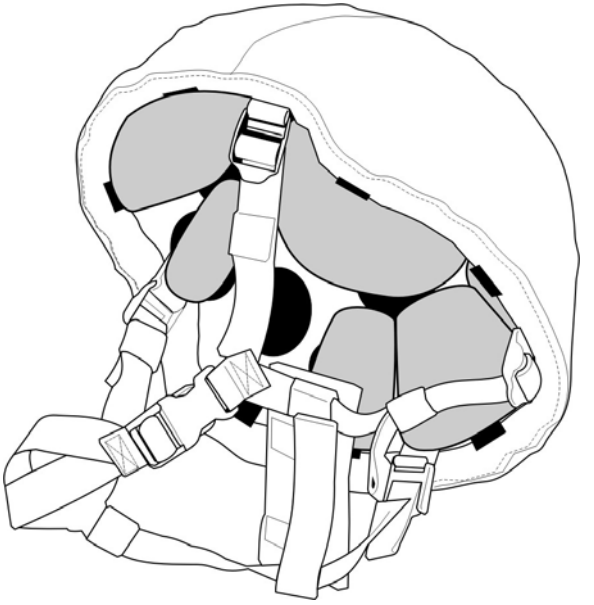
TECHNICAL MANUAL

OPERATOR'S MANUAL FOR

ADVANCED COMBAT HELMET (ACH)



* TM 10-8470-204-10, dated 14 March 2008, superseded TM 10-8470-204-10 dated 30 September 2005, including all changes.

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

HEADQUARTERS, DEPARTMENT OF THE ARMY

14 MARCH 2008

WARNING SUMMARY

This warning summary contains general safety warnings and hazardous materials warnings that must be understood and applied during operation and maintenance of this equipment. Failure to observe these precautions could result in serious injury or death to personnel.

WARNING

For first aid treatments, refer to FM 4-25.11.

WARNING

All seven helmet pads must be worn during airborne operations and should be worn during other high-risk operations such as air assault and rappelling/mountaineering. Failure to observe this precaution could result in serious injury or death because all seven pads provide maximum impact protection.

WARNING

For training and combat missions, Soldiers are to utilize the 7-pad configuration only. For non-training and non-combat missions (for example, parades, ceremonies, etc.) the 5- and 6-pad configurations are authorized. Failure to observe these precautions could result in serious injury or death to personnel.

WARNING

The hardware for the ACH helmets–where the chin strap retention system webbing attaches to the helmet shell–must be covered by padding during airborne and other high risk operations such as air assault and rappelling/mountaineering. The oblong/oval pads must be placed flush with the rim (edge) of the helmet and completely cover the hardware. Failure to observe this precaution could result in serious injury or death to personnel because a hard-point could contact the Soldier's head.

WARNING

Helmet must fit properly. If you experience fit problems, tightness or looseness, or helmet profile is too high or too low refer to Sizing and Fitting Troubleshooting guidelines. Failure to observe this precaution could result in serious injury or death to personnel.

WARNING

When donning the helmet for the first time in a cold environment, it is necessary to wear the helmet for a few minutes or otherwise warm the pads, such as by placing in pockets, so that the pads will conform to the shape of your head. As the pads warm up and conform to the shape of your head, it may be necessary to retighten the chin strap retention system. Failure to observe this precaution could result in serious injury or death to personnel.

WARNING

If you pull too tightly on any strap while putting on the helmet, or if you don't position helmet on head and hold in place with one hand on top of helmet for initial adjustment, the helmet may become uncomfortable and tilted on your head and chin cup may become un-centered. Failure to observe this precaution could result in serious injury or death to personnel.

WARNING

The rear trapezoidal pad must be placed flush with the rim (edge) of the helmet for airborne operations. If you experience helmet rotation during airborne operations, the rear trapezoidal pad can be placed so that it extends ½" beyond the rim of the helmet. Placement of the rear trapezoidal pad flush or beyond the rim (edge) of the helmet prevents the hard shell from hitting your neck. Failure to observe this precaution could result in serious injury or death to personnel.

LIST OF EFFECTIVE PAGES/WORK PACKAGES

NOTE: This manual supersedes TM 10-8470-204-10 dated 30 September 2005. Zero in "Change No." column indicates an original page or work package.

Date of issue for revision is:

Original 14 March 2008

TOTAL NUMBER OF PAGES FOR FRONT AND REAR MATTER IS 22 AND TOTAL NUMBER OF WORK PACKAGES IS 25, CONSISTING OF THE FOLLOWING:

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Front Cover	**0**	Chp 3 title page	**0**
Warning	**0**	WP 0014 (12 pgs)	**0**
i-x	**0**	Chp 4 title page	**0**
Chp 1 title page	**0**	WP 0015 (2 pgs)	**0**
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WP 0002 (20 pgs)	**0**	WP 0017 (2 pgs)	**0**
WP 0003 (2 pgs)	**0**	WP 0018 (4 pgs)	**0**
Chp 2 title page	**0**	WP 0019 (6 pgs)	**0**
WP 0004 (6 pgs)	**0**	Chp 5 title page	**0**
WP 0005 (6 pgs)	**0**	WP 0020 (2 pgs)	**0**
WP 0006 (12 pgs)	**0**	WP 0021 (6 pgs)	**0**
WP 0007 (8 pgs)	**0**	WP 0022 (2 pgs)	**0**
WP 0008 (8 pgs)	**0**	WP 0023 (4 pgs)	**0**
WP 0009 (10 pgs)	**0**	WP 0024 (2 pgs)	**0**
WP 0010 (8 pgs)	**0**	WP 0025 (2 pgs)	**0**
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HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 14 MARCH 2008

TECHNICAL MANUAL

OPERATOR'S MANUAL FOR

ADVANCED COMBAT HELMET (ACH)

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter or DA Form 2028 (Recommended Changes to Publications and Blank Forms), located in the back of this manual, directly to: Commander, TACOM Life Cycle Management Command, ATTN: AMSTA-LC-SECT, Kansas St., Natick, MA 01760. You may also send in your recommended changes via electronic mail or by fax. Our fax number is (DSN 256-5205, and commercial number 508-233-5205). Our e-mail address is soldier.pubs@natick.army.mil. A reply will be furnished to you.

* TM 10-8470-204-10, dated 14 March 2008, superseded
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HOW TO USE THIS MANUAL

OVERVIEW

This manual contains operating instructions and maintenance procedures for the Advanced Combat Helmet (ACH).

This manual is divided into the following major sections:

Front Cover. Provides information about the equipment covered by the TM.

Warning Summary. Provides a summary of all warnings that apply throughout the manual.

Table of Contents. Lists chapters and work packages in order of appearance.

Chapter 1. General Information, Equipment Description , and Theory of Operation. Provides descriptions, equipment data, and theory of operation information.

Chapter 2. Operator Instructions. Provides sizing information, donning information, and operating instructions in both usual and unusual conditions.

Chapter 3. Troubleshooting Procedures. Provides troubleshooting procedures for the ACH.

Chapter 4. Maintenance Instructions. Provides instructions on hardware replacement, pad suspension replacement, cleaning the ACH, and PMCS.

Chapter 5. Supporting Information. Provides reference information, Components of End Items (COEI)/Basic Issue Items (BII) Lists, Associated and Repair Items List, Expendable and Durable Items List and Additional Information for the ACH.

NAVIGATION

This TM is in work package format. All of the work packages contained within the TM are listed in the table of contents in the order they appear by chapters. The work package sequence number (e.g. WP 0001) is listed for each work package in the table of contents. The work package sequence number is at the top of each page of the work package and is also a part of the page number for each work package (e.g., 0001-1). The page numbers appear at the bottom of each page.

OPERATION AND MAINTENANCE

Before you use the Advanced Combat Helmet (ACH) familiarize yourself with the assembly and fitting instructions and the operating instructions (Chapter 2). Perform maintenance procedures (Chapter 3) on a regular basis. Always follow the WARNINGS and CAUTIONS.

CHAPTER 1

GENERAL INFORMATION, EQUIPMENT DESCRIPTION, AND THEORY OF OPERATION FOR ADVANCED COMBAT HELMET (ACH)

SCOPE

This manual covers the basic fitting and use instructions for the Advanced Combat Helmet (ACH), hereafter referred to as the ACH or the helmet.

MAINTENANCE FORMS, RECORDS, AND REPORTS

Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DA PAM 750-8, The Army Maintenance Management System (TAMMS) Users Manual.

REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR)

If your ACH needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you don't like about your equipment. Let us know why you don't like the design or performance. If you have Internet access, the easiest and fastest way to report problems or suggestions is to go to https: //aeps.ria.army.mil/aepspublic.cfm (scroll down and choose the “Submit Quality Deficiency Report” bar). The Internet form lets you choose to submit an Equipment Improvement Recommendation (EIR), a Product Quality Deficiency Report (PQDR) or a Warranty Claim Action (WCA). You may also submit your information using an SF 368 (Product Quality Deficiency Report). You can send your SF 368 via e-mail, regular mail, or facsimile using the addresses/facsimile numbers specified in DA PAM 750-8 The Army Maintenance Management System (TAMMS) Users Manual.

CORROSION PREVENTION AND CONTROL (CPC)

Corrosion Prevention and Control (CPC) of Army materiel is a continuing concern. It is important that any corrosion or degradation problems with this item be reported so that the problem can be corrected and improvements can be made to prevent the problem in future items. Corrosion specifically occurs with metals. It is an electrochemical process that causes the degradation of metals. It is commonly caused by exposure to moisture, acids, bases, or salts. An example is the rusting of iron. Corrosion damage in metals can be seen, depending on the metal, as tarnishing, pitting, fogging, surface residue, and/or cracking. Plastics, composites, and rubbers can also degrade. Degradation is caused by thermal (heat), oxidation (oxygen), solvation (solvents), or photolytic (light, typically UV) processes.

The most common exposures are excessive heat or light. Damage from these processes will appear as cracking, softening, swelling, and/or breaking.SF Form 368, Product Quality Deficiency Report should be submitted to the address specified in DA PAM 750-8, The Army Maintenance Management System (TAMMS) Users Manual. We will send you a reply.

DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE

Not Applicable to the ACH

PREPARATION FOR STORAGE OR SHIPMENT

To prepare the ACH for shipment or storage, tag it and place it in its original container or a suitable box.

LIST OF ABBREVIATIONS/ACRONYMS

Components of End Item	COEI
Basic Issue Items	BII
Advanced Combat Helmet	ACH
Corrosion Prevention Control	CPC
Night Vision Devices	NVD
Nuclear, Biological, Chemical	NBC
National Stock Number	NSN
Equipment Improvement Report	EIR
Preventive Maintenance Checks and Services	PMCS

END OF WORK PACKAGE

EQUIPMENT CHARACTERISTICS, CAPABILITIES AND FEATURES

The ACH is a helmet system that provides ballistic and impact protection. This system is compatible with the current night vision devices (NVDs), communications packages, and Nuclear, Biological and Chemical (NBC) defense equipment and body armor.

The ACH provides ballistic protection within the full spectrum of operational environments.

The ACH allows maximum sensory and situational awareness for the operator. This includes an unobstructed field of view and increased ambient hearing capabilities.

The ACH's chin strap retention systems and pad suspension system provide unsurpassed balance, stability and comfort. The systems provide for proper size, fit and ventilation. An armor nape pad is also availabge, which provides protection against fragments from ground-level threats and adds stablility.

The ACH's pad suspension system provides impact protection throughout all operational scenarios, including static-line airborne operations.

This work package provides descriptions and data of the MSA, SDS, Gentex, and Rabintex Advanced Combat Helmets.

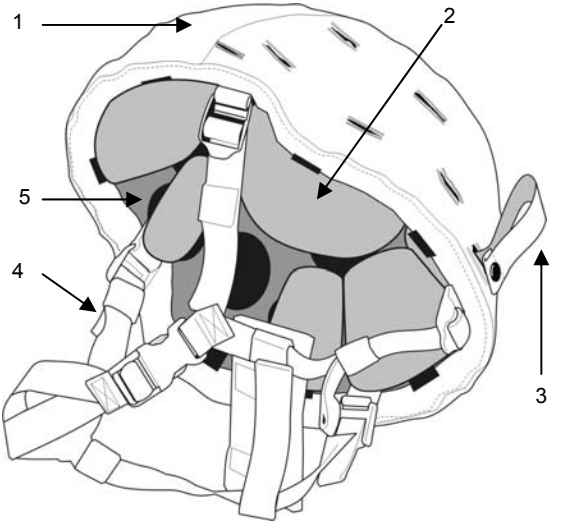
NOTE

Throughout this manual, some illustrations of the helmet show a hole in the front of the helmet shell. Where shown, this hole is for mounting the Night Vision Device (NVD) front bracket. This bracket should be mounted on the helmet or the hole should be plugged with screw and post (see WP 0022 for parts information) at all times. At no time should the hole be left empty.

This section pertains to all models of the ACH. Size 8 pads are no longer available. If your size 8 pads become unserviceable, obtain size 6 pads and refer to WP 0004 for proper sizing.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS (MSA, SDS, Gentex H, and Rabintex)

The MSA, SDS, Gentex H, and Rabintex helmets are made up of the following components, which are illustrated below:



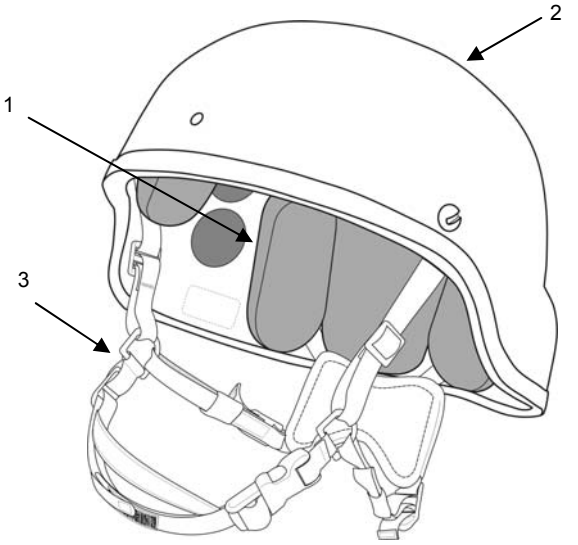
LEGEND

1. Helmet Cover
2. Pad Suspension System
3. Eyewear Retention Strap
4. Chin Strap Retention System with Hardware
5. Helmet Shell

Figure 1. Major Components (SDS, MSA, Gentex H, and Rabintex).

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS (GENTEX X)

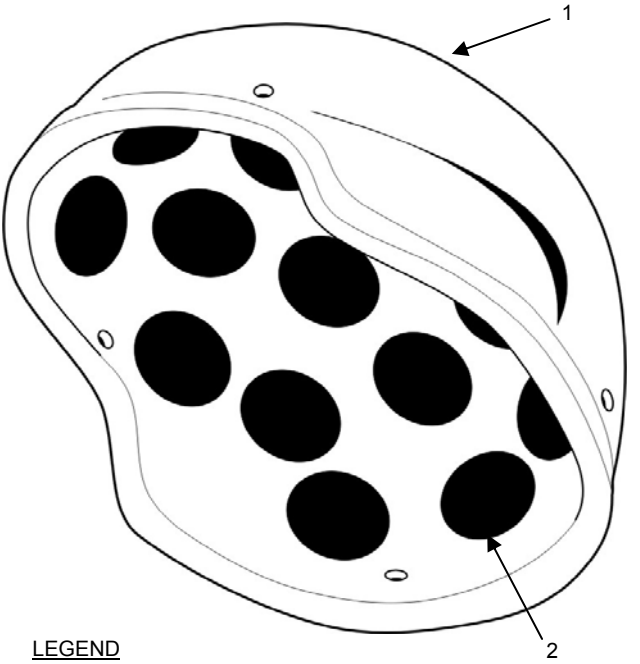
The Gentex X Advanced Combat Helmet is made up of the following major components, which are illustrated below:



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1. Pad Suspension System
2. Helmet Shell
3. X Chin Strap Retention System with Hardware

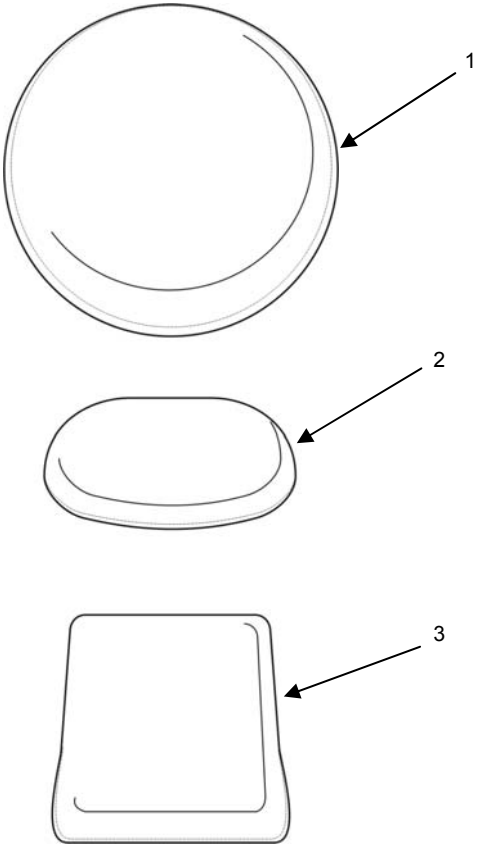
Figure 2. Major Components (Gentex X).



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1. Helmet Shell
2. Hook Disks

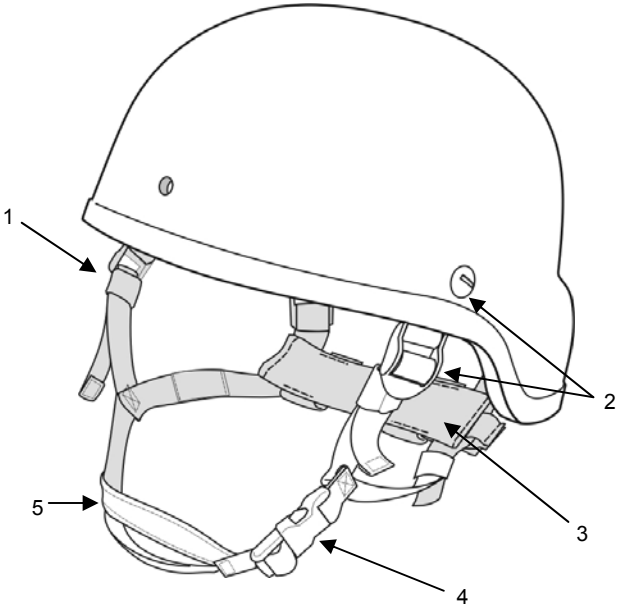
Figure 3. Helmet Shell (All Models).



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1. Circular Crown Pad (1 per helmet)
2. Oblong/Oval Pad (4 per helmet)
3. Trapezoidal Pad (2 per helmet)

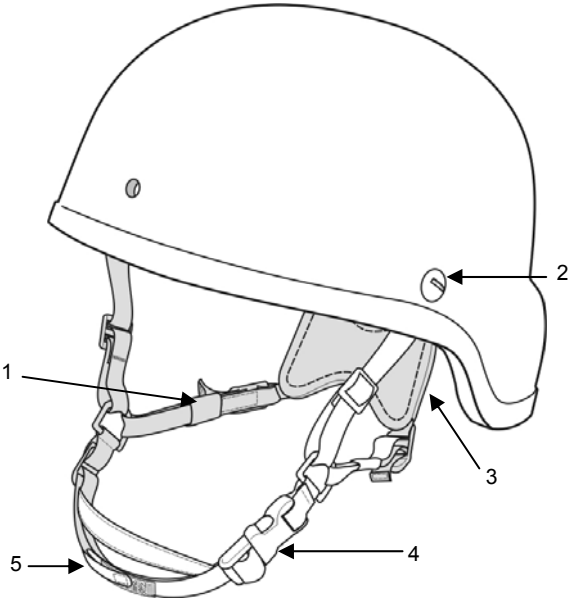
Figure 4. Pad Suspension System (All Models).



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1. Elastic Band
2. Hardware
3. Nape Pad
4. Buckle
5. Chin Cup

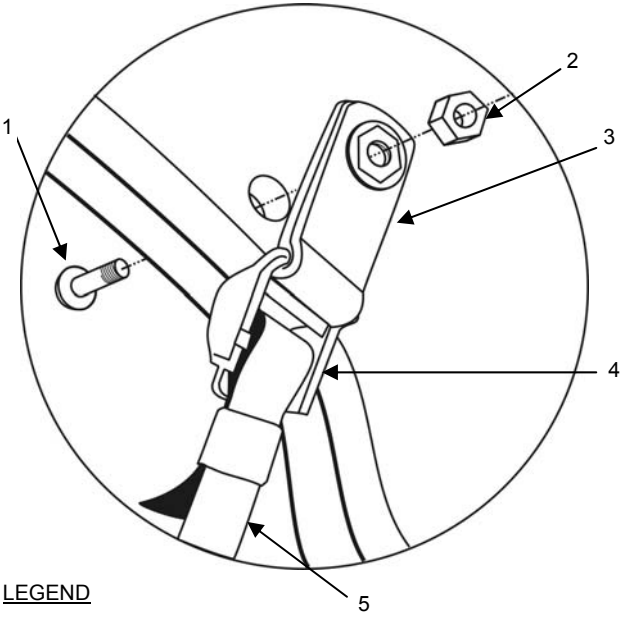
Figure 5. Chin Strap Retention System with Hardware (MSA, SDS, Gentex H, and Rabintex).



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1. Elastic Band
2. Hardware
3. Nape Pad
4. Buckle
5. Chin Cup

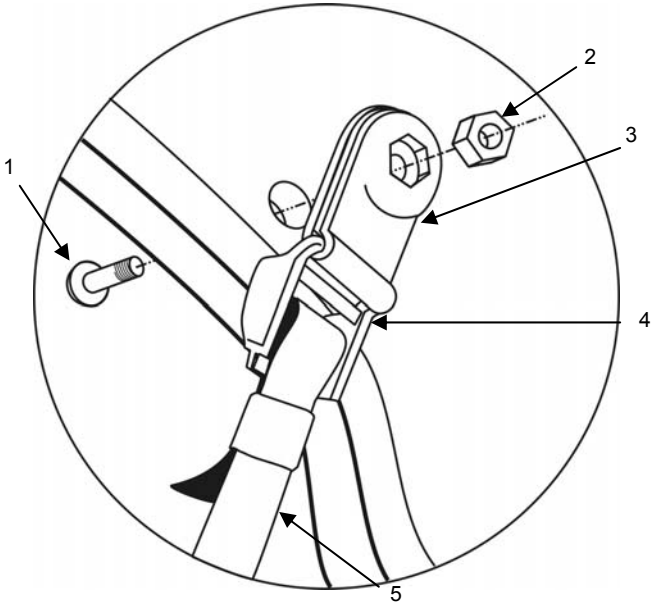
Figure 6. Chin Strap Retention System with Hardware (Gentex X).



LEGEND

1. Screw
2. Nut
3. P-Clamp
4. Ladder Lock
5. Webbing

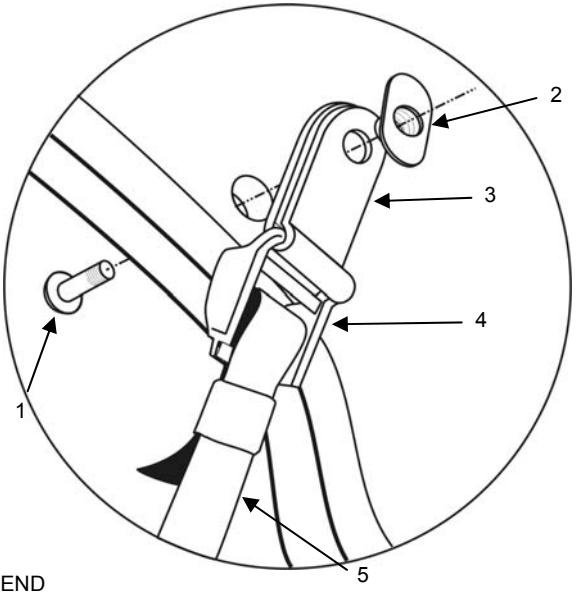
Figure 7. Hardware (MSA Early Version).



LEGEND

1. Screw
2. Nut
3. P-Clamp
4. Ladder Lock
5. Webbing

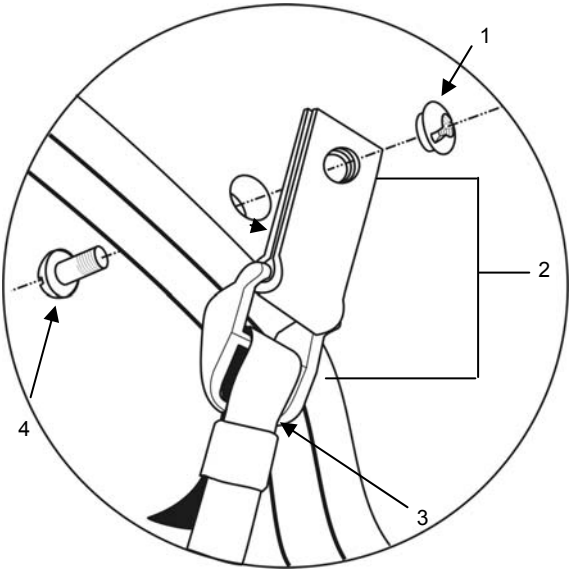
Figure 8. Hardware (MSA Later Version).



LEGEND

1. Screw
2. T-Nut
3. P-Clamp
4. Ladder Lock
5. Webbing

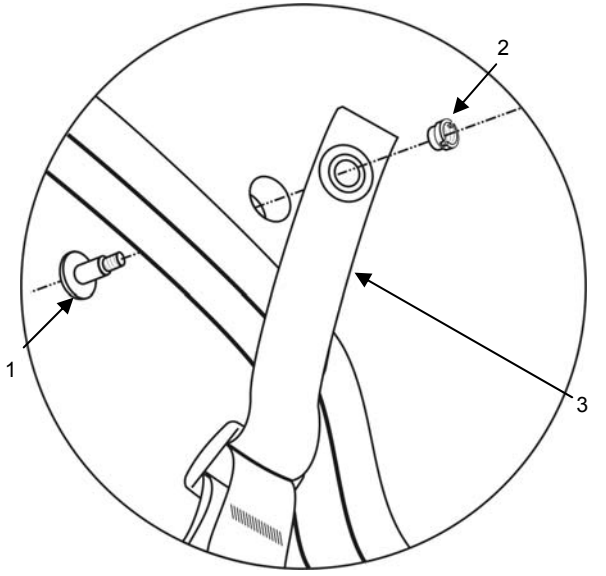
Figure 9. Hardware (MSA Current Version).



LEGEND

1. Post
2. Attachment Tab
3. Webbing
4. Screw

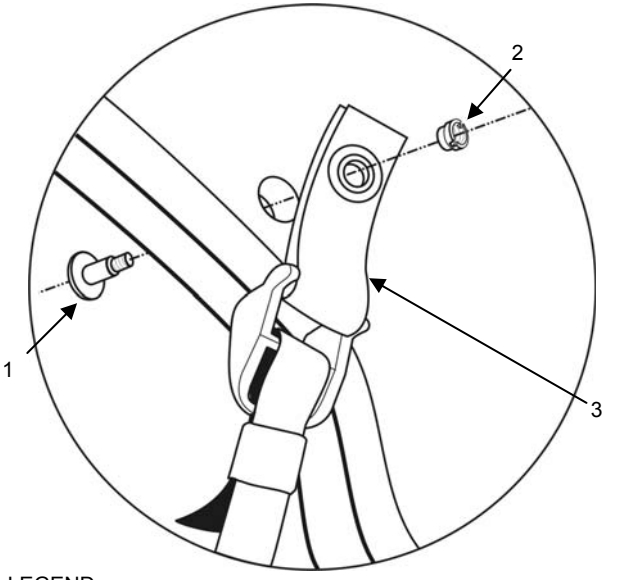
Figure 10. Hardware (SDS).



LEGEND

1. Screw
2. Conical Nut
3. Webbing

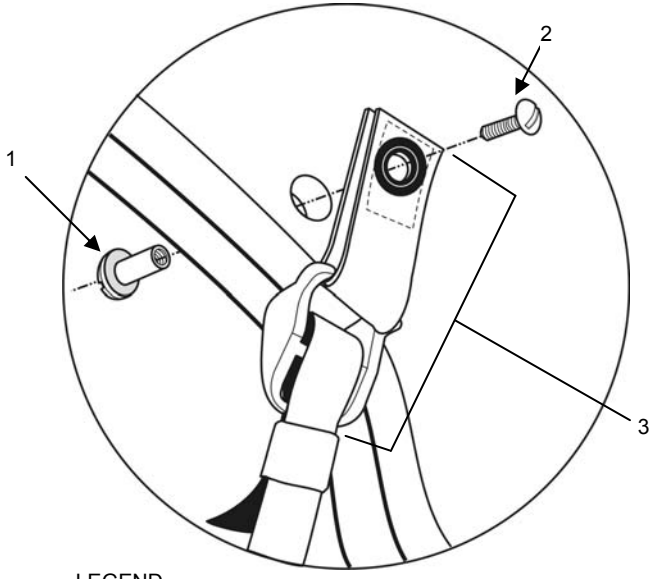
Figure 11. Hardware (Gentex X).



LEGEND

1. Screw
2. Conical Nut
3. Webbing

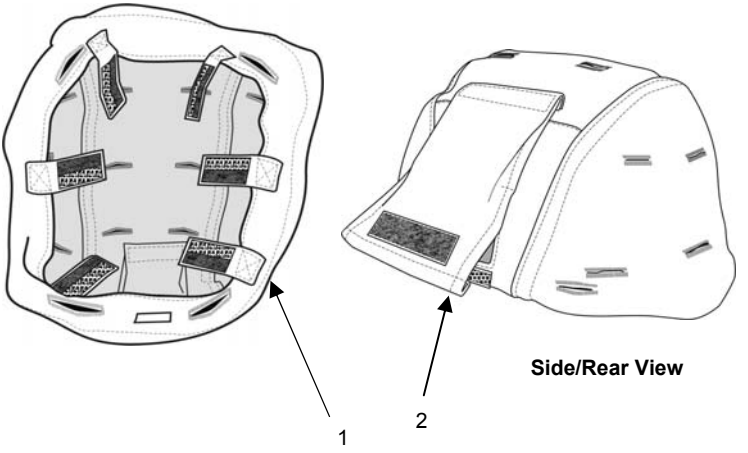
Figure 12. Hardware (Gentex H).



LEGEND

1. Jacket Bolt
2. Machine Screw
3. Attachment Tab Assembly

Figure 13. Hardware (Rabintex).



LEGEND

1. Cover Retaining Tab
2. Communications Flap

Figure 14. Reversible Helmet Cover (Woodland/Desert, All Models).

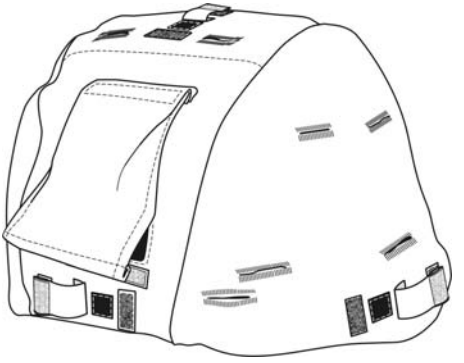
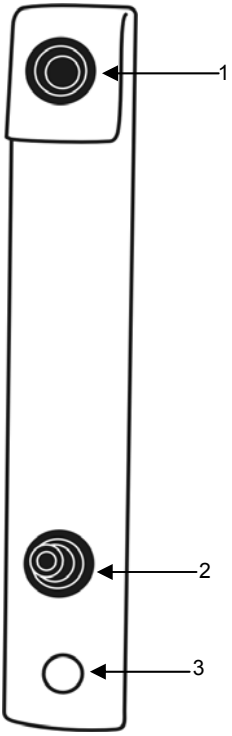


Figure 15. Non-Reversible Helmet Cover (White and Universal Camouflage, All Models).



LEGEND

1. Snap (Socket)
2. Snap (Stud)
3. Hole to Mount to Helmet Shell

Figure 16. Eyewear Retention Strap (All Models).

The following items are used in certain operations:

chemical protective cover,
helmet band

.



Figure 17. Armor Nape Pad (X Style Chinstrap).

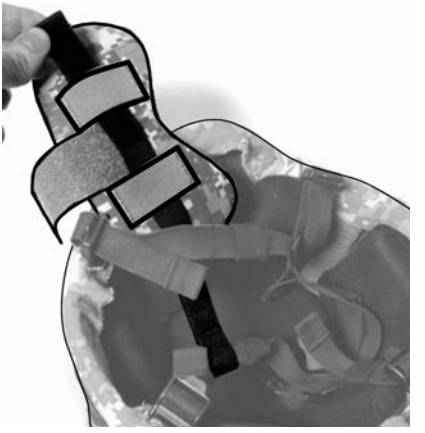


Figure 18. Armor Nape Pad (H Style Chinstrap).

DIFFERENCES BETWEEN MODELS

There are presently four suppliers of the ACH: MSA, SDS, Gentex, and Rabintex. The helmet has a label identifying the manufacturer. The helmets are similar and all employ a four-point chin strap retention system design (Figure 1). However, Gentex has two different designs for its chin strap retention system and hardware, the earlier version (X design, Figure 11) and the later version (H design, Figure 12). The primary difference between MSA, SDS, Gentex H, and Rabintex design is the hardware within the chin strap retention system. The straps of the retention system on the MSA, SDS, Rabintex, and later Gentex version (H design) are all the same. They are composed of three basic elements: a "V" shaped right side element, a "V" shaped left side element, a foam nape pad joining the two side elements. The nape pad is adjustable side-to-side and along the legs of the chin strap. This allows the Soldier an additional adjustment point. The earlier Gentex chin strap (X design) uses a similar four-point design; however, the rear nape pad is not adjustable. However, the Gentex X design has an adjustment in the center section of the chin strap, where the chin cup is located. The Gentex X design chin strap attaches directly to the shell using a screw and nut, not requiring the use of a ladder-lock at the shell; the adjustment point is elsewhere in the chin strap.

The ACH currently comes in four shell sizes: small, medium, large and extra large. Pad size ¾" (formerly known as size 6) is standard size. Pad size 1" (formerly known as size 8) has been discontinued.

EQUIPMENT DATA

The following table provides information pertaining to the mechanical data for the three models of ACH:

Table 1. Mechanical Data for the ACH (Maximum Values for All Models).

Helmet Shell Size	Length (inches)	Width (inches)	Height (inches)	Weight (ounces)
Small	9.7	9.1	7.0	47
Medium	10.3	9.3	7.0	49
Large	10.5	9.5	7.0	53
X-large	11.0	10.1	7.0	62

Weight includes shell, retention system, and suspension system only. Does not include cover or eyewear retention system.

Dimensions (Length, Width, and Height) are overall exterior dimensions.

END OF WORK PACKAGE

THEORY OF OPERATION

This work package discusses theory of operation and protective qualities of the ACH.

The ACH is designed to provide the Soldier with ballistic and impact protection. It is compatible with night vision, communications and Nuclear, Biological and Chemical (NBC) equipment. The ACH weighs approximately 3.0 pounds for the small size, 3.2 pounds for the medium size, 3.4 pounds for the large size and 3.9 pounds for the extra large size.

The edge cut of the shell has been reduced when compared to the Helmet, Ground Troops and Parachutists. This design enables better situational awareness through improved field of view and hearing.

The shell provides ballistic protection. The pads act as a suspension system providing sizing and fitting. In conjunction with the shell, the pad suspension system provides impact protection.

The chin strap retention system is a four point design, attaching to the shell at four locations. In conjunction with the pad suspension system, it provides improved stability.

END OF WORK PACKAGE

CHAPTER 2

OPERATOR INSTRUCTIONS

FOR

ADVANCED COMBAT HELMET (ACH)

SIZING AND FITTING INSTRUCTIONS

INITIAL SETUP: **Not Applicable**

OPERATING PROCEDURES

This work package provides instructions for choosing the proper size ACH.

If other equipment is to be used with the helmet, such as a headset/microphone, evaluate helmet shell and pad size with that equipment.

ACH Shell Sizing

Head Measuring Procedure. Use tape measure and caliper to make the following measurements. See WP 0024, Additional Information, for appropriate National Stock Numbers (NSN).

1. Soldier must be seated in upright position.

2. Measure the maximum head length between the browridge and the back of the head (Figure 1). Measurement is best made with a caliper. If caliper is not available, an approximate measurement can be made using a tape measure aligned with the front and back of head as shown. Record size measured.

NOTE

Arrows denote the proper alignment of the caliper or tape measure.

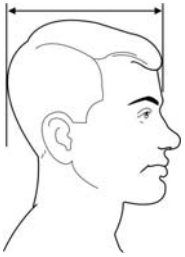


Figure 1. Head Length.

3. Measure the maximum head width above the ears from the widest point between the left and right side of head. Measurement is best made with a caliper. If no caliper is available, an approximate measurement can be made using a tape measure aligned with each side of head as shown. Record size measured.

NOTE

Arrows denote the proper alignment of the caliper or tape measure.



Figure 2. Head Width.

4. Measure the maximum head circumference. Record size measured.

NOTE

Soldier sits erect with head level. Measure circumference by passing tape measure just above the bony eyebrow ridges of the forehead and above both ears. The tape measure must be pulled tight.



Figure 3. Head Circumference.

NOTE

If any measurement falls on the dividing line between sizes, select the larger size.

5. Using Table 1, select the helmet shell size based on the largest of the three measurements. The helmet shell size selected in this step will be used as the starting point for pad evaluation in the next procedure.

Table 1. Head/Shell Sizing.

Helmet Shell	Head Length	Head Breadth (Width)	Head Circumference
Small Helmet Shell	Up to 7 ¼ inches (184 mm)	Up to 6 ½ inches (162 mm)	Up to 21 ¼ inches (538 mm)
Medium Helmet Shell	From 7 ¼ inches (184 mm) up to 7 ¾ inches (198 mm)	Up to 6 ½ inches (162 mm)	From 21 ¼ inches (538 mm) up to 22 ½ inches (573 mm)
Large Helmet Shell	From 7 ¾ inches (198 mm) up to 8 ¼ inches (210 mm)	Up to 6 ½ inches (162 mm)	From 22 ½ inches (573 mm) up to 23 ½ inches (597 mm)
Extra-Large Helmet Shell	8 ¼ inches (210 mm) and over	6 ½ inches (162 mm) and over	23 ½ inches (597 mm) and over

END OF TASK

ACH Pad Sizing (Evaluation of Sizing)

The sizes of pads available are as follows:
¾" thick (also referred to as size 6).

To Select Pad Size.

1. Assemble helmet in standard pad configuration with size 6 pads (¾" thick) (see WP 0005).

2. Try on helmet and evaluate fit. Proper fit is achieved when the helmet does not sit too high (crown pad does not contact head or too much of forehead is exposed) or too low (too low on brow or not compatible with eyewear, etc.) and is not too tight or too loose (see WP 0007). Shake head rapidly from side to side to check for stability. Helmet should not rotate from side to side when head is shaken. While evaluating fit, be sure to have the chin strap retention system cinched down (WP 0008).

3. The ACH should fit so that the front rim is no more than ½ " above the eyebrows. A properly sized and fitted ACH will sit level on the Soldier's head (side to side), with the lower edge of the front rim being level to the ground or slightly inclined with respect to the ground. While looking upward by moving only the eyes, the Soldier can test for proper fit by observing that the edge of the rim is just in view. All ACHs should be fitted with the thinner size 6 crown pad (¾" thick) in the top of the helmet. The Soldier should feel the crown pad touch the top of his head. Fit can be adjusted by adjusting the pad positions inside the helmet, tightening the retention straps, or exchanging the helmet shell for a larger size. A quick evaluation of the height of the ACH can be made by looking at the height of the ACH relative to the ear canal openings. The bottom of the ACH should come to the top of the Soldier's ear canal opening (Figure 1).



Figure 1. A Properly Fitted ACH.

4. Soldiers who required a smaller size were previously accommodated by using a medium helmet with size 8 pads. Now, these Soldiers should use a small-sized ACH with size 6 pads.

END OF TASK

END OF WORK PACKAGE

PAD CONFIGURATION

INITIAL SETUP: Not Applicable

PAD CONFIGURATIONS

This work package provides instructions for different pad configurations.

WARNING

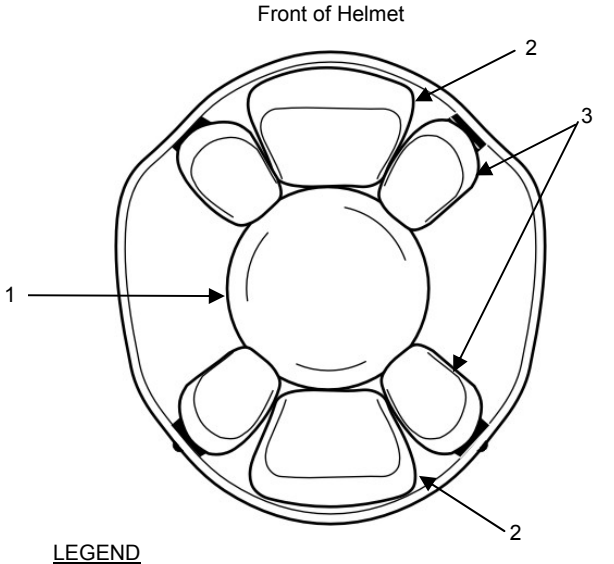
For training and combat missions, Soldiers are to utilize the 7-pad configuration only. For non-training and non-combat missions (for example, parades, ceremonies, etc.) the 5- and 6-pad configurations are authorized. Failure to observe these precautions could result in serious injury or death to personnel.

NOTE

This section pertains to all models of the ACH. Size 8 pads are no longer available. If your size 8 pads become unserviceable, obtain size 6 pads and refer to WP 0004 for proper sizing.

Standard Pad Configuration

All seven pads are worn when first trying on the helmet for sizing and fitting, for training and combat missions, and for airborne and other high-risk operations (see WP 0014) (Figure 1).



LEGEND

1. Circular crown pad (1)
2. Trapezoidal pads (2)
3. Oval/oblong pads (4)

Figure 1. Standard Pad Configuration.

Alternate Pad Configurations

WARNING

It is best to cover hardware with pads in all situations. However, pads must cover hardware in high-risk situations. All seven helmet pads must be worn for training and combat missions, and for high-risk operations such as airborne operations, air assault, and rappelling/ mountaineering. Failure to observe this precaution could result in serious injury or death because all seven pads provide maximum impact protection.

NOTE

The following illustrations show alternate configurations. For reasons of clarity only, each of the illustrations shows pads in either horizontal or vertical positions but not in diagonal positions. However, the pads can be placed diagonally, at any angle.

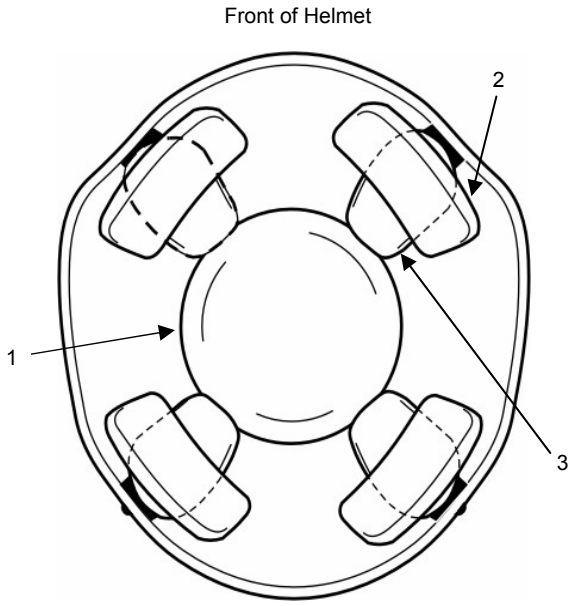
Alternate pad configurations are allowed only for non-training and non-combat missions to obtain a better fit or more comfort.

Pads can be placed in vertical or horizontal directions (as shown in illustrations) or a combination or at an angle between horizontal and vertical (diagonal).

Up to two pads (oblong/oval or trapezoidal) can be removed in non-risk situations. The circular crown pad must always remain in the helmet.

Pads should be placed around the inside of the helmet to provide optimum comfort and stability.

The five-pad configuration is useful in hot climates (Figure 2).

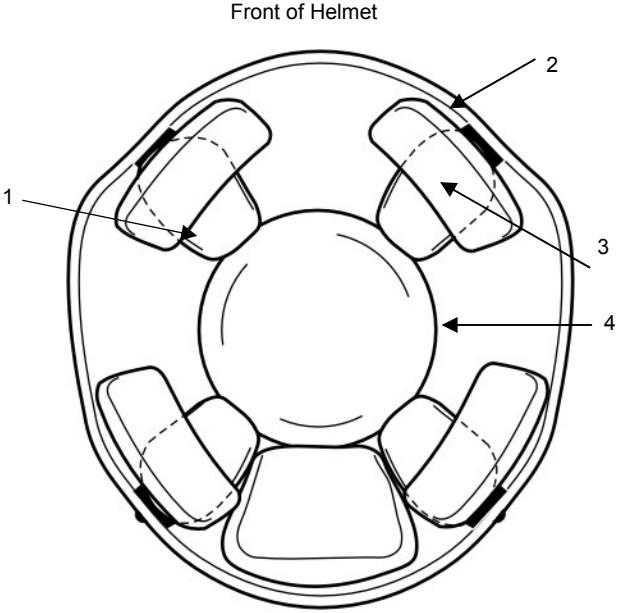


LEGEND

1. Circular crown pad
2. Oblong/Oval pad (Horizontal direction)
3. Oblong/Oval pad (Vertical direction)

Figure 2. Five-Pad Configuration.

The six-pad configuration is useful for Soldiers wearing protective masks (Figure 3).



LEGEND

1. Circular crown pad
2. Oblong/Oval pad (Horizontal direction)
3. Oblong/Oval pad (Vertical direction)
4. Trapezoidal pad

Figure 3. Six-Pad Configuration.

END OF WORK PACKAGE

OPERATION UNDER USUAL CONDITIONS

PAD SUSPENSION ADJUSTMENT

INITIAL SETUP: Not Applicable

This work package provides information about the adjusting the pad suspension system. This unique suspension system is fully adjustable. The system has the following requirements and restrictions:

WARNING

For training and combat missions, Soldiers are to utilize the 7-pad configuration only. For non-training and non-combat missions (for example, parades, ceremonies, etc.) the 5- and 6-pad configurations are authorized. Failure to observe these precautions could result in serious injury or death to personnel.

NOTE

If you experience fit problems, tightness or looseness, or helmet profile is too high or too low, refer to Sizing and Fitting Troubleshooting guidelines (WP 0007).

When donning the helmet for the first time in a cold environment, it may be necessary to wear the helmet for a few minutes or otherwise warm the pads, such as by placing in pockets, so that the pads will conform to the shape of your head. As the pads warm up and conform to the shape of your head, it may be necessary to retighten the chin strap retention system.

To maximize ventilation, the five pad configuration is the maximum pad reduction authorized in . non-training and non-combat missions (for example, parades, ceremonies, etc)

If you experience hot spots or discomfort, try rearranging the pad suspension system to accommodate a more comfortable fit. If discomfort persists, try resizing your shell (WP 0004 and WP 0007).

The direction of the oblong/oval pads may be changed to maximize comfort. These pads may be routed vertically from bolt to crown. This configuration maximizes airflow for better temperature regulation. These pads may be routed horizontally to make a seal around the user's head. This configuration is better suited for cold weather environments (see WP 0005).

WARNING

The hardware for the ACH helmets–where the chin strap retention system webbing attaches to the helmet shell–must be covered for all training and combat missions. The oblong/oval pads (Figures 1 and 2) must be placed flush with the rim (edge) of the helmet and completely cover the hardware (Figures 3–5) (Front) (Figures 6–8) (Rear). Failure to observe this precaution could result in serious injury or death to personnel because a hard-point could contact the Soldier's head.

ATTACHING HELMET PADS

The helmet pads have two sides separated by a flange. On one side, the pads are covered with a loop material. This side has production information on it. Attach only this side to the hook disks on the inside of the helmet shell. On the other side, the pads are covered by moisture-wicking fabric. Do not attach this side to the hook disks.

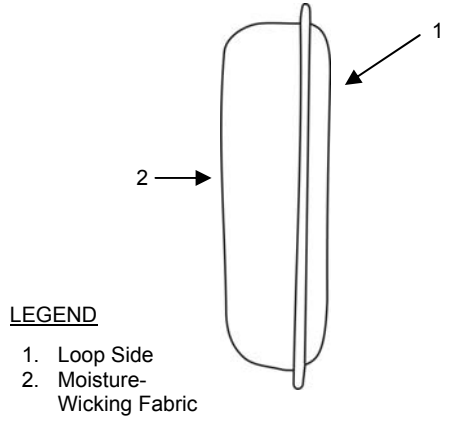


Figure 1. Oblong/Oval Pad.

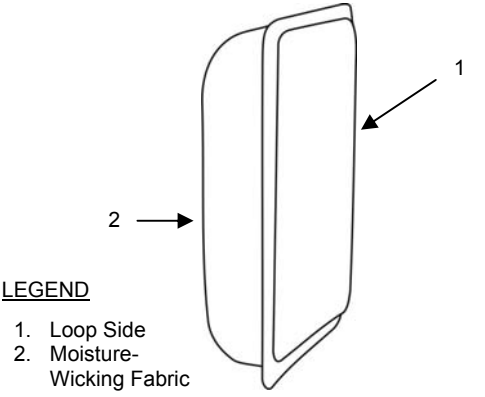
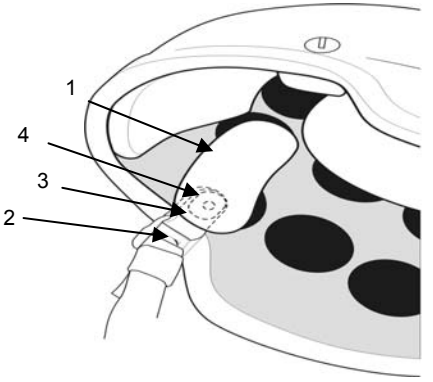


Figure 2. Oblong/Oval Pad.

1. To attach the pads, press them against the hook disks.

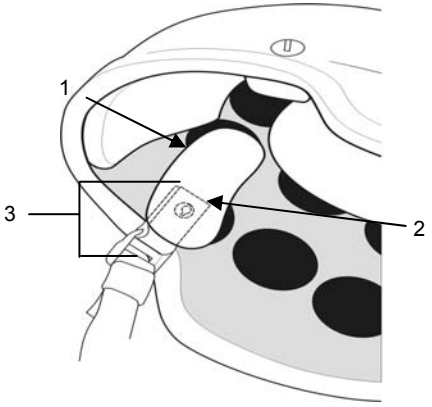
2. To adjust the pad suspension; pull the individual pads off the inner helmet hook disks and reattach the pads as needed (Figures 3 – 8).



LEGEND

1. Oblong/Oval Pad
2. Ladder Lock
3. P-Clamp
4. Screw/Nut

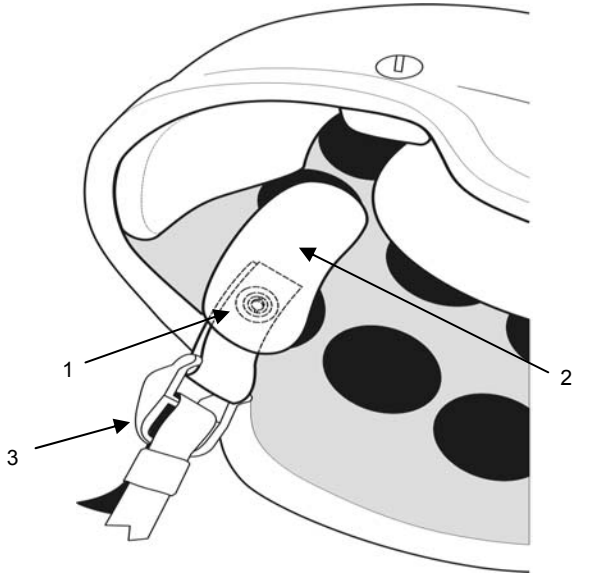
Figure 3. Pad Placement over Hardware (Front) (MSA).



LEGEND

1. Oblong/Oval Pad
2. Screw/Post
3. Attachment Tab

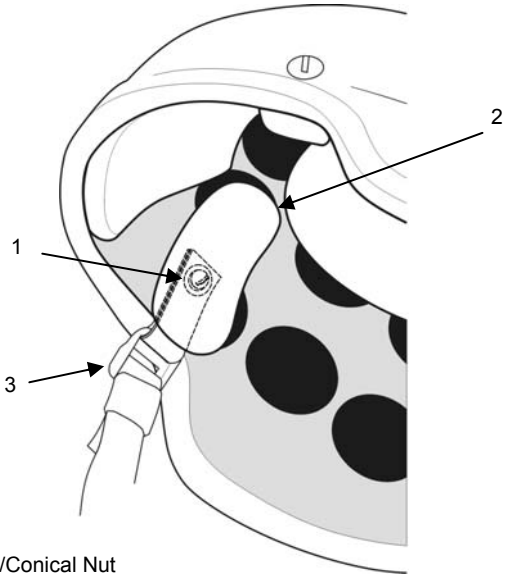
Figure 4. Pad Placement over Hardware (SDS).



LEGEND

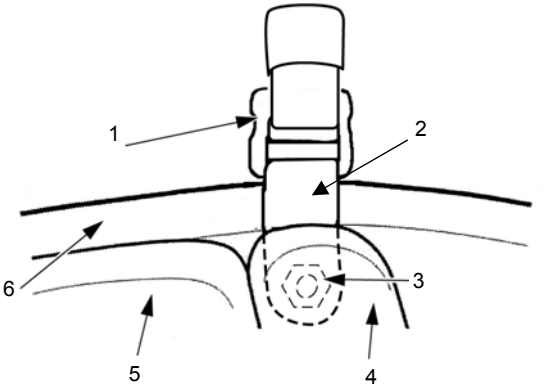
1. Screw/Conical Nut
2. Oblong/Oval Pad
3. Buckle

Figure 5. Pad Placement over Hardware (Front) (Gentex X and H).



LEGEND
1. Screw/Conical Nut
2. Oblong/Oval Pad
3. Buckle Assembly

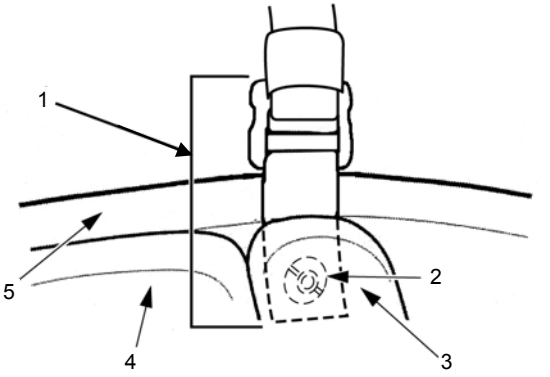
Figure 6. Pad Placement over Hardware (Front) (Rabintex).



LEGEND

1. Ladder Lock
2. P-Clamp
3. Screw/Nut
4. Oblong/Oval Pad
5. Trapezoidal Pad
6. Rim (edge) of Helmet

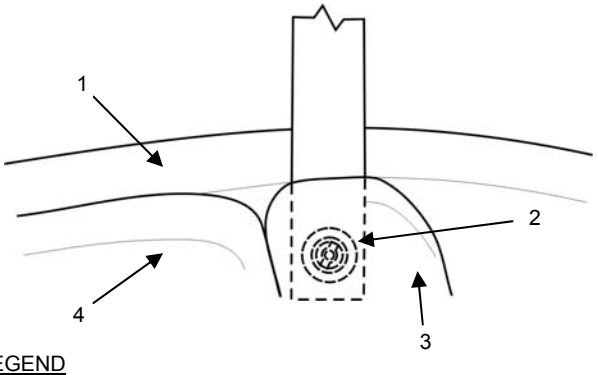
Figure 7. Pad Placement over Hardware (Rear) (MSA).



LEGEND

1. Attachment Tab
2. Screw/Post
3. Oblong/Oval Pad
4. Trapezoidal Pad
5. Rim (edge) of Helmet

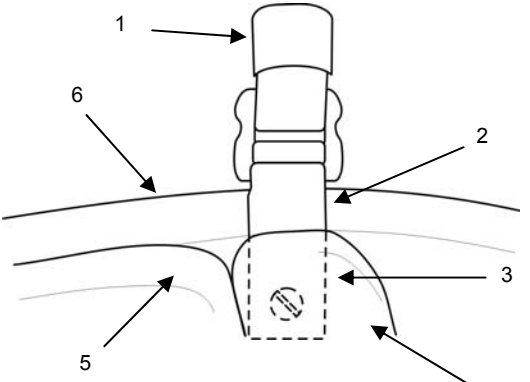
Figure 8. Pad Placement over Hardware (Rear) (SDS).



LEGEND

1. Rim (edge) of Helmet
2. Screw/Conical Nut
3. Oblong/Oval Pad
4. Trapezoidal Pad

Figure 9. Pad Placement over Hardware (Rear) (Gentex X and H).



LEGEND
1. Ladder Lock
2. P-Clamp
3. Screw/Nut
4. Oblong/Oval Pad
5. Trapezoidal Pad
6. Rim of Helmet

Figure 10. Pad Placement over Hardware (Rear) (Rabintex).

END OF TASK

END OF WORK PACKAGE

SIZING AND FITTING TROUBLESHOOTING

INITIAL SETUP: Not Applicable

SIZING AND FITTING TROUBLESHOOTING

This work package provides sizing and fitting troubleshooting techniques.

WARNING

For training and combat missions, Soldiers are to utilize the 7-pad configuration only. For non-training and non-combat missions (for example, parades, ceremonies, etc.) the 5- and 6-pad configurations are authorized. Failure to observe these precautions could result in serious injury or death to personnel.

NOTE

The illustrations in this WP are generic and represent all three helmet models.

If Helmet is Too Tight

1. Rearrange oblong/oval pads in an alternate direction, horizontal, vertical, or diagonal (see WP 0005).

2. If rearranging the pads does not alleviate the tightness (Figure 1), try removing front pad and/or rear pad and rearranging oblong/oval pads to create space in the area you felt tightness (see WP 0005).

3. If problems persist, try the next larger shell size.



Figure 1. Helmet Too Tight.

END OF TASK

If Helmet is Too Loose

If helmet slides on the head while shaking the head side to side, helmet is too loose (Figure 2).

NOTE

Leaders need to periodically check the suspension pads assembly and chin strap retention system for serviceability. If any of the components are broken or worn out, they may be replaced with the items listed in WP 0022.

1. Tighten the chin strap retention system. Soldiers may also find that over time, the pads compress and the retention straps may need to be adjusted to compensate. Periodically, the ACH pads should be inspected for wear and deterioration. This is done by squeezing the pads (WP 0019). If pad does not return to its original shape, replace in accordance with WP 0017.

2. Rearrange side pads in an alternate direction (horizontal, vertical or diagonal (see WP 0005).

3. Increase the number of pads in shell.

4. Try the next smaller shell size.



Figure 2. Helmet Too Loose.

END OF TASK

If Helmet is Too High

If helmet is too high (i.e., too much forehead exposed) (Figure 3), crown does not touch top of head (Figure 4) or Soldier does not see rim of helmet (Figure 5):

1. Try rearranging pads, horizontal, vertical or diagonal (see WP 0005).

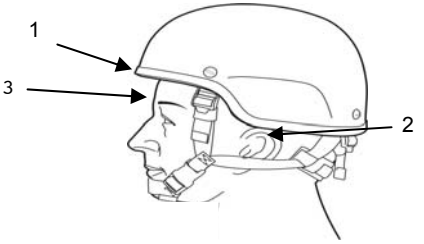
2. Try the next larger shell size.

NOTE

It is extremely important that the helmet not be sized and fitted to sit too high on the head. Here are some things to look for:

The ACH should fit so that the front rim of helmet (Figure 3) is not more than ½ " above the eyebrows.

A quick evaluation of the height of the ACH can be made by looking at the height of the ACH relative to the ear canal opening. Proper fit is achieved when the portion of ear at or above ear canal is covered.



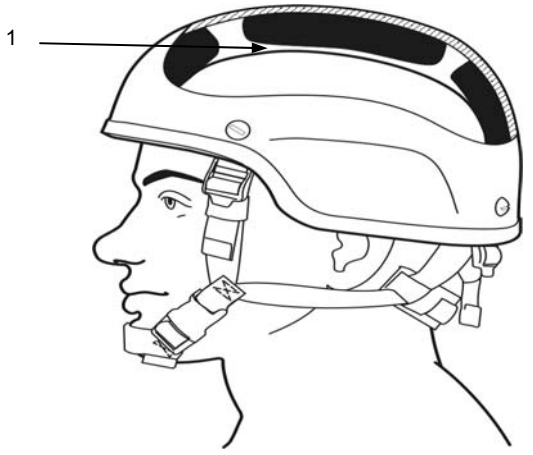
LEGEND

1. Rim of Helmet
2. Too much ear canal exposed
3. Too much forehead exposed

Figure 3. Helmet Too High (Too Much Forehead and Ear Canal Exposed).

END OF TASK

If crown pad does not touch head (Figure 4), (Soldier cannot feel pad), then the helmet is too high.

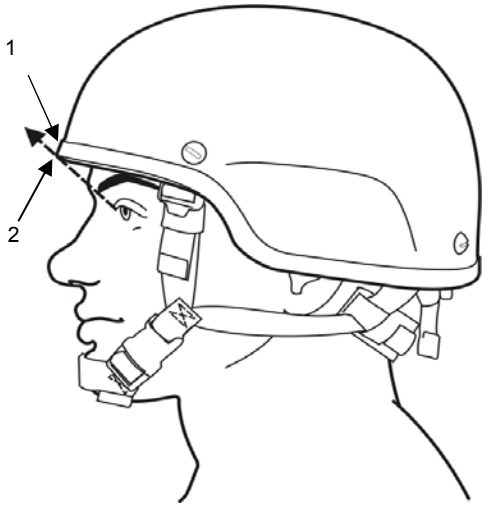


LEGEND

1. Space between pad and head

Figure 4. Helmet Too High (Crown Pad not Touching Head).

When fitting, have Soldier look upward by moving eyes, without moving head (Figure 5). If Soldier cannot see the rim of the helmet, then the helmet is too high.



LEGEND

1. Rim of Helmet
2. Soldier cannot see Rim

Figure 5. Helmet Too High (Looking Past Rim).

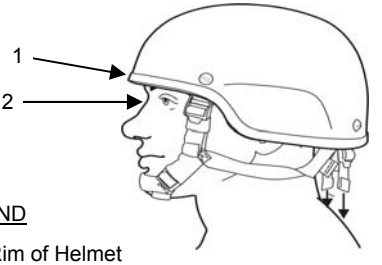
END OF TASK

If Helmet is Too Low:

If helmet is too low (i.e. too low on brow, not compatible with eyewear, or has other similar compatibility issues) (Figure 6):

1. Try rearranging pads horizontal or diagonal (see WP 0005).

2. Try the next smaller shell size.



LEGEND

1. Rim of Helmet
2. Rim interferes with vision and eyewear

Figure 6. Helmet Too Low (Interferes With Vision).

END OF TASK

Inspection and Fit of the ACH

Some quick visual evaluations can be made to check for proper fit. They are in addition to information found in previous sections. They are as follows:

1. Front look check. The helmet should be level side to side.

2. Side look check. The helmet should be level front-to-back– look at the part of helmet by the ear.

END OF TASK

END OF WORK PACKAGE

OPERATION UNDER USUAL CONDITIONS

DON AND REMOVE THE ADVANCED COMBAT HELMET

INITIAL SETUP: Not Applicable

This work package provides instructions for donning and doffing the helmet, including adjusting the chin strap to optimize fit and comfort.

WARNING

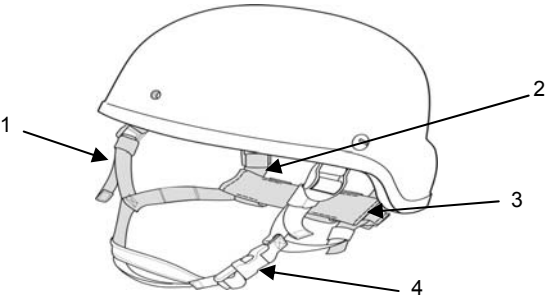
Ensure that all helmet adjustment mechanisms are properly adjusted for a snug, secure fit at all times when the helmet is worn. Failure to do so can result in an unstable helmet that will reduce protection to the Soldier.

NOTE

This section pertains to the MSA, SDS, and Gentex H chinstrap versions.

DON: TO DON (PUT ON) THE HELMET (MSA, SDS, GENTEX, AND RABINTEX CHINSTRAP VERSIONS)

1. Check number and placement of pads (see WP 0005).
2. Prior to donning helmet, loosen all adjustment straps (Figure1). Ensure chin strap is unbuckled (Figure 1).



Legend
1. Front Adjustment Straps
2. Rear Adjustment Straps
3. Nape Pad
4. Chin Strap Buckle

Figure 1. Helmet Adjustment Locations (All Versions).

WARNING

If you pull too tightly on any strap during steps 3 and 4 or if you don't position helmet on head and hold in place with one hand on top of helmet for initial adjustment as instructed in step 2 the helmet may become uncomfortable and tilted on your head and chin cup may become un-centered.

3. Position helmet on head and buckle chin strap (Figure 1). Hold helmet in place with one hand on top of helmet for initial adjustment (Figure 2).



Figure 2. Place Hand on Top of Helmet (All Versions).

4. Partially tighten two rear adjustment straps (Figure 3) one side at a time.

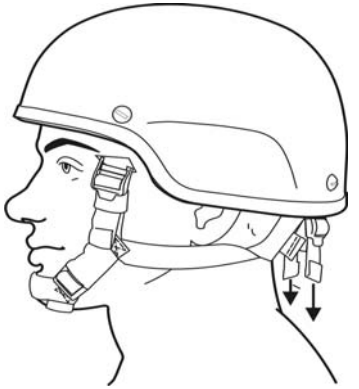


Figure 3. Tighten Rear Adjustment Straps (All Versions).

5. Partially tighten two front adjustment straps (Figure 4) one side at a time.

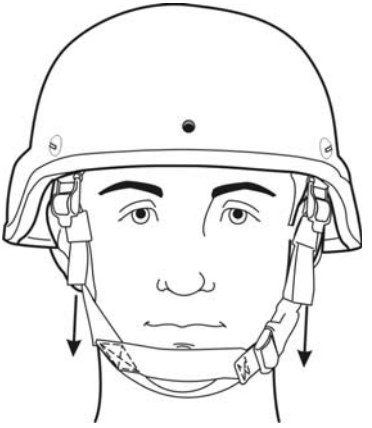


Figure 4. Tighten Front Adjustment Straps (All Versions).

6. With both hands fully tighten front and rear adjustment straps (Figure 5).

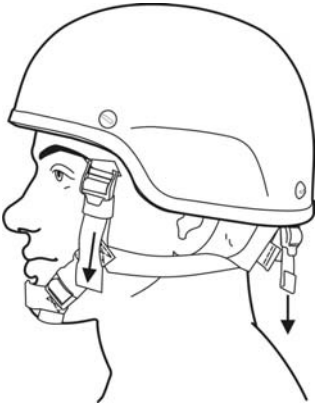


Figure 5. Tighten Front and Rear Adjustment Straps (All Versions).

7. The nape pad (Figure 6) can be slid up and down along the rear legs of the chin strap. It can be positioned according to personal comfort. When tightened (Figure 6) against the nape by pulling on end of webbing, the nape pad adds additional stability to the helmet such as when wearing NVDs. Keep the nape pad away from the ladder-locks while adjusting the chin strap to prevent jamming.

8. Check the helmet stability by attempting to rock the helmet back and forth on the head. If the helmet rocks back and forth, it is not stable. Adjust further until the helmet is stable.

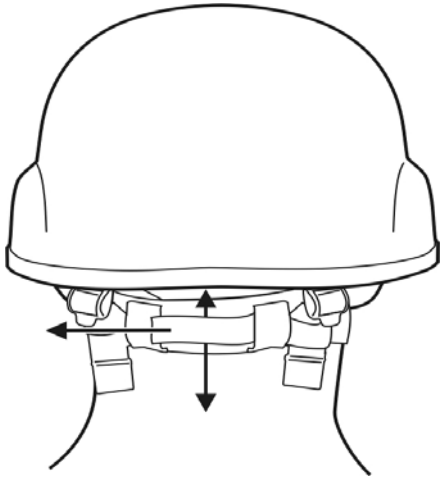


Figure 6. Tighten/Adjust Nape Pad (All Versions).

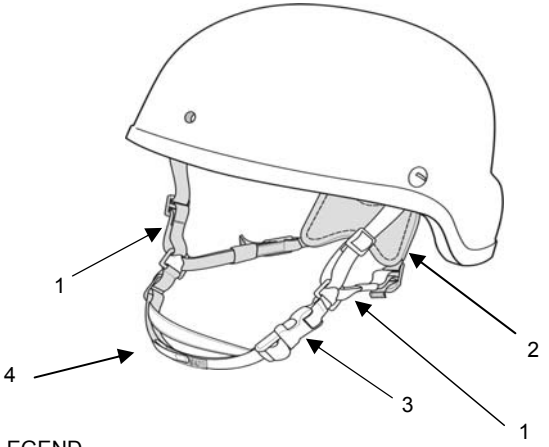
NOTE

This section pertains to the Gentex (X Version) helmet.

DON: TO DON (PUT ON) THE HELMET (GENTEX X)

1. Check number and placement of pads (WP 0005).

2. Position helmet on head and buckle chin strap (Figure 7). Hold helmet in place with one hand on top of helmet for initial adjustment (Figure 8).



LEGEND

1. Adjustment Straps
2. Nape Pad
3. Chin Strap Buckle
4. Hook and Loop Fasteners

Figure 7. Helmet Adjustment Locations (Gentex X).



Figure 8. Place Hand on Top of Helmet (Gentex X).

3. TIghten the nape strap for a snug, secure, comfortable fit (Figure 9).

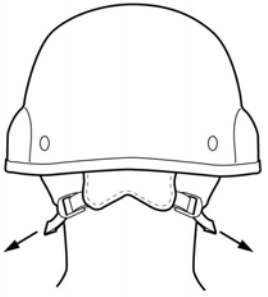


Figure 9. Tighten Nape Straps (Gentex X).

4. Tighten the chin cup chin strap by loosening the hook and loop fasteners and pulling on the ends until the fit is snug, secure and comfortable (Figure 10). Reattach the ends to the loop fastener when the desired fit is attained.

5. Check the helmet stability by attempting to rock the helmet back and forth on the head. If the helmet rocks back and forth, it is not stable. Adjust further until the helmet is stable.

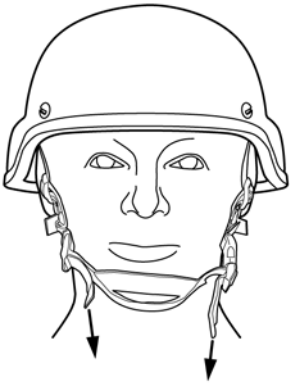


Figure 10. Tightening Chin Cup Chin Strap.

END OF TASK

REMOVE: TO REMOVE THE HELMET (MSA, SDS, GENTEX H, RABINTEX)

1. To remove the helmet, press the sides of the center section of the chin strap buckle on the chin strap retention system inward. Once the buckle releases, remove the helmet. To just loosen the chin strap, push up on the Ladder Lock (MSA) or the Attachment Tab Buckle (SDS).

END OF TASK

REMOVE: TO REMOVE THE HELMET (Gentex X)

1. To remove the helmet, press the sides of the center section on the chin strap buckle inward. Once the buckle releases, remove the helmet. To just loosen the helmet, unhook the hook and loop fasteners and push up on buckles.

END OF TASK

END OF WORK PACKAGE

REMOVING AND REPLACING CHIN STRAP RETENTION SYSTEM

INITIAL SETUP: Not Applicable

This work package provides instructions for replacing the chin strap retention systems.

NOTE

There are three manufacturers of the ACH and several models of chinstraps among the manufacturers. However, if replacing the chin strap, replace it with NSN 8470-01-531-3351. This NSN will fit all models.

In the following procedures, a coin is used to replace ACH hardware. However, if available, a standard flathead screwdriver may also be used.

MSA

1. Remove webbing from elastic bands. Unthread and remove the chin strap retention system webbing from the four buckles.
2. Lay the helmet on its crown with the front of the helmet away from you. Drape the replacement chin strap retention system over the helmet with the nape-strap pad facing down on the back/rear of the helmet (Figure 1).

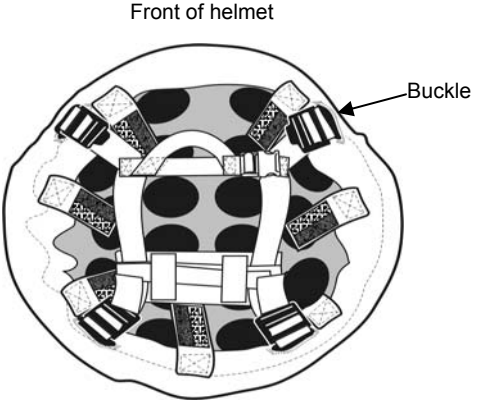


Figure 1. Chin Strap Retention System Orientation (All Models).

3. Insert and thread the four legs of the chin strap into their corresponding buckles (Figure 2). For illustration of entire assembled helmet with chin strap retention and hardware, see WP 0002. Take care to ensure that webbing is not twisted.

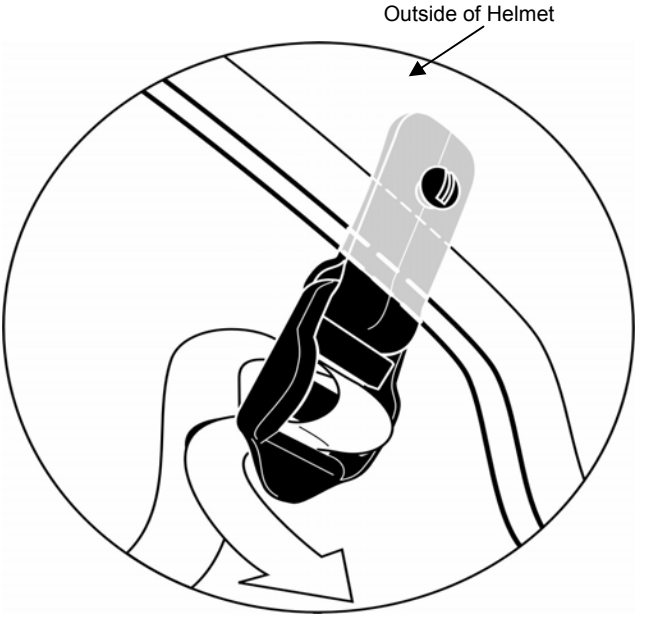


Figure 2. Routing of Chin Strap Webbing through Buckle (MSA).

4. Slide elastic band over loose ends of webbing.

END OF TASK

SDS

1. Remove webbing from elastic bands. Unthread and remove the chin strap retention system webbing from the buckle.

2. Lay the helmet on its crown with the front of the helmet away from you (chinstrap buckle is located on right side of helmet). Drape the replacement chin strap retention system over the helmet with the nape-strap pad facing down on the back/rear of the helmet (Figure 3).

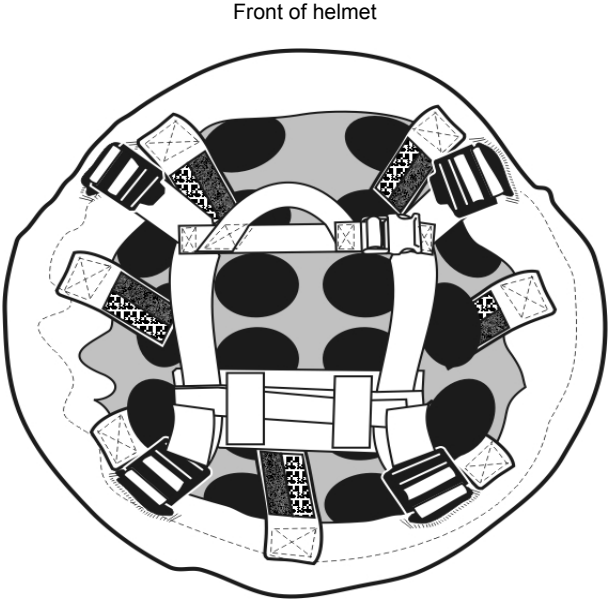


Figure 3. Chin Strap Retention System Orientation (SDS).

3. Insert and thread the four legs of the chin strap into their corresponding buckles (Figure 4). For illustration of entire assembled helmet with chin strap retention and hardware, see WP 0002. Take care to ensure that webbing is not twisted.

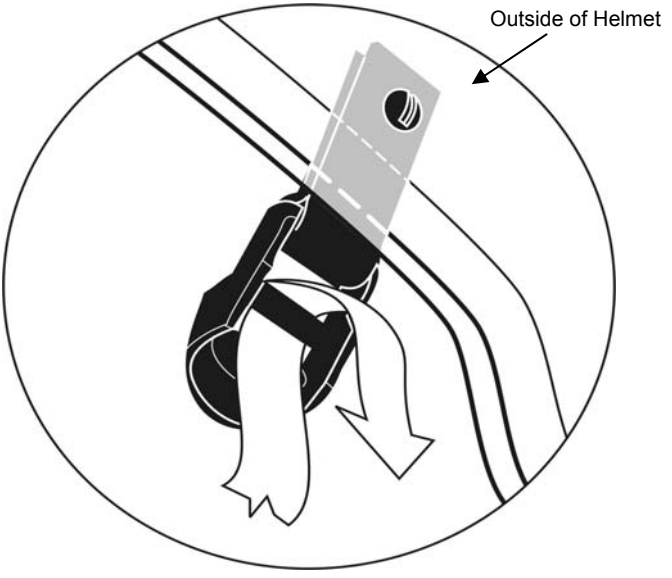


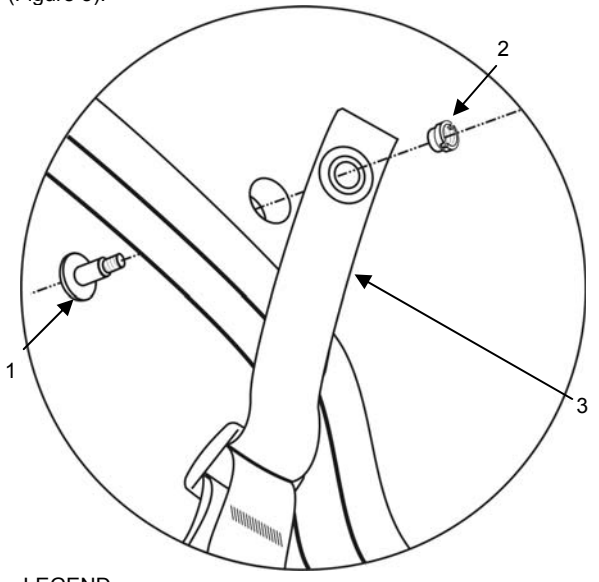
Figure 4. Routing of Chin Strap Webbing through Buckle (SDS).

4. Slide elastic band over loose ends of webbing.

END OF TASK

GENTEX (X VERSION)

1. Remove the chin strap retention system webbing from the helmet by using a coin to unscrew the four screws and conical nuts (Figure 5).



LEGEND

1. Screw
2. Conical Nut
3. Webbing

Figure 5. Hardware (Gentex X).

2. Lay the helmet on its crown with the front of the helmet away from you (chinstrap buckle is located on right side of helmet). Drape the replacement chin strap retention system over the helmet with the nape-strap pad facing down on the back/rear of the helmet (Figure 6) and attach new chin strap retention system using the new hardware (Figure 7).

.

Front of helmet



Figure 6. Chin Strap Retention System Orientation (Gentex X).

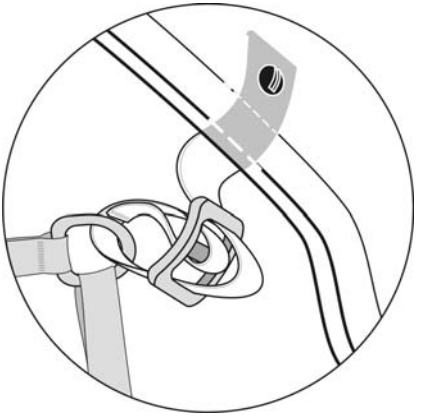


Figure 7. Routing of Chin Strap Webbing through Buckle (Gentex X).

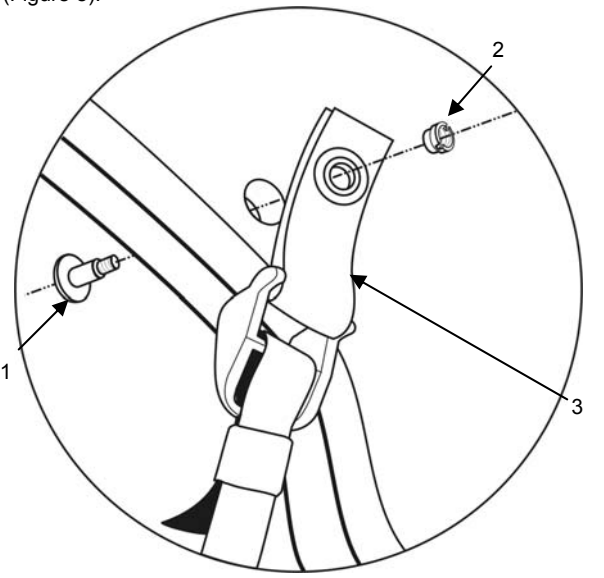
3. Slide elastic band over loose ends of webbing.

4. For illustration of entire assembled helmet with chin strap retention and hardware, see WP 0002. Take care to ensure that webbing is not twisted

END OF TASK

GENTEX (H VERSION)

1. Remove the chin strap retention system webbing from the helmet by using a coin to unscrew the four screws and conical nuts (Figure 8).



LEGEND

1. Screw
2. Conical Nut
3. Webbing

Figure 8. Hardware (Gentex H).

2. Lay the helmet on its crown with the front of the helmet away from you (buckle is located on right side of helmet). Drape the replacement chin strap retention system over the helmet with the nape-strap pad facing down on the back/rear of the helmet (Figure 9) and attach new chin strap retention system using the new hardware (Figure 10).

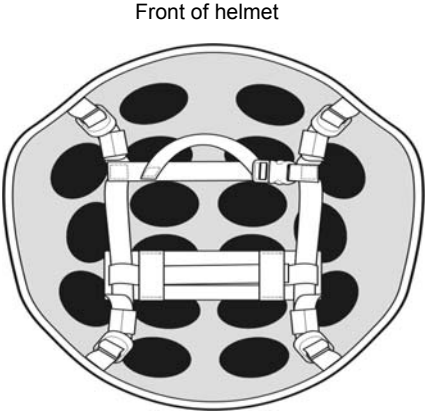


Figure 9. Chin Strap Retention System Orientation (Gentex H).



Figure 10. Routing of Chin Strap Webbing through Buckle (Gentex H).

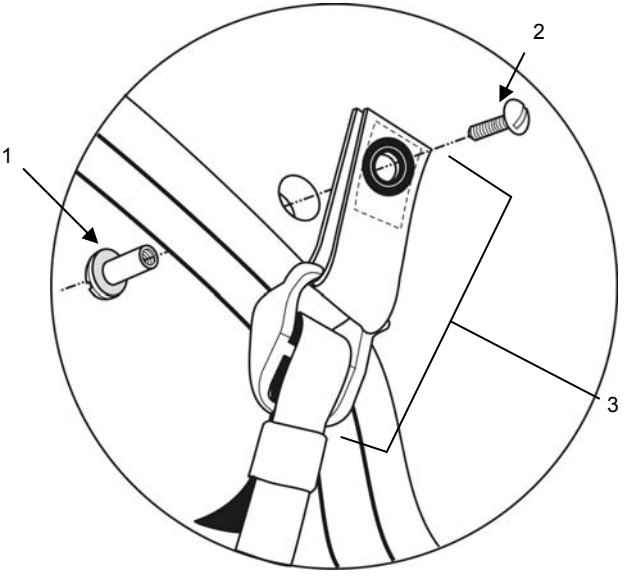
3. Slide elastic band over loose ends of webbing.

4. For illustration of entire assembled helmet with chin strap retention and hardware, see WP 0002. Take care to ensure that webbing is not twisted.

END OF TASK

RABINTEX

1. Remove the chin strap retention system webbing from the helmet by using a coin to unscrew the four jacket bolts and machine screws (Figure 11).



LEGEND

1. Jacket Bolt
2. Machine Screw
3. Attachment Tab Assembly

Figure 11. Hardware (Rabintex).

2. Lay the helmet on its crown with the front of the helmet away from you (buckle is located on right side of helmet). Drape the replacement chin strap retention system over the helmet with the nape-strap pad facing down on the back/rear of the helmet (Figure 12) and attach new chin strap retention system using the new hardware (Figure 13).

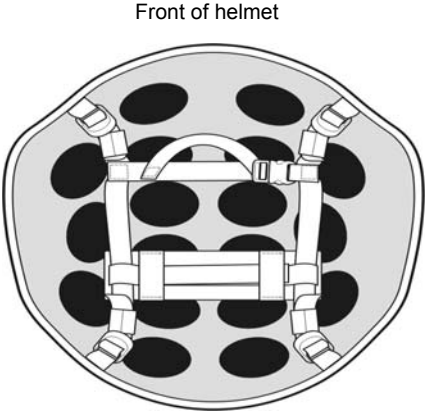


Figure 12. Chin Strap Retention System Orientation (Rabintex).

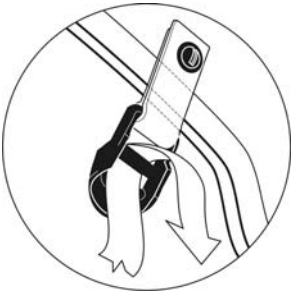


Figure 13. Routing of Chin Strap Webbing through Buckle (Rabintex).

END OF TASK

END OF WORK PACKAGE

ATTACHING THE HELMET COVER TO THE ACH

INITIAL SETUP: Not Applicable

This work package provides instructions for attaching the camouflage helmet cover to the ACH.

There are four covers available for the ACH: a reversible woodland (Figure 1), a reversible desert (Figure 2), a non-reversible universal camouflage (Figure 3), and a non-reversible white (arctic) cover (Figure 4). Also, covers are available with and without the communications flap (see WP 0023 for NSNs).

The communications flap is used to store cables from the headset that is sometimes used with the helmet.

The flap can also be used to secure goggle straps if no eyewear retention straps are available. Lift the flap and place the goggle strap under the flap. Re-secure the flap by pressing the hook and loop together.

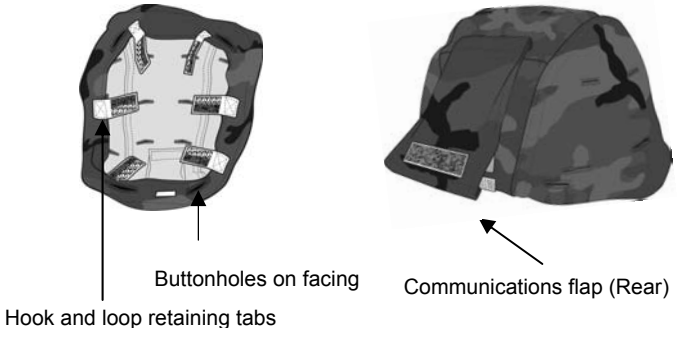


Figure 1. Reversible Helmet Cover (Woodland).

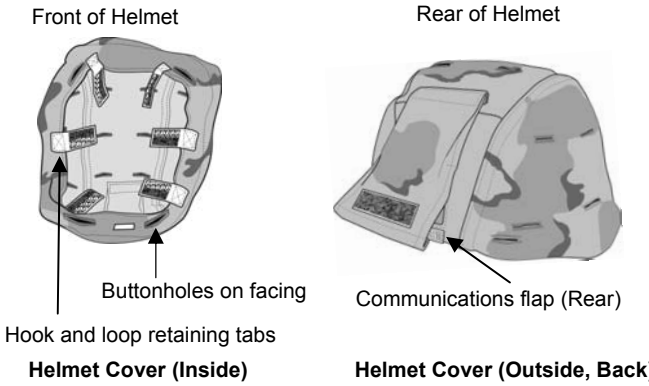


Figure 2. Reversible Helmet Cover (Desert).

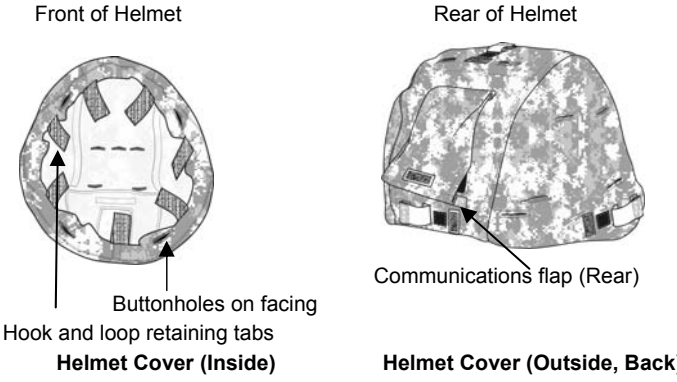


Figure 3. Non-Reversible Helmet Cover (Universal Camouflage).

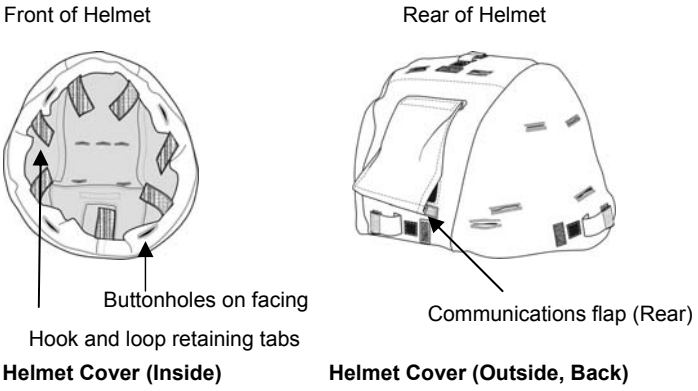


Figure 4. Non-Reversible Helmet Cover White (Arctic).

NOTE

This section pertains to the MSA, SDS, Gentex H, and Rabintex versions.

1. Remove the suspension pads from the inside of the helmet shell.
2. Unthread and remove the chin strap retention system webbing (see WP 0009). Do not remove hardware.
3. Select the camouflage pattern to be worn and orient the cover so that the desired pattern is on the outside.
4. Helmet covers without communications flaps will be aligned by the front of the helmet cover to the front of the helmet. The front of the helmet cover has a single 1 ¼" long button hole (Figure 5). Helmet covers with communications flaps will be aligned with the communications flap towards the rear of the helmet (Figures 1 - 4).

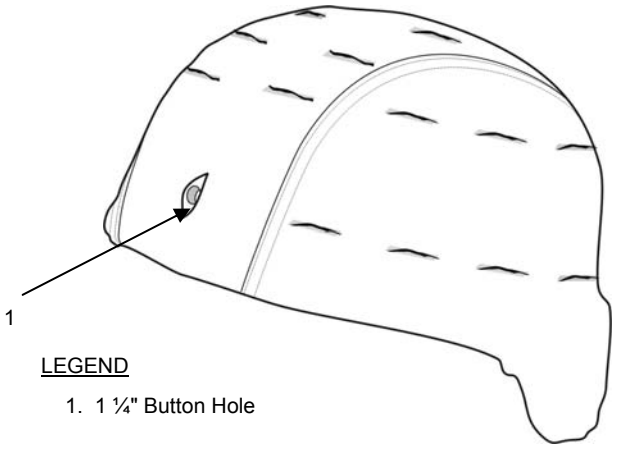
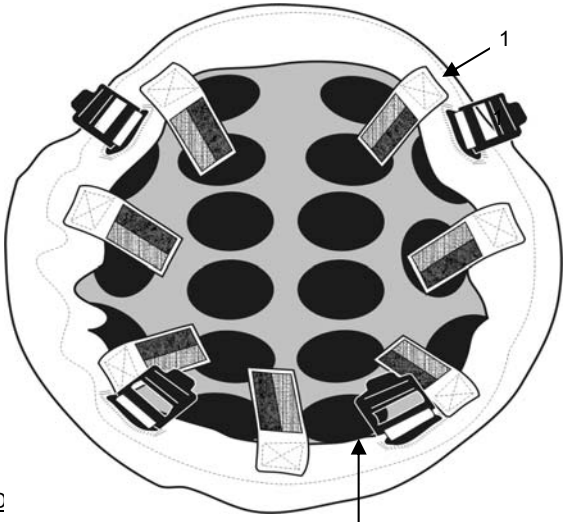


Figure 5. 1 ¼" Button Hole (Front) (All Models).

5. Pull the cover over the back and sides of helmet shell.
6. Thread each buckle through the corresponding buttonhole in the cover.
7. Pull the cover retaining tabs down and attach tabs to hook disks inside helmet shell. Ensure tight smooth fit of cover by pulling the retaining tabs until tight.
8. Replace chin strap retention system webbing (see WP 0009).
9. Place suspension pads back into shell (see WP 0005).



LEGEND

1. Cover retaining tabs
2. Hook disk

Figure 6. Helmet Cover Installed (All Versions).

END OF TASK

NOTE

This section pertains to the Gentex X version chin strap.

1. Remove the suspension pads from the inside of the helmet shell.
2. Remove the Gentex X chinstrap retention system IAW WP 0009.
3. Select the camouflage pattern to be worn and orient the cover so that the desired pattern is on the outside.

4. Helmet covers without communications flaps will be aligned by the front of the helmet cover to the front of the helmet. The front of the helmet cover has a single 1 ¼" long button hole (Figure 5) aligned in the front. Helmet covers with communications flaps will be aligned with the communications flap towards the rear of the helmet (Figures 1 - 4).

5. Pull the cover loosely over the back and sides of the helmet shell.

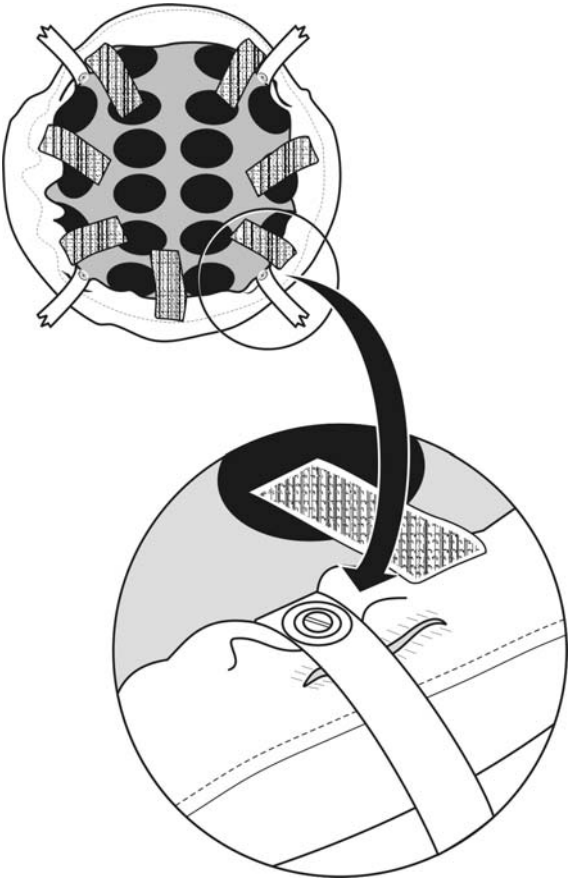
6. Thread chinstrap mounting tabs through the corresponding button holes on the cover.

NOTE

Cover may need to be adjusted to gain access to screw heads through outer button holes in cover.

7. Reinstall the hardware.

8. Pull the cover retaining tabs down and attach tabs to hook disks inside helmet shell. Ensure tight smooth fit of cover by pulling the retaining tabs until tight. The cover goes around the chin strap webbing and sits between the shell and webbing (chin strap not removed, Figure 7).



LEGEND

1. Cover retaining tabs
2. Hook disk

Figure 7. Helmet Cover Installed (Gentex X).

9. Place suspension pads back into shell (see WP 0005).

END OF TASK

END OF WORK PACKAGE

OPERATIONS UNDER USUAL CONDITIONS

FRONT BRACKET ASSEMBLY INSTALLATION

INITIAL SETUP: Not Applicable

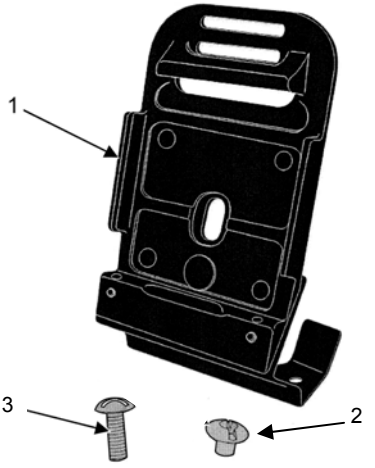
This work package provides instructions for installing the front bracket assembly on the ACH.

WARNING

If no NVD Front Bracket is used—and the helmet has hole for front bracket, plug hole with 8-32 x 3/8 inch long screw and post (see WP 0023). Failure to do so may result in injury or death to personnel.

1. Make sure that the front bracket assembly kit has all the components. You should have a front bracket assembly, a screw, and a threaded post (Figure 1). See WP 0023, Associated and Repair Items List, for appropriate NSN.

2. Install the helmet cover on your helmet IAW WP 0010.



LEGEND

1. Front bracket assembly
2. Threaded post
3. Screw

Figure 1. Front Bracket Assembly Kit Contents.

NOTE

Before attaching the front bracket assembly, it may be necessary to loosen the hook and loop tabs on the helmet cover.

3. Place the front bracket assembly on the helmet over the helmet cover. Line up the hole in the plate, the front buttonhole in the cover and the hole in the helmet shell (Figure 2).

4. Insert the screw through the front bracket assembly, cover and into shell from the outside of the helmet. Insert the threaded post from inside the helmet. Slightly tighten the screw and threaded post (Figure 2).

CAUTION

Do not over tighten the screw or the front bracket assembly may break.

5. Before completely tightening the screw, ensure that the cleat of front bracket assembly is tight against the rim of the helmet (Figure 2). Push the bracket up so that the cleat is tight against the rim (edge) of the helmet while tightening the screw and post. It may be helpful to have another person assist with this step.

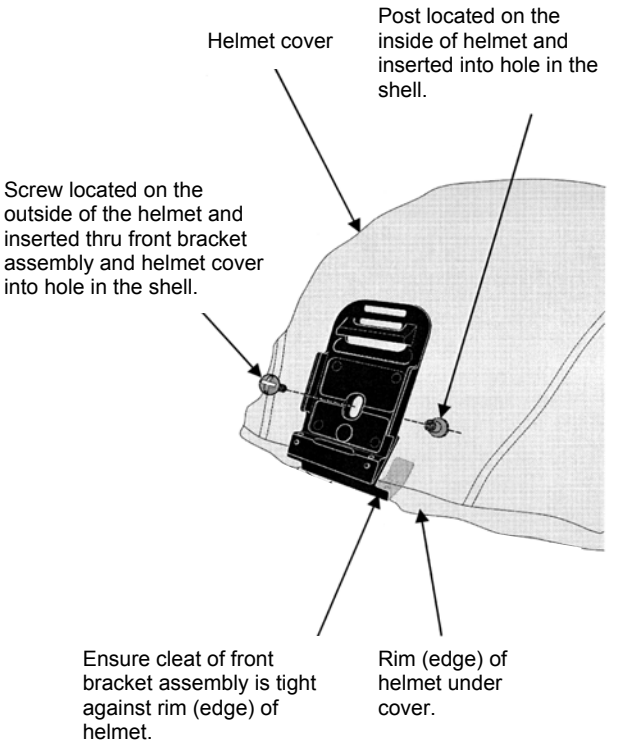


Figure 2. Front Bracket Assembly Positioned on Helmet.

END OF TASK

END OF WORK PACKAGE

OPERATIONS UNDER USUAL CONDITIONS

EYEWEAR RETENTION STRAP INSTALLATION

INITIAL SETUP: Not Applicable

This work package provides instructions for installing the eyewear retention straps.

INSTALLING THE EYEWEAR RETENTION STRAPS (ALL VERSIONS)

1. Make sure you have a pair of eyewear retention straps (see WP 0023).

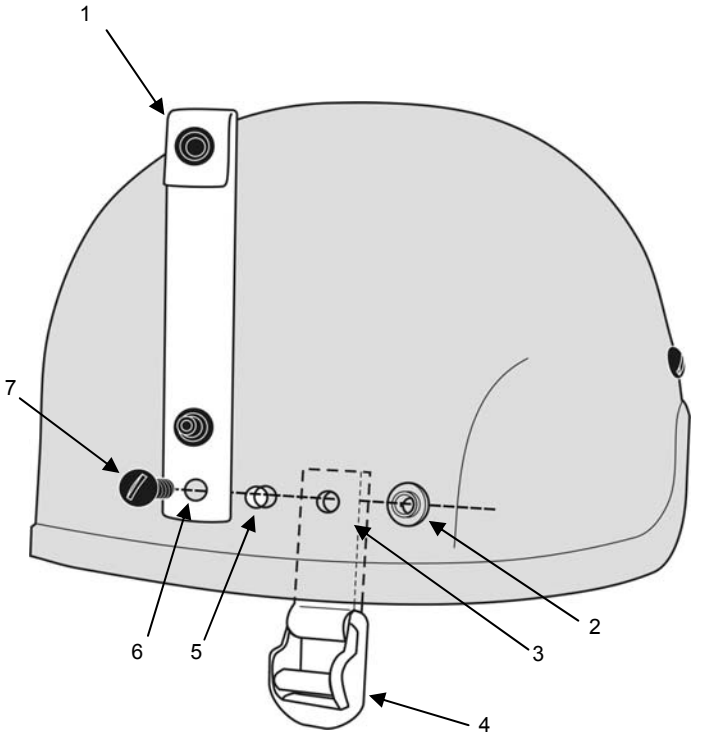
2. If the helmet cover is installed, unfasten the cover retaining tabs to expose the two rear screws.

3. Remove a rear screw and place an eyewear retention strap over the barrel conical nut (shaft) of the screw with the snap socket and stud facing away from the helmet (Figure 1-5). A strap is installed on each of the two rear screws.

4. Insert the screw with eyewear retention strap attached into the hole in helmet through the corresponding buttonhole in the helmet cover (Figure 6).

5. Thread the buckle assembly through the corresponding hole on helmet cover. Tighten the screw. Repeat for other rear screw.

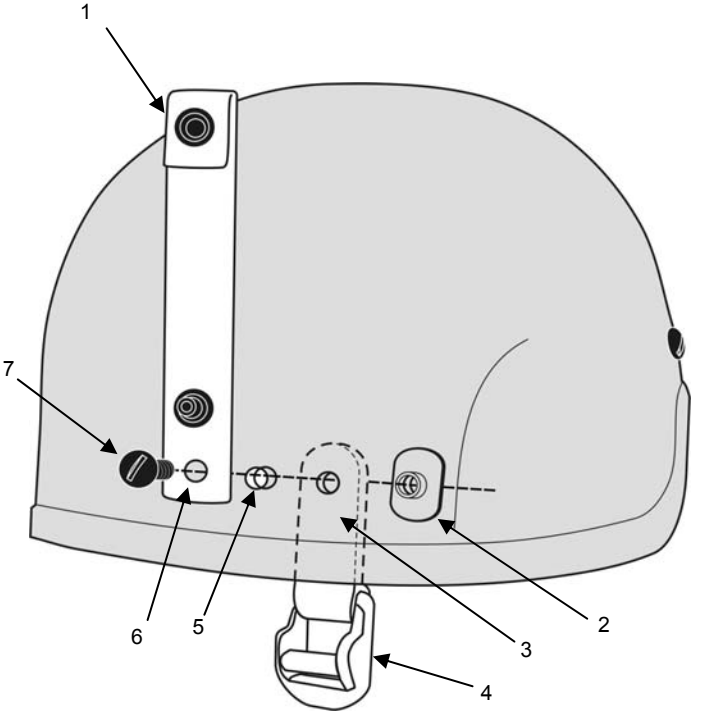
6. Re-secure attachment tabs.



LEGEND

1. Eyewear retention strap
2. Nut
3. P-clamp
4. Ladder Lock
5. Hole in helmet shell
6. Hole in eyewear retention strap
7. Screw

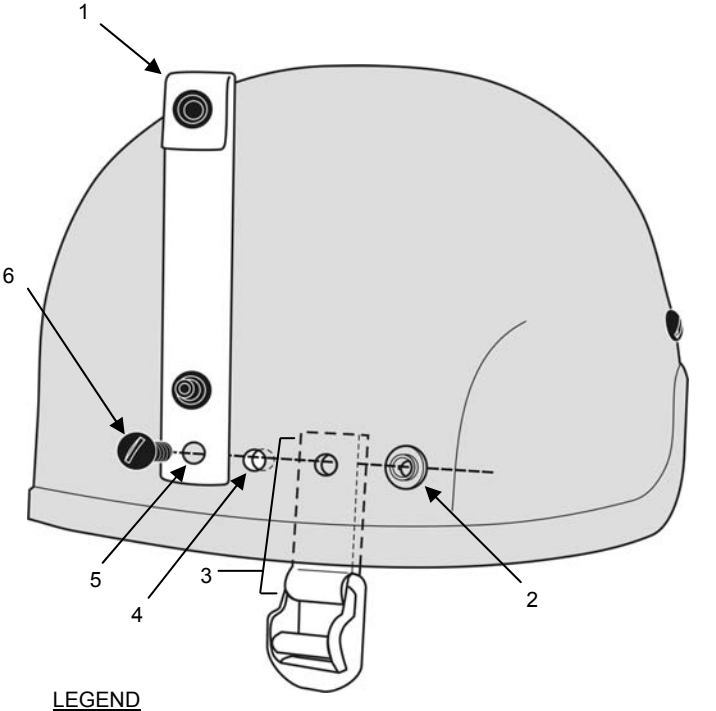
Figure 1. Eyewear Retention Strap and Screw Assembly (MSA Early and Late Version).



LEGEND

1. Eyewear retention strap
2. Nut
3. P-clamp
4. Ladder Lock
5. Hole in helmet shell
6. Hole in eyewear retention strap
7. Screw

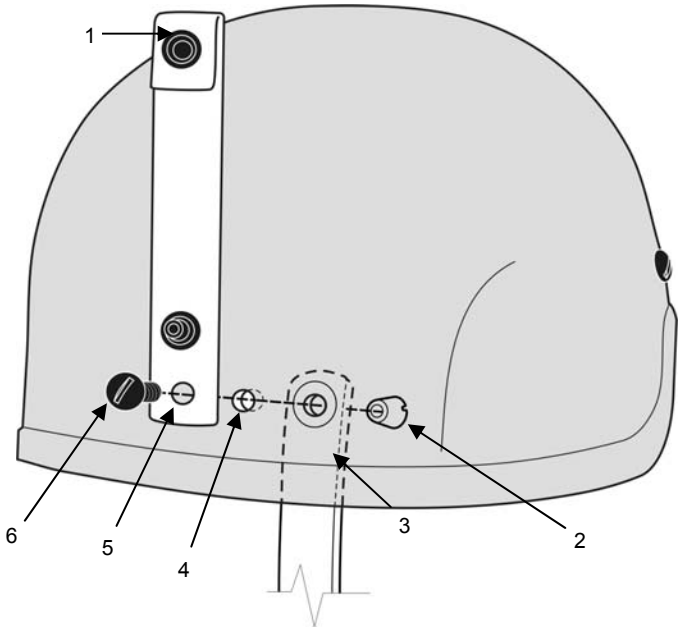
Figure 2. Eyewear Retention Strap and Screw Assembly (MSA Current Version).



LEGEND

1. Eyewear retention strap
2. Post
3. Attachment tab
4. Hole in helmet shell
5. Hole in eyewear retention strap
6. Screw

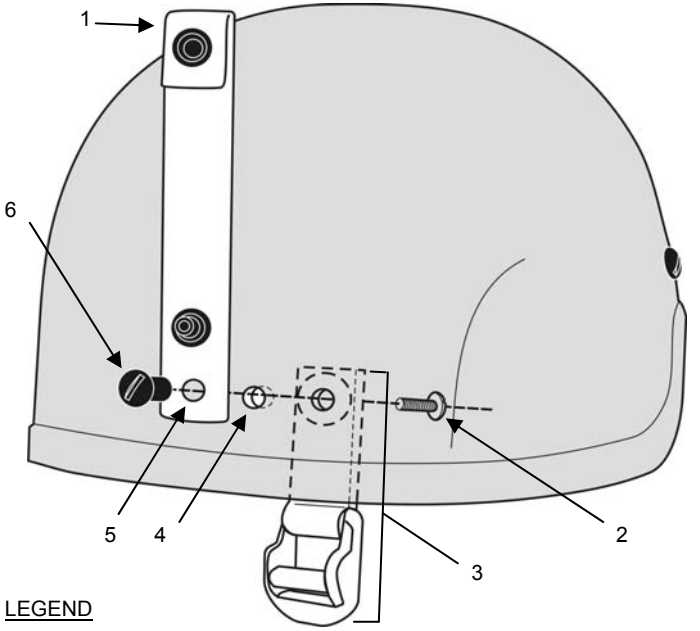
Figure 3. Eyewear Retention Strap and Screw Assembly (SDS).



LEGEND

1. Eyewear retention strap
2. Conical nut
3. Webbing
4. Hole in helmet shell
5. Hole in eyewear retention strap
6. Screw

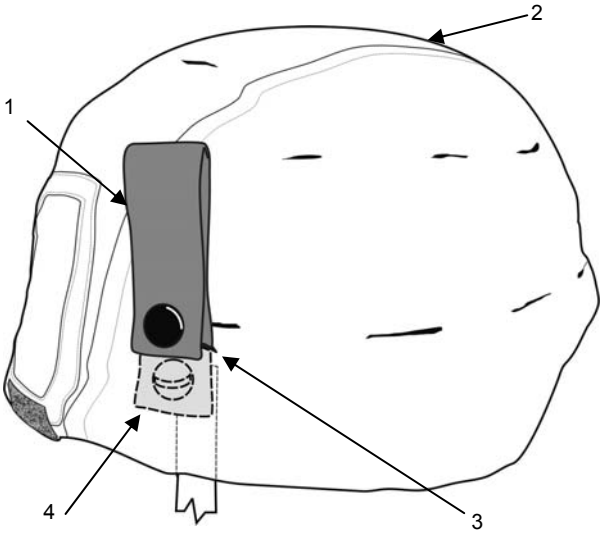
Figure 4. Eyewear Retention Strap and Screw Assembly (Gentex, All Versions).



LEGEND

1. Eyewear retention strap
2. Machine screw
3. Attachment tab assembly
4. Hole in helmet shell
5. Hole in eyewear retention strap
6. Jacket bolt

Figure 5. Eyewear Retention Strap and Screw Assembly (Rabintex).



LEGEND

1. Eyewear retention strap
2. Helmet cover
3. Lower most rear buttonhole
4. Screw (shown under cover)

Figure 6. Helmet with Eyewear Retention Strap Installed (All Versions).

END OF TASK

END OF WORK PACKAGE

ARMOR NAPE PAD INSTALLATION

INITIAL SETUP: Not Applicable

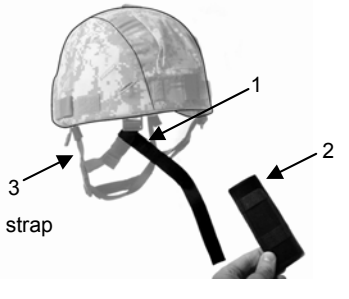
This work package provides instructions for installing the armor nape pad. The armor nape pad is designed to protect against ground-level threats, while adding stability to the helmet. It is available in two sizes—size 1 fits a small or medium ACH; size 2 fits a large or extra large ACH. The armor nape pad is also available in two configurations—one to fit the H-style chinstrap configuration, and one to fit the X-style chinstrap configuration. Armor nape pad sizes and corresponding ACH sizes are presented in Table 1.

Table 1. Armor Nape Pad Sizing.

Armor Nape Pad Model	ACH Size	Chinstrap Configuration
Model 1	Small/Medium	H
Model 2	Large/Extra Large	H
Model 3	Small/Medium	X
Model 4	Large/Extra Large	X

INSTALL ARMOR NAPE PAD ON H-STYLE CHINSTRAP

1. Note orientation of existing nape pad before removing it. Remove the existing nape pad by unfastening the hook and loop strap (Figure 1, items 1) that holds the nape pad (Figure 1, item 2) to the chin strap (Figure 1, item 3).

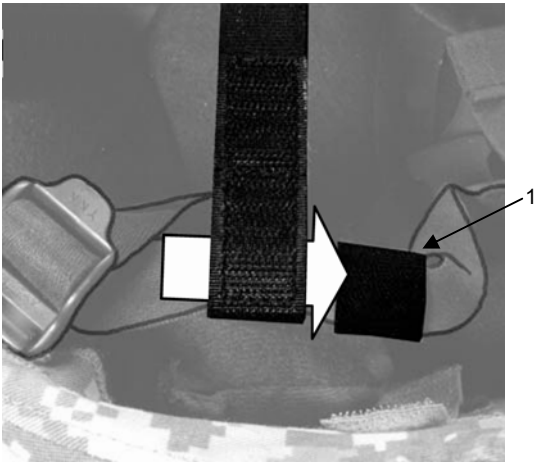


LEGEND

1. Hook and loop strap
2. Nape pad
3. Chinstrap

Figure 1. Removing Existing Nape Pad.

2. Move the elastic bands (Figure 2, item 1) used to secure loose ends of the chinstrap toward the front of the ACH.



LEGEND

1. Elastic band
2. Helmet shell

Figure 2. Slide Elastic Bands.

3. Orient the armor nape pad so that the camouflage side faces out and the mesh side faces the wearer and install the pad on the hook and loop strap (Figure 3).

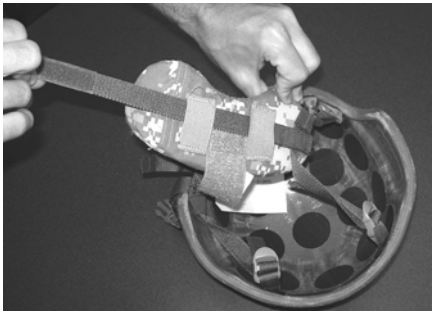


Figure 3. Armor Nape Pad Installed on Hook and Loop Strap.

4. Thread the free end of the hook and loop strap (Figure 4, Item 1) around the chinstrap webbing and back through the armor nape pad elastic loops (Figure 4, Item 2).

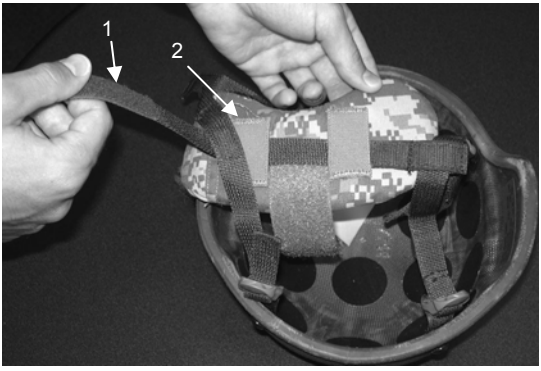
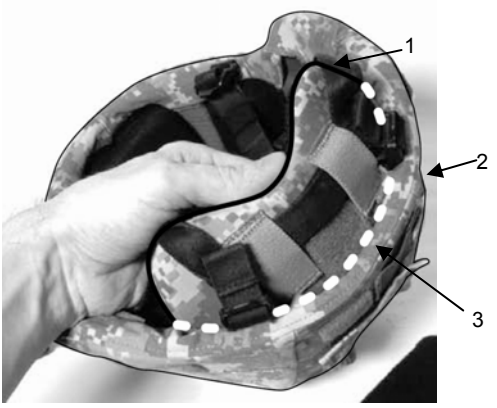


Figure. 4. Attaching the Armor Nape Pad.

5. Remove the rear trapezoidal pad from the helmet shell and set it aside.

6. Slide the armor nape pad (Figure 5, item 1) toward the helmet shell (Figure 5, item 2) until shell and armor nape pad overlap by approximately ½" (Figure 5, item 3).

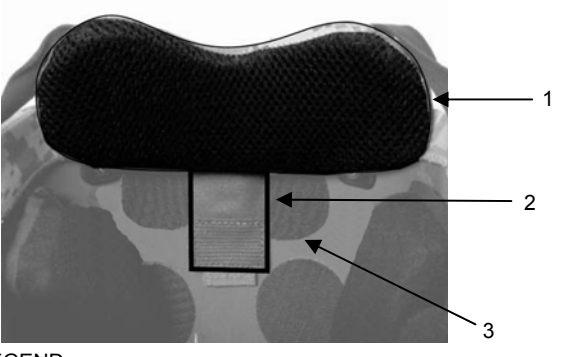


LEGEND

1. Nape pad
2. Helmet shell
3. Area of overlap

Figure 5. Fitting Armor Nape Pad into Helmet Shell.

7. With armor nape pad (Figure 6, item 1) overlapping shell edge, press the hook and loop tab (Figure 6, item 2) against the hook disks (Figure 6, item 3) on the inside of the shell.

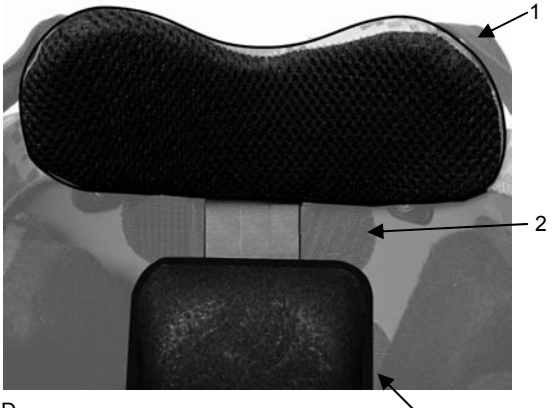


LEGEND

1. Nape pad
2. Hook and loop tab
3. Hook disks

Figure 6. Attaching Armor Nape Pad to Helmet Shell

8. Reinstall the rear trapezoidal pad (Figure 7, item 3). Ensure it is oriented in accordance with procedures in WP 005. Position it so that there is about 1" of space (Figure 7, item 2) between armor nape pad (Figure 7, item 1) and the rear trapezoidal pad. This will allow the armor nape pad to retract into the helmet shell when the neck is arched back. Adjust this space to fit your specific needs. Refer to WP 0005 for orientation of rear trapezoidal pad.



LEGEND

1. Nape pad
2. 1" space between nape pad and rear trapezoidal pad
3. Rear trapezoidal pad

Figure 7. Armor Nape Pad Installed.

END OF TASK

INSTALL ARMOR NAPE PAD ON X-STYLE CHINSTRAP

1. Check helmet to ensure it has an x-style chinstrap configuration (Figure 8).



Figure 8. Chinstrap with X-Style Configuration.

NOTE

The loop tab (the softer tab) is attached to the bottom edge of the nape pad.

2. Open the hook and loop tabs on the armor nape pad (Figure 9).



Figure 9. Hook and Loop Tab on Armor Nape Pad Opened.

3. Position label side of armor nape pad against inside surface of the chinstrap. Wrap hook and loop tabs around the x-strap to secure the armor nape pad in place (Figure 10).



Figure 10. Hook and Loop Tab Secured to Chinstrap.

NOTE

If Soldier is uncomfortable when arching neck back with armor nape pad installed, the rear trapezoidal pad can be repositioned to allow the armor nape pad to slide under the helmet.

4. With hook and loop tabs tightly wrapped around the x-strap, ensure armor nape pad is oriented correctly (Figures 11 and 12).



Figure 11. Nape Pad Installed and Properly Oriented (Bottom View).



Figure 12. Nape Pad Installed and Properly Oriented (Rear View).

END OF TASK

END OF WORK PACKAGE

OPERATION UNDER UNUSUAL CONDITIONS

CONFIGURATION FOR AIRBORNE OPERATIONS

INITIAL SETUP: Not Applicable

This work package provides instructions for configuring the ACH for airborne operations as well as other high-risk operations such as air assault and rappelling/mountaineering. No additional parts or components are required for airborne use of the helmet.

WARNING

The hardware for the ACH helmets–where the chin strap retention system webbing attaches to the helmet shell–must be covered by padding during airborne and other high risk operations, such as air assault and rappelling/mountaineering. The oblong/oval pads must be placed flush with the rim (edge) of the helmet and completely cover the hardware (Figures 1–3) (Front) (Figures 4–6) (Rear). Failure to observe this precaution could result in serious injury or death to personnel because a hard-point could contact the Soldier's head.

All seven helmet pads must be worn during airborne operations and high-risk operations such as air assault and rappelling/mountaineering. Failure to observe this precaution could result in serious injury or death because all seven pads provide maximum impact protection.

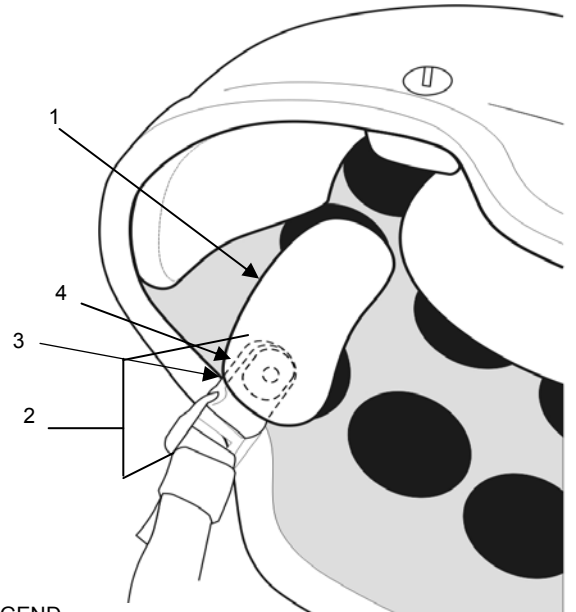
The rear trapezoidal pad must be placed flush with the rim (edge) of the helmet for airborne operations. If you experience helmet rotation during airborne operations the rear trapezoidal pad can be placed, so that it extends ½" beyond the rim of the helmet. Placement of the rear trapezoidal pad flush or beyond the rim (edge) of the helmet prevents the hard shell from hitting your neck. (Front) (Figures 2 and 3) (Rear) (Figures 4, 5, and 6).

ATTACHING HELMET PADS

The helmet pads have two sides separated by a flange. On one side, the pads are covered with a loop material. This side has production information on it. Attach only this side to the hook disks on the inside of the helmet shell. On the other side, the pads are covered by moisture-wicking fabric. Do not attach this side to the hook disks

To attach the pads, press the side with production information against the hook disks.

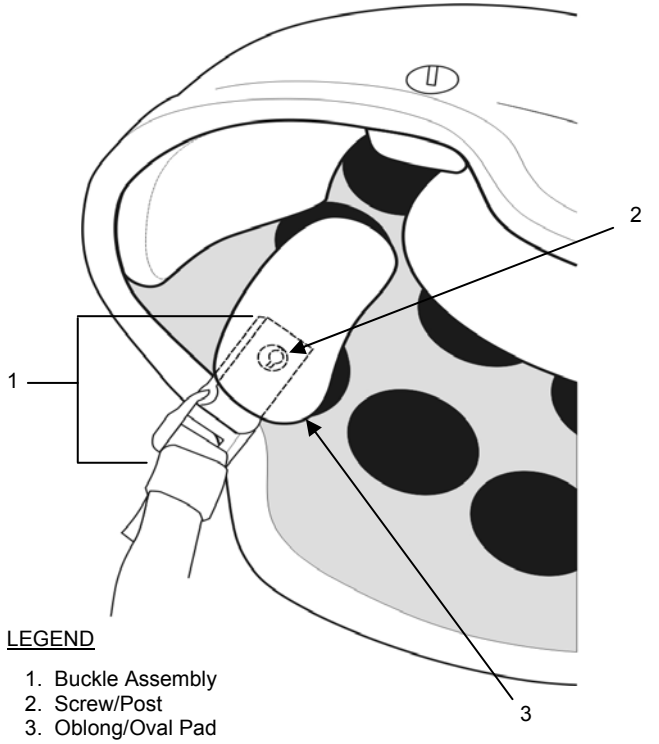
When preparing for airborne operations, adjust pads IAW WP 0006.



LEGEND

1. Oblong/Oval Pad
2. Buckle Assembly
3. P-Clamp
4. Screw/Nut

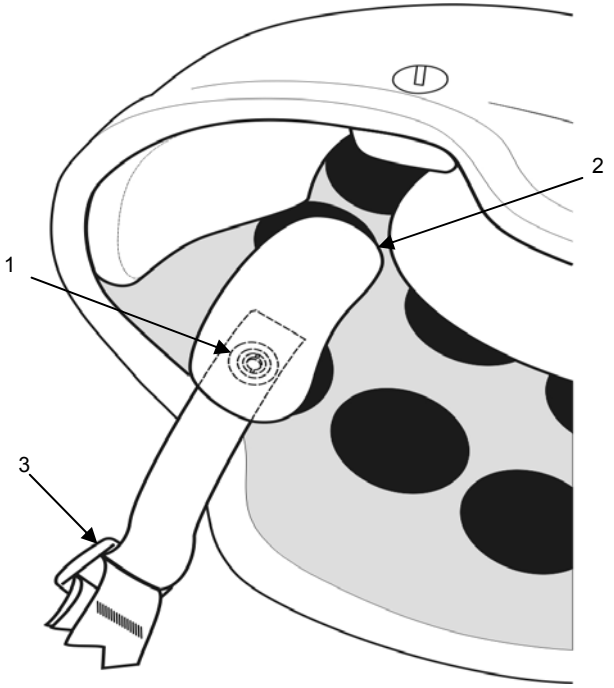
Figure 1. Pad Placement over Hardware (Front) (MSA).



LEGEND

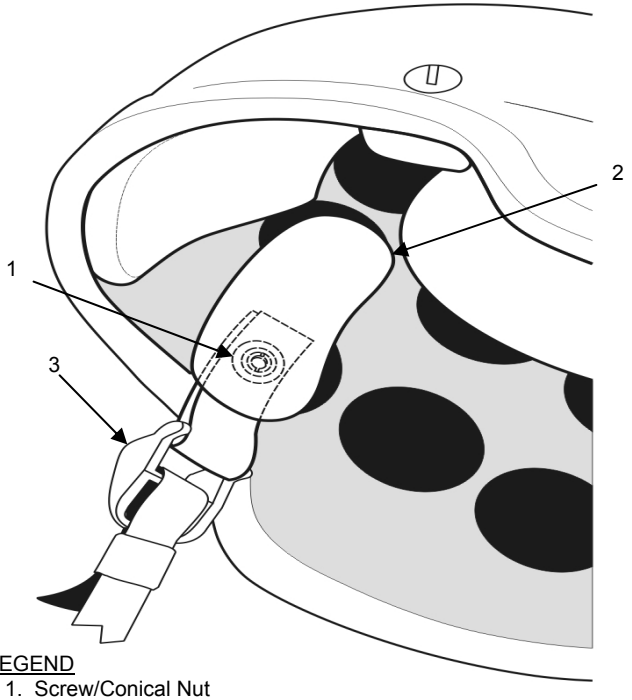
1. Buckle Assembly
2. Screw/Post
3. Oblong/Oval Pad

Figure 2. Pad Placement over Hardware (Front) (SDS).



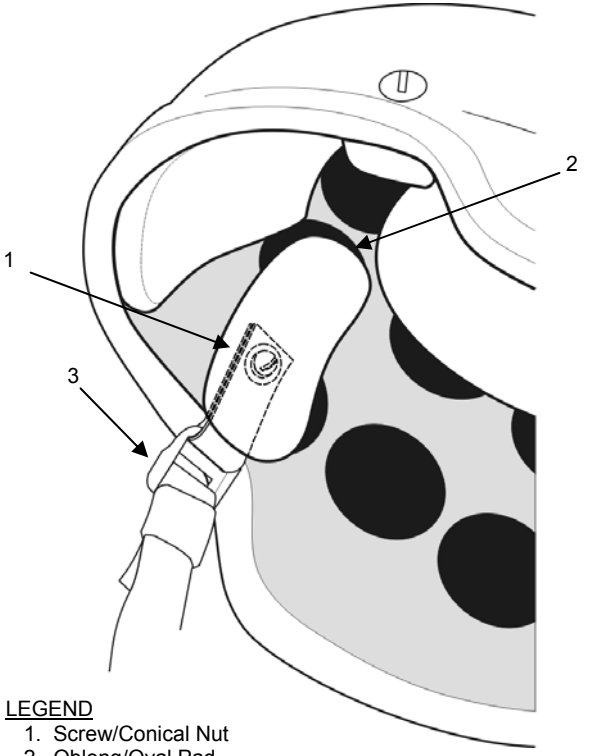
LEGEND
1. Screw/Conical Nut
2. Oblong/Oval Pad
3. Buckle Assembly

Figure 3. Pad Placement over Hardware (Front) (Gentex X).



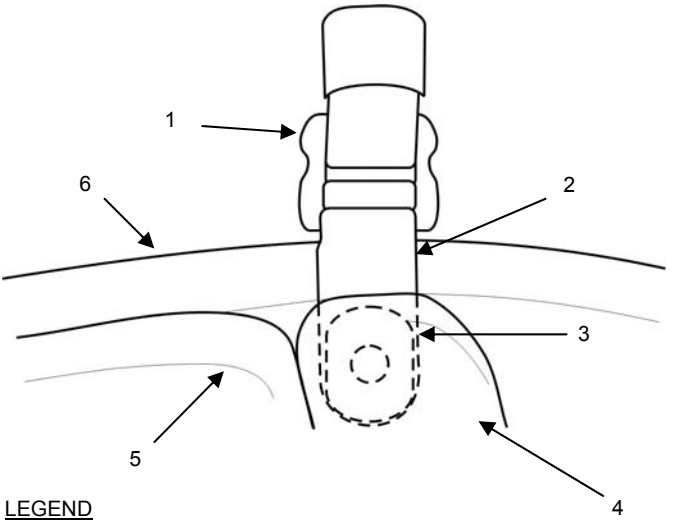
LEGEND
1. Screw/Conical Nut
2. Oblong/Oval Pad
3. Buckle Assembly

Figure 4. Pad Placement over Hardware (Front) (Gentex H).



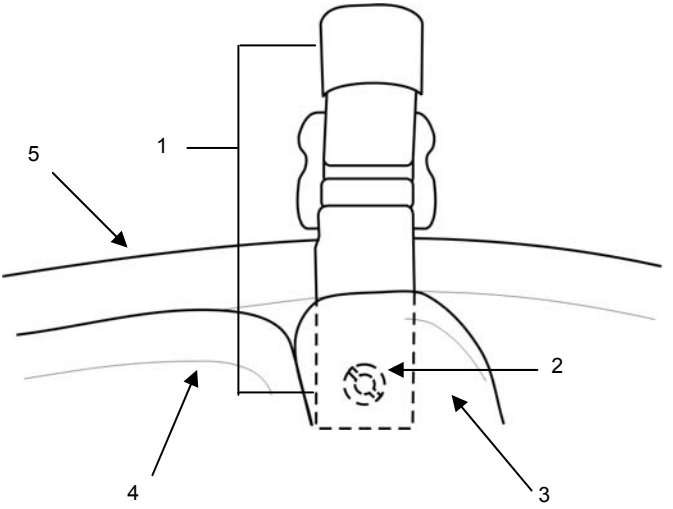
LEGEND
1. Screw/Conical Nut
2. Oblong/Oval Pad
3. Buckle Assembly

Figure 5. Pad Placement over Hardware (Front) (Rabintex).



LEGEND
1. Ladder Lock
2. P-Clamp
3. Screw/Nut
4. Oblong/Oval Pad
5. Trapezoidal Pad
6. Rim of Helmet

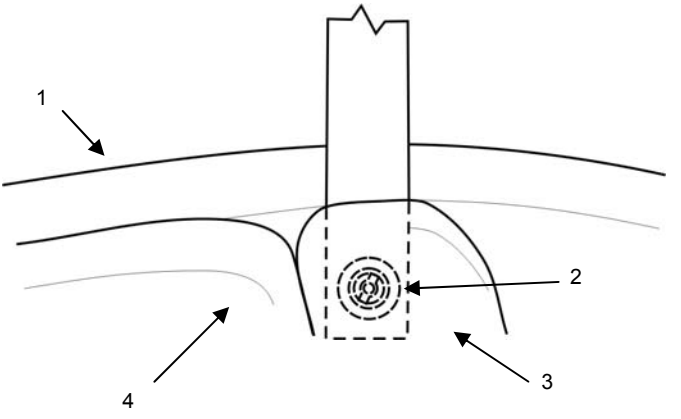
Figure 6. Pad Placement over Hardware (Rear) (MSA Current Version).



LEGEND

1. Attachment Tab
2. Screw/Post
3. Oblong/Oval Pad
4. Trapezoidal Pad
5. Rim of Helmet

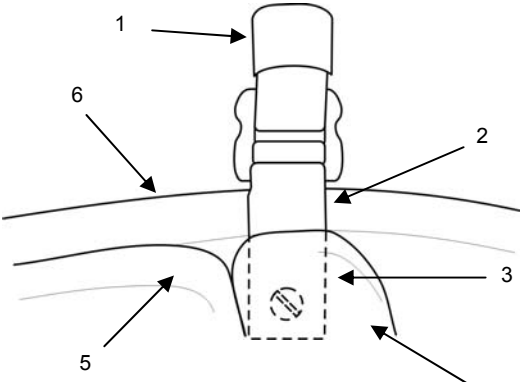
Figure 7. Pad Placement over Hardware (Rear) (SDS).



LEGEND

1. Rim of Helmet
2. Screw/Conical Nut
3. Oblong/Oval Pad
4. Trapezoidal Pad

Figure 8. Pad Placement over Hardware (Rear) (Gentex X and H Versions).



LEGEND
1. Ladder Lock
2. P-Clamp
3. Screw/Nut
4. Oblong/Oval Pad
5. Trapezoidal Pad
6. Rim of Helmet

Figure 9. Pad Placement over Hardware (Rear) (Rabintex).

END OF TASK

END OF WORK PACKAGE

CHAPTER 3

TROUBLESHOOTING PROCEDURES

FOR

ADVANCED COMBAT HELMET (ACH)

TROUBLESHOOTING PROCEDURES

INITIAL SETUP: Not Applicable

This work package lists troubleshooting tasks for each component of the ACH, along with the appropriate repair procedure.

TROUBLESHOOTING PROCEDURE
ADVANCED COMBAT HELMET

SYMPTOM
Unable to fasten chin strap retention system.
MALFUNCTION
Chin strap buckle is broken or dirty.
CORRECTIVE ACTION
Replace chin strap retention system, if necessary (see WP 0009).
Clean IAW WP 0018.
END OF TASK

SYMPTOM
Unable to attain or maintain helmet stability.
MALFUNCTION
Chin strap retention system webbing is torn/frayed.
CORRECTIVE ACTION
Replace chin strap retention system (see WP 0005).
END OF TASK

SYMPTOM
Unable to attain or maintain helmet stability
MALFUNCTION
Pad suspension system is worn
CORRECTIVE ACTION
Replace pad suspension system (see WP 0006).
END OF TASK

SYMPTOM
ACH shell will not provide adequate protection.
MALFUNCTION
Helmet shell is cracked or has holes in it.
CORRECTIVE ACTION
Turn ACH in for replacement.
END OF TASK

SYMPTOM
Pads will not stay secure in shell.
MALFUNCTION
Damaged or dirty hook disks or damaged or dirty pads.
CORRECTIVE ACTION
Clean or replace hook disks (see WP 0018) or clean or replace pads (see WP 0017 and WP 0005)

END OF TASK

SYMPTOM
NVG are unstable.
MALFUNCTION
NVD bracket is loose.
CORRECTIVE ACTION
Tighten NVD screw. If condition persists, replace NVD bracket IAW WP 0011.

END OF TASK

END OF WORK PACKAGE

CHAPTER 4

MAINTENANCE INSTRUCTIONS

FOR

ADVANCED COMBAT HELMET (ACH)

REPLACING THE HARDWARE

INITIAL SETUP: Not Applicable

This work package provides instructions for replacing the hardware in the ACH.

NOTE

In the following procedures, a coin is used to replace the ACH hardware. However, if available, a standard flathead screwdriver may also be used.

If any component of the chinstrap assembly needs to be replaced, replace the whole assembly, to include hardware and chinstrap, with NSN 8470-01-531-3351. The only authorized hardware used with the ACH are obtained with this NSN. All other hardware and chinstraps are no longer supported.

ALL VERSIONS

NOTE

1. Remove the pad suspension system and remove the chinstrap retention system with coins and lift out the hardware. (Figure 1).
2. Replace the hardware. Tighten the screws (Figure 1).
3. Inspect the screws to ensure tightness. If loosening persists, refer to higher level maintenance to obtain sealing compound (thread-locking compound) (see WP 0021). Use the sealing compound only as directed on the container.

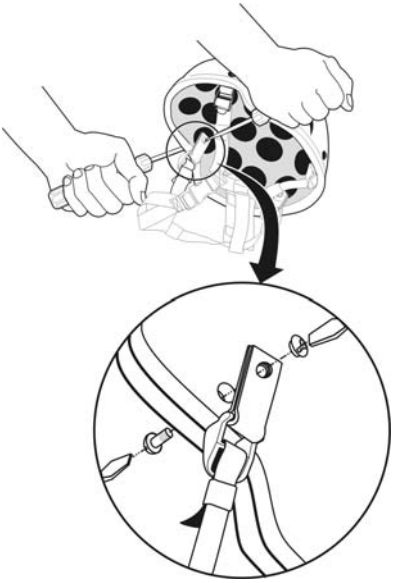


Figure 1. Hardware Installation.

END OF TASK

END OF WORK PACKAGE

REPLACING THE PAD SUSPENSION

This work package provides information on replacing the pad suspension.

REPLACING PAD SUSPENSION

NOTE

On one side, the pads are covered with a loop material. The loop side of the pad has production information on it. Attach only the loop side to the hook disks. On the other side, the pads are covered by moisture-wicking fabric. Do not attach this side to the hooks disks.

1. To replace the pad suspension, pull the individual pads off the inner helmet hook disks.

2. Reattach the pads as needed IAW WP 0005 and WP 0006.

END OF TASK

END OF WORK PACKAGE

CLEANING THE ADVANCED COMBAT HELMET

This work package provides instructions for cleaning the ACH, including the helmet shell, helmet cover, pad suspension system, and nape pad.

HELMET SHELL

1. Clean with mild soap and water. Use a soft brush or cloth.

2. Allow to air dry.

A small brush is useful in removing dirt from the hook disks on the inside of the shell.

END OF TASK

CHINSTRAP, HELMET COVER, AND PAD SUSPENSION

1. Clean with mild soap and water. Wash by hand or in machine in the gentle cycle, cold water.

2. Allow to air dry. Do not machine dry.

Keeping the hook and loop clean will help to maintain their ability to stick together.

END OF TASK

ARMOR NAP PAD

CAUTION

Do not machine wash or dry any parts. Do not attempt to dye item to fix discoloration. Do not put ballistic panel in water. If the panel gets wet, allow to air dry away from direct heat or sunlight. If panel becomes saturated with gasoline, bleach or lubricants, turn in for replacement as soon as possible. Failure to follow these precautions could affect the protective qualities of the nape pad.

1. Remove soft ballistic panel from outer fabric carrier through opening in carrier (Figure 1).



Figure 1. Removing Ballistic Panel from Outer Fabric Carrier.

2. Clean ballistic panel by wiping exterior with a moistened sponge or cloth.

3. Hand wash carrier in cold or warm water, using only mild detergent or soap.

4. Rinse carrier in clean, warm water.

5. Air dry indoors or in shade, away from heat sources.

6. Once clean and dry, re-insert ballistic panel into carrier through opening in carrier, insuring that the label on the ballistic panel faces toward wearer (Figure 2).



Figure 2. Re-inserting Ballistic Panel into Carrier.

END OF TASK

END OF WORK PACKAGE

PREVENTIVE MAINTENANCE CHECKS AND SERVICES

INTRODUCTION

General

Preventive maintenance checks and services (PMCS) are performed to keep the ACH in operating condition. The checks are used to find, correct, and report problems. The operator is to do the PMCS tasks shown in PMCS Table 1. PMCS is to be done before, during, and after use of the ACH.

Before you use the ACH, perform PMCS.

During use of the ACH, periodically perform PMCS.

After you have used the ACH, perform PMCS.

PMCS Column Description

Column (1) ITEM NO. The order the PMCS should be performed.

Column (2) INTERVAL. Tells when the check should be performed.

Column (3) ITEM TO BE CHECKED OR SERVICED. Tells which items to perform the PMCS procedure on.

Column (4) PROCEDURE. Tells which procedure is to be performed. If item cannot be repaired, it must be replaced.

Column (5) EQUIPMENT NOT READY/AVAILABLE IF. Tells what conditions render the ACH unfit to perform the mission.

Table 1. Preventive Maintenance Checks and Services.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/AVAILABLE IF
1	Before	Chin Strap Retention System	1. Check for cuts, frays or other damage or loose or damaged stitching in the webbing. If webbing is frayed more than ½" or has a discernable cut, or loose or damaged stitching, replace.	Chin strap webbing has cuts, frays, or other damage.
			2. Check for missing, cracked, worn, or damaged hardware or buckle assembly. Refer to higher level maintenance for repair.	Hardware or buckle assembly is missing, cracked, worn, or damaged.
			3. Check for loose or missing screws. Tighten screws or refer to higher level maintenance if loose.	Screws loose.

Table 1. Preventive Maintenance Checks and Services—Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/AVAILABLE IF
2	Before	Pad Suspension System	1. Check for cuts, tears or other damage to outer fabric or inner foam. If pads are torn or cut exposing the inner padding material, replace.	Pads torn, cut, or otherwise damaged.
			2. Check pads for compressibility. Pads in service should resist compression the same as new pads when squeezed with hands. Compressed pads do not return to original shape, If pads have lost compressibility, replace.	Compressed pads do not return to original shape.
3	Before	Shell	1. Check for gouges, scrapes, cracks, delamination or other damage to shell. If gouges, scrapes, or damage extends below the surface (below the paint), refer to higher level maintenance for repair.	Gouges, scrapes, cracks, delamination or other damage extends below the surface (below the paint).
			2. Check for loose or damaged edging. Refer to higher level maintenance for repair.	Edging is loose or damaged.

Table 1. Preventive Maintenance Checks and Services—Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/AVAILABLE IF
4	Before	Cover	1. Check for cuts, frays or other damage to the fabric or cut or frayed stitching. If damaged, replace.	Cuts, frays, or other damage to the fabric or cut or frayed stitching.
5	Before	Eyewear Retention Straps	1. Check for cuts, frays or other damage to the webbing. If damaged, replace. 2. Check for broken snaps or studs. Replace.	Cuts, frays, to the webbing. Snaps or studs bent or broken.
6	Before	Front Bracket Assembly	1. Check for cracked bracket. If bracket is cracked, replace. 2. Check for loose or missing screw. If missing, replace. If loosening persists, refer to higher level maintenance.	Bracket is cracked. Screw is loose or missing.

Table 1. Preventive Maintenance Checks and Services—Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/AVAILABLE IF
7	Before	Armor Nape Pad	1. Check for evidence of hit by a bullet or a fragment. If present, replace. 2. Tears or damage to the carrier. 3. Check that the soft armor can be flattened after being bunched. 4. Check that hook and loop tab securely attaches nape pad to the helmet. 5. Check that elastic is not torn beyond repair. 6. Carrier can be adequately cleaned, is not discolored, and has not been saturated with gasoline, bleach, or lubricants	Evidence of hit by a bullet or fragment. Carrier is torn or damaged. Soft armor is bunched and cannot be flattened. Hook and look tab does not securely attach nape pad to the helmet. Elastic is torn beyond repair. Carrier cannot be adequately cleaned, is discolored, or has been saturated with gasoline, bleach, or lubricants.
8	After	Chin Strap Retention System, Hardware, Pad Suspension System, Shell	1. Perform all PMCS steps in Items 1-6 after use.	See item 1 - 7.

END OF WORK PACKAGE

CHAPTER 5

SUPPORTING INFORMATION

FOR

ADVANCED COMBAT HELMET (ACH)

REFERENCES

This work package lists related field manuals, forms, technical manuals, and miscellaneous publications.

FIELD MANUALS

FM 4-25.11	First Aid

FORMS

DA Form 2028	Recommended changes to Publications and Blank Forms
SF 368	Product Quality Deficiency Report

MISCELLANEOUS PUBS

DA PAM 750-8	The Army Maintenance Management System (TAMMS) Users Manual

END OF WORK PACKAGE

SUPPORTING INFORMATION

COMPONENTS OF END ITEMS (COEI) AND BASIC ISSUE ITEMS (BII) LISTS

INTRODUCTION

Scope

This work package lists COEI and BII for the ACH to help you inventory items for safe and efficient operation of the equipment.

General

The COEI and BII information is divided into the following lists:

Components of End Item (COEI). This list is for information purposes only and is not authority to requisition replacements. These items are part of the ACH. As part of the end item, these items must be with the end item whenever it is issued or transferred between property accounts. Items of COEI are removed and separately packaged for transportation or shipment only when necessary. Illustrations are furnished to help you find and identify the items.

Basic Issue Items (BII). These essential items are required to place the ACH in operation, operate it, and to do emergency repairs. Although shipped separately packaged, BII must be with the ACH during operation and when it is transferred between property accounts. Listing these items is your authority to request/requisition them for replacement based on authorization of the end item by the TOE/MTOE. Illustrations are furnished to help you find and identify the items.

Explanation of Columns in the COEI List and BII List

Column (1) Illus Number. Gives you the number of the item illustrated.

Column (2) National Stock Number (NSN). Identifies the stock number of the item to be used for requisitioning purposes.

Column (3) Description, CAGEC, and Part Number. Identifies the Federal item name (in all capital letters) followed by a minimum description when needed. The stowage location of COEI and BII is also included in this column. The last line below the description is the part number and the Commerical and Government Entity Code (CAGEC) (in parentheses) and the part number.

Column (4) Usable On Code. When applicable, gives you a code if the item you need is not the same for different models of equipment.

Column (5) Unit of Issue (U/I). Indicates the physical measurement or count of the item as issued per the National Stock Number shown in column (2).

Column (6) Qty Rqr. Indicates the quantity required.

Table 1. Components of End Item List (COEI).

(1) Illus Number	(2) National Stock Number (NSN)	(3) Description, Part Number/(CAGEC)	(4) Usable on Code	(5) U/I	(6) Qty Rqr
1	8415-01-524-5842	BAND, HELMET, CAMOUFLAGE, Foliage green MIL-B-1851 (81349)	N/A	ea	1
1	8415-01-495-6714	BAND, HELMET, CAMOUFLAGE, Tan MIL-B-1851 (81349)	N/A	ea	1
2	8470-01-476-5643	PAD SET, SUSPENSION, ACH, set of size 6 pads (3/4") 8470-01-F01-0477 (81337)	N/A	se	1
3	8470-01-530-0868	STRAP ASSEMBLY, CHIN, Foliage green CO/PD 05-04 (81337)	N/A	ea	1
4	8415-01-521-8802	STRAP, EYEWEAR RETENTION, Foliage green MIL-DTL-32134 (81337)	N/A	pr	1
4	8415-01-521-8801	STRAP, EYEWEAR RETENTION, Tan MIL-DTL-32134 (81337)	N/A	pr	1
5	8415-01-552-4599	PAD, NAPE, ARMOR, X-style, S/M ACH ARM-NP3-24-000	N/A	ea	1
5	8415-01-552-4602	PAD, NAPE, ARMOR, X-style, L/XL ACH ARM-NP4-24-000	N/A	ea	1
6	8415-01-552-4607	PAD, NAPE, ARMOR, H-style, S/M ACH ARM-NP1-24-000	N/A	ea	1
6	8415-01-552-4610	PAD, NAPE, ARMOR, H-style, L/XL ACH ARM-NP2-24-000	N/A	ea	1

Table 2. Basic Issue Items List (BII).

(1) Illus Number	(2) National Stock Number	(3) Description, Part Number/(CAGEC)	(4) Usable on Code	(5) U/I	(6) Qty Rqr
1	8415-01-515-4662	COVER, HELMET, REVERSIBLE, woodland/desert with communication flap, size S/M 84-01 (81337)	N/A	ea	1
1	8415-01-515-4663	COVER, HELMET, REVERSIBLE, woodland/desert with communication flap, size L/XL 84-01 (81337)	N/A	ea	1
2	8415-01-515-4286	COVER, HELMET, Non-reversible, white, with communication flap, size S/M 85-04 (81337)	N/A	ea	1
2	8415-01-515-4288	COVER, HELMET, Non-reversible, white, with communication flap, size L/XL 85-04 (81337)	N/A	ea	1
3	8415-01-515-4674	COVER, HELMET, REVERSIBLE, woodland/desert, without communication flap, size L/XL 86-01 (81337)	N/A	ea	1
4	8415-01-521-8806	COVER, HELMET, UNIVERSAL CAMOUFLAGE PATTERN, Non-reversible, with communication flap, universal pattern, size S/M 552-04-SMALL/MEDIUM (81337)	N/A	ea	1
4	8415-01-521-8808	COVER, HELMET, UNIVERSAL CAMOUFLAGE PATTERN, Non-reversible, with communication flap, universal pattern, size L/XL 552-04-LARGE/XLARGE (81337)	N/A	ea	1

END OF WORK PACKAGE

SUPPORTING INFORMATION

EXPENDABLE AND DURABLE ITEMS LISTS

INTRODUCTION

Scope

This work package lists expendable and durable items that you will need to operate and maintain the Advanced Combat Helmet. This list is for information only and is not authority to requisition the listed items. These items are authorized to you by CTA 50-970, Expendable/Durable Items (Except Medical, Class V Repair Parts, and Heraldic Items), CTA 50-909, Field and Garrison Furnishings and Equipment or CTA 8-100, Army Medical Department Expendable/Durable Items.

Explanation of Columns in the Expendable/Durable Items List

Column (1) Item No. This number is assigned to the entry in the list and is referenced in the narrative instructions to identify the item (e.g., “Use brake fluid (item 5, WP 0098)).

Column (2) Level. This column identifies the lowest level of maintenance that requires the listed item (C = Operator/Crew).

Column (3) National Stock Number (NSN). This is the NSN assigned to the item which you can use to requisition it.

Column (4) Item Name, Description, Part Number/(CAGEC). This column provides the other information you need to identify the item. The last line below the description is the part number and the Commercial and Government Entity Code (CAGEC) (in parentheses).

Column (5) U/I. Unit of Issue (U/I) code shows the physical measurement or count of an item, such as gallon, dozen, gross, etc.

Table 1. Expendable and Durable Items List.

(1) Item No.	(2) Level	(3) National Stock Number (NSN)	(4) Item Name, Description, Part Number/(CAGEC)	(5) U/I
1	C	8040-01-388-0735	ADHESIVE, adhesive for edging 40640(05972)	CO
2	C	6850-01-228-7266	CLEANING COMPOUND, SOLVENT, clean up for adhesive 76820(05972)	BT
3	C		Cloth	EA
4	C		Mild Soap	EA
5	C	8030-01-104-5392	SEALING COMPOUND, thread locking compound 24221(05972)	BX
6	C		Soft Brush	EA

END OF WORK PACKAGE

ASSOCIATED AND REPAIR ITEMS LIST

This work package lists the associated and repair items you will need to operate and maintain the Advanced Combat Helmet (ACH). This list is for information purposes only and is not authority to requisition replacements.

Table 1. Associated and Repair Items List.

(1) Item No.	(2) Description, Part Number/(CAGEC)	(3) U/I	(4) National Stock Number
1	BRACKET, LEVER, NVD front bracket assembly A3297307 (80063)	ea	5340-01-509-1467
2	STRAP, CHIN, ATTACHMENT, Tab Foliage green 2426 (3T951)	bx	8470-01-531-3897
3	CHIN STRAP ONLY, ADVANCED COMBAT HELMET, Foliage green, 2418 (3T951)	ea	8470-01-531-3351
4	COVER, HELMET, REVERSIBLE, Woodland/desert, with communication flap, size S/M 84-01 (81337)	ea	8415-01-515-4662
5	COVER, HELMET, REVERSIBLE, Woodland/desert, with communication flap, size L/XL 84-01 (81337)	ea	8415-01-515-4663
6	COVER, HELMET, Non-reversible, white, with communication flap, size S/M 85-04 (81337)	ea	8415-01-515-4286
7	COVER, HELMET, Non-reversible, white, with communication flap, size L/XL 85-04 (81337)	ea	8415-01-515-4288
8	FASTENER TAPE, HOOK, Hook disks 246-03 (81337)	ro	8470-01-506-6742

Table 1. Associated and Repair Items List—Continued.

(1) Item No.	(2) Description, Part Number/(CAGEC)	(3) U/I	(4) National Stock Number
9	HELMET, ADVANCED COMBAT, Foliage green with one NVD mounting hole, size small shell, size 6 pads (3/4" thick) 268-05 268-05 (81337)	ea	8470-01-529-6302
10	HELMET, ADVANCED COMBAT, Foliage green with one NVD mounting hole, size medium shell, size 6 pads (3/4" thick) 268-05 (81337)	ea	8470-01-529-6329
11	HELMET, ADVANCED COMBAT, Foliage green with one NVD mounting hole, size large shell, size 6 pads (3/4" thick) 268-05 (81337)	ea	8470-01-529-6344
12	HELMET, ADVANCED COMBAT, Foliage green with one NVD mounting hole, size x-large shell, size 6 pads (3/4" thick) 268-05 (81337)	ea	8470-01-529-6365
13	PAD SET, SUSPENSION, ACH, set of size 6 pads (3/4" thick) 8470-01-F01-0477 (81337)	se	8470-01-476-5643
14	PAD, HELMET, ADVANCED COMBAT, circular crown pad, size 6 (3/4" thick) 252-03 (81337)	ea	8470-01-506-6626
15	PAD, HELMET, ADVANCED COMBAT, oblong/oval pad, size 6 (3/4" thick) 251-03 (81337)	ea	8470-01-506-6454
16	PAD, HELMET, ADVANCED COMBAT, trapezoidal pad, size 6 253-03 (81337)	ea	8470-01-506-6851
17	PAD, NAPE, ARMOR, X-style, S/M ACH ARM-NP3-24-000	ea	8415-01-552-4599

Table 1. Associated and Repair Items List—Continued.

(1) Item No.	(2) Description, Part Number/(CAGEC)	(3) U/I	(4) National Stock Number
18	PAD, NAPE, ARMOR, X-style L/XL ACH ARM-NP4-24-000	ea	8415-01-552-4602
19	PAD, NAPE, ARMOR, H-style S/M ACH ARM-NP1-24-000	ea	8415-01-552-4607
20	PAD, NAPE, ARMOR, H-style L/XL ACH ARM-NP2-24-000	ea	8415-01-552-4610
21	POST, HELMET, For mounting BRACKET, LEVER on ACH 8-2-647 (81337)	bx	8470-01-144-5367
22	POST, HELMET, Mounting post for STRAP ASSEMBLY, CHIN 2424 (3T951)	bx	8470-01-531-4284
23	SCREW, MACHINE, 8-32 x 3/8 in long screw for plugging hole in front of ACH if no NVD used MS51957-43B (96906)	hd	5305-00-182-9265
24	SCREW, HELMET, Mounting screw for STRAP ASSEMBLY, CHIN 2423 (3T951)	bx	8470-01-531-4268
25	STRAP, EYEWEAR RETENTION, Foliage green MIL-DTL-32134 (81337)	pr	8415-01-521-8802
26	STRAP, EYEWEAR RETENTION, Tan MIL-DTL-32134 (81337)	pr	8415-01-521-8801

END OF WORK PACKAGE

ADDITIONAL INFORMATION

This work package lists items you will need to operate and maintain the Advanced Combat Helmet (ACH). This list is for information purposes only and is not authority to requisition replacements.

Table 1. Additional Items List.

(1) Item No.	(2) Description, Part Number/(CAGEC)	(3) U/I	(4) National Stock Number (NSN)
1	CALIPER, OUTSIDE 452-12 (73792)	ea	5210-01-434-9493
2	TAPE, MEASURING A-A-1666 (58536)	ea	8315-00-782-3520
3	Screwdriver	ea	

END OF WORK PACKAGE

OPERATOR RECORD OF HIT

Name: _____

Rank: _____

Unit: _____

Phone: _____ E-Mail: _____

HELMET Size: _____ Date of Issue: _ _/_ _/_ _

Duty Being Performed When Hit: _____

Hit Caused by (circle): Fragmentation (Mine, Grenade, Booby Trap Artillery, Other)

Date of Hit: _ _/_ _/_ _

Estimated range from point of detonation: _____

Location of Hit(s) on Advanced Combat Helmet:

Continued to Perform Mission (circle one)?: Yes No

Was Personal Injury Sustained (circle one)?: Yes No

Description of Injury: _____

OPERATOR RECORD OF HIT—Continued

Mail Record of Hit to postal address or responses to electronic mail address:

Postal Address:

Commander
U.S. Army Soldier and Biological Chemical Command
ATTN: AMSRD-NSC-IP-A Kansas Street Natick, MA 01760

Electronic Mail Address:

http://www.sbccom.army.mil/feedback/index.htm

END OF WORK PACKAGE

By Order of the Secretary of the Army:

GEORGE W. CASEY, JR.
General, United States Army
Chief of Staff

Official:



JOYCE E. MORROW
Administrative Assistant to the
Secretary of the Army
0806401

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These are the instructions for sending an electronic 2028

The following format must be used if submitting an electronic 2028. The subject line must be exactly the same and all fields must be included; however only the following fields are mandatory: 1, 3, 4, 5, 6, 7, 8, 9, 10, 13, 15, 16, 17, and 27.

From: “Whomever” <whomever@avma27.army.mil>
To: soldier.pubs@us.army.mil
Subject: DA Form 2028
1. ***From:*** Joe Smith
2. *Unit:* home
3. ***Address:*** 4300 Park
4. ***City:*** Hometown
5. ***St:*** MO
6. ***Zip:*** 77777
7. ***Date Sent:*** 19--OCT--93
8. ***Pub no:*** 55--2840--229--23
9. ***Pub Title:*** TM
10. ***Publication Date:*** 04--JUL--85
11. *Change Number:* 7
12. *Submitter Rank:* MSG
13. ***Submitter FName:*** Joe
14. *Submitter MName:* T
15. ***Submitter LName:*** Smith
16. ***Submitter Phone:*** 123--123--1234
17. ***Problem:*** **1**
18. *Page:* 2
19. *Paragraph:* 3
20. *Line:* 4
21. *NSN:* 5
22. *Reference:* 6
23. *Figure:* 7
24. *Table:* 8
25. *Item:* 9
26. *Total:* 123
27. ***Text:***

This is the text for the problem below line 27.

PIN: 080445-000