strap together with the male quick release buckle (medium) will passed through the loop and across the side of the backpack to fasten the male quick release buckle to the female quick release buckle that is sewn at the edge of the back of the backpack, as illustrated. The male and female quick release buckle shall correspond to each other.

2.3.17 Draw Cord – all zippers shall be provided with a draw cord, 23.0 ± 3.0 cm long for easy accessibility.

2.3.18 Strap Keeper – all loose ends or hanging straps shall be provided with a strap keeper, olive drab in color for managing excess webbing straps.

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2.3.19 Stitches – All sewing and stitching shall be running stitches ranging from 8 – 10 stitches per 2.54 cm.

2.4 Workmanship

2.4.1 Design – The Backpack, Tactical MOLLE shall be of the design essentially the same as shown in the attached illustrations.

2.4.2 Manufacturer's Label – Each Backpack, Tactical MOLLE shall have a manufacturer's label printed on the inside upper center of backpack, using black ink or paint. The contents of label shall be as follows:

BACKPACK, TACTICAL MOLLE
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Name of Manufacturer:
Date Manufactured:

2.4.3 Size of Label – The letters BACKPACK, TACTICAL MOLLE shall be Arial font, size 20 while the rest of the label data shall be Arial font size 12.

2.4.4 "ARMY" Marking - The "ARMY" marking shall be printed on the upper center portion of the front pocket (big) with the use of black ink or paint, Stencil font, Size 150, as illustrated.


2.4.5 Finish – The Backpack, Tactical MOLLE, PHILARPAT shall be clean, well finished and free from any defect which may affect its appearance or serviceability. Overall workmanship shall be the best known to the trade. Poor quality of sewing and workmanship shall be sufficient ground for rejection of the finished article.

3. VERIFICATION

3.1 First Article Inspection – The samples of the Backpack, Tactical MOLLE, PHILARPAT submitted in para 2.1 shall be subjected to first article inspection and for approval as against the bid sample. The samples shall be subjected to test 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, component and other items entering into the manufacture of the Backpack, Tactical MOLLE, PHILARPAT shall be taken at random, from time to time by the PA inspectors for the purpose of examination and test to determine compliance with the requirements of this specification.



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3.2.2 Pre-production Sample – Before actual production starts, one (1) finished sample of Backpack, Tactical MOLLE, PHILARPAT shall be submitted to the RDC, ASCOM, PA for verification whether the quality of materials used conform with the requirements of this specification and one (1) finished Backpack, Tactical MOLLE shall be submitted to the Office of the Army Quartermaster for approval as to design, construction, workmanship, style and finish.

4. QUALITY ASSURANCE PROVISION

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 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 the specifications which are deemed necessary to assure that supplies and services conform to prescribed requirements.

4.2 Responsibility for Compliance – All items must meet all the requirements of sections 2 and 3. The inspections set forth in this specification shall become a part of the contractor'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 assuring that all products or supplies submitted to the Government for acceptance comply with all the requirements of the contract.

4.3 Bid Samples – Two (2) pieces bid samples of the finished Backpack, Tactical MOLLE, PHILARPAT shall be submitted to RDC, ASCOM, PA to determine the extent of compliance with the specification insofar as quality of materials used is concerned. The Office of the Army Quartermaster 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 Backpack, Tactical MOLLE, PHILARPAT properly labeled shall be placed in a transparent cellophane bag. The open end of the bag shall be folded and closed with a transparent tape.

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5.2 Packing – The Backpack, Tactical MOLLE, PHILARPAT shall be packed in a corrugated carton. The top cover, when closed, shall be sealed with binding tape and finally secured with nylon straps. The box shall be labeled as follows:

BACKPACK, TACTICAL MOLLE

Name of Manufacturer

Date Manufactured:

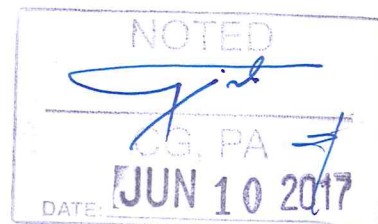
Quantity:

6. NOTES

6.1 The contractor/manufacturer shall notify the Office of the Army Quartermaster at least seven (7) days before actual production starts so that PA inspectors can be assigned to oversee the process of manufacture to be followed and to inspect the quality of materials to be used.

6.2 Any point not covered by this text shall be governed by the attached illustrations which shall be followed in every detail.


AURELIO T. BADAJOS
Colonel, QMS (GSC) PA
Chief



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ANNEX "A"

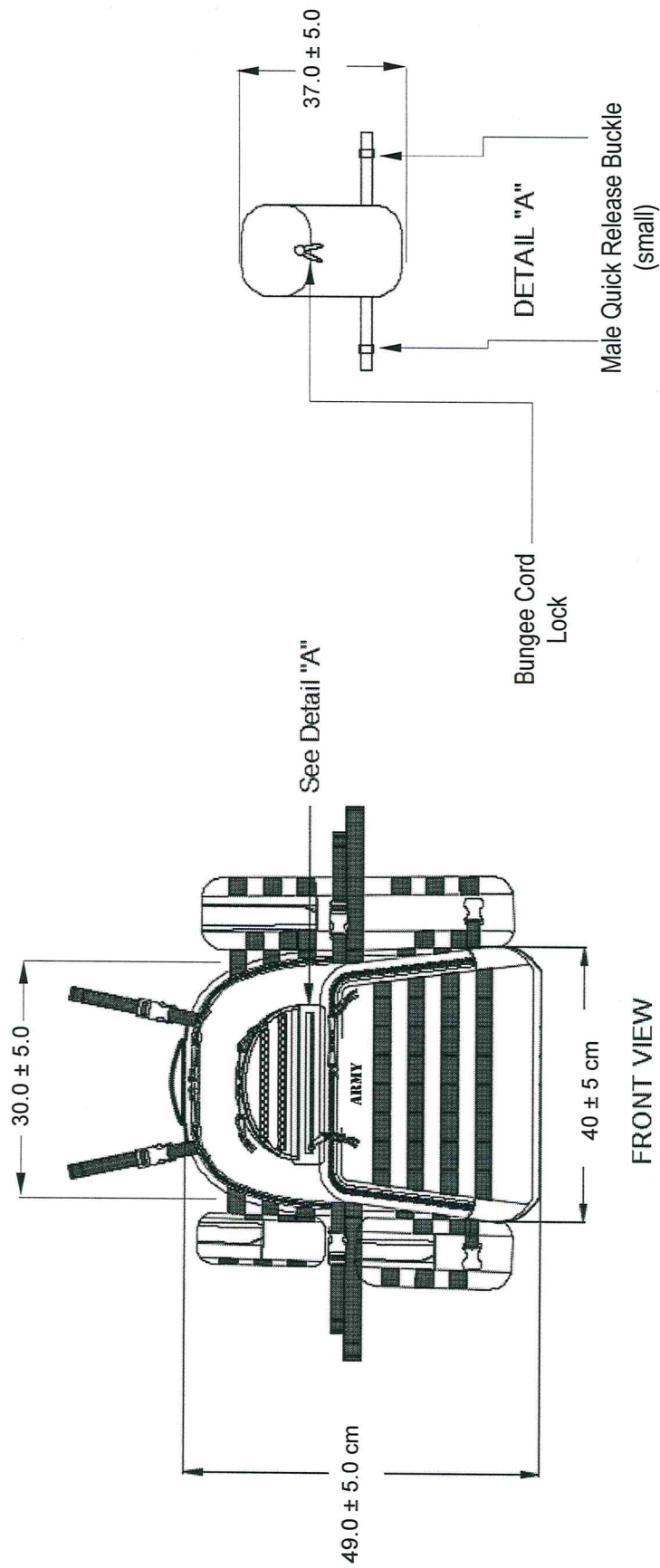
FINISHED SIZES AND MEASUREMENT

BACKPACK, TACTICAL MOLLE

PARAMETERS	MEASUREMENTS
Height, cm	49.0 ± 5.0
Width, top part, cm	30.0 ± 5.0
Width, bottom part, cm	40.0 ± 5.0
Thickness, side part (excluding the front pocket), cm	17.0 ± 3.0
Thickness, extended part (top portion), cm	7.0 ± 3.0
Thickness, extended part (bottom portion), cm	13.0 ± 3.0
Front Pocket (small) (H-measured at the center x W x T), cm	10.0 ± 1.0 x 22.0 ± 1.0 x 6.0 ± 2.0
Front Pocket (big) (H-measured at the center x W x T), cm	35.0 ± 3.0 x 34.0 ± 3.0 x 9.0 ± 2.0
Side Pocket (small) (H x W x T), cm	18.0 ± 2.0 x 13.0 ± 2.0 x 7.0 ± 2.0
Side Pocket (medium) (H x W x T), cm	22.0 ± 2.0 x 17 ± 2.0 x 7.0 ± 2.0
Side Pocket (long) (H x W x T), cm	44.0 ± 2.0 x 17.0 ± 2.0 x 7.0 ± 2.0
Length of Carrying Strap, cm	
Carrying Strap #1	23.0 ± 3.0
Carrying Strap #2	26.0 ± 2.0

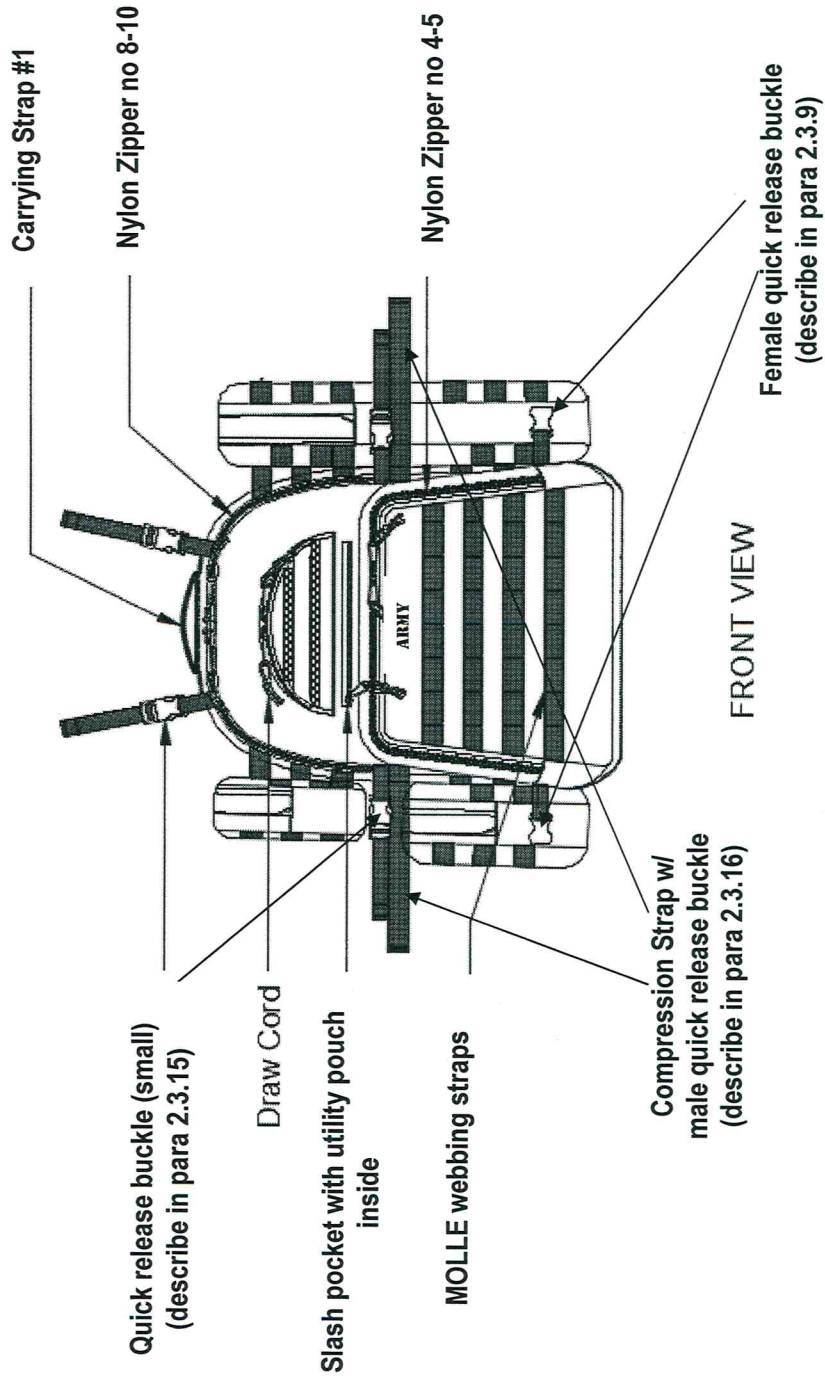
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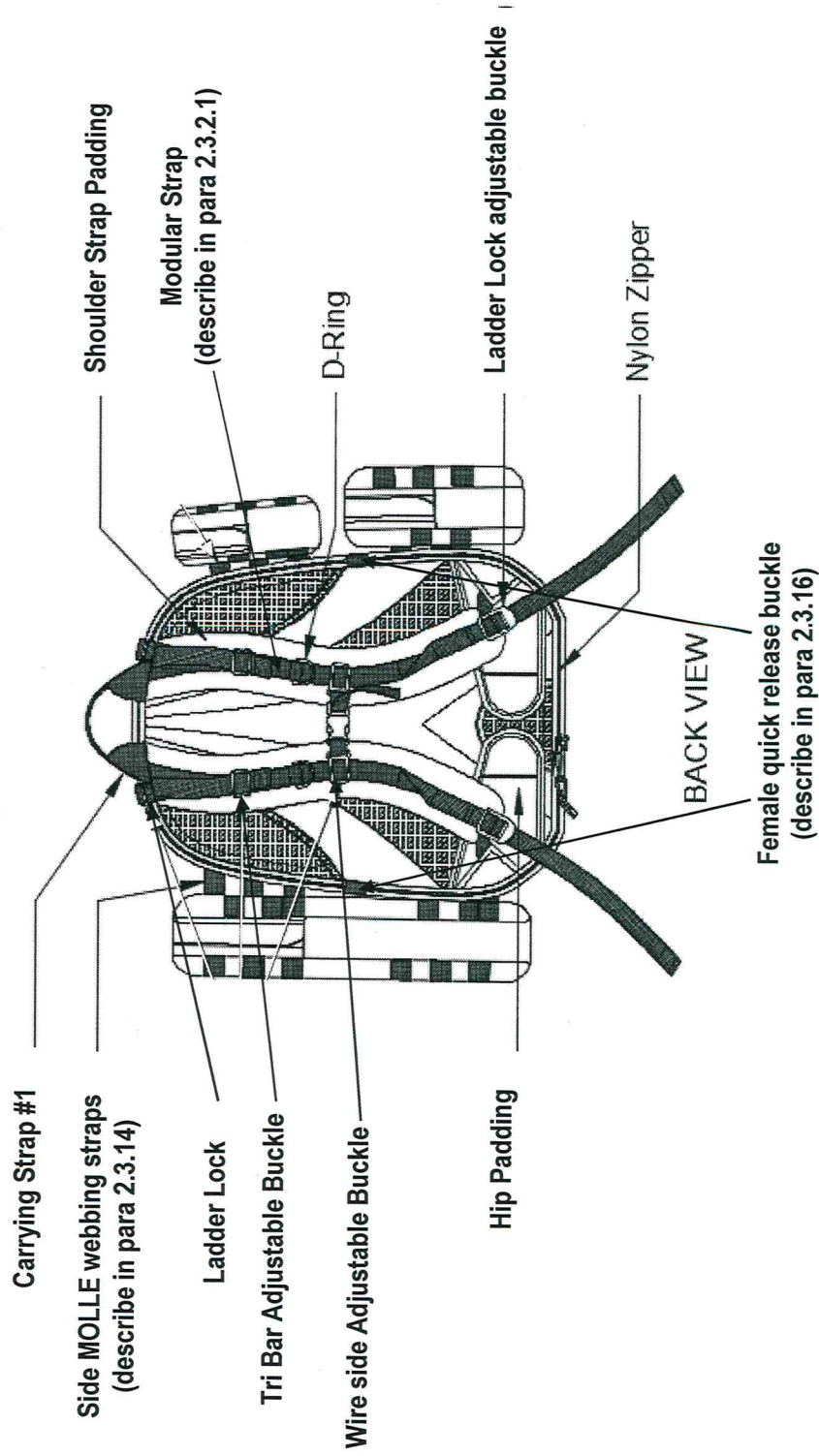


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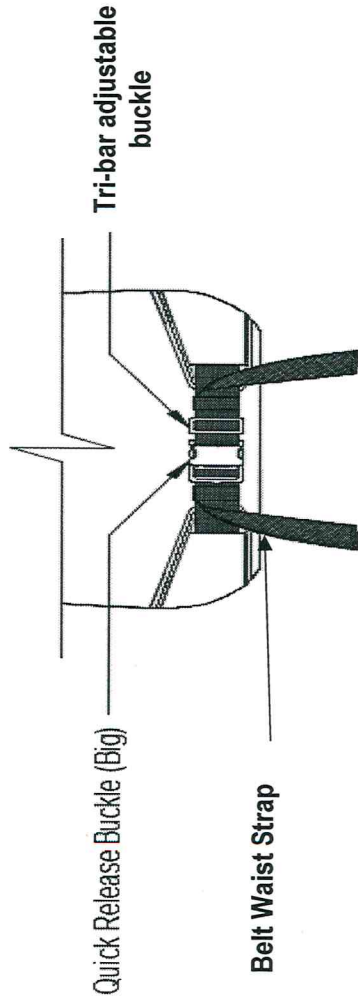


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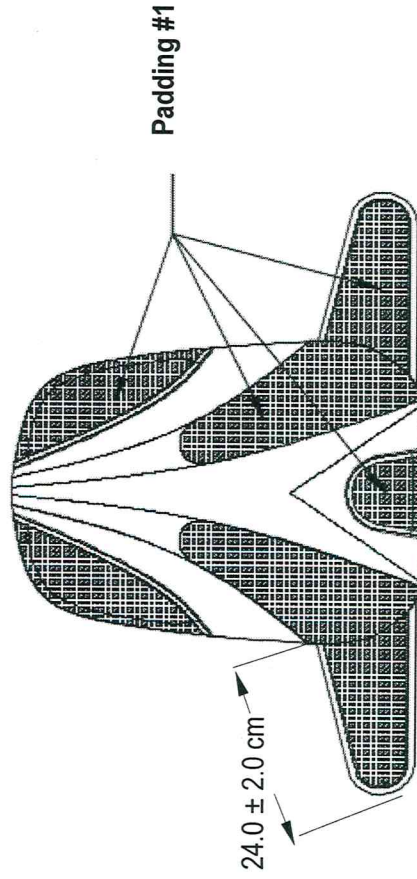
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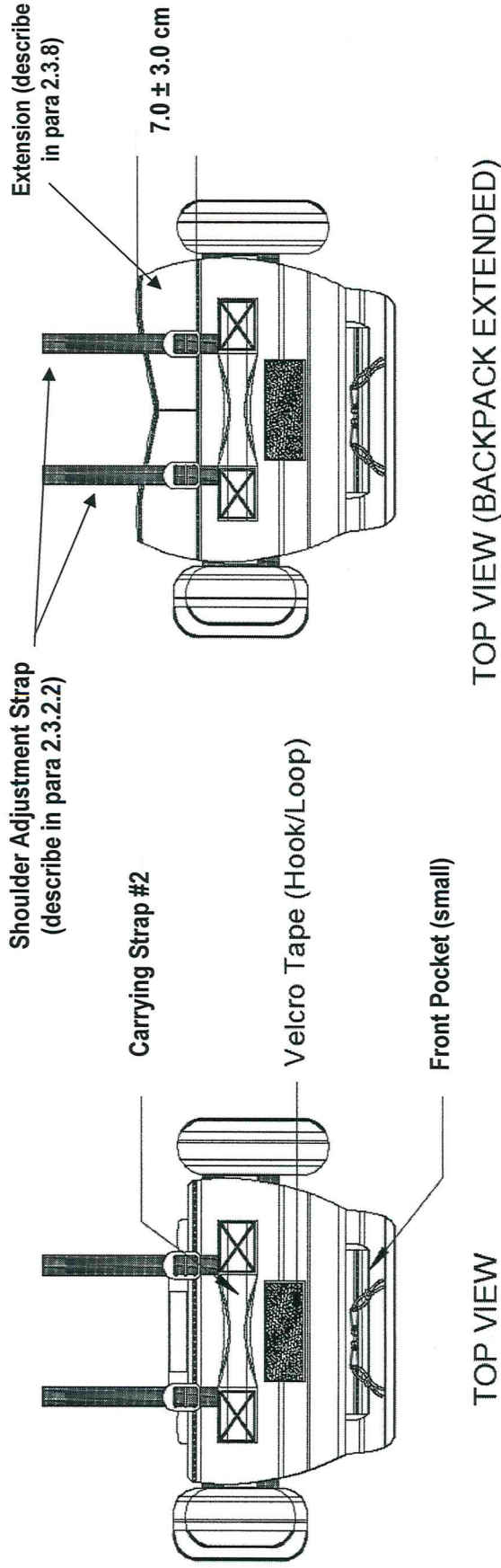
BACK VIEW with BELT WAIST STRAP



BACK VIEW without SHOULDER STRAP

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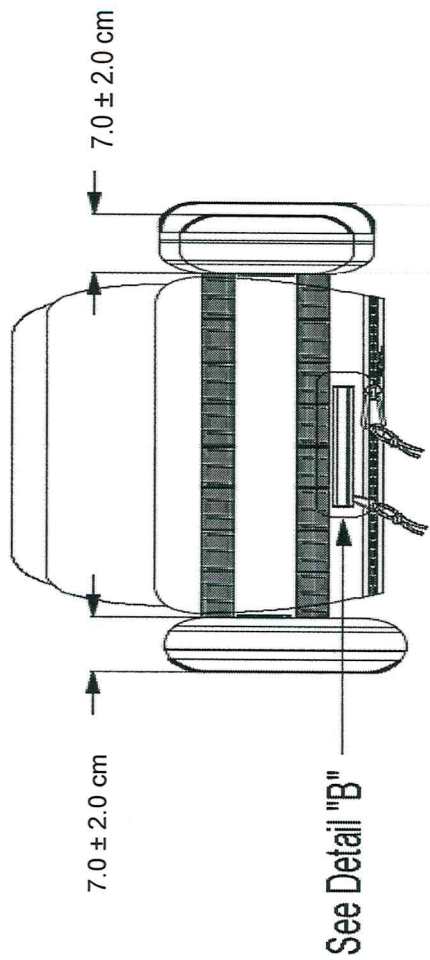


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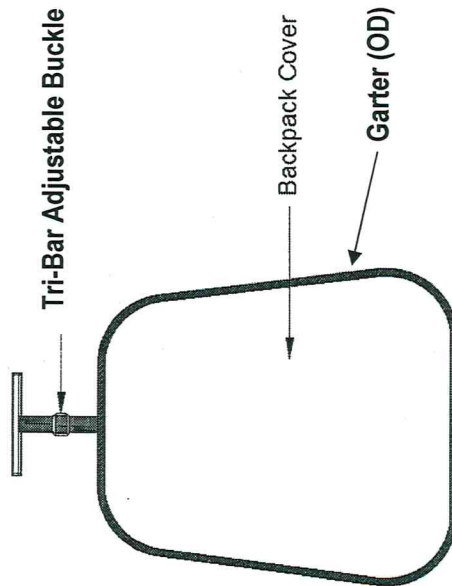
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BOTTOM VIEW



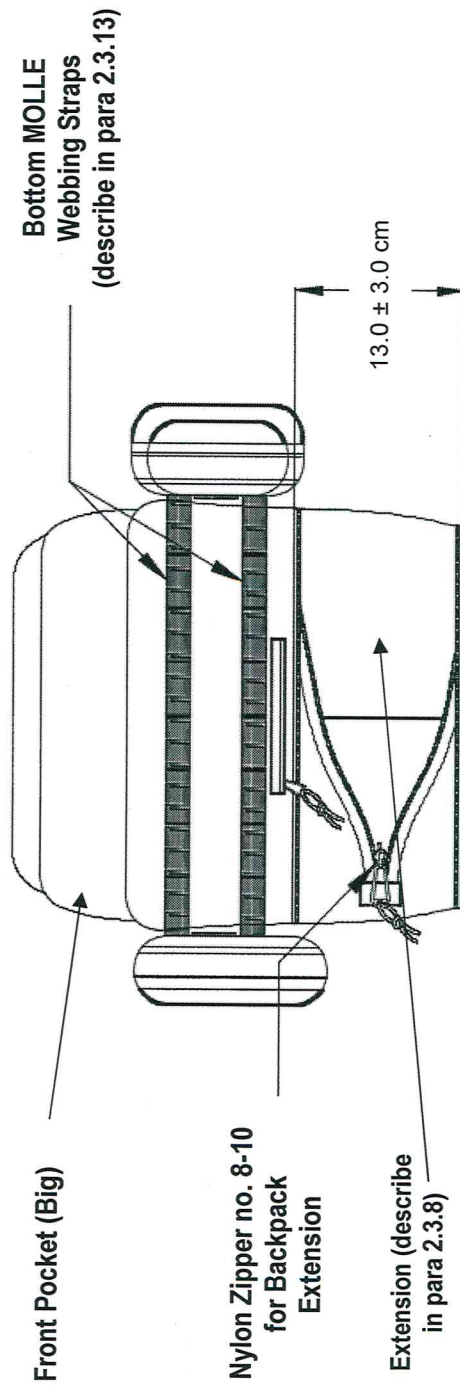
DETAIL "B"
(Rain Cover)

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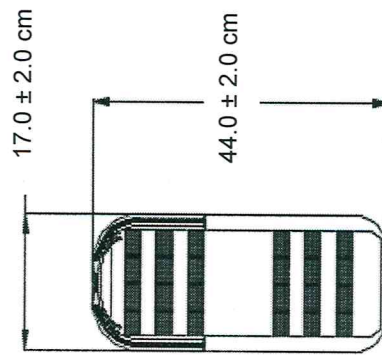
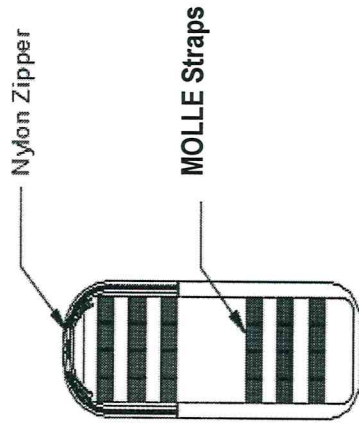
BOTTOM VIEW (BACKPACK EXTENDED)

PA SPECIFICATION

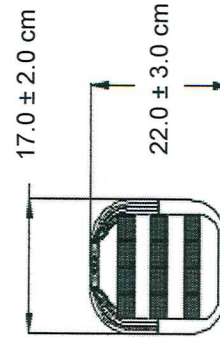
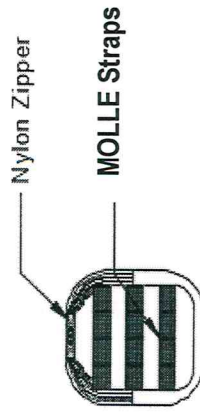
QM SPEC NR IE-22BTM
2017

Interim

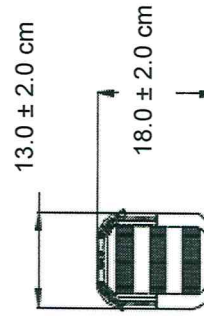
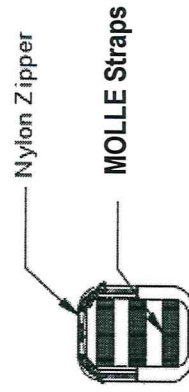
POCKETS



SIDE POCKET (BIG)



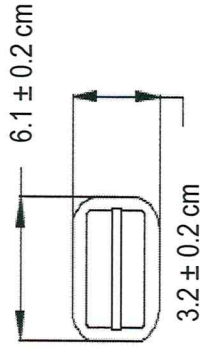
SIDE POCKET (MEDIUM)



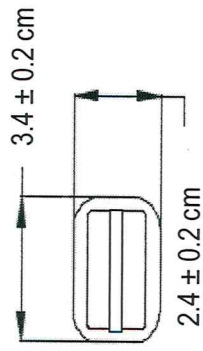
SIDE POCKET (SMALL)

PA SPECIFICATION

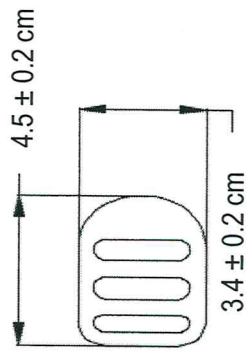
QM SPEC NR IE-22BTM
JUN 10 2017
Interim



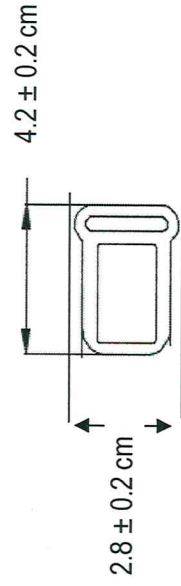
TRI-BAR ADJUSTABLE
BUCKLE (LARGE)



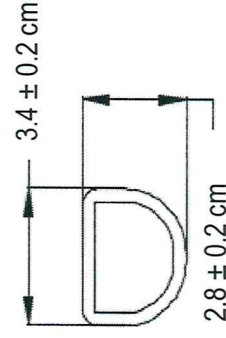
TRI-BAR ADJUSTABLE
BUCKLE (SMALL)



LADDER LOCK



WIRE SIDE ADJUSTABLE
BUCKLE



D - RING

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OFFICE OF THE ARMY QUARTERMASTER
Fort Andres Bonifacio, Metro Manila

TEST PARAMETERS
BACKPACK, TACTICAL MOLLE
(MODULAR LIGHTWEIGHT LOAD-CARRYING EQUIPMENT)

TEST PARAMETERS	QM SPEC NR IE - 22BTM 10 June 2017 (Interim)	Classification	
		Major	Minor
Measurements, cm			
Height, cm	49.0 ± 5.0	x	
Width, top part, cm	30.0 ± 5.0	x	
Width, bottom part, cm	40.0 ± 5.0	x	
Thickness, side part (excluding the front pocket), cm	17.0 ± 3.0		x
Thickness, extended part (top portion), cm	7.0 ± 3.0		x
Thickness, extended part (bottom portion), cm	13.0 ± 3.0		x
Front Pocket (small) (H-measured at the center x W x T), cm	10.0 ± 1.0 x 22.0 ± 1.0 x 6.0 ± 2.0	x	
Front Pocket (big) (H-measured at the center x W x T), cm	35.0 ± 3.0 x 34.0 ± 3.0 x 9.0 ± 2.0	x	
Side Pocket (small) (H x W x T), cm	18.0 ± 2.0 x 13.0 ± 2.0 x 7.0 ± 2.0	x	
Side Pocket (medium) (H x W x T), cm	22.0 ± 2.0 x 17 ± 2.0 x 7.0 ± 2.0	x	
Side Pocket (long) (H x W x T), cm	44.0 ± 2.0 x 17.0 ± 2.0 x 7.0 ± 2.0	x	
Length of Carrying Strap, cm			
Carrying Strap #1	23.0 ± 3.0		x
Carrying Strap #2	26.0 ± 2.0		x
Basic Material	nylon canvas	x	
Color	PHILARPAT	x	
Coating	Applied with water resistant material on the reverse side	x	
Type of Weave	Plain		x
Yarn Size, Denier			
Warp	1,350 (minimum)		x
Filling	1,200 (minimum)		x
Thread Count/2.54 cm			
Warp	34 (minimum)		x
Filling	27 (minimum)		x
Weight, g/m	400 (maximum)	x	
Thickness, mm	0.60 (minimum)		x

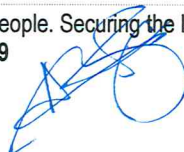


TEST PARAMETERS	QM SPEC NR IE - 22BTM 10 June 2017 (Interim)	Classification	
		Major	Minor
Breaking Strength, kg			
Warp	330 (minimum)	x	
Filling	280 (minimum)	x	
Water Repellency, %	80 (minimum)	x	
Water Resistance, grams of water absorbed by blotter	0	x	
Lining			
Color	Olive Drab (OD)	x	
Type of Weave	Plain		x
Yarn Size, Denier			
Warp	85 (minimum)		x
Filling	80 (minimum)		x
Thread Count/2.54 cm			
Warp	90 (minimum)		x
Filling	65 (minimum)		x
Weight, g/m	70 (maximum)	x	
Thickness, mm	0.20 (maximum)		x
Breaking Strength, kg			
Warp	40 (minimum)		x
Filling	35 (minimum)		x
Mesh Material	Polyester	x	
Mesh	It shall be made of two (2) layered materials. Top and bottom layers shall be OD knitted breathable.	x	
No. of Holes per 2.54 cm ²	50 (minimum)		x
Thickness	3.0 (maximum)		x
Weight, g/m ²	250 (maximum)		x
Bursting Strength, kg/cm ²	18 (minimum)	x	
Straps	Polyester webbing	x	
Color	Olive Drab (OD)	x	
Strap #1			
Width, cm	5.0 ± 0.2	x	
Type of Weave	Plain Double		x
Thickness, mm	1.0 - 1.5		x
Breaking Strength, kg (full width)	1000 (minimum)	x	
Strap #2			
Width, cm	2.5 ± 0.2	x	
Type of Weave	Plain Double		x
Thickness, mm	1.0 - 1.5		x
Breaking Strength, kg (full width)	700 (minimum)	x	
Strap #3			
Width, cm	2.0 ± 0.2	x	
Type of Weave	Plain Double		x

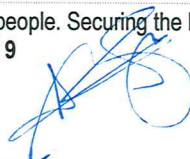
TEST PARAMETERS	QM SPEC NR IE - 22BTM 10 June 2017 (Interim)	Classification	
		Major	Minor
Thickness, mm	1.0 - 1.5		x
Breaking Strength, kg (full width)	500 (minimum)	x	
Binding Tape	Nylon or Polyester webbing	x	
Color	OD	x	
Width, cm	2.0 ± 0.5	x	
Type of Weave	Plain Double		x
Thickness, mm	0.7 (minimum)		x
Padding	Rubberized Foam	x	
Padding #1			
Thickness, mm	10.0-11.0	x	
Padding #2			
Thickness, mm	2.5 - 3.5	x	
Elastic Cord	Nylon or Polyester	x	
Color	OD	x	
Diameter, mm	3.0 ± 0.5		x
Breaking Strength, kg	25.0 (minimum)	x	
Plastic Buckles Accessories	Hard plastic	x	
Color	OD	x	
Quick Release Buckle (small)			
No. of pieces	7 pieces	x	
Length, cm	5.4 ± 0.2	x	
Width, cm	2.6 ± 0.2	x	
Thickness, mm	11.3 ± 1.0		x
Breaking Strength, kg	45 (minimum)	x	
Quick Release Buckle (medium)			
No. of pieces	2 pieces	x	
Length, cm	6.3 ± 0.2	x	
Width, cm	3.2 ± 0.2	x	
Thickness, mm	12.0 ± 1.0		x
Breaking Strength, kg	45 (minimum)	x	
Quick Release Buckle (Large)			
No. of pieces	1 piece	x	
Length, cm	8.0 ± 0.2	x	
Width, cm	6.0 ± 0.2	x	
Thickness, mm	15.0 ± 1.0		x
Breaking Strength, kg	100 (minimum)	x	
D-Ring			
No. of pieces	2 pieces	x	
Length, cm	3.4 ± 0.2	x	
Width, cm	2.8 ± 0.2	x	
Thickness, mm	4.0 ± 0.2		x

TEST PARAMETERS	QM SPEC NR IE - 22BTM 10 June 2017 (Interim)	Classification	
		Major	Minor
Tri-Bar Adjustable Buckle (small)			
No. of pieces	3 pieces	x	
Length, cm	2.4 ± 0.2	x	
Width, cm	3.4 ± 0.2	x	
Accommodation Width, mm	2.9 ± 0.2	x	
Tri-Bar Adjustable Buckle (Large)			
No. of pieces	1 piece	x	
Length, cm	3.2 ± 0.2	x	
Width, cm	6.1 ± 0.2	x	
Accommodation Width, cm	5.2 ± 0.2	x	
Ladder Lock			
No. of pieces	4 pieces	x	
Length, cm	4.5 ± 0.2	x	
Width, cm	3.4 ± 0.2	x	
Wire Side Adjustable Buckle			
No. of pieces	2 pieces	x	
Length, cm	2.8 ± 0.2	x	
Width, cm	4.2 ± 0.2	x	
Accommodation Width, cm			
Wire Side	2.1 ± 0.2	x	
Adjustable Bar	2.7 ± 0.2	x	
Bungee Cord Lock			
No. of pieces	1 piece	x	
Length, cm	2.8 ± 0.2		x
Width, cm	1.5 ± 0.2		x
Zipper	Nylon		
Color	OD	x	
Main Pocket/Extension	No 8 - 10	x	
Side Pockets	No. 4 - 5	x	
Thread	Nylon or Polyester		x
Color	OD	x	
No. of Ply	2 (minimum)		x
Breaking Strength, kg	1.5 (minimum)		x
Construction			
Make Body and Bottom	It shall be cut from the basic material as specified in para 2.2.1, to the correct size and shape. The upper body of the backpack shall be provided with two (2) heavy duty nylon zipper, no 8 - 10, 69.0 + 3.0 cm long for closure and shall be concealed with the basic material 3.5 + 0.2 cm width.	x	
	The inside of the backpack shall be provided with padding #2 on one side covered with lining material as specified in para 2.2.2. It shall join the ends of the fabric and lining material with a binding tape and sewed in a double-lapped seam.	x	

TEST PARAMETERS	QM SPEC NR IE - 22BTM 10 June 2017 (Interim)	Classification	
		Major	Minor
Make Body and Bottom	The back of the Backpack shall be provided with padding #1 cut on size and shape in accordance to the design in the attached illustration.	x	
	The padding shall be covered with mesh material as prescribed in para 2.2.3. The padding shall be placed at the back of the backpack and sewn over the basic material to elevate the padding and provide cushioning and ventilation to the back of the user, as illustrated.	x	
Shoulder Strap Padding	The two (2) pieces shoulder strap shall be provided with padding #1 constructed with the material as specified in para 2.2.6 and shall be covered with the basic material on the face side and mesh on the reverse side, as illustrated.	x	
	The shoulder strap padding shall be connected to the bottom strap (strap #2) with a length of 50 cm (minimum) using a ladder lock adjustable buckle.	x	
Modular Strap	Each shoulder strap padding shall have modular straps (strap #2), sewn along the length of each padding and the lower ends of the strap is attached to the ladder lock buckle to connect with the bottom strap as specified in para 2.3.2, while the upper end of the strap is sewn jointly with the shoulder strap padding.	x	
	Each shoulder strap shall be provided with one (1) tri-bar adjustable buckle, one (1) d-ring and one (1) wire side adjustable buckle place symmetrically on the left and right of the shoulder strap padding.	x	
Shoulder Adjustment/Compression Strap	The shoulder strap padding specified in para 2.3.2 shall be provided with an adjustment strap using strap #2.		x
	The lower ends of the strap shall be inserted to the tri-bar adjustable buckle together with the modular strap specified in para 2.3.2.1 and the upper ends of the strap shall be inserted to the ladder lock adjustable buckle that was sewn jointly in the carrying strap # 2.		x
	The Horizontal Chest strap shall be made of strap #3. The left portion of the chest strap shall have a fixed length of 4.0 ± 1.0 cm, inserted to the wire side adjustable buckle, while the right portion shall be adjustable.	x	




TEST PARAMETERS	QM SPEC NR IE - 22BTM 10 June 2017 (Interim)	Classification	
		Major	Minor
Shoulder Adjustment/Compression Strap	The left and right portion of the horizontal chest strap shall be attached to the respective wire side adjustable buckle. The female quick release buckle shall be attached to the left portion of the wire side adjustable buckle via strap #3, while the male quick release buckle shall be attached to the right portion of the wire side adjustable buckle via strap #3, as illustrated.	x	
Belt Waist Strap	The belt waist strap is composed of two (2) straps #1, 50.0 ± 2.0 cm long each and sewn at each end of the hip padding 5.5 ± 0.5 cm from the longest edge. The strap is provided with quick release buckle (large) and Tri-bar Adjustable Buckle as specified in 2.2.8	x	
	The strap shall be secured with a strap keeper, olive drab in color.	x	
Hip Padding	The hip padding is cut in accordance to size and shape as shown in the attached illustration. It shall cover with the basic material on the face side and mesh material on the reverse/back side.	x	
Carrying Straps	There shall be two (2) carrying straps.	x	
	Carrying strap #1 is made of strap #1, folded in the middle and sewn at the sides. It is placed and sewn just above the shoulder strap padding.		x
	Carrying strap #2 is made of strap #1, placed and sewn at the top of the backpack, as illustrated. It shall double with strap #2 and with bar tacks.		x
Velcro Tape	It shall have a Velcro tape (hook and loop) OD in color sewn in the top of the backpack parallel to carrying strap #2, as illustrated.	x	
	The dimension is 5.0 ± 0.5 cm long and has a width of 12.0 ± 0.5 cm.		x
Backpack Rain Cover	The backpack cover shall be made of lining material as specified in para 2.2.2 with coating on the reverse side and placed/attached inside the pocket located at the bottom of the backpack.	x	
	It shall be enclosed with a no. 4-5 zipper and with a length of 15.0 ± 2.0 cm.		x
	The backpack cover shall be attached in a tri-bar adjustable buckle for adjustment.		x
	The edge of the backpack cover shall have garter, olive drab in color to serve as binding tape and better grip/fit in the backpack when in used.	x	
	The seam of the backpack cover shall be sewn with a binding tape specified in para 2.2.5.		x



TEST PARAMETERS	QM SPEC NR IE - 22BTM 10 June 2017 (Interim)	Classification	
		Major	Minor
Extension	The material for the bag extension shall be made of the basic material sewn at the back portion of the backpack and shall be provided with zipper No. 8 – 10 for closure and opening of the backpack extension, as illustrated.	x	
Utility pouch	The utility pouch shall be made of lining material as specified in para 2.2.2. It shall be placed/attached inside of the 20.0 ± 2.0 cm long slash pocket located between the two (2) front pockets, as illustrated.	x	
	The utility pouch shall be provided with two (2) straps #3, 23.0 ± 0.5 cm long sewn both on the lower side of the pouch with quick release buckle (male) that will corresponds in the quick release buckle (female) that are sewn on each of the lower side of the backpack, as illustrated.	x	
	The opening edge of the utility pouch shall be provided with elastic cord, eyelet and a bungee cord lock for closure.	x	
Dimension	See Detail A		x
Inside Pocket	The inside pocket shall be one-piece made from the lining material specified in para 2.2.2 double thickness with padding #2 in the inside.	x	
	The height of the pocket is 32.0 ± 3.0 cm and the width shall be measured based on the width and cut of the back of the backpack. It shall be sewed jointly by a binding tape along the edge of the seam on the back of the backpack.		x
Front Pockets	It shall have two (2) sewn front pockets made of same basic material and provided with two (2) heavy duty nylon zipper, No 4- 5 for closure.	x	
Front Pockets (small)	It shall have two (2) modular straps (strap # 2) sewn and bar tacked on the front of the pocket. The inside of the pocket shall have a lining and the seam is joined with a binding tape.	x	
Front Pockets (Big)	It shall have four (4) modular straps (strap # 2) are sewn and bar tacked on the front of the pocket. The inside of the pocket shall have a lining and the seam is joined with a binding tape. The zipper shall be concealed with the basic material.	x	
Side Pockets	It shall have three (3) modular side pockets made of the basic material and provided with two (2) heavy duty nylon zipper, No. 4 – 5 each for closure and concealed with the basic material. It shall have a lining inside the pocket and the joining seam is sewn with a binding tape.	x	
Side Pocket (small)	It shall have three (3) MOLLE webbing straps (strap #2) sewn and bar tacked on the front and back of the pocket. There shall be two (2) MOLLE attachment strap (strap #2), 24.0 ± 1.0 cm long, sewn and bar tacked on the back of the pocket.	x	

TEST PARAMETERS	QM SPEC NR IE - 22BTM 10 June 2017 (Interim)	Classification	
		Major	Minor
Side Pocket (small)	One end of the MOLLE attachment strap shall be folded to serve as lock during attachment of pocket to the MOLLE webbing strap in the side part of the backpack, as illustrated.		x
Side Pocket (medium)	It shall have three (3) MOLLE webbing strap (strap #2) sewn and bar tacked on the front and the back of the pocket. There shall be two (2) MOLLE attachment strap (strap #2), 24.0 ± 1.0 cm long, sewn and bar tacked on the back of the pocket.	x	
	One end of the MOLLE attachment strap shall be folded to serve as lock during attachment of pocket to the MOLLE webbing strap in the side part of the backpack, as illustrated.		x
Side Pocket (long)	It shall have six (6) MOLLE webbing strap (strap #2) sewn and bar tacked on the front and the back of the pocket. There shall be four (4) MOLLE attachment strap (strap #2), 24.0 ± 1.0 cm long.	x	
	The two (2) attachment straps shall be sewn and bar tacked on the upper portion of the back pocket while the two (2) attachment straps shall be sewn and bar tacked on the middle of the back of the pocket.		x
	One end of the MOLLE attachment strap shall be folded to serve as lock during attachment of pocket to the MOLLE webbing strap in the side part of the backpack, as illustrated.		x
Bottom MOLLE webbing Straps	The bottom of the backpack shall be provided with two (2) MOLLE webbing straps (strap #2), 48.0 ± 2.0 cm to serve as reinforcement for the bottom part of the backpack.		x
Side MOLLE webbing Straps	Each side of the backpack shall be provided with six (6) MOLLE webbing strap for attachment of the pocket, as illustrated.	x	
Quick Release Buckle (small)	There shall be a quick release buckle (small) sewn in the seam on each of the middle front side (both left and right) and upper front side (both left and right) portion of the backpack. It is placed symmetrically on the left and right portion of the backpack, as illustrated.		x
Compression Strap	The Backpack shall be provided with compression strap by using a quick release buckle (medium).	x	
	The two (2) compression strap shall be sewn at each side of the backpack align at both ends of the zipper main pocket.		x

TEST PARAMETERS	QM SPEC NR IE - 22BTM 10 June 2017 (Interim)	Classification	
		Major	Minor
Compression Strap	It shall be attached by forming a loop and the strap together with the male quick release buckle (medium) will be passed through the loop and across the side of the backpack to fasten the male quick release buckle to the female quick release buckle that is sewn at the edge of the back of the backpack, as illustrated.		x
Draw Cord	All zippers shall be provided with a draw cord, 23.0 ± 3.0 cm long.	x	
Strap Keeper	All loose ends or hanging straps shall be provided with a strap keeper, olive drab in color for managing excess webbing straps.	x	
Stitches	All sewing and stitching shall be running stitches ranging from 8 – 10 stitches per 2.54 cm.		x
Manufacturer Label	With Manufacturer's Label	x	
Location	Printed on the inside upper center of backpack		x
Type of Ink	Black ink or Paint	x	
Size of Label	The letters BACKPACK, TACTICAL MOLLE shall be Arial font, size 20 while the rest of the label data shall be Arial font size 12.		x
Contents of Label	The Manufacturer's label shall consist of the ff: BACKPACK, TACTICAL MOLLE QM SPEC NR IE- 22BTM Name of Manufacturer: Date Manufactured:	x	
ARMY "Marking"	With Army Marking	x	
Location	Printed on the upper center portion of the front pocket (big)	x	
Type of Ink	Black ink or Paint	x	
Type and Size of Lettering	Stencil font, Size 150	x	
Finish	The Backpack, Tactical MOLLE shall be clean, well finished and free from any defect which may affect its appearance or serviceability.	x	
TOTAL TEST POINTS		117	61


AURELIO T BADAJOS
 Colonel, QMS (GSC) PA
 Chief

HEADQUARTERS
PHILIPPINE ARMY
OFFICE OF THE ARMY QUARTERMASTER
Fort Andres Bonifacio, Metro Manila

BACKPACK, TACTICAL MOLLE, PHILARPAT
QM SPEC NR IE-22BTM dtd 10 June 2017 (Interim)
With Amendment 1 dated 20 April 2018

LIST OF REQUIRED SAMPLES AND SWATCH MATERIALS FOR TESTING

1. FOR POST QUALIFICATION TEST

PROTOTYPE SAMPLES

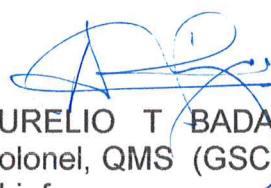
RDC – Two (2) pcs Backpack, Tactical MOLLE
AQM - One (1) pc Backpack, Tactical MOLLE

SWATCH MATERIALS (Minimum requirements)

Basic Material	-	-	-	- 1m (full width)
Lining	-	-	-	- 1m (full width)
Mesh Material	-	-	-	- 0.5 m x 0.5 m
Straps				
5.0 cm wide	-	-	-	- 1.5 m
2.5 cm wide	-	-	-	- 1.5 m
2.0 cm wide	-	-	-	- 1.5 m
Binding Tape	-	-	-	- 0.5 m
Foam Padding (thickness)				
Padding # 1 (11 mm)	-	-	-	- 10 cm x 10 cm
Padding # 2 (3 mm)	-	-	-	- 10 cm x 10 cm
Elastic Cord	-	-	-	- 1.5 m
Quick Release Buckles	-	-	-	- 3 pcs each sizes
Thread Sewing	-	-	-	- 10 m

2. FOR ACCEPTANCE TEST

Three (3) pcs of Backpack, Tactical MOLLE, PHILARPAT – Picked at random from delivery


AURELIO T. BADAJOS
Colonel, QMS (GSC) PA
Chief

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**BACKPACK, TACTICAL MOLLE, PHILARPAT
QM SPEC NR IE-22BTM dtd 10 June 2017 (Interim)
With Amendment 1 dated 20 April 2018**

VISUAL INSPECTION CHECKLIST

DESCRIPTION OF DEFECTS	CLASSIFICATION OF DEFECTS
1. Packaging and Packing	
a. Contents of carton label as specified.	Minor
b. Each Backpack shall be in a transparent cellophane bag.	Major
2. Basic material in PHILARPAT design	Major
3. Any Components/parts missing:	
a. Carrying straps, OD in color	Major
b. Lining, OD in color	Minor
c. Binding tape, OD in color	Major
d. Mesh made of two (2) layered materials	Minor
e. Padding, rubberized foam	Major
f. Elastic cord, OD in color	Major
g. Plastic Buckles Accessories shall be hard plastic and OD in color.	Major
h. Quick Release Buckle, OD in color	Major
i. D-ring, OD in color	Major
j. Tri-Bar Adjustable Buckle, OD in color	Major
k. Ladder Lock, OD in color	Major
l. Wire Side Adjustable Buckle, OD in color	Major
m. Bungee Cord Lock, OD in color	Major
n. Front/Side Pocket of same basic material	Major
4. Zipper shall be nylon and OD in color	Major
5. The back pack shall be modular it shall have a rain cover, OD in color	Major
6. It shall have a Belt Waist Strap provided with quick release buckle	Major
7. It shall have extension made of same basic material	Major
8. It shall have compression strap using quick release buckle	Major
9. Draw Cord – all zippers shall be provided with draw cord for easy accessibility.	Minor
10. It shall have Strap Keeper OD in color for managing excess webbing straps	Minor
11. It shall have a utility pouch with the same material of lining	Minor
12. Contractor's label	
a. Location - Printed on the inside upper center of backpack	Major
b. Using Black Ink or Paint	Minor
c. Contents of contractor's label not as specified	Minor

DESCRIPTION OF DEFECTS	CLASSIFICATION OF DEFECTS
13. ARMY marking:	
a. Location - Printed on the upper center portion of the front pocket (big)	Major
b. Using Black Ink or Paint	Minor
14. Loose sewing/Untrimmed thread ends	Minor
15. Presence of dirt, stains and other defects:	
a. That is significant and affects the appearance and functionality of the item	Major
b. That is negligible and does not affect the appearance and functionality of the item	Minor

* **Note:** Sample size will be based on Military Standard 105E, Table III-A of General Inspection Level I, Double Sampling Plan for Normal Inspection


AURELIO T. BADAJOS
Colonel, QMS (GSC) PA
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