TM 10-8470-208-24&P

TECHNICAL MANUAL

FIELD AND SUSTAINMENT MAINTENANCE MANUAL INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST FOR

INTERCEPTOR BODY ARMOR SYSTEM

HEADQUARTERS, DEPARTMENT OF THE ARMY

21 APRIL 2010

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. Also included are explanations of safety and hazardous materials icons used within the technical manual.

EXPLANATION OF SAFETY WARNING ICONS

FLYING PARTICLES – arrows bouncing off face with face shield shows that particles flying through the air will harm face.

SHARP OBJECT – hand being stabbed by object shows that the material will pierce the skin.

GENERAL SAFETY WARNINGS DESCRIPTION

WARNING

For First Aid treatment, refer to FM 4-25.11.

WARNING

Pressing, starching, dry cleaning, or the use of fabric softener will degrade your body armor. Failure to following these instructions could result in harm to the soldier.

WARNING

If your body armor is exposed to any Chemical, Biological, Radiological, and Nuclear (CBRN) elements dispose of in accordance with FM 3.11.3.

LIST OF EFFECTIVE PAGES/WORK PACKAGES

NOTE: Zero in the “Change No.” column indicates an original page or work package.

Date of issue for the original manual is:

Original 21 April 2010

TOTAL NUMBER OF PAGES FOR FRONT AND REAR MATTER IS 40 AND TOTAL NUMBER OF WORK PACKAGES IS 48, CONSISTING OF THE FOLLOWING:

Page / WP No.	Change No.	Page / WP No.	Change No.
Cover (2 pgs)	0	WP 0037 (6 pgs)	0
Warning (2 pgs)	0	Chp 9 title page (2 pgs)	0
Chp 1 title page (2 pgs)	0	WP 0038 (6 pgs)	0
WP 0001 (4 pgs)	0	WP 0039 (2 pgs)	0
WP 0002 (22 pgs)	0	WP 0040 (4 pgs)	0
WP 0003 (2 pgs)	0	WP 0041 (2 pgs)	0
Chp 2 title page (2 pgs)	0	WP 0042 (2 pgs)	0
WP 0004 (4 pgs)	0	Chp 10 title page (2 pgs)	0
WP 0005 (4 pgs)	0	WP 0043 (2 pgs)	0
WP 0006 (4 pgs)	0	WP 0044 (4 pgs)	0
Chp 3 title page (2 pgs)	0	WP 0045 (6 pgs)	0
WP 0007 (2 pgs)	0	WP 0046 (2 pgs)	0
WP 0008 (22 pgs)	0	WP 0047 (2 pgs)	0
WP 0009 (16 pgs)	0	WP 0048 (2 pgs)	0
WP 0010 (14 pgs)	0	F1 (2 pgs)	0
WP 0011 (20 pgs)	0	F2 (2 pgs)	0
WP 0012 (20 pgs)	0	F3 (2 pgs)	0
WP 0013 (12 pgs)	0	F4 (2 pgs)	0
Chp 4 title page (2 pgs)	0	F5 (2 pgs)	0
WP 0014 (2 pgs)	0	F6 (2 pgs)	0
WP 0015 (2 pgs)	0	Inside back cover	0
WP 0016 (2 pgs)	0	Back cover	0
WP 0017 (2 pgs)	0		
WP 0018 (2 pgs)	0		
Chp 5 title page (2 pgs)	0		
WP 0019 (14 pgs)	0		
WP 0020 (6 pgs)	0		
WP 0021 (10 pgs)	0		
WP 0022 (4 pgs)	0		
WP 0023 (2 pgs)	0		
WP 0024 (16 pgs)	0		
WP 0025 (2 pgs)	0		
WP 0026 (4 pgs)	0		
WP 0027 (4 pgs)	0		
WP 0028 (2 pgs)	0		
WP 0029 (4 pgs)	0		
WP 0030 (2 pgs)	0		
WP 0031 (6 pgs)	0		
Chp 6 title page (2 pgs)	0		
WP 0032 (2 pgs)	0		
Chp 7 title page (2 pgs)	0		
WP 0033 (4 pgs)	0		
WP 0034 (4 pgs)	0		
WP 0035 (4 pgs)	0		
Chp 8 title page (2 pgs)	0		
WP 0036 (2 pgs)	0		

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 21 April 2010

TECHNICAL MANUAL

FIELD AND SUSTAINMENT MAINTENANCE MANUAL INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST (RPSTL) FOR

INTERCEPTOR BODY ARMOR SYSTEM

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, U.S. Army TACOM Life Cycle Management Command, ATTN: AMSTA-LCL-MPP / TECH PUBS, 1 Rock Island Arsenal, Rock Island, IL 61299-7630. You may also send in your recommended changes via electronic mail or by fax. Our fax number is DSN 793-0726 and commercial number (309) 782-0726. Our e-mail address is TACOMLCMC.DAForm2028@us.army.mil. A reply will be furnished to you.

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

TABLE OF CONTENTS

TABLE OF CONTENTS

TABLE OF CONTENTS

TABLE OF CONTENTS

TABLE OF CONTENTS

TABLE OF CONTENTS

TABLE OF CONTENTS

TABLE OF CONTENTS

HOW TO USE THIS MANUAL

HOW TO OBTAIN TECHNICAL MANUALS

When a new system is introduced to the Army inventory, it is the responsibility of the receiving units to notify and inform the Unit Publications Clerk that a Technical Manual is available for the new system. Throughout the life cycle of the new system, the Publications Proponent will also provide updates and changes to the Technical Manual.

To receive new Technical Manuals or change packages to fielded Technical Manuals, provide the Unit Publications Clerk the full Technical Manual number, title, date of publication, and number of copies required. The Unit Publications Clerk will then justify the request through the Unit Publications Officer. When the request is approved, DA Form 12-R is used to order the Technical Manual from the Army Publishing Directorate (APD). Obtain the form and request a publications account from the APD Web site at http://www.apd.army.mil. Once on the Website, click on the “Orders/Subscriptions/Reports” tab. From the dropdown menu, select “Establish an Account,” then select “Tutorial” and follow the instructions in the tutorial presentation.

Complete information for obtaining Army publications can be found in DA PAM 25-33.

HOW TO USE THIS MANUAL

In this manual, primary chapters appear in upper case/capital letters; work packages are presented in numeric sequence, e.g., 0001, 0002; paragraphs within a work package are not numbered and are presented in a titled format. For a first level paragraph, titles are in all upper case/capital letters, e.g., FRONT MATTER. Subordinate paragraph titles will have the first letter of the first word of each principle word all upper case/capital letters, e.g., Manual Organization and Page Numbering System. The location of additional material that must be referenced is clearly marked. Illustrations supporting maintenance procedures/text are located underneath, or as close as possible to, their referenced paragraph.

FRONT MATTER. - Front matter consists of front cover, warning summary, title block, table of contents, and how to use this manual pages.

CHAPTER 1 – GENERAL INFORMATION, EQUIPMENT DESCRIPTION, AND THEORY OF OPERATION. Chapter 1 contains introductory information on the Interceptor Body Armor System and its associated equipment, as well as equipment description and data and theory of operation.

CHAPTER 2 – FIELD MAINTENANCE INSTRUCTIONS. Chapter 2 starts all the field maintenance information and individual service maintenance work packages.

CHAPTER 3 – SUSTAINMENT MAINTENANCE INSTRUCTIONS. Chapter 3 starts all the sustainment maintenance information and individual service maintenance work packages.

CHAPTER 4 – SUSTAINMENT MAINTENANCE INSTRUCTIONS FOR OUTER TACTICAL VEST (OTV). Chapter 4 starts all the sustainment maintenance information and individual service maintenance work packages for the Outer Tactical Vest.

CHAPTER 5 – SUSTAINMENT MAINTENANCE INSTRUCTIONS FOR IMPROVED OUTER TACTICAL VEST (IOTV) AND IMPROVED OUTER TACTICAL VEST GEN II (IOTV AND IOTV GEN II). Chapter 5 starts all the sustainment maintenance information and individual service maintenance work packages for the Improved Outer Tactical Vest and the Improved Outer Tactical Vest Gen II.

CHAPTER 6 – SUSTAINMENT MAINTENANCE INSTRUCTIONS FOR ESAPI AND ESBI. Chapter 6 starts all the sustainment maintenance information and individual service maintenance work packages for the ESAPI and ESBI.

CHAPTER 7 – ILLUSTRATED PARTS LIST. Chapter 7 contains Illustrated Lists of Manufactured Items for the OTV, IOTV, and IOTV Gen II.

CHAPTER 8 – SHIPMENT MOVEMENT AND STORAGE. Chapter 8 describes Preparation for Storage and Shipment for the OTV, IOTV, and IOTV Gen II.

CHAPTER 9 – PARTS INFORMATION. Chapter 9 contains Repair Parts and Special Tools List (RPSTL), national stock number index and part number index.

CHAPTER 10 – SUPPORTING INFORMATION. Chapter 10 contains references, maintenance allocation chart and expendable and durable items list.

REAR MATTER. Rear matter consists of an alphabetical index, DA Form 2028, authentication page, sewing patterns, and back cover.

Manual Organization and Page Numbering System. The manual is divided into eight major chapters that detail the topics mentioned above. Within each chapter are work packages covering a wide range of topics. Each work package is numbered sequentially starting at page 1. The work package has its own page numbering scheme and is independent of the page numbering used by other work packages. Each page of a work package has a page number of the form XXXX-YY where XXXX is the work package number (e.g. 0010 is work package 10) and YY represents the number of the page within that work package. A page number such as 0010-1/2 Blank means that page 1 contains information but page 2 of that work package has been intentionally left blank.

Finding Information. The table of contents permits the reader to find information in the manual quickly. The reader should start here first when looking for a specific topic. The table of contents lists the topics, figures, and tables contained within each chapter and the work package sequence number where it can be found.

Example: If the reader were looking for information about the purpose of the Interceptor Body Armor System, which is a general information topic, the table of contents indicates that general information can be found in Chapter 1. Scanning down the listings for chapter 1, information on the purpose of the Interceptor Body Armor System can be found in WP 0001, General Information. (i.e. Work Package 01).

CHAPTER 1

GENERAL INFORMATION, EQUIPMENT DESCRIPTION, AND THEORY OF OPERATION FOR INTERCEPTOR BODY ARMOR SYSTEM

FIELD AND SUSTAINMENT MAINTENANCE
INTERCEPTOR BODY ARMOR SYSTEM
GENERAL INFORMATION

SCOPE

Type of Manual

This technical manual provides field and sustainment maintenance instructions for the Interceptor Body Armor System. This manual also provides a Repair Parts and Special Tools List (RPSTL), located in WP 0038 through WP 0042.

Model Number(s) and Equipment Name

INTERCEPTOR BODY ARMOR SYSTEM consisting of:

- Outer Tactical Vest (OTV)
- Improved Outer Tactical Vest (IOTV)
- Improved Outer Tactical Vest (IOTV Gen II)
- Enhanced Small Arms Protective Inserts (ESAPI)
- Enhanced Side Ballistic Inserts (ESBI)
- Small Arms Protective Inserts (SAPI)
- Ancillary Equipment

Purpose of Equipment

The purpose of the Interceptor Body Armor System is to increase survivability by stopping or slowing bullets and fragments and reducing the number and severity of wounds.

MAINTENANCE FORMS, RECORDS, AND REPORTS

Department of the Army forms and procedures used for equipment maintenance will be those prescribed by (as applicable) DA PAM 750-8, The Army Maintenance Management System (TAMMS) Users Manual; DA PAM 738-751, Functional Users Manual for the Army Maintenance Management Systems-Aviation (TAMMS-A); or AR 700-138, Army Logistics Readiness and Sustainability.

REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR)

If your Interceptor Body Armor System 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. We will send you a reply.

CORROSION PREVENTION AND CONTROL (CPC)

Corrosion Prevention and Control (CPC) of Army materiel is a continuing concern. It is important that any corrosion 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.

CORROSION PREVENTION AND CONTROL (CPC) – CONTINUED

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.

DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE

There are no requirements to destroy the Interceptor Body Armor System for prevention of enemy use at this level of maintenance. Follow published demilitarization procedures when turning unserviceable items in to DRMS.

PREPARATION FOR STORAGE OR SHIPMENT

For storage and shipment, refer to WP 0036 of this manual.

WARRANTY INFORMATION

The Interceptor Body Armor System does not contain warranty provisions.

NOMENCLATURE CROSS-REFERENCE LIST

Table 1. Nomenclature Cross-Reference List.

Common Name	Official Nomenclature
100 mile-per-hour Tape	Pressure Sensitive Adhesive Tape
Duct Tape	Pressure Sensitive Adhesive Tape
Rigger's Tape	Pressure Sensitive Adhesive Tape
Ballistic Collar	Yoke/Collar Assembly
Cable Release Assembly	Improved Outer Tactical Vest Cord Cable Assembly
Hard Armor Protective Inserts	Small Arms Protective Inserts
Hard Armor Protective Inserts	Enhanced Small Arms Protective Inserts
Hard Armor Protective Inserts	Enhanced Side Ballistic Inserts
Hook and Loop Fastener	Hook and Pile Fastener
Internal Elastic Band	Body Armor Waistband
Lower Back Protector	Kidney Protector Body Armor

LIST OF ABBREVIATIONS/ACRONYMS

Table 2. List of Acronyms and Abbreviations.

Acronym/Abbreviation	Meaning
BII	Basic Issue Item
CBRN	Chemical, Biological, Radiological, Nuclear
CIF	Central Issue Facility
COEI	Component of End Item
ea	Each
EIR	Equipment Improvement Recommendation
ESAPI	Enhanced Small Arms Protective Inserts
ESBI	Enhanced Side Ballistic Inserts
FM	Field Manual
ft	Foot
lb	Pound(s)
MOLLE	Modular Lightweight Load-Carrying Equipment
NIIN	National Item Identification Number
NSN	National Stock Number
P/N	Part Number
PMCS	Preventive Maintenance Checks and Services
SAPI	Small Arms Protective Inserts
SF	Standard Form

LIST OF ABBREVIATIONS/ACRONYMS – CONTINUED

Table 2. List of Abbreviations and Acronyms – Continued.

TM	Technical Manual
WP	Work Package
XS	Extra-Small
S	Small
M	Medium
ML	Medium-Long
L	Large
LL	Large-Long
XL	Extra Large
XLL	Extra Large-Long
2XL	Extra Extra Large
3XL	Extra Extra Extra Large
4XL	Extra Extra Extra Extra Large

QUALITY OF MATERIAL

Material used for replacement, repair, or modification must meet the requirements of this manual. If quality of material requirements are not stated in this manual, the material must meet the requirements of the drawings, standards, specifications, or approved engineering change proposals applicable to the subject equipment.

SAFETY, CARE AND HANDLING

The following subparagraphs summarize the safety, care and handling requirements for the Interceptor Body Armor System assembly.

Safety

Always pay attention to Warnings, Cautions and Notes appearing throughout the manual. They will appear prior to applicable procedures. Ensure you read and understand their content to prevent serious injury to yourself and others, or damage to equipment.

Care and Handling

Every effort shall be made to protect the equipment from weather elements, dust, dirt, oil, grease, and acid.

SUPPORTING INFORMATION FOR REPAIR PARTS, SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT

Special tools, TMDE, and support equipment are required. The Maintenance Allocation Chart (MAC) Introduction and MAC can be found in WP 0044 and WP 0045 respectively.

REPAIR PARTS AND SPECIAL TOOLS LIST (RPSTL)

Repair parts are listed and illustrated in WP 0038 through WP 0042 of this manual.

COMMON TOOLS AND EQUIPMENT

For authorized common tools and equipment, refer to the Modified Table of Organization and Equipment (MTOE), 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, as applicable to your unit.

END OF WORK PACKAGE

FIELD AND SUSTAINMENT MAINTENANCE
INTERCEPTOR BODY ARMOR SYSTEM
EQUIPMENT DESCRIPTION AND DATA

EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES

The Interceptor Body Armor (IBA) System is a modular system that consists of a vest, hard armor protective inserts, and attachments (ancillary equipment) that increase area of coverage and level of protection.

The IBA system is issued to Soldiers in a variety of configurations. Some vests are issued with ancillary equipment while with other vests, ancillary equipment is issued separately. Therefore, the term ancillary equipment, as used in this manual, is used to describe the attachments to the base vest configuration. Refer to the Repair Parts and Special Tools Lists in WP 0038 through 0042 to determine which attachments are issued with each configuration.

Vest

The IBA vest comes in three basic configurations: the Outer Tactical Vest (OTV), the Improved Outer Tactical Vest (IOTV) and the Improved Outer Tactical Vest (IOTV) Gen II.

OTV. The OTV is a single-piece vest that is donned and doffed in a manner similar to an ACU blouse. It is opened and closed in the front and arms go through arm holes.

IOTV/IOTV Gen II. The IOTV and IOTV Gen II consist of a front piece and a back piece held together by a cable release assembly. The IOTV and IOTV Gen II design distributes the weight of the IBA system more evenly than previous versions of IBA.

Hard Armor Protective Inserts

There are two types of hard armor protective inserts: inserts that protect the side of the Soldier and inserts that protect the front and back of the Soldier. All hard armor protective inserts are made of a ceramic material covered in cloth. The hard armor protective inserts are curved to fit the body.

The Enhanced Side Ballistic Inserts (ESBI) protect the Soldier’s side. The Small Arms Protective Inserts (SAPI), which are black, and Enhanced Small Arms Protective Inserts (ESAPI), which are green, protect the Soldier’s front and back.

The SAPI plates are authorized for training use only. They do not provide the appropriate level of ballistic protection for deploying Soldiers and shall never be issued to deploying Soldiers. All further references to hard armor protective inserts will be for the ESAPI and ESBI.

Ancillary Equipment

Ancillary equipment for the Interceptor Body Armor System includes the yoke/collar assembly, front yoke assembly, throat protector assembly, deltoid axillary protection system (DAPS), ESBI carrier assembly, deltoid protector assembly, groin protector assembly and lower back protector assembly. When added to the vest, these items increase the area of ballistic protection. Some items of ancillary equipment may be issued as a part of the base vest assembly, depending on the configuration. Refer to the Repair Parts and Special Tools Lists in WP 0038 through 0042 to determine which attachments are issued with each configuration.

Interoperability

The OTV, IOTV and IOTV Gen II are compatible with Modular Lightweight Load-carrying Equipment (MOLLE) components. The IOTV and IOTV Gen II are also compatible with the Land Warrior System.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS

Vest (OTV)

The OTV (Figure 1) consists of a back panel, front right panel and front left panel. The front panels are connected to the back panel with three pieces of nylon webbing at each side and are also attached at the shoulders. After donning the vest, the front panels are secured using hook and loop fastener tape and snap fasteners.

The back panel has an ESAPI pocket at the top that can be accessed while the vest is worn. The front right panel has an ESAPI pocket that can also be accessed while the vest is worn. The front ESAPI pocket has an eject strap that allows the user to quickly eject the hard armor protective insert. The fit of the vest is adjusted using the nylon webbing at each side of the vest.

The vest has MOLLE webbing located on both the front and back panels.

Figure 1. Outer Tactical Vest.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS – CONTINUED

Vest (IOTV/IOTV Gen II)

The information in this section applies to both IOTV and IOTV Gen II systems. Features discussed are common to both configurations. Differences between models will be discussed in the next section. All graphics in this section show an IOTV Gen II but features indicated are common to both systems.

Front Carrier. The front carrier (Figure 2) has two shoulder straps with attached buckles. On the right shoulder is the aft guide channel used for routing of the cable release. The left shoulder has a hook and loop fastener attachment point and is referred to as the medical access point.

In the center of the neckline is the location for rank placement. Behind the rank placement is a pocket for storage of the quick release handle of the cable assembly. There is also a location for the name tape placement on the right side of the chest area.

MOLLE webbing is sewn on the vest for attaching items such as MOLLE pouches.

There is a pull tab attached to the front flap for raising the flap. Lifting the flap exposes the hook and loop fastener tapes used to attach the side plate carriers. On the inside of the front carrier, there is webbing for attaching the ballistic groin protector. The data plate containing essential information is also located on the inside of the front carrier.

Front Ballistic Insert. The front ballistic insert is located inside the front carrier and provides ballistic protection. The front ballistic insert has loop fastener tape and a data label.

Figure 2. Front Carrier (IOTV Gen II Shown).

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS – CONTINUED

Back Carrier. On the upper portion of the back carrier (Figure 3) are the shoulder strap guides used for routing the shoulder straps of the front carrier. There is a casualty drag strap located on the upper center portion of the carrier. There is webbing with hook and loop material for securing the strap. Keep the strap secured when not in use to prevent snagging.

There are two flaps (Figure 4); a smaller upper access panel and a larger, lower access panel. The upper access panel has slits for routing the shoulder straps. In the upper compartment, there is a series of webbing used for attaching the front carrier to the back carrier.

There is a right shoulder webbing loop, a center cable guide, and the left shoulder webbing loop. The two olive drab straps with an attached buckle are for use with the Land Warrior System. There is a cable retention loop located on the left side for storing the excess cable.

Under the lower flap, there is additional webbing to attach the internal elastic band and the side plate carriers. There is a cable retaining pocket on the very bottom of the pocket for stowing excess cable.

Back Ballistic Insert. The back ballistic insert is located inside the back carrier and provides ballistic protection. The back ballistic insert has loop fastener tape and a data label.

Figure 3. Back Carrier (IOTV Gen II Shown).

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS – CONTINUED

Figure 4. Back Carrier Cable Routing (Upper and Lower Access Panels Removed for Clarity).

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS – CONTINUED

Side Plate Carriers. Both the IOTV and IOTV Gen II have two side plate carriers (Figure 5) but of different design. The side plate carriers attach the front and back carriers, help distribute the load of the vest and carry the ESBI plates.

The side plate carriers are attached to the back vest using the quick release system and with the front carrier using hook and loop fastener tape.

Universal Side Plate Carrier (Interior)

Universal Side Plate Carrier (Exterior)

Universal Side Plate Pouch (Exterior)

Universal Side Plate Pouch (Interior)

Right Side Plate Carrier (Interior)

Left Side Plate Carrier (Interior)

Right Side Plate Carrier (Exterior)

Left Side Plate Carrier (Exterior)

Index	Nomenclature
1	BACK CARRIER ATTACHMENT POINT
2	SIDE PLATE POCKET
3	FRONT CARRIER ATTACHMENT POINT

Figure 5. Side Plate Carriers.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS – CONTINUED

Internal Elastic Bands. The IOTV and IOTV Gen II vests both come with a left and right internal elastic band (Figure 6). The elastic bands help distribute the weight of the equipment and keep the vest secured when the front carrier is lifted up for medical access. The internal elastic bands only attach to the back carrier and attach to each other on the front using hook and loop fastener tape.

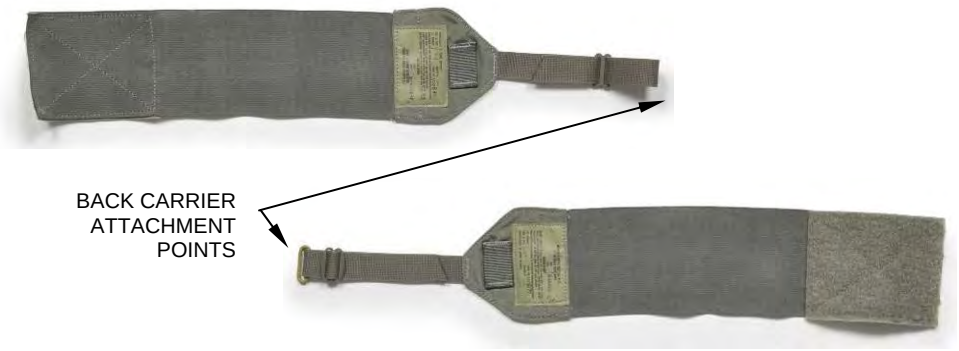


Figure 6. Internal Elastic Bands.

Cable Release Assembly. The cable release assembly (Figure 7) comes in four different sizes, depending on the vest size. The assembly features the quick release handle that the user pulls to activate the quick release function. The data plate is located on the handle. The assembly includes the two cables; one slightly longer than the other.

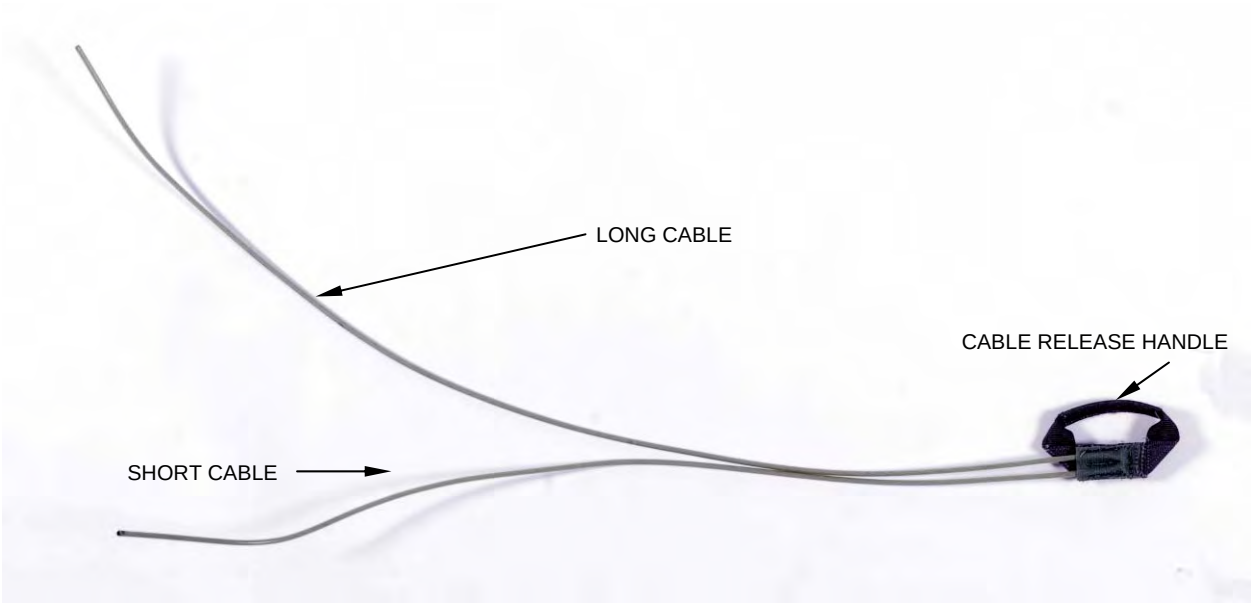


Figure 7. Cable Release Assembly (IOTV Gen II Shown).

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS – CONTINUED

Ancillary Equipment

The IBA base vest ballistic protection can be extended with the ancillary equipment.

Ancillary equipment for the OTV consists of the yoke/collar assembly, throat protector assembly, deltoid axillary protection system (DAPS), ESBI carrier assembly, and groin protector assembly.

Ancillary equipment for the IOTV and IOTV Gen II consist of the yoke/collar assembly, front yoke assembly, deltoid protector assembly, groin protector assembly and lower back protector assembly.

Each item of ancillary equipment consists of a soft ballistic insert and a carrier outershell component.

Yoke/Collar Assembly (IOTV/IOTV Gen II). The yoke/collar assembly provides additional ballistic protection to the back of the neck and shoulders (Figure 8).

Front Yoke Assembly (IOTV/IOTV Gen II). The front yoke assembly provides additional ballistic protection to the throat and shoulders (Figure 8).

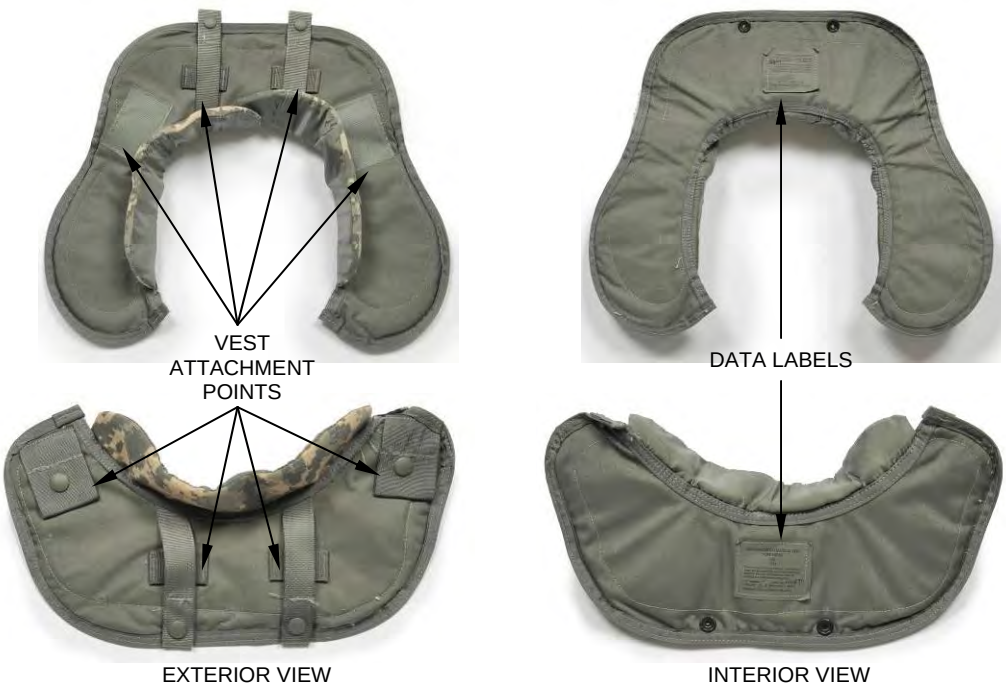


Figure 8. Yoke/Collar Assembly and Front Yoke Assembly.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS – CONTINUED

Yoke/Collar Assembly and Throat Protector Assembly (OTV Only). The yoke/collar assembly (Figure 9) comes with two ballistic inserts and provides additional ballistic protection to the back of the neck and shoulders. The throat protector assembly (Figure 10) comes with one ballistic insert and provides additional ballistic protection to the throat.

Figure 9. OTV Yoke Assembly.

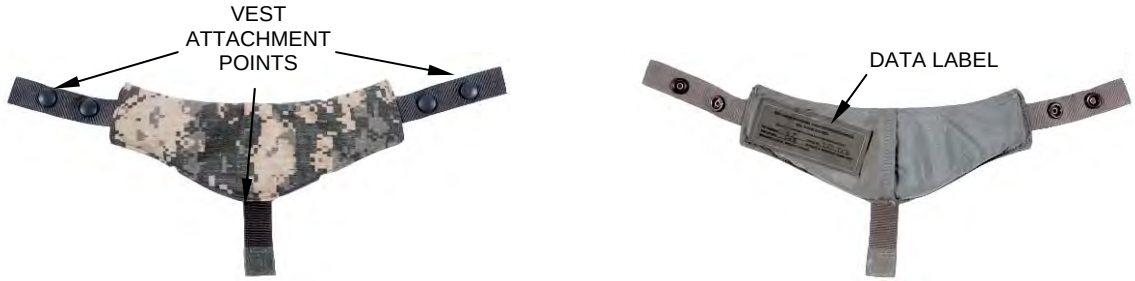


Figure 10. OTV Throat Protector Assembly.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS – CONTINUED

Deltoid Protector Assembly and Deltoid & Axillary Protection System (DAPS). The DAPS (Figure 11), as part of the OTV, provides additional ballistic protection to the shoulders, upper arms and sides. The deltoid protector assembly (Figure 11), as part of the IOTV/IOTV Gen II, provides additional ballistic protection to the shoulders and upper arms. The DAPS consists of a deltoid protector assembly and an axillary protector assembly. The deltoid protector assembly for the DAPS is interchangeable with the deltoid protector assembly for the IOTV and IOTV Gen II.

They attach to the shoulder sections of the vest and use a strap with hook and loop fastener tape to keep the protectors wrapped around the arm.

Figure 11. Deltoid Axillary Protection System (DAPS).

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS – CONTINUED

Groin Protector Assembly. The groin protector assembly (Figure 12) provides additional protection for the femoral arteries and pelvis. The groin protector assembly attaches to the inside of the front carrier using two nylon straps and snap fasteners.

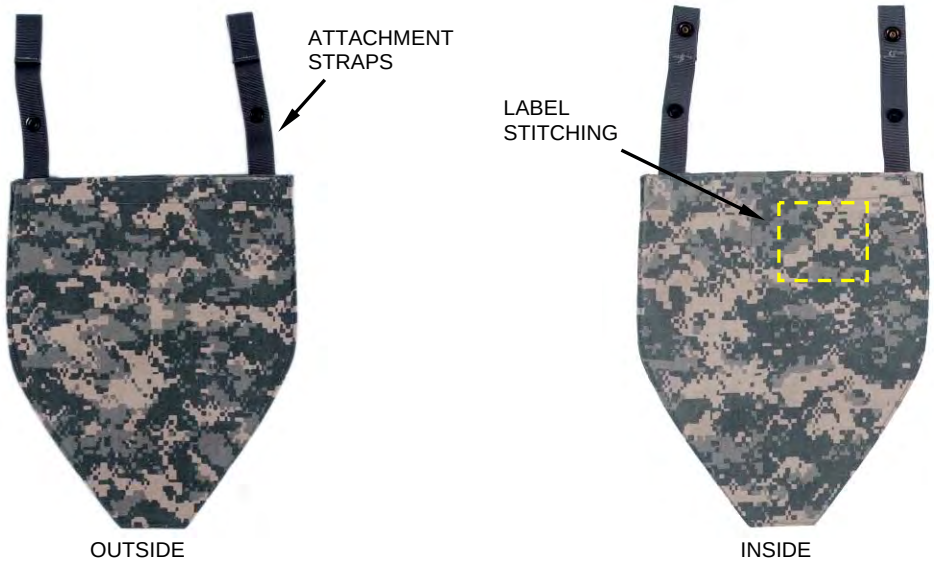


Figure 12. Groin Protector Assembly.

Lower Back Protector Assembly. The lower back protector assembly (Figure 13) provides additional protection for the lower spine and pelvis. The lower back protector assembly attaches to the inside of the back carrier using two nylon straps and snap fasteners.

Figure 13. Lower Back Protector Assembly (IOTV Gen II Shown).

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS – CONTINUED

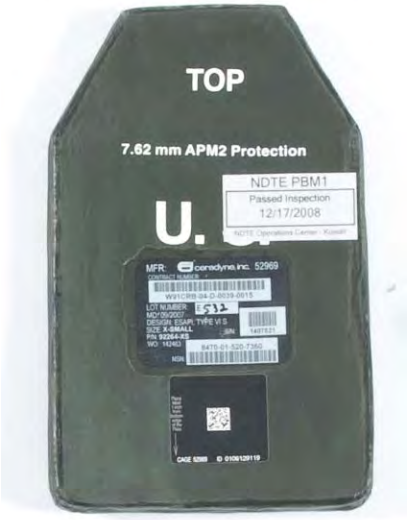
Hard Armor

There are two types of hard armor plates: ESBI and ESAPI.

ESBI. The two ESBI (Figure 14) provide side protection against 7.62 mm bullets. The concave side is worn toward the body.

Figure 14. ESBI Plates.

ESAPI. The two ESAPI (Figure 15) provide protection for the chest and back against 7.62 mm bullets. The concave side is worn toward the body.



Concave Face

Strike Face

Figure 15. ESAPI Plates.

DIFFERENCES BETWEEN MODELS

Refer to Table 1 for differences between the OTV, IOTV and IOTV Gen II vests and ancillary equipment.

Table 1. Differences Between Models for OTV, IOTV, IOTV Gen II and Ancillary Equipment.

	OTV	IOTV	IOTV Gen II
Vest Overview			
	• Single piece vest that is donned and doffed in a manner similar to an ACU blouse. • Closes in front using hook and loop fastener tape, and snap fasteners. • Hard armor protective inserts may be installed while vest is worn.	• Front and back vest pieces separate using a cable release assembly. • Internal elastic bands and side plate carriers help distribute weight more evenly. • Increased ballistic protection on the sides.	• Front and back vest pieces separate using a cable release assembly. • Equipment rings on front vest for easy attachment of Tactical Assault Panel (TAP) or other equipment. • Improved and easier routing for cable release assembly on front carrier.

DIFFERENCE BETWEEN MODELS – CONTINUED

Table 1. Differences Between Models for OTV, IOTV, IOTV Gen II and Ancillary Equipment – Continued.

	OTV	IOTV	IOTV Gen II
Front Carrier	 • Front carrier is constructed of two pieces. • No quick release assembly for vest.	 • Has one pocket on each side of the front carrier. • Loop tape on rank patch is wider. • No equipment attachment rings. • Has a 1 ¼-inch long webbing and steel 2:1 reducer buckle on the shoulder attachment points where the front carrier attaches to the back carrier. • Cable channel does not run continuously. • Cable release handle requires a cable stop to prevent cable assembly from being pulled through cable channel.	 • The pockets have been removed on the IOTV Gen II to reduce system weight. • The size of the loop tape for the rank patch is narrower to better accommodate the rank patch. • Has equipment attachment rings for the Tactical Assault Panel (TAP). • Has a one-piece steel 2:1 reducer buckle on the shoulder attachment points where the front carrier attaches to the back carrier. • Cable channel runs continuously from quick release handle pocket to the right shoulder attachment point. • Cable release handle pocket designed so cable release handle cannot be pulled through cable channel.
Vest Interior Fabric	 • Interior fabric of cloth components is woven nylon, similar to exterior fabric.	 • Interior fabric of cloth components is a knit mesh.	 • Interior fabric of cloth components is woven nylon, similar to exterior fabric.

DIFFERENCE BETWEEN MODELS – CONTINUED

Table 1. Differences Between Models for OTV, IOTV, IOTV Gen II and Ancillary Equipment – Continued.

	OTV	IOTV	IOTV Gen II
Cable Release Assembly	• No cable release assembly.	 • Cable stop needed to prevent cable release handle from being pulled through cable channel. • Cable is crimped where cable attaches to cable release handle. • Cable attaches to cable release handle at the center of the handle.	 • Cable stop not needed. • Cable release is bar tacked to the cable release handle. • Cable attaches to the cable release handle from the side.
Side Plate Carriers	• No side plate carrier.	 • Side plate carriers are side-specific. There is a right-side carrier and a left-side carrier. • Pocket for hard armor protective inserts is permanently attached to the side plate carriers. • Side plate carriers have stiffeners in the area underneath the data label. • Pocket has a top and bottom opening for accommodating an Extra Small ESAPI.	 • Side plate carriers are universal and have a removable side plate pouch. • Side plate carriers have a stiffener throughout, which increases comfort and prevents sagging. • Side plate pouch has only one opening with elastic to accommodate the Extra Small ESAPI.

DIFFERENCE BETWEEN MODELS – CONTINUED

Table 1. Differences Between Models for OTV, IOTV, IOTV Gen II and Ancillary Equipment – Continued.

	OTV	IOTV	IOTV Gen II
Quick Release Anchor Points	• No quick release assembly.	 • Quick release anchor points on the back carrier are longer. • One of the internal elastic bands is semi-permanently attached to the middle anchor point.	 • Quick release anchor points on the back carrier are shorter. • Both internal elastic bands are fully detachable from the middle anchor point.
Lower Back Protector	• The OTV does not have a lower back protector.	 • Lower back protector has a utility channel underneath the MOLLE webbing. • Interior fabric is nylon mesh.	 • No MOLLE webbing on outershell. • No utility channel. • Interior fabric of cloth components is woven nylon, similar to exterior fabric.

DIFFERENCE BETWEEN MODELS – CONTINUED

Table 1. Differences Between Models for OTV, IOTV, IOTV Gen II and Ancillary Equipment – Continued.

	OTV	IOTV	IOTV Gen II
Deltoid and Axillary Protection	 • Deltoid protector assembly is interchangeable for OTV, IOTV and IOTV Gen II. • OTV has axillary protectors to add extra soft ballistic protection to the sides.	 • Deltoid protector assembly is interchangeable for OTV, IOTV and IOTV Gen II. • No axillary protector. Vest has integrated axillary protection.	 • Deltoid protector assembly is interchangeable for OTV, IOTV and IOTV Gen II. • No axillary protector. Vest has integrated axillary protection.
Yoke/Collar Assemblies	  • Yoke/collar assembly has two removable soft ballistic inserts. • Yoke/collar assembly is similar in look to IOTV and IOTV Gen II rear collar but has additional webbing attachments for the front of the vest. • Throat protector assembly is smaller and has only two snap fastener attachment points with one hook and loop fastener attachment point. • Throat protector assembly has a removable soft ballistic insert.	  • Rear yoke attaches only to back vest. • Rear collar has two removable ballistic inserts. • Front yoke assembly has four snap fastener/webbing attachment points for the front vest.	  • Rear yoke attaches only to back vest. • Rear collar does not have removable ballistic inserts. • Front yoke assembly has four snap fastener/webbing attachment points for the front vest.

DIFFERENCE BETWEEN MODELS – CONTINUED

Hard Armor Protective Inserts

The front and back hard armor ballistic inserts come in two variants. The small arms protective insert (SAPI) and enhanced small arms protective insert (ESAPI). The SAPI plates are black in color and do not offer the same level of ballistic protection as the ESAPI. The ESAPI plates are green in color and offer a greater level of ballistic protection. SAPI plates shall only be used for training purposes. SAPI plates shall never be issued to deploying Soldiers.

EQUIPMENT DATA

OTV

Component	Data
Vest	
Sizes	XS, S, M, L, XL, 2XL, 3XL, 4XL
Protection	9 mm, Fragmentation
Yoke/Collar Assembly	
Sizes	XS, S, M, L, XL, 2XL, 3XL, 4XL
Protection	9 mm, Fragmentation
Throat Protector Assembly	
Sizes	One Size
Protection	9 mm, Fragmentation
Groin Protector Assembly	
Sizes	S-ML, L-4XL
Protection	9 mm, Fragmentation
Deltoid & Axillary Protector Assembly	
Sizes	One Size
Protection	9 mm, Fragmentation
ESBI Side Plate Carrier	
Sizes	One Size
Protection	9 mm, Fragmentation

IOTV

Component	Data
Vest	
Sizes	XS, S, M, ML, L, LL, XL, XLL, 2XL, 3XL, 4XL
Protection	9 mm, Fragmentation
Right and Left Side Plate Carriers	
Sizes	XS-S, M-L, XL-2XL, 3XL-4XL
Right and Left Internal Elastic Bands	
Sizes	XS-S, M-L, XL-2XL, 3XL-4XL
Cable Release Assembly	
Sizes	XS-S, M-L, XL-2XL, 3XL-4XL
Yoke/Collar Assembly	
Front Yoke Assembly Sizes	One Size
Sizes	XS, S, M, L, XL, 2XL, 3XL, 4XL
Protection	9 mm, Fragmentation

EQUIPMENT DATA – CONTINUED

Groin Protector Assembly
Sizes.....S-ML, L-4XL
Protection .....9 mm, Fragmentation

Lower Back Protector Assembly
Sizes..... One Size
Protection .....9 mm, Fragmentation

Deltoid Protector Assembly
Sizes..... XS-S, M-L, XL-4XL
Protection .....9 mm, Fragmentation

IOTV Gen II

Component **Data**
Vest
Sizes..... XS, S, M, ML, L, LL, XL, XLL, 2XL, 3XL, 4XL
Protection .....9 mm, Fragmentation

Universal Side Plate Carriers
Sizes..... XS-S, M-L, XL-2XL, 3XL-4XL

Universal Side Plate Pouch
Sizes..... One Size

Right and Left Internal Elastic Bands
Sizes..... XS-S, M-L, XL-2XL, 3XL-4XL

Cable Release Assembly
Sizes..... XS-S, M-L, XL-2XL, 3XL-4XL

Yoke/Collar Assembly
Front Yoke Assembly Sizes ..... One Size
Sizes.....XS, S, M, L, XL, 2XL, 3XL, 4XL
Protection .....9 mm, Fragmentation

Groin Protector Assembly
Sizes.....S-ML, L-4XL
Protection .....9 mm, Fragmentation

Lower Back Protector Assembly
Sizes.....One size
Protection .....9 mm, Fragmentation

Deltoid Protector Assembly
Sizes..... XS-S, M-L, XL-4XL
Protection .....9 mm, Fragmentation

HARD ARMOR PROTECTIVE INSERTS

ESBI
Sizes..... One Size
Protection ..... Armor Piercing 7.62 mm

ESAPI
Sizes..... XS, S, M, L, XL
Protection ..... Armor Piercing 7.62 mm

EQUIPMENT DATA – CONTINUED

System Weight

Table 2. OTV System Maximum Weight Chart (in pounds).

Finished Component	XS	S	M	L	XL	2XL	3XL	4XL
Base Vest Assembly:	6.64	6.95	7.66	8.38	9.51	9.84	10.81	11.79
Throat Protector Assembly:	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Yoke and Collar Assembly	0.90	0.95	1.00	1.10	1.20	1.30	1.40	1.50
Groin Protector Assembly:	0.70	0.70	0.70	0.85	0.85	0.85	0.85	0.85
DAPS	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50
ESAPI Plates (x2)	7.60	9.50	10.90	12.50	14.20	14.20	14.20	14.20
ESBI Plate Carrier (x2)	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80
ESBI Plates	5.10	5.10	5.10	5.10	5.10	5.10	5.10	5.10
Total System Weight	**21.59**	**23.85**	**26.01**	**28.58**	**31.51**	**31.94**	**33.01**	**34.09**

Table 3. IOTV System Maximum Weight Chart (in pounds).

Finished Component	XS	S	M	ML	L	LL	XL	XLL	2XL	3XL	4XL
Base Vest Assembly:	9.01	9.33	9.86	10.60	10.97	11.24	11.98	12.51	13.52	15.80	16.17
Front Yoke/Collar Assembly:	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56
Back Yoke/Collar Assembly:	0.80	0.83	0.88	0.88	0.91	0.91	0.96	0.96	1.02	1.17	1.17
Groin Protector Assembly:	0.72	0.72	0.72	0.72	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Lower Back Protector Assembly:	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67
Deltoid Protector Assembly:	1.00	1.00	1.20	1.20	1.20	1.20	1.45	1.45	1.45	1.45	1.45
ESBI Plates (x2)	5.10	5.10	5.10	5.10	5.10	5.10	5.10	5.10	5.10	5.10	5.10
ESAPI Plates (x2)	7.60	9.50	10.90	10.90	12.50	12.50	14.20	14.20	14.20	14.20	14.20
Total System Weight	**26.46**	**28.71**	**31.09**	**31.83**	**33.98**	**34.25**	**37.24**	**37.77**	**38.84**	**41.27**	**41.64**

EQUIPMENT DATA – CONTINUED

Table 4. IOTV Gen II System Maximum Weight Chart (in pounds).

Finished Component	XS	S	M	ML	L	LL	XL	XLL	2XL	3XL	4XL
Base Vest Assembly:	9.61	9.93	10.56	11.30	11.72	11.99	12.78	13.31	14.32	16.60	16.97
Front Yoke/Collar Assembly:	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56
Back Yoke/Collar Assembly:	0.80	0.83	0.88	0.88	0.91	0.91	0.96	0.96	1.02	1.17	1.23
Groin Protector Assembly:	0.72	0.72	0.72	0.72	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Lower Back Protector Assembly:	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67	0.67
Deltoid Protector Assembly:	2.00	2.00	2.40	2.40	2.40	2.40	2.90	2.90	2.90	2.90	2.90
ESBI Plates (x2)	5.10	5.10	5.10	5.10	5.10	5.10	5.10	5.10	5.10	5.10	5.10
ESAPI Plates (x2)	7.60	9.50	10.90	10.90	12.50	12.50	14.20	14.20	14.20	14.20	14.20
Total System Weight	**27.06**	**26.31**	**31.69**	**32.53**	**34.73**	**35.00**	**38.04**	**38.57**	**39.64**	**42.07**	**42.50**

END OF WORK PACKAGE

THEORY OF OPERATION

Different field scenarios will require different levels of protection for the Soldier. Unit commanders will prescribe the level of protection required for a mission.

The most basic configuration of the OTV consists of the vest (back, front-left and front-right) with soft ballistic inserts.

The most basic configuration of the IOTV and IOTV Gen II consists of the front and rear carriers with soft ballistic inserts, two side plate carriers with side plate pouches, internal elastic band, and the quick release cable.

The ancillary equipment provides protection for areas not covered by the basic configuration. The yoke/collar assembly and front yoke assembly or yoke/collar assembly with throat protector provides protection for the shoulders and neck. The deltoid protector assembly provides protection for the shoulders and upper arms. The groin protector assembly provides protection for the femoral arteries and pelvis. The lower back protector assembly provides protection for the lower spine and pelvis.

The next level of protection includes installing hard armor plates. Leave the soft ballistic protection in the vest when installing the hard armor and ensure the soft ballistic protection remains flat and smooth. Insert the side ballistic plates into the side plate pockets.

The IBA (with all hard armor protective inserts and ancillary equipment installed) is designed to protect the Soldier from small-arms fire to include 7.62 mm and 9 mm bullets as well as fragmentation.

Each component of the IOTV is compatible with each piece of IOTV Gen II.

The deltoid protector assembly and groin protector assembly are compatible with the OTV, IOTV and IOTV Gen II.

Quick-Release Function (IOTV and IOTV Gen II ONLY)

The IOTV and IOTV Gen II vest have a quick release function designed to be used during emergency situations only. With the IOTV or IOTV Gen II assembled with some or all of the accessories, the quick release function can be used to doff the vest rapidly in emergency situations. Such situations could include needing quick access for medical attention, or needed to remove the vest quickly to swim.

Once the function has been used, the vest can be reassembled easily to provide ballistic protection.

END OF WORK PACKAGE

CHAPTER 2

FIELD MAINTENANCE INSTRUCTIONS FOR INTERCEPTOR BODY ARMOR SYSTEM

FIELD MAINTENANCE
INTERCEPTOR BODY ARMOR SYSTEM
CLEANING AND DRYING
SERVICE

INITIAL SETUP:

Tools and Special Tools

Brush, Scrub (WP 0047, Item 1)

Personnel Required

Non-MOS Specific

Materials/Parts

Mild Detergent or Soap (WP 0046, Item 8)

SERVICE

The procedures in this work package apply to all components of the Interceptor Body Armor System, including the OTV, IOTV, IOTV Gen II, SAPI, ESAPI, ESBI and Ancillary Equipment, for field-level maintenance. CIF personnel should refer to Sustainment Maintenance instructions.

WARNING

Failure to follow all cleaning instructions could deteriorate, damage, or destroy the IBA and result in degraded ballistic protection. Degraded ballistic protection may cause injury or death to the user.

To maintain your IBA so that it provides you with the maximum protection intended, it is extremely important to follow proper cleaning procedures. Do not bleach, machine wash, dry clean, or apply solvents, cleaning fluids, or yellow soap to any part of the IBA. They will discolor and/or deteriorate the IBA. Do not attempt to dye item or fix discolorations.

IBA Vest and Components

WARNING

Do not machine wash or dry. Failure to follow these instructions may degrade your ballistic protection. Degraded ballistic protection may cause injury or death to the user.

Remove all soft armor and hard armor protective inserts prior to cleaning. Failure to follow these instructions may degrade ballistic protection. Degraded ballistic protection may cause injury or death to the user.

CAUTION

Do not use a stiff brush to clean any part of your IBA as this will damage the material.

1. Remove loose dirt and lint from the outer shell using a cloth or soft bristle brush. Never use a stiff bristle brush.

2. Remove all soft ballistic inserts and the ESAPI/ESBI from the outer shell and component carriers.

SERVICE – CONTINUED

CAUTION

Never use bleach, yellow soap, cleaning fluids or solvents to clean the outer shell as this will stain and damage the material.

3. Hand-wash the outer shell and component carrier covers in cold or warm water, with mild detergent or soap.

4. Badly soiled areas may be scrubbed. Scrub only long enough to remove soil.

5. Grease and oil stains may be pre-spotted with detergent and scrubbed with a soft brush. If stubborn stain persists, repeat the procedure.

6. Rinse the outer shell and covers thoroughly in clean, warm water until suds are completely gone.

7. Air-dry indoors or in shade, away from heat sources and direct sunlight.

END OF TASK

Soft Ballistic Inserts

WARNING

Do not machine wash or dry the soft ballistic inserts. Failure to follow these instructions may degrade ballistic protection. Degraded ballistic protection may cause injury or death to the user.

CAUTION

Do not submerge soft inserts in any liquid, including water. Do not use a stiff brush to clean any part of your IBA as this will damage the material.

Cleaning of the soft ballistics inserts is limited to removing loose dirt from the surface with a cloth or soft brush. If soft ballistic inserts become wet, allow to air dry in a flat position away from heat sources and direct sunlight. If soft ballistic insert becomes saturated with liquids such as gasoline, bleach or other lubricants, turn in for replacement as soon as possible.

END OF TASK

SERVICE – CONTINUED

ESAPI/ESBI Cleaning

WARNING

Do not machine wash or dry the ESAPI/ESBI inserts. Failure to follow these instructions may degrade the ESAPI/ESBI ballistic protection. Degraded ballistic protection may cause injury or death to the user.

CAUTION

Do not submerge ESAPI/ESBI inserts in any liquid, including water.

Do not use a stiff brush to clean any part of your IBA as this will damage the material.

1. Remove loose dirt and lint from the outer surface of the ESAPI/ESBI using a cloth or soft bristle brush. Never use a stiff bristle brush.
2. Wet the ESAPI/ESBI in a sink or shower using warm, not hot, water.
3. Apply a mild soap or detergent to the soiled areas and scrub with a cloth or soft bristle brush. Scrub only long enough to remove soil.
4. Heavy grease/oil stains may be pre-spotted with a mild detergent and scrubbed with a soft brush.
5. Rinse the ESAPI/ESBI with warm water until suds are completely gone.
6. Let the insert dry by itself, away from heat or open flame.

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE
LEFT AND RIGHT SIDE PLATE CARRIER (IOTV)
UNIVERSAL SIDE PLATE CARRIER (IOTV GEN II)
REPAIR

INITIAL SETUP:

Tools and Special Tools

Heated Blade Cutter (WP 0047, Item 3)
Shears, Tailors, 12 Inch (WP 0047, Item 14)
Stitch Removal Tool (WP 0047, Item 15)
Ruler, Measuring (WP 0047, Item 8)
Sewing Machine, Industrial (Light Duty) (WP 0047, Item 13)
Sewing Machine, Industrial (Darning) (WP 0047, Item 12)

Personnel Required

Shower, Laundry and Clothing Repair Specialist SLCR (92S)

Materials/Parts

Pencil, Marking Aid, Yellow, A-A-87 (WP 0046, Item 12)
Webbing, Textile, MIL-W-17337, Class 2, 2-Inch (WP 0040, Item 33)
Fastener Tape, Hook, AA55126, Type II, 4-Inch (WP 0040, Item 11)
Fastener Tape, Loop, AA55126, Type II, 4-Inch (WP 0040, Item 15)
Thread, Nylon, Type I or II, Class A, Size E, Natural (WP 0040, Item 27)

References

WP 0013

REPAIR

Fabric materials such as webbing that is cut for use in the maintenance of the IOTV will normally be heat seared (unless otherwise specified) IAW WP 0013, to prevent the material from fraying or unraveling.

Unless otherwise specified, all seams will be sewn with a 301 lock stitch using Size E, Type I, II, or III thread, at 7 to 11 stitches-per-inch and a light duty sewing machine. . Ensure the thread ends are trimmed to a point as close as possible to the material that has been sewn.

REPAIR – CONTINUED

This work package covers repair of the IOTV right and left side plate carrier pocket bottom overlay and the repair of hook and loop fastener tape on both IOTV side plate carriers and IOTV Gen II side plate carriers (Figure 1).

Figure 1. Side Plate Carrier Repair.

REPAIR – CONTINUED

Repair of the Left and Right Side Plate Carrier Pocket Bottom Overlay with Minimal Wear (IOTV Only)

1. Darn abrasion locations (Figure 2). Refer to WP 0013 for darning techniques.

2. Place webbing over the damaged area on the outside of the flap.

3. Sew seam 1/8 inch in from edge of webbing,

4. Stitch the nylon webbing over the damaged area in a zig-zag fashion for reinforcement (Figure 2).

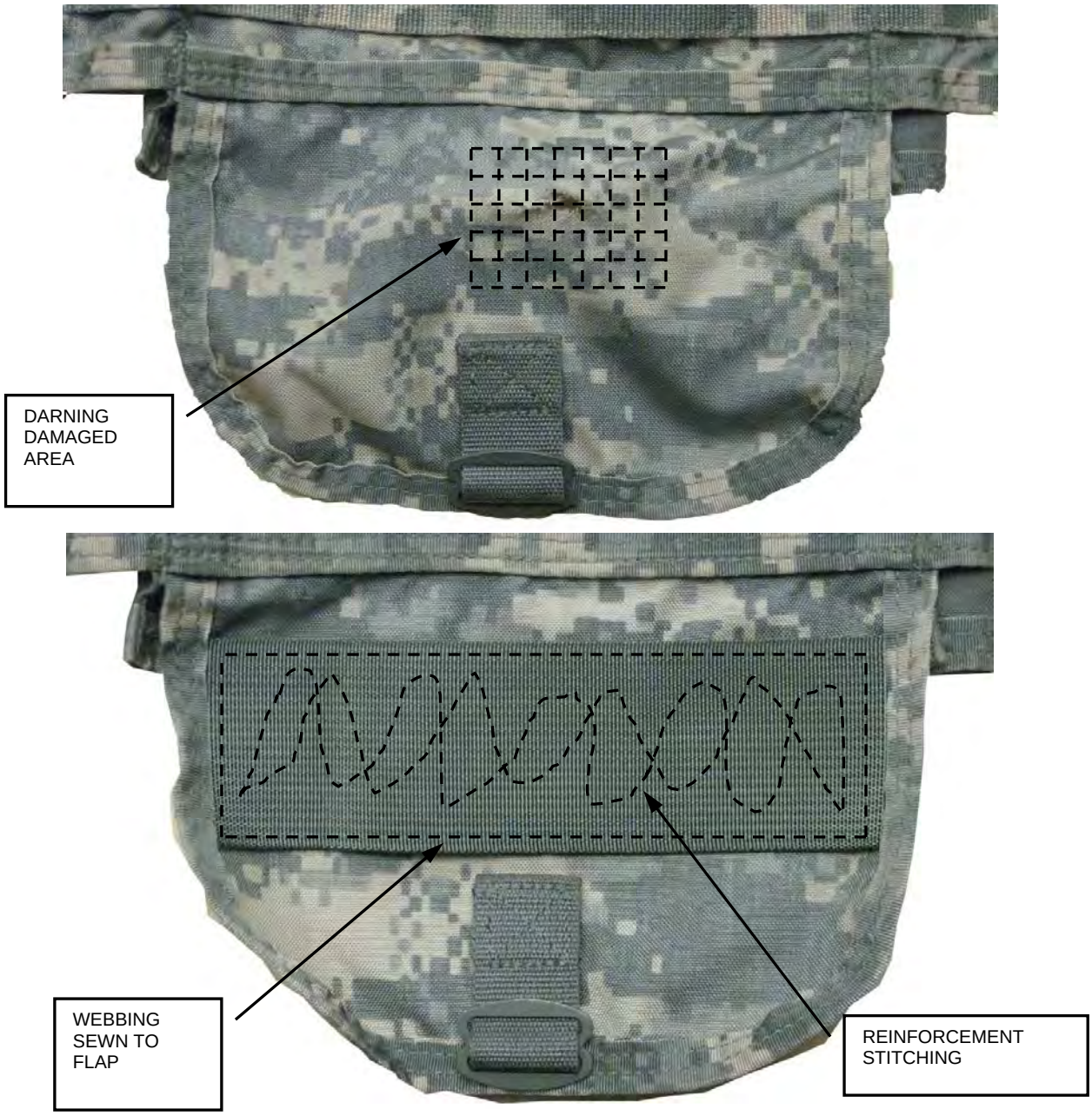


Figure 2. Repair of Side Plate Carrier Bottom Overlay (IOTV Only).

END OF TASK

REPAIR – CONTINUED

Replacement of Hook and loop on Side Plate Carrier (IOTV and IOTV Gen II)

NOTE

New hook or loop may be sewn over damaged hook or loop one time only. After that, old hook or loop must be removed before sewing on new hook or loop.

1. If the hook or loop tape has been previously repaired (more than one layer of material), remove both layers of hook or loop fastener tape.
2. Cut 4-inch hook or loop fastener tape to appropriate length.
3. Cut hook and loop fastener tape to same shape as original.
4. Place over original location.
5. Sew hook or loop fastener tape to side plate carrier 1/8-inch from edge using an X-stitch pattern (Figure 3).

Figure 3. Replacement of Hook or Loop on Side Plate Carrier.

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE
FRONT CARRIER (IOTV, IOTV GEN II)
REPAIR

INITIAL SETUP:

Tools and Special Tools

Ruler, Measuring (WP 0047, Item 8)
Sewing Machine, Industrial (Light Duty) (WP 0047, Item 13)
Shears, Tailors, 12 Inch (WP 0047, Item 14)
Stitch Removal Tool (WP 0047, Item 15)

Personnel Required

Shower, Laundry, and Clothing Repair Specialist (SLCR) (92S)

Materials/Parts

Fastener Tape, Hook, A-A-55126, Class 1, 2-Inch (WP 0040, Item 10)
Fastener Tape, Loop, A-A-55126, Class 1, 4-Inch (WP 0040, Item 15)
Webbing, Textile, AA-55301, Class 3, 1-Inch (WP 0040, Item 32)
Webbing, Textile, MIL-W-17337, Class 2, 2-Inch (WP 0040, Item 33)
Webbing, Textile, MIL-W-17337, Class 2, 3-Inch (WP 0040, Item 38)
Thread, Nylon, Type I or II, Class A, Size E, Natural (WP 0040, Item 27)

References

WP 0013

REPAIR

Fabric materials such as webbing that is cut for use in the maintenance of the IOTV will normally be heat seared (unless otherwise specified) IAW WP 0013, to prevent the material from fraying or unraveling.

Unless otherwise specified, all seams will be sewn with a 301 lock stitch using Size E, Type I, II, or III thread, at 7 to 11 stitches-per-inch and a light duty sewing machine. Ensure the thread ends are trimmed to a point as close as possible to the material that has been sewn.

REPAIR – CONTINUED

Repair Damage to Webbing Strap on IOTV Front Flap

1. Carefully remove box-x stitching on webbing strap (Figure 1).

Figure 1. Repair Damage to Webbing Strap on IOTV Front Flap.

REPAIR – CONTINUED

NOTE

If flap is damaged during strap removal, a piece of 1-inch nylon webbing may be used to reinforce fabric.

2. Cut replacement strap using damaged webbing strap as a template.

3. Place folds in strap according to Figure 2.

4. Fold strap ½ inch under and sew to flap with box stitch.

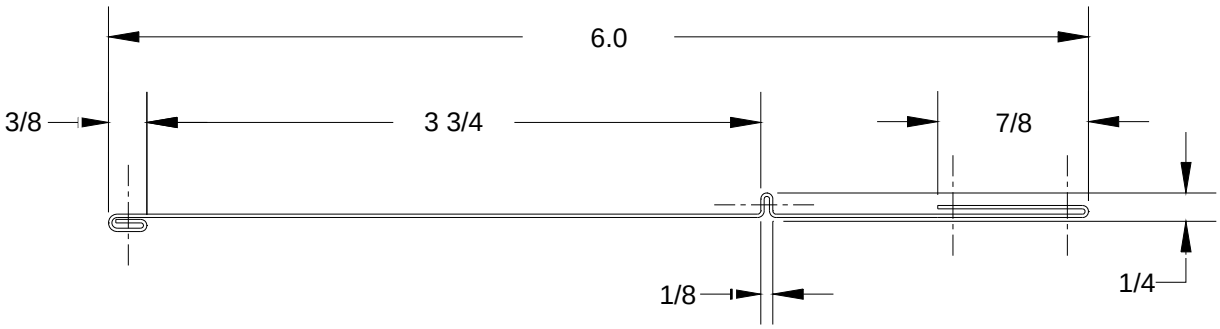


Figure 2. Measuring New Strap for IOTV Front Flap.

END OF TASK

END OF WORK PACKAGE

CHAPTER 3

SUSTAINMENT MAINTENANCE INSTRUCTIONS FOR INTERCEPTOR BODY ARMOR SYSTEM

SUSTAINMENT MAINTENANCE
INTERCEPTOR BODY ARMOR SYSTEM
SERVICE UPON RECEIPT

INITIAL SETUP:

Materials

N/A

Personnel Required

CIF

References

WP 0010
WP 0036
WP 0037
DA PAM 750-8
SF 361

RECEIPT OF EQUIPMENT (ESAPI/ESBI)

Receiving Equipment

When hard armor protective inserts (ESAPI/ESBI) are initially received by a using unit, the packaging will be inspected. If the shipping container shows signs of damage, all items in the container must be inspected IAW WP 0010. Serviceable equipment may then be entered either into storage or into use in operations, as applicable. An unserviceable item will be held and reported, in accordance with DA PAM 750-8.

1. Inspect equipment for damage incurred during shipment. If the equipment has been damaged, report the damage on a SF 361, Transportation Discrepancy Report (TDR).

2. Check the equipment against the packing slip to see if the shipment is complete. Report all discrepancies in accordance with the instructions in DA PAM 750-8.

3. Check to see whether the equipment has been modified.

Unpacking Equipment

Keep original packaging materials if not damaged.

Storage of Equipment

Refer to WP 0037 for instructions on storage of hard armor protective inserts (ESAPI/ESBI).

RECEIPT OF EQUIPMENT – INTERCEPTOR BODY ARMOR SYSTEM

Receiving Equipment

When items are initially received by a using unit, the packaging will be inspected. If the shipping container shows signs of damage, all items in the container must be inspected IAW WP 0010. Serviceable equipment may then be entered either into storage or into use in operations, as applicable. An unserviceable item will be held and reported, in accordance with DA PAM 750-8.

1. Inspect equipment for damage incurred during shipment. If the equipment has been damaged, report the damage on a SF 361, Transportation Discrepancy Report (TDR).

2. Check the equipment against the packing slip to see if the shipment is complete. Report all discrepancies in accordance with the instructions in DA PAM 750-8.

3. Check to see whether the equipment has been modified.

Storage of Equipment

Refer to WP 0036 for instructions on storage of the Interceptor Body Armor System.

END OF WORK PACKAGE

SUSTAINMENT MAINTENANCE
INTERCEPTOR BODY ARMOR SYSTEM
EQUIPMENT/USER FITTING INSTRUCTIONS

INITIAL SETUP:

Personnel Required	**References**
CIF Personnel	WP 0009 TM 10-277

OTV USER FITTING INSTRUCTIONS

WARNING

All Soldiers must try on a vest to be properly fitted. Improperly fitted body armor could result in injury or death to the user.

NOTE

All vests will have hard armor protective insets properly inserted in the vest IAW WP 0009. This includes: one set of ESAPI (front and back). Soldiers will not be sized in the OTV without inserted body armor. ESBI Carrier Assembly and ESBI plates are not required to be worn for proper fitting.

1. Prior to sizing the OTV, ensure all components are present (Table 1) and properly sized (Table 2).

Table 1. IBA Component Listing (OTV Configuration).

Item Name	QTY	U/I	Photo
Vest Outershell	1	ea	
Back Ballistic Insert (located in the Vest Outershell)	1	ea	

OTV USER FITTING INSTRUCTIONS – CONTINUED

Table 1. IBA Component Listing (OTV Configuration) – Continued.

Item Name	QTY	U/I	Photo
Front Right Ballistic Insert (located in the Vest Outershell)	1	ea	
Front Left Ballistic Insert (located in the Vest Outershell)	1	ea	
Yoke/Collar Assembly	1	ea	
Collar Ballistic Inserts (located in the Yoke/Collar Assembly)	2	ea	
Throat Protector Assembly	1	ea	

OTV USER FITTING INSTRUCTIONS – CONTINUED

Table 1. IBA Component Listing (OTV Configuration) – Continued.

Item Name	QTY	U/I	Photo
Throat Protector Ballistic Inserts (located in the Throat Protector Assembly)	1	ea	
DAPS (Deltoid Protector Assembly)	2	ea	
DAPS (Deltoid Protector Ballistic Insert located in the Deltoid Protector Assembly)	2	ea	
DAPS (Axillary Protector Assembly)	2	ea	
DAPS (Axillary Protector Ballistic Insert located in the Axillary Protector Assembly)	2	ea	
Groin Protector Outershell	1	ea	

OTV USER FITTING INSTRUCTIONS – CONTINUED

Table 1. IBA Component Listing (OTV Configuration) – Continued.

Item Name	QTY	U/I	Photo
Groin Protector Ballistic Insert (Located in the Groin Protector Assembly)	1	ea	
ESBI Carrier Assembly	2	ea	
ESBI Carrier Ballistic Insert (Located in the ESBI Carrier Assembly)	2	ea	
ESBI	2	ea	
ESAPI	2	ea	

OTV USER FITTING INSTRUCTIONS – CONTINUED

Table 2. OTV Component Sizing Chart.

Vest Size	XS	S	M	L	XL	2XL	3XL	4XL
OTV Carrier	XS	S	M	L	XL	2XL	3XL	4XL
Back, Front Left and Front Right Ballistic Inserts	XS	S	M	L	XL	2XL	3XL	4XL
Yoke/Collar Assembly	XS	S	M	L	XL	2XL	3XL	4XL
Throat Protector Assembly	U	U	U	U	U	U	U	U
Groin Protector Assembly	XS-M	XS-M	XS-M	L-4XL	L-4XL	L-4XL	L-4XL	L-4XL
DAPS	U	U	U	U	U	U	U	U
ESBI Carrier Assembly	U	U	U	U	U	U	U	U
ESAPI Plates	XS	S	M	L	XL	XL	XL	XL
ESBI Plates	U	U	U	U	U	U	U	U

2. Have the Soldier stand in front and face the sizing personnel.

3. Ask the Soldier his/her current OTV size, IOTV size or coat size.

4. Have the Soldier try on an OTV based on the sizing information in Table 3.

5. If Soldier does not have sizing information, take a chest measurement. Refer to TM 10-227, Fitting of Army Uniforms for proper measuring information.

Table 3. OTV Size Prediction Chart.

Coat Size	Chest Circumference (Inches)	OTV Size
33S – 33L	29 – 33	XS
33S – 37XL	33 – 37	S
37S – 41L	37 – 41	M
41S – 46L	41 – 45	L
45S – 49L	45 – 49	XL
49S – 52L	49 – 53	2XL
	53 – 57	3XL
	57 – 61	4XL

OTV USER FITTING INSTRUCTIONS – CONTINUED

NOTE

Ensure the side adjustment straps are tightened prior to donning the vest.

6. Assist the Soldier in donning the OTV.

7. Ensure the yoke/collar assembly is lying properly along the shoulders, neck and back. It should lie smoothly without any bulking or bunching.

8. Have the Soldier face toward you to check size, comfort and mobility by asking the Soldier to move arms in a circular motion, then in a running motion, execute some deep knee bends and lift one knee up at a time.

9. Have the Soldier sit upright in a chair, visually check to ensure the vest is not rising off the shoulders, the vest should rest flush on the shoulders (Figure 1).

10. Ensure that the front bottom edge on the vest/front plate is not placing pressure down on the Soldier's legs. If so, re-size and fit the Soldier in a smaller vest.

11. Visually check the overall size/fit of the vest to ensure that there are no exposed areas of the torso (lower neck, lower front and back torso areas). If so, re-size the Soldier in a larger vest.

Figure 1. Checking Fit of OTV.

END OF TASK

IOTV/IOTV GEN II USER FITTING INSTRUCTIONS

WARNING

All Soldiers must try on a vest to be properly fitted. Improperly fitted body armor could result in injury or death to the user.

NOTE

All vests will have hard armor protective insets properly inserted in the vest IAW WP 0009. This includes: one set of ESAPI (front and back) and one set of ESBI (left and right). Soldiers will not be sized in the IOTV without inserted body armor.

Pictures shown are of the IOTV Gen II. These are representational illustrations. Unless otherwise noted, the procedures are identical for the IOTV and IOTV Gen II.

1. Prior to sizing the IOTV/IOTV Gen II, ensure the following:
   a. Ensure all components are present (Table 4) and properly sized (Table 5).

WARNING

The IOTV may have a 1¼-inch, 2:1 reducer buckle (Figure 2, Item 1) or a metal 2:1 reducer buckle. Vests with plastic 2:1 reducer buckles shall not be issued and must be changed prior to issue. Failure to follow these directions may result in improper performance that may lead to injury or death to the user.

   b. If using the IOTV, ensure both shoulder straps have the correct 2:1 reducer buckle and that both shoulder straps have the same type of 2:1 reducer buckle.
   c. If using the 1¼-inch, 2:1 reducer buckle, ensure the tip of the buckle on the left shoulder is aligned with the cable release channel (Figure 2, Item 2).

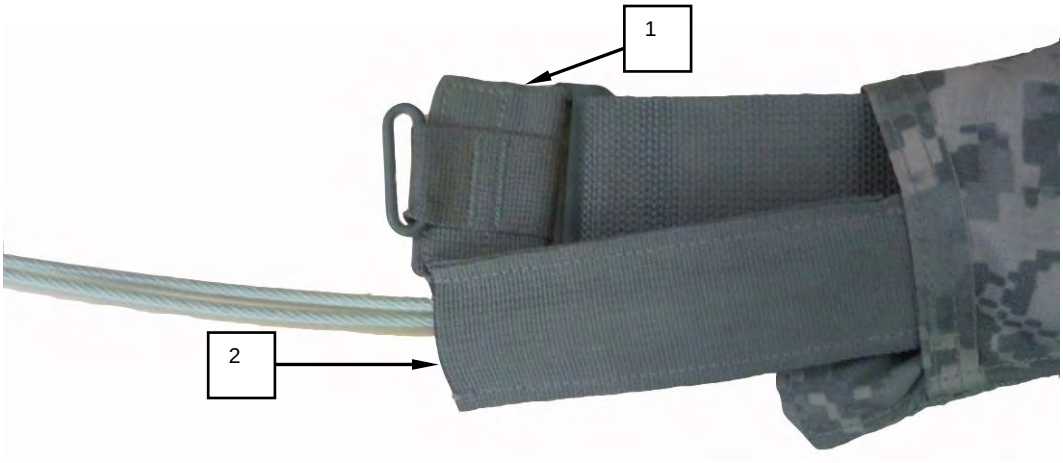


Figure 2. Adjusting Left Shoulder Webbing Length (IOTV Only)

IOTV/IOTV GEN II USER FITTING INSTRUCTIONS – CONTINUED

Table 4. IOTV and IOTV Gen II Inventory.

Component	QTY	IOTV	IOTV Gen II
Front Carrier	1	  Mesh interior. IOTV Front Carrier must also have a cable stop below.	  Solid fabric interior. Equipment attachment rings on shoulders (exterior fabric).
		 Cable Stop.	
Front Soft Ballistic Insert	1		Same as IOTV
Back Carrier	1	 Mesh interior.	 Solid fabric interior.

IOTV/IOTV GEN II USER FITTING INSTRUCTIONS – CONTINUED

Table 4. IOTV and IOTV Gen II Inventory – Continued.

Component	QTY	IOTV	IOTV Gen II
Back Soft Ballistic Inserts	1		Same as IOTV
Side Plate Carrier	2	 Plate pocket attached. Must have one each of right and left side plate carrier.	 Stiff throughout. Plate pouch is detachable. Neither is side-specific.
Internal Elastic Band (One each of left and right)	2	 One is semi-permanently attached.	Same as IOTV but both are completely separable.
Cable Release Assembly	1	  Cable comes out middle of handle.	  Cable comes out side of handle.
Front Yoke Assembly	1		Same as IOTV.

IOTV/IOTV GEN II USER FITTING INSTRUCTIONS – CONTINUED

Table 4. IOTV and IOTV Gen II Inventory – Continued.

Component	QTY	IOTV	IOTV Gen II
Yoke/Collar Assembly	1		Same as IOTV.
Groin Protector Outershell	1		Same as IOTV
Groin Protector Soft Ballistic Inserts	1		Same as IOTV
Lower Back Protector Outershell	1	 Pouch.	 No pouch.
Lower Back Protector Ballistic Insert	1		Same as IOTV.
Deltoid Protector Outershell	2		Same as IOTV.

IOTV/IOTV GEN II USER FITTING INSTRUCTIONS – CONTINUED

Table 4. IOTV and IOTV Gen II Inventory – Continued.

Component	QTY	IOTV	IOTV Gen II
Deltoid Protector Soft Ballistic Inserts	2		Same as IOTV.
ESBI Plate	2		Same as IOTV
ESAPI Plate	2		Same as IOTV

IOTV/IOTV GEN II USER FITTING INSTRUCTIONS – CONTINUED

Table 5. IOTV and IOTV Gen II Component Sizing Chart.

Vest Size	XS	S	M	ML	L	LL	XL	XLL	2XL	3XL	4XL
Front Carrier & Soft Ballistic Insert	XS	S	M	ML	L	LL	XL	XLL	2XL	3XL	4XL
Back Carrier & Soft Ballistic Insert	XS	S	M	ML	L	LL	XL	XLL	2XL	3XL	4XL
Cable Release Assembly	XS-S	XS-S	M-LL	M-LL	M-LL	M-LL	XL-XLL	XL-XLL	2XL-4XL	2XL-4XL	2XL-4XL
Internal Elastic Band	XS-S	XS-S	M-LL	M-LL	M-LL	M-LL	XL-2XL	XL-2XL	XL-2XL	3XL-4XL	3XL-4XL
Side Plate Carriers	XS-S	XS-S	M-LL	M-LL	M-LL	M-LL	XL-2XL	XL-2XL	XL-2XL	3XL-4XL	3XL-4XL
Universal Side Plate Pouch (IOTV Gen II Only)	U	U	U	U	U	U	U	U	U	U	U
Front Yoke/Collar	U	U	U	U	U	U	U	U	U	U	U
Back Yoke/Collar	XS	S	M-ML	M-ML	L-LL	L-LL	XL-XLL	XI-XXL	2XL	3XL	4XL
Groin Protector Assembly	XS-ML	XS-ML	XS-ML	XS-ML	L-4XL	L-4XL	L-4XL	L-4XL	L-4XL	L-4XL	L-4XL
Lower Back Protector Assembly	U	U	U	U	U	U	U	U	U	U	U
Deltoid Protector Assembly	XS-S	XS-S	M-L	M-L	M-L	M-L	XL-4XL	XL-4XL	XL-4XL	XL-4XL	XL-4XL
ESAPI Plates	XS	S	M	M	L	L	XL	XL	XL	XL	XL
ESBI Plates	U	U	U	U	U	U	U	U	U	U	U

2. Have the Soldier stand in front and face the sizing personnel.

3. Observe the build and height of the Soldier – note if the Soldier tends to be tall (6 feet or taller) and/or tends to have a stocky or thin build.

4. Ask the Soldier his/her current OTV size, IOTV size or coat size and height.

5. Have the Soldier try on an IOTV/IOTV Gen II based on the sizing information in Table 6.

IOTV/IOTV GEN II USER FITTING INSTRUCTIONS – CONTINUED

6. If Soldier does not have sizing information, take a chest measurement. Refer to TM 10-227, Fitting of Army Uniforms for proper measuring information.

Table 6. IOTV and IOTV Gen II Size Prediction Chart.

Coat Size	Height	Chest Circumference (Inches)	IOTV/IOTV Gen II Size
33S – 33L	5’ 0” – 6’ 2”	29 – 33	XS
33S – 37XL	5’ 0” – 6’ 2” +	33 – 37	S
37S – 41L	5’ 0” – 6’ 0”	37 – 41	M
37L – 41XL	6’ 0” +	37 – 41	ML
41S – 46L	5’ 0” – 6’ 0”	41 – 45	L
41L – 46L	6’ 0” +	41 – 45	LL
45S – 49L	5’ 0” – 6’ 0”	45 – 49	XL
45L – 49L	6’ 0” +	45 – 49	XLL
49S – 52L	5’ 0” – 6’ 2” +	49 – 53	2XL
	5’ 0” – 6’ 2” +	53 – 57	3XL
	5’ 0” – 6’ 2” +	57 – 61	4XL

NOTE

When the IOTV/IOTV Gen II is worn and adjusted correctly, there will be at least 1-inch overlap of fabric where the front and back carriers join at the shoulder.

Ensure the side plate carrier adjustment straps are loosened prior to donning the vest.

7. Assist the Soldier in donning the IOTV using the over-the-head method.

   a. Open the left shoulder of the vest (medical access point) and unsnap the shoulder strap.
   b. Loosen the left shoulder strap.
   c. Place the vest over the head (Figure 3).

IOTV/IOTV GEN II USER FITTING INSTRUCTIONS – CONTINUED

Figure 3. Over the Head Donning.

IOTV/IOTV GEN II USER FITTING INSTRUCTIONS – CONTINUED

d. Pull on the left shoulder strap until tightened.

e. Secure left shoulder strap with hook and loop fastener tape and snap into place (Figure 4).

Figure 4. Adjusting Left Shoulder Strap.

8. Ensure the front and rear yoke and collar is lying properly along the shoulders, neck and back. It should lie smoothly without any bulking or bunching.

9. Secure the internal elastic band by lifting front carrier and pulling two halves of the band forward and connecting hook and loop fastener tape (Figure 5).

Figure 5. Securing Internal Elastic Bands.

IOTV/IOTV GEN II USER FITTING INSTRUCTIONS – CONTINUED

10. With the front carrier down, lift up the front flap to reveal the side plate carrier attachment points.

WARNING

Ensure front and back carrier soft ballistic protection overlaps under the arm when donning the vest. Failure to do so will result in unprotected areas, which may result in injury or death to the user.

11. Pull one of the side plate carriers around the body and attach to same side hook and loop panel in front. Repeat the step with the other half. Ensure the hook material is square with the loop material and does not overlap (Figure 6).

Figure 6. Securing Side Plate Carriers.

a. When securing the internal elastic bands, ensure the hook and loop fastener tapes are matched and square.

IOTV/IOTV GEN II USER FITTING INSTRUCTIONS – CONTINUED

b. When securing the side plate carriers to the front carrier, ensure the side plate carriers are squared on the hook and loop fastener tape. The hook and loop fastener tape should match as closely as possible (Figure 7).

Figure 7. Squaring Side Plate Carriers.

12. Close the front flap, secure with hook and loop tape, and tuck the bottom of the front flap up into the front flap pocket.
13. Close the front panel cover.
14. Ensure the sides of the front carrier and back carrier are lying properly around the Soldier's torso. The sides should overlap and lay smoothly without bulking or bunching.
15. Turn the Soldier around and open the lower access panel on the back carrier.

IOTV/IOTV GEN II USER FITTING INSTRUCTIONS – CONTINUED

16. Tighten straps from top to bottom until the vest fits firmly and comfortably on the body (Figure 8). Ensure all straps are adjusted evenly.

    a. The distance from the edge of the left side plate carrier to the centerline of the vest on the top attachment strap (Figure 8) is measurement A.

    b. The distance from the edge of the right side plate carrier to the centerline of the vest is measurement B.

    c. Measurements A and B should be approximately the same.

    d. The distance from the edge of the left side plate carrier to the centerline of the vest on the bottom attachment strap (Figure 8) is measurement C.

    e. The distance from the edge of the right side plate carrier to the centerline of the vest is measurement D.

    f. Measurements C and D should be approximately the same.

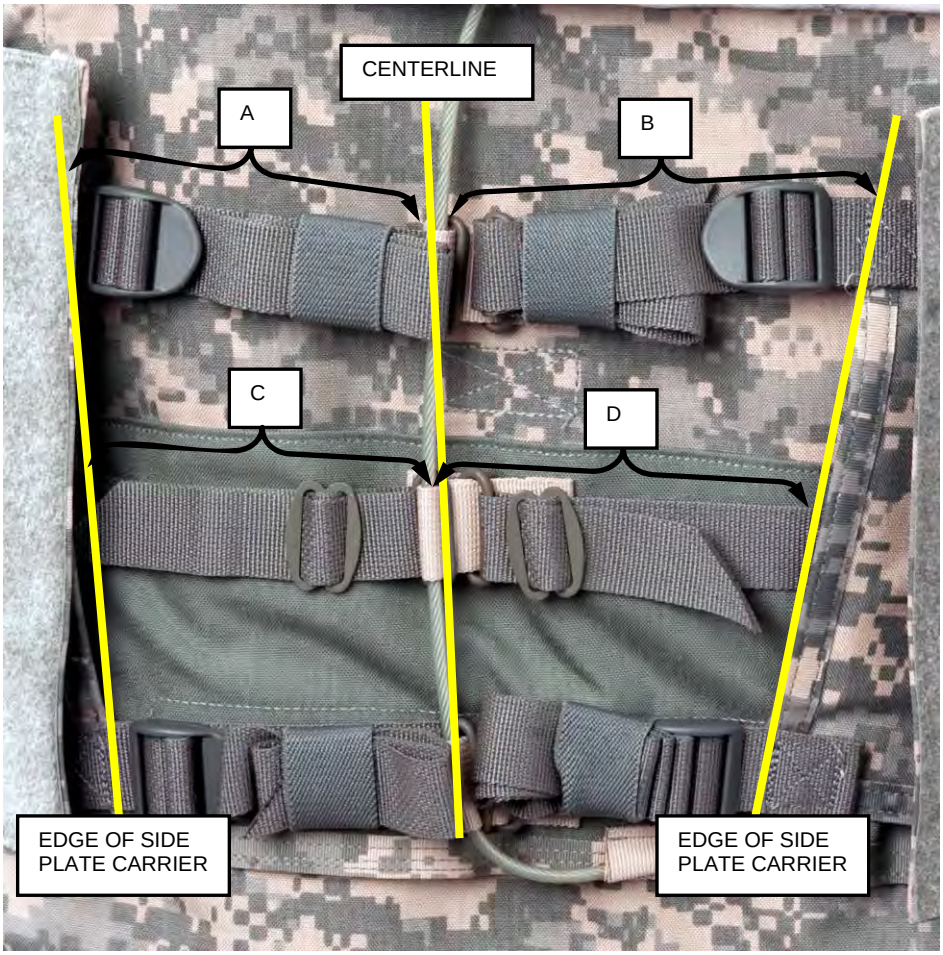


Figure 8. Adjusting Side Plate Carrier and Internal Elastic Band Straps.

17. Secure excess webbing in webbing keepers.

IOTV/IOTV GEN II USER FITTING INSTRUCTIONS – CONTINUED

18. Verify proper fit by checking for the following:
    a. Side plate carriers and internal elastic bands should be evenly tightened (as done in step 16).
    b. ESBI's should be centered on the side of the body.
    c. Cable release should route without any kinking or bending.
    d. At least 1-inch overlap of fabric where the front and back carriers join at the shoulder.
    e. The cable release assembly should extend a minimum of 1 ½ inches past the last adjustment point.
    f. Ensure there are no exposed side plate carrier straps or buckles showing from the carrier channel after adjustments are made.
    g. Side plate carriers should route through the side plate carrier channels.
    h. Internal elastic bands should route through both side plate carrier channel and internal elastic band channel.
19. Re-adjust as necessary. If re-adjustment does not fix the problem, then try a different size.
20. When completed, close the lower access panel and tuck the bottom up into the back flap pocket
21. Have the Soldier face toward you to check size, comfort and mobility by asking the Soldier to move arms in a circular motion, then in a running motion, execute some deep knee bends and lift one knee up at a time.
22. Have the Soldier sit upright in a chair, visually check to ensure the vest is not rising off the shoulders, the vest should rest flush on the shoulders. Ensure that the front bottom edge on the vest/front plate is not placing pressure down on the Soldiers legs. If so, re-size and fit the Soldier in a smaller vest.
23. Have the Soldier stand with his or her body straight, and visually check the length of the vest to ensure that the front bottom edge of the front carrier falls between the belly button and the belt line. If not, re-size and fit the Soldier with a larger/long vest.

NOTE

If the Soldier is tall and/or has a long torso, check that the stomach area is covered, by ensuring that the bottom edge of the front and back carrier falls between the belly button and the belt line. If not, re-size and fit the Soldiers with a longer vest (The longer size vest will provide three additional inches of coverage).

IOTV/IOTV GEN II USER FITTING INSTRUCTIONS – CONTINUED

Figure 9. IOTV/IOTV Gen II Sizing Checks.

IOTV/IOTV GEN II USER FITTING INSTRUCTIONS – CONTINUED

24. Visually check the side panels of the front and back carrier to ensure they overlap a minimum of 1-inch to provide complete side protection (Figure 9). If not, re-size and fit the Soldier with a larger vest.

25. Visually check the wing channels and the rear portion of the side plate carriers after adjustment, to ensure there are no gaps between the wing channel and the rear portion of the side plate carrier after adjustment (Figure 10). If so, re-size the Soldier in a larger vest.

Figure 10. Checking Side Panels and Wing Channels.

26. Visually check the overall size/fit of the vest to ensure that there are no exposed areas of the torso (lower neck, under arms, lower front and back torso areas). If so, re-size the Soldier in a larger or larger/long vest.

27. Visually check the overall size/fit to ensure that the vest is not too big for the torso. If so, re-size the Soldier in a smaller or smaller/long vest.

END OF TASK

END OF WORK PACKAGE

SUSTAINMENT MAINTENANCE
INTERCEPTOR BODY ARMOR SYSTEM
DISASSEMBLY, ASSEMBLY

INITIAL SETUP:

Personnel Required

CIF Personnel

DISASSEMBLY

Disassemble IOTV/IOTV Gen II

1. Remove SAPI/ESAPI plates from the front and back carriers, if installed.
2. Remove ESBI plates from side carriers, if installed.
3. Remove the deltoid protectors, lower back protector and groin protector, if attached and remove ballistic inserts from each.
4. Remove yoke/collar assembly and front yoke assembly from vest.
5. Remove yoke/collar ballistic inserts (if removable).
6. Separate the front and back IOTV carriers by removing the cable release completely, and unsnapping and releasing the hook and loop fasteners on the left shoulder.
7. Remove side plate carriers and internal elastic band.
8. Remove soft ballistic inserts from front and back carriers.

END OF TASK

Disassemble OTV

1. Remove SAPI/ESAPI plates from the front and back pockets, if installed.
2. Remove ESBI plates, if installed.
3. Remove the DAPS and groin protector, if attached and remove ballistic inserts from each.
4. Remove yoke/collar assembly and front throat protector assembly from vest, and remove ballistic inserts.
5. Remove front-left, front-right and back soft ballistic inserts from outershell.

END OF TASK

ASSEMBLY

Assemble IOTV or IOTV Gen II

WARNING

Ensure the sizes of the front and back carrier match by comparing data plate information. Ensure the sizes of the attachable items match the sizes of the front and back carriers by comparing data plate information. Failure to do so could affect performance, causing injury or death to the user.

NOTE

The term “interior fabric” or “interior surface” means the side of any component of the IBA system that faces the soldier when worn. The term “exterior fabric” or “exterior surface” means the side of any component of the IBA system that faces away from the soldier. The term “inside surface,” “inside fabric” or “inside” means the area of any IBA component that is between the exterior and interior surfaces. The inside or inside surface of an IBA component is the portion that touches the soft ballistic inserts.

Inserting Soft Ballistic Inserts.

1. Place the carrier on a clean surface with the exterior surface facing down.
2. Place the soft ballistic insert on top of the carrier with the data label facing up (Figure 1).

Figure 1. Placing Carrier Exterior Fabric Down.

3. Separate the hook and loop fastener tape on the interior fabric of the carrier.

ASSEMBLY – CONTINUED

4. Fold the shoulders and sides of the soft ballistic insert in toward the center (Figure 2).

Figure 2. Inserting Soft Ballistics.

5. Place soft ballistics inside the carrier.
6. Using your hand, smooth the soft ballistic insert so that it fits snugly inside the carrier and does not bulge or fold (Figure 3).

Figure 3. Inserting Soft Ballistics (Actual Vest Material is Not See-Through).

7. Re-seal the hook and loop fastener tape, ensuring that the tape and fabric are smooth and have no folds or puckers.
8. Repeat steps 1-7 for the back carrier.

ASSEMBLY – CONTINUED

9. Repeat steps 1-3 and 5-7 for the deltoid protectors, lower back protector, and groin protector. Refer to Figure 4 for an example of how to insert soft ballistic into ancillary equipment.

Figure 4. Inserting Soft Ballistics into Lower Back Protector.

END OF TASK

Inserting Hard Armor.

1. Place the carrier on a clean surface with the exterior surface facing down.
2. Separate the hook and loop fastener tape on the interior fabric of the carrier.
3. If installed, lift the soft ballistic insert to reveal the hard armor pocket.
4. Unfasten the nylon strap at the bottom of the hard armor pocket (Figure 5).

Figure 5. Opening Hard Armor Protective Insert Pocket.

ASSEMBLY – CONTINUED

5. Place ESAPI plate into the hard armor pocket with the concave side up (Figure 6).

Figure 6. Inserting Hard Armor Protective Insert.

6. Reattach the nylon webbing on the hard armor pocket (Figure 7). The webbing should be tightened enough to hold the hard armor in the pocket firmly with no slipping.

Figure 7. Re-sealing the Hard Armor Protective Insert Pocket.

7. Smooth the soft ballistic inserts inside the carrier, ensuring there are no folds or buckles.
8. Re-seal the hook and loop fastener tape on the interior of the carrier, ensuring there are no folds or puckers.
9. Repeat steps 1-8 for the back carrier.

END OF TASK

ASSEMBLY – CONTINUED

Installing the Front Collar Assembly and Yoke/Collar Assembly.

1. Lay the front and back carrier on a flat surface with interior surface up.
2. Position the front collar assembly on the front carrier and slip the side straps of collar through the mating loops on carrier (Figure 8). Secure the snap fasteners.
3. Weave remaining straps through the mating loops and secure the snap fasteners (Figure 8).

Figure 8. Attaching Front Collar.

ASSEMBLY – CONTINUED

4. Position the yoke/collar assembly on the back carrier and secure the sides with the hook and loop fastener tape (Figure 9).
5. Weave remaining straps through the mating loops and secure the snap fasteners (Figure 9).

Figure 9. Attaching Yoke/Collar Assembly.

END OF TASK

Assembling Base Vest Assembly.

1. (IOTV ONLY) Route the cables through the grommets on the cable stop. It does not matter which cable goes through which grommet (Figure 10).

Figure 10. Routing Cable through Cable Stop.

ASSEMBLY – CONTINUED

WARNING

Ensure there are no kinks in the quick-release cable. Failure to do so could adversely affect the function of the quick-release, causing injury or death to the service member.

Ensure the appropriate sized cable assembly is used according to the vest size.

(IOTV ONLY) Ensure the quick-release cable is routed through the two grommets of the cable stop, or a malfunction may occur. It does not matter which cable is routed through which grommet.

2. Insert the cable through the release cable pocket and route through the right shoulder (Figure 11).
   a. (IOTV ONLY) Continue to route cable through the release cable webbing channel on the right shoulder of the front carrier (Figure 11).

Figure 11. Routing the Cable Release Assembly on Front Carrier.

3. Stow the cable-release handle in the cable release handle pocket and secure with the hook and loop patches inside the pocket.

ASSEMBLY – CONTINUED

4. (IOTV WITH 1 ¼-INCH 2:1 REDUCER BUCKLE ONLY) Adjust right shoulder buckle so that the 1 ¼-inch 2:1 reducer buckle is even with the cable webbing channel (Figure 12).

Figure 12. Adjusting Left Shoulder Webbing Length.

5. Align the front and back carriers with the interior side down, right shoulder to right shoulder and left shoulder to left shoulder (Figure 13).
6. Route the right side buckles and cables from the front carrier through the shoulder strap guide of the back carrier. Route the left side buckle of the front carrier through the shoulder strap guide of the back carrier (Figure 13).

Figure 13. Connecting Front and Back Carriers.

7. Open the upper access panel by separating the hook and loop fastener tape.
8. Route both lengths of the cable release through the opening at the top of the upper access panel (Figure 13, Item 1).
9. Route the two webbing loops under the upper access panel through the metal buckles on the front carrier shoulder straps (Figure 14, Items 1 and 2).
10. Route the short cable release through the portion of the right hand webbing loop that sticks out of the buckle (Figure 14, Item 2).
11. Continue routing the release cable through the center cable routing channel (Figure 14, Item 3) and through the left hand webbing loop that sticks out of the buckle (Figure 14, Item 3).

ASSEMBLY – CONTINUED

NOTE

There are two olive-drab green straps with buckles attached to the ends under the upper flap of the back carrier. Do not use these buckles during assembly. They are to only be used with the Land Warrior System.

12. Insert the remaining portion of the release cable into the release cable stowage channel on the left side of the vest, ensuring the cable extends a minimum of 1½ inches past the left hand webbing loop (Figure 14, Item 4).

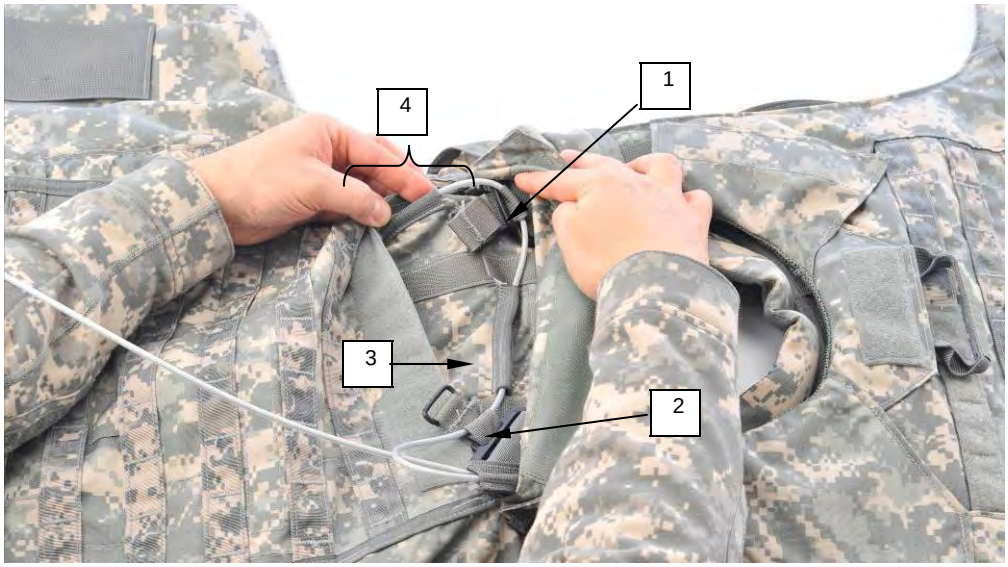


Figure 14. Routing Short Release Cable.

13. Route longer release cable through opening in lower access panel (Figure 15).

Figure 15. Routing Long Release Cable though the Lower Access Panel.

14. Release the upper access panel, ensuring the seam is flat with no folds or puckers.

ASSEMBLY – CONTINUED

NOTE

Most IOTV back carriers have one of the internal elastic bands semi-permanently attached. IOTV Gen II back carriers do not.

15. Route the 1-inch nylon webbing one internal elastic band (Figure 16, Item 3) through the internal elastic band routing channel (Figure 16, Item 1) and then through the wing channels (Figure 16, Item 2). Ensure the data label side is facing the vest.
16. If the second internal elastic band is not semi-permanently attached, repeat step 15 for the opposite side.

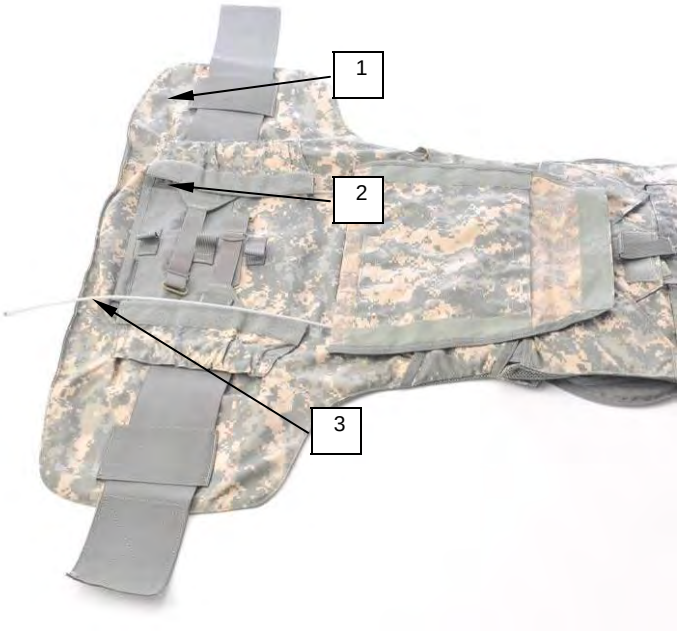


Figure 16. Installing the Internal Elastic Bands.

ASSEMBLY – CONTINUED

NOTE

For the IOTV, the side plate carriers are labeled for left or right side use. Use the left side plate carrier for the left side and the right side plate carrier for the right side.

For the IOTV Gen II, the side plate carriers are universal and can be used on either side.

17. Route the two, 1-inch nylon webbings on one of the side plate carriers (Figure 17, Item 2) through the wing channels (Figure 17, Item 1). Ensure the data label side is facing the vest.
18. Repeat step 17 for the opposite side.

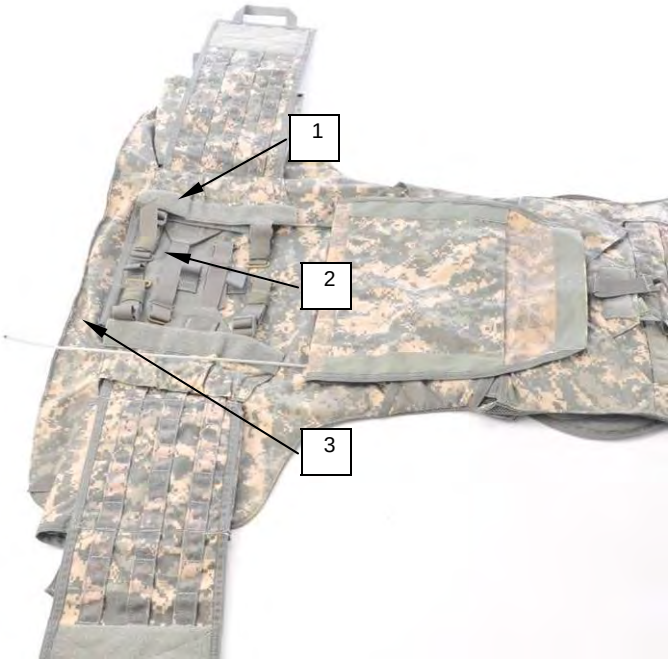


Figure 17. Installing the Side Plate Carriers.

WARNING

Proper routing of the cable release assembly is critical to the proper operation of the vest during an emergency doffing. The left-hand side plate carrier (left side plate carrier for IOTV or left-hand universal side plate carrier for IOTV Gen II) should be attached first, followed by the right. Failure to follow these directions could result in injury or death.

19. Route the uppermost loop of 1-inch webbing through the rectangular ring at the end of the 1-inch nylon webbing on the right-hand side plate carrier and then through the left-hand side plate carrier. Refer to Figure 18 for the sequence.
20. If one of the internal elastic bands is semi-permanent attached, route the middle loop of 1-inch webbing through the rectangular ring at the end of the opposite internal elastic band. If both elastic bands are permanently detached, then route the loop of 1-inch webbing through one internal elastic band and then through the second internal elastic band. Refer to Figure 18 for sequence.
21. Route the lowermost loop of 1-inch webbing through the rectangular ring at the end of the 1-inch nylon webbing on the right-hand side plate carrier and then through the left-hand side plate carrier. Refer to Figure 18 for the sequence.
22. Ensuring the 1-inch nylon webbing does not come out of the rectangular rings, route the long release cable through all three loops from top to bottom (Figure18).
23. Tuck the end of the release cable into the cable stowage pocket, ensuring a minimum of 1 ½ inches of cable extend past the last webbing loop (Figure 18).

ASSEMBLY – CONTINUED

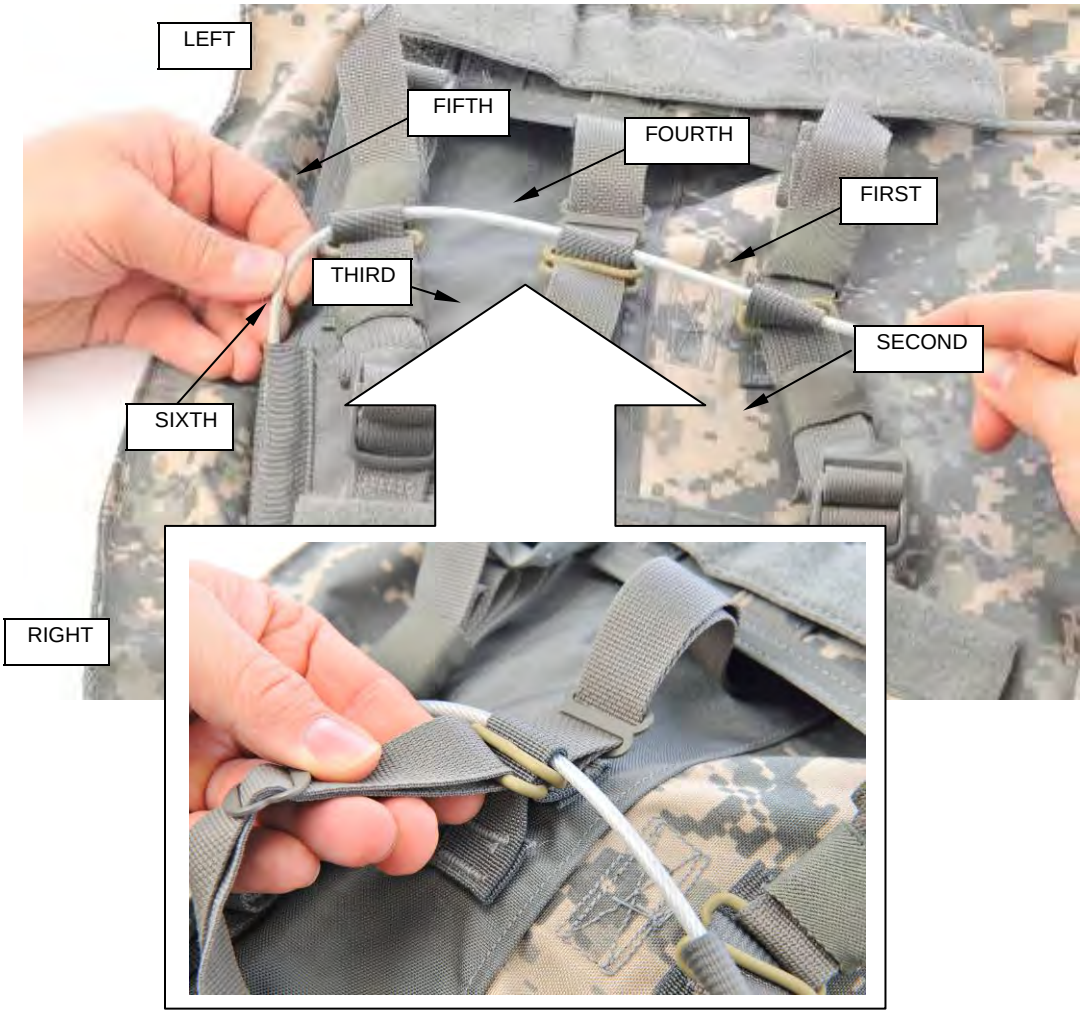


Figure 18. Routing Cable Release through Side Plate Carriers.

ASSEMBLY – CONTINUED

24. Gather any loose straps and secure using elastic keepers (Figure 19). The back pocket is now prepared to close.

25. Close and attach the back flap to the hook and loop strips, and tuck the bottom of the back flap up into the back flap pocket.

Figure 19. Long Release Cable Routing (IOTV Gen II Shown).

END OF TASK

ASSEMBLY – CONTINUED

Installing the Ballistic Groin Protector and Lower Back Protector.

NOTE

The following procedures are identical for the lower back protector and the groin protector. The lower back protector attaches to the back carrier. The groin protector attaches to the front carrier.

1. Lay carrier on flat surface with interior surface facing up.
2. Insert both straps on groin protector (Figure 20) or lower back protector into the webbing loops on the carrier.
3. Fold over and secure the snap fasteners.
4. Ensure the data label faces the body when worn.

Figure 20. Attaching Groin Protector.

END OF TASK

Attaching the Deltoid Protectors.

WARNING

Do not include the flap of the back yoke when attaching the deltoid protector to the vest. Doing so may prevent the cable release from operating correctly.

NOTE

Deltoid protectors are universal. There is no right or left deltoid protector.

1. Unhook and fully extend deltoid protector upper attachment strap. Route the strap over and under the shoulder of the vest. For maximum protection, ensure the deltoid protector overlaps where the front and back shoulder joins.
2. Use the same procedure for attaching both right and left deltoid protectors.
3. Secure the deltoid protector around the arm by pulling the loose end of the attachment strap around the arm and securing the hook and loop material.

END OF TASK

ASSEMBLY – CONTINUED

Inserting Side Hard Armor Plates (ESBI).

WARNING

During pre-combat inspections, check that side plate strap has an additional turn with the strap through the buckle for added security. Without the strap being properly secured, the plate could fall out, leaving the user vulnerable to small-arms fire or fragmentation.

1. Lay the back carrier on flat surface with the interior material up and side plate carriers folded out, exposing the side plate pockets. There are two methods to install the side ballistic plates.

2. Top Load Method (IOTV and IOTV Gen II):

   a. The first method is to unfasten the hook and loop on the top flap of the side plate pocket and pull out the flap and insert the side ballistic plate.

   b. Push the plate into pocket, fold the flap back into pocket and re-attach the hook and loop fastener tape.

3. Bottom Load Method (IOTV ONLY):

   a. The second method is to unweave the webbing from the buckle on the bottom of the pouch.

   b. Open the pouch and insert the plate with the concaved portion facing toward the inside.

   c. Close the flap and weave the strap back through the buckle.

   d. Route the end of the strap back through the buckle in the opposite direction to lock.

4. If using the X-Small ESAPI plates instead of ESBI plates, insert the plate into unbuckled bottom flap and into the opened top flap. Buckle the bottom flap closed, ensuring to put the additional loop through the buckle to secure the strap.

END OF TASK

END OF WORK PACKAGE

SUSTAINMENT MAINTENANCE
INTERCEPTOR BODY ARMOR SYSTEM
INSPECT

INITIAL SETUP:

Equipment Condition

Unpacked

Personnel Required

CIF

References

WP 0007
WP 0011
WP 0012
WP 0013
WP 0018
WP 0023
TB 43-0002-27 (MEL for 8400)

INSPECT

Serviceability Criteria

The Interceptor Body Armor System must be completely inspected at the following times:

- Upon issue
- Upon turn-in from Soldier or other user
- Upon receipt from repair or laundry
- As directed by other guidance or local SOP

On receipt of systems, the individual items are inspected, assessed, and then classified for serviceability, which in turn determines the disposition of the item. Table 1 lists the classification codes along with the defining criteria.

Table 1. Item Condition and Disposal Codes and Criteria.

CODE	EXPLANATION
A	New and unused property possessing original appearance and serviceability.
B	Serviceability as to be acceptable for issue or sale in lieu of class A like-new property. Items of organizational clothing and equipage will possess such appearance and degree of serviceability as to justify their issue to troops and afford a satisfactory military appearance. As a guide only and where practicable for application, these items should possess not less than 50 percent of the life of a like-new item.
F	Unserviceable items which are economically repairable. Economically repairable items are those which may be restored to condition code B for not more than 65 percent (clothing) or equipage of prices contained in current Army Master Data File.
H	Unserviceable items which are obviously scrap or salvage, for which any use would require a repair cost exceeding 65 percent for clothing or equipage of the current cost of the item.
X	Items which do not possess the appearance or degree of serviceability to justify the classification of B or which cannot be repaired economically for the purpose originally intended, but which can be used as an end item (without benefit of repair) for duties which are harmful to clothing, i.e., mechanics, painters, construction workers, etc.

INSPECT – CONTINUED

Organizational Clothing General Inspection Criteria. Items of organizational clothing and equipment will require the following for classification in serviceable condition codes (A or B):

- Complete state of repair.
- Cleaned. Must be in a clean (laundered, dry cleaned, sterilized, or painted) condition.
- Hook and Loop Tape Fasteners. All hook and loop tape fasteners must be functional and of the correct color for the uniform. The tape shall not be frayed or worn.
- Buttonholes. Buttonholes should not be enlarged or ripped.
- Fasteners. All present and of the same size originally affixed to item.
- Frayed edges. Frayed edges of an inconspicuous or minor nature will be permitted.
- Patches and darns. Patches and darns will be permitted, provided their color is similar to that of the original material.
- Fading. Fading will be permitted.
- Identification marks. Marks of identification include those made at issue point and those made by individuals. These should be lined out or obliterated. A mark is considered obliterated when its cancellation is readily evident.
- Spots and stains. Small paint, grease, or other spots or stains will be permitted if garment or other item is otherwise completely serviceable.
- Hardware. Hardware will not be bent, broken, or missing. Bright and shiny hardware will not disqualify items from a serviceable classification.

Items to be inspected:

1. Ensure the Interceptor Body Armor is complete with all components prior to being reissued.
2. If the ESAPI/ESBI plates have been hit by bullets or fragments, they are no longer serviceable.

Table 2. OTV Components.

COMPONENT PROCEDURE	ACCEPTABLE (Codes A and B)	REPAIRABLE (Code F)	NONREPAIRABLE (Codes H and X)
Interceptor Body Armor System (OTV Configuration)			
1. Ensure all components are present. Refer to Table 1, WP 0011.	All components are present.	Components are missing (Code G). Replace missing components.	N/A
2. Check sizing on all components. Refer to Table 1, WP 0012.	All sizes must match or be in the same size range.	Replace improperly sized components with properly sized components.	N/A

INSPECT – CONTINUED

Table 2. OTV Components – Continued.

COMPONENT PROCEDURE	ACCEPTABLE (Codes A and B)	REPAIRABLE (Code F)	NONREPAIRABLE (Codes H and X)
Back Ballistic Insert Front Right Ballistic Insert Front Left Ballistic Insert			
3. Inspect soft ballistic inserts for evidence of being hit by bullets or fragments.	The soft ballistic inserts shows no evidence of being hit by bullets or fragments.	Bullet or fragment damage cannot be repaired.	The soft ballistic inserts shows evidence of being hit by bullets or fragments.
4. Check data labels for readability.	Data labels present and readable.	Data label is present but information is unreadable. Re-mark IAW WP 0012. Replace data label IAW WP 0013.	N/A
5. Inspect fabric for rips, tears, cleanliness or stains.	Fabric has no damage and is clean.	Fabric is dirty. Clean IAW WP 0011.	Fabric is ripped, torn or stained with petroleum-based products or acids.
6. Ensure ballistics are flat.	Ballistics are flat and smooth.	Ballistics are bunched or folded. Flatten IAW WP 0018.	Ballistics are bunched and cannot be flattened.
7. Inspect hook and loop fastener tape for proper operation.	All hook and loop fastener tape functions properly.		Hook and loop fastener tape does not function properly.
Vest Outershell			
8. Inspect fabric for cleanliness or stains.	Fabric is clean.	Fabric is dirty. Clean IAW WP 0011.	N/A
9. Inspect fabric, MOLLE webbing, and straps for rips, tears or damage.	Fabric has no damage.	Any damage that can be repaired at less than 65% of replacement cost.	Any damage that requires repairs at more than 65% of replacement cost.
10. Inspect hook and loop fastener tape for proper operation.	All hook and loop fastener tape functions properly.	Any damage that can be repaired at less than 65% of replacement cost.	Any damage that requires repairs at more than 65% of replacement cost.
11. Inspect camouflage pattern for fading.	Camouflage pattern is visually discernable and the colors are still subdued in nature.	N/A	Camouflage pattern is no longer discernable.
12. Check data labels for readability.	Data labels present and readable.	Data label is present but information is unreadable. Re-mark IAW WP 0012. Replace data label IAW WP 0013.	N/A

INSPECT – CONTINUED

Table 2. OTV Components – Continued.

COMPONENT PROCEDURE	ACCEPTABLE (Codes A and B)	REPAIRABLE (Code F)	NONREPAIRABLE (Codes H and X)
13. Inspect hardware and snap fasteners for breaks, cracks, corrosion, damage and proper functioning.	All hardware and snap fasteners function properly and have no damage.	Any damage that can be repaired at less than 65% of replacement cost.	Any damage that requires repairs at more than 65% of replacement cost.
14. Ensure ballistics lay flat when installed in the carrier.	Soft ballistic inserts fit in the carrier and lay flat.	N/A	Vest outershell is unserviceable if the soft ballistic inserts do not fit properly, as long as they are both the same size. Vests that have shrunk shall not be re-used.
Groin Protector, DAPS, Yoke/Collar, ESBI Carrier and Throat Protector Outershells			
15. Inspect fabric for cleanliness or stains.	Fabric is clean.	Fabric is dirty. Clean IAW WP 0011.	N/A
16. Inspect fabric, and straps for rips, tears or damage.	Fabric has no damage.	Any damage that can be repaired at less than 65% of replacement cost.	Any damage that requires repairs at more than 65% of replacement cost.
17. Inspect hook and loop fastener tape for proper operation.	All hook and loop fastener tape functions properly.	Any damage that can be repaired at less than 65% of replacement cost.	Any damage that requires repairs at more than 65% of replacement cost.
18. Inspect camouflage pattern for fading.	Camouflage pattern is visually discernable and the colors are still subdued in nature.	N/A	Camouflage pattern is no longer discernable.
19. Check data labels for readability.	Data labels present and readable.	Data label is present but information is unreadable. Re-mark IAW WP 0012. Replace data label IAW WP 0013.	N/A
20. Inspect snap fasteners for breaks, cracks, corrosion, damage and proper functioning.	All snap fasteners function properly and have no damage.	Any damage that can be repaired at less than 65% of replacement cost.	Any damage that requires repairs at more than 65% of replacement cost.

INSPECT – CONTINUED

Table 2. OTV Components – Continued.

COMPONENT PROCEDURE	ACCEPTABLE (Codes A and B)	REPAIRABLE (Code F)	NONREPAIRABLE (Codes H and X)
21. Ensure ballistics lay flat when installed in the carrier.	Soft ballistic inserts fit in the carrier and lay flat.	N/A	Outershell is unserviceable if the soft ballistic inserts do not fit properly, as long as they are both the same size. Outershells that have shrunk shall not be re-used.
Groin Protector, DAPS, Yoke/Collar, ESBI Carrier and Throat Protector Soft Ballistic Inserts			
22. Inspect soft ballistic inserts for evidence of being hit by bullets or fragments.	The soft ballistic inserts shows no evidence of being hit by bullets or fragments.	Bullet or fragment damage cannot be repaired.	The soft ballistic inserts shows evidence of being hit by bullets or fragments.
23. Check data labels for readability.	Data labels present and readable.	Data label is present but information is unreadable. Re-mark IAW WP 0012. Replace data label IAW WP 0013.	N/A
24. Inspect fabric for rips, tears, cleanliness or stains.	Fabric has no damage and is clean.	Fabric is dirty. Clean IAW WP 0011.	Fabric is ripped, torn or stained with petroleum-based products or acids.
25. Ensure ballistics are flat.	Ballistics are flat and smooth.	Ballistics are bunched or folded. Flatten IAW WP 0018.	Ballistics are bunched and cannot be flattened.
ESAPI/ESBI			
26. Inspect ESBI and ESAPI outer cover for damage or exposed ceramic material (Figure 1).	Outer cover has no damage.	Hard armor protective inserts are not reparable.	Outer cover is damaged exposing the ceramic tile material.
27. Inspect ESBI and ESAPI for cracks or loose pieces by shaking the plates.	Plate has no cracks and there is no rattling or loose pieces when shaken.	Hard armor protective inserts are not reparable.	Plate is cracked and you hear loose pieces rattling around when shaken.
28. Inspect ESBI and ESAPI for damage by twisting by hand.	No creaking or squeaking of plate when twisted by hand.	Hard armor protective inserts are not reparable.	Creaking or squeaking of ceramic tile heard when plate twisted by hand.

INSPECT – CONTINUED

Table 2. OTV Components – Continued.

COMPONENT PROCEDURE	ACCEPTABLE (Codes A and B)	REPAIRABLE (Code F)	NONREPAIRABLE (Codes H and X)
29. Inspect composite backing for delamination (Figure 1).	No delamination of composite backing.	Hard armor protective inserts are not reparable.	Composite backing is delaminating (backing material plies are separating).
30. Inspect ESBI and ESAPI for cracking by pinching the outer ½-inch perimeter of the plate.	No cracking of the tile is felt or heard.	Hard armor protective inserts are not reparable.	Cracking of the ceramic tile is felt or heard as you firmly pinch the outer ½-inch perimeter of the plate.
31. Inspect ESBI and ESAPI for evidence of a hit by bullets or fragments.	No evidence of being hit by bullets or fragments.	Hard armor protective inserts are not reparable.	Plate has been hit by a bullet or fragment.

Table 3. IOTV and IOTV Gen II Components.

COMPONENT PROCEDURE	ACCEPTABLE (Codes A and B)	REPAIRABLE (Code F)	NONREPAIRABLE (Codes H and X)
Interceptor Body Armor System (IOTV or IOTV Gen II Configuration)			
1. Ensure all components are present.	All components are present.	Components are missing (Code G). Replace missing components.	N/A
2. Check sizing on all components. Refer to Table 2, WP 0012.	All sizes must match or be in the same size range. Refer to Table 2, WP 0012.	Replace improperly sized components with properly sized components.	N/A
Front and Back Soft Ballistic Insert			
3. Inspect soft ballistic inserts for evidence of being hit by bullets or fragments.	The soft ballistic inserts shows no evidence of being hit by bullets or fragments.	Bullet or fragment damage cannot be repaired.	The soft ballistic inserts shows evidence of being hit by bullets or fragments.

INSPECT – CONTINUED

Table 3. IOTV and IOTV Gen II Components – Continued.

COMPONENT PROCEDURE	ACCEPTABLE (Codes A and B)	REPAIRABLE (Code F)	NONREPAIRABLE (Codes H and X)
4. Check data labels for readability.	Data labels present and readable.	Data label is present but information is unreadable. Re-mark IAW WP 0012. Replace data label IAW WP 0013.	N/A
5. Inspect fabric for rips, tears, cleanliness or stains.	Fabric has no damage and is clean.	Fabric is dirty. Clean IAW WP 0011.	Fabric is ripped, torn or stained with petroleum-based products or acids.
6. Ensure ballistics are flat.	Ballistics are flat and smooth.	Ballistics are bunched or folded. Flatten IAW WP 0023.	Ballistics are bunched and cannot be flattened.
7. Inspect hook and loop fastener tape for proper operation.	All hook and loop fastener tape functions properly.		Hook and loop fastener tape does not function properly.
Front and Back Carriers			
8. Inspect fabric for cleanliness or stains.	Fabric is clean.	Fabric is dirty. Clean IAW WP 0011.	N/A
9. Inspect fabric, MOLLE webbing, and straps for rips, tears or damage.	Fabric has no damage.	Any damage that can be repaired at less than 65% of replacement cost.	Any damage that requires repairs at more than 65% of replacement cost.
10. Inspect hook and loop fastener tape for proper operation.	All hook and loop fastener tape functions properly.	Any damage that can be repaired at less than 65% of replacement cost.	Any damage that requires repairs at more than 65% of replacement cost.

INSPECT – CONTINUED

Table 3. IOTV and IOTV Gen II Components – Continued.

COMPONENT PROCEDURE	ACCEPTABLE (Codes A and B)	REPAIRABLE (Code F)	NONREPAIRABLE (Codes H and X)
11. Inspect camouflage pattern for fading.	Camouflage pattern is visually discernable and the colors are still subdued in nature.	N/A	Camouflage pattern is no longer discernable.
12. Check data labels for readability.	Data labels present and readable.	Data label is present but information is unreadable. Re-mark IAW WP 0012. Replace data label IAW WP 0013.	N/A
13. Inspect hardware and snap fasteners for breaks, cracks, corrosion, damage and proper functioning.	All hardware and snap fasteners function properly and have no damage.	Any damage that can be repaired at less than 65% of replacement cost.	Any damage that requires repairs at more than 65% of replacement cost.
14. Ensure ballistics lay flat when installed in the carrier.	Soft ballistic inserts fit in the carrier and lay flat.	N/A	Vest outershell is unserviceable if the soft ballistic inserts do not fit properly, as long as they are both the same size. Vests that have shrunk shall not be re-used.
15. Ensure the following items are present and undamaged: -Cable Stop (IOTV only) -Quick release webbing/cable stowage channels -Aft guide channel (IOTV only) -Medical access strap and rectangular ring -Shoulder buckles/2:1 reducer buckle -Land Warrior buckles -Casualty drag strap and tuck tab -Front and back flap pull tabs -ESAPI pockets/straps (inside of carrier)	All components are present and undamaged.	Any damage that can be repaired at less than 65% of replacement cost.	Any damage that requires repairs at more than 65% of replacement cost.

INSPECT – CONTINUED

Table 3. IOTV and IOTV Gen II Components – Continued.

COMPONENT PROCEDURE	ACCEPTABLE (Codes A and B)	REPAIRABLE (Code F)	NONREPAIRABLE (Codes H and X)
Cable Release Assembly			
16. Inspect fabric for rips, tears or damage.	Fabric has no damage.		Any rips, tears or damage.
17. Inspect hook and loop fastener tape for proper operation.	All hook and loop fastener tape functions properly.		Hook and loop fastener tape does not function.
18. Check data labels for readability.	Data labels present and readable.	Data label is present but information is unreadable. Re-mark IAW WP 0012. Replace data label IAW WP 0013.	N/A
19. Check cable for any breaks, kinks, sharp bends, frays, corrosion, missing or broken coating, or other damage that may interfere with the proper operation of the cable release.	No damage to cable.	N/A	Any damage to cable.
Right and Left Side Plate Carrier **Right and Left Internal Elastic Bands** **Universal Side Plate Carriers** **Universal Side Plate Pouches**			
20. Inspect fabric for cleanliness or stains.	Fabric is clean.	Fabric is dirty. Clean IAW WP 0011.	N/A
21. Inspect fabric, MOLLE webbing, and straps for rips, tears or damage.	Fabric has no damage.	Any damage that can be repaired at less than 65% of replacement cost.	Any damage that requires repairs at more than 65% of replacement cost.
22. Inspect hook and loop fastener tape for proper operation.	All hook and loop fastener tape functions properly.	Any damage that can be repaired at less than 65% of replacement cost.	Any damage that requires repairs at more than 65% of replacement cost.

INSPECT – CONTINUED

Table 3. IOTV and IOTV Gen II Components – Continued.

COMPONENT PROCEDURE	ACCEPTABLE (Codes A and B)	REPAIRABLE (Code F)	NONREPAIRABLE (Codes H and X)
23. Inspect camouflage pattern for fading.	Camouflage pattern is visually discernable and the colors are still subdued in nature.	N/A	Camouflage pattern is no longer discernable.
24. Check data labels for readability.	Data labels present and readable.	Data label is present but information is unreadable. Re-mark IAW WP 0012. Replace data label IAW WP 0013.	N/A
25. Inspect hardware and snap fasteners for breaks, cracks, corrosion, damage and proper functioning.	All hardware and snap fasteners function properly and have no damage.	Any damage that can be repaired at less than 65% of replacement cost.	Any damage that requires repairs at more than 65% of replacement cost.
26. Inspect plastic stiffener located for distortion, cracking or disintegration.	Plastic stiffener is intact and undamaged.	Any damage that can be repaired at less than 65% of replacement cost.	Any damage that requires repairs at more than 65% of replacement cost.
Yoke/Collar Assembly and Front Yoke Assembly			
27. Inspect fabric for cleanliness or stains.	Fabric is clean.	Fabric is dirty. Clean IAW WP 0011.	N/A
28. Inspect fabric, and straps for rips, tears or damage.	Fabric has no damage.	Re-stitch edge seams.	Any other damage to the body of the yoke and collar.
29. Inspect hook and loop fastener tape for proper operation.	All hook and loop fastener tape functions properly.		Hook and loop fastener tape does not function properly.

INSPECT – CONTINUED

Table 3. IOTV and IOTV Gen II Components – Continued.

COMPONENT PROCEDURE	ACCEPTABLE (Codes A and B)	REPAIRABLE (Code F)	NONREPAIRABLE (Codes H and X)
30. Inspect camouflage pattern for fading.	Camouflage pattern is visually discernable and the colors are still subdued in nature.	N/A	Camouflage pattern is no longer discernable.
31. Check data labels for readability.	Data labels present and readable.	Data label is present but information is unreadable. Re-mark IAW WP 0012. Replace data label IAW WP 0013.	N/A
32. Inspect snap fasteners for presence, breaks, cracks, corrosion, damage and proper functioning.	All snap fasteners function properly and have no damage.	Snap fasteners on webbing are missing or inoperable.	Snap fasteners on yoke/collar or front yoke outershell.
NOTE Inspect removable soft ballistic inserts using the same procedures as lower back protector ballistic inserts. 33. If soft ballistic inserts are removable: ensure ballistics lay flat when installed in the carrier.	Soft ballistic inserts fit in the carrier and lay flat.	N/A	Outershell is unserviceable if the soft ballistic inserts do not fit properly, as long as they are both the same size. Outershells that have shrunk shall not be re-used.
34. If soft ballistic inserts are not removable: inspect outershell collar for evidence of being hit by bullets or fragments	The collar shows no evidence of being hit by bullets or fragments.	Bullet or fragment damage cannot be repaired.	The collar shows evidence of being hit by bullets or fragments.
Lower Back Protector, Groin Protector and Deltoid Protector Outershells			
35. Inspect fabric for cleanliness or stains.	Fabric is clean.	Fabric is dirty. Clean IAW WP 0011.	N/A

INSPECT – CONTINUED

Table 3. IOTV and IOTV Gen II Components – Continued.

COMPONENT PROCEDURE	ACCEPTABLE (Codes A and B)	REPAIRABLE (Code F)	NONREPAIRABLE (Codes H and X)
36. Inspect fabric, and straps for rips, tears or damage.	Fabric has no damage.	Any damage that can be repaired at less than 65% of replacement cost.	Any damage that requires repairs at more than 65% of replacement cost.
37. Inspect hook and loop fastener tape for proper operation.	All hook and loop fastener tape functions properly.	Any damage that can be repaired at less than 65% of replacement cost.	Any damage that requires repairs at more than 65% of replacement cost.
38. Inspect camouflage pattern for fading.	Camouflage pattern is visually discernable and the colors are still subdued in nature.	N/A	Camouflage pattern is no longer discernable.
39. Check data labels for readability.	Data labels present and readable.	Data label is present but information is unreadable. Re-mark IAW WP 0012. Replace data label IAW WP 0013.	N/A
40. Inspect snap fasteners for breaks, cracks, corrosion, damage and proper functioning.	All snap fasteners function properly and have no damage.	Any damage that can be repaired at less than 65% of replacement cost.	Any damage that requires repairs at more than 65% of replacement cost.
41. Ensure ballistics lay flat when installed in the carrier.	Soft ballistic inserts fit in the carrier and lay flat.	N/A	Outershell is unserviceable if the soft ballistic inserts do not fit properly, as long as they are both the same size. Outershells that have shrunk shall not be re-used.

INSPECT – CONTINUED

Table 3. IOTV and IOTV Gen II Components – Continued.

COMPONENT PROCEDURE	ACCEPTABLE (Codes A and B)	REPAIRABLE (Code F)	NONREPAIRABLE (Codes H and X)
Lower Back Protector, Groin Protector and Deltoid Protector Soft Ballistic Inserts			
42. Inspect soft ballistic inserts for evidence of being hit by bullets or fragments.	The soft ballistic inserts shows no evidence of being hit by bullets or fragments.	Bullet or fragment damage cannot be repaired.	The soft ballistic inserts shows evidence of being hit by bullets or fragments.
43. Check data labels for readability.	Data labels present and readable.	Data label is present but information is unreadable. Re-mark IAW WP 0012. Replace data label IAW WP 0013.	N/A
44. Inspect fabric for rips, tears, cleanliness or stains.	Fabric has no damage and is clean.	Fabric is dirty. Clean IAW WP 0011.	Fabric is ripped, torn or stained with petroleum-based products or acids.
45. Ensure ballistics are flat.	Ballistics are flat and smooth.	Ballistics are bunched or folded. Flatten IAW WP 0023.	Ballistics are bunched and cannot be flattened.
ESAPI/ESBI			
46. Inspect ESBI and ESAPI outer cover for damage or exposed ceramic material (Figure 1).	Outer cover has no damage.	Hard armor protective inserts are not reparable.	Outer cover is damaged exposing the ceramic tile material.
47. Inspect ESBI and ESAPI for cracks or loose pieces by shaking the plates.	Plate has no cracks and there is no rattling or loose pieces when shaken.	Hard armor protective inserts are not reparable.	Plate is cracked and you hear loose pieces rattling around when shaken.
48. Inspect ESBI and ESAPI for damage by twisting by hand.	No creaking or squeaking of plate when twisted by hand.	Hard armor protective inserts are not reparable.	Creaking or squeaking of ceramic tile heard when plate twisted by hand.
49. Inspect composite backing for delamination (Figure 1).	No delamination of composite backing.	Hard armor protective inserts are not reparable.	Composite backing is delaminating (backing material plies are separating).

INSPECT – CONTINUED

Table 3. IOTV and IOTV Gen II Components – Continued.

COMPONENT PROCEDURE	ACCEPTABLE (Codes A and B)	REPAIRABLE (Code F)	NONREPAIRABLE (Codes H and X)
50. Inspect ESBI and ESAPI for cracking by pinching the outer ½-inch perimeter of the plate.	No cracking of the tile is felt or heard.	Hard armor protective inserts are not reparable.	Cracking of the ceramic tile is felt or heard as you firmly pinch the outer ½-inch perimeter of the plate.
51. Inspect ESBI and ESAPI for evidence of a hit by bullets or fragments.	No evidence of being hit by bullets or fragments.	Hard armor protective inserts are not reparable.	Plate has been hit by a bullet or fragment.

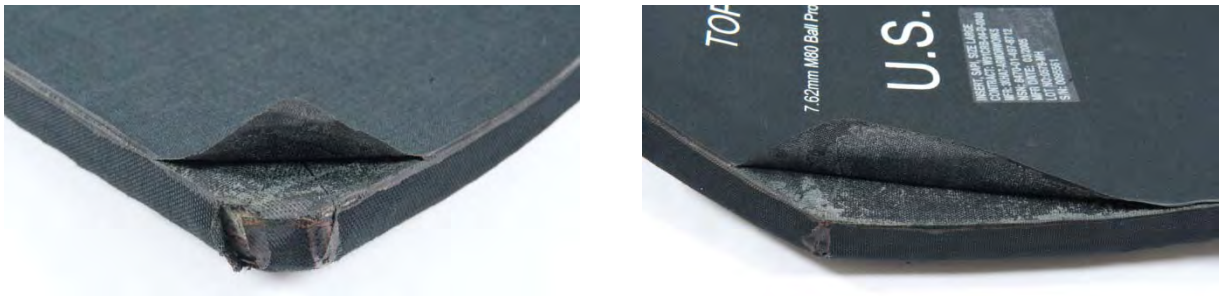


Figure 1. Examples of Damage to Hard Armor Protective Inserts.

SUSTAINMENT MAINTENANCE

CLEANING AND DRYING

SERVICE

INITIAL SETUP:

Tools and Special Tools

Washer: High Extract (300 G), 65-lb (dry) capacity, solid mount computer-controlled wet clean system, Wascomat® Model EXSM-230C or equivalent (WP 0047, Item 18)
Dryer: Wascomat® Model TD75 RMC or equivalent (WP 0047, Item 2)
Temperature Measuring Instrument (70 °F – 200 °F capability, 1 °F accuracy) (WP 0047, Item 16)
Textile Fabric Moisture Analyzer (0% – 15% moisture capability, 1% accuracy) (WP 0047, Item 17)

Personnel Required

Non-MOS Specific

Equipment Condition

Materials/Parts

Lanadol® Avant® Detergent (WP 0046, Item 5)
Lanadol® Aktiv® Detergent (WP 0046, Item 4)
Perforated Laundry Bag (WP 0046, Item 13)
Laundry ID Tags or Wash-resistant Bar Code Label (human readable) (WP 0046, Item 6)
Ventilated Plastic Bag for Storing Cleaned IOTV Components (WP 0046, Item 16)
Plastic Bag for Storing Soft Ballistic Inserts (WP 0046, Item 14)

References

WP 0004
WP 0009

SERVICE

NOTE

Universal Side Plate Carrier (IOTV Gen II) is not machine washable. Hand wash Universal Side Plate Carrier IAW WP 0004.

The IOTV and IOTV Gen II consists of 15 to 16 individual component of which, 10 to 11 of the components are machine-washable using the instructions outlined below. All components of the IOTV and IOTV Gen II are interchangeable. It is possible to have a left side plate carrier with a universal side plate carrier with universal side plate pouch.

The remaining five components consist of the soft ballistic inserts and the quick release cable. None of these items may be machine washed. The laundry procedures outlined below apply to the items marked “Yes” in the Washable column in Table 1. Locations of pin tracking ID tag or label are indicated by a circle.

SERVICE – CONTINUED

Table 1. IOTV Components.

Item #	Picture		Data Label Item Name	Washable
	Exterior	Interior		
1			IOTV Front Carrier	Yes
	OR			
			IOTV Front Carrier – FQ/PD 04-05 D	
2			IOTV Back Carrier	Yes
	OR			
			IOTV Back Carrier – FQ/PD 04-05 D	

SERVICE – CONTINUED

Table 1. IOTV Components – Continued.

Item #	Picture		Data Label Item Name	Washable
	Exterior	Interior		
3			Right External Side Plate Carrier	Yes
	OR			
	 AND 	 AND 	Universal Side Plate Carrier – FQ/PD 04-05 D AND Universal Side Plate Pouch – FQ/PD 04-05 D	
4			Left External Side Plate Carrier	Yes
	OR			
	 AND 	 AND 	Universal Side Plate Carrier– FQ/PD 04-05 D AND Universal Side Plate Pouch– FQ/PD 04-05 D	

SERVICE – CONTINUED

Table 1. IOTV Components – Continued.

Item #	Picture		Data Label Item Name	Washable
	Exterior	Interior		
5			Right Internal Waistband	Yes
	OR			
			Right Internal Waistband – FQ/PD 04-05 D	
6			Left Internal Waistband	Yes
	OR			
			Left Internal Waistband – FQ/PD 04-05 D	
7			Front Yoke/Collar Assembly	Yes
	OR			
			Front Yoke/Collar Assembly – FQ/PD 04-05 D	

SERVICE – CONTINUED

Table 1. IOTV Components – Continued.

Item #	Picture		Data Label Item Name	Washable
	Exterior	Interior		
8			Yoke and Collar, Front and Rear	Yes
	OR			
			Yoke and Collar, Front and Rear – FQ/PD 04-05 D	
9			Groin Protector Outershell	Yes
	OR			
			Groin Protector Outershell – FQ/PD 04-05 D	

SERVICE – CONTINUED

Table 1. IOTV Components – Continued.

Item #	Picture		Data Label Item Name	Washable
	Exterior	Interior		
10			Lower Back Protector Outershell	Yes
	OR			
			Lower Back Protector Outershell – FQ/PD 04-05 D	
11			Front Ballistic Insert	No
12			Back Ballistic Insert	No

SERVICE – CONTINUED

Table 1. IOTV Components – Continued.

Item #	Picture		Data Label Item Name	Washable
	Exterior	Interior		
13			Lower Back Protector Ballistic Insert	No
14			Groin Protector Ballistic Insert	No
15			Cable Release Assembly	No
	OR			
			Cable Release Assembly – FQ/PD 04-05 D	

LEGEND:	
Black Circle –	Indicates recommended location to pin tracking ID tag or label. Pin to MOLLE straps at mark.
Black Triangle–	Indicates recommended location to place adhesive-backed ID tracking label.

SERVICE – CONTINUED

WARNING

Wear suitable protective gloves and personal protective equipment when handling soiled IOTVs.

NOTE

It is recommended that all component parts of an IOTV are tracked throughout the cleaning process so they can be reassembled properly. Tracking individual components and ballistic inserts will minimize risk of improper re-assembly and functionality.

Disassembly

NOTE

The only parts not to be cleaned are the soft ballistic inserts.

1. Lay the IOTV or IOTV Gen II on a flat surface with front carrier facing up (Figure 1).

Figure 1. IOTV Front

2. Lift the front flap open and unhook the left and right external side plate carriers (Figure 2).

Figure 2. Opening Front Flap.

SERVICE – CONTINUED

3. Lay the front and back carriers open with the shoulder straps still attached and with the data labels facing up (Figure 3).

Figure 3. Front and Rear Carrier Open.

4. Unhook the left and right internal waistbands from each other (Figure 4).

Figure 4. Disconnect Hook and Loop on Internal Waistbands.

SERVICE – CONTINUED

5. Remove soft ballistic inserts from lower back and groin protector assemblies (if applicable) by separating the hook and loop fasteners on their respective carriers (Figure 5).

Figure 5. Removing Lower Back Protector and Groin Protector Soft Ballistic Inserts.

6. Open the hook and loop seam on the inside of the front carrier and remove ballistic insert from the front carrier (Figure 6).

Figure 6. Removing Ballistic Inserts from Front Carrier.

SERVICE – CONTINUED

7. Similarly open the hook and pile seam on the inside of the back carrier and remove ballistic insert from the back carrier (Figure 7).

Figure 7. Removing Ballistic Inserts from Back Carrier.

8. Connect the left and right internal waistbands together (Figure 8).

Figure 8. Connect Hook and Loop on Internal Waistbands.

SERVICE – CONTINUED

9. Fold the front and back carriers together, lift up the front flap and connect the left and right side plate carriers (Figure 9).

Figure 9. Front Carrier with Flap Open, Hook Side Plate Carriers.

10. Identify the IOTV garment (i.e. IOTV without the ballistic inserts) by pinning an ID label at the locations on the front and back carrier as shown (Figure 10).

Figure 10. ID Label Locations.

11. Cover the exposed hook surface on the front and back flaps with pieces of loop tape so as to prevent them from abrading other components during the subsequent wash and dry cycles.

SERVICE – CONTINUED

12. Remove the quick release cable completely (Figure 11).

Figure 11. Pull and Remove Quick Release Assembly.

13. The IOTV will now be separated into two main parts:
    - Front Carrier, Side Plate Carriers hooked on to Front Carrier, Front Yoke and Collar, and Groin Protector (if applicable).
    - Back Carrier, Internal Waistbands hook and loop to each other in front and one Internal Waistband attached to Back Carrier, Rear Yoke and Collar, and Lower Back Protector.
14. Place the removed ballistic inserts (Lower Back Protector, Groin Protector, Front and Back Ballistic Inserts) and quick release assembly in an appropriate container and identity the container with an ID label so that the content can be traced back to the original IOTV garment for reassembly after cleaning.

END OF TASK

SERVICE – CONTINUED

Preparation for Cleaning

1. If not already done, disassemble IOTV/IOTV Gen II.
2. Inventory IOTV/IOTV Gen II, ensuring all parts listed in Table 1 are present.
3. Record the size, manufacturer and lot number of each IOTV/IOTV Gen II garment.

CAUTION

Do not pin or puncture any soft ballistic armor. Pins for ID tags shall only be placed on the MOLLE webbing and not through the nylon fabric.

NOTE

Laundry ID tags or labels shall be pinned to the washable IOTV/IOTV Gen II components and cable release assembly. An adhesive-backed ID label shall be used for soft ballistic inserts.

4. Affix a traceable laundry ID tag or wash-resistant ID label with appropriate tracking information (i.e. information which can allow complete traceability to the original IOTV, customer order and any item information which might be provided with the order by the customer) on the webbing pull straps on the Front and Back Carriers at locations shown in Table 1.
5. Place all soft ballistic inserts and quick release cable (Table 1, Items 11 through 15) in a plastic bag, store the bag in an appropriate container and set aside until after wash. Each container shall hold the soft ballistic inserts of only one IOTV garment. Identify the plastic bag/container with a bad code label tracking the contents with the corresponding outer shell components.
6. Inspect all washable components (Table 1, Items 1 through 10) for damage, defects, heavy soiling and stains. Note any damage or defects.
7. Wet the heavily stained and soiled areas with the undiluted spot cleaning solution (Lanadol® Avant®).
8. Check to ensure that the yoke and collar assemblies, internal elastic waist bands, side plate carriers, lower back protector carrier, groin protector carrier, front and back carriers are securely attached and any exposed hook surfaces on the front and back carriers are covered with a dummy pile tape.

END OF TASK

Washing Procedures

NOTE

The cleaning conditions below are based on the Wascomat® Model EXSM-230C washer.

Do not overload the wash cylinder. Do not exceed 50% of the rated capacity of the machine.

The maximum load for a typical 65-lb machine is 5 IOTV garments.

Wash IOTVs using the Wascomat® Model EXSM-230C washer or an equivalent computer-controlled, wet cleaning machine, using settings listed in Table 2 and detergents listed in Table 3.

SERVICE – CONTINUED

Table 2. Process Cycle Program.

Step	Process Description	Time
0	Head	
	• Buzzer at Program End	On
	• Motor Gentle Action On Time	00:05
	• Motor Gentle Action Off Time	00:10
	• Motor Normal Action On Time	00:10
	• Motor Normal Action Off Time	00:05
1	Prewash (1)	
	• Wash Time (min:sec)	08:00
	• Temperature (degree C)	40
	• Temperature Variability Range (degree C)	+/- 2
	• Second Fill Level (liters)	110
	• Cold Water	On
	• Hot Water	On
	• Fill Gentle	On
	• Heat Gentle	On
	• Wash Normal	On
	• Motor Speed During Filling (RPM)	20
	• Motor Speed During Heating (RPM)	20
	• Motor Speed During Wash (RPM)	30
	• Motor Acceleration (RPM/sec)	20
	• Detergent Signal (Avant® @4 ml/sec)	01:30
2	Drain (1)	
	• Motor Normal	On
	• Drain Normal	On
	• Drain Time (min:sec)	1:00
	• Motor Speed During Drain Time (RPM)	41
	• Motor Acceleration During Drain (RPM/sec)	20
3	Main Wash (1)	
	• Wash Time (min:sec)	10:00
	• Temperature (degree C)	40
	• Temperature Variability Range (degree C)	+/- 2
	• Second Fill Level (liters)	110

SERVICE – CONTINUED

Table 2. Process Cycle Program – Continued.

Step	Process Description	Time
	• Level Variability Range (liters)	+/- 10
	• Cold Water	On
	• Hot Water	On
	• Fill Gentle	On
	• Heat Gentle	On
	• Wash Normal	On
	• Motor Speed During Filling (RPM)	20
	• Motor Speed During Heating (RPM)	20
	• Motor Speed During Wash (RPM)	30
	• Motor Acceleration (RPM/sec)	20
	• Detergent Signal (Aktiv® @4ml/sec)	01:00
	• Detergent Signal (Avant® @4ml/sec)	00:30
4	Drain (2)	
	• Motor Normal	On
	• Drain Normal	On
	• Drain Time (min:sec)	00:40
	• Motor Speed During Drain Time (RPM)	41
	• Motor Acceleration During Drain (RPM/sec)	20
5	Spin (1)	
	• Drain Normal	On
	1. Extract Time (min:sec)	00:30
	2. Extract Speed (RPM)	400
6	Rinse (1)	
	• Wash Time (min:sec)	02:00
	• Temperature (degree C)	40
	• Temperature Variability Range (degree C)	+/- 2
	• Second Fill Level (liters)	141
	• Level Variability Range (liters)	+/- 15
	• Cold Water	On
	• Hot Water	On
	• Fill Gentle	On
	• Heat Gentle	On

SERVICE – CONTINUED

Table 2. Process Cycle Program – Continued.

Step	Process Description	Time
	• Wash Normal	On
	• Motor Speed During Filling (RPM)	20
	• Motor Speed During Heating (RPM)	20
	• Motor Speed During Wash (RPM)	30
	• Motor Acceleration (RPM/sec)	20
7	Drain (3)	
	• Motor Normal	On
	• Drain Normal	On
	• Drain Time (min:sec)	00:40
	• Distribution Time (min:sec)	00:10
	• Motor Speed During Drain Time (RPM)	41
	• Motor Acceleration During Drain (RPM/sec)	20
8	Spin (2)	
	• Drain Normal	On
	• Extract Time (min:sec)	00:30
	• Extract Speed (RPM)	400
9	Rinse Repeat (1)	
	• Wash Time (min:sec)	01:00
	• Temperature (degree C)	40
	• Temperature Variability Range (degree C)	+/- 2
	• Second Fill Level (liters)	141
	• Level Variability Range (liters)	+/- 15
	• Cold Water	On
	• Hot Water	On
	• Fill Gentle	On
	• Heat Gentle	On
	• Wash Normal	On
	• Motor Speed During Filling (RPM)	20
	• Motor Speed During Heating (RPM)	20
	• Motor Speed During Wash (RPM)	30
	• Motor Acceleration (RPM/sec)	20

SERVICE – CONTINUED

Table 2. Process Cycle Program – Continued.

Step	Process Description	Time
10	Drain (4)	
	• Motor Gentle	On
	• Drain Normal	On
	• Drain Time (min:sec)	01:00
	• Distribution Time (min:sec)	00:20
	• Motor Speed During Drain Time (RPM)	41
	• Motor Acceleration During Drain (RPM/sec)	20
11	Spin (3)	
	• Drain Normal	On
	• Extract Time (min:sec)	00:30
	• Extract Speed (RPM)	690
12	End	

Table 3. Approved Detergents.

Manufacturer	Product Trade Name	Function	Application Stage	Amount
Kreussler Company	Lanadol® Avant®	Pre-spotting Agent	• Prewash • Main Wash	360 ml 120 ml
	Lanadol® Aktiv®	Detergent	• Main Wash	240 ml

Drying

CAUTION

Overheating and over-drying will result in damage to the IOTV that may not be readily apparent. Follow all directions carefully. The dryer must have proper temperature and residual moisture controls to assure conformance to the process and finished product specifications.

NOTE

Do not load dryer to more than 75% of rated capacity. The maximum load for a typical 75-lb machine is 7 IOTVs.

1. Dry the IOTVs in a drying machine capable of detecting the amount of residual moisture in the garment and automatically stopping the drying cycle when the garments reach the desirable residual moisture content (Wascomat® model TD75RMC or equivalent). The process conditions for the drying machine are located in Table 4.
2. Upon completion of drying cycle, check the garment components for residual moisture level and temperature. Do not over-dry or over-heat the garment.

SERVICE – CONTINUED

3. If residual moisture level is higher than the desirable range in Table 4, extend the drying cycle time in small increments until the desirable residual moisture conditions are met.

Table 4. Drying Process Conditions.

Condition	Setting/Measurement
Garment Residual Moisture Level	5 - 7%
Maximum Air Temperature	180 °F
Maximum Garment Temperature	110 °F
Approximate Cycle Time	20 minutes

Post-Cleaning Inspection

1. Inspect IOTV components for cleanliness.
2. If any of the components is not sufficiently cleaned (best commercial practices), repeat the cleaning and drying process.
3. If IOTV components are clean, allow items to acclimate to room relative humidity and temperature.
4. Once acclimated, regroup the clean washed components with the corresponding soft ballistic inserts and quick release cables that were previously set aside.
5. Check ID tag/label for each component and ballistic inserts to ensure that all items match to the original IOTV.
6. Inventory all items in accordance with Table 1 to make sure there is no missing part. Note any discrepancies with inventory taken prior to washing.

END OF TASK

Assembly

Assemble, rework and inspect IOTV IAW WP 0009 and then package in accordance with Packaging section.

END OF TASK

Packaging

1. Place the assembled and inspected IOTV in a separate, ventilated plastic bag.
2. Insert in each bag the inspection record identifying any non-conforming, damaged or missing component and/or defective conditions of the IOTV.
3. Identify the ventilated bag of IOTV with a label containing the lot/serial code that is traceable to the specific customer order and any item information which might be provided with the order.
4. Return the cleaned IOTVs in the ventilated plastic bag to customer per order requirement.

END OF TASK

END OF WORK PACKAGE

SUSTAINMENT MAINTENANCE
MARKING AND STENCILING
REPAIR

INITIAL SETUP:

Tools and Special Tools

Personnel Required

CIF

Materials/Parts

Marker, Felt Tip, Black, Permanent (WP 0046, Item 7)
Pen, Ball Point (WP 0046, Item 11)

Equipment Condition

REPAIR

All components of the Interceptor Body Armor System, except for hard armor protective inserts, may be re-marked or re-stenciled. If possible, new labels should be manufactured IAW Tables x through x, and sewn to the component for all components except soft ballistics inserts, yoke/collar assemblies, front yoke assembly and throat protector assembly. If a data label is missing and the size of the component is unknown, follow these procedures to determine size prior to re-marking.

Determining Size of Component When Data Label is Missing

OTV Assembly

1. Lay OTV on a flat surface with interior fabric facing up.

NOTE

Linear measurements are taken in a flat, relaxed state with a metal measuring device and measurements taken to the nearest 1/16 inch.

2. With the vest properly fastened and turned inside out, measure the combined width at the widest point below the lower armhole opening, edge to edge. This is the chest measurement.
3. Measure the length of the front center panel.
4. Measure the length of the back. The back waist length shall be taken on a straight line from the center of the back from the top edge of the base vest neckline (center back) to the bottom edge of the shell.
5. Find the measurements from steps 2 through 4 in Table 1 to determine size.
6. Sew new data label on interior of vest.

REPAIR – CONTINUED

Figure 1. OTV Vest Sizing.

Table 1. OTV Vest Sizing

Chest Measurement (± ½ Inch)	Front & Center Length (± ½ Inch)	OTV Size
22 ¼	17	XS
23 ¼	17 ¼	S
24 ¼	17 ¾	M
26 ¼	18 ½	L
28 ¼	19 ¼	XL
30 ¼	20	2XL
32 ¼	20 ¾	3XL
34 ¼	21 ¼	4XL

REPAIR – CONTINUED

IOTV/IOTV Gen II Front Carrier Measurements

NOTE

Front and back center measurements are taken along the center line by holding the garment taut with a metal measuring device and measurements taken to the nearest 1/16 inch.

1. Lay the front carrier on a flap surface with the exterior fabric facing up.
2. Holding the garment taut and using a metal measuring device, measure the distance on a straight line from the center of the back from the top edge of the base vest neckline (center front and back) to the bottom edge of the shell.
3. Measure the width of the carrier at the widest point below the lower armhole opening, edge to edge.
4. Find the measurements from steps 2 and 3 in Table 2 to determine size of front carrier.
5. Sew new data label on interior of vest.
6. Repeat steps 1-5 for rear carrier using Table 2 to determine size of rear carrier.

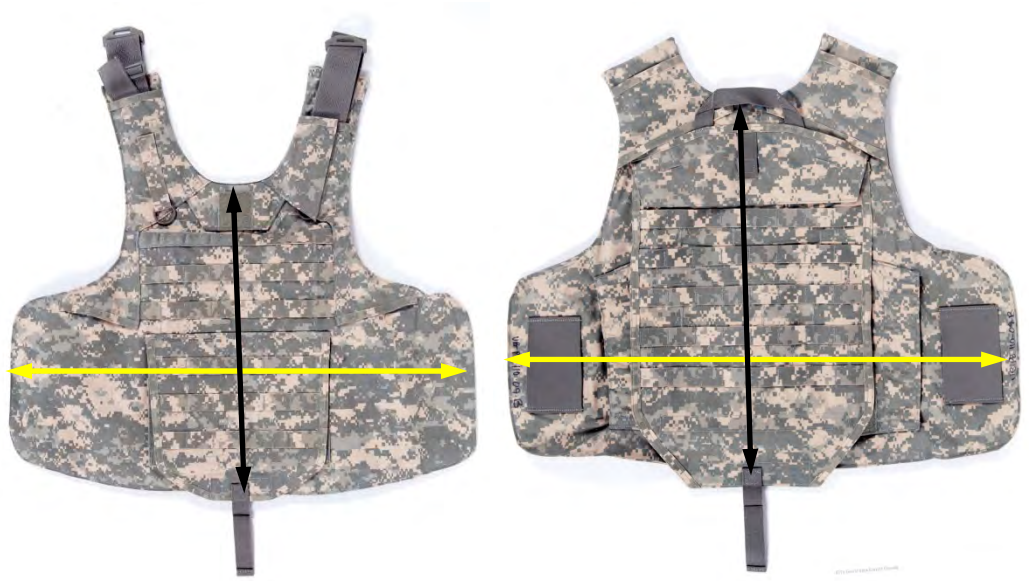


Figure 2. IOTV/IOTV Gen II Front and Back Carrier Measurements.

Table 2. IOTV/IOTV Gen II Sizing Chart.

Front Center Length ± ½”	Front Width ± ½”	Back Center Length ± ½”	Back Width ± ½”	IOTV Size
17 ¼	25 1/8	18 ¾	24 3/8	XS
17 ½	26 1/8	19	25 ¼	S
18	271/8	19 ½	27 ¼	M
19	27 ¼	20 ½	27 ¼	ML
18 ¾	29 1/8	20 ¼	29 ¼	L
19 ¾	29 1/8	21 ¼	29 3/8	LL
19 ½	31 1/8	21	31 ¼	XL
20 ½	31 1/8	22	31 3/8	XLL
21 ½	33	23	33 3/8	2XL
22 ½	34 7/8	24	35 3/8	3XL
23 ½	36 7/8	25	37 ½	4XL

END OF TASK

REPAIR – CONTINUED

Cable Release Assembly

1. Measure distance from crimped cable sleeve to the end of the short cable.
2. Measure distance from crimped cable sleeve to the end of the long cable.
3. Refer to table 3 for proper sizing.
4. Install new label.

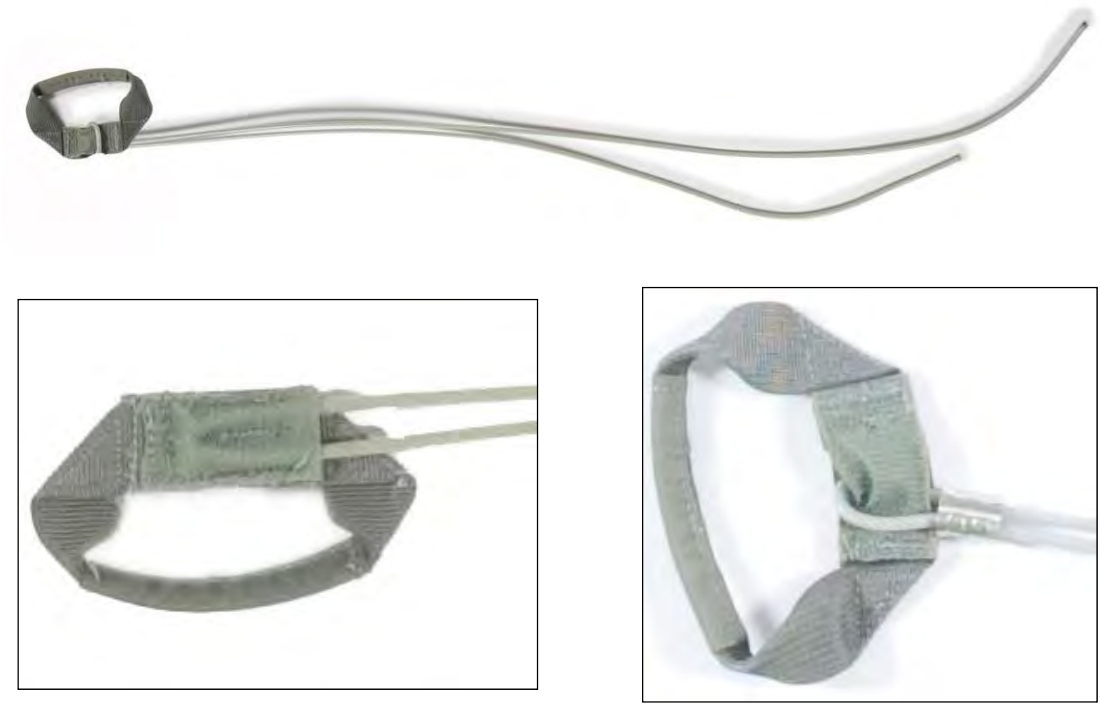


Figure 3. Cable Release Assembly.

Table 3. Cable Release Assembly Sizing.

Short Cable Length	Long Cable Length	Vest Size
24 ¾	30 ¾	XS – S
25 ¾	31 ¾	M – LL
26 ¾	32 ¾	XL – XLL
27 ¾	34 ¾	2XL – 4XL

END OF TASK

REPAIR – CONTINUED

NOTE

Stenciling should be used whenever possible. A ball point pen or permanent felt tip marker should be used only where stenciling is not possible, or when stenciling devices are not available. Any type ball point pen using black or blue ink may be used for marking on labels only.

Original stenciled data or marking that becomes faded, illegible, obliterated, or removed as a result of performing a repair procedure, will be remarked with a ball point pen, permanent felt tip marker, or re-stenciled with parachute marking ink. All marking or re-stenciling will be done on, or as near as possible to, the original location and should conform to the original lettering type and size.

Marking

Using marking devices, such as a ball point pen or permanent felt tip marker, mark on, or as near as possible to, the original location and conform to the original lettering type and size.

Stenciling

Proceed as follows:

1. Cut oiled stencil board to match the original lettering type and size of data to be re-stenciled.
2. Place cut stencil board over, or as near as possible to, the original marking to be re-stenciled.
3. Place an additional sheet of stencil board beneath the area to be re-stenciled to prevent the marking ink from penetrating to other areas.
4. With the stencil board in place and, using the stenciling brush filled with parachute marking ink, re-stencil the original marking as shown in Table 1.

REPAIR – CONTINUED

Table 4. OTV Label Information.

Label Information
BODY ARMOR, "INTERCEPTOR" BASE VEST CARRIER SIZE NSN: XXXX-XX-XXX-XXXX **THE INTERCEPTOR OUTER TACTICAL VEST (OTV) WITH ALL SOFT BALLISTIC PANELS INSTALLED PROVIDES PROTECTION FROM FRAGMENTATION AND 9 MM SUBMACHINE GUN OR LESSER THREATS. THIS VEST DOES NOT PROTECT AGAINST KNIVES OR SHARP OBJECTS** **DO NOT MACHINE WASH OR DRY. FAILURE TO FOLLOW THESE INSTRUCTIONS WILL DAMAGE THE VEST'S PROTECTIVE CAPABILITY.** **CLEANING INSTRUCTIONS** 1. Remove dirt from outer surface with a cloth or soft bristle brush. 2. Remove all ballistic panels and the Small Arms Protective Inserts (SAPI) from the outer shell and the component carriers. So ft ballistic Panels are ONLY to be cleaned by removing loose dirt from the surface and wiping clean with a moistened cloth or a soft bristle brush. Avoid submerging the panels in water: DO NOT bleach! DO NOT machine wash! DO NOT dry clean! DO NOT! Apply solvents to the ballistic panels! If the ballistic panels become wet allow them to air dry flat away from heat sources and out of direct sunlight. If the ballistic panels become saturated with liquids such as bleaches, gasoline, petroleum, oils or lubricants, turn them in for replacement as soon as possible. 3. Hand wash the OTV base vest and component outer shells only in cold water with soap or a very mild detergent. DO NOT USE CAUSTIC CLEANERS, CHLORINE BLEACH, YELLOW SOAP, CLEANING FLUIDS OR SOLVENTS, WHICH WILL DISCOLOR AND DETERIORATE THE TEMS! 4. Rinse the outer shells very thoroughly in clean water to wash out the soap. 5. Air-dry indoors, or in the shade, AWAY FROM HEAT SOURCES. 6. DO NOT ATTEMPT TO DYE THE ITEM OR FIX DISCOLORATIONS. **TURN IN YOUR ITEMS IF:** 1. Frags or bullets have hit them. 2. The outer cover is torn or damaged beyond field repair. 3. The Velcro cannot be closed completely or repaired. 4. The webbing is torn or damaged beyond repair. 5. The items cannot be adequately cleaned, or are badly discolored. 6. The items have open seams or broken components. **REFER TO USE & CARE MANUAL FOR THE PROPER USE OF THIS BALLISTIC PROTECTIVE SYSTEM, REPAIR PROCEDURES & RECORDING OF HITS.** LOT NUMBER DATE OF MFG. VEST SERIAL #: CONTRACT # MANUFACTURED BY
BODY ARMOR INTERCEPTOR - BALLISTIC PANEL, *LEFT FRONT SIZE: NSN:XXXX-XX-XXX-XXXX **INSERT THIS SIDE TO BODY** **FAILURE TO INSERT THIS BALLISTIC PANEL IN THE INTERCEPTOR OTV OUTERSHELL WILL RE SULT IN ABSENCE OF BALLISTIC PERFORMANCE FROM FRAGMENTATION AND 9MM SUBMARINE GUN OR LESSER T HREATS** **DO NOT LAUNDER BALLISTIC PANELS** Avoid submerging in water. DO NOT bleach. DO NOT Machine Wash DO NOT Dry Clean. DO NOT apply solvents. **FOR CLEANING:** ONLY Remove loose dirt from surface and wipe clean With a moistened cloth or soft brush. If Ballistic Panels become wet allow to air dry in a flat position away From heat sources and out of direct sunlight. If ballistic panel becomes Saturated with liquids such as gasoline, bleach or other lubricants, Turn in for replacement as soon as possible. LOT NUMBER DATE OF MFG: SERIAL NO: CONTRACT # MANUFACTURED BY:

*Above label to be used with ballistic panels left and right, imprint left or right where applicable.

REPAIR – CONTINUED

Table 4. OTV Label Information – Continued.

Label Information	
BODY ARMOR, INTERCEPTOR, BALLISTIC PANEL, BACK SIZE: NSN: XXXX-XX-XXX-XXXX **INSERT THIS SIDE TO BODY** **FAILURE TO INSERT THIS BALLISTIC PROTECTIVE PANEL IN THE OUTER TACTICAL VEST SHELL WILL RESULT IN THE ABSENCE OF PROTECTION FROM FRAGMENTATION & 9 MM SUB-MACHINE GUN OR LESSER THREATS!** **DO NOT MACHINE WASH OR DRY BALLISTIC PANELS!** Avoid submerging in wash water. Avoid caustic cleaners, DO NOT bleach! DO NOT machine wash! DO NOT dry clean! DO NOT apply solvents! **CLEANING:** ONLY remove loose dirt from surface & wipe clean with a moistened cloth or soft bristle brush. When Ballistic Panels become wet allow to air dry in a flat position away from heat sources & out of direct sunlight. If Ballistic panels become saturated with liquids such as bleaches, gasoline, petroleum, oils, or lubricants, turn-in for replacement as soon as possible. LOT NUMBER DATE OF MFG. SERIAL #: CONTRACT #: MANUFACTURED BY:	
BODY ARMOR, INTERCEPTOR, BALLISTIC PANEL, COLLAR *RIGHT SIZE NSN XXXX-XX-XXX-XXXX **INSERT THIS SIDE TO BODY** FAILURE TO INSERT THIS BALLISTIC PANEL IN THE COLLAR ASSEMBLY OUTERSHELL WILL RESULT IN ABSENCE OF BALLISTIC PROTECTION. Refer to the OTV outershell Label for cleaning and maintenance instructions. LOT NO. DATE OF MFG SERIAL NO. CONTRACT # MANUFACTURED BY: *Above label to be used with ballistic panels left and right, imprint left or right where applicable.	
BODY ARMOR, INTERCEPTOR, YOKE AND COLLAR OUTERSHELL SIZE NSN XXXX-XX-XXX-XXXX **THIS SIDE TO BODY** Refer to the OTV outershell Label for cleaning and maintenance instructions. LOT NO. DATE OF MFG SERIAL NO. CONTRACT # MANUFACTURED BY:	
BODY ARMOR, INTERCEPTOR, BALLISTIC PANEL THROAT PROTECTOR NSN XXXX-XX-XXX-XXXX **INSERT THIS SIDE TO BODY** FAILURE TO INSERT THIS BALLISTIC PANEL IN THE COLLAR ASSEMBLY OUTERSHELL WILL RESULT IN ABSENCE OF BALLISTIC PROTECTION. Refer to the OTV outershell Label for cleaning and maintenance instructions. LOT NO. DATE OF MFG SERIAL NO. CONTRACT # MANUFACTURED BY:	

REPAIR – CONTINUED

Table 4. OTV Label Information – Continued.

Label Information	
BODY ARMOR, INTERCEPTOR, THROAT PROTECTOR OUTERSHELL NSN XXXX-XX-XXX-XXXX Refer to the OTV outershell Label for cleaning and maintenance instructions. LOT NO. DATE OF MFG SERIAL NO. CONTRACT # MANUFACTURED BY:	
BODY ARMOR, INTERCEPTOR, BALLISTIC PANEL, GROIN PROTECTOR **SIZE**: NSN:XXXX-XX-XXX-XXXX **INSERT THIS SIDE TO BODY** DO NOT LAUNDER. Remove loose dirt from cover with a cloth or soft brush. Avoid submerging panels in wash water. DO NOT bleach. DO NOT machine Wash. DO NOT dry clean. DO NOT apply solvents. Refer to OTV Outershell Label for cleaning and maintenance instructions. LOT NUMBER DATE OF MFG. SERIAL # CONTRACT # MANUFACTURED BY:	
BODY AMOR INTERCEPTOR, GROIN PROTECTOR OUTERSHELL SIZE: NSN:XXXX-XX-XXX-XXXX Check to insure the correct side of the Ballistic Panel will be against the Body before attaching to the OTV Refer to the OTV outershell Label for cleaning and maintenance instructions. LOT NUMBER DATE OF MFG SERIAL# CONTRACT # MANUFACTURED BY:	
BODY ARMOR INTERCEPTOR,*AXILLARY (UNDERARM) PROTECTOR OUTERSHELL **SIZE: ONE SIZE** NSN XXXX-XX-XXX-XXXX Refer to the OTV outershell Label for cleaning and maintenance instructions. LOT NO. DATE OF MFG SERIAL NO. CONTRACT # MANUFACTURED BY: *Above label to be used with axillary (underarm) and Deltoid (shoulder) protector, where applicable.	

REPAIR – CONTINUED

Table 4. OTV Label Information – Continued.

Label Information	
BODY AMOR INTERCEPTOR, BALLISTIC PANEL AXILLARY (UNDERARM) PROTECTOR SIZE: ONESIZE NSN:XXXX-XX-XXX-XXXX **INSERT THIS SIDE TO BODY** DO NOT LAUNDER. Remove loose dirt from cover with a cloth or soft brush. Avoid submerging panels in wash water. DO NOT bleach. DO NOT machine Wash. DO NOT dry clean. DO NOT apply solvents. Refer to OTV Outershell Label for cleaning and maintenance instructions. Check to insure the correct side of the Ballistic Panel will be against the Body before attaching to the OTV Refer to the OTV outershell Label for cleaning and maintenance instructions. LOT NUMBER DATE OF MFG SERIAL# CONTRACT # MANUFACTURED BY: *Above label to be used with axillary (underarm) and Deltoid (shoulder) protector, ballistic panel, where applicable.	

REPAIR – CONTINUED

Table 5. IOTV Label Information.

Label Information	
IMPROVED OUTER TACTICAL VEST FRONT CARRIER SIZE: NSN: THE IMPROVED OUTER TACTICAL VEST (IOTV) WITH ALL SOFT BALLISTIC PANELS INSTALLED PROVIDES PROTECTION FROM FRAGMENTATION AND 9MM SUBMACHINE GUN OR LESSER THREATS. THIS VEST DOES NOT PROTECT AGAINST KNIVES OR SHARP OBJECTS. DO NOT MACHINE WASH OR DRY. FAILURE TO FOLLOW THESE INSTRUCTIONS WILL DAMAGE THE VEST'S PROTECTIVE CAPABILITY. CLEANING INSTRUCTIONS 1. Remove dirt from outer surface with a cloth or soft bristle brush. 2. Remove all ballistic panels and the Enhanced Small Arms Protective Inserts (ESAPI) and Enhanced Side Ballistic Inserts (ESBI) from the outer shell and the component carriers. Soft ballistic Panels are ONLY to be cleaned by removing loose dirt from the surface and wiping clean with a moistened cloth or a soft bristle brush. Avoid submerging the panels in water DO NOT bleach! DO NOT machine wash! DO NOT dry clean! DO NOT apply solvents to the ballistic panels! If the ballistic panels become wet allow them to air dry flat away from heat sources and out of direct sunlight. If the ballistic panels become saturated with liquids such as bleaches, gasoline, petroleum, oils or lubricants, turn them in for replacement as soon as possible. 3. Hand wash the IOTV base vest and component outer shells only in cold water with soap or a very mild detergent. DO NOT USE CAUSTIC CLEANERS, CHLORINE BLEACH, YELLOW SOAP, CLEANING FLUIDS OR SOLVENTS, WHICH WILL DISCOLOR AND DETERIORATE THE ITEMS! 4. Rinse the outer shells very thoroughly in clean water to wash out the soap. 5. Air-dry indoors, or in the shade, AWAY FROM HEAT SOURCES. 6. DO NOT ATTEMPT TO DYE THE ITEM OR FIX DISCOLORATIONS. TURN IN YOUR ITEM IF: 1. Frags or bullets have hit them. 2. The outer cover is torn or damaged beyond field repair. 3. The hook and loop cannot be closed completely or repaired. 4. The webbing is torn or damaged beyond repair. 5. The items cannot be adequately cleaned, or are badly discolored. 6. The items have open seams or broken components. REFER TO USE & CARE MANUAL FOR THE PROPER USE OF THIS BALLISTIC PROTECTIVE SYSTEM, REPAIR PROCEDURES & RECORDING OF HITS. LOT NUMBER:_____ DATE OF MFG:_____ SERIAL NO:_____ CONTRACT #: MANUFACTURED BY:	
IMPROVED OUTER TACTICAL VEST BACK CARRIER SIZE: NSN: THE IMPROVED OUTER TACTICAL VEST (IOTV) WITH ALL SOFT BALLISTIC PANELS INSTALLED PROVIDES PROTECTION FROM FRAGMENTATION AND 9MM SUBMACHINE GUN OR LESSER THREATS. THIS VEST DOES NOT PROTECT AGAINST KNIVES OR SHARP OBJECTS. DO NOT MACHINE WASH OR DRY. FAILURE TO FOLLOW THESE INSTRUCTIONS WILL DAMAGE THE VEST'S PROTECTIVE CAPABILITY. CLEANING INSTRUCTIONS 1. Remove dirt from outer surface with a cloth or soft bristle brush. 2. Remove all ballistic panels and the Enhanced Small Arms Protective Inserts (ESAPI) and Enhanced Side Ballistic Inserts (ESBI) from the outer shell and the component carriers. Soft ballistic Panels are ONLY to be cleaned by removing loose dirt from the surface and wiping clean with a moistened cloth or a soft bristle brush. Avoid submerging the panels in water; DO NOT bleach! DO NOT machine wash! DO NOT dry clean! DO NOT apply solvents to the ballistic panels! If the ballistic panels become wet allow them to air dry flat away from heat sources and out of direct sunlight. If the ballistic panels become saturated with liquids such as bleaches, gasoline, petroleum, oils or lubricants, turn them in for replacement as soon as possible. 3. Hand wash the IOTV base vest and component outer shells only in cold water with soap or a very mild detergent. DO NOT USE CAUSTIC CLEANERS, CHLORINE BLEACH, YELLOW SOAP, CLEANING FLUIDS OR SOLVENTS, WHICH WILL DISCOLOR AND DETERIORATE THE ITEMS! 4. Rinse the outer shells very thoroughly in clean water to wash out the soap. 5. Air-dry indoors, or in the shade, AWAY FROM HEAT SOURCES. 6. DO NOT ATTEMPT TO DYE THE ITEM OR FIX DISCOLORATIONS. TURN IN YOUR ITEM IF: 1. Frags or bullets have hit them. 2. The outer cover is torn or damaged beyond field repair. 3. The hook and loop cannot be closed completely or repaired. 4. The webbing is torn or damaged beyond repair. 5. The items cannot be adequately cleaned, or are badly discolored. 6. The items have open seams or broken components. REFER TO USE & CARE MANUAL FOR THE PROPER USE OF THIS BALLISTIC PROTECTIVE SYSTEM, REPAIR PROCEDURES & RECORDING OF HITS. LOT NUMBER:_____ DATE OF MFG:_____ SERIAL NO:_____ CONTRACT #: MANUFACTURED BY:	

REPAIR – CONTINUED

Table 5. IOTV Label Information – Continued.

Label Information	
IMPROVED OUTER TACTICAL VEST- FRONT BALLISTIC INSERT SIZE: NSN: INSERT THIS SIDE TO BODY FAILURE TO INSERT THIS BALLISTIC INSERT IN THE IOTV OUTERSHELL WILL RESULT IN ABSENCE OF BALLISTIC PERFORMANCE FROM FRAGMENTATION & 9MM SUB-MACHINE GUN OR LESSER THREATS. DO NOT LAUNDER BALLISTIC PANELS! Avoid submerging in wash water. DO NOT bleach! DO NOT machine wash! DO NOT dry clean! DO NOT apply solvents! FOR CLEANING: ONLY Remove loose dirt from surface & wipe clean with a moistened cloth or soft bristle brush. If Ballistic Panels become wet allow to air dry in a flat position away from heat sources & out of direct sunlight. If Ballistic panels become saturated with liquids such as bleaches, gasoline, petroleum, oils, or lubricants, TURN IN FOR REPLACEMENT AS SOON AS POSSIBLE. LOT NUMBER:_____ DATE OF MFG:_____ SERIAL NO:_____ CONTRACT #: MANUFACTURED BY:	
IMPROVED OUTER TACTICAL VEST- BACK BALLISTIC INSERT SIZE: NSN: INSERT THIS SIDE TO BODY FAILURE TO INSERT THIS BALLISTIC INSERT IN THE IOTV OUTERSHELL WILL RESULT IN ABSENCE OF BALLISTIC PERFORMANCE FROM FRAGMENTATION & 9MM SUB-MACHINE GUN OR LESSER THREATS. DO NOT LAUNDER BALLISTIC PANELS! Avoid submerging in wash water. DO NOT bleach! DO NOT machine wash! DO NOT dry clean! DO NOT apply solvents! FOR CLEANING: ONLY Remove loose dirt from surface & wipe clean with a moistened cloth or soft bristle brush. If Ballistic Panels become wet allow to air dry in a flat position away from heat sources & out of direct sunlight. If Ballistic panels become saturated with liquids such as bleaches, gasoline, petroleum, oils, or lubricants, TURN IN FOR REPLACEMENT AS SOON AS POSSIBLE. LOT NUMBER:_____ DATE OF MFG:_____ SERIAL NO:_____ CONTRACT #: MANUFACTURED BY:	
IMPROVED OUTER TACTICAL VEST RIGHT SIDE PLATE CARRIER SIZE: NSN: Refer to IOTV outershell label for cleaning and maintenance instructions. LOT NUMBER:_____ DATE OF MFG:_____ CONTRACT #: MANUFACTURED BY:	
IMPROVED OUTER TACTICAL VEST LEFT SIDE PLATE CARRIER SIZE: NSN: Refer to IOTV outershell label for cleaning and maintenance instructions. LOT NUMBER:_____ DATE OF MFG:_____ CONTRACT #: MANUFACTURED BY:	
IMPROVED OUTER TACTICAL VEST RIGHT INTERNAL ELASTIC BAND SIZE: NSN: Refer to the IOTV outershell Label for cleaning and maintenance instructions. LOT NUMBER:_____ DATE OF MFG:_____ CONTRACT #: MANUFACTURED BY:	

REPAIR – CONTINUED

Table 5. IOTV Label Information – Continued.

Label Information	
IMPROVED OUTER TACTICAL VEST LEFT INTERNAL ELASTIC BAND SIZE: NSN: Refer to the IOTV outershell Label for cleaning and maintenance instructions. LOT NUMBER:_____ DATE OF MFG:_____ CONTRACT #: MANUFACTURED BY:	
IMPROVED OUTER TACTICAL VEST CABLE ASSEMBLY SIZE: NSN: Refer to IOTV outershell Label for cleaning and maintenance instructions. LOT NUMBER:_____ DATE OF MFG:_____ CONTRACT #: MANUFACTURED BY:	
IMPROVED OUTER TACTICAL VEST YOKE/COLLAR FRONT ASSEMBLY NSN: Refer to IOTV outershell label for cleaning and maintenance instructions. LOT NO:_____ DATE OF MFG:_____ SERIAL NO:_____ CONTRACT #: MANUFACTURED BY:	
IMPROVED OUTER TACTICAL VEST YOKE/COLLAR BACK ASSEMBLY SIZE: NSN: Check to insure the correct side of the Ballistic Panel will be against the Body before attaching to the IOTV.Refer to IOTV outershell Label for cleaning and maintenance instructions. LOT NO:_____ DATE OF MFG:_____ SERIAL NO:_____ CONTRACT #: MANUFACTURED BY:	
IMPROVED OUTER TACTICAL VEST RIGHT COLLAR BALLISTIC INSERT SIZE: NSN: INSERT THIS SIDE TO BODY FAILURE TO INSERT THIS BALLISTIC PANEL IN THE COLLAR ASSEMBLY OUTERSHELL WILL RESULT IN ABSENCE OF BALLISTIC PROTECTION. DO NOT LAUNDER. Remove loose dirt from cover with a cloth or soft brush. Avoid submerging panels in wash water. DO NOT bleach. DO NOT machine wash. DO NOT dry clean. DO NOT apply solvents. Refer to the IOTV outershell Label for cleaning and maintenance instructions. LOT NUMBER:_____ DATE OF MFG:_____ SERIAL NO:_____ CONTRACT #: MANUFACTURED BY:	

REPAIR – CONTINUED

Table 5. IOTV Label Information – Continued.

Label Information	
IMPROVED OUTER TACTICAL VEST LEFT COLLAR BALLISTIC INSERT SIZE: NSN: INSERT THIS SIDE TO BODY FAILURE TO INSERT THIS BALLISTIC PANEL IN THE COLLAR ASSEMBLY OUTERSHELL WILL RESULT IN ABSENCE OF BALLISTIC PROTECTION. DO NOT LAUNDER. Remove loose dirt from cover with a cloth or soft brush. Avoid submerging panels in wash water. DO NOT bleach. DO NOT machine wash. DO NOT dry clean. DO NOT apply solvents. Refer to the IOTV outershell Label for cleaning and maintenance instructions. LOT NUMBER:_____ DATE OF MFG:_____ SERIAL NO:_____ CONTRACT #: MANUFACTURED BY:	
IMPROVED OUTER TACTICAL VEST LOWER BACK PROTECTOR OUTERSHELL NSN: Check to insure the correct side of the Ballistic Panel will be against the Body before attaching to the IOTV. Refer to IOTV outershell Label for cleaning and maintenance instructions. LOT NUMBER:_____ DATE OF MFG:_____ SERIAL NO:_____ CONTRACT #: MANUFACTURED BY:	
IMPROVED OUTER TACTICAL VEST LOWER BACK PROTECTOR INSERT NSN: INSERT THIS SIDE TO BODY DO NOT LAUNDER. Remove loose dirt from cover with a cloth or soft brush. Avoid submerging panels in wash water. DO NOT bleach. DO NOT machine wash. DO NOT dry clean. DO NOT apply solvents. Refer to the IOTV outershell Label for cleaning and maintenance instructions. LOT NUMBER:_____ DATE OF MFG:_____ SERIAL NO:_____ CONTRACT #: MANUFACTURED BY:	
IMPROVED OUTER TACTICAL VEST GROIN PROTECTOR OUTERSHELL SIZE: NSN: Check to insure the correct side of the Ballistic Panel will be against the Body before attaching to the IOTV. Refer to IOTV outershell Label for cleaning and maintenance instructions. LOT NUMBER:_____ DATE OF MFG:_____ SERIAL NO:_____ CONTRACT #: MANUFACTURED BY:	
IMPROVED OUTER TACTICAL VEST GROIN PROTECTOR INSERT SIZE: NSN: INSERT THIS SIDE TO BODY DO NOT LAUNDER. Remove loose dirt from cover with a cloth or soft brush. Avoid submerging panels in wash water. DO NOT bleach. DO NOT machine wash. DO NOT dry clean. DO NOT apply solvents. Refer to the IOTV outershell Label for cleaning and maintenance instructions. LOT NUMBER:_____ DATE OF MFG:_____ SERIAL NO:_____ CONTRACT #: MANUFACTURED BY:	

REPAIR – CONTINUED

Table 5. IOTV Label Information – Continued.

Label Information	
IMPROVED OUTER TACTICAL VEST DELTOID PROTECTOR OUTERSHELL SIZE: NSN XXXX-XX-XXX-XXXX Refer to the IOTV outershell Label for cleaning and maintenance instructions. LOT NUMBER:_____ DATE OF MFG:_____ SERIAL NO:_____ CONTRACT #: MANUFACTURED BY:	
IMPROVED OUTER TACTICAL VEST DELTOID PROTECTOR BALLISTIC INSERT SIZE: NSN:XXXX-XX-XXX-XXXX INSERT THIS SIDE TO BODY DO NOT LAUNDER. Remove loose dirt from cover with a cloth or soft brush. Avoid submerging panels in wash water. DO NOT bleach. DO NOT machine Wash. DO NOT dry clean. DO NOT apply solvents. Refer to IOTV Outershell Label for cleaning and maintenance instructions. Check to insure the correct side of the Ballistic Panel will be against the Body before attaching to the IOTV Refer to the IOTV outershell Label for cleaning and maintenance instructions. LOT NUMBER:_____ DATE OF MFG:_____ SERIAL NO:_____ CONTRACT #: MANUFACTURED BY:	

REPAIR – CONTINUED

Table 6. IOTV Gen II Label Information.

Label Information	
IMPROVED OUTER TACTICAL VEST FRONT CARRIER – FQ/PD 07-05 D SIZE: NSN: THE IMPROVED OUTER TACTICAL VEST (IOTV) WITH ALL SOFT BALLISTIC PANELS INSTALLED PROVIDES PROTECTION FROM FRAGMENTATION AND 9MM SUBMACHINE GUN OR LESSER THREATS. THIS VEST DOES NOT PROTECT AGAINST KNIVES OR SHARP OBJECTS. DO NOT MACHINE WASH OR DRY. FAILURE TO FOLLOW THESE INSTRUCTIONS WILL DAMAGE THE VEST'S PROTECTIVE CAPABILITY. CLEANING INSTRUCTIONS 1. Remove dirt from outer surface with a cloth or soft bristle brush. 2. Remove all ballistic panels and the Enhanced Small Arms Protective Inserts (ESAPI) and Enhanced Side Ballistic Inserts (ESBI) from the outer shell and the component carriers. Soft ballistic Panels are ONLY to be cleaned by removing loose dirt from the surface and wiping clean with a moistened cloth or a soft bristle brush. Avoid submerging the panels in water; DO NOT bleach! DO NOT machine wash! DO NOT dry clean! DO NOT apply solvents to the ballistic panels! If the ballistic panels become wet allow them to air dry flat away from heat sources and out of direct sunlight. If the ballistic panels become saturated with liquids such as bleaches, gasoline, petroleum, oils or lubricants, turn them in for replacement as soon as possible. 3. Hand wash the IOTV base vest and component outer shells only in cold water with soap or a very mild detergent. DO NOT USE CAUSTIC CLEANERS, CHLORINE BLEACH, YELLOW SOAP, CLEANING FLUIDS OR SOLVENTS, WHICH WILL DISCOLOR AND DETERIORATE THE ITEMS! 4. Rinse the outer shells very thoroughly in clean water to wash out the soap. 5. Air-dry indoors or in the shade, AWAY FROM HEAT SOURCES. 6. DO NOT ATTEMPT TO DYE THE ITEM OR FIX DISCOLORATIONS. TURN IN YOUR ITEM IF: 1. Frags or bullets have hit them. 2. The outer cover is torn or damaged beyond field repair. 3. The hook and loop cannot be closed completely or repaired. 4. The webbing is torn or damaged beyond repair. 5. The items cannot be adequately cleaned, or are badly discolored. 6. The items have open seams or broken components. REFER TO USE & CARE MANUAL FOR THE PROPER USE OF THIS BALLISTIC PROTECTIVE SYSTEM, REPAIR PROCEDURES & RECORDING OF HITS. LOT NUMBER:_____ DATE OF MFG:_____ SERIAL NO:_____ CONTRACT #: MANUFACTURED BY:	

REPAIR – CONTINUED

Table 6. IOTV Gen II Label Information – Continued.

Label Information	
IMPROVED OUTER TACTICAL VEST BACK CARRIER – FQ/PD 07-05 D SIZE: NSN: THE IMPROVED OUTER TACTICAL VEST (IOTV) WITH ALL SOFT BALLISTIC PANELS INSTALLED PROVIDES PROTECTION FROM FRAGMENTATION AND 9MM SUBMACHINE GUN OR LESSER THREATS. THIS VEST DOES NOT PROTECT AGAINST KNIVES OR SHARP OBJECTS. DO NOT MACHINE WASH OR DRY. FAILURE TO FOLLOW THESE INSTRUCTIONS WILL DAMAGE THE VEST'S PROTECTIVE CAPABILITY. CLEANING INSTRUCTIONS 1. Remove dirt from outer surface with a cloth or soft bristle brush. 2. Remove all ballistic panels and the Enhanced Small Arms Protective Inserts (ESAPI) and Enhanced Side Ballistic Inserts (ESBI) from the outer shell and the component carriers. Soft ballistic Panels are ONLY to be cleaned by removing loose dirt from the surface and wiping clean with a moistened cloth or a soft bristle brush. Avoid submerging the panels in water; DO NOT bleach! DO NOT machine wash! DO NOT dry clean! DO NOT apply solvents to the ballistic panels! If the ballistic panels become wet allow them to air dry flat away from heat sources and out of direct sunlight. If the ballistic panels become saturated with liquids such as bleaches, gasoline, petroleum, oils or lubricants, turn them in for replacement as soon as possible. 3. Hand wash the IOTV base vest and component outer shells only in cold water with soap or a very mild detergent. DO NOT USE CAUSTIC CLEANERS, CHLORINE BLEACH, YELLOW SOAP, CLEANING FLUIDS OR SOLVENTS, WHICH WILL DISCOLOR AND DETERIORATE THE ITEMS! 4. Rinse the outer shells very thoroughly in clean water to wash out the soap. 5. Air-dry indoors, or in the shade, AWAY FROM HEAT SOURCES. 6. DO NOT ATTEMPT TO DYE THE ITEM OR FIX DISCOLORATIONS. TURN IN YOUR ITEM IF: 1. Frags or bullets have hit them. 2. The outer cover is torn or damaged beyond field repair. 3. The hook and loop cannot be closed completely or repaired. 4. The webbing is torn or damaged beyond repair. 5. The items cannot be adequately cleaned, or are badly discolored. 6. The items have open seams or broken components. REFER TO USE & CARE MANUAL FOR THE PROPER USE OF THIS BALLISTIC PROTECTIVE SYSTEM, REPAIR PROCEDURES & RECORDING OF HITS. LOT NUMBER:_____ DATE OF MFG:_____ SERIAL NO:_____ CONTRACT #: MANUFACTURED BY:	
IMPROVED OUTER TACTICAL VEST - FRONT BALLISTIC INSERT– FQ/PD 07-05 D SIZE: NSN: INSERT THIS SIDE TO BODY FAILURE TO INSERT THIS BALLISTIC INSERT IN THE IOTV OUTERSHELL WILL RESULT IN ABSENCE OF BALLISTIC PERFORMANCE FROM FRAGMENTATION & 9MM SUB-MACHINE GUN OR LESSER THREATS. DO NOT LAUNDER BALLISTIC PANELS! Avoid submerging in wash water. DO NOT bleach! DO NOT machine wash! DO NOT dry clean! DO NOT apply solvents! FOR CLEANING: ONLY Remove loose dirt from surface & wipe clean with a moistened cloth or soft bristle brush. If Ballistic Panels become wet allow to air dry in a flat position away from heat sources & out of direct sunlight. If Ballistic panels become saturated with liquids such as bleaches, gasoline, petroleum, oils, or lubricants, TURN IN FOR REPLACEMENT AS SOON AS POSSIBLE. LOT NUMBER:_____ DATE OF MFG:_____ SERIAL NO:_____ CONTRACT #: MANUFACTURED BY:	

REPAIR – CONTINUED

Table 6. IOTV Gen II Label Information – Continued.

Label Information	
IMPROVED OUTER TACTICAL VEST- BACK BALLISTIC INSERT– FQ/PD 07-05 D SIZE: NSN: INSERT THIS SIDE TO BODY FAILURE TO INSERT THIS BALLISTIC INSERT IN THE IOTV OUTERSHELL WILL RESULT IN ABSENCE OF BALLISTIC PERFORMANCE FROM FRAGMENTATION & 9MM SUB-MACHINE GUN OR LESSER THREATS. DO NOT LAUNDER BALLISTIC PANELS! Avoid submerging in wash water. DO NOT bleach! DO NOT machine wash! DO NOT dry clean! DO NOT apply solvents! FOR CLEANING: ONLY Remove loose dirt from surface & wipe clean with a moistened cloth or soft bristle brush. If Ballistic Panels become wet allow to air dry in a flat position away from heat sources & out of direct sunlight. If Ballistic panels become saturated with liquids such as bleaches, gasoline, petroleum, oils, or lubricants, TURN IN FOR REPLACEMENT AS SOON AS POSSIBLE. LOT NUMBER:_____ DATE OF MFG:_____ SERIAL NO:_____ CONTRACT #: MANUFACTURED BY:	
IMPROVED OUTER TACTICAL VEST SIDE PLATE CARRIER – FQ/PD 07-05 D SIZE: NSN: Refer to IOTV outershell label for cleaning and maintenance instructions. LOT NUMBER:_____ DATE OF MFG:_____ CONTRACT #: MANUFACTURED BY:	
IMPROVED OUTER TACTICAL VEST SIDE PLATE POCKET – FQ/PD 07-05 D SIZE: NSN: Refer to IOTV outershell label for cleaning and maintenance instructions. LOT NUMBER:_____ DATE OF MFG:_____ CONTRACT #: MANUFACTURED BY:	
IMPROVED OUTER TACTICAL VEST RIGHT INTERNAL ELASTIC BAND – FQ/PD 07-05 D SIZE: NSN: Refer to the IOTV outershell Label for cleaning and maintenance instructions. LOT NUMBER:_____ DATE OF MFG:_____ CONTRACT #: MANUFACTURED BY:	

REPAIR – CONTINUED

Table 6. IOTV Gen II Label Information – Continued.

Label Information	
IMPROVED OUTER TACTICAL VEST LEFT INTERNAL ELASTIC BAND – FQ/PD 07-05 D SIZE: NSN: Refer to the IOTV outershell Label for cleaning and maintenance instructions. LOT NUMBER:_____ DATE OF MFG:_____ CONTRACT #: MANUFACTURED BY:	
IMPROVED OUTER TACTICAL VEST CABLE ASSEMBLY – FQ/PD 07-05 D SIZE: NSN: Refer to IOTV outershell Label for cleaning and maintenance instructions. LOT NUMBER:_____ DATE OF MFG:_____ CONTRACT #: MANUFACTURED BY:	
IMPROVED OUTER TACTICAL VEST YOKE/COLLAR FRONT ASSEMBLY – FQ/PD 07-05 D NSN: Refer to IOTV outershell label for cleaning and maintenance instructions. LOT NO:_____ DATE OF MFG:_____ SERIAL NO:_____ CONTRACT #: MANUFACTURED BY:	
IMPROVED OUTER TACTICAL VEST YOKE/COLLAR BACK ASSEMBLY – FQ/PD 07-05 D SIZE: NSN: Check to insure the correct side of the Ballistic Panel will be against the Body before attaching to the IOTV.Refer to IOTV outershell Label for cleaning and maintenance instructions. LOT NO:_____ DATE OF MFG:_____ SERIAL NO:_____ CONTRACT #: MANUFACTURED BY:	
IMPROVED OUTER TACTICAL VEST LOWER BACK PROTECTOR OUTERSHELL – FQ/PD 07-05 D NSN: Check to insure the correct side of the Ballistic Panel will be against the Body before attaching to the IOTV. Refer to IOTV outershell Label for cleaning and maintenance instructions. LOT NUMBER:_____ DATE OF MFG:_____ SERIAL NO:_____ CONTRACT #: MANUFACTURED BY:	

REPAIR – CONTINUED

Table 6. IOTV Gen II Label Information – Continued.

Label Information	
IMPROVED OUTER TACTICAL VEST LOWER BACK PROTECTOR INSERT – FQ/PD 07-05 D NSN: INSERT THIS SIDE TO BODY DO NOT LAUNDER. Remove loose dirt from cover with a cloth or soft brush. Avoid submerging panels in wash water. DO NOT bleach. DO NOT machine wash. DO NOT dry clean. DO NOT apply solvents. Refer to the IOTV outershell Label for cleaning and maintenance instructions. LOT NUMBER:_____ DATE OF MFG:_____ SERIAL NO:_____ CONTRACT #: MANUFACTURED BY:	
IMPROVED OUTER TACTICAL VEST GROIN PROTECTOR OUTERSHELL – FQ/PD 07-05 D SIZE: NSN: Check to insure the correct side of the Ballistic Panel will be against the Body before attaching to the IOTV. Refer to IOTV outershell Label for cleaning and maintenance instructions. LOT NUMBER:_____ DATE OF MFG:_____ SERIAL NO:_____ CONTRACT #: MANUFACTURED BY:	
IMPROVED OUTER TACTICAL VEST GROIN PROTECTOR INSERT – FQ/PD 07-05 D SIZE: NSN: INSERT THIS SIDE TO BODY DO NOT LAUNDER. Remove loose dirt from cover with a cloth or soft brush. Avoid submerging panels in wash water. DO NOT bleach. DO NOT machine wash. DO NOT dry clean. DO NOT apply solvents. Refer to the IOTV outershell Label for cleaning and maintenance instructions. LOT NUMBER:_____ DATE OF MFG:_____ SERIAL NO:_____ CONTRACT #: MANUFACTURED BY:	
IMPROVED OUTER TACTICAL VEST DELTOID PROTECTOR OUTERSHELL – FQ/PD 07-05 D SIZE: NSN XXXX-XX-XXX-XXXX Refer to the IOTV outershell Label for cleaning and maintenance instructions. LOT NUMBER:_____ DATE OF MFG:_____ SERIAL NO:_____ CONTRACT #: MANUFACTURED BY:	

REPAIR – CONTINUED

Table 6. IOTV Gen II Label Information – Continued.

Label Information	
IMPROVED OUTER TACTICAL VEST **DELTOID PROTECTOR BALLISTIC INSERT– FQ/PD 07-05 D** SIZE: NSN:XXXX-XX-XXX-XXXX **INSERT THIS SIDE TO BODY** DO NOT LAUNDER. Remove loose dirt from cover with a cloth or soft brush. **Avoid submerging panels in wash water. DO NOT bleach. DO NOT machine** Wash. DO NOT dry clean. DO NOT apply solvents. Refer to IOTV Outershell Label for cleaning and maintenance instructions. Check to insure the correct side of the Ballistic Panel will be against the Body before attaching to the IOTV Refer to the IOTV outershell Label for cleaning and maintenance instructions. LOT NUMBER:_____ DATE OF MFG:_____ SERIAL NO:_____ CONTRACT #: MANUFACTURED BY:	

END OF TASK

END OF WORK PACKAGE

SUSTAINMENT MAINTENANCE
INTERCEPTOR BODY ARMOR SYSTEM
GENERAL REPAIR

INITIAL SETUP:

Tools and Special Tools

Specified in paragraph applicable to the item being repaired.

Materials/Parts

Specified in paragraph applicable to the item being repaired.

Personnel Required

CIF

GENERAL REPAIR

WARNING

The only maintenance authorized for soft ballistic inserts is flattening, marking and hand cleaning. No other maintenance is allowed for soft ballistic inserts. Failure to follow proper maintenance procedures may result in degradation of ballistic protection which may cause injury or death to the user.

NOTE

Sewing requirements will vary according to the type of item being repaired and the type of repair being made. The type of sewing machine, type of thread, the stitch range, and the stitch pattern (if applicable) required to accomplish a sewing procedure will be specified in the paragraph applicable to the item being repaired. All original stitching that is cut during the performance of a sewing procedure will be removed from the applicable item Thread ends to a point as close as possible to the material that has been sewn.

Repair and replacement of IBA components is performed in accordance with the repair instruction in this section and in specific paragraphs applicable to the item being repaired. Fabrication is a means of replacing an IBA component that is damaged beyond repair and not an issue item. Though the act of fabrication is a replacement-type action, the function is actually a method of repairing an end item. Since most fabrication pertains to components that are peculiar to the Interceptor Body Armor System, the fabrication of components that are most general in nature will be detailed in the following paragraphs.

Basting and Temporary Tacking

Basting and temporary tacking are hand-sewing methods used to temporarily hold layers of cloth fabric together while a repair is being performed. The following is a list of procedures that apply to basting and temporary tacking actions:

1. Basting and temporary tacking should be made using thread that is of a contrasting color to the material being worked.

2. Basting and temporary tacking will be performed using a single strand of size A, nylon thread, or ticket No. 24/4 cotton thread.

GENERAL REPAIR – CONTINUED

3. When basting, do not tie knots at any point in the thread length. Also, the sewing should be made with two stitches per inch.

4. Immediately upon completion of a repair, remove previously made basting or temporary tacking.

END OF TASK

Stitching and Restitching

WARNING

Stitching and re-stitching is not authorized on any ballistic component. Stitching through ballistic material may degrade ballistic performance, which may result in injury or death to the user.

Perform stitching and re-stitching as follows:

Outershell Components. When stitching and re-stitching outershell components constructed from cloth and webbing use thread that matches the color of the original stitching, when possible. Straight stitching Lock all straight stitching by at least 2 inches at the end of each stitch row, when possible. When not possible, place a bar tack or zig-zag stitch at the end of the straight stitch to prevent unraveling. Zig-Zag stitching does not require locking; however, zig-zag restitching should extend at least 1/4 inch into undamaged stitching at each end, when possible. When re-stitching, stitch directly over the original stitching and follow the original stitch pattern as closely as possible.

Webbing Replacement.

1. Carefully remove thread from original bar tack.

2. Remove damaged webbing.

3. Cut new webbing according to specifications or by using damaged webbing as a template.

4. Bar tack with original size bar tack in the original location ensuring any unintended layers are avoided.

END OF TASK

Darning

Darning is a sewing procedure used to repair limited size holes, rips, and tears. A darning repair may be made either by hand or by sewing machine, depending upon the method preferred and the availability of equipment. However, a darning machine should be used to darn small holes and tears where fabric is missing no larger than ¾ inch. A darning repair will be performed using the following procedures, as appropriate:

GENERAL REPAIR – CONTINUED

Machine darning. Proceed as follows (Figure 1):

1. Using an authorized marking aid of contrasting color, mark a square around the damaged area and ensure the marking is at least 1/4 inch back from each edge of the damaged area.

2. Darn the damaged area by sewing the material in a back and forth manner, using size A or E nylon thread.

3. Turn the material and stitch back and forth across the stitching made in step b until the hole or tear is completely darned.

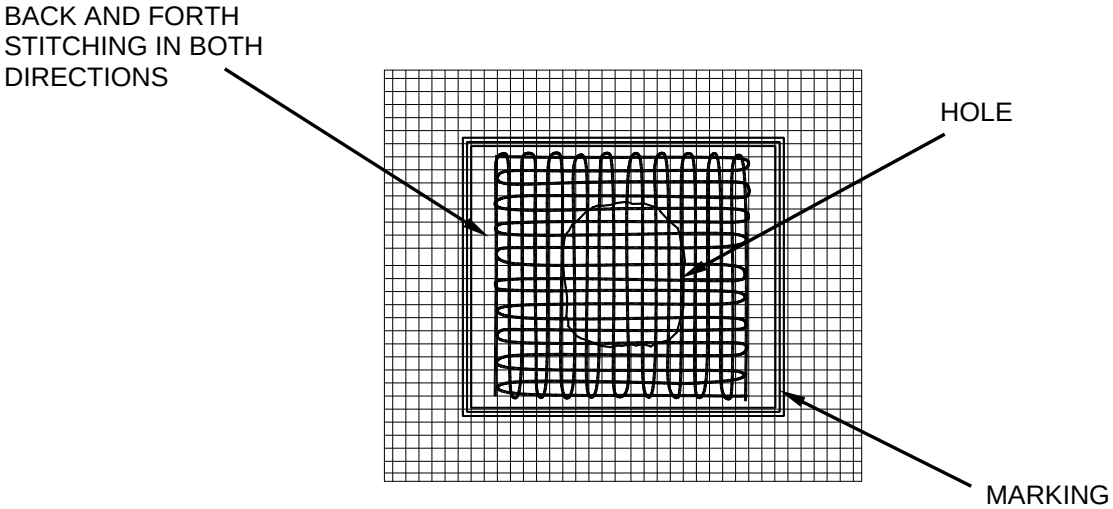


Figure 1. Machine Darning.

GENERAL REPAIR – CONTINUED

Hand Darning. When repair of a hole or tear is made by hand darning, the darn should match the original weave of the damaged material as closely as possible. Hand darning will be performed as follows (Figure 2):

1. Using an authorized marking aid of contrasting color, mark a square around the damaged area and ensure the marking is at least 1/4 inch back from each edge of the damaged area.

2. Using a darning needle and a length of size A or E nylon thread, begin darning at one corner of the marked area. Working parallel with the marking, pass the needle and thread back and forth through the material until the opposite diagonal corner of the marked area is reached.

3. Turn the material and weave the needle and thread back and forth across the stitching made in step 2 until the hole is completely darned.

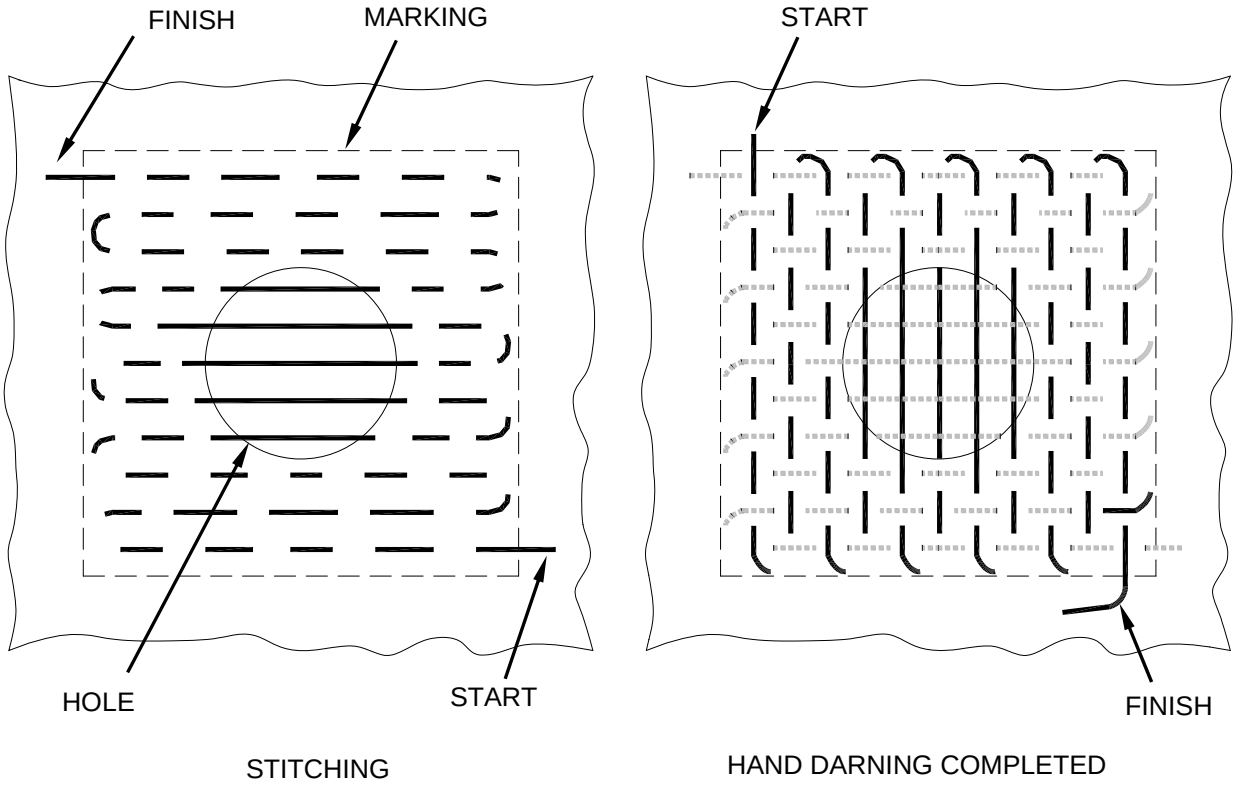


Figure 2. Hand Darning.

GENERAL REPAIR – CONTINUED

BOX X Stitching Pattern

NOTE

Use the maintenance instructions related to the repair or replacement being conducted for required thread and stitching requirements.

Number 1 in the drawing is the top of the Box X stitch pattern.

Use the following diagram (Figure 3) to complete the Box X stitch pattern. Start the Box X at position 1 position and follow the numbers in sequence finishing with a ½-inch locking stitch.

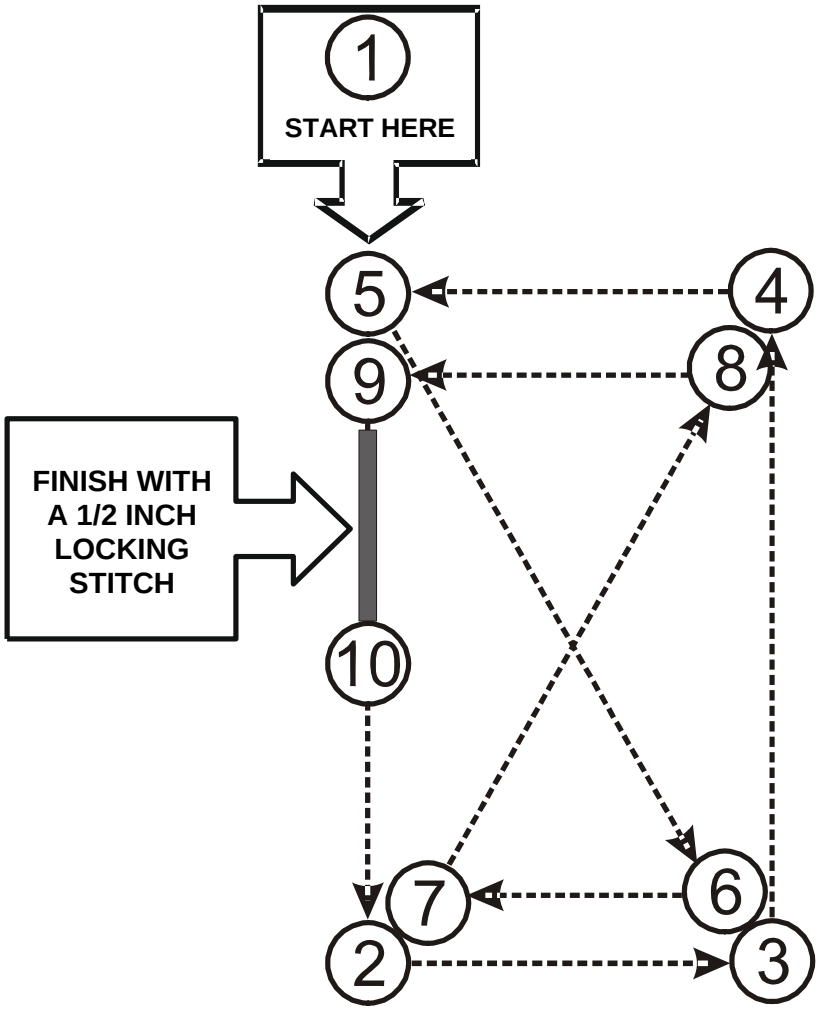


Figure 3. Box Stitching Pattern with Locking Stitch.

GENERAL REPAIR – CONTINUED

Zig-Zag Sewing

Components of the Interceptor Body Armor System that have sustained cut or tear damage, may be repaired by zig-zag sewing, provided the applicable damaged area does not have any material missing and the cut or tear is straight or L-shaped. Should the damaged area be irregular shaped or have material missing, the repair will be achieved by either darning or patching, as required. A zig-zag sewing repair will be accomplished using a zig-zag sewing machine, with the following procedures:

1. Set the sewing machine to the maximum stitch width.

2. Beginning at a point 1/4 inch beyond one end of the cut or tear, stitch lengthwise along the damaged area to a point 1/4 inch beyond the opposite end of the cut or tear (Figure 4).

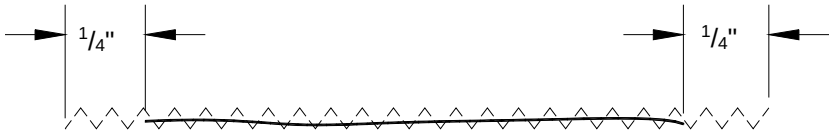


Figure 4. Straight Cut Or Tear Stitching.

3. The cited stitching procedure will also apply to an L-shaped cut or tear (Figure 5).

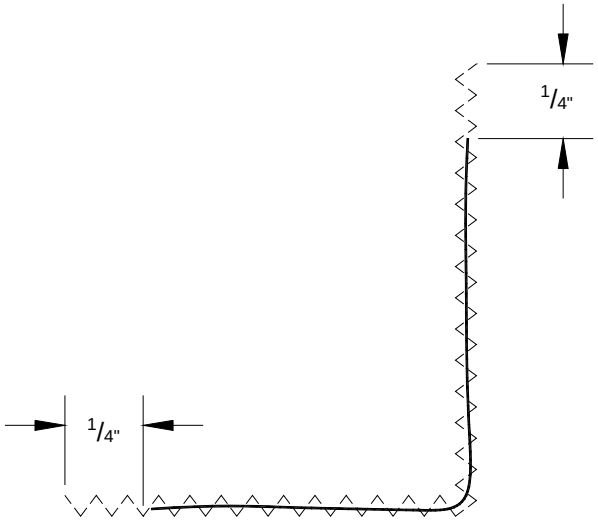


Figure 5. L-Shaped Cut Or Tear Stitching.

GENERAL REPAIR – CONTINUED

Sewn patch. The primary method of applying a basic patch is by sewing.

Patching is a procedure used to repair holes that cannot be darned.

Apply a sewn patch (Figure 6) as follows:

1. Invert the damaged section. Smooth out the damaged area on a repair table.

2. Measure the damaged area. Cut new material of same type 2 inches longer and wider than the damaged area.

3. Place the new material centered over the damaged area folding the ends under 1/2 inch and secure. Secure the new material to the damaged area.

CAUTION

Do not sew patches over MOLLE webbing. If patched area is behind MOLLE webbing, align all stitching with the existing bar tacks on MOLLE. Failure to do so will cause MOLLE attachments to be unusable.

4. Sew the new material over the damaged area 1/8-inch in from the edge.

5. Re-invert the damaged area of the material. Place it onto the sewing table with the patch side down.

6. Darn damaged area onto the patch.

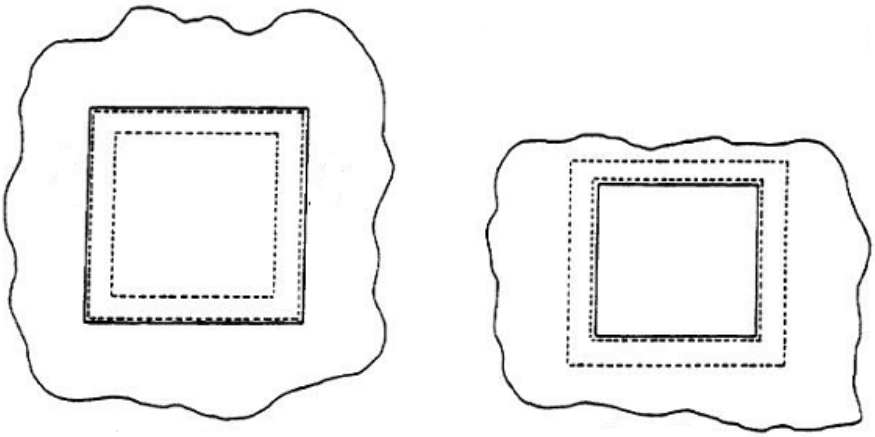


Figure 6. Sewn Patch.

END OF TASK

GENERAL REPAIR – CONTINUED

Mending Cloth Patch. A second method of applying a basic patch is by use of adhesive, nylon, mending cloth.

1. To facilitate the application of the mending cloth patch, place a 1/2- by 20- by 20-inch smooth wooden board or similar smooth, hard-finished, rigid material (except paper board) under the damaged area.

2. Trim the ragged, frayed, or severely burned areas of the cloth to provide a smooth area for patch application.

3. Using an authorized marking aid of contrasting color, mark a square, triangle, or rectangle, as applicable, around the damaged area.

4. Measure and cut lengths of the mending cloth to achieve the shape and size of the intended patch.

5. Cut the patch to provide an overlap of at least ½- inch larger than the damaged area.

6. Round off the corners of the patch to a 1-inch radius.

7. Apply adhesive patch.
    a. Peel paper from back of adhesive patch.
    b. Place patch over damaged area.
    c. Using a small, hard object (similar to a spoon) apply pressure to the patch for approximately 45 seconds.

8. Turn component right side out.

9. Cut another patch to a size that will cover the damaged area from the outside but will not cover any MOLLE webbing.

10. Use size E nylon thread, 7 to 11 stitches per inch, 1/8-inch in from the outer edge of the patch.

END OF TASK

Replace Label

WARNING

Label cannot be replaced on soft ballistic inserts, yoke/collar assemblies and front yoke assembly. Replacing labels on these components requires stitching through ballistic material, which can degrade ballistic protection. Degraded ballistic protection may result in injury or death to the user.

1. Remove damaged label.

2. Cut material to size of original pattern.

3. Stencil original label information IAW WP 0012.

4. Attach new label in location of original label.

END OF TASK

GENERAL REPAIR – CONTINUED

Replace Snap Fastener

WARNING

Ensure that eye protection is worn. Serious injury can result from flying metal pieces coming in contact with eyes if proper safety precautions are not observed.

1. Remove original snap fastener by one of the following methods:

   a. Cut crimped edge of applicable snap fastener assembly part at three or four points with diagonal cutters.

   b. Using a suitable type tool, pry back fastener crimped edges and remove applicable unserviceable fastener parts.

2. Reinforcement of original snap fastener area. If fabric area around original snap fastener is damaged, repair area by applying a reinforcement patch to the outside of the material. Use a 1-inch square of seared type II nylon webbing.

GENERAL REPAIR – CONTINUED

3. Hand-held method. Proceed as follows:

   a. Place selected chuck (Figure 7, Item 1) in open end of holder (Figure 7, Item 2) and secure chuck in place using locking screw (Figure 7, Item 3) located on one side of holder (Figure 7, Item 2). Then place the die (Figure 7, Item 4) into anvil (Figure 7, Item 5).

NOTE

Snap fasteners located on the harness assembly are not authorized for replacement.

   b. Fit socket or stud (Figure 7, Item 6), as applicable, on chuck (Figure 7, Item 1) lower end. Place cap or post, as applicable, on die (Figure 7, Item 4) with barrel facing up.

   c. Position material over barrel of cap or post. Ensure that fastener socket or stud (Figure 7, Item 7) is located on proper side of material for subsequent fastener engagement.

   d. Place socket or stud on barrel of cap or post. With a mallet, strike holder, clinching the two snap fastener components to material.

   e. Remove clinched snap fastener components from chuck (Figure 7, Item 1) and die set (Figure 7, Item 4) and check seating of joined components. If applicable components are not properly seated, repeat procedures in step d., above.

   f. Check engagement of installed snap fastener components with opposite mating components to ensure open and closed snapping process without hindrance. If snap engaging process cannot be accomplished without difficulty, replace opposite mating snap fastener components using procedures in steps a. through e., above. As required, remove chuck and die from applicable snap fastener tools by reversing procedures in step a, above.

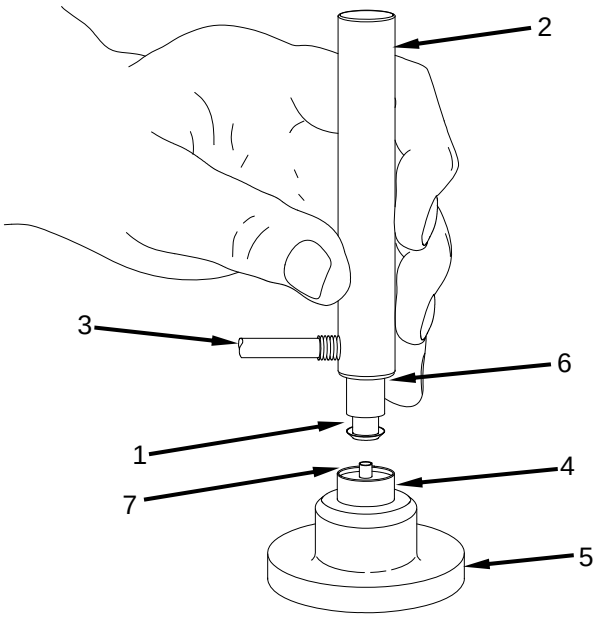


Figure 7. Hand-held Method.

GENERAL REPAIR – CONTINUED

4. Hand or foot operated press method. Installation of a snap fastener assembly by hand or foot operated press (Figure 8, Item 1) may be accomplished using the procedures in step 3., above, except one uses the hand or foot to press the two pieces together, and the chuck (Figure 8, Item 2) and die (Figure 8, Item 3) will be secured within the applicable press assembly using the available locking screws (Figure 8, Item 4).

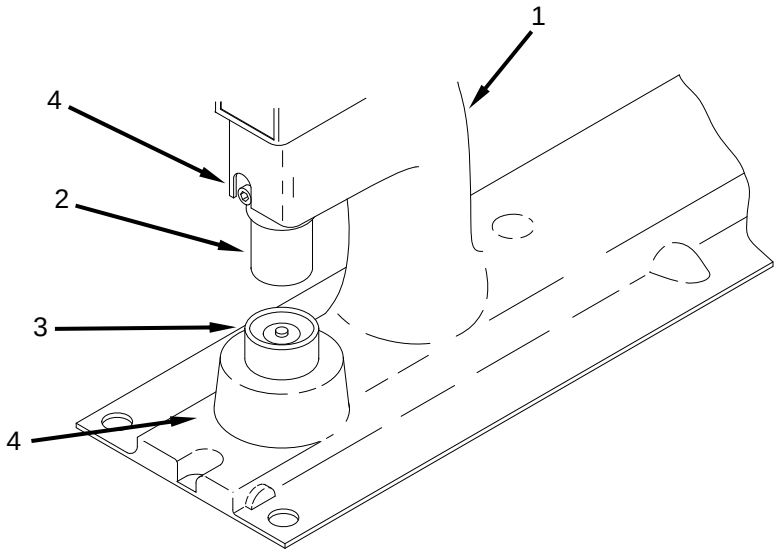


Figure 8. Hand or Foot Operated Press Method.

END OF TASK

Searing

CAUTION

Cotton tape, webbing, or cord will not be seared.

NOTE

Fabric materials such as cord, tape, and webbing, that are cut for use in the maintenance of the Interceptor Body Armor, will normally be heat-seared to prevent the material from fraying or unraveling.

The cut ends of nylon tape, webbing, and cord lengths may be prepared by heat-searing, which is performed by pressing the raw end of the material against a hot metal surface (heated blade cutter) until the nylon has melted sufficiently. Avoid forming a sharp edge or lumped effect on the melted end.

END OF TASK

END OF WORK PACKAGE

CHAPTER 4

SUSTAINMENT MAINTENANCE INSTRUCTIONS FOR OUTER TACTICAL VEST (OTV)

SUSTAINMENT MAINTENANCE

OTV VEST

REPAIR

INITIAL SETUP:

Tools and Special Tools

Specified in paragraph applicable to the item being repaired.

Materials/Parts

Specified in paragraph applicable to the item being repaired.

Personnel Required

CIF

References

WP 0013
WP 0033

REPAIR

NOTE

For patching and/or restitching the OTV or replacing buckles, snaps, and hook and loop fasteners refer, to WP 0013.

END OF TASK

Fabrication of OTV Components

NOTE

Damaged components of the OTV that are beyond repair must be remanufactured using the patterns and materials provided in WP 0033.

END OF TASK

END OF WORK PACKAGE

SUSTAINMENT MAINTENANCE

OTV YOKE/COLLAR AND THROAT PROTECTOR

REPAIR

INITIAL SETUP:

Tools and Special Tools	Personnel Required
Specified in paragraph applicable to the item being repaired.	CIF

Materials/Parts	References
Specified in paragraph applicable to the item being repaired.	WP 0013 WP 0018

REPAIR

Stitching and Restitching

Re-stitch is authorized on the binding tape along the outside edge of the front yoke assembly (Figure 1). No other restitching is authorized.

Re-stitch IAW WP 0013, General Repair Procedures.

END OF TASK

Repair Damage to the Collar

WARNING

Repairs are not authorized to the collar. Repairs may impact the serviceability of the ballistics sewn into the collar. Using equipment with damaged collar may cause serious injury or death.

No repair of the collar (Figure 1) is authorized.

END OF TASK

REPAIR – CONTINUED

Figure 1. Front Yoke/Collar Assembly.

Repair Damage to the Male Stud on Front Outer Shell

Repair to the male stud snap fasteners on the upper and lower portions of the yoke assembly is not authorized.

END OF TASK

Repair Damage to the Female Stud on Webbing Strap

Repair female stud IAW WP 0013, General Repair Procedures.

END OF TASK

Throat Protector Repair

Repair throat protector outershell IAW WP 0013, General Repair Procedures. Refer to WP 0018 for throat protector soft ballistic insert maintenance.

END OF TASK

END OF WORK PACKAGE

SUSTAINMENT MAINTENANCE

DELTOID AXILLARY PROTECTION SYSTEM

REPAIR

INITIAL SETUP:

Tools and Special Tools

Specified in paragraph applicable to the item being repaired.

Personnel Required

CIF

Materials/Parts

Specified in paragraph applicable to the item being repaired.

References

WP 0013
WP 0018
WP 0031

REPAIR

NOTE

For patching and/or restitching the DAPS or replacing buckles, snaps, and hook and loop fasteners, refer to WP 0013.

END OF TASK

Repair of Deltoid Protectors

Refer to WP 0031 for detailed instructions on deltoid protector outershell repair. Refer to WP 0018 for DAPS soft ballistic insert maintenance instructions.

END OF WORK PACKAGE

SUSTAINMENT MAINTENANCE

GROIN PROTECTOR

REPAIR

INITIAL SETUP:

Tools and Special Tools	Personnel Required
Specified in paragraph applicable to the item being repaired.	CIF

Materials/Parts	References
Specified in paragraph applicable to the item being repaired.	WP 0018 WP 0030

REPAIR

Refer to WP 0030 for detailed information on groin protector outershell repair. Refer to WP 0018 for groin protector soft ballistic insert maintenance procedures.

END OF WORK PACKAGE

SUSTAINMENT MAINTENANCE
SOFT BALLISTIC INSERTS
REPAIR

INITIAL SETUP:

Tools and Special Tools

Specified in paragraph applicable to the item being repaired.

Materials/Parts

Specified in paragraph applicable to the item being repaired.

Personnel Required

CIF
Shower, Laundry and Clothing Repair Specialist (SLCR) (92S)

Equipment Condition

References

WP 0012
WP 0015

REPAIR

WARNING

Steam pressing, mechanical pressing and machine washing of soft ballistic inserts is not authorized. Doing so may degrade the ballistic protection, which may cause injury or death to the Soldier.

NOTE

This work package applies to all soft ballistic inserts except yoke/collar assembly (OTV, IOTV and IOTV Gen II), and front yoke assembly. Ballistic materials on these items are not removable and cannot be flattened. Some yoke/collar assemblies have removable soft ballistic inserts in the collar. If the yoke/collar assembly has a removable soft ballistic insert in the collar, then it may be flattened using these procedures. No other portion of the yoke/collar and front yoke assemblies may be flattened. Repair of yoke/collar assembly and throat protector is covered in WP 0015.

The only repair authorized for soft ballistic inserts are re-stenciling and flattening. Any damage to the soft ballistic inserts shall cause the insert to be removed from service.

Flattening Soft Ballistic Inserts

If soft ballistic inserts are bunched or folded, they may be flattened as follows:

1. Soak the soft ballistic insert in cold water for at least 1 hour.

REPAIR – CONTINUED

CAUTION

Do not wring or use any mechanical means to remove water from soft ballistic inserts. Failure to follow instructions may result in damage to equipment.

2. Remove soft ballistic inserts from water.

CAUTION

Do not use steam press to speed up the drying process. Failure to follow these instructions may result in damage to equipment.

NOTE

Use of a wire rack or slotted surface may speed up the drying process. Use of fans may speed up drying process. If drying on a flat surface, regular turning of inserts may be necessary.

3. Place inserts horizontally on a flat surface.

4. Allow the ballistic inserts to dry completely (24-48 hours, depending on conditions).

5. Check the ballistic inserts for flatness. Dispose of any soft ballistic insert that does not flatten.

6. Ensure data label is readable. If data label is unreadable, remark IAW WP 0012.

END OF TASK

END OF WORK PACKAGE

CHAPTER 5

SUSTAINMENT MAINTENANCE INSTRUCTIONS FOR IMPROVED OUTER TACTICAL VEST (IOTV) AND IMPROVED OUTER TACTICAL VEST GEN II (IOTV GEN II)

SUSTAINMENT MAINTENANCE

FRONT CARRIER (IOTV/IOTV GEN II) EXTERIOR FABRIC

REPAIR

INITIAL SETUP:

Tools and Special Tools

Press, Grommet and Eyelet, Hand Operated (WP 0047, Item 5)
Punch And Die, Grommet Inserting, No 00 (WP 0047, Item 6)
Ruler, Measuring (WP 0047, Item 8)
Screwdriver, Flat-tip, (1/4-inch) (WP 0047, Item 9)
Sewing Machine, Industrial (Light Duty) (WP 0047, Item 13)
Sewing Machine, Industrial (Bar Tack) (WP 0047, Item 11)
Shears, Tailors, 12 Inch (WP 0047, Item 14)
Stitch Removal Tool (WP 0047, Item 15)

Personnel Required

CIF

References

WP 0013
WP 0034

Materials/Parts

Nylon Fabric, MIL C 43734, 1000 Denier (WP 0040, Item 6)
Fastener Tape, Hook, AA55216, Type II, Class 1, 1 1/2-Inch (WP 0040, Item 9)
Fastener Tape, Hook, AA55216, Type II, Class 1, 2-Inch (WP 0040, Item 10)
Fastener Tape, Loop, AA55216, Type II, Class 1, 1 1/2-Inch (WP 0040, Item 13)
Fastener Tape, Loop, AA55216, Type II, Class 1, 2-Inch (WP 000, Item 14)
Fastener Tape, Loop, AA55216, Type II, Class 1, 4-Inch (WP 0040, Item 15)
Pencil, Marking Aid, Yellow, A-A-87 (WP 0046, Item 12)
Ring, Rectangular 1” x ½” X .150 Steel, Zinc, Welded, Color: Foliage Green 504 (WP 0059, Item 37)
Webbing, Textile, AA-55301, Type III, 1-Inch (WP 0040, Item 32)
Tape, MIL T 5038, Type III, Class 2 (WP 0040, Item 26)
Webbing, Textile, MIL-W-17337, Class 2,1 1/2-Inch (WP 0040, Item 37)
Webbing, Textile, MIL-W-17337, Class 2, 3-Inch (WP 0040, Item 38)
Webbing, Textile, MIL-W-17337, Class 2, 2-Inch (WP 0040, Item 33)

REPAIR

Introduction

This work package covers repair to the IOTV/IOTV Gen II front carrier. Refer to Figure 1 for an overview of IOTV/IOTV Gen II front carrier repair.

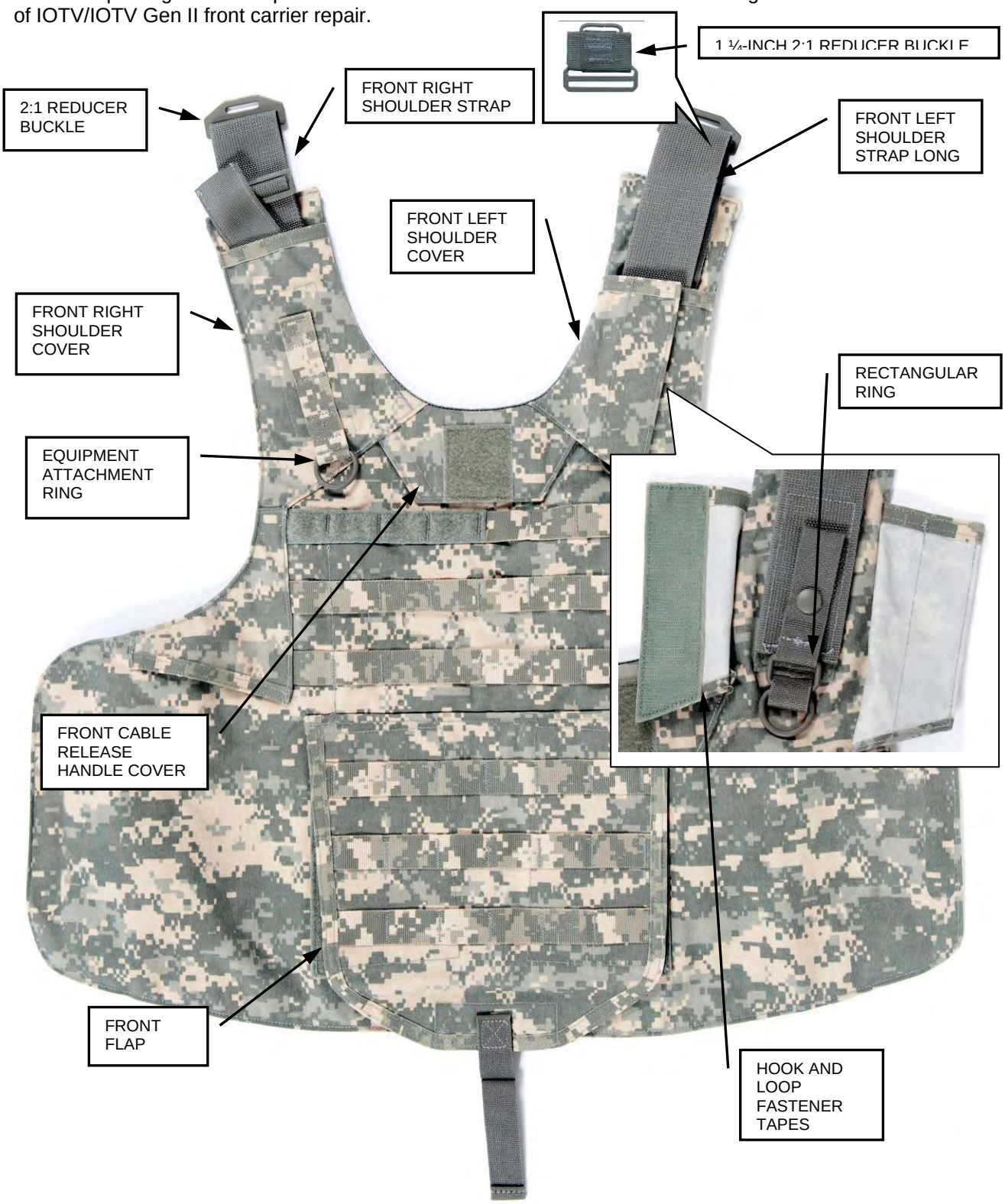


Figure 1. IOTV Gen II Front Carrier.

REPAIR – CONTINUED

Repair Damage to Shoulder Strap Short

If 1 1/4-inch 2:1 reducer buckle is damaged, replace with metal 2:1 reducer buckle. Both shoulders must have the same type of 2:1 reducer buckle. If not, replace to make them match.

END OF TASK

Repair Damage to Front Left Shoulder Strap Long

1. Fold 1-inch webbing (Figure 2, Item 1) according to match damaged piece.

2. Set female snap (Figure 2, Item 2) in appropriate location IAW WP 0013.

3. Place webbing (Figure 2, Item 1) between hook (Figure 2, Item 3) and 2-inch webbing (Figure 2, Item 4).

4. Attach Hook to 2-inch webbing with 1-inch webbing sandwiched with a 301 lock stitch and using a bar tack sewing machine, size E thread, place a 42-stitch 1/8 x 7/8-inch bar tack.

5. Place male portion of snap (Figure 2, Item 5) in appropriate location IAW WP 0013.

6. Place short strap (Figure 2, Item 6) on long strap (Figure 2, Item 4).

7. Sew second piece of hook onto long strap, catching the edge of the short strap.

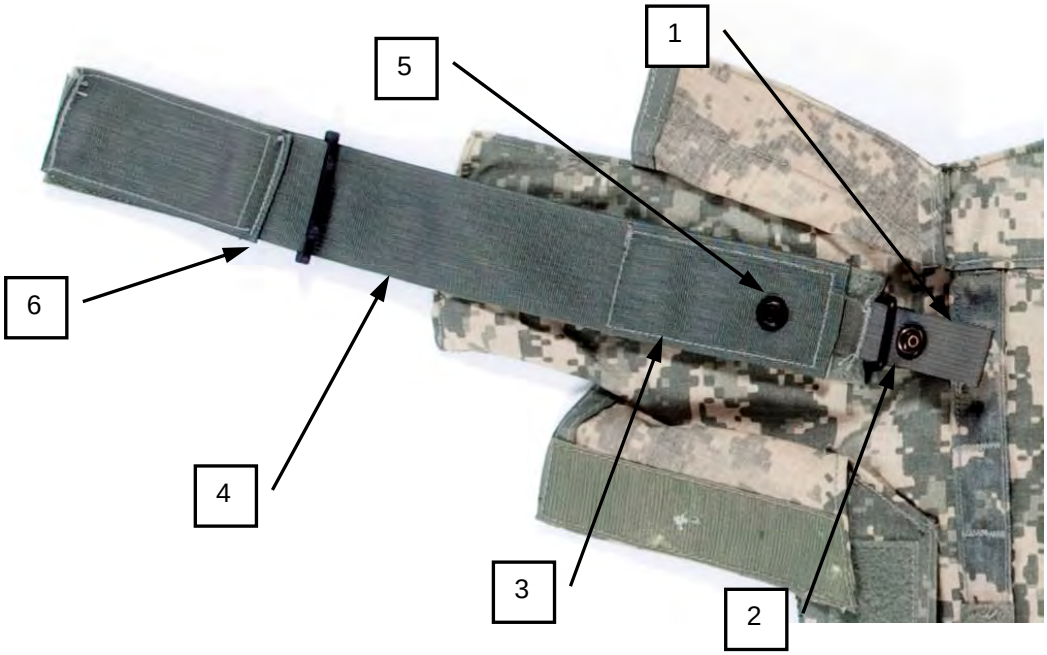


Figure 2. Repair Damage to Front Left Shoulder Strap Long.

END OF TASK

REPAIR – CONTINUED

Repair Damage to Front Left Shoulder Cover Top and Bottom

1. Carefully remove top stitching and bar tacks.
2. Carefully open seam that damaged piece is inserted into.
3. Cut replacement piece according to pattern piece IOTV F L SHD CVR TP or IOTV F L SHD CVR BT provided in WP 0034.
4. Bind top edge (Figure 3, Item 1).
5. Fold bottom edge under 3/8-inch.
6. Fold inner edge so that it will be placed under hook/loop fastener tape as appropriate.
7. Attach hook and loop fastener tape (Figure 3, Item 2).
8. Insert outer edge into seam in appropriate location.
9. Using size E thread, place a 42-stitch, 1/8 x 7/8-inch bar tack on the lower right corner of cover where meets ripcord pocket.
10. Top stitch entire area closed, ensuring to catch stitching above and below open portion by at least ½ inch.

Figure 3. Repair Damage to Front Left Shoulder Cover Top and Bottom.

END OF TASK

REPAIR – CONTINUED

Repair Damage to 2-Inch Loop Fastener on Left Outer Shoulder

1. Carefully open seam along the armscye.
2. Carefully remove stitching holding the loop fastener (Figure 4) on.
3. Cut new loop using damaged loop fastener as a template.
4. Attach loop fastener in original location.
5. Invert the armscye to sew along armscye.
6. Re-orientate the armscye to expose outer seam.
7. Topstitch seam closed along the armscye.

Figure 4. Damage to 2-Inch Loop Fastener on Left Outer Shoulder.

END OF TASK

REPAIR – CONTINUED

Repair Damage to 1-inch Webbing or Rectangular Ring

1. Carefully remove bar tack and stitching holding webbing (Figure 4, Item 1) in place.
2. Carefully open seam along armscye.
3. Remove damaged piece.
4. Cut webbing using damaged webbing as a template.
5. Run webbing through rectangular ring (Figure 4, Item 2).
6. Place cut ends ½ inch under edge of loop fastener.
7. Stitch loop down and using a bar tack sewing machine, size E thread, place a 42-stitch 1/8 x 7/8-inch bar tack.
8. Invert armscye area to close seam then re-orientate to topstitch seam along armscye closed.

Figure 5. Repair Damage to 1-inch Webbing or Rectangular Ring.

END OF TASK

REPAIR – CONTINUED

Repair Damage to Front Right Shoulder Cover

For Minor Damage (Holes smaller than 1/2-inch):

1. Carefully remove seam along neck area.
2. Darn location where damaged IAW WP 0013.
3. Invert vest to expose inside seam along neck.
4. Sew seam along neck to close.

For Major Damage (Holes larger than 1/2 inch):

1. Remove all topstitching.
2. Open seam along armhole and neck hole.
3. Remove damaged piece.
4. Cut new piece according to IOTV F R SHD CVR provided in WP 0034.
5. Bind upper edge.
6. Fold lower edge under 3/8-inch.
7. Attach to IOTV Front (Figure 6) according to pattern.
8. Fold edges under-3/8 inch catching them in the neck and armscye seam.
9. Invert vest to expose armscye seam and neck sew closed area previously undone.
10. Reorient vest to expose outer seam along armscye and topstitch shut.

Figure 6. Repair Damage to Front Right Shoulder Cover.

END OF TASK

REPAIR – CONTINUED

Repair Damage to Front Right Shoulder Cable Cover Guide (IOTV Only)

1. Carefully remove stitching holding the cable cover guide to the right shoulder (Figure 7).
2. Cut one 4 ½-inch and one 5 1/8-inch piece of MIL-W-17337, 1 ½-inch nylon webbing.
3. Align one edge.
4. Stitch both pieces together.
5. Attach longer half at shoulder seam.

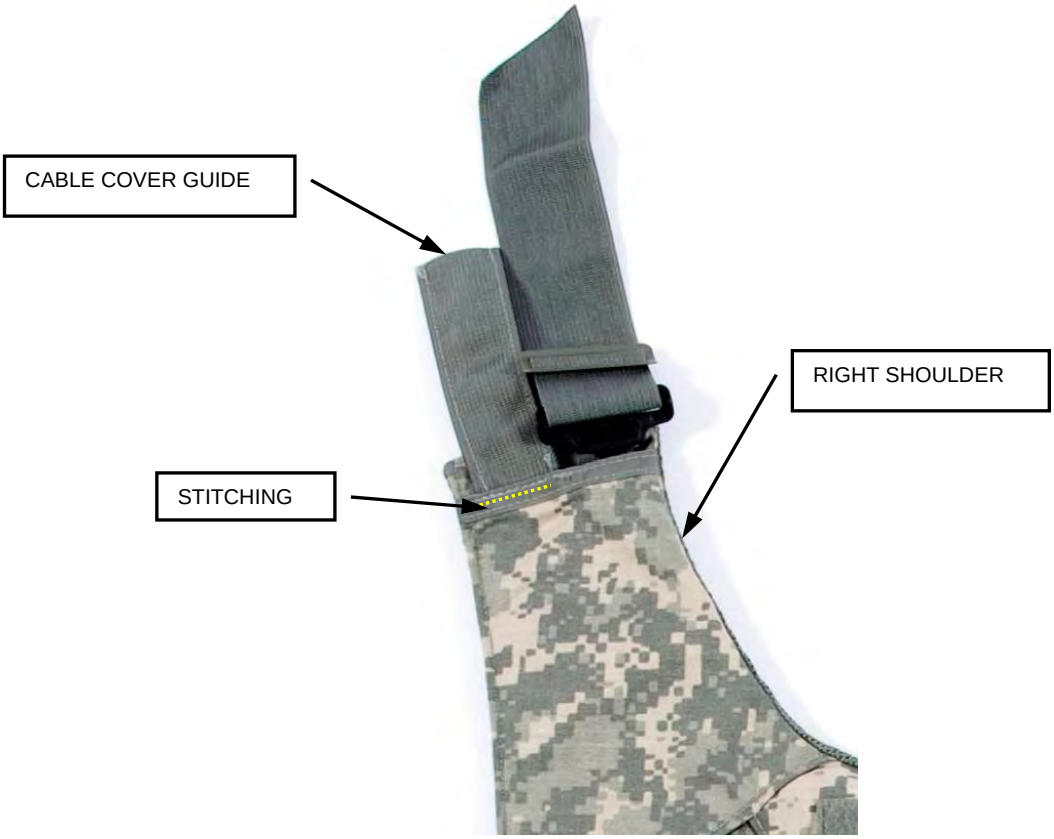


Figure 7. Repair Damage to Front Right Shoulder Cable Cover Guide.

END OF TASK

REPAIR – CONTINUED

Repair Damage to Front Right Shoulder Strap

1. Cut an approximately 17-inch length of 2-inch nylon webbing (Figure 8).
2. Measure 16 inches from one end.
3. Cut the webbing at an angle from the 16-inch mark to the end of the webbing, forming an angled end to help with routing through buckle.
4. Sear cut end.
5. Open seam along armhole and neck hole of shoulder (Figure 8, Item 2).
6. Carefully remove damaged shoulder strap.
7. Place shoulder strap in original location.
8. Attach with a 1/2-inch x 1 3/4-inch box X.
9. Align neck hole and sew closed.

Figure 8. Repair Damage to Front Right Shoulder Strap.

END OF TASK

REPAIR – CONTINUED

Repair Damage to Front Release Handle Cover

1. Carefully open seam along neck hole.
2. Remove stitching on front left and right shoulder covers, and on the lower edge of the front release handle cover.
3. Cut replacement piece (Figure 9, Item 1) according to pattern piece IOTV F RL HN CVR.
4. Attach loop (Figure 9, Item 2) according to pattern piece length.
5. Fold replacement piece in half with face of fabric inboard.
6. Attach handle cover to IOTV front cover by topstitch along lower edges 3/8-inch seam allowance, leaving the bottom edge open to form pocket for release handle.
7. Bar tack lower bottom of release handle cover in right and left in the original location using a bar tack sewing machine, size E thread, place a 42-stitch 1/8 x 7/8-inch bar tack.
8. Invert piece to expose neck hole area.
9. Sew closed neck hole area.

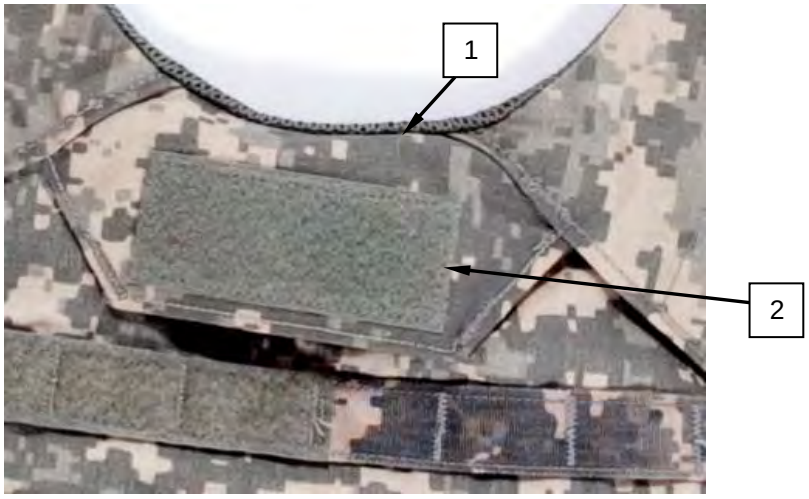


Figure 9. Repair Damage to Front Release Handle Cover.

END OF TASK

REPAIR – CONTINUED

Repair Damage to Loop under Front Release Handle Cover

1. Remove stitching on loop fastener tape (Figure 10, Item 1) and remove damaged loop fastener tape.

2. Place replacement loop fastener tape in original location and sew onto main body.

3. Fold release handle cover back down.

4. Stitch and using a bar tack sewing machine, size E thread, place a 42-stitch 1/8 x 7/8-inch bar tack, bar tack in original locations.

Figure 10. Repair Damage to Loop under Front Release Handle Cover.

END OF TASK

REPAIR – CONTINUED

Repair Damage to Front Outer Shell

Whenever possible, use a nylon adhesive patch IAW WP 0013.

Minor Damage (holes smaller than 1/2-inch) darn location where damaged IAW WP 0013.

Damage Occurring in Multiple Areas between Webbing.

1. Expose inside of front carrier to expose inside protector pocket.
2. Remove bar tack and seam approx 4-inches down on each side.
3. Cut approx 12-inches long length of 4-inch webbing based on dimensions of inside front carrier pocket.
4. Sear edge of webbing IAW WP 0013.
5. Place webbing in location of damage area.
6. Sew down webbing along the length of pocket side seam.
7. Sew down pocket along side seams at top of pocket and using a bar tack sewing machine, size E thread, place a 42-stitch 1/8 x 7/8-inch bar tack.

END OF TASK

Repair Damage to MOLLE Webbing on IOTV Front Flap

1. Carefully remove stitching of bar tacks just outside damaged location.
2. Cut webbing to the inside of the former bar tack location.
3. Remove all damaged webbing and bar tacks in that area.
4. Cut piece of webbing to length of damaged area plus 1-inch.
5. Fold edges of webbing under ½ inch.
6. Using a bar tack sewing machine, size E thread, place a 42-stitch 1/8 x 7/8-inch bar tack place bar tack over existing bar tack and bar tack in location.

END OF TASK

REPAIR – CONTINUED

Repair Damage to IOTV Front Flap Pocket

1. Cut replacement piece using pattern IOTV F FL PK.
2. Carefully remove stitching around edges of loop fastener (Figure 11, Item 1) and edges of flap pocket (Figure 11, Item 2).
3. Remove damaged flap pocket (Figure 11, Item 2) and loop fastener (Figure 11, Item 1).
4. Bind edge of new flap pocket piece.
5. Attach 2-inch loop fastener (Figure 11, Item 3) to underside of flap pocket (Figure 11, Item 2).
6. Attach 4-inch loop fastener to flap pocket (Figure 11, Item 1).
7. Sewing around perimeter of flap pocket, attach flap pocket to IOTV front in original location.
8. Attach upper loop to IOTV front with box-X.

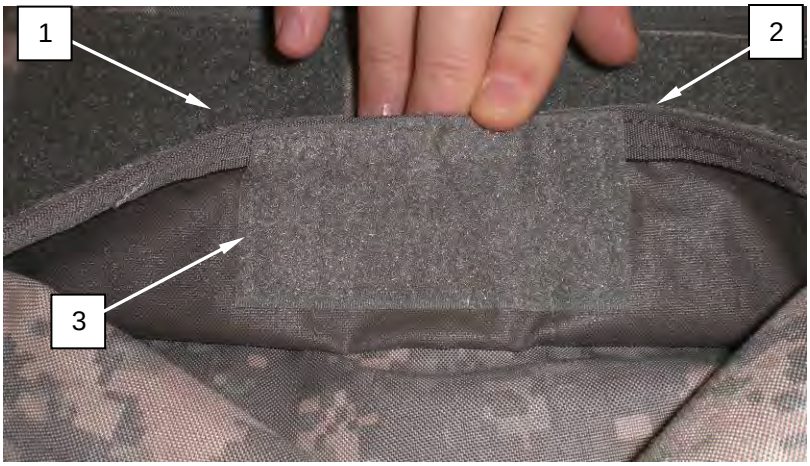


Figure 11. Repair Damage to IOTV Front Flap Pocket.

END OF TASK

REPAIR – CONTINUED

Repair Damage to IOTV Front Pocket

If front pocket is damaged, it may be completely removed. If front pocket is missing, it does not need to be replaced.

END OF TASK

Repair Damage to IOTV Front Inner Plate Pocket

Minor Damage. Install nylon adhesive patch IAW WP 0013.

Major Damage.

1. Carefully remove seams.
2. Remove pocket.
3. Cut new pocket piece from pattern piece IOTV F IN P PK.
4. Bind upper and lower edge of pocket piece.
5. Attach 2-inch loop fastener according to pattern.
6. Place replacement piece in original location.
7. Attach on both sides.

END OF TASK

END OF WORK PACKAGE

SUSTAINMENT MAINTENANCE
FRONT CARRIER INTERIOR FABRIC
REPAIR

INITIAL SETUP:

Tools and Special Tools

Ruler, Measuring (WP 0047, Item 8)
Sewing Machine, Industrial (Light Duty) (WP 0047, Item 13)
Shears, Tailors, 12 Inch (WP 0047, Item 14)
Stitch Removal Tool (WP 0047, Item 15)

Personnel Required

CIF

Materials/Parts

Fastener Tape, Hook, A-A-55126, Type II, Class 1, 1-Inch (WP 0040, Item 8)
Fastener Tape, Hook, A-A-55126, Type II, Class 1, 1 1/2-Inch (WP 0040, Item 9)
Fastener Tape, Loop, A-A-55126, Type II, Class 1, 1-Inch (WP 0040, Item 12)
Fastener Tape, Loop, A-A-55126, Type II, Class 1, 1 1/2-Inch (WP 0040, Item 13)
Fastener Tape, Loop, A-A-55126, Type II, Class 1, 2-Inch (WP 0040, Item 14)
Pencil, Marking Aid, Yellow, A-A-87 (WP 0046, Item 12)
Webbing, Textile, AA-55301, Class III, 1-Inch (WP 0040, Item 32)

References

WP 0034
WP 0035

REPAIR

The interior fabric of the IOTV front carrier is a knit raschel. The interior fabric of the IOTV Gen II is made of similar fabric to the exterior. If no raschel knit material is available for repair, the interior fabric of the IOTV front carrier may be replaced with IOTV Gen II fabric. The IOTV Gen II fabric may not be used to patch the raschel knit.

Repair Damage to the Loop Fastener on Front Inner Shell Upper Left Shoulder

1. Open seam along armhole.

2. Carefully remove damaged loop fastener.

3. Cut loop fastener according to pattern F IN SH UP or by using damaged loop fastener as a template.

REPAIR – CONTINUED

4. Attach loop fastener (Figure 1, Item 1) in original location.

5. Topstitch seam at armhole closed.

Figure 1. Repair Damage to the Loop Fastener on Front Inner Shell Upper Left Shoulder (IOTV Shown).

END OF TASK

REPAIR – CONTINUED

Repair Damage to the Front Yoke and Groin Protector Attachment Points

1. If repairing the front yoke attachment points (Figure 2, Items 1 and 2), open seam along armhole enough to gain access to repair. For groin protector attachment points (Figure 2, Item 3), open hook and loop fastener tape.

2. Carefully remove damaged webbing.

3. Cut the appropriate length of A-A-55301, FG 504, 1-inch webbing.
    a. Front Yoke Assembly Shoulder Attachment Points (Figure 2, Item 1): 3 ½ inches.
    b. Front Yoke Assembly Chest Attachment Points (Figure 2, Item 2): 3 inches.
    c. Groin Protector Assembly Attachment Points (Figure 2, Item 3): 3 inches.

4. Using size E thread, place a 42-stitch, 1/8 x 5/8-inch bar tack at each end of webbing in the same location as the original bar tack (Figure 2).

5. If opened, topstitch seam at armhole closed.

Figure 2. Repair Damage to the Front Yoke and Groin Protector Attachment Points (IOTV Gen II Shown).

END OF TASK

REPAIR – CONTINUED

Repair Damage to the Hook on inside of Front Inner Shell

1. If necessary, open seam along armhole.
2. Carefully remove damaged hook.
3. Cut hook according to pattern F IN SH UP, or by using damaged hook as a template.
4. Attach hook (Figure 3, Item1) in original location.
5. If necessary, topstitch seam at armhole closed.

Figure 3. Repair Damage to the Hook on inside of Front Inner Shell (IOTV Shown Inverted).

END OF TASK

Repair Damage to 1-Inch horizontal Hook on Front Inner Shell Upper

1. Carefully remove 1-inch hook.
2. Cut hook (Figure 3, Item 2) according to pattern F IN SH UP, or by using damaged hook as a template.
3. Attach in original location.

END OF TASK

REPAIR – CONTINUED

Repair Damage to Hook on inside of Front Inner Shell Lower

1. Carefully remove damaged hook.

2. Cut replacement hook (Figure 4, Item1) according to pattern F IN SH LW, or by using damaged hook as a template.

3. Attach in original location.

Figure 4. Repair Damage to Hook on inside of Front Inner Shell Lower (IOTV Shown).

END OF TASK

Repair Damage to Loop on Front Inner Shell Lower

1. Carefully remove 1-inch loop.

2. Cut loop (Figure 5, Item1) according to pattern F IN SH LW, or by using damaged hook as a template.

3. Attach in original location.

Figure 5. Repair Damage to Loop on Front Inner Shell Lower (IOTV Shown).

END OF TASK

END OF WORK PACKAGE

SUSTAINMENT MAINTENANCE

BACK CARRIER (IOTV/IOTV GEN II) EXTERIOR FABRIC

REPAIR

INITIAL SETUP:

Tools and Special Tools

Ruler, Measuring (WP 0047, Item 8)
Sewing Machine, Industrial (Light Duty) (WP 0047, Item 13)
Shears, Tailors, 12 Inch (WP 0047, Item 14)
Stitch Removal Tool (WP 0047, Item 15)

Materials/Parts

Fastener Tape, Hook, A-A-55126, Type II, Class 1, 1-Inch (WP 0040, Item 8)
Fastener Tape, Hook, A-A-55126, Type II, Class 1, 1 1/2-Inch (WP 0040, Item 9)
Fastener Tape, Loop, A-A-55126, Type II, Class 1, 1-Inch (WP 0040, Item 12)
Fastener Tape, Loop, A-A-55126, Type II, Class 1, 1 1/2-Inch (WP 0040, Item 13)
Fastener Tape, Loop, A-A-55126, Type II, Class 1, 2-Inch (WP 0040, Item 14)
Pencil, Marking Aid, Yellow, A-A-87 (WP 0046, Item 12)
Webbing, Textile, AA-55301, Class III, 1-Inch (WP 0040, Item 32)

Personnel Required

CIF

Equipment Condition

.
Equipment completely disassembled

References

WP 0013
WP 0034
WP 0035

REPAIR

NOTE

Darning is required for small areas of damage. A darning machine will be required for areas as noted.

This work package covers repair to the outside of the IOTV and IOTV Gen II back carrier. Refer to Figure 1 on the following page for an overview of the back carrier.

Stitching and Restitching

Stitching and restitching of the back carrier shall be done IAW WP 0013, General Repair Procedures.

REPAIR – CONTINUED

Figure 1. Back Carrier Overview.

REPAIR – CONTINUED

Repair Damage to the IOTV Back Shoulder Cover

1. Carefully remove top stitching from back shoulder cover (Figure 2, Item 2).
2. Invert back carrier and separate shoulder seams (Figure 2, Items 1 and 3) to remove damaged back shoulder cover.
3. Manufacture new back shoulder cover using pattern B SHD CVR.
4. Sew new shoulder cover on back carrier (Figure 2, Items 1 and 3).
5. Turn back carrier right-side-out and top stitch the remaining portion of the back shoulder cover to back carrier (Figure 2, Item 2).

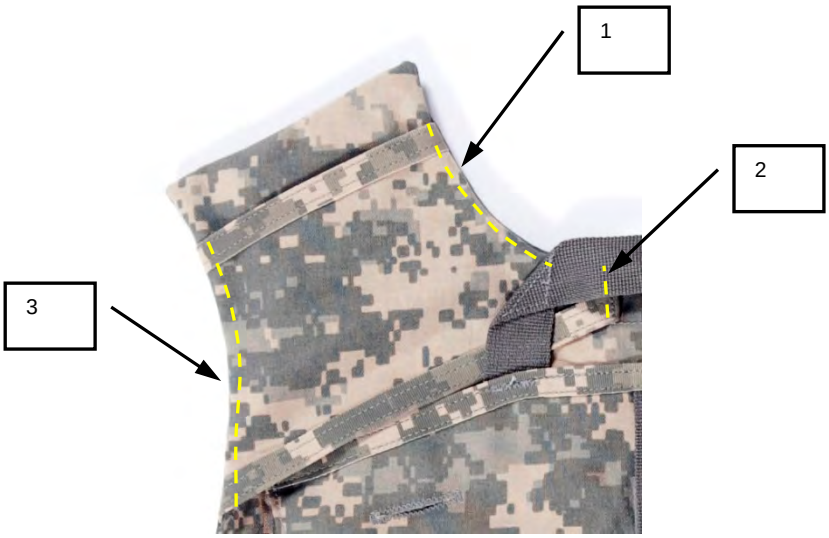


Figure 2. Back Shoulder Cover Repair.

END OF TASK

REPAIR – CONTINUED

Repair Damage to the Back Drag Strap

1. Carefully remove the four bar tacks on the upper access panel (Figure 3).
2. Mark location of back drag strap on back carrier for future reference.
3. Carefully remove stitching holding the back drag strap to the back carrier (Figure 3).
4. Cut a 19 ¼-inch piece of 1-inch, FG 504, A-A-55301 webbing and manufacture new drag strap using the back drag strap template or using the old strap as a guide.
5. Place new back drag strap on marks made previously.
6. Sew back drag strap to back carrier in same location as previous (Figure 3).
7. Using size E thread, place four, 42-stitch, 1/8 x 7/8-inch bar tacks on the upper access panel in the same locations as the old ones.
8. Stop stitch the center section of the upper access panel between the two center bar tacks. Do not stitch past the center bar tacks.

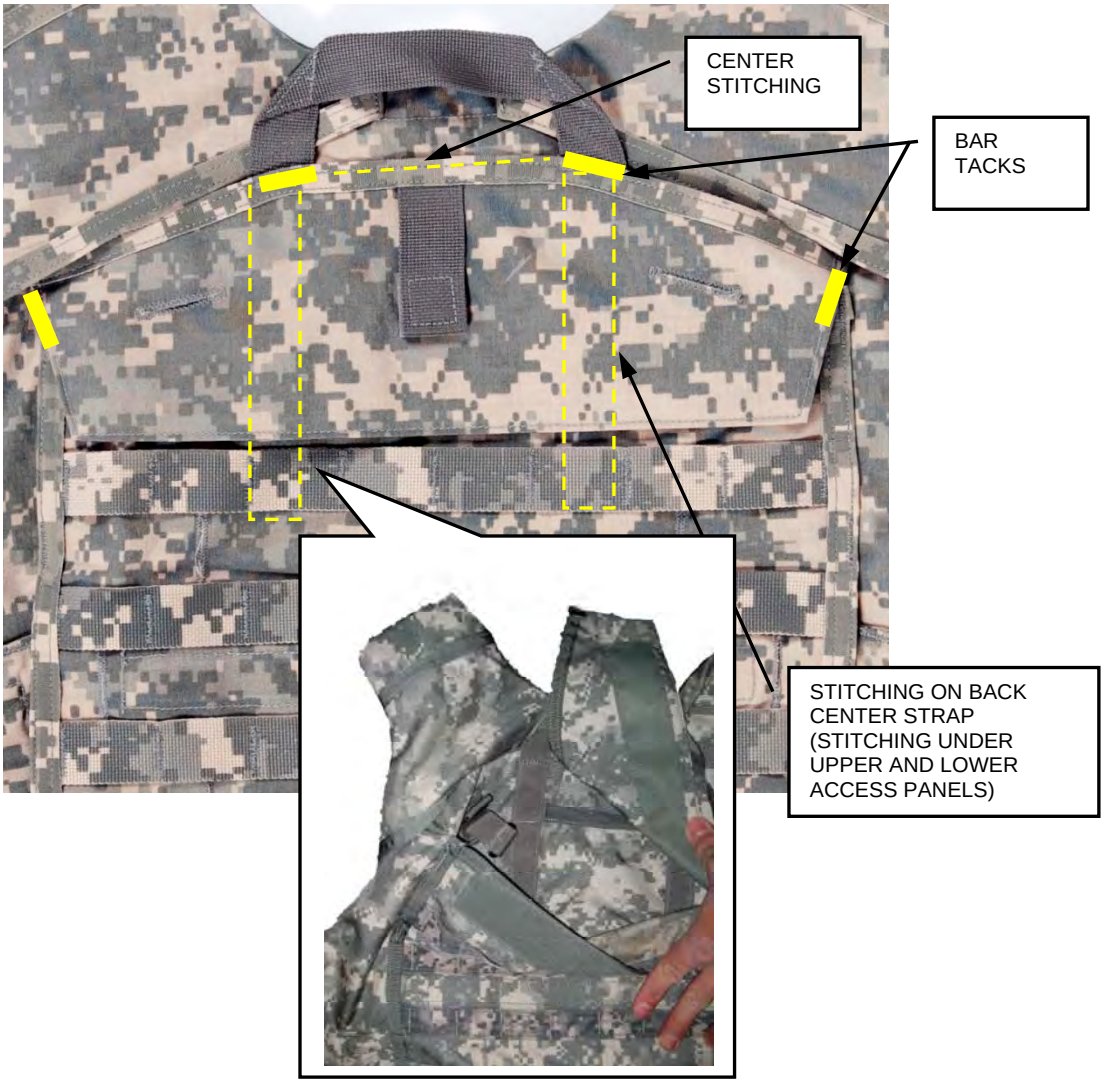


Figure 3. Repair Damage to Back Drag Strap.

END OF TASK

REPAIR – CONTINUED

Repair Damage to the Upper Access Panel

1. Carefully remove the four bar tacks holding the upper access panel in place (Figure 3).
2. Remove the center stitching holding the upper access panel in place.
3. Manufacture new upper access panel using pattern B UP FL.
4. Using size E thread, place four, 42-stitch, 1/8 x 7/8-inch bar tacks on the upper access panel in the same locations as the old ones.
5. Stop stitch the center section of the upper access panel between the two center bar tacks. Do not stitch past the center bar tacks.

END OF TASK

Repair Damage to the Back Retention Handle

1. Carefully remove the stitching holding the back retention handle and binding tape to the back carrier (Figure 4, Item 1). Remove only enough to access strap.
2. Cut a 3 ¼-inch piece of A-A-553-1, FG 504, 1-inch webbing.
3. Cut a 1-inch length of 1-inch hook fastener tape.
4. Fold one end of the 1-inch nylon webbing over ¼ inch and sew on hook fastener tape.
5. Place new back retention handle under the binding tape.
6. Sew binding tape back to back carrier.

Figure 4. Repair Damage to the Back Strap Retaining Strap.

END OF TASK

REPAIR – CONTINUED

Repair Damage to Hook on IOTV Back Upper Flap

1. Carefully remove damaged hook fastener tape (Figure 5).
2. Cut hook using pattern B UP FL or by using damaged hook as a template.
3. Attach hook in original location.

Figure 5. Repair Damage to Hook on IOTV Back Upper Flap.

END OF TASK

Repair Damage to IOTV Back Center Flap

The back center flap may be manufactured using the Back Flap Bar Tacks template and the following pattern pieces:

- B CTR FL (Back Center Flap)
- B CTR FL IN PK (Back Center Flap Inside Pocket)
- B CTR FL PK (Back Center Flap Pocket)

1. Carefully remove the four bar tacks attaching the back center flap (lower access panel) to the back carrier (Figure 6).
2. Remove the remaining stitching holding the back center flap (lower access panel) to the back carrier (Figure 6).
3. Manufacture new back center flap (lower access panel) using items listed above.
4. Using size E thread, place four, 42-stitch, 1/8 x 7/8-inch bar tacks on the back center flap (lower access panel) in the same locations as the old ones.
5. Restitch the back center flap (lower access panel) to the back carrier in original locations (Figure 6). Do not stitch past the center bar tacks.

REPAIR – CONTINUED

Figure 6. Back Center Flap (Lower Access Panel) Repair.

END OF TASK

REPAIR – CONTINUED

Repair Damage to the Hook and Loop Fastener on Back Center Flap

1. Carefully remove damaged hook or loop fastener on back center flap (Figure 5, Item1).

2. Cut hook or loop fastener using the back center flap template (B C FL REV TEMP) or by using damaged loop fastener as a template.

3. Attach hook or loop fastener in original location.

Figure 7. Repair Damage to Back Center Flap.

END OF TASK

Repair Damage to the Back Center Flap Inner Pocket

1. Carefully remove stitching holding binding tape and inner pocket to back flap (Figure 7, Item 2).
2. Manufacture new pocket using pattern B CTR FL IN PK.
3. Attach new pocket to back inner flap along both sides (Figure 7, Item 2) backstitching by ½ inch. Ensure pocket is sewn under binding tape.

END OF TASK

REPAIR – CONTINUED

Repair Damage to the Internal Elastic Band Channel Covers

1. Remove stitching attaching internal elastic band channel cover to back carrier (Figure 8, Item 1).
2. Cut a 6-inch piece of MIL-W-17337 3-inch nylon webbing.
3. Fold both ends of webbing under ¼ inch.
4. Sew webbing to back carrier in same location as original.

Figure 8. Repair Damage to the Internal Elastic Band Covers.

END OF TASK

END OF WORK PACKAGE

SUSTAINMENT MAINTENANCE

BACK CARRIER (IOTV/IOTV GEN II) INTERIOR FABRIC

REPAIR

INITIAL SETUP:

Tools and Special Tools

Ruler, Measuring (WP 0047, Item 8)
Sewing Machine, Industrial (Light Duty) (WP 0047, Item 13)
Shears, Tailors, 12 Inch (WP 0047, Item 14)
Stitch Removal Tool (WP 0047, Item 15)

Personnel Required

CIF

Materials/Parts

Fastener Tape, Hook, A-A-55126, Type II, Class 1, 1-Inch (WP 0040, Item 8)
Fastener Tape, Hook, A-A-55126, Type II, Class 1, 1 1/2-Inch (WP 0040, Item 9)
Fastener Tape, Loop, A-A-55126, Type II, Class 1, 1-Inch (WP 0040, Item 12)
Fastener Tape, Loop, A-A-55126, Type II, Class 1, 1 1/2-Inch (WP 0040, Item 13)
Fastener Tape, Loop, A-A-55126, Type II, Class 1, 2-Inch (WP 0040, Item 14)
Pencil, Marking Aid, Yellow, A-A-87 (WP 0046, Item 12)
Webbing, Textile, AA-55301, Class III, 1-Inch (WP 0040, Item 32)

References

WP 0034

REPAIR

The interior fabric of the IOTV front carrier is a knit raschel. The interior fabric of the IOTV Gen II is made of similar fabric to the exterior. If no raschel knit material is available for repair, the interior fabric of the IOTV front carrier may be replaced with IOTV Gen II fabric. The IOTV Gen II fabric may not be used to patch the raschel knit.

REPAIR – CONTINUED

NOTE

Darning is required for small areas of damage. A darning machine will be required for areas as noted.

Repair Damage to the Loop Fastener on Back Inner Shell Upper Left and Right Shoulders

1. Open seam along armhole.
2. Carefully remove damaged loop fastener.
3. Cut loop fastener using pattern B IN SH UP or by using damaged loop fastener as a template.
4. Attach loop fastener (Figure 1, Item 1) in original location.
5. Topstitch seam at armhole closed.

Figure 1. Repair Damage to the Loop Fastener on Back Inner Shell Upper Left and Right Shoulders.

END OF TASK

REPAIR – CONTINUED

Repair Damage to the Hook on inside of Back Inner Shell Upper Left and Right Shoulders

1. Open seam along armhole.
2. Carefully remove damaged hook.
3. Cut hook using pattern B IN SH UP or by using damaged hook as a template.
4. Attach hook (Figure 2, Item 1) in original location.
5. Topstitch seam at armhole closed.

Figure 2. Repair Damage to the Hook on inside of Front Inner Shell Upper Left and Right Shoulder.

END OF TASK

Repair Damage to 1-Inch horizontal Hook on Back Inner Shell Upper

1. Carefully remove 1-inch hook.
2. Cut hook using damaged hook as a template.
3. Attach in original location.

END OF TASK

Repair Damage to Hook on inside of Back Inner Shell Lower

1. Carefully remove hook.
2. Cut hook using pattern B IN SH LWR or by using damaged hook as a template.
3. Attach in original location.

END OF TASK

REPAIR – CONTINUED

Repair Damage to Loop on Back Inner Shell Lower

1. Carefully remove 1-inch loop.
2. Cut loop according to pattern in B IN SH LWR or by using damaged hook as a template.
3. Attach in original location.

END OF TASK

END OF WORK PACKAGE

SUSTAINMENT MAINTENANCE
IOTV SOFT BALLISTIC INSERTS
IOTV GEN II SOFT BALLISTIC INSERTS
REPAIR

INITIAL SETUP:

Tools and Special Tools

Specified in paragraph applicable to the item being repaired.

Personnel Required

CIF

Materials/Parts

Specified in paragraph applicable to the item being repaired.

References

WP 0012
WP 0027
WP 0028

REPAIR

WARNING

Steam pressing, mechanical pressing and machine washing of soft ballistic inserts is not authorized. Doing so may degrade the ballistic protection, which may cause injury or death to the Soldier.

NOTE

This work package applies to all soft ballistic inserts except yoke/collar assembly (OTV, IOTV and IOTV Gen II), and front yoke assembly. Ballistic materials on these items are not removable and cannot be flattened. Some yoke/collar assemblies have removable soft ballistic inserts in the collar. If the yoke/collar assembly has a removable soft ballistic insert in the collar, then it may be flattened using these procedures. No other portion of the yoke/collar and front yoke assemblies may be flattened. Repair of yoke/collar assembly and front yoke protector is covered in WP 0027 and 0028.

The only repair authorized for soft ballistic inserts are re-stenciling and flattening. Any damage to the soft ballistic inserts shall cause the insert to be removed from service.

Flattening Soft Ballistic Inserts

If soft ballistic inserts are bunched or folded, they may be flattened as follows:

1. Soak the soft ballistic insert in cold water for at least 1 hour.

REPAIR – CONTINUED

CAUTION

Do not wring or use any mechanical means to remove water from soft ballistic inserts. Failure to following instructions may result in damage to equipment.

2. Remove soft ballistic inserts from water.

CAUTION

Do not use steam press to speed up the drying process. Failure to follow these instructions may result in damage to equipment.

NOTE

Use of a wire rack or slotted surface may speed up the drying process. Use of fans may speed up drying process. If drying on a flat surface, regular turning of inserts may be necessary.

3. Place inserts horizontally on a flat surface.

4. Allow the ballistic inserts to dry completely (24-48 hours, depending on conditions).

5. Check the ballistic inserts for flatness. Dispose of any soft ballistic insert that does not flatten.

6. Ensure data label is readable. If data label is unreadable, remark IAW WP 0012.

END OF TASK

END OF WORK PACKAGE

SUSTAINMENT MAINTENANCE
LEFT AND RIGHT SIDE PLATE CARRIER (IOTV)
UNIVERSAL SIDE PLATE CARRIER (IOTV GEN II)
REPAIR

INITIAL SETUP:

Tools and Special Tools

Shears, Tailors, 12 Inch (WP 0047, Item 14)
Stitch Removal Tool (WP 0047, Item 15)
Ruler, Measuring (WP 0047, Item 8)
Sewing Machine, Industrial (Light Duty) (WP 0047, Item 13)
Sewing Machine, Industrial (Bar Tack) (WP 0047, Item 11)

Personnel Required

CIF

Materials/Parts

Pencil, Marking Aid, Yellow, A-A-87 (WP 0046, Item 12)
Nylon Fabric, 500 denier, MIL C 43734 (WP 0040, Item 7)
Tape, MIL T 5038, Type III, Class 2 (WP 0040, Item 26)
Keeper, Webbing (WP 0046, Item 3)
Webbing, Textile, AA-55301, Type III, 1-Inch (WP 0040, Item 32)
Ladderlock, Trovato, 1-Inch TLL, ITW (WP 0040, Item 19)
Ring, Rectangular 1” x ½” X .150 Steel, Zinc, Welded, Color: Foliage Green 504 (WP 0059, Item 37)
Webbing, Textile, MIL-T-5038, 1-Inch (WP 0040, Item 32)
Webbing, Textile, MIL-W-17337, Class 2, ¾ Inch (WP 0040, Item 35)
Elastic, 1-Inch (WP 0059, Item 5)
Buckle, Tri-glide, Bowed, 2-Inch (WP 0059, Item 1)
Ring, Oval (WP 0059, Item 36)
Fastener Tape, Hook, AA55126, Type II, Class 1, 4-Inch (WP 0040, Item 11)
Fastener Tape, Loop, AA55126, Type II, Class 1, 4-Inch (WP 0040, Item 15)
PE, Extruded, .5 Mil (WP 0059, Item 30)
Fastener Tape, Hook, AA55126, Type II, Class 1, 2-Inch (WP 0040, Item 10)
Fastener Tape, Loop, AA55126, Type II, Class 1, 2-Inch (WP 0040, Item 14)

References

Refer to WP 0034 and WP 0035 for the following:
IOTV SPC
IOTV SPC P PK C TP
IOTV SPC P PK OUT C
IOTV SPC P PK FL
IOTV SPC STF
IOTV SPC STF CVR
IOTV SPC P PK
IOTV SPC P PK IN C

WP 0012
WP 0013

REPAIR

NOTE

Fabric materials such as webbing that is cut for use in the maintenance of the IOTV will normally be heat seared (unless otherwise specified) IAW WP 0013, to prevent the material from fraying or unraveling.

This work package covers repair of the IOTV right and left side plate carrier and universal side plate carrier (Figure 1).

REPAIR – CONTINUED

Figure 1. Side Plate Carrier Repair.

REPAIR – CONTINUED

Repair of the Left and Right Side Plate Carrier Pocket Bottom Overlay with Minimal Wear (IOTV Only)

1. Darn abrasion locations (Figure 2). Refer to WP 0013 for darning techniques.
2. Place webbing over the damaged area on the outside of the flap.
3. Sew seam 1/8 inch in from edge of webbing,
4. Stitch the nylon webbing over the damaged area in a zig-zag fashion for reinforcement (Figure 2).

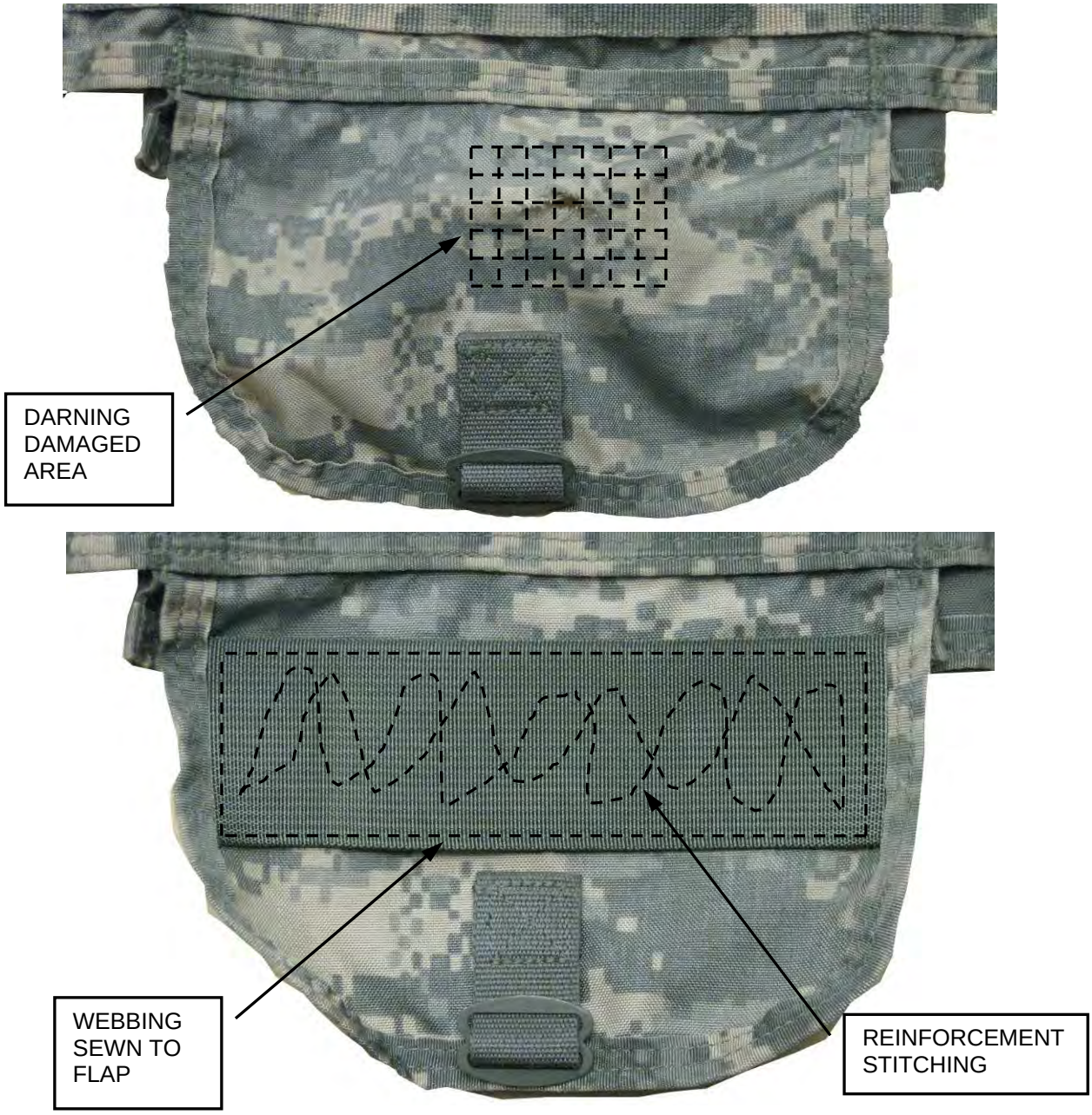


Figure 2. Repair of Side Plate Carrier Bottom Overlay (IOTV Only).

END OF TASK

REPAIR – CONTINUED

Replacement of Hook and loop on Side Plate Carrier (IOTV and IOTV Gen II)

NOTE

New hook or loop may be sewn over damaged hook or loop one time only. After that, old hook or loop must be removed before sewing on new hook or loop.

1. If the hook or loop tape has been previously repaired (more than one layer of material), remove both layers of hook or loop fastener tape.

2. Cut 4-inch hook or loop fastener tape to appropriate length.

3. Cut hook and loop fastener tape to same shape as original.

4. Place over original location.

5. Sew hook or loop fastener tape to side plate carrier 1/8-inch from edge using an X-stitch pattern (Figure 3).

Figure 3. Replacement of Hook or Loop on Side Plate Carrier.

END OF TASK

REPAIR – CONTINUED

Replace SPC Pocket Bottom Overlay (IOTV Only)

1. Carefully cut the pocket bottom overlay (Figure 4) off as close to seam as possible.

2. Remove bar tack (Figure 4) from both sides to open up plate pocket.

NOTE

If pattern piece is not available, pocket may be fabricated by tracing off original pocket to acquire dimensions.

3. To fabricate pocket, refer to pattern piece IOTV SPC P PK FL in WP 0034.

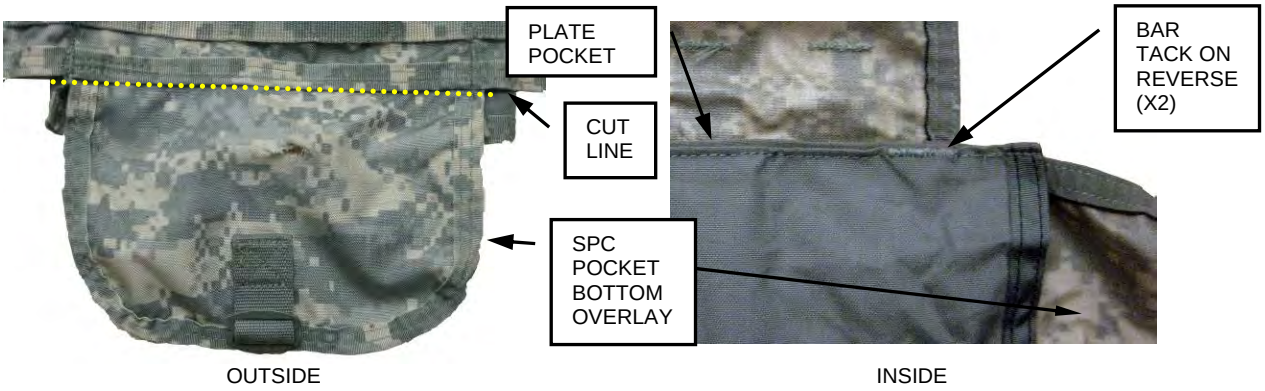


Figure 4. Replacement of SPC Pocket Bottom Overlay.

4. Using a light duty sewing machine, sew the fabricated pocket to the original seam with two rows of size E thread, 7 to 11 stitches per inch (Figure 5).

5. Sew plate pocket carrier closed. Using size E thread, place a 42-stitch, 1/8 x 7/8-inch bar tack in the same location as the original bar tack (Figure 4).

Figure 5. Sewing Plate Pocket Carrier Closed.

END OF TASK

REPAIR – CONTINUED

Replacement of SPC Plate Pocket Closure Strap (IOTV Only)

1. Cut 5-inch length of 1-inch nylon webbing.

2. Route webbing through tri-glide buckle (Figure 6).

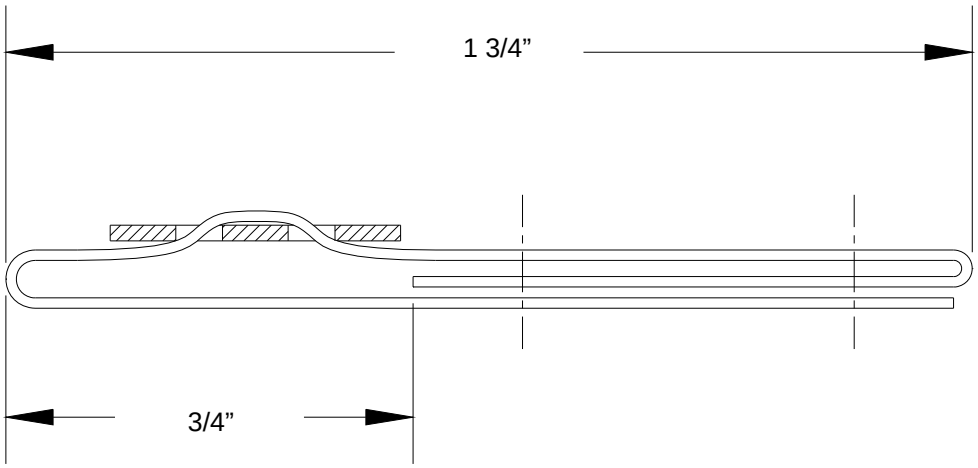


Figure 6. Routing of SPC Plate Pocket Closure Strap.

3. Fold webbing into double loop length approximately 1-3/4 inches long with a 3/4 inch loop.

4. Using a light duty sewing machine, place a 3/4-inch X 3/4-inch box-x centered on flap onto webbing 2-inches away from flap seam (Figure 7).

Figure 7. Replacement of SPC Plate Pocket Closure Strap.

END OF TASK

REPAIR – CONTINUED

Replace the Strap on the Plate Pocket (IOTV Only)

1. Carefully remove strap on the plate pocket (Figure 8) of the SPC.
2. Fabricate strap using the damaged strap as a template.
3. Using a light duty sewing machine, place a 3/4-inch X 3/4-inch box-x centered on flap onto webbing.

Figure 8. Replacement of SPC Plate Pocket Strap.

END OF TASK

REPAIR – CONTINUED

Replacement of SPC Plate Pocket (IOTV Only)

1. Carefully cut both seams on the plate pocket (Figure 9) of the SPC and remove old SPC pocket.

2. Fabricate SPC plate pocket IAW WP 0034 using pattern piece SPC P PK.

Figure 9. Replacement of SPC Plate Pocket.

3. Fold sides in 3/8 inch.

4. Sew pocket seams on side plate carrier plate pocket 1/8 inch from edge.

5. Using size E thread, place a 42-stitch, 1/8 x 7/8-inch bar tack (Figure 9) in four corners on both sides of the pocket.

END OF TASK

REPAIR – CONTINUED

Replacement of SPC Plate Pocket Cap (IOTV Only)

1. Carefully cut off Plate Pocket Cap (Figure 10) along edge of binding tape.

Figure 10. Side Plate Carrier Pocket Cap Replacement.

2. Cut fabric using pattern pieces IOTV SPC P PK C TP, IOTV SPC P PK OUT C, and IOTV SPC P PK IN C.

3. Sew on loop fastener tape in accordance to pattern pieces on inner cap and outer cap (Figure 11).

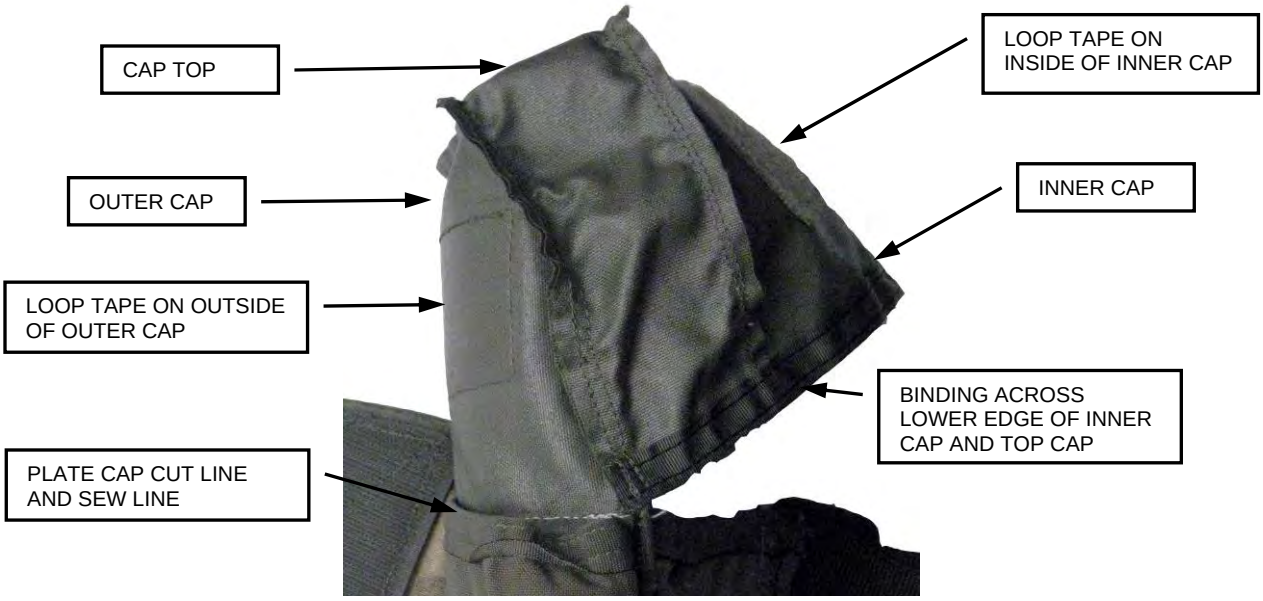


Figure 11. Side Plate Carrier Pocket Cap Construction (Shown Inverted).

REPAIR – CONTINUED

4. Sew inner cap to cap top.

5. Bind piece starting on edge of top across lower edge of inner cap to other edge of top cap (Figure 11).

6. Cut and sear end of binding even with edge of cap.

7. Attach outer cap to top cap.

8. Fold under ½ inch and attach plate pocket cap to plate carrier assembly using 2 rows of straight stitching.

9. Using size E thread, place a 42-stitch, 1/8 x 7/8-inch bar tack on the inner section of the cap top and the outer cap along binded edge (Figure 12).

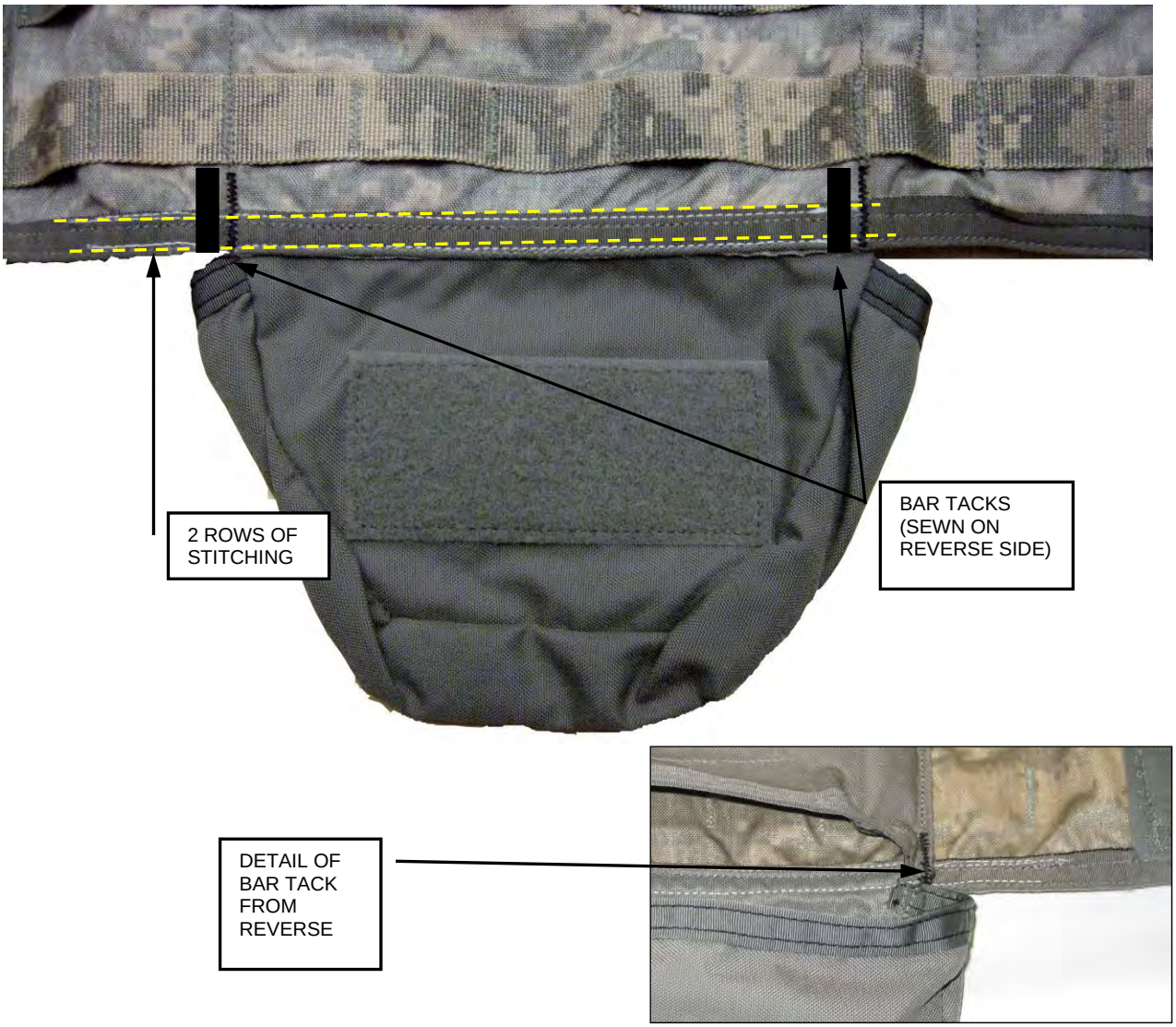


Figure 12. Replacement of SPC Plate Pocket Cap.

END OF TASK

REPAIR – CONTINUED

Replacement of SPC Handle

1. Carefully remove bar tack on each end of the handle (Figure 13) and cut off handle as close to loop fastener tape as possible.

2. Cut new webbing piece 8 ½ inches in length and sear ends.

3. Fold ends of webbing under 1/2 inch and using size E thread, place a 42-stitch, 1/8 x 7/8-inch bar tack in same locations as old bar tacks.

Figure 13. Replacement of SPC Handle.

END OF TASK

REPAIR – CONTINUED

Replacement of Right and Left Webbing Strap

1. Carefully remove box-X (Figure 14) on each end of the webbing straps to remove straps.

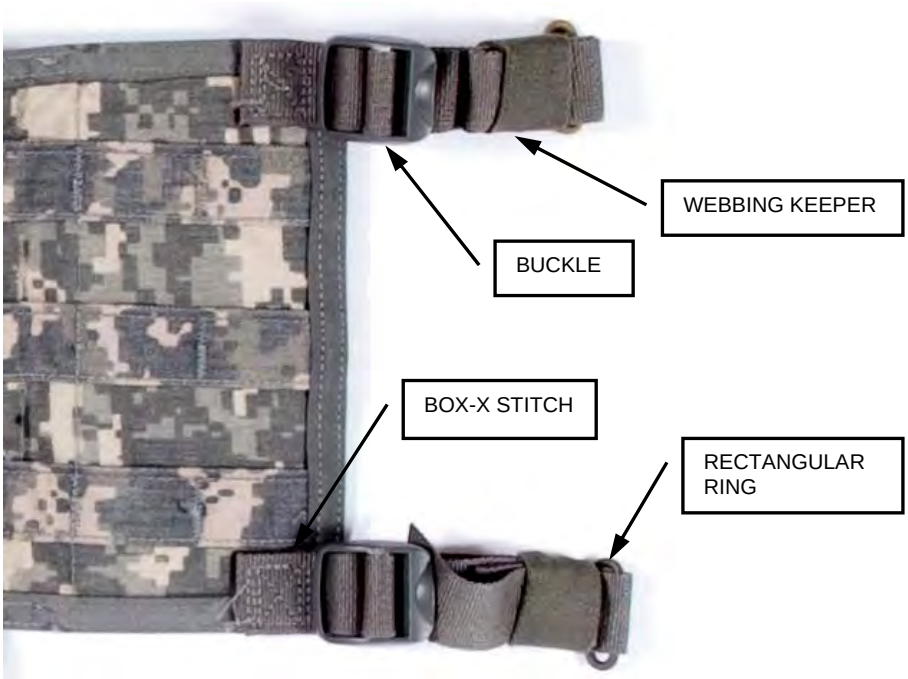


Figure 14. Replacement of Right and Left Webbing Strap.

2. Cut new webbing piece 25 ½ inches in length and sear ends at 45 degree angle.

3. Duplicate webbing routing through buckle, rectangular ring, and webbing keeper as shown (Figure 15).

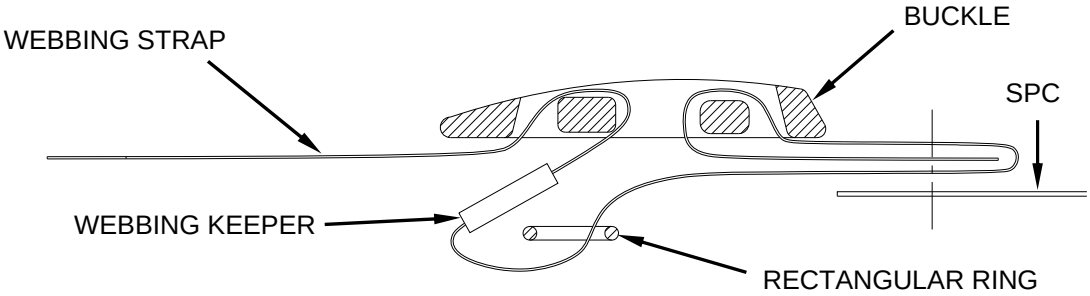


Figure 15. Routing Webbing through Buckle, Webbing Keeper and Rectangular Ring.

4. Reattach using a 3/4-inch X 3/4-inch box-X.

END OF TASK

REPAIR – CONTINUED

Repair Damage to MOLLE Webbing

1. Carefully remove stitching of bar tacks just outside damaged location.
2. Cut webbing to the inside of the previous bar tack location (Figure 16).
3. Remove all damaged webbing and bar tacks in that area.
4. Cut piece of webbing to length and add 1/2-inch to overall length. Lightly sear webbing edge.
5. Using size E thread, place a 42-stitch, 1/8 x 7/8-inch bar tack over existing bar tack.

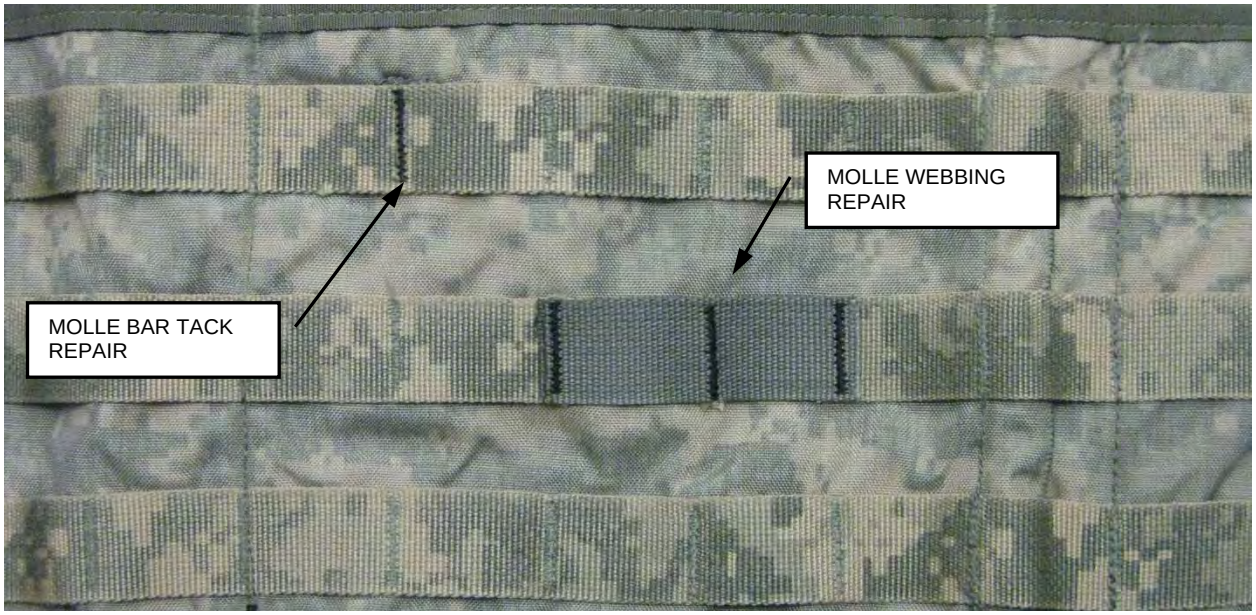


Figure 16. MOLLE Webbing Repair.

END OF TASK

REPAIR – CONTINUED

Repair Damage to the Side Plate Carrier Stiffener (IOTV Only)

1. Carefully remove stitching on side of cover (Figure 17) opposite binding.

2. Remove broken stiffener.

NOTE

If current stiffener is sewn to box-x stitches, the stiffener may be cut along seam.

3. Replace with new stiffener piece cut new stiffener by using pattern piece show in Figure 18 with 1-inch corners removed for bar tack.

Figure 17. Repair Damage to the Side Plate Carrier Stiffener.

4. Fold cover under along previous fold line.

REPAIR – CONTINUED

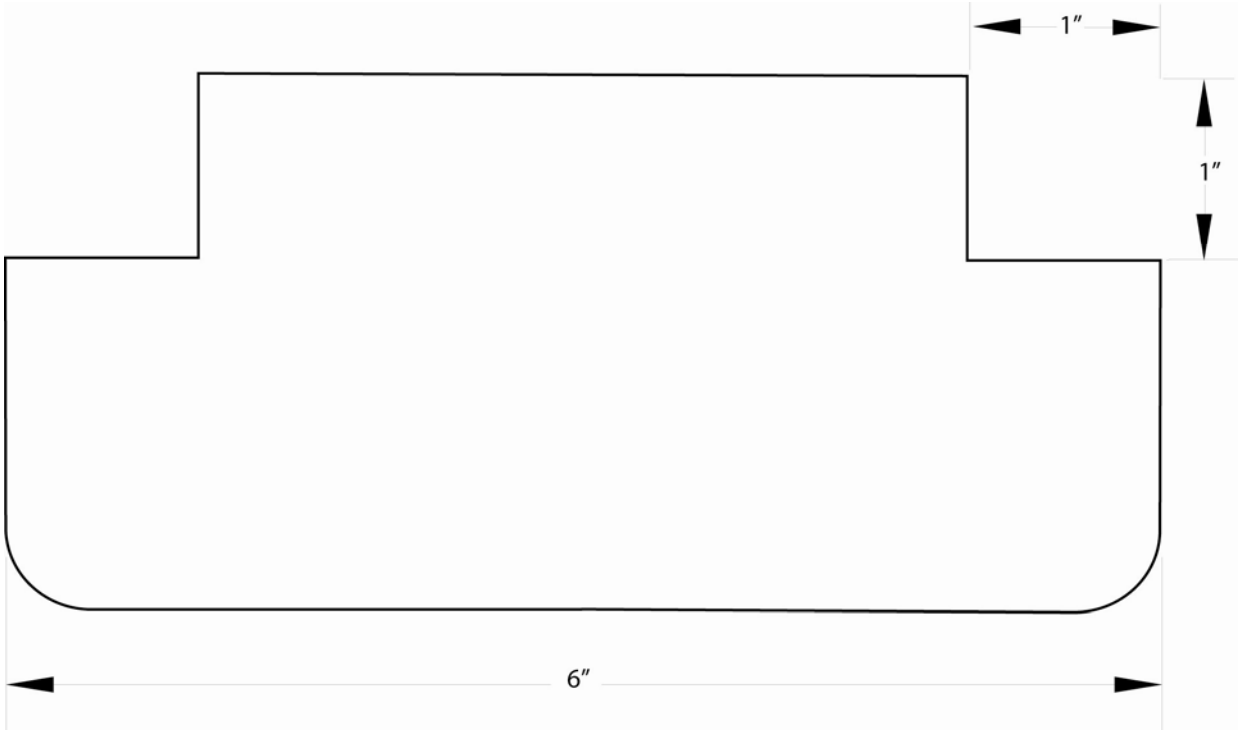


Figure 18. IOTV SPC Stiffener Modified for Repair (Shown Actual Size).

5. Top stitch along edge ensuring to line up stitch line with 7/8-inch bar tacks (Figure 19) on opposite side.

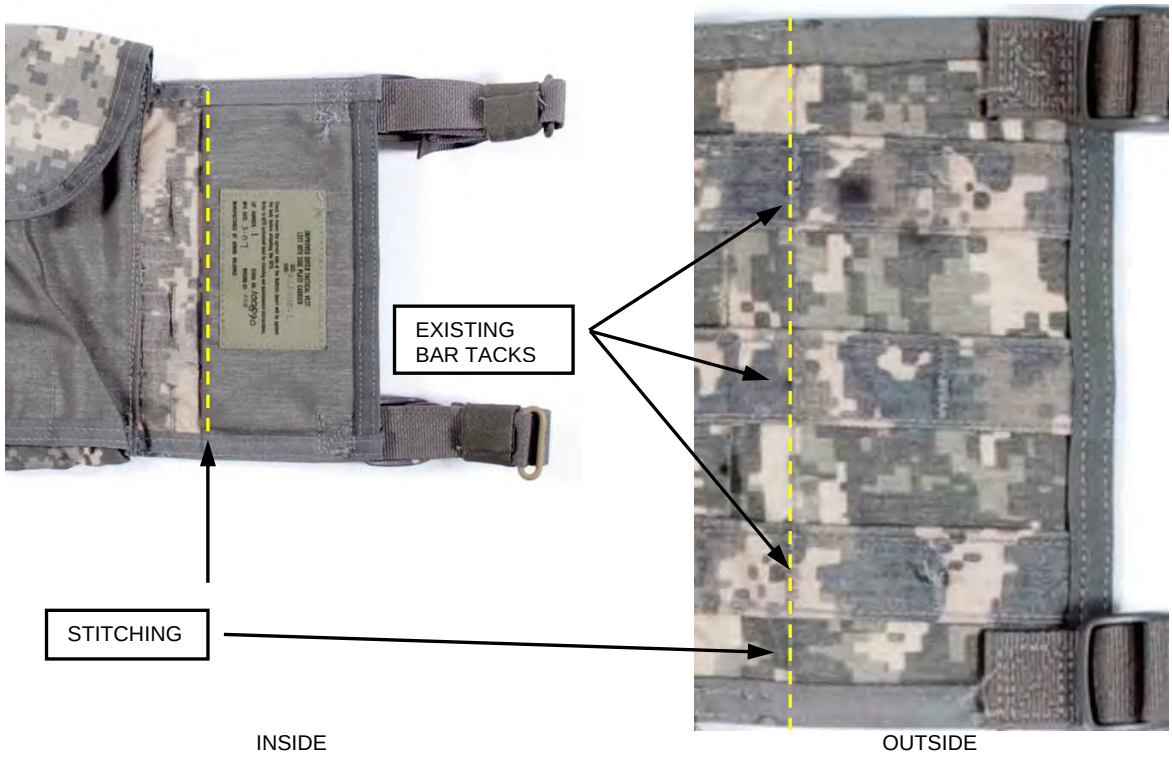


Figure 19. Repair Damage to the Side Plate Carrier Stiffener.

END OF TASK

END OF WORK PACKAGE

SUSTAINMENT MAINTENANCE

UNIVERSAL SIDE PLATE POUCH (IOTV GEN II)

REPAIR

INITIAL SETUP:

Tools and Special Tools

Shears, Tailors, 12 Inch (WP 0047, Item 14)
Stitch Removal Tool (WP 0047, Item 15)
Ruler, Measuring (WP 0047, Item 8)
Sewing Machine, Industrial (Light Duty) (WP 0047, Item 13)
Sewing Machine, Industrial (Bar Tack) (WP 0047, Item 11)

Personnel Required

CIF

Materials/Parts

Pencil, Marking Aid, Yellow, A-A-87 (WP 0046, Item 12)
Nylon Fabric, 500 denier, MIL C 43734 (WP 0040, Item 7)
Tape, MIL T 5038, Type III, Class 2 (WP 0040, Item 26)
Webbing, Textile, AA-55301, Type III, 1-Inch (WP 0040, Item 32)
Webbing, Textile, MIL-T-5038, 1-Inch (WP 0040, Item 32)
Fastener Tape, Hook, AA55126, Type II, Class 1, 4-Inch (WP 0040, Item 11)
Fastener Tape, Loop, AA55126, Type II, Class 1, 4-Inch (WP 0040, Item 15)
Fastener Tape, Hook, AA55126, Type II, Class 1, 2-Inch (WP 0040, Item 10)
Fastener Tape, Loop, AA55126, Type II, Class 1, 2-Inch (WP 0040, Item 14)

References

WP 0013

REPAIR

Replace Snap Fasteners

Replace snap fasteners (Figure 1) IAW WP 0013, General Repair Procedures.

END OF TASK

Repair MOLLE Webbing

Repair MOLLE webbing (Figure 1) IAW WP 0013, General Repair Procedures.

END OF TASK

REPAIR – CONTINUED

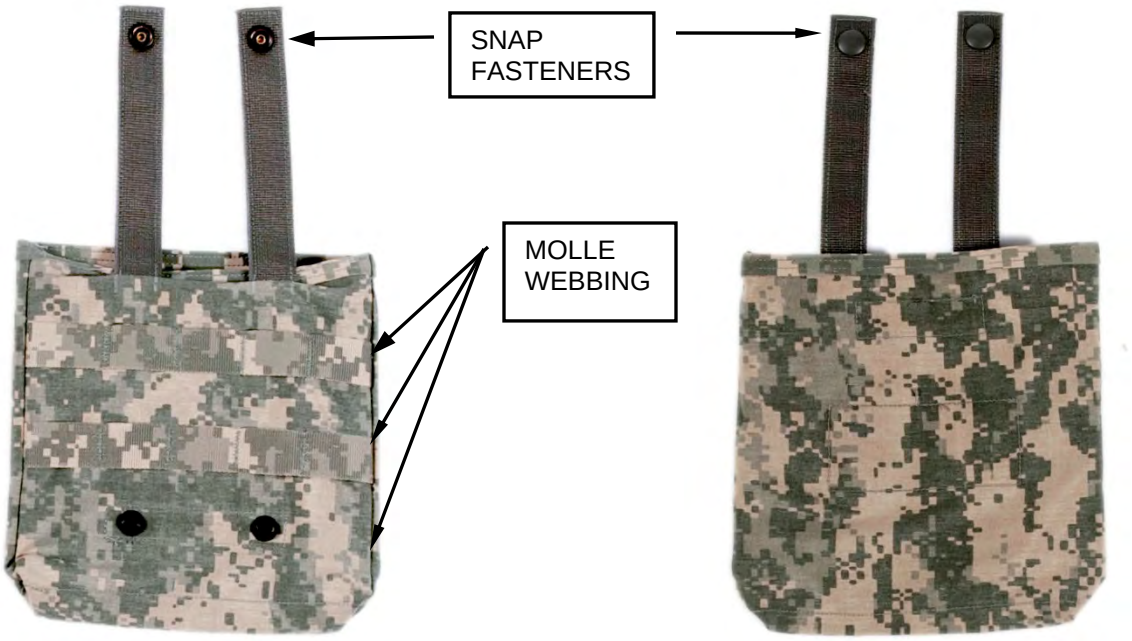


Figure 1. Universal Side Plate Pocket.

Stitching and Restitching

Restitch IAW WP 0013, General Repair Procedures.

END OF TASK

Patching

Patch IAW WP 0013, General Repair Procedures.

END OF TASK

END OF WORK PACKAGE

SUSTAINMENT MAINTENANCE
INTERNAL ELASTIC BAND
REPAIR

INITIAL SETUP:

Tools and Special Tools

Shears, Tailors, 12 Inch (WP 0047, Item 14)
Stitch Removal Tool (WP 0047, Item 15)
Ruler, Measuring (WP 0047, Item 8)
Sewing Machine, Industrial (Light Duty) (WP 0047, Item 13)

Personnel Required

CIF

Materials/Parts

Fastener Tape, Hook, A-A-55126, Type II, Class 1, 1-Inch (WP 0040, Item 8)
Fastener Tape, Hook, A-A-55126, Type II, Class 1, 1 1/2-Inch (WP 0040, Item 9)
Fastener Tape, Loop, A-A-55126, Type II, Class 1, 1-Inch (WP 0040, Item 12)
Fastener Tape, Loop, A-A-55126, Type II, Class 1, 1 1/2-Inch (WP 0040, Item 13)
Fastener Tape, Loop, A-A-55126, Type II, Class 1, 2-Inch (WP 0040, Item 14)
Pencil, Marking Aid, Yellow, A-A-87 (WP 0046, Item 12)
Webbing, Textile, AA-55301, Type III, 1-Inch (WP 0040, Item 36)

References

WP 0013

REPAIR

Replace Buckles

1. Unthread first length of webbing from tri-glide buckle (Figure 1).

NOTE

If the rectangular ring is permanently attached to the back carrier, skip step 2.

2. Retain rectangular ring.
3. Unthread remaining portion of webbing from the tri-glide buckle.
4. Replace tri-glide buckle with serviceable item from stock.
5. Route the running end of the internal elastic band through the tri-glide buckle and rectangular ring, and back through the buckle.

Figure 1. Internal Elastic Band.

END OF TASK

REPAIR – CONTINUED

Replace Rectangular Ring (Detachable)

1. Unthread the first length of webbing from tri-glide buckle (Figure 2).
2. Remove rectangular ring and replace with serviceable item from stock.
3. Route the running end of the webbing through the rectangular ring and back through the tri-glide buckle.

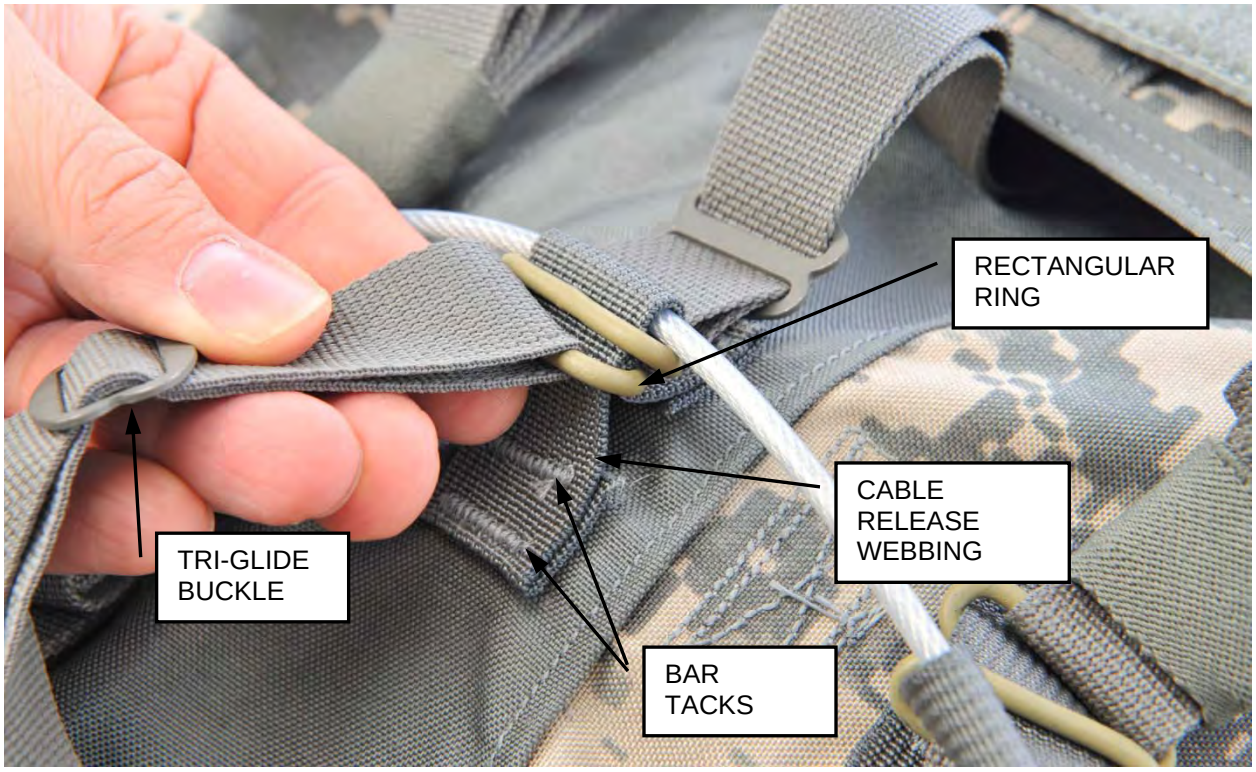


Figure 2. Replacing Rectangular Ring.

END OF TASK

Replace Rectangular Ring (Attached)

If the rectangular ring is permanently attached to the back carrier webbing, use the following procedures.

1. Unthread the first length of webbing from tri-glide buckle (Figure 2).
2. Remove internal elastic band from rectangular ring and back carrier.
3. Remove both bar tacks from one side of the cable release webbing, cleaning all loose threads.
4. Remove and replace the rectangular ring with a serviceable item from stock.

NOTE

Fabric damaged by bar tack removal may be reinforced with a 1-inch piece of 1-inch webbing.

5. Using size E thread, place two 42-stitch, 1/8 x 7/8-inch bar tack in the same location as the original bar tack

REPAIR – CONTINUED

6. Route the running end of the webbing through the rectangular ring and back through the tri-glide buckle.

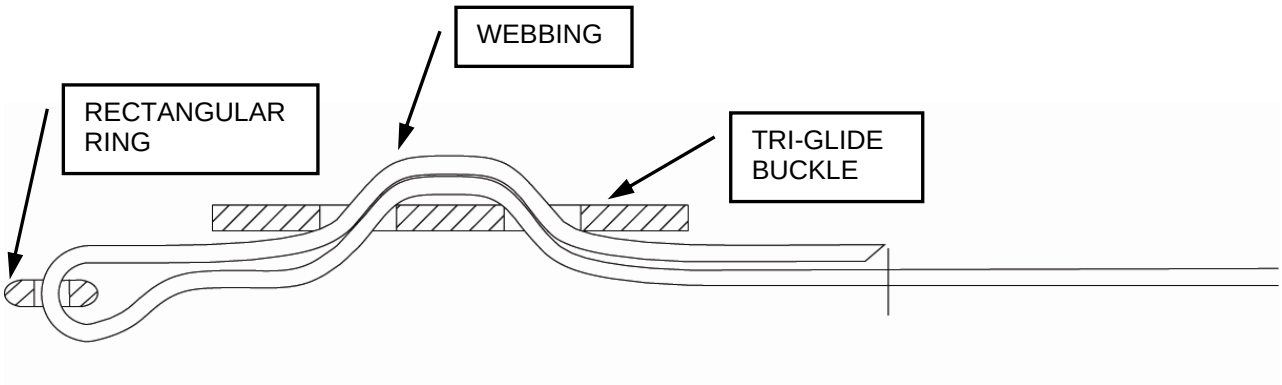


Figure 3. Rectangular Ring Routing (Cross-Sectional View).

END OF TASK

Stitching and Restitching

Restitch IAW WP 0013, General Repair Procedures.

END OF TASK

END OF WORK PACKAGE

SUSTAINMENT MAINTENANCE
FRONT YOKE ASSEMBLY
REPAIR

INITIAL SETUP:

Tools and Special Tools

Pliers (WP 0047, Item 4)
Press, Grommet and Eyelet, Hand Operated (WP 0047, Item 5)
Punch and Die, Grommet inserting, No 00 (WP 0047, Item 6)
Ruler, Measuring (WP 0047, Item 8)
Screwdriver, Flat-tip, (1/4-inch) (WP 0047, Item 9)
Sewing Machine, Industrial (Light Duty) (WP 0047, Item 13)
Sewing Machine, Industrial (Bar Tack) (WP 0047, Item 11)
Shears, Tailors, 12 Inch (WP 0047, Item 14)
Stitch Removal Tool (WP 0047, Item 15)

Materials/Parts

Pencil, Marking Aid, Yellow, A-A-87 (WP 0046, Item 12)
Socket, Snap Fastener, Style 2 (WP 0059, Item 38)
Stud, Snap Fastener, Style 2 (WP 0059, Item 40)
Webbing, Textile, AA-55301, Type III, 1-Inch (WP 0040, Item 36)
Webbing, Textile, MIL-W-17337, Class 2, 2-Inch (WP 0040, Item 33)

Personnel Required

CIF

REPAIR

Stitching and Re-stitching

Re-stitch is authorized on the binding tape along the outside edge of the front yoke assembly (Figure 1). No other re-stitching is authorized.

Re-stitch IAW WP 0013, General Repair Procedures.

REPAIR – CONTINUED

Repair Damage to the Collar

WARNING

Repairs are not authorized to the collar. Repairs may impact the serviceability of the ballistics sewn into the collar. Using equipment with damaged collar may cause serious injury or death.

No repair of the collar (Figure 1) is authorized.

Figure 1. Front Yoke Assembly.

END OF TASK

REPAIR – CONTINUED

Repair Damage to the 2-inch Webbing Attachment Straps on Shoulder of Yoke

1. Carefully remove all stitching through binding holding webbing (Figure 2, Item 1) in place.
2. Remove damaged webbing attachment strap.
3. Cut and mark snap locations on replacement webbing piece.
4. Place snaps (Figure 2, Item 2) in appropriate location and set snaps in webbing IAW WP 0013.
5. Place webbing (Figure 2, Item 1) in appropriate location on yoke.
6. Close binding with two rows of stitching.
7. Fold under edge of binding. Using size E thread, place a 42-stitch 1/8 x 5/8-inch bar tack at each edge of the webbing along the edge of the yoke.

Figure 2. Repair Damage to 2-inch Webbing Attachment Straps.

END OF TASK

REPAIR – CONTINUED

Repair Damage to the Male Stud on Front Outer Shell

Repair to the male stud snap fasteners on the upper and lower portions of the yoke assembly is not authorized.

END OF TASK

Repair Damage to the Female Stud on Webbing Strap

Repair female stud IAW WP 0013, General Repair Procedures.

END OF TASK

END OF WORK PACKAGE

SUSTAINMENT MAINTENANCE
YOKE/COLLAR ASSEMBLY (IOTV/IOTV GEN II)
REPAIR

INITIAL SETUP:

Tools and Special Tools

Pliers (WP 0047, Item 4)
Press, Grommet and Eyelet, Hand Operated (WP 0047, Item 5)
Punch and Die, Grommet inserting, No 00 (WP 0047, Item 6)
Ruler, Measuring (WP 0047, Item 8)
Screwdriver, Flat-tip, (1/4-inch) (WP 0047, Item 9)
Sewing Machine, Industrial (Light Duty) (WP 0047, Item 13)
Shears, Tailors, 12 Inch (WP 0047, Item 14)
Stitch Removal Tool (WP 0047, Item 15)

Personnel Required

CIF

Materials/Parts

Fastener Tape, Hook, AA5126, Type II, Class 1, 2-Inch (WP 0040, Item 10)
Pencil, Marking Aid, Yellow, A-A-87 (WP 0046, Item 12)
Socket, Snap Fastener, Style 2 (WP 0059, Item 38)
Stud, Snap Fastener, Style 2 (WP 0059, Item 40)
Webbing, Textile, AA-55301, Type III, 1-Inch (WP 0040, Item 32)

References

WP 0013

REPAIR

Stitching and Restitching

Re-stitch is authorized on the binding tape along the outside edge of the front yoke assembly (Figure 1). No other restitching is authorized.

Re-stitch IAW WP 0013, General Repair Procedures.

END OF TASK

REPAIR – CONTINUED

Repair Damage to the Collar

WARNING

Repairs are not authorized to the collar. Repairs may impact the serviceability of the ballistics sewn into the collar. Using equipment with damaged collar may cause serious injury or death.

No repair of the collar (Figure 1) is authorized.

Figure 1. Front Yoke/Collar Assembly.

Repair Damage to the Male Stud on Front Outer Shell

Repair to the male stud snap fasteners on the upper and lower portions of the yoke assembly is not authorized.

END OF TASK

Repair Damage to the Female Stud on Webbing Strap

Repair female stud IAW WP 0013, General Repair Procedures.

END OF TASK

END OF WORK PACKAGE

SUSTAINMENT MAINTENANCE
LOWER BACK PROTECTOR OUTERSHELL
REPAIR

INITIAL SETUP:

Tools and Special Tools

Pliers (WP 0047, Item 4)
Press, Grommet, Hand Operated (WP 0047, Item 5)
Punch and Die, Grommet, No 00 (WP 0047, Item 6)
Ruler, Measuring (WP 0047, Item 8)
Screwdriver, Flat-tip, (1/4-inch) (WP 0047, Item 9)
Sewing Machine, Industrial Light Duty (WP 0047, Item 13)
Sewing Machine, Double Needle (WP 0047, Item 10)
Sewing Machine, Bar Tack (WP 0047, Item 11)
Shears, Tailors, 12 Inch (WP 0047, Item 14)
Stitch Removal Tool (WP 0047, Item 15)

Personnel Required

CIF

Materials/Parts

Nylon Fabric, MIL DTL 43734,1000 Denier (WP 0040, Item 6)
Pencil, Marking Aid, Yellow, A-A-87 (WP 0046, Item 12)
Socket, Snap Fastener, Style 2 (WP 0059, Item 38)
Stud, Snap Fastener, Style 2 (WP 0059, Item 40)
Webbing, Textile, AA-55301, Type III, 1-Inch (WP 0040, Item 32)

References

WP 0013

REPAIR

Replace Snaps on the Lower Back Protector Attachment Straps

Replace snap fasteners on Lower Back Protector IAW WP 0013, General Repair Procedures.

END OF TASK

Stitching and Restitching

Restitch IAW WP 0013, General Repair Procedures.

END OF TASK

REPAIR – CONTINUED

Patching

Patch IAW WP 0013, General Repair Procedures.

END OF TASK

Replace Lower Back Protector Attachment Straps

1. Carefully remove bar tack.
2. Cut away excess damaged webbing as close to edge of binding as possible.
3. Cut new webbing according to Figure 1.
4. Mark fold and snap locations.
5. Replace snaps IAW WP 0013.
6. Fold and using size E thread, place a 42-stitch, 1/8 x 7/8-inch bar tack and bar tack loop on end.
7. Fold opposite end under 1/2 inch.
8. Place over original location.
9. Attach lower back protector attachment strap, using size E thread, place a 42-stitch, 1/8 x 7/8-inch bar tack in the same location as the previous bar tacks.

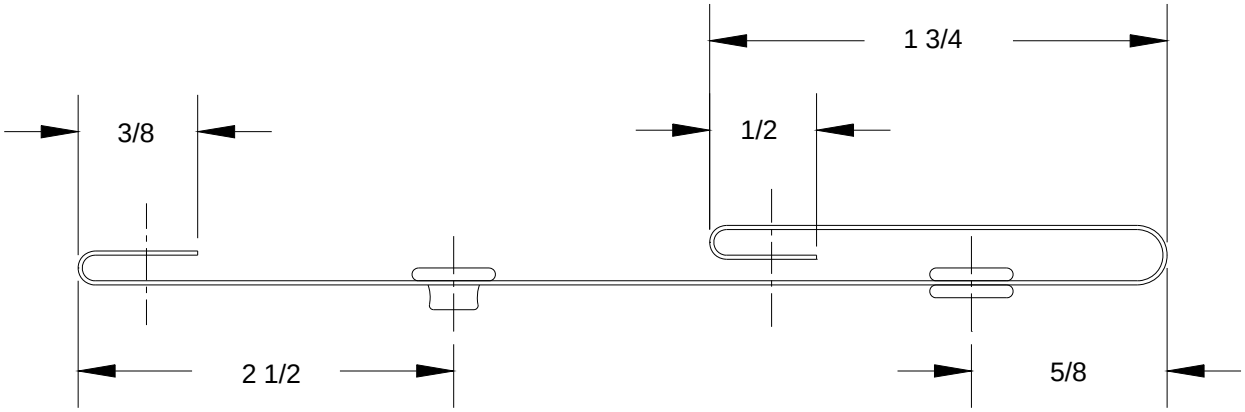


Figure 1. Replace Lower Back Protector Attachment Straps.

END OF TASK

REPAIR – CONTINUED

Repair Damage to MOLLE Webbing (IOTV Only)

If MOLLE webbing (Figure 2, Item 1) on the lower back protector is damaged, the entire MOLLE webbing may be removed. MOLLE webbing is not necessary for the lower back protector.

Figure 2. Lower Back Protector (IOTV).

END OF TASK

Repair Damage to Lower Back Protector (LBP) Overlay (IOTV Only)

Overlay is not required for lower back protector.

1. If overlay (Figure 2) is damaged, cut the old overlay off as close to the edge binding as possible.
2. Sear edge of fabric to prevent fraying.

END OF TASK

END OF WORK PACKAGE

SUSTAINMENT MAINTENANCE
GROIN PROTECTOR ASSEMBLY
REPAIR

INITIAL SETUP:

Tools and Special Tools

Ruler, Measuring (WP 0047, Item 8)
Sewing Machine, Industrial Light Duty (WP 0047, Item 13)
Shears, Tailors, 12 Inch (WP 0047, Item 14)
Stitch Removal Tool (WP 0047, Item 15)

Personnel Required

CIF

Materials/Parts

Nylon Fabric, MIL DTL 43734,1000 Denier (WP 0040, Item 6)
Fastener Tape, Hook, A-A-55126, Type II, Class 1, 2-Inch (WP 0040, Item 10)
Fastener Tape, Loop, A-A-55126, Type II, Class 1, 1/2-Inch (WP 0059, Item 12)
Fastener Tape, Loop, A-A-55126, Type II, Class 1, 2-Inch (WP 0040, Item 14)
Pencil, Marking Aid, Yellow, A-A-87 (WP 0046, Item 12)
Webbing, Textile, AA-55301, Type III, 1-Inch (WP 0040, Item 32)
Webbing, Textile, MIL-W-17337, Class 2, 2-Inch (WP 0040, Item 33)

References

WP 0013

REPAIR

Fabric materials such as webbing that is cut for use in the maintenance of the IOTV will normally be heat seared (unless otherwise specified) IAW WP 0013, to prevent the material from fraying or unraveling.

Replace Snap Fasteners

Replace snap fasteners IAW WP 0013, General Repair Procedures.

END OF TASK

Stitching and Restitching

Restitch IAW WP 0013, General Repair Procedures.

END OF TASK

REPAIR – CONTINUED

Patching

Patch IAW WP 0013, General Repair Procedures.

END OF TASK

Replace Groin Protector Attachment Straps

1. Carefully remove bar tack.
2. Cut away excess damaged webbing as close to edge of binding as possible.
3. Cut new webbing according to Figure 1.
4. Mark fold and snap locations.
5. Replace snaps IAW WP 0013.
6. Fold and using size E thread, place a 42-stitch, 1/8 x 7/8-inch bar tack and bar tack loop on end.
7. Fold opposite end under 1/2 inch.
8. Place over original location.
9. Attach groin protector attachment strap, using size E thread, place a 42-stitch, 1/8 x 7/8-inch bar tack in the same location as the previous bar tacks.

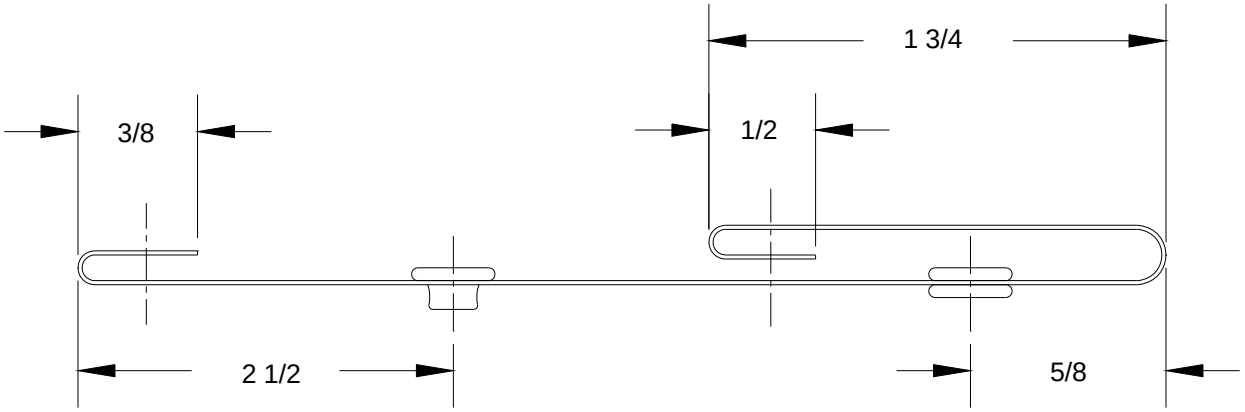


Figure 1. Replace Lower Back Protector Attachment Straps.

END OF TASK

END OF WORK PACKAGE

SUSTAINMENT MAINTENANCE
DELTOID PROTECTOR ASSEMBLY
REPAIR

INITIAL SETUP:

Tools and Special Tools

Ruler, Measuring (WP 0047, Item 8)
Sewing Machine, Industrial Light Duty (WP 0047, Item 13)
Shears, Tailors, 12 Inch (WP 0047, Item 14)
Stitch Removal Tool (WP 0047, Item 15)

Personnel Required

CIF

Materials/Parts

Nylon Fabric, MIL DTL 43734, 500 Denier (WP 0040, Item 6)
Fastener Tape, Hook, A-A-55126, Type II, Class 1, 2-Inch (WP 0040, Item 10)
Fastener Tape, Loop, A-A-55126, Type II, Class 1, 2-Inch (WP 0040, Item 14)
Pencil, Marking Aid, Yellow, A-A-87 (WP 0046, Item 12)
Webbing, Textile, AA-55301, Type III, 1-Inch (WP 0040, Item 32)
Webbing, Textile, MIL-W-17337, Class 2, 2-Inch (WP 0040, Item 33)

References

WP 0034
WP 0035

REPAIR

Repair procedures begin on the next page.

REPAIR – CONTINUED

Figure 1. Deltoid Protector Assembly.

Repair Damage to Vertical Attachment Strap on Deltoid Outer Shell

1. Carefully remove stitching (Figure 2, Item 1).

REPAIR – CONTINUED

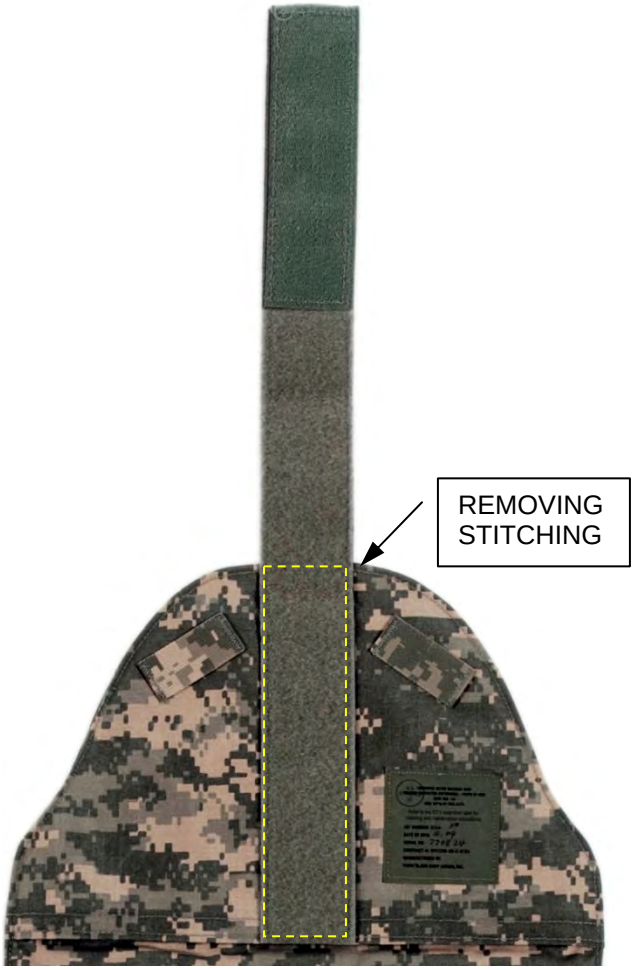


Figure 2. Replacing Vertical Attachment Strap.

2. Cut webbing, hook and loop fastener using pattern piece DLT BL CVR OUT, or by using damaged webbing, hook and loop fastener as a template.

3. Sew hook and loop fastener tape to webbing in original positions using one row of stitching, 1/8-inch from edge.

Figure 3. Vertical Attachment Strap Hook and Loop Fastener Tape Placement.

4. Sew vertical attachment strap to deltoid protector with one row of stitching (Figure 2).

END OF TASK

REPAIR – CONTINUED

Repair Damage to the Deltoid Arm Strap

1. Pull arm strap (Figure 1, Item 2) out of strap channel.
2. Cut and assemble webbing and hook according to spec and pattern DLT OUT SH, or by using damaged webbing, and hook as a template.
3. Place deltoid arm strap back through arm strap channel.

END OF TASK

Repair Damage to the Loop Fastener on the Deltoid Arm Strap Channel

1. Carefully remove loop fastener from arm strap channel (Figure 1, Item 4).
2. Remove stitching on upper edge of arm strap channel.
3. Cut loop fastener according to pattern DLT CHNL, or by using damaged loop fastener as a template.
4. Fold arm strap channel out and place loop fastener on channel and reattach with a 301 lock stitch.
5. Place channel in original location and stitch back onto the deltoid protector.

END OF TASK

Repair Damage to the Deltoid Arm Strap Channel

1. Carefully remove all stitching holding the arm strap channel (Figure 1, Item 4) on.
2. Cut replacement piece according to pattern piece DAPS DLT.
3. Attach 2-inch loop fastener to channel cover.
4. Fold under and topstitch arm strap channel to deltoid protector.

END OF TASK

Repair Damage to the Horizontal Loop Fastener on Interior Deltoid Outershell Lower Inner

1. Carefully remove all damaged loop fastener (Figure 1, Item 5).
2. Cut loop fastener according to pattern DLT OUT SH and DLT LW IN or by using damaged loop fastener as a template.
3. Stitch replacement loop fastener onto deltoid shell lower inner.

END OF TASK

Repair Damage to 1-Inch Webbing Located on Deltoid Outershell Upper Inner

1. Carefully remove damaged webbing piece.
2. Cut new webbing piece using damaged webbing as a template.
3. Reattach webbing piece with bar tack in appropriate location.

END OF TASK

REPAIR – CONTINUED

Repair Damage to MOLLE Attachment Straps on Outer Deltoid Outershell

1. Carefully remove damaged webbing piece.
2. Cut new webbing piece using damaged webbing as a template.
3. Reattach webbing piece with bar tack in appropriate location.

END OF TASK

Repair Damage to Deltoid Outershell

Patch deltoid protector outershell IAW WP 0012, general repair procedures.

END OF TASK

Repair Damage to Unit ID Loop Fastener on Deltoid Outershell

1. Carefully remove damaged webbing.
2. Cut loop fastener according to pattern piece DAPS DLT OUT SH.
3. Reattach loop fastener in appropriate location.

END OF TASK

END OF WORK PACKAGE

CHAPTER 6

SUSTAINMENT MAINTENANCE INSTRUCTIONS FOR ESAPI AND ESBI

SUSTAINMENT MAINTENANCE
ENHANCED SMALL ARMS PROTECTIVE INSERT (ESAPI)
ENHANCED SIDE BALLISTIC INSERT (ESBI)
INSPECT

INITIAL SETUP:

Tools and Special Tools
N/A

Materials/Parts
N/A

Personnel Required
CIF

Equipment Condition
Plates removed from vest

References
WP 0009

INSPECT

External Inspection

Inspect the hard armor protective inserts IAW WP 0009.

Non-Destructive Testing

Non-destructive testing is authorized for hard armor protective inserts and shall be performed on hard armor protective inserts per current Army guidance.

END OF TASK

END OF WORK PACKAGE

CHAPTER 7

ILLUSTRATED PARTS LIST
FOR
INTERCEPTOR BODY ARMOR SYSTEM

SUSTAINMENT MAINTENANCE

OTV

ILLUSTRATED LIST OF MANUFACTURED ITEMS

ILLUSTRATED LIST OF MANUFACTURED ITEMS INTRODUCTION

Scope

This work package includes complete instructions for making items authorized to be manufactured or fabricated at the SUSTAINMENT MAINTENANCE level for the OTV.

How to Use the Index of Manufactured Items

A part number index in alphanumeric order is provided for cross-referencing the part number of the item to be manufactured to the page which covers fabrication criteria.

Explanation of the Illustrations of Manufactured Items

All instructions needed by maintenance personnel to manufacture the item are included on the illustrations. All bulk materials needed for manufacture of an item are listed by part number or specification number in a tabular list on the illustration.

Pattern pieces for the side plate carriers are located in foldout pages at the back of this technical manual. All other pattern pieces are available upon request for authorized repair facilities. Please contact the following office for assistance in obtaining complete pattern sets.

TACOM LCMC Integrated Logistics Support Command
Soldier PSID Soldier Equipment Support Team
AMSTA-LCS-ECE
15 Kansas St.
Natick, MA 02053
508-233-6081

ILLUSTRATED LIST OF MANUFACTURED ITEMS INDEX

Table 1. Illustrated List of Manufactured Items Index (OTV).

Pattern Nomenclature	Nomenclature	Cut	Reference
Base Vest and Components Carrier Outer Shell			
BCK OUT SHL	Back Outer Shell	1 Face Up	ORDER
FR OUT SHL LF	Front Outer Shell, Left	1 Face Up	ORDER
FR OUT SHL RF	Front Outer Shell, Right	1 Face Up	ORDER
FL FR CL OU	Flap, Front Closure, Outer	1	ORDER
GRN BCK SHL	Groin Back Shell	1	ORDER
GRN FR SHL	Groin Front Shell	1	ORDER
THR PRT FRT	Throat Protector, Front	1	ORDER
BK PL PK FL	Back Plate, Pocket, Flap	1	ORDER
OTV-TPINR	Top Inner DAPS Underarm	1	ORDER
OTV-BTIN	Bottom Inner DAPS Underarm	1	ORDER
OTV-OS	Outer Piece DAPS Underarm	1	ORDER
OTV-OS-BI	Outer Piece DAPS Bicep	1	ORDER
OTV-INRBIC	Top Inner Piece DAPS Bicep	1	ORDER
LOW IN SHELL	Bottom Liner Piece DAPS Bicep	1	ORDER
DAPES-TUN	Tunnel Piece DAPS Bicep	1	ORDER
Base Vest Carrier Inner Lining			
BK IN SH UP	Back Inner Shell, Upper	1 Face Up	ORDER
BK IN SH LW	Back Inner Shell, Lower	1 Face Up	ORDER
F I SH UP L	Front Inner Shell, Upper Left	1 Face Up	ORDER
F I SH UP R	Front Inner Shell, Upper Right	1 Face Up	ORDER
F I SH LW L	Front Inner Shell, Lower Left	1 Face Up	ORDER
F I SH LW R	Front Inner Shell, Lower Right	1 Face Up	ORDER
FRT PKT FLP	Front Flap Pocket	1	ORDER
Basic Vest Carrier ESAPI Pockets			

ILLUSTRATED LIST OF MANUFACTURED ITEMS INDEX

Table 1. Illustrated List of Manufactured Items Index (OTV) – Continued.

Pattern Nomenclature	Nomenclature	Cut	Reference
BK PKT PLT	Back Pocket (Plate)	1	ORDER
FRT PKT PLT	Front Pocket (Plate)	2	ORDER
FLAP POCKET	Front Pocket Flap	1	ORDER

END OF WORK PACKAGE

SUSTAINMENT MAINTENANCE

IOTV

ILLUSTRATED LIST OF MANUFACTURED ITEMS

ILLUSTRATED LIST OF MANUFACTURED ITEMS INTRODUCTION

Scope

This work package includes complete instructions for making items authorized to be manufactured or fabricated at the SUSTAINMENT MAINTENANCE level for the IOTV.

How to Use the Index of Manufactured Items

A part number index in alphanumeric order is provided for cross-referencing the part number of the item to be manufactured to the page which covers fabrication criteria.

Explanation of the Illustrations of Manufactured Items

All instructions needed by maintenance personnel to manufacture the item are included on the illustrations. All bulk materials needed for manufacture of an item are listed by part number or specification number in a tabular list on the illustration.

Pattern pieces for the side plate carriers are located in foldout pages at the back of this technical manual. All other pattern pieces are available upon request for authorized repair facilities. Please contact the following office for assistance in obtaining complete pattern sets.

TACOM LCMC Integrated Logistics Support Command
Soldier PSID Soldier Equipment Support Team
AMSTA-LCS-ECE
15 Kansas St.
Natick, MA 02053
508-233-6081

ILLUSTRATED LIST OF MANUFACTURED ITEMS INDEX (IOTV)

Table 1. Illustrated List of Manufactured Items Index (IOTV).

Pattern Nomenclature	Nomenclature	Cut	Reference
Base Vest and Components Carrier Outer Shell			
F OUT SH	Front Outer Shell	1 Face Up	ORDER
F PK	Front Pocket	1 Pair	ORDER
F FL	Front Flap	1 Face Up	ORDER
F CH CVR	Front Channel Cover	1 Pair	ORDER
F R SHD CVR	Front Right Shoulder Cover	1 Face Up	ORDER
F R SHD CVR TP	Front Right Shoulder Cover Top	1 Face Up	ORDER
F R SHD CVR BT	Front Right Shoulder Cover Bottom	1 Face Up	ORDER
F RL HN CVR	Front Release Handle Cover	1 Face Up	ORDER
B OUT SH	Back Outer Shell	1 Face Up	ORDER
B UP FL	Back Upper Flap	1 Face Up	ORDER
B CTR FL	Back Center Flap	1 Face Up	ORDER
B SHD CVR	Back Shoulder Cover	1 Pair	ORDER
B CH CVR	Back Channel Cover	1 Pair	ORDER
SPC	Side Plate Carrier	1 Pair	APPENDIX
SPC P PK C TP	Side Plate Carrier Plate Pocket Cap Top	1 Pair	APPENDIX
SPC P PK FL	Side Plate Carrier Plate Pocket Flap	1 Pair	APPENDIX
SPC P PK OUT C	Side Plate Carrier Plate Pocket Outer Cap	1 Pair	APPENDIX
LBP OUT SH	Lower Back Protector Outer Shell	1 Face Up	ORDER
LBP OVLY	Lower Back Protector Overlay	1 Face Up	ORDER
GP OUT SH	Groin Protector Outer Shell	1 Face Up	ORDER
GP IN SH	Groin Protector Inner Shell	1 Face Up	ORDER
DLT UP IN	Deltoid Outer Shell, Upper Inner	1 Face Up	ORDER
DLT LW IN	Deltoid Outer Shell, Lower Inner	1 Face Up	ORDER
DLT OUT SH	Deltoid Outer Shell	1 Face Up	ORDER

ILLUSTRATED LIST OF MANUFACTURED ITEMS INDEX (IOTV) – CONTINUED

Table 1. Illustrated List of Manufactured Items Index (IOTV) – Continued.

Pattern Nomenclature	Nomenclature	Cut	Reference
DLT CHNL	Deltoid Arm Strap Channel	1 Face Up	ORDER
Base Vest and Components Carrier Inner Shell			
F FL PK	Front Flap Pocket	1 Face Up	ORDER
F IN P PK	Front Inside Plate Pocket	1 Face Up	ORDER
B IN P PK	Back Inside Plate Pocket	1 Face Up	ORDER
B CTR FL IN PK	Back Center Flap Inside Pocket	1 Face Up	ORDER
B CTR FL PK	Back Center Flap Pocket	1 Face Up	ORDER
SPC P PK	Side Plate Carrier Plate Pocket	1 Pair	APPENDIX
SPC P PK IN C	Side Plate Carrier Plate Pocket Inner Cap	1 Pair	APPENDIX
SPC STF CVR	Side Plate Carrier Stiffener Cover	1 Pair	APPENDIX
IEB OUT CVR	Internal Elastic Band Outer Cover	1 Pair	ORDER
IEB IN CVR	Internal Elastic Band Inner Cover	1 Pair	ORDER
F IN SH UP	Front Inner Shell Upper	1 Face Up	ORDER
F IN SH LWR	Front Inner Shell Lower	1 Face Up	ORDER
F IN SH S	Front Inner Shell Side	1 Pair	ORDER
B IN SH UP	Back Inner Shell Upper	1 Face Up	ORDER
B IN SH LWR	Back Inner Shell Lower	1 Face Up	ORDER
B IN SH S	Back Inner Shell Side	1 Pair	ORDER
LBP IN SH UP	Lower Back Protector Inner Shell Upper	1 Face Up	ORDER
LBP IN SH LWR	Lower Back Protector Inner Shell Lower	1 Face Up	ORDER
Polyethylene			
SPC STF	Side Plate Carrier Stiffener	1 Pair	APPENDIX

ILLUSTRATED LIST OF MANUFACTURED ITEMS INDEX (IOTV) – CONTINUED

Table 2. List of Templates (IOTV).

Templates	Reference
Front and Back Center Flap Strap	ORDER
Front and Back Inner Plate Pocket Strap	ORDER
Front Left Shoulder Strap, Narrow	ORDER
Front Left Shoulder Hook, Long Strap	ORDER
Front Left Shoulder Hook, Short Strap	ORDER
Front Right Shoulder Cover Cable Guide	ORDER
Front Bar Tacks	ORDER
Front Flap Bar Tacks	ORDER
Back Drag Strap	ORDER
Back Upper Release Loop	ORDER
Back Flap Bar Tacks	ORDER
Side Plate Carrier Bar Tacks	APPENDIX
Internal Elastic Band Metal Loop and Side Assembly	ORDER
Yoke Front and Back Strap, Narrow	ORDER
Yoke Front Strap, Wide	ORDER
Lower Back Protector Strap	ORDER
Lower Back Protector Overlay Bar Tacks	ORDER
Groin Protector Strap	ORDER
Cable Assembly Handle	ORDER
Shoulder Attachment Assembly	ORDER
Cable Stop Tab	ORDER

END OF WORK PACKAGE

SUSTAINMENT MAINTENANCE

IOTV GEN II

ILLUSTRATED LIST OF MANUFACTURED ITEMS

ILLUSTRATED LIST OF MANUFACTURED ITEMS INTRODUCTION

Scope

This work package includes complete instructions for making items authorized to be manufactured or fabricated at the SUSTAINMENT MAINTENANCE level for the IOTV Gen II.

How to Use the Index of Manufactured Items

A part number index in alphanumeric order is provided for cross-referencing the part number of the item to be manufactured to the page which covers fabrication criteria.

Explanation of the Illustrations of Manufactured Items

All instructions needed by maintenance personnel to manufacture the item are included on the illustrations. All bulk materials needed for manufacture of an item are listed by part number or specification number in a tabular list on the illustration.

Pattern pieces for the side plate carriers are located in foldout pages at the back of this technical manual. All other pattern pieces are available upon request for authorized repair facilities. Please contact the following office for assistance in obtaining complete pattern sets.

TACOM LCMC Integrated Logistics Support Command
Soldier PSID Soldier Equipment Support Team
AMSTA-LCS-ECE
15 Kansas St.
Natick, MA 02053
508-233-6081

ILLUSTRATED LIST OF MANUFACTURED ITEMS INDEX (IOTV GEN II)

Table 1. Illustrated List of Manufactured Items Index (IOTV Gen II).

Pattern Nomenclature	Nomenclature	Cut	Reference
Base Vest and Components Carrier Outer Shell			
F OUT SH	Front Outer Shell	1 Face Up	ORDER
F FL	Front Flap	1 Face Up	ORDER
F CH CVR	Front Channel Cover	1 Pair	ORDER
F R SHD CVR	Front Right Shoulder Cover	1 Face Up	ORDER
F L SHD CVR TP	Front Left Shoulder Cover Top	1 Face Up	ORDER
F L SHD CVR BT	Front Left Shoulder Cover Bottom	1 Face Up	ORDER
F RL HN CVR	Front Release Handle Cover	1 Face Up	ORDER
B OUT SH	Back Outer Shell	1 Face Up	ORDER
B UP FL	Back Upper Flap	1 Face Up	ORDER
B CTR FL	Back Center Flap	1 Face Up	ORDER
B SHD CVR	Back Shoulder Cover	1 Pair	ORDER
B CH CVR	Back Channel Cover	1 Pair	ORDER
SPC OUT SH	Side Plate Carrier Outer Shell	1 Pair	ORDER
SPC IN SH	Side Plate Carrier Inner Shell	1 Pair	ORDER
SPC P PK	Side Plate Carrier Plate Pocket	1 Pair	ORDER
SPC P PK BT OVLY	Side Plate Carrier Pocket Bottom Overlay	1 Pair	ORDER
SPC LBL UNLY	Side Plate Carrier Label Underlay	1 Pair	ORDER
SPC P PK IN C	Side Plate Carrier Plate Pocket Inner Cap	1 Pair	ORDER
SPC STF CVR	Side Plate Carrier Stiffener Cover	1 Pair	ORDER
SPC P PK C TP	Side Plate Carrier Plate Pocket Cap Top	1 Pair	ORDER
SPC P PK FL	Side Plate Carrier Plate Pocket Flap	1 Pair	ORDER
SPC P PK OUT C	Side Plate Carrier Plate Pocket Outer Cap	1 Pair	ORDER
LBP OUT SH	Lower Back Protector Outer Shell	1 Face Up	ORDER
GP OUT SH	Groin Protector Outer Shell	1 Face Up	ORDER

ILLUSTRATED LIST OF MANUFACTURED ITEMS INDEX (IOTV GEN II) – CONTINUED

Table 1. Illustrated List of Manufactured Items Index (IOTV Gen II) – Continued.

Pattern Nomenclature	Nomenclature	Cut	Reference
GP IN SH	Groin Protector Inner Shell	1 Face Up	ORDER
DLT UP IN	Deltoid Outer Shell, Upper Inner	1 Face Up	ORDER
DLT LW IN	Deltoid Outer Shell, Lower Inner	1 Face Up	ORDER
DLT OUT SH	Deltoid Outer Shell	1 Face Up	ORDER
DLT CHNL	Deltoid Arm Strap Channel	1 Face Up	ORDER
Base Vest and Components Carrier Inner Shell			
F FL PK	Front Flap Pocket	1 Face Up	ORDER
F IN P PK	Front Inside Plate Pocket	1 Face Up	ORDER
B IN P PK	Back Inside Plate Pocket	1 Face Up	ORDER
B CTR FL IN PK	Back Center Flap Inside Pocket	1 Face Up	ORDER
B CTR FL PK	Back Center Flap Pocket	1 Face Up	ORDER
IEB OUT CVR	Internal Elastic Band Outer Cover	1 Pair	ORDER
IEB IN CVR	Internal Elastic Band Inner Cover	1 Pair	ORDER
F IN SH UP	Front Inner Shell Upper	1 Face Up	ORDER
F IN SH LWR	Front Inner Shell Lower	1 Face Up	ORDER
F IN SH S	Front Inner Shell Side	1 Pair	ORDER
B IN SH UP	Back Inner Shell Upper	1 Face Up	ORDER
B IN SH LWR	Back Inner Shell Lower	1 Face Up	ORDER
B IN SH S	Back Inner Shell Side	1 Pair	ORDER
LBP IN SH UP	Lower Back Protector Inner Shell Upper	1 Face Up	ORDER
LBP IN SH LWR	Lower Back Protector Inner Shell Lower	1 Face Up	ORDER
Polyethylene			
SPC STF	Side Plate Carrier Stiffener	1 Pair	ORDER
SPC PL PK STRAP STF	Side Plate Carrier Pocket Strap Stiff	4	ORDER

ILLUSTRATED LIST OF MANUFACTURED ITEMS INDEX (IOTV GEN II)

Table 2. List of Templates (IOTV Gen II).

Nomenclature	Reference
Templates	
Front and Back Center Flap Strap	ORDER
Front and Back Inner Plate Pocket Strap	ORDER
Front Left Shoulder Strap, Narrow	ORDER
Front Left Shoulder Hook, Long Strap	ORDER
Front Left Shoulder Hook, Short Strap	ORDER
Front Right Shoulder Cover Cable Guide	ORDER
Front Bar Tacks	ORDER
Front Flap Bar Tacks	ORDER
Back Drag Strap	ORDER
Back Upper Release Loop	ORDER
Back Flap Bar Tacks	ORDER
Side Plate Carrier Bar Tacks	APPENDIX
Internal Elastic Band Metal Loop and Slide Assembly	ORDER
Yoke Front and Back Strap, Narrow	ORDER
Yoke Front Strap, Wide	ORDER
Lower Back Protector Strap	ORDER
Groin Protector Strap	ORDER
Cable Assembly Handle	ORDER
Shoulder Attachment Assembly	ORDER
Cable Stop Tab	APPENDIX

END OF WORK PACKAGE

CHAPTER 8

SHIPMENT/MOVEMENT AND STORAGE FOR INTERCEPTOR BODY ARMOR SYSTEM

SUSTAINMENT MAINTENANCE
INTERCEPTOR BODY ARMOR SYSTEM
PREPARATION FOR STORAGE OR SHIPMENT

INITIAL SETUP:

Tools and Special Tools	**Personnel Required**
None required	CIF
Materials/Parts	**References**
None required	WP 0037 AR 700-15

PREPARATION FOR STORAGE

General Storage Requirements

To ensure that serviceability standards of the stored body armor are maintained, every effort will be exerted to adhere to the following general storage requirements:

1. When available, a climate controlled building should be used to store body armor.

2. Body armor will be stored in a dry, well-ventilated location and protected from pilferage, dampness, fire, dirt, insects, rodents, and direct sunlight.

3. Body armor will not be stored in a manner that which would prevent ventilation or interfere with light fixtures, heating vents, fire fighting devices, cooling units, exits, or fire doors.

4. Body armor will not be stored in a damaged, dirty, or damp condition.

5. Body armor will not be stored in direct contact with any building floor or wall. Store using bins, shelves, pallets, racks, or dunnage to provide airspace between the storage area floor and the equipment. If the pre-constructed shelving or similar storage accommodations are not available, locally fabricate storage provisions using suitable lumber or wooden boxes.

6. All available material handling equipment should be used as much as possible in the handling of body armor.

7. Periodic rotation of stock, conversion of available space, proper housekeeping policies, and strict adherence to all safety regulations will be practiced at all times.

General Storage Inspection Requirements

1. General Information. An in-storage inspection is a physical check conducted on a random sample of body armor that are located in storage.

2. Inspection. Inspect to ensure that the body armor is ready for issue.

3. Check that no damage or deterioration has been incurred.

4. Check the adequacy of the storage facilities, efforts taken to control pests and rodents, and protection against unfavorable climatic conditions.

PREPARATION FOR STORAGE – CONTINUED

ESAPI and ESBI Plates

Refer to WP 0037 for storage and shipment information for the ESAPI and ESBI plates.

END OF TASK

PREPARATION FOR SHIPMENT

During shipment, every effort will be made to protect body armor from weather elements, dust, dirt, oil, grease, and acids. Vehicles used to transport body armor will be inspected to ensure the items are protected from the previously cited material damaging conditions.

Body Armor destined for domestic or overseas shipment will be packaged and marked in accordance with AR 700-15.

END OF TASK

END OF WORK PACKAGE

SUSTAINMENT MAINTENANCE

ESAPI, ESBI

PREPARATION FOR STORAGE OR SHIPMENT

INITIAL SETUP:

Materials/Parts

Sleeve, Box (WP 0059, Item 51)
Cardboard, Two Ply (WP 0059, Item 52)
Foam Roll (WP 0059, Item 53)

Personnel Required

CIF

References

DD 361
DA PAM 750-8

PREPARATION FOR STORAGE

If in original packaging, keep ESAPI and ESBI plates in original shipping packing material until they are issued.

1. Stack no more than two tri-wall boxes high in a warehousing/issuing facility.
2. The original packaging consists of ballistic plates packed vertically in a corrugated cardboard box with foam roll between each plate for cushioning. These boxes are then double packed in a larger box for added protection. Reuse original packing material if available.
3. Place foam roll between each stacked plate for added cushioning and load distribution.

PREPARATION FOR STORAGE – CONTINUED

If not in original packing, construct an empty tri-wall box (40” X 48” X 22”, triple-ply cardboard box with plastic pallet base and locking lid. Stack no more than two tri-wall boxes high in a warehousing/issuing facility.

NOTE

Table 1 gives the recommended number of plates that will fit in a box listed by size and orientation.

1. Before packing plates into the tri-wall box, a two-ply cardboard base plate and a layer of the minimum thickness of 1/4" x 24" x 250' foam roll - perforated every 12" foam roll sheet shall be placed in the bottom of the box for additional support of the plates (Figure 1).

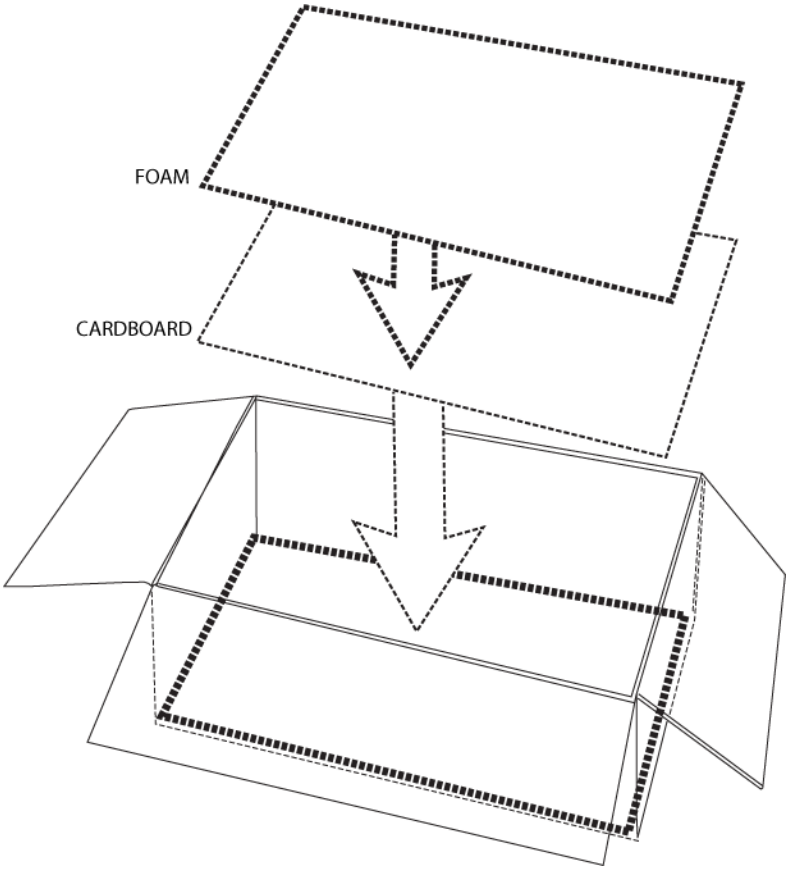


Figure 1. Preparing Box.

PREPARATION FOR STORAGE – CONTINUED

2. Place plates into the boxes on either their short edge (with the non-angled base toward the bottom) or their long edge (with the angled edge on the left) (Figure 2).

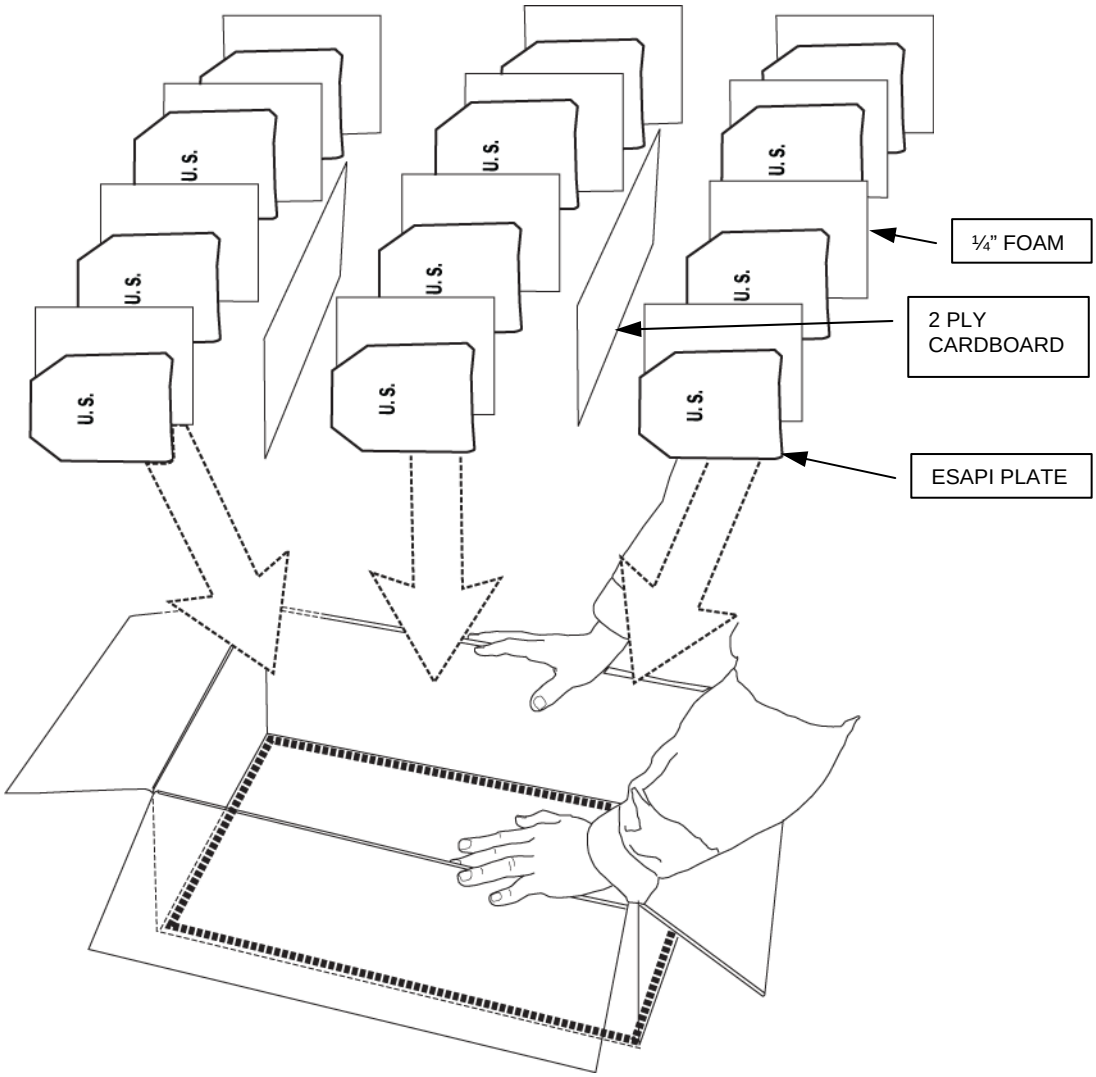


Figure 2. Inserting Plates (ESAPI Plates Stored Sideways Shown).

3. Place a foam roll sheet between each plate.

4. All plates should face same direction.

5. Each row has a two-ply cardboard divider placed in between each row to prevent shifting of the plates during transportation. If additional padding is required to secure the plates, add two-ply cardboard as applicable.

PREPARATION FOR STORAGE – CONTINUED

NOTE

Horizontal ESBI packing configuration and vertical ESAPI packing configuration are shown in Figure 4.

6. Once the plates are packed into rows, an additional layer of single density foam is placed on top and the lid is secured (Figure 3).

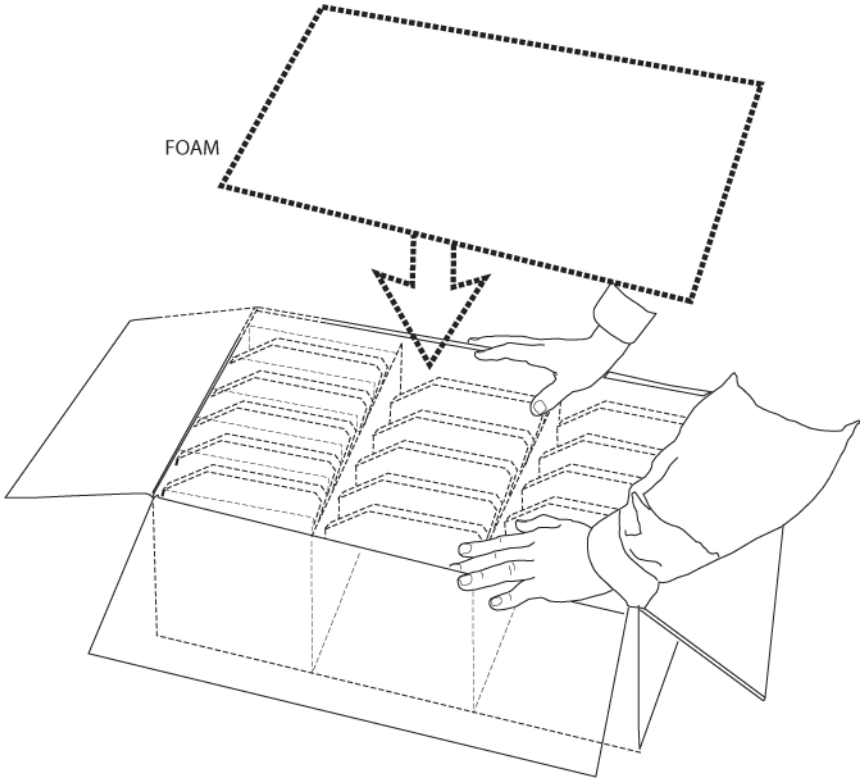
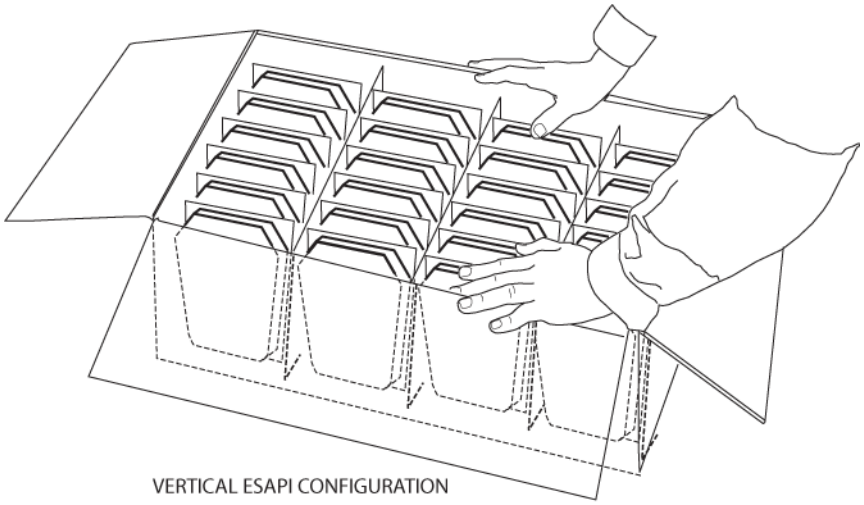


Figure 3. Closing the Box.

PREPARATION FOR STORAGE – CONTINUED



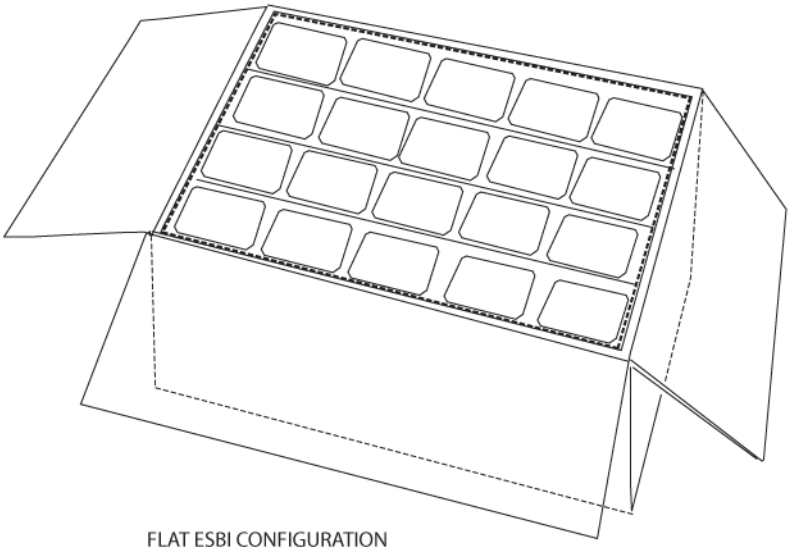


Figure 4. Alternate Packing Configurations.

Table 1. Number of Plates by Size and Orientation.

Size	Total	Rows	# per Row	Orientation
XL	105	3	35	Long Edge
L	105	3	35	Long Edge
M	140	4	35	Short Edge
S	140	4	35	Short Edge
XS	140	4	35	Short Edge
ESBI	250	5	50	Horizontal

END OF TASK

PREPARATION FOR STORAGE – CONTINUED

PREPARATION FOR SHIPMENT

1. Package ESAPI/ESBI plates in the same manner as storage.

2. Band the tri-wall box to support plates during transportation.

END OF TASK

END OF WORK PACKAGE

CHAPTER 9

PARTS INFORMATION
FOR
INTERCEPTOR BODY ARMOR SYSTEM

FIELD AND SUSTAINMENT MAINTENANCE
INTERCEPTOR BODY ARMOR SYSTEM
REPAIR PARTS AND SPECIAL TOOLS LIST (RPSTL)

INTRODUCTION

SCOPE

This RPSTL lists and authorizes spares and repair parts; special tools; special test, measurement, and diagnostic equipment (TMDE); and other special support equipment required for performance of operator, field and sustainment maintenance of the Interceptor Body Armor System. It authorizes the requisitioning, issue, and disposition of spares, repair parts, and special tools as indicated by the source, maintenance, and recoverability (SMR) codes.

GENERAL

In addition to the Introduction work package, this RPSTL is divided into the following work packages.

1. Repair Parts List Work Packages. Work packages containing lists of spares and repair parts authorized by this RPSTL for use in the performance of maintenance. These work packages also include parts which must be removed for replacement of the authorized parts. Parts lists are composed of functional groups in ascending alphanumeric sequence, with the parts in each group listed in ascending figure and item number sequence. Sending units, brackets, filters, and bolts are listed with the component they mount on. Bulk materials are listed by item name in FIG. BULK at the end of the work packages. Repair parts kits are listed at the end of the individual work packages. Repair parts for reparable special tools are also listed in a separate work package. Items listed are shown on the associated illustrations.
2. Special Tools List Work Packages. Work packages containing lists of special tools, special TMDE, and special support equipment authorized by this RPSTL (as indicated by Basis of Issue (BOI) information in the DESCRIPTION AND USABLE ON CODE (UOC) column). Tools that are components of common tool sets and/or Class VII are not listed.
3. Cross-Reference Indexes Work Packages. There are two cross-reference indexes work packages in this RPSTL: the National Stock Number (NSN) Index work package and the Part Number (P/N) Index work package. The National Stock Number Index work package refers you to the figure and item number. The Part Number Index work package refers you to the figure and item number.

EXPLANATION OF COLUMNS IN THE REPAIR PARTS LIST AND SPECIAL TOOLS LIST WORK PACKAGES

ITEM NO. (Column (1)). Indicates the number used to identify items called out in the illustration.

SMR CODE (Column (2)). The SMR code containing supply/requisitioning information, maintenance level authorization criteria, and disposition instruction, as shown in the following breakout. This entry may be subdivided into 4 subentries. One for each service.

Table 1. SMR Code Explanation.

Source Code	Maintenance Code		Recoverability Code
XX	XX		X
1st two positions:	3rd position:	4th position:	5th position:
How to get an item.	Who can install, replace, or use the item.	Who can do complete repair* on the item.	Who determines disposition action on unserviceable items.

*Complete Repair: Maintenance capacity, capability, and authority to perform all corrective maintenance tasks of the "Repair" function in a use/user environment in order to restore serviceability to a failed item.

EXPLANATION OF COLUMNS IN THE REPAIR PARTS LIST AND SPECIAL TOOLS LIST WORK PACKAGES – CONTINUED

Source Code. The source code tells you how you get an item needed for maintenance, repair, or overhaul of an end item/equipment. Explanations of source codes follow:

Source Code	Application/Explanation
PA PB PC PD PE PF PG PH PR PZ	**NOTE** Items coded PC are subject to deterioration. Stock items; use the applicable NSN to requisition/request items with these source codes. They are authorized to the level indicated by the code entered in the 3rd position of the SMR code.
KD KF KB	Items with these codes are not to be requested/requisitioned individually. They are part of a kit which is authorized to the maintenance level indicated in the third position of the SMR code. The complete kit must be requisitioned and applied.
MF-Made at field MH-Made at below depot/sustainment level ML-Made at SRA MD-Made at depot MG-Navy only	Items with these codes are not to be requested/requisitioned individually. They must be made from bulk material which is identified by the part number in the DESCRIPTION AND USABLE ON CODE (UOC) column and listed in the bulk material group work package of the RPSTL. If the item is authorized to you by the third position code of the SMR code, but the source code indicates it is made at higher level, order the item from the higher level of maintenance.
AF-Assembled by field AH-Assembled by below depot/sustainment level AL-Assembled by SRA AD-Assembled by depot AG-Navy only	Items with these codes are not to be requested/requisitioned individually. The parts that make up the assembled item must be requisitioned or fabricated and assembled at the level of maintenance indicated by the source code. If the 3rd position of the SMR code authorizes you to replace the item, but the source code indicates the item is assembled at a higher level, order the item from the higher level of maintenance.
XA	Do not requisition an "XA" coded item. Order the next higher assembly.(Refer to NOTE below.)
XB	If an item is not available from salvage, order it using the CAGEC and part number.
XC	Installation drawings, diagrams, instruction sheets, field service drawings; identified by manufacturer's part number.
XD	Item is not stocked. Order an XD-coded item through normal supply channels using the CAGEC and part number given, if no NSN is available.

EXPLANATION OF COLUMNS IN THE REPAIR PARTS LIST AND SPECIAL TOOLS LIST WORK PACKAGES – CONTINUED

NOTE

Cannibalization or controlled exchange, when authorized, may be used as a source of supply for items with the above source codes except for those items source coded "XA" or those aircraft support items restricted by requirements of AR 750-1.

Maintenance Code. Maintenance codes tell you the level(s) of maintenance authorized to use and repair support items. The maintenance codes are entered in the third and fourth positions of the SMR code as follows:

Third Position. The maintenance code entered in the third position tells you the lowest maintenance level authorized to remove, replace, and use an item. The maintenance code entered in the third position will indicate authorization to the following levels of maintenance:

Maintenance Code	Application/Explanation
O* -	Field (Service) level/AMC maintenance can remove, replace, and use the item.
F -	Field/ASB maintenance can remove, replace, and use the item.
H -	Below Depot Sustainment maintenance can remove, replace, and use the item.
L -	Specialized repair activity/TASMG can remove, replace, and use the item.
G -	Afloat and ashore intermediate maintenance can remove, replace, and use the item (Navy only)
K -	Contractor facility can remove, replace, and use the item
Z -	Item is not authorized to be removed, replace, or used at any maintenance level
D -	Depot can remove, replace, and use the item.

*NOTE - Army may use C in the third position. However, for joint service publications, Army will use O.

Fourth Position. The maintenance code entered in the fourth position tells you whether or not the item is to be repaired and identifies the lowest maintenance level with the capability to do complete repair (perform all authorized repair functions).

NOTE

Some limited repair may be done on the item at a lower level of maintenance, if authorized by the Maintenance Allocation Chart (MAC) and SMR codes.

Maintenance Code	Application/Explanation
O -	Field (Service)/AMC is the lowest level that can do complete repair of the item.
F -	Field/ASB is the lowest level that can do complete repair of the item.
H -	Below Depot Sustainment is the lowest level that can do complete repair of the item.
L -	Specialized repair activity/TASMG is the lowest level that can do complete repair of the item.
D -	Depot is the lowest level that can do complete repair of the item.
G -	Both afloat and ashore intermediate levels are capable of complete repair of item. (Navy only)
K -	Complete repair is done at contractor facility
Z -	Non repairable. No repair is authorized.
B -	No repair is authorized. No parts or special tools are authorized for maintenance of "B" coded item. However, the item may be reconditioned by adjusting, lubricating, etc., at the user level.

EXPLANATION OF COLUMNS IN THE REPAIR PARTS LIST AND SPECIAL TOOLS LIST WORK PACKAGES – CONTINUED

Recoverability Code. Recoverability codes are assigned to items to indicate the disposition action on unserviceable items. The recoverability code is shown in the fifth position of the SMR code as follows:

Recoverability Code	Application/Explanation
Z -	Non repairable item. When unserviceable, condemn and dispose of the item at the level of maintenance shown in the third position of the SMR code.
O -	Reparable item. When uneconomically reparable, condemn and dispose of the item at the unit level.
F -	Reparable item. When uneconomically reparable, condemn and dispose of the item at the direct support level.
H -	Reparable item. When uneconomically reparable, condemn and dispose of the item at the general support level.
D -	Reparable item. When beyond lower level repair capability, return to depot. Condemnation and disposal of item are not authorized below depot level.
L -	Reparable item. Condemnation and disposal not authorized below Specialized Repair Activity (SRA).
A -	Item requires special handling or condemnation procedures because of specific reasons (such as precious metal content, high dollar value, critical material, or hazardous material). Refer to appropriate manuals/directives for specific instructions.
G -	Filed level reparable item. Condemn and dispose at either afloat or ashore intermediate levels. (Navy only)
K -	Reparable item. Condemnation and disposal to be performed at contractor facility

NSN (Column (3)). The NSN for the item is listed in this column.

CAGEC (Column (4)). The Commercial and Government Entity Code (CAGEC) is a five-digit code which is used to identify the manufacturer, distributor, or Government agency/activity that supplies the item.

PART NUMBER (Column (5)). Indicates the primary number used by the manufacturer (individual, company, firm, corporation, or Government activity), which controls the design and characteristics of the item by means of its engineering drawings, specifications, standards, and inspection requirements to identify an item or range of items.

NOTE

When you use an NSN to requisition an item, the item you receive may have a different part number from the number listed.

DESCRIPTION AND USABLE ON CODE (UOC) (Column (6)). This column includes the following information:

1. The federal item name, and when required, a minimum description to identify the item.
2. Part numbers of bulk materials are referenced in this column in the line entry to be manufactured or fabricated.
3. Hardness Critical Item (HCI). A support item that provides the equipment with special protection from electromagnetic pulse (EMP) damage during a nuclear attack.
4. The statement END OF FIGURE appears just below the last item description in column (6) for a given figure in both the repair parts list and special tools list work packages.
   QTY (Column (7)). The QTY (quantity per figure) column indicates the quantity of the item used in the breakout shown on the illustration/figure, which is prepared for a functional group, subfunctional group, or an assembly. A "V" appearing in this column instead of a quantity indicates that the quantity is variable and quantity may change from application to application.

EXPLANATION OF CROSS-REFERENCE INDEXES WORK PACKAGES FORMAT AND COLUMNS

1. National Stock Number (NSN) Index Work Package. NSN's in this index are listed in National Item Identification Number (NIIN) sequence.

STOCK NUMBER Column. This column lists the NSN in NIIN sequence. The NIIN consists of the last nine digits of the NSN. When using this column to locate an item, ignore the first four digits of the NSN. However, the complete NSN should be used when ordering items by stock number. For example, if the NSN is 5385-01-574-1476, the NIIN is 01-574-1476.

FIG. Column. This column lists the number of the figure where the item is identified/located. The figures are in numerical order in the repair parts list and special tools list work packages.

ITEM Column. The item number identifies the item associated with the figure listed in the adjacent FIG. column. This item is also identified by the NSN listed on the same line.

2. Part Number (P/N) Index Work Package. Part numbers in this index are listed in ascending alphanumeric sequence (vertical arrangement of letter and number combinations which places the first letter or digit of each group in order A through Z, followed by the numbers 0 through 9 and each following letter or digit in like order).

PART NUMBER Column. Indicates the part number assigned to the item.

FIG. Column. This column lists the number of the figure where the item is identified/located in the repair parts list and special tools list work packages.

ITEM Column. The item number is the number assigned to the item as it appears in the figure referenced in the adjacent figure number column."

SPECIAL INFORMATION

UOC. The UOC appears in the lower left corner of the Description Column heading. Usable on codes are shown as "UOC:..." in the Description Column (justified left) on the first line under the applicable item/nomenclature. Uncoded items are applicable to all models. Identification of the UOCs used in the RPSTL are:

Code	Used On
AAA	Outer Tactical Vest (OTV)
BBB	Improved Outer Tactical Vest (IOTV)
CCC	Improved Outer Tactical Vest Gen II (IOTV Gen II)

Fabrication Instructions. Bulk materials required to manufacture items are listed in the bulk material functional group of this RPSTL. Part numbers for bulk material are also referenced in the Description Column of the line item entry for the item to be manufactured/fabricated. Detailed fabrication instructions for items source coded to be manufactured or fabricated are found in the applicable maintenance work package.

Index Numbers. Items which have the word BULK in the figure column will have an index number shown in the item number column. This index number is a cross-reference between the NSN / Part Number (P/N) Index work packages and the bulk material list in the repair parts list work package.

Illustrations List. The illustrations in this RPSTL contain field authorized items.
Illustrations published in (enter applicable TM number for the higher maintenance level RPSTL, e.g., for field, below depot sustainment, etc.) that contain field authorized items also appear in this RPSTL.. The tabular list in the repair parts list work package contains only those parts coded "O" in the third position of the SMR code, therefore, there may be a break in the item number sequence.

HOW TO LOCATE REPAIR PARTS

1. When NSNs or Part Numbers Are Not Known.

First. Using the table of contents, determine the assembly group to which the item belongs. This is necessary since figures are prepared for assembly groups and subassembly groups, and lists are divided into the same groups.

Second. Find the figure covering the functional group or the subfunctional group to which the item belongs.

Third. Identify the item on the figure and note the number(s).

Fourth. Look in the repair parts list work packages for the figure and item numbers. The NSNs and part numbers are on the same line as the associated item numbers.

2. When NSN Is Known.

First. If you have the NSN, look in the STOCK NUMBER column of the NSN index work package. The NSN is arranged in NIIN sequence. Note the figure and item number next to the NSN.

Second. Turn to the figure and locate the item number. Verify that the item is the one you are looking for.

3. When Part Number Is Known.

First. If you have the part number and not the NSN, look in the PART NUMBER column of the part number index work package. Identify the figure and item number.

Second. Look up the item on the figure in the applicable repair parts list work package.

END OF WORK PACKAGE

FIELD AND SUSTAINMENT MAINTENANCE
INTERCEPTOR BODY ARMOR SYSTEM
REPAIR PARTS AND SPECIAL TOOLS LIST (RPSTL)

NOTE

The Repair Parts and Special Tools List for the Interceptor Body Armor System will be published in Change 1.

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
					GROUP 01	
					FIG. 1	
						1
					END OF FIGURE	

FIELD AND SUSTAINMENT MAINTENANCE

INTERCEPTOR BODY ARMOR SYSTEM

BULK MATERIALS LIST

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
					GROUP 99 BULK MATERIAL	
					FIG. BULK	
1			3Z8V4	09148-22-21884	Buckle, Slide (Bowed, 2 inch) Source: ITW Nexus, 195 Algonquin Avenue, Des Planes IL 60016 ((847) 375-6709.	EA
2			3Z8V4	08090-22-21884	Buckle, Slide (Steel) Source: ITW Nexus, 195 Algonquin Avenue, Des Planes IL 60016 ((847) 375-6709.	EA
3			0HY43	MIL-C-8061	Cloth, Knit (Nylon) Source: SSM Industries, PO Box 602, Spring City TN 37381 ((423) 365-4048)	YD
4			0HY43	MIL-C--508	Cloth, Oxford (Nylon) Source: SSM Industries, PO Box 602, Spring City TN 37381 ((423) 365-4048)	YD
5			02768	01047-20	D-Ring, Metal (1 inch) Source: ITW Nexus, 195 Algonquin Avenue, Des Planes IL 60016 ((847) 375-6709.	EA
6				MIL-DTL-43734	Fabric (Nylon, 1000 denier)	YD
7				MIL-DTL-43734	Fabric (Nylon, 500 denier)	YD
8			8T804	A-A-55126	Fastener Tape, Hook (Type II, Class 1, 1 inch) Source: Velcro, Inc., USA, 406 Brown Ave., P.O. Box 5218, Manchester, NH 03108 ((800) 225-0180)	YD
9			8T804	A-A-55126	Fastener Tape, Hook (type II, Class 1, 1.5 inch) Source: Velcro, Inc., USA, 406 Brown Ave., P.O. Box 5218, Manchester, NH 03108 ((800) 225-0180)	YD
10			8T804	A-A-55126	Fastener Tape, Hook (Type II, Class 1, 2 inch) Source: Velcro, Inc., USA, 406 Brown Ave., P.O. Box 5218, Manchester, NH 03108 ((800) 225-0180)	YD

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
11			8T804	A-A-55126	Fastener Tape, Hook (Type II, Class 1, 4 inch) Source: Velcro, Inc., USA, 406 Brown Ave., P.O. Box 5218, Manchester, NH 03108 ((800) 225-0180)	YD
12			8T804	A-A-55126	Fastener Tape, Loop (type II, Class 1, 1 inch) Source: Velcro, Inc., USA, 406 Brown Ave., P.O. Box 5218, Manchester, NH 03108 ((800) 225-0180)	YD
13			8T804	A-A-55126	Fastener Tape, Loop (type II, Class 1, 1.5 inch) Source: Velcro, Inc., USA, 406 Brown Ave., P.O. Box 5218, Manchester, NH 03108 ((800) 225-0180)	YD
14			8T804	A-A-55126	Fastener Tape, Loop (type II, Class 1, 2 inch) Source: Velcro, Inc., USA, 406 Brown Ave., P.O. Box 5218, Manchester, NH 03108 ((800) 225-0180)	YD
15			8T804	A-A-55126	Fastener Tape, Loop (Type II, Class 1, 4 inch) Source: Velcro, Inc., USA, 406 Brown Ave., P.O. Box 5218, Manchester, NH 03108 ((800) 225-0180)	YD
16			57771	MIL-G-16491	Grommet (Type III, Class 3) Source: Stimpson, 900 Sylvan Ave., Bayport, NY. 11705-1097 Phone 631-472-2000	EA
17			57771	MIL-G-16491	Grommet and Washer (Type III, Class 3) Source: Stimpson, 900 Sylvan Ave., Bayport, NY. 11705-1097 Phone 631-472-2000	EA
18			3Z8V4	154-0100-5676	Ladderlock (1 inch) Source: ITW Nexus, 195 Algonquin Avenue, Des Planes IL 60016 ((847) 375-6709.	
19			3Z8V4	104-3100	Ladderlock, Trovato (1 inch) Source: ITW Nexus, 195 Algonquin Avenue, Des Planes IL 60016 ((847) 375-6709.	EA
20			3Z8V4	111-2201-5676	Looplock Source: ITW Nexus, 195 Algonquin Avenue, Des Planes IL 60016 ((847) 375-6709.	EA
21			02768	01004-20	Metal Loop (1 inch) Source: ITW Nexus, 195 Algonquin Avenue, Des Planes IL 60016 ((847) 375-6709.	EA

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
22				L-P-378	Polyethylene (.45 thick) Source: Blue Ridge Films, 20307 Unico Road, McKenney VA 23872 ((900) 677-7234	SH
23			3Z8V4	00022-22	Slide (2 inch) Source: ITW Nexus, 195 Algonquin Avenue, Des Planes IL 60016 ((847) 375-6709.	EA
24			57771	MIL-F-10884	Snap Fastener, (Button/Socket) Source: Stimpson, 900 Sylvan Ave., Bayport, NY. 11705-1097 Phone 631-472-2000	EA
25			57771	MIL-F-10884F	Snap Fastener, (Button/Socket) Source: Stimpson, 900 Sylvan Ave., Bayport, NY. 11705-1097 Phone 631-472-2000	EA
26			85810	MIL-T-5038	Tape, Textile (Binding tape 1 inch) Source: Narricot Industries, 931 Noble Street, Suite 801, Anniston AL 36201 ((215) 322-3918)	YD
27			73441	V-T-295	Thread (Nylon, type I or II, Size E) Source: Coats American 4135 South Stream Boulevard, Charlotte NC 28217 ((610) 927-1571)	SP
28			73441	V-T-295	Thread (Nylon, type I or II, Size F) Source: Coats American 4135 South Stream Boulevard, Charlotte NC 28217 ((610) 927-1571)	SP
29			57771	MIL-G-16491	Washer (Type III, Class 3) Source: Stimpson, 900 Sylvan Ave., Bayport, NY. 11705-1097 Phone 631-472-2000	EA
30			1S3D4	MIL-W-5664D	Webbing, Elastic (Nylon 1 inch) Source: K & W Webbing Co. 403 Roosevelt Avenue, Central Falls RI 02863 ((401) 725-4441)	YD
31			1S3D4	MIL-W-5664	Webbing, Elastic (Nylon, 4 inch) Source: K & W Webbing Co. 403 Roosevelt Avenue, Central Falls RI 02863 ((401) 725-4441)	YD
32			85810	A-A-55301	Webbing, Textile (Nylon 1 inch, Class III) Source: Narricot Industries, 931 Noble Street, Suite 801, Anniston AL 36201 ((215) 322-3918)	YD
33			85810	MIL-W-17337	Webbing, Textile (Nylon 2 inch) Source: Narricot Industries, 931 Noble Street, Suite 801, Anniston AL 36201 ((215) 322-3918)	YD

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
34			85810	A-A-55301	Webbing, Textile (Nylon 2 inch, Class III) Source: Narricot Industries, 931 Noble Street, Suite 801, Anniston AL 36201 ((215) 322-3918)	YD
35			85810	MIL-W- 17337	Webbing, Textile (Nylon .75 inch) Source: Narricot Industries, 931 Noble Street, Suite 801, Anniston AL 36201 ((215) 322-3918)	YD
36			85810	MIL-W- 17337	Webbing, Textile (Nylon 1 inch) Source: Narricot Industries, 931 Noble Street, Suite 801, Anniston AL 36201 ((215) 322-3918)	YD
37			85810	MIL-W- 17337	Webbing, Textile (Nylon 1.5 inch) Source: Narricot Industries, 931 Noble Street, Suite 801, Anniston AL 36201 ((215) 322-3918)	YD
38			85810	MIL-W- 17337	Webbing, Textile (Nylon 3 inch) Source: Narricot Industries, 931 Noble Street, Suite 801, Anniston AL 36201 ((215) 322-3918)	YD

END OF FIGURE

FIELD AND SUSTAINMENT MAINTENANCE
INTERCEPTOR BODY ARMOR SYSTEM
NATIONAL STOCK NUMBER INDEX

STOCK NUMBER	FIG.	ITEM

NOTE

The national stock number index will be updated in change 1.

FIELD AND SUSTAINMENT MAINTENANCE
INTERCEPTOR BODY ARMOR SYSTEM
PART NUMBER INDEX

PART NUMBER	FIG.	ITEM
A-A-55126	99	8
A-A-55126	99	9
A-A-55126	99	10
A-A-55126	99	11
A-A-55126	99	12
A-A-55126	99	13
A-A-55126	99	14
A-A-55126	99	15
A-A-55301	99	32
A-A-55301	99	34
L-P-378	99	22
MIL-C--508	99	4
MIL-C-8061	99	3
MIL-DTL-43734	99	6
MIL-DTL-43734	99	7
MIL-F-10884	99	24
MIL-F-10884F	99	25
MIL-G-16491	99	16
MIL-G-16491	99	17
MIL-G-16491	99	29
MIL-T-5038	99	26
MIL-W- 17337	99	35
MIL-W- 17337	99	36
MIL-W- 17337	99	37
MIL-W- 17337	99	38
MIL-W-17337	99	33
MIL-W-5664	99	31
MIL-W-5664D	99	30
V-T-295	99	27
V-T-295	99	28
00022-22	99	23
01004-20	99	21
01047-20	99	5
08090-22-21884	99	2
09148-22-21884	99	1
104-3100	99	19
111-2201-5676	99	20
154-0100-5676	99	18

CHAPTER 10

SUPPORTING INFORMATION
FOR
INTERCEPTOR BODY ARMOR SYSTEM

FIELD AND SUSTAINMENT MAINTENANCE
INTERCEPTOR BODY ARMOR SYSTEM
REFERENCES

SCOPE

This work package lists all field manuals, forms, technical manuals and miscellaneous publications referenced throughout this manual.

DA PAMPHLETS

DA PAM 738-751	Functional Users Manual for The Army Maintenance Management System (TAMMS)
DA PAM 750-8	The Army Maintenance Management System (TAMMS) Users Manual

TECHNICAL MANUALS

TM 10-277	Fitting of Army Uniforms

FIELD MANUALS

FM 21-11	First Aid for Soldiers
FM 3-3	Chemical and Biological Contamination Avoidance
FM 3-5	NBC Decontamination
FM 38-701	Packaging of Materials, Packing

FORMS

DA Form 2028-2	Recommended Changes to Equipment Technical Publications
DA Form 2404	Equipment Inspection & Maintenance Worksheet
SF 361	Transportation Discrepancy Report
SF 362	Report of Packaging and Handling Deficiencies
SF 364	Report of Discrepancy (ROD)
SF 368	Product Quality Deficiency Report (PQDR)

MISCELLANEOUS

AR 700-15	Packaging of Materiel
TB 43-0002-27	Maintenance Expenditure Limits for FSC Groups 72, 83, And 84
CTA 8-100	Army Medical Department Expendable/Durable Items
CTA 50-909	Field and Garrison Furnishings and Equipment
CTA 50-970	Expendable/Durable Items

END OF WORK PACKAGE

FIELD AND SUSTAINMENT MAINTENANCE

INTERCEPTOR BODY ARMOR SYSTEM

MAINTENANCE ALLOCATION CHART (MAC)

MAINTENANCE ALLOCATION CHART (MAC)

INTRODUCTION

The Army Maintenance System MAC

This introduction provides a general explanation of all maintenance and repair functions authorized at the two maintenance levels under the Two-Level Maintenance System concept.

The MAC (immediately following the introduction) designates overall authority and responsibility for the performance of maintenance functions on the identified end item or component. The application of the maintenance functions to the end item or component shall be consistent with the capacities and capabilities of the designated maintenance levels, which are shown on the MAC in column (4) as:

Field – includes two subcolumns, Crew (C) and Maintainer (F).

Sustainment – includes two subcolumns, Below Depot (H) and Depot (D).

The maintenance to be performed at field and sustainment levels is described as follows:

1. Crew maintenance. The responsibility of a using organization to perform maintenance on its assigned equipment. It normally consists of inspecting, servicing, lubricating, adjusting, and replacing parts, minor assemblies, and subassemblies. The replace function for this level of maintenance is indicated by the letter “C” in the third position of the SMR code. A “C” appearing in the fourth position of the SMR code indicates complete repair is possible at the crew maintenance level.

2. Maintainer maintenance. Maintenance accomplished on a component, accessory, assembly, subassembly, plug-in unit, or other portion either on the system or after it is removed. The replace function for this level of maintenance is indicated by the letter “F” appearing in the third position of the SMR code. An “F” appearing in the fourth position of the SMR code indicates complete repair is possible at the field maintenance level. Items are returned to the user after maintenance is performed at this level.

3. Below depot sustainment. Maintenance accomplished on a component, accessory, assembly, subassembly, plug-in unit, or other portion either on the system or after it is removed. The replace function for this level of maintenance is indicated by the letter "H" appearing in the third position of the SMR code. An "H" appearing in the fourth position of the SMR code indicates complete repair is possible at the below depot sustainment maintenance level. Items are returned to the supply system after maintenance is performed at this level.

4. Depot sustainment . Maintenance accomplished on a component, accessory, assembly, subassembly, plug-in unit, or other portion either on the system or after it is removed. The replace function for this level of maintenance is indicated by the letter "D" or "K" appearing in the third position of the SMR code. Depot sustainment maintenance can be performed by either depot personnel or contractor personnel. A "D" or "K" appearing in the fourth position of the SMR code indicates complete repair is possible at the depot sustainment maintenance level. Items are returned to the supply systems after maintenance is performed at this level.

The tools and test equipment requirements (immediately following the MAC) list the tools and test equipment (both special tools and common tool sets) required for each maintenance function as referenced from the MAC.

The remarks (immediately following the tools and test equipment requirements) contain supplemental instructions and explanatory notes for a particular maintenance function.

Maintenance Functions

Maintenance functions are limited to and defined as follows:

1. Inspect. To determine the serviceability of an item by comparing its physical, mechanical, and/or electrical characteristics with established standards through examination (e.g., by sight, sound, or feel). This includes scheduled inspection and gagings and evaluation of cannon tubes.

2. Test. To verify serviceability by measuring the mechanical, pneumatic, hydraulic, or electrical characteristics of an item and comparing those characteristics with prescribed standards on a scheduled basis, i.e., load testing of lift devices and hydrostatic testing of pressure hoses.

3. Service. Operations required periodically to keep an item in proper operating condition, e.g., to clean (includes decontaminate, when required), to preserve, to drain, to paint, or to replenish fuel, lubricants, chemical fluids, or gases. This includes scheduled exercising and purging of recoil mechanisms. The following are examples of service functions:

    a. Unpack. To remove from packing box for service or when required for the performance of maintenance operations.

    b. Repack. To return item to packing box after service and other maintenance operations.

    c. Clean. To rid the item of contamination.

    d. Touch up. To spot paint scratched or blistered surfaces.

    e. Mark. To restore obliterated identification.

4. Adjust. To maintain or regulate, within prescribed limits, by bringing into proper position, or by setting the operating characteristics to specified parameters.

5. Align. To adjust specified variable elements of an item to bring about optimum or desired performance

6. Calibrate. To determine and cause corrections to be made or to be adjusted on instruments of test, measuring, and diagnostic equipment used in precision measurement. Consists of comparisons of two instruments, one of which is a certified standard of known accuracy, to detect and adjust any discrepancy in the accuracy of the instrument being compared.

7. Remove/Install. To remove and install the same item when required to perform service or other maintenance functions. Install may be the act of emplacing, seating, or fixing into position a spare, repair part, or module (component or assembly) in a manner to allow the proper functioning of an equipment or system.

8. Paint (Ammunition Only). To prepare and spray color coats of paint so that the ammunition can be identified and protected. The color indicating primary use is applied, preferably, to the entire exterior surface as the background color of the item. Other markings are to be repainted as original so as to retain proper ammunition identification.

9. Replace. To remove an unserviceable item and install a serviceable counterpart in its place. “Replace” is authorized by the MAC and assigned maintenance level is shown as the third position code of the Source, Maintenance and Recoverability (SMR) code.

10. Repair. The application of maintenance services, including fault location/troubleshooting, removal/installation, disassembly/assembly procedures and maintenance actions to identify troubles and restore serviceability to an item by correcting specific damage, fault, malfunction, or failure in a part, subassembly, module (component or assembly), end item, or system.

NOTE

The following definitions are applicable to the “repair” maintenance function:

Services. Inspect, test, service, adjust, align, calibrate, and/or replace.

Fault location/troubleshooting. The process of investigating and detecting the cause of equipment malfunctioning; the act of isolating a fault within a system or Unit Under Test (UUT).

Disassembly/assembly. The step-by-step breakdown (taking apart) of a spare/functional group coded item to the level of its least component, that is assigned an SMR code for the level of maintenance under consideration (i.e., identified as maintenance significant).

Actions. Welding, grinding, riveting, straightening, facing, machining, and/or resurfacing.

11. Overhaul. That maintenance effort (service/action) prescribed to restore an item to a completely serviceable/operational condition as required by maintenance standards in appropriate technical publications. Overhaul is normally the highest degree of maintenance performed by the Army. Overhaul does not normally return an item to like new condition.

12. Rebuild. Consists of those services/actions necessary for the restoration of unserviceable equipment to a like new condition in accordance with original manufacturing standards. Rebuild is the highest degree of material maintenance applied to Army equipment. The rebuild operation includes the act of returning to zero those age measurements (e.g., hours/miles) considered in classifying Army equipment/components.

Explanation of Columns in the MAC

Column (1) Group Number. Column (1) lists Functional Group Code (FGC) numbers, the purpose of which is to identify maintenance significant components, assemblies, subassemblies, and modules with the Next Higher Assembly (NHA).

Column (2) Component/Assembly. Column (2) contains the item names of components, assemblies, subassemblies, and modules for which maintenance is authorized.

Column (3) Maintenance Function. Column (3) lists the functions to be performed on the item listed in column (2). (For a detailed explanation of these functions refer to “Maintenance Functions” outlined above).

Column (4) Maintenance Level. Column (4) specifies each level of maintenance authorized to perform each function listed in column (3), by indicating work time required (expressed as manhours in whole hours or decimals) in the appropriate subcolumn. This work time figure represents the active time required to perform that maintenance function at the indicated level of maintenance. If the number or complexity of the tasks within the listed maintenance function varies at different maintenance levels, appropriate work time figures are to be shown for each level. The work time figure represents the average time required to restore an item (assembly, subassembly, component, module, end item, or system) to a serviceable condition under typical field operating conditions. This time includes preparation time (including any necessary disassembly/assembly time), troubleshooting/fault location time, and quality assurance time in addition to the time required to perform the specific tasks identified for the maintenance functions authorized in the MAC. The symbol designations for the various maintenance levels are as follows:

<u>Field:</u>

C Crew maintenance
F Maintainer maintenance

<u>Sustainment:</u>

H Below depot maintenance
D Depot maintenance

NOTE

The “L” maintenance level is not included in column (4) of the MAC. Functions to this level of maintenance are identified by work time figure in the “H” column of column (4), and an associated reference code is used in the REMARKS column (6). This code is keyed to the remarks and the SRA complete repair application is explained there.

Column (5) Tools and Equipment Reference Code. Column (5) specifies, by code, those common tool sets (not individual tools), common Test, Measurement and Diagnostic Equipment (TMDE), and special tools, special TMDE, and special support equipment required to perform the designated function. Codes are keyed to the entries in the tools and test equipment table.

Column (6) Remarks Code. When applicable, this column contains a letter code, in alphabetic order, which is keyed to the remarks table entries.

Explanation of Columns in the Tools and Test Equipment Requirements

Column (1) – Tool or Test Equipment Reference Code. The tool or test equipment reference code correlates with a code used in column (5) of the MAC.

Column (2) – Maintenance Level. The lowest level of maintenance authorized to use the tool or test equipment.

Column (3) – Nomenclature. Name or identification of the tool or test equipment.

Column (4) – National Stock Number (NSN). The NSN of the tool or test equipment.

Column (5) – Tool Number. The manufacturer's part number.

Explanation of Columns in Remarks

Column (1) – Remarks Code. The code recorded in column (6) of the MAC.

Column (2) – Remarks. This column lists information pertinent to the maintenance function being performed as indicated in the MAC.

FIELD AND SUSTAINMENT MAINTENANCE
INTERCEPTOR BODY ARMOR SYSTEM
MAINTENANCE ALLOCATION CHART (MAC)

Table 1. MAC for Interceptor Body Armor System.

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) TOOLS AND EQUIPMENT REFERENCE CODE	(6) REMARKS CODE
			FIELD		SUSTAINMENT			
			CREW	MAINTAINER	BELOW DEPOT	DEPOT		
			C	F	H	D		
00	**SYSTEM, BODY ARMOR, INTERCEPTOR**							
01	**BODY ARMOR, INTERCEPTOR, OUTER TACTICAL VEST (OTV) CONFIGURATION**							
0101	BODY ARMOR, OTV (COMPLETE)	INSPECT			0.2			
010101	BASE VEST ASSEMBLY	SERVICE INSPECT						
01010101	BASE VEST CARRIER (OUTERSHELL)	SERVICE INSPECT						
01010102	BALLISTIC INSERT SET	SERVICE INSPECT			0.1 0.1			A, B
0101010201	BALLISTIC INSERT, BACK	SERVICE INSPECT			0.1 0.1			A, B
0101010202	BALLISTIC INSERT, RIGHT FRONT	SERVICE INSPECT			0.1 0.1			A, B
0101010203	BALLISTIC INSERT, LEFT FRONT	SERVICE INSPECT			0.1 0.1			A, B
01010103	YOKE AND COLLAR ASSEMBLY	INSPECT						
0101010301	YOKE AND COLLAR CARRIER (OUTERSHELL)	SERVICE INSPECT						
0101010302	BALLISTIC INSERT, COLLAR SET							
010101030201	BALLISTIC INSERT, COLLAR, RIGHT	SERVICE INSPECT						A, B
010101030202	BALLISTIC INSERT, COLLAR, LEFT	SERVICE INSPECT						A, B
01010104	GROIN PROTECTOR ASSEMBLY							
0101010401	GROIN PROTECTOR CARRIER (OUTERSHELL)							
0101010402	INSERT, BALLISTIC, GROIN PROTECTOR	SERVICE INSPECT						A, B
01010105	THROAT PROTECTOR ASSEMBLY							
0101010501	THROAT PROTECTOR CARRIER (OUTERSHELL)							

Table 1. MAC for Interceptor Body Armor System.

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) TOOLS AND EQUIPMENT REFERENCE CODE	(6) REMARKS CODE
			FIELD		SUSTAINMENT			
			CREW	MAINTAINER	BELOW DEPOT	DEPOT		
			C	F	H	D		
0101010502	BALLISTIC INSERT, THROAT PROTECTOR	SERVICE INSPECT						A, B
0102	ESBI CARRIER ASSEMBLY	SERVICE INSPECT						
010201	ESBI CARRIER OUTERSHELL							
010202	ESBI CARRIER, BALLISTIC PANEL	SERVICE INSPECT						A, B
0103	DELTOID & AXILLARY PROTECTOR ASSEMBLY	SERVICE INSPECT						
010301	DELTOID PROTECTOR ASSEMBLY							
01030101	DELTOID PROTECTOR OUTERSHELL							
01030102	BALLISTIC PANEL, DELTOID PROTECTOR	SERVICE INSPECT						A, B
010302	AXILLARY PROTECTOR ASSEMBLY							
01030201	AXILLARY PROTECTOR, OUTERSHELL							
01030202	AXILLARY PROTECTOR, BALLISTIC PANEL	SERVICE INSPECT						A, B
0104	SMALL ARMS PROTECTIVE INSERT (SAPI)	SERVICE INSPECT						A, B C
	ENHANCED SMALL ARMS PROTECTIVE INSERT (ESAPI)	SERVICE INSPECT						A, B C
0105	ENHANCED SIDE BALLISTIC INSERT (ESBI) (PLATE)	SERVICE INSPECT						A, B C
02	**BODY ARMOR, INTERCEPTOR, IMPROVED OUTER TACTICAL VEST (IOTV) CONFIGURATION**							
0201	BODY ARMOR, INTERCEPTOR, IOTV (COMPLETE)	SERVICE INSPECT						
020101	BASE VEST ASSEMBLY							
02010101	BASE VEST ASSEMBLY, FRONT							
0201010101	CARRIER,FRONT	REPAIR REPAIR		0.1	 1.0			
0201010102	INSERT, BALLISTIC, FRONT,	SERVICE INSPECT						

Table 1. MAC for Interceptor Body Armor System.

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) TOOLS AND EQUIPMENT REFERENCE CODE	(6) REMARKS CODE
			FIELD		SUSTAINMENT			
			CREW	MAINTAINER	BELOW DEPOT	DEPOT		
			C	F	H	D		
02010102	BASE VEST ASSEMBLY BACK							
0201010201	CARRIER, BACK							
0201010202	INSERT BALLISTIC, BACK							
02010103	CARRIER, SIDE PLATE, RIGHT							
02010104	CARRIER, SIDE, PLATE, LEFT							
02010105	WAISTBAND, RIGHT							
02010106	WAISTBAND, LEFT							
02010107	CABLE, ASSEMBLY							
020102	YOKE/COLLAR ASSEMBLY							
02010201	CARRIER, YOKE COLLAR ASSEMBLY							
0201020101	INSERT, BALLISTIC, RIGHT COLLAR							
0201020102	INSERT, BALLISTIC, LEFT, COLLAR							
020103	YOKE ASSEMBLY, FRONT							
020104	LOWER BACK PROTECTOR ASSEMBLY							
02010401	LOWER BACK PROTECTOR, OUTERSHELL							
02010402	INSERT, LOWER BACK PROTECTOR							
0202	GROIN PROTECTOR ASSEMBLY	SERVICE INSPECT						
020201	GROIN PROTECTOR CARRIER (OUTERSHELL)							
020202	INSERT, BALLISTIC, GROIN PROTECTOR							
0203	DELTOID PROTECTOR ASSEMBLY	SERVICE INSPECT						
020301	DELTOID PROTECTOR OUTERSHELL							
020302	BALLISTIC PANEL, DELTOID PROTECTOR							
0204	SMALL ARMS PROTECTIVE INSERT (SAPI)	SERVICE INSPECT						

Table 1. MAC for Interceptor Body Armor System.

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) TOOLS AND EQUIPMENT REFERENCE CODE	(6) REMARKS CODE
			FIELD		SUSTAINMENT			
			CREW	MAINTAINER	BELOW DEPOT	DEPOT		
			C	F	H	D		
	ENHANCED SMALL ARMS PROTECTIVE INSERT (ESAPI)	SERVICE INSPECT						
0205	ENHANCED SIDE BALLISTIC INSERT (ESBI) (PLATE)	SERVICE INSPECT						
03	**BODY ARMOR, INTERCEPTOR, IOTV GEN II CONFIGURATION**							
0301	BODY ARMOR, IOTV GEN II (COMPLETE)	SERVICE INSPECT						
030101	BASE VEST ASSEMBLY							
03010101	BASE VEST ASSEMBLY, FRONT							
0301010101	CARRIER, FRONT							
0301010102	INSERT, BALLISTIC, FRONT							
03010102	BASE VEST ASSEMBLY BACK							
0301010201	CARRIER, BACK							
0301010202	INSERT BALLISTIC, BACK							
03010103	UNIVERSAL EXTERNAL SIDE PLATE CARRIER							
03010104	UNIVERSAL EXTERNAL SIDE PLATE POUCH							
03010105	WAISTBAND, RIGHT							
03010106	WAISTBAND, LEFT							
03010107	CABLE, ASSEMBLY							
030102	YOKE/COLLAR ASSEMBLY							
030103	YOKE ASSEMBLY, FRONT							
030104	LOWER BACK PROTECTOR ASSEMBLY							
03010401	LOWER BACK PROTECTOR, OUTERSHELL							
03010402	INSERT LOWER BACK PROTECTOR							
030106	DELTOID PROTECTOR ASSEMBLY							
03010601	DELTOID PROTECTOR OUTERSHELL							

Table 1. MAC for Interceptor Body Armor System.

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL				(5) TOOLS AND EQUIPMENT REFERENCE CODE	(6) REMARKS CODE
			FIELD		SUSTAINMENT			
			CREW	MAINTAINER	BELOW DEPOT	DEPOT		
			C	F	H	D		
03010602	BALLISTIC PANEL, DELTOID PROTECTOR							
030107	GROIN PROTECTOR ASSEMBLY							
03010701	GROIN PROTECTOR CARRIER (OUTERSHELL)							
03010702	INSERT, BALLISTIC, GROIN PROTECTOR							
0302	SMALL ARMS PROTECTIVE INSERT (SAPI)	SERVICE INSPECT						
	ENHANCED SMALL ARMS PROTECTIVE INSERT (ESAPI)	SERVICE INSPECT						
0303	ENHANCED SIDE BALLISTIC INSERT (ESBI) (PLATE)	SERVICE INSPECT						

Table 2. Tools and Test Equipment for Interceptor Body Armor System.

TOOLS OR TEST EQUIPMENT	MAINTENANCE LEVEL	NOMENCLATURE	NATIONAL STOCK NUMBER	TOOL NUMBER
1	F	Tool Kit, General Mechanic's: Automotive (GMTK)	5180-01-483-0249	SC 5180-95-B47
2	F	Tool Set, SATS, Base	4910-01-490-6453	SC 4910-95-A81

Table 3. Remarks for Interceptor Body Armor System.

REMARK CODE	REMARKS
A	Service consists of cleaning.
B	Service consists of marking.
C	Inspect consists of visual inspection. Hard armor protective inserts also have a NDTE inspection requirement. Follow operational SOP and guidance for NDTE inspection frequency.

END OF WORK PACKAGE

FIELD AND SUSTAINMENT MAINTENANCE
INTERCEPTOR BODY ARMOR SYSTEM
EXPENDABLE AND DURABLE ITEMS LIST

INTRODUCTION

Scope

This work package lists expendable and durable items that you will need to operate and maintain the Interceptor Body Armor System. 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.

Explanations of Columns in 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 (WP 0098, Item 5)).

Column (2) Level. This column includes the lowest level of maintenance that requires the listed item (*C=Crew, F=Maintainer*).

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, F		Cardboard, Two Ply	EA
2	C, F		Foam Roll	EA
3	C, F		Keeper, Webbing	EA
4	C, F		Lanadol® Aktiv® Detergent	BX
5	C, F		Lanadol® Avant® Detergent	BX
6	C, F		Laundry ID Tags or Wash-resistant Bar Code Label (human readable)	BX
7	C, F	7520-00-973-1059	Marker, Permanent, Black G003 (04457)	BX
8	C, F		Mild Detergent or Soap	BX
9	C, F		Nylon Fabric, MIL DTL 43734, 500 Denier	YD
10	C, F		Nylon Fabric, MIL DTL 43734,1000 Denier	YD
11	C, F	7520-01-060-5820	Pen, Ball Point (83421)	BX
12	C, F	7510-00-264-4612	Pencil, Marking Aid, Yellow, A-A-87	BX
13	C, F		Perforated Laundry Bag	EA
14	C, F		Plastic Bag for Storing Ballistic Inserts	BX

Table 1. Expendable and Durable Items List – Continued.

(1) Item No.	(2) Level	(3) National Stock Number (NSN)	(4) Item Name, Description, Part Number/(CAGEC)	(5) U/I
15	C, F		Sleeve, Box	EA
16	C, F		Ventilated Plastic Bag for Storing Cleaned IOTV Components	BX

END OF WORK PACKAGE

FIELD AND SERVICE MAINTENANCE
INTERCEPTOR BODY ARMOR SYSTEM
TOOL IDENTIFICATION LIST

INTRODUCTION

Scope

This work package lists all common tools and supplements and special tools/fixtures needed to maintain the Interceptor Body Armor System.

Explanation of Columns in the Tool Identification List

Column (1) Item No. This number is assigned to the entry in the list and is referenced in the initial setup to identify the item (e.g., “Extractor (WP 0090, Item 32)”).

Column (2) Item Name. This column lists the item by noun nomenclature and other descriptive features (e.g., “Gage, belt tension”).

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

Column (4) Part Number/(CAGEC). Indicates the primary number used by the manufacturer (individual, company, firm, corporation, or Government activity) which controls the design and characteristics of the item by means of its engineering drawings, specifications, standards, and inspection requirements to identify an item or range of items. The manufacturer’s Commercial and Government Entity Code (CAGEC) is also included.

Column (5) Reference. This column identifies the authorizing supply catalog or RPSTL for items listed in this work package.

Table 1. Tool Identification List.

(1) Item No.	(2) Item Name	(3) National Stock Number (NSN)	(4) Part Number/ (CAGEC)	(5) Reference
1	Brush, Scrub	7920-00-282-2470	7920-00-282-2470	TM 10-8470-208-24&P
2	Dryer, Wascomat® Model TD75 RMC or equivalent	Local Purchase		TM 10-8470-208-24&P
3	Heated Blade Cutter	Local Purchase	25793-2RMC5	TM 10-8470-208-24&P
4	Pliers	5120-00-756-1156	B107.20M	TM 10-8470-208-24&P
5	Press, Grommet and Eyelet, Hand Operated	5120-00-880-0619	M370	TM 10-8470-208-24&P
6	Punch and Die, Grommet inserting, No 00	5210-00-357-5753	216-00	TM 10-8470-208-24&P
7	Punch and Die, Grommet inserting, Size 0	5120-00-221-1146	217-00	TM 10-8470-208-24&P
8	Ruler, Measuring	7510-00-173-4897	93287	TM 10-8470-208-24&P
9	Screwdriver, Flat-tip, (1/4-inch)	5120-00-596-8653	B107.15	TM 10-8470-208-24&P

Table 1. Tool Identification List – Continued.

(1) Item No.	(2) Item Name	(3) National Stock Number (NSN)	(4) Part Number/ (CAGEC)	(5) Reference
10	Sewing Machine, Double Needle Binding	3530-00-892-4636	00-S-256/2	TM 10-8470-208-24&P
11	Sewing Machine, Industrial (Bar Tack)	Local Purchase		TM 10-8470-208-24&P
12	Sewing Machine, Industrial (Darning)	3530-01-177-8589	207(120/60/1)	TM 10-8470-208-24&P
13	Sewing Machine, Industrial (Light Duty)	3530-01-177-8590	00-S-00256/13	TM 10-8470-208-24&P
14	Shears, Tailors, 12 Inch	5110-00-233-6370		TM 10-8470-208-24&P
15	Stitch Removal Tool	Local Purchase		TM 10-8470-208-24&P
16	Temperature Measuring Instrument (70 °F – 200 °F capability, 1 °F accuracy)	Local Purchase		TM 10-8470-208-24&P
17	Textile Fabric Moisture Analyzer (0% – 15% moisture capability, 1% accuracy)	Local Purchase		TM 10-8470-208-24&P
18	Washer: High Extract (300 G), 65-lb (dry) capacity, solid mount computer-controlled wet clean system, Wascomat® Model EXSM-230C or equivalent	Local Purchase		TM 10-8470-208-24&P

END OF WORK PACKAGE

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: TACOMLCMC.DAForm2028@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.

RECOMMENDED CHANGES TO PUBLICATIONS AND BLANK FORMS For use of this form, see AR 25-30; the proponent agency is ODISC4.	Use Part II *(reverse)* for Repair Parts and Special Tool Lists (RPSTL) and Supply Catalogs/Supply Manuals (SC/SM).	DATE 21 October 2003

TO: *(Forward to proponent of publication or form) (Include ZIP Code)* US ARMY TACOM LIFE CYCLE MANAGEMENT COMMAND ATTN: AMSTA-LC-SECT 15 KANSAS ST NATICK, MA 01760-5052	**FROM:** *(Activity and location) (Include ZIP Code)* *PFC JANE DOE* *Co A 3RD Engineer Br.* *Ft Leonard Wood, MO 63108*

PART I – ALL PUBLICATIONS (EXCEPT RPSTL AND SC/SM) AND BLANK FORMS

PUBLICATION/FORM NUMBER	DATE	TITLE
TM 10-1670-296-23&P	30 October 2002	Unit Manual for Ancillary Equipment for Low Velocity Air Drop Systems

ITEM NO.	PAGE NO.	PARA-GRAPH	LINE NO. *	FIGURE NO.	TABLE NO.	RECOMMENDED CHANGES AND REASON *(Provide exact wording of recommended changes, if possible).*
	0036 00-2				1	*In Table 1, Sewing Machine Code Symbols, the second sewing machine code symbol should be MDZZ not MD22* *Change the manual to show Sewing Machine, Industrial: Zig-Zag; 308 stitch; medium-duty; NSN 3530-01-181-1421 as a MDZZ code symbol.*

**Reference to line numbers within the paragraph or subparagraph.*

TYPED NAME, GRADE OR TITLE	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION	SIGNATURE
Jane Doe, PFC	(508) 233-4141 DSN 256-4141	Jane Doe *Jane Doe*

DA FORM 2028, FEB 74 REPLACES DA FORM 2028, 1 DEC 68, WHICH WILL BE USED. USAPPC V3.00

TO: (*Forward direct to addressee listed in publication*)	**FROM:** (*Activity and location*) (*Include ZIP Code*)	**DATE**
US ARMY TACOM LIFE CYCLE MANAGEMENT COMMAND ATTN: AMSTA-LC-SECT 15 KANSAS ST NATICK, MA 01760-5052	*PFC JANE DOE* *Co A 3RD Engineer Br.* *Ft Leonard Wood, MO 63108*	21 October 2003

PART II – REPAIR PARTS AND SPECIAL TOOL LISTS AND SUPPLY CATALOGS/SUPPLY MANUALS

PUBLICATION NUMBER	DATE	TITLE
TM 10-1670-296-23&P	30 October 2002	Unit Manual for Ancillary Equipment for Low Velocity Air Drop Systems

PAGE NO.	COLM NO.	LINE NO.	NATIONAL STOCK NUMBER	REFERENCE NO.	FIGURE NO.	ITEM NO.	TOTAL NO. OF MAJOR ITEMS SUPPORTED	RECOMMENDED ACTION
0066 00-1					4			*Callout 16 in figure 4 is pointed to a D-Ring. In the Repair Part List key for Figure 4, item 16 is called a Snap Hook. Please correct one or the other.*

PART III – REMARKS (*Any general remarks or recommendations, or suggestions for improvement of publications and blank forms. Additional blank sheets may be used if more space is needed.*)

TYPED NAME, GRADE OR TITLE	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION	SIGNATURE

RECOMMENDED CHANGES TO PUBLICATIONS AND BLANK FORMS For use of this form, see AR 25-30; the proponent agency is ODISC4.	Use Part II *(reverse)* for Repair Parts and Special Tool Lists (RPSTL) and Supply Catalogs/Supply Manuals (SC/SM).	DATE

TO: *(Forward to proponent of publication or form) (Include ZIP Code)* US ARMY TACOM LIFE CYCLE MANAGEMENT COMMAND ATTN: AMSTA-LC-LMPP/TECH PUBS 1 Rock Island Arsenal ROCK ISLAND, IL 61299-7630	**FROM:** *(Activity and location) (Include ZIP Code)*

PART I – ALL PUBLICATIONS (EXCEPT RPSTL AND SC/SM) AND BLANK FORMS

PUBLICATION/FORM NUMBER	DATE	TITLE
TM 10-8470-208-24&P	21 April 2010	Field and Sustainment Maintenance Manual Including Repair Parts and Special Tools Lists for Interceptor Body Armor System

ITEM NO.	PAGE NO.	PARA-GRAPH	LINE NO. *	FIGURE NO.	TABLE NO.	RECOMMENDED CHANGES AND REASON *(Provide exact wording of recommended changes, if possible).*

**Reference to line numbers within the paragraph or subparagraph.*

TYPED NAME, GRADE OR TITLE	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION	SIGNATURE

TO: *(Forward to proponent of publication or form) (Include ZIP Code)*	FROM: (*Activity and location) (Include ZIP Code)*	DATE
US ARMY TACOM LIFE CYCLE MANAGEMENT COMMAND ATTN: AMSTA-LC-LMPP/TECH PUBS 1 Rock Island Arsenal ROCK ISLAND, IL 61299-7630		

PART II – REPAIR PARTS AND SPECIAL TOOL LISTS AND SUPPLY CATALOGS/SUPPLY MANUALS

PUBLICATION NUMBER	DATE	TITLE
TM 10-8470-208-24&P	21 April 2010	Field and Sustainment Maintenance Manual Including Repair Parts and Special Tools Lists for Interceptor Body Armor System

PAGE NO.	COLM NO.	LINE NO.	NATIONAL STOCK NUMBER	REFERENCE NO.	FIGURE NO.	ITEM NO.	TOTAL NO. OF MAJOR ITEMS SUPPORTED	RECOMMENDED ACTION

PART III – REMARKS (*Any general remarks or recommendations, or suggestions for improvement of publications and blank forms. Additional blank sheets may be used if more space is needed.)*

TYPED NAME, GRADE OR TITLE	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION	SIGNATURE

RECOMMENDED CHANGES TO PUBLICATIONS AND BLANK FORMS For use of this form, see AR 25-30; the proponent agency is ODISC4.	Use Part II *(reverse)* for Repair Parts and Special Tool Lists (RPSTL) and Supply Catalogs/Supply Manuals (SC/SM).	DATE

TO: *(Forward to proponent of publication or form) (Include ZIP Code)* US ARMY TACOM LIFE CYCLE MANAGEMENT COMMAND ATTN: AMSTA-LC-LMPP/TECH PUBS 1 Rock Island Arsenal ROCK ISLAND, IL 61299-7630	**FROM:** *(Activity and location) (Include ZIP Code)*

PART I – ALL PUBLICATIONS (EXCEPT RPSTL AND SC/SM) AND BLANK FORMS

PUBLICATION/FORM NUMBER	DATE	TITLE
TM 10-8470-208-24&P	21 April 2010	Field and Sustainment Maintenance Manual Including Repair Parts and Special Tools Lists for Interceptor Body Armor System

ITEM NO.	PAGE NO.	PARA-GRAPH	LINE NO. *	FIGURE NO.	TABLE NO.	RECOMMENDED CHANGES AND REASON *(Provide exact wording of recommended changes, if possible).*

**Reference to line numbers within the paragraph or subparagraph.*

TYPED NAME, GRADE OR TITLE	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION	SIGNATURE

DA FORM 2028, FEB 74 REPLACES DA FORM 2028, 1 DEC 68, WHICH WILL BE USED. USAPPC V3.00

TO: *(Forward to proponent of publication or form) (Include ZIP Code)*	**FROM:** (*Activity and location) (Include ZIP Code)*	**DATE**
US ARMY TACOM LIFE CYCLE MANAGEMENT COMMAND ATTN: AMSTA-LC-LMPP/TECH PUBS 1 Rock Island Arsenal ROCK ISLAND, IL 61299-7630		

PART II – REPAIR PARTS AND SPECIAL TOOL LISTS AND SUPPLY CATALOGS/SUPPLY MANUALS

PUBLICATION NUMBER	DATE	TITLE
TM 10-8470-208-24&P	21 April 2010	Field and Sustainment Maintenance Manual Including Repair Parts and Special Tools Lists for Interceptor Body Armor System

PAGE NO.	COLM NO.	LINE NO.	NATIONAL STOCK NUMBER	REFERENCE NO.	FIGURE NO.	ITEM NO.	TOTAL NO. OF MAJOR ITEMS SUPPORTED	RECOMMENDED ACTION

PART III – REMARKS (*Any general remarks or recommendations, or suggestions for improvement of publications and blank forms. Additional blank sheets may be used if more space is needed.)*

TYPED NAME, GRADE OR TITLE	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION	SIGNATURE

By Order of the Secretary of the Army:

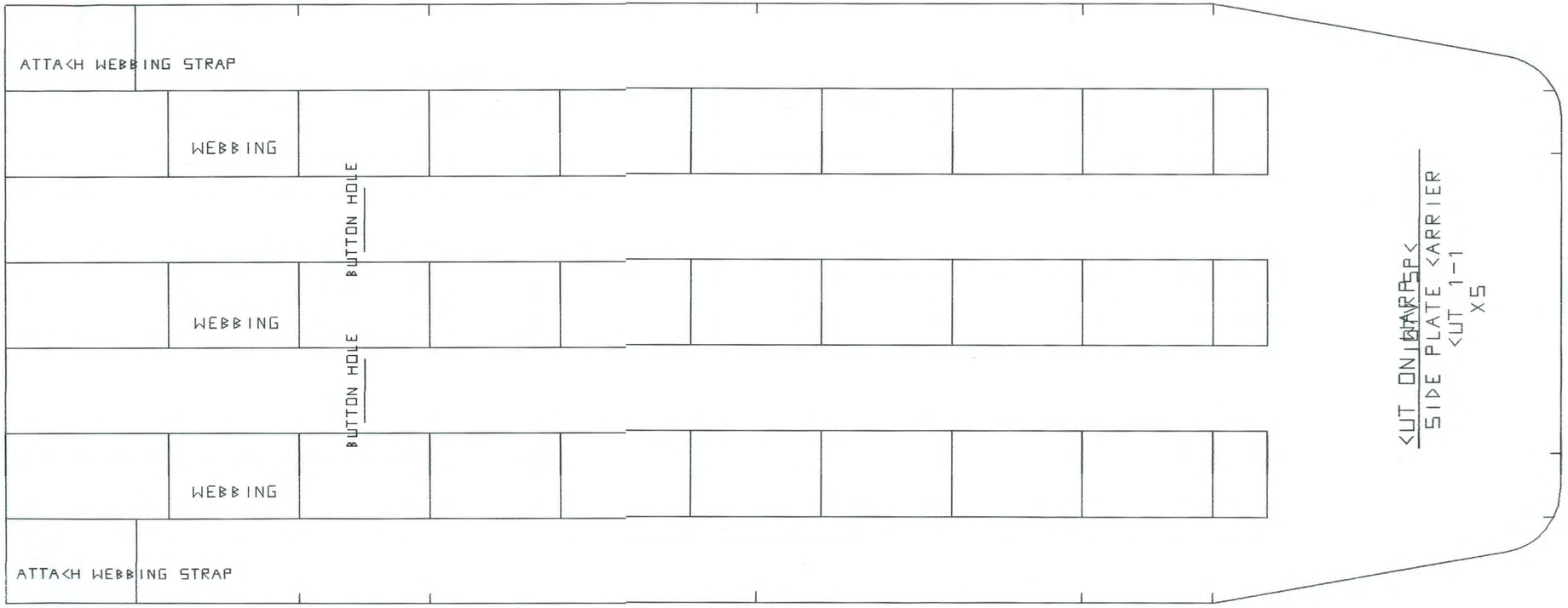
GEORGE W. CASEY, JR.
General, United States Army
Chief of Staff

Official:

JOYCE E. MORROW
Administrative Assistant to the
Secretary of the Army
1009711

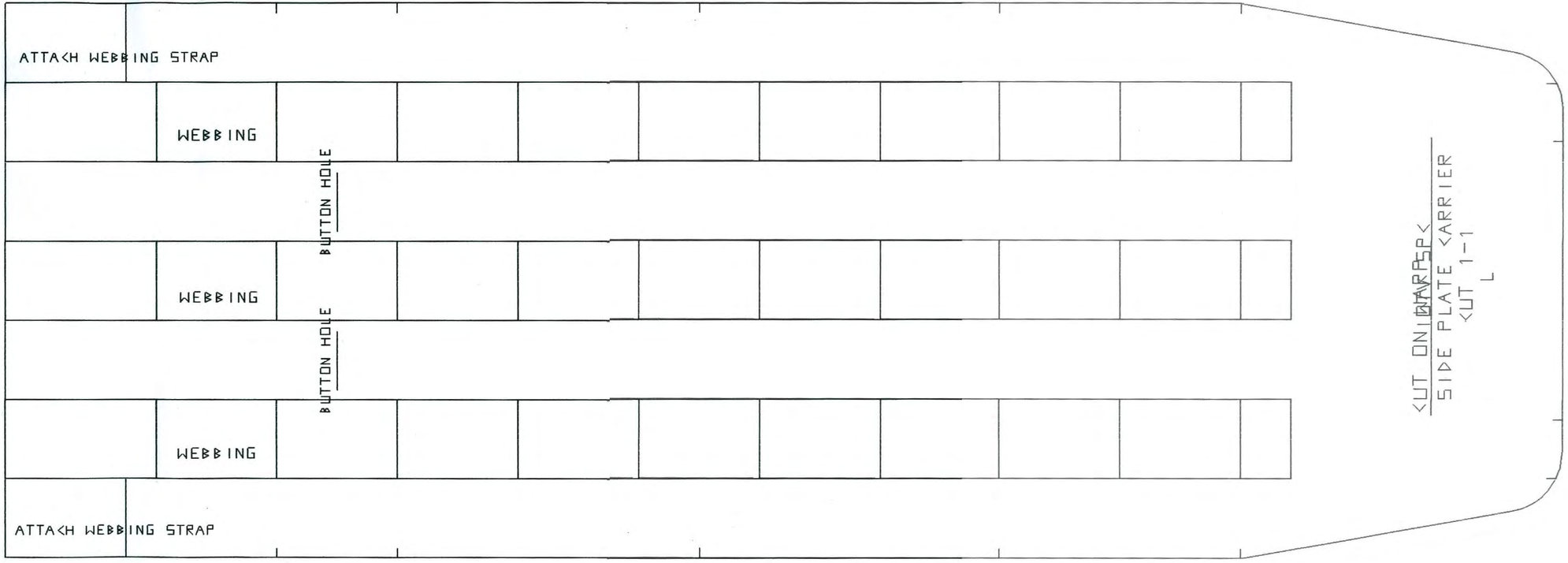
DISTRIBUTION:

To be distributed in accordance with initial distribution number (IDN) 314095 requirements for TM 10-8470-208-24&P.



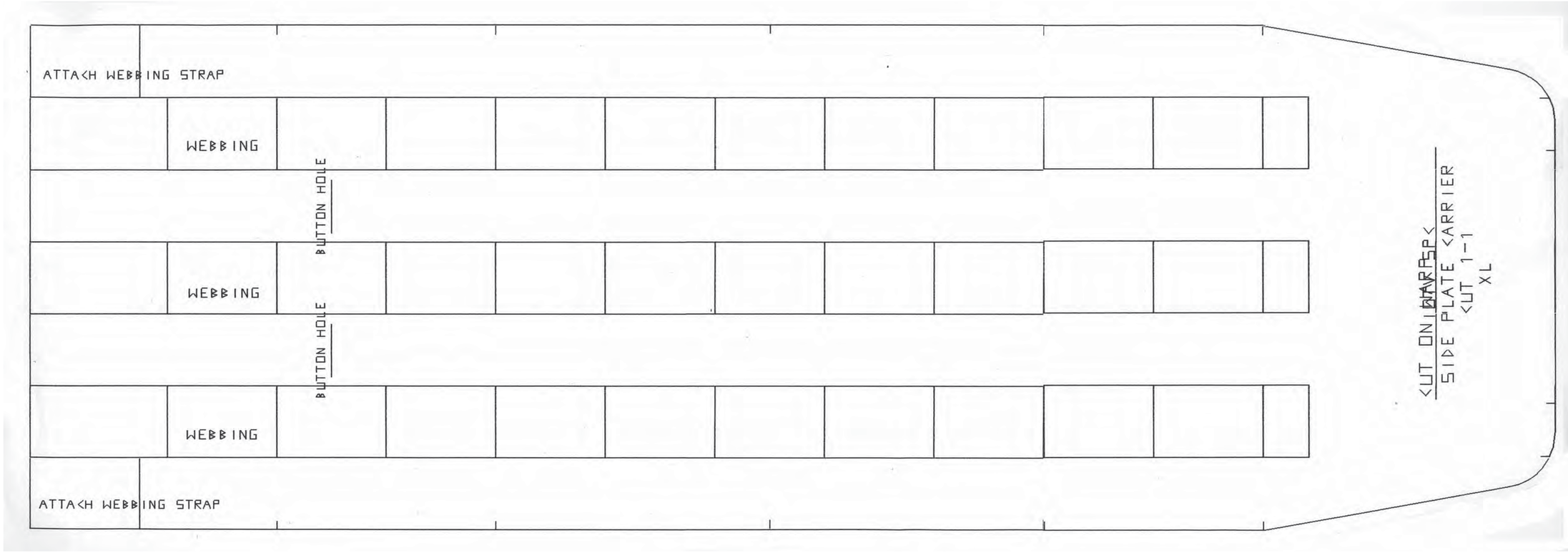
FO 1. Pattern Piece SPC Size XS-S.

FP-1/2 blank

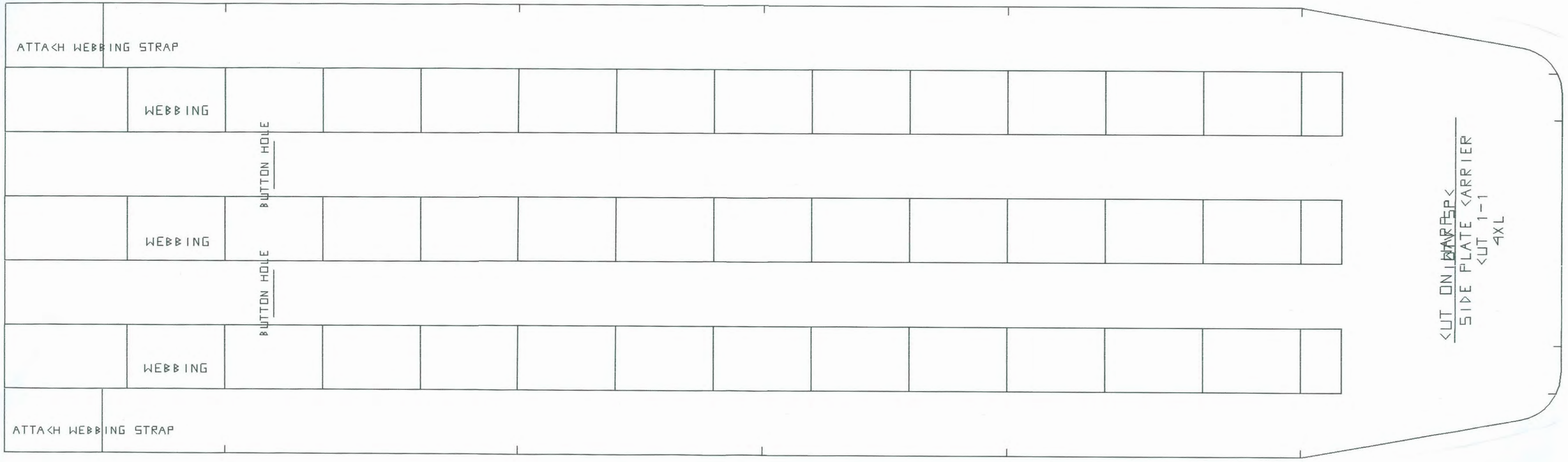


FO 2. Pattern Piece SPC Size M--L.

FP-3/4 blank

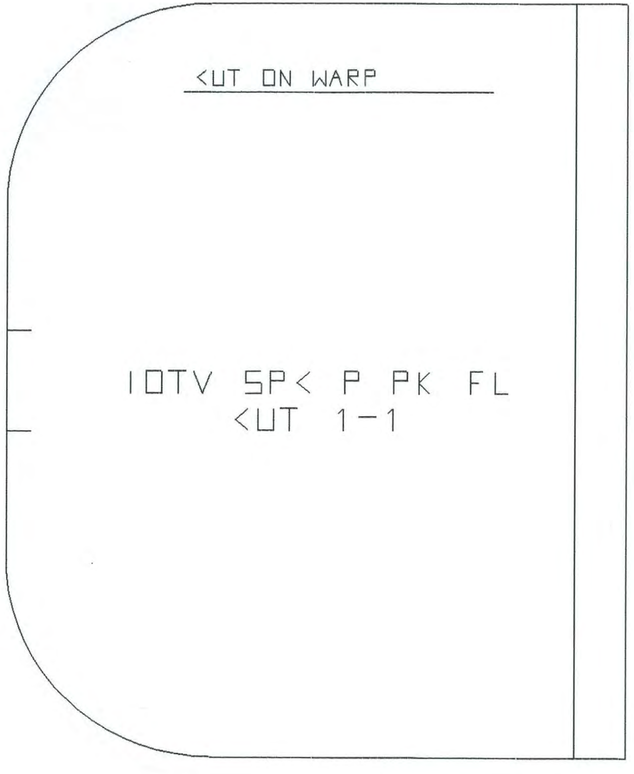


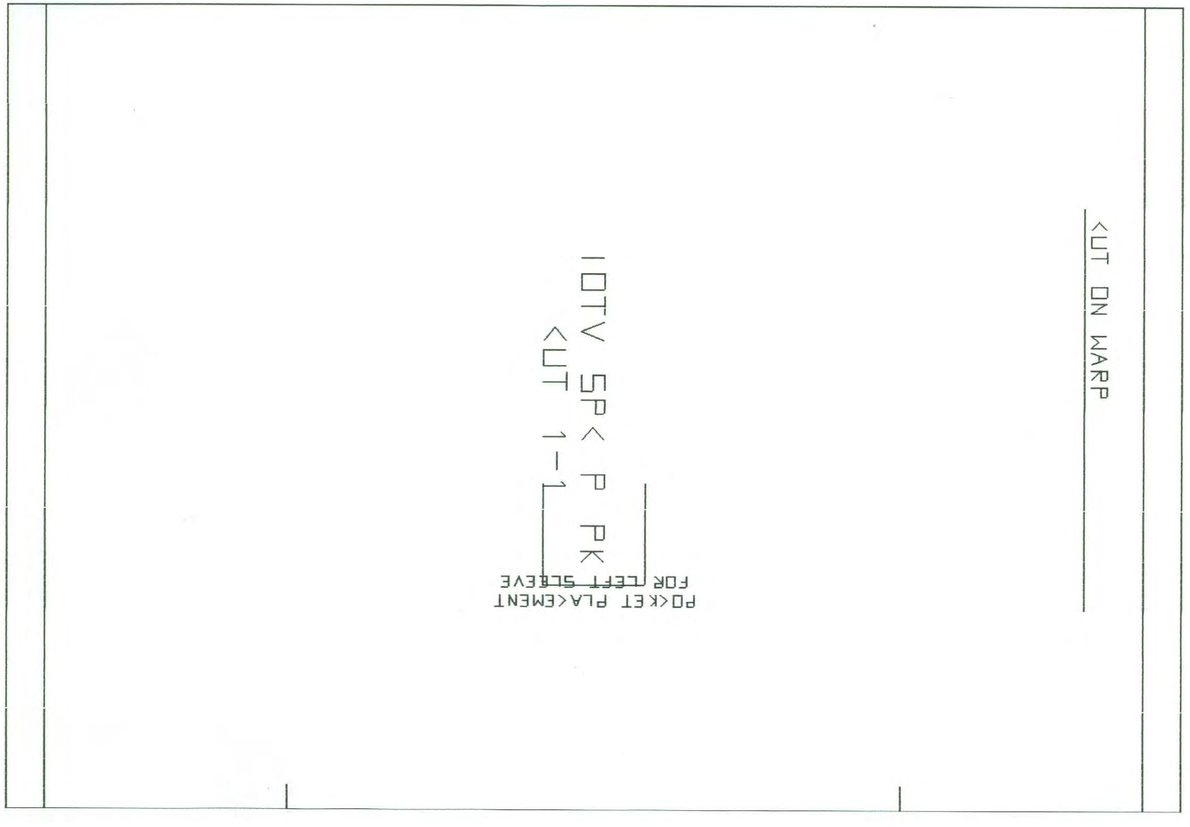
FO 3. Pattern Piece SPC Size XL--2XL.



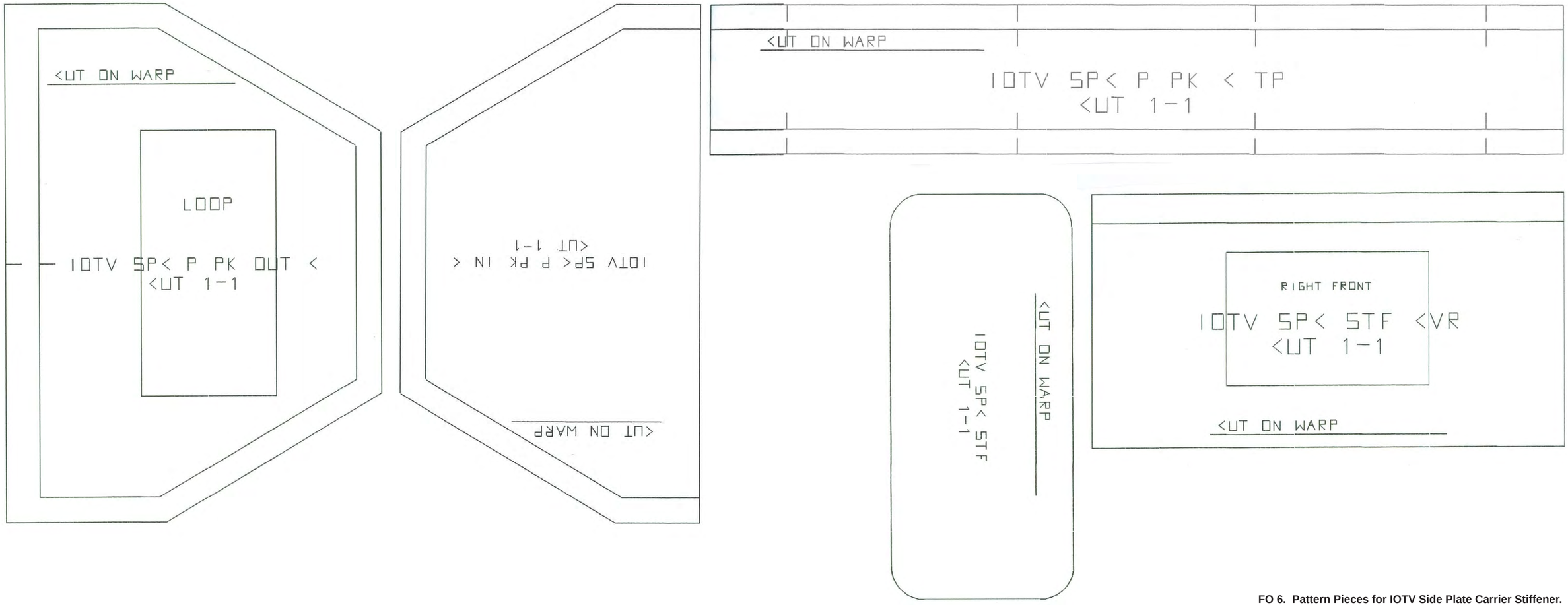
FO 4. Pattern Piece SPC Size 3XL--4XL.

FP-7/8 blank





FO 5. Pattern Pieces for IOTV Side Plate Carrier Plate Pocket.



FO 6. Pattern Pieces for IOTV Side Plate Carrier Stiffener.

The Metric System and Equivalents

Linear Measure

1 centimeter = 10 millimeters = .39 inch
1 decimeter = 10 centimeters = 3.94 inches
1 meter = 10 decimeters = 39.37 inches
1 dekameter = 10 meters = 3 2.8 feet
1 hectometer = 10 dekameters = 328.08 feet
1 kilometer = 10 hectometers = 3,280.8 feet

Liquid Measure

1 centiliter = 10 milliliters = .34 fl. ounce
1 deciliter = 10 centiliters = 3.38 fl. ounces
1 liter = 10 deciliters = 33.81 fl. ounces
1 dekaliter = 10 liters = 2.64 gallons
1 hectoliter = 10 dekaliters = 26.42 gallons
1 kiloliter = 10 hectoliters = 264.18 gallons

Weights

1 centigram = 10 milligrams = .15 grain
1 decigrarn = 10 centigrams = 1.54 grains
1 gram = 10 decigrams = .035 ounce
1 dekagram = 10 grams = .35 ounce
1 hectogram = 10 dekagrams = 3.52 ounces
1 kilogram = 10 hectograms = 2.2 pounds
1 quintal = 100 kilograms = 220.46 pounds
1 metric ton = 10 quintals = 1.1 short tons

Square Measure

1 sq. centimeter = 100 sq. millimeters = .15 5 sq. inch
1 sq. decimeter =100 sq. centimeters = 15.5 sq. inches
1 sq. meter (centare) = 100 sq. decimeters = 10.76 sq. feet
1 sq. dekameter (are) = 100 sq. meters = 1,076.4 sq. feet
1 sq. hectometer (hectare) = 100 sq. dekameters = 2.47 acres
1 sq. kilometer = 100 sq. hectometers = .386 sq. mile

Cubic Measure

1 cu. centimeter = 1000 cu. millimeters = .06 cu. inch
1 cu. decimeter = 1000 cu. centimeters = 61.02 cu. inches
1 cu. meter = 1000 cu. decimeters = 35.31 feet

Approximate Conversion Factors

To change	*To*	*Multiply by*	*To change*	*To*	*Multiply by*
inches	centimeters	2.540	ounce-inches	newton-meters	.007062
feet	meters	.305	centimeters	inches	.394
yards	meters	.914	meters	feet	3.280
miles	kilometers	1.609	meters	yards	1.094
square inches	square centimeters	6.451	kilometers	miles	.621
square feet	square meters	.093	square centimeters	square inches	.155
square yards	square meters	.836	square meters	square feet	10.764
square miles	square kilometers	2.590	square meters	square yards	1.196
acres	square hectometers	.405	square kilometers	square miles	.386
cubic feet	cubic meters	.028	square hectometers	acres	2.471
cubic yards	cubic meters	.765	cubic meters	cubic feet	35.315
fluid ounces	milliliters	29.573	cubic meters	cubic yards	1.308
pints	liters	.473	milliliters	fluid ounces	.034
quarts	liters	.946	liters	pints	2.113
gallons	liters	3.785	liters	quarts	1.057
ounces	grams	28.349	liters	gallons	.264
pounds	kilograms	.454	grams	ounces	.035
short tons	metric tons	.907	kilograms	pounds	2.205
pound-feet	newton-meters	1.356	metric tons	short tons	1.102
pound-inches	newton-meters	.11296			

Temperature (Exact)

°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C

PIN: 086159-000