*TM 10-8465-236-24&P

TECHNICAL MANUAL

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

MODULAR LIGHTWEIGHT LOAD-CARRYING EQUIPMENT (MOLLE) II (NSN 8465-01-525-0578) (EIC: YCH)

***This manual supersedes TM 10-8465-236-24&P, 16 September 2010, including all changes.**

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

HEADQUARTERS, DEPARTMENT OF THE ARMY

15 MARCH 2014

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.

FIRST AID DATA

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

EXPLANATION OF SAFETY WARNING ICONS

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

EYE PROTECTION - Person with goggles shows that the material will injure the eyes.

WARNINGS DESCRIPTION

WARNING

Sewing machine needles can break with great force. Serious injury can result from flying metal pieces coming in contact with eyes, if proper safety precautions are not observed.

WARNING

Eye protection should be worn when operating a sewing machine. Failure to wear eye protection can lead to injury to eye(s).

LIST OF EFFECTIVE PAGES/WORK PACKAGES

NOTE: This manual supersedes TM 10-8465-236-24&P dated 16 September 2010. Zero in the "Change No." column indicates an original page or work package.

Date of issue for the original manual is:

Original 15 MARCH 2014

TOTAL NUMBER OF PAGES FOR FRONT AND REAR MATTER IS 30 AND TOTAL NUMBER OF WORK PACKAGES IS 43, CONSISTING OF THE FOLLOWING:

Page/WP No.	Change No.	Page/WP No.	Change No.
Front Cover	0	WP 0032 (8 pgs)	0
Blank	0	WP 0033 (16 pgs)	0
Warning Summary	0	WP 0034 (6 pgs)	0
i-xii	0	Chp 5 title page	0
Chp 1 title page	0	Blank	0
Blank	0	WP 0035 (6 pgs)	0
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WP 0002 (18 pgs)	0	WP 0037 (6 pgs)	0
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WP 0004 (2 pgs)	0	Blank	0
WP 0005 (4 pgs)	0	WP 0040 (2 pgs)	0
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WP 0025 (6 pgs)	0		
WP 0026 (4 pgs)	0		
WP 0027 (8 pgs)	0		
WP 0028 (10 pgs)	0		
WP 0029 (4 pgs)	0		
WP 0030 (4 pgs)	0		
WP 0031 (4 pgs)	0		

HEADQUARTERS,
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 15 MARCH 2014

TECHNICAL MANUAL

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

MODULAR LIGHTWEIGHT LOAD-CARRYING EQUIPMENT (MOLLE) II (NSN 8465-01-525-0578) (EIC: YCH)

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this publication. If you find any errors, or if you would like to recommend any improvements to the procedures in this publication, please let us know. The preferred method is to submit your DA Form 2028 (Recommended Changes to Publications and Blank Forms) through the Internet on the TACOM Unique Logistics Support Applications (TULSA) Web site. The Internet address is https://tulsa.tacom.army.mil. Access to all applications requires CAC authentication, and you must complete the Access Request form the first time you use it. The DA Form 2028 is located under the TULSA Applications on the left-hand navigation bar. Fill out the form and click on SUBMIT. Using this form on the TULSA Web site will enable us to respond more quickly to your comments and to better manage the DA Form 2028 program. You may also mail, e-mail, or fax your comments or DA Form 2028 directly to the U.S. Army TACOM Life Cycle Management Command. The postal mail address is U.S. Army TACOM Life Cycle Management Command, ATTN: AMSTA-LCL-MPP/TECH PUBS, MS 727, 6501 E. 11 Mile Road, Warren, MI 48397-5000. The e-mail address is TACOMLCMC.DAForm2028@us.army.mil. The fax number is DSN 786-1856 or Commercial (586) 282-1856. A reply will be furnished to you.

*This manual supersedes TM 10-8465-236-24&P, 16 September 2010, including all changes.

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

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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 Distribution Center DOL-W 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).

Instructions for the Unit Publications Clerk

Obtain DA Form 12-R 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.

ORGANIZATION OF THIS MANUAL

FRONT MATTER — Front matter consists of front cover, warning summary, title block, table of contents, and “How to Use This Manual” page.

CHAPTER 1 — GENERAL INFORMATION, EQUIPMENT DESCRIPTION, AND THEORY OF OPERATION. Chapter 1 contains general information, equipment description and data, as well as theory of operation.

CHAPTER 2 — PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS). Chapter 2 contains preventive maintenance checks and services information.

CHAPTER 3 — FIELD MAINTENANCE INSTRUCTIONS. Chapter 3 contains maintenance procedures authorized at the field level that include repair and replace.

CHAPTER 4 — SUSTAINMENT MAINTENANCE INSTRUCTIONS. Chapter 4 contains maintenance authorized at the sustainment level that includes service, inspect, repair, and replace.

CHAPTER 5 — PARTS INFORMATION. Chapter 6 contains the Repair Parts and Special Tools List (RPSTL), the National Stock Number Index, and the Parts Number Index.

CHAPTER 6 — SUPPORTING INFORMATION. Chapter 7 contains the Maintenance Allocation Chart (MAC) and the Expendable and Durable Items List.

REAR MATTER — Rear matter consists of the DA Form 2028, authentication page, and back cover.

Manual Organization and Page Numbering System

The Manual is divided into seven 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-ZZ where XXXX is the work package number (e.g. 0010 is work package 10) and YY is reserved to permit unlimited expansion of the TM to incorporate new configuration data without affecting the WP sequence numbers already assigned, and to permit adding one or more WPs between any two existing WPs during any revision cycle. ZZ represents the number of the page within that work package. A page number such as 0010 00-1/2 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 contained within each chapter and the Work Package Sequence Number where it can be found.

Example: If the reader were looking for general descriptions of MOLLE II components, the Table of Contents indicates the information can be found in Chapter 1. Scanning down the listings for Chapter 1, “Equipment Description and Data” information can be found in WP 0002 00 (i.e. Work Package 2).

There is not a Glossary at the back of the Manual.

CHAPTER 1

GENERAL INFORMATION, EQUIPMENT DESCRIPTION, AND THEORY OF OPERATION FOR MODULAR LIGHTWEIGHT LOAD-CARRYING EQUIPMENT (MOLLE) II

FIELD AND SUSTAINMENT MAINTENANCE
MODULAR LIGHTWEIGHT LOAD-CARRYING EQUIPMENT (MOLLE) II
GENERAL INFORMATION

SCOPE

Type of Manual

This technical manual provides Field Maintenance instructions for Modular Lightweight Load-Carrying Equipment (MOLLE) II.

Equipment Name

The equipment name is Modular Lightweight Load-Carrying Equipment (MOLLE) II.

Purpose of Equipment

The MOLLE II is an integrated, modular load bearing system designed to have different configurations that allow soldiers to tailor their equipment to meet specific mission needs.

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) User's Manual; DA PAM 738-751, Functional User's Manual for The Army Maintenance Management System – Aviation (TAMMS-A), or AR 700-138, Army Logistics Readiness and Sustainability.

REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR)

If your MOLLE II needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us why you do not like the design or performance. If you have Internet access, the easiest and fastest way to report problems or suggestions is to follow the instructions and links below:

For ALL non-Aviation/Missile Warranty, EIR and PQDRs, submit through the Web Product Quality Deficiency Reporting (PQDR) site. The Web PQDR Web site is:
https://www.pdrep.csd.disa.mil/pdrep_files/report_tools/pqdr.htm

New accounts can be established at the following address:
https://www.pdrep.csd.disa.mil/pdrep_files/accessforms/useraccess.htm
You may also submit your information using an SF 368 (Product Quality Deficiency Report). You can send your SF 368 using e-mail, regular mail, or fax using the addresses/fax numbers specified in (DA PAM 750-8, The Army Maintenance Management System (TAMMS) User's Manual, or DA PAM 738-751, Functional User's Manual for The Army Maintenance Management System – Aviation (TAMMS-A). 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.

While corrosion is typically associated with rusting of metals, it can also include deterioration of other materials, such as rubber and plastic. Unusual cracking, softening, swelling, or breaking of these materials may be a corrosion problem.

If a corrosion problem is identified, it can be reported using Standard Form SF 368, Product Quality Deficiency Report. Use of keywords such as "corrosion," "rust," "deterioration," or "cracking" will ensure that the information is identified as a CPC problem.

The form should be submitted to the address specified in DA PAM 750-8, The Army Maintenance Management System (TAMMS) User's Manual.

DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE

Not applicable to the MOLLE II system.

PREPARATION FOR STORAGE AND SHIPMENT

The MOLLE II is shipped in sealed plastic. Do not store the MOLLE II in any medium that could trap moisture and cause degradation of the equipment.

NOMENCLATURE CROSS-REFERENCE LIST

Table 1. Nomenclature Cross-Reference List.

Common Name	Official Nomenclature
Large Rucksack	Large Field Pack (in legacy systems called the Main Pack)
Medium Rucksack	Medium Field Pack
MOLLE	MOLLE II
Large Pack Frame	MOLLE II Large Pack Frame
Medium Pack Frame	MOLLE II Medium Pack Frame

LIST OF ACRONYMS AND ABBREVIATIONS

Table 2. List of Acronyms and Abbreviations.

Acronym/Abbreviation	Meaning
AAL	Additional Authorized List (AAL)
ALICE	All Purpose Lightweight Individual Carrying Equipment
APD	Army Publishing Directorate (APD)
AR	Army Regulation
BII	Basic Issue Items
CBRN	Chemical, Biological, Radiological and Nuclear
CIF	Central Issue Facility
COEI	Components of End Items
CPC	Corrosion
DA	Department of the Army
DOL-W	Director of Logistics-Washington
EIR	Equipment Improvement Recommendations
ETLBV	Enhanced Tactical Load-Bearing Vest
FLC	Fighting Load Carrier
FM	Field Manual
LBV	Load Bearing Vest
LIN	Line Item Number
MOLLE	Modular Lightweight Load-Carrying Equipment
MBITR	Multiband Inter-/Intra-Team Radio
MVP	MOLLE Vehicle Pane
NBC	Nuclear, Biological, and Chemical
NO	Number
PAM	Pamphlet
PMCS	Preventative Maintenance Checks and Services
PQDR	Product Quality Deficiency Report
PVS	Portable Visual Search (Night Vision Goggles)
SAW	Squad Automatic Weapon
SF	Standard Form
TAMMS	The Army Maintenance Management System
TAP	Tactical Assault Panel
TDR	Transportation Discrepancy Report
TM	Technical Manual
UV	Ultra Violet
WCA	Warranty Claim Action
WP	Work Package

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.

END OF WORK PACKAGE

FIELD AND SUSTAINMENT MAINTENANCE
MODULAR LIGHTWEIGHT LOAD-CARRYING EQUIPMENT (MOLLE) II
EQUIPMENT DESCRIPTION AND DATA

EQUIPMENT CHARACTERISTICS, CAPABILITIES AND FEATURES

MOLLE II is an integrated, modular load-carrying system designed to enhance the capability and lethality of the modern Soldier. MOLLE II is designed to have different configurations that allow Soldiers to tailor their equipment to meet specific mission needs.

The MOLLE II system is configured from the following items: Large Field Pack with an external frame and webbing to accommodate added components; Medium Field Pack with an external frame and webbing to accommodate added components; the Fighting Load Carrier (FLC) with webbing; Tactical Assault Pack (TAP), with harness and webbing and pouches; Waist Pack; Assault Pack; compatible pouches and pockets; Hydration System; and additional items to assist in meeting mission requirements.

The MOLLE II is made from water-repellant fabrics and composites that are military-specified.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS

Rifleman Set

The Rifleman Set is the basic issue set of MOLLE II gear. The Rifleman Set with Tactical Assault Panel (TAP) consists of the TAP with harness and adapter webs and buckles. The Rifleman Set with Fighting Load Carrier (FLC) consists of FLC, general canteen pouch, hand grenade pouch, M4 two-magazine pouch, M4 Three-magazine pouch, an assault pack, a waist pack, an entrenching tool carrier, bandoleer ammunition pouches, a flash bang grenade pouch, and a hydration system (Hydramax or Camelbak Storm®).

Fighting Load Carrier.

The FLC is a modular vest that allows commanders to tailor the load to meet mission needs without unnecessary pouches and gear (Figure 1). It is one size fits all, and it may be worn over body armor. The MOLLE II pockets can be placed directly on Interceptor Body Armor for certain missions; however, when the pockets are placed directly on the armor, it limits the ability to take the fighting load off without exposing oneself to ballistic threats.

The FLC is designed to reduce heat buildup on the back with a minimum area of coverage of the H-Harness design. The wide, 31/2-inch shoulder straps of the FLC help distribute the load without the need for excessive padding that can hinder mobility and sighting a weapon.

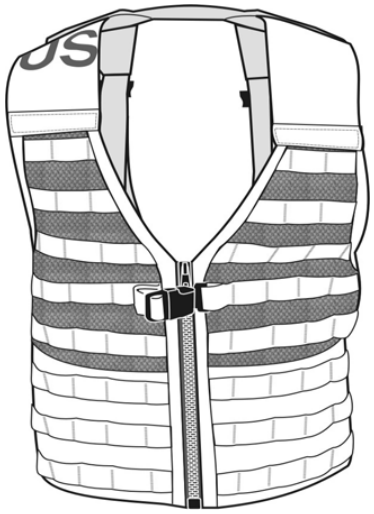
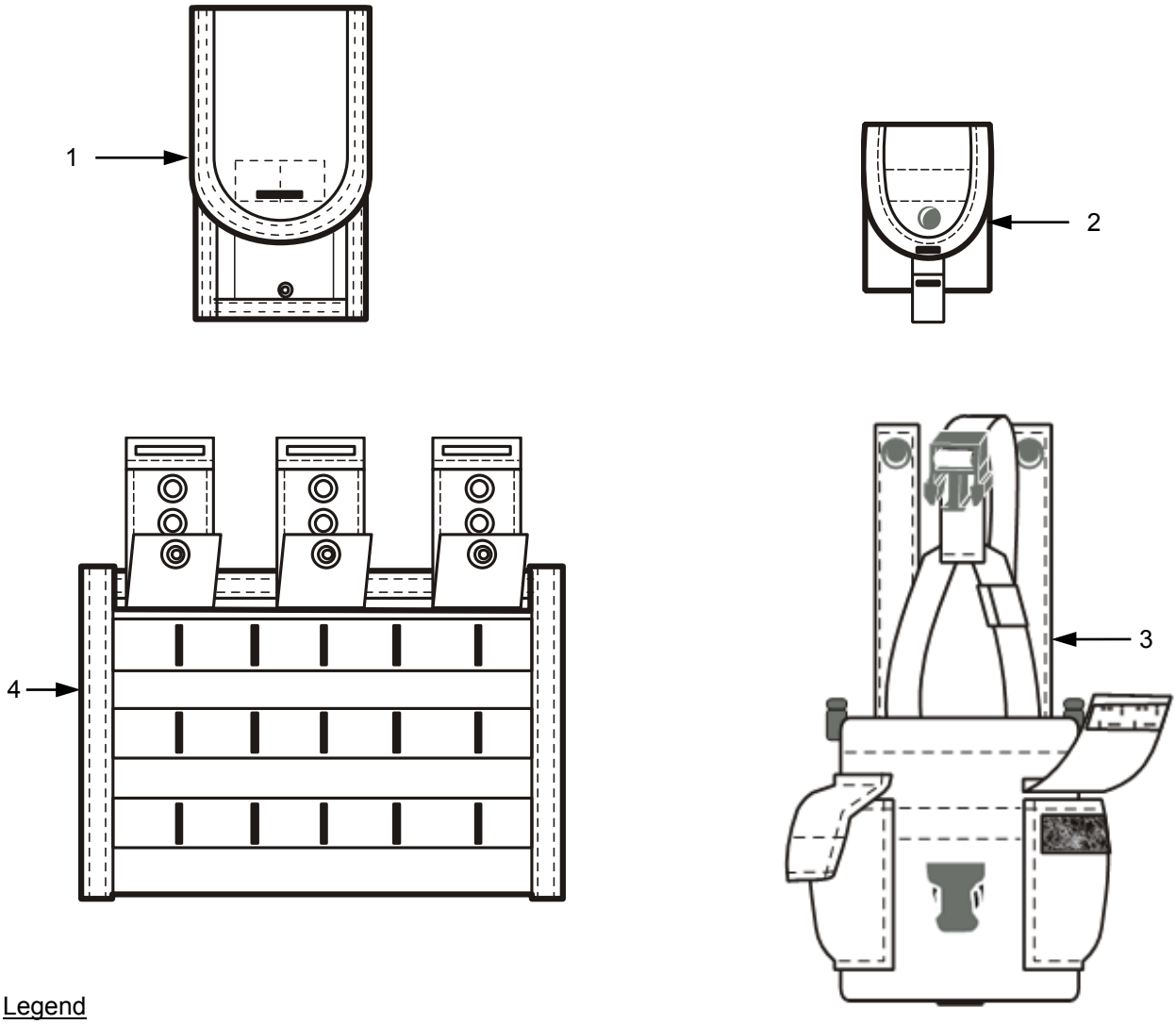


Figure 1. Fighting Load Carrier.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS — CONTINUED

Rifleman Set Pouches. The rifleman set comes standard with two general purpose/canteen pouches, two hand grenade pouches, three M4 two-magazine pouches, and two M4 three-magazine pouches (Figure 2). The M4 three-magazine pouches have additional webbing on the outside to allow for pouch stacking.



Legend
1. M4 Two-Magazine Pouch (3 ea.)
2. Hand Grenade Pouch (2 ea.)
3. Canteen/General Purpose Pouch (2ea.)
4. M4 Three-Magazine Pouch (2 ea.)

Figure 2. Rifleman Set Basic Pouches.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS — CONTINUED

Tactical Assault Panel (TAP). The Tactical Assault Panel (TAP) (Figure 3) is an alternative to the FLC. The TAP harness attachment points (Figure 4) are shown in the front and rear view. The components of the TAP are shown in Figure 5. It is one size fits all. The design of the TAP, unlike the FLC, allows for the release of the Improved Outer Technical Vest (IOTV) in emergency situations, without first removing the load-carrying system. The TAP can also be worn with the Soldier Plate Carrier System (SPCS).

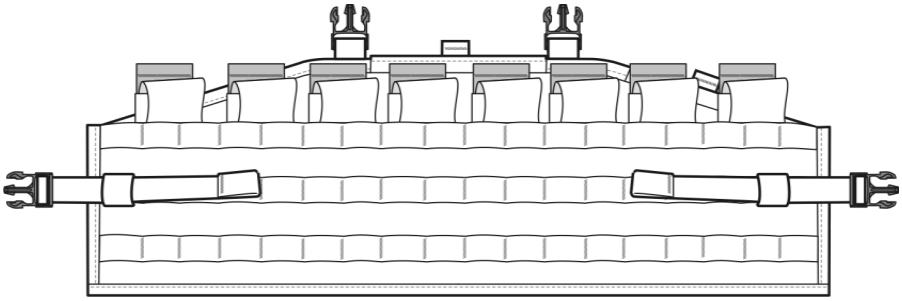


Figure 3. Tactical Assault Panel (TAP).

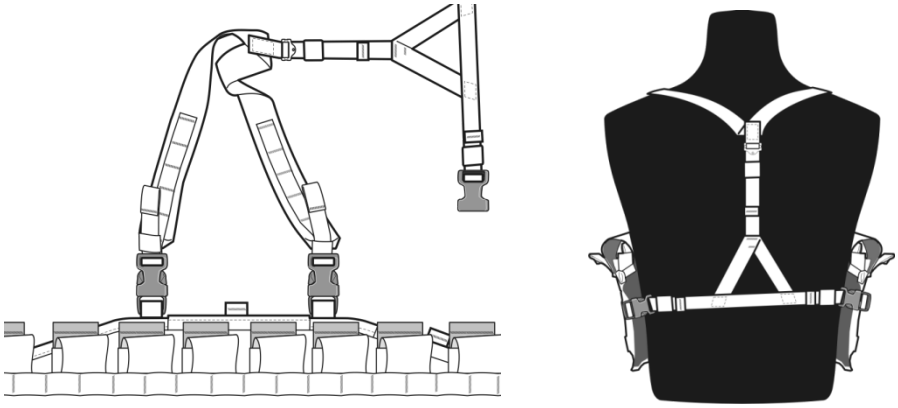
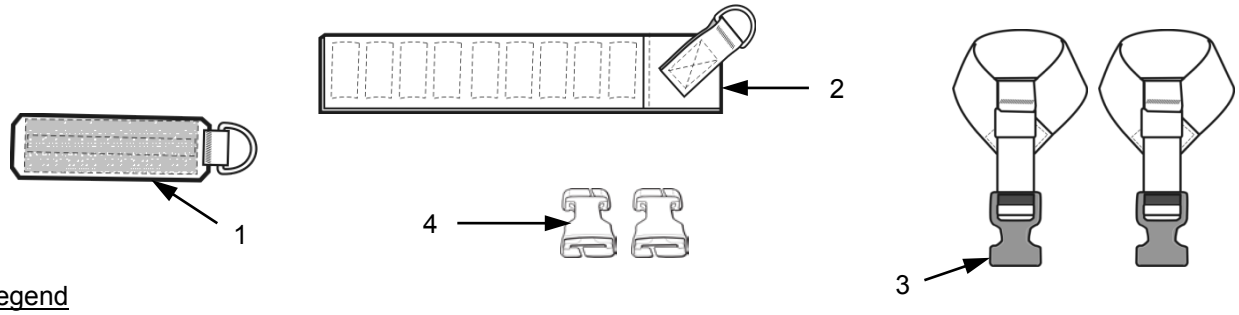


Figure 4. TAP Stand-Alone Front and Rear View, with Attachment Points.

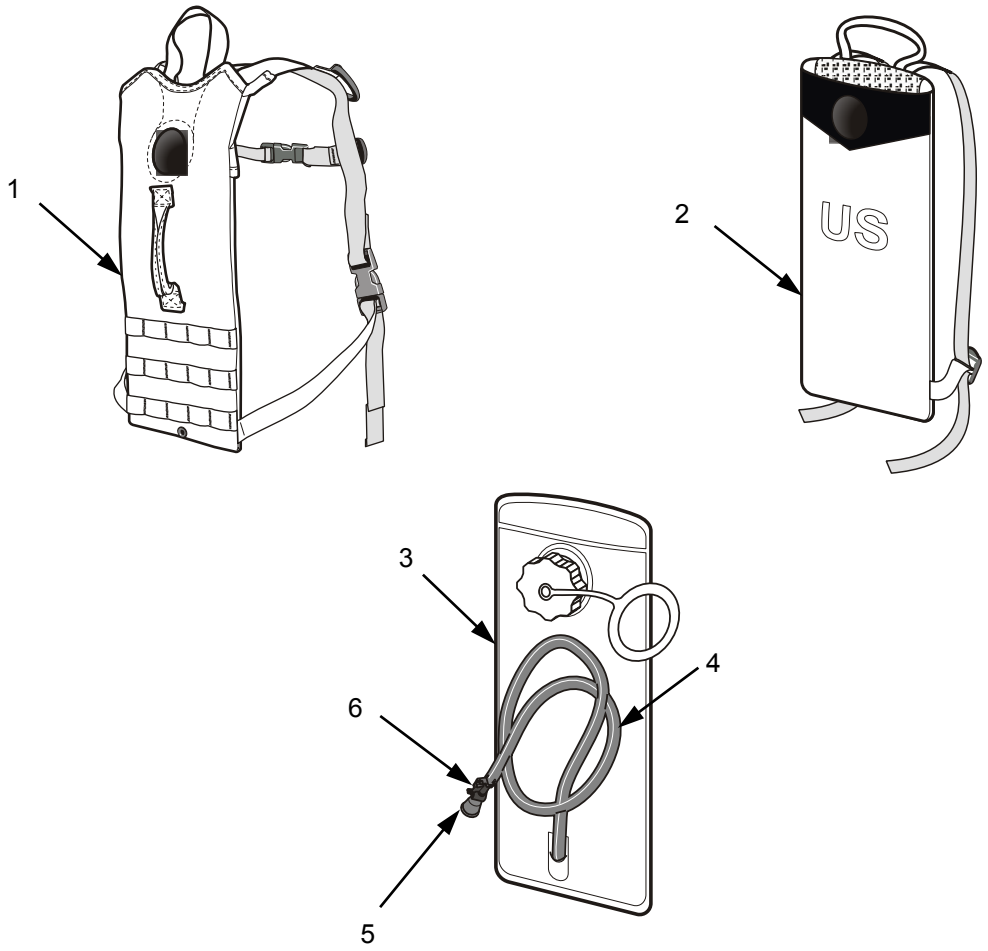


Legend
1. Left Side Adapter Web (1 ea.)
2. Right Side Adapter (1 ea.)
3. Soldier Plate Carrier System (SPCS) Adapters (2ea.)
4. Quasm Buckles (2 ea.)

Figure 5. TAP Components.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS — CONTINUED

Hydration System. Each rifleman set comes with one of two styles of hydration systems — one with MOLLE II webbing and one without (Figure 6). Both hydration systems consist of a carrier, a bladder, and a tube with shut-off valve and bite valve (in some systems, the tube detaches). Both hydration systems are easily cleaned and provide the Soldier with 100 ounces of drinking water.



Legend
1. Hydration System Carrier (with MOLLE II)
2. Hydration System Carrier (without MOLLE II)
3. Hydration System Bladder
4. Hydration System Drink tube
5. Hydration System Bite Valve
6. Hydration System Shut-Off Valve

Figure 6. Hydration System.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS — CONTINUED

Assault Pack. The assault pack (Figure 7) is designed to provide the Soldier with a medium-sized container for shorter-duration patrols. The assault pack provides 1,525 cubic inches of space in the main compartment and 825 cubic inches of space in the large front packet. It carries 60 pounds and can be easily donned and doffed over the FLC and/or TAP. It is accessible through the top with a slide fastener and has a flap covering the opening that provides water resistance.

The pack has two, 30-inch lengths of Type VIII webbing for direct attachment to the parachutist snaphook, for integration with personnel parachute harnesses, in addition to having a sewn-in, lowering-line attachment point. The assault pack may be worn on its own or may be attached to the pack frame on top of the large field pack.

Figure 7. Assault Pack.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS — CONTINUED

Waist Pack. The multi-purpose Waist Pack (Figure 8) can be worn in one of three ways: It can be attached to the bottom of the assault pack by passing the stiffened webbing straps with the female side release buckles through the four webbing keepers on the bottom of the assault pack.

It can be attached directly to the FLC by utilizing the stiffened webbing tabs woven into the corresponding slots on the back of the FLC. It can be carried in the “stand alone” configuration by utilizing the attached two-inch wide waistbelt. This method allows the user to rotate the Waist Pack around in front to easily access the contents of the pack, without removing the FLC or assault pack.

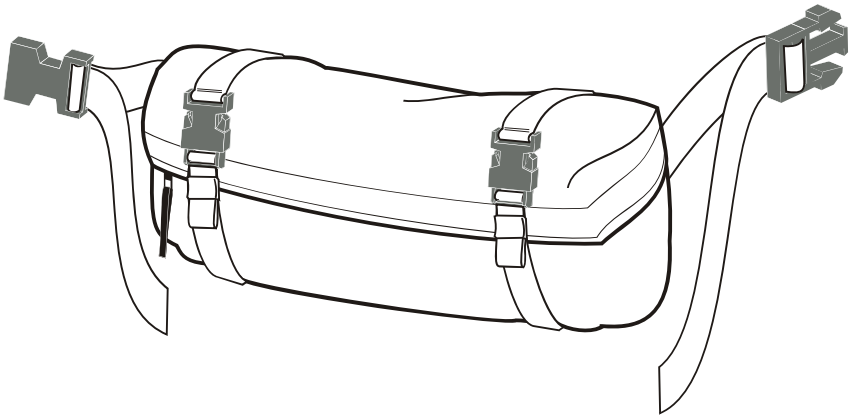


Figure 8. Waist Pack.

Entrenching Tool Carrier. The Entrenching Tool Carrier (Figure 9) is designed to fit on the assault pack or large field pack.

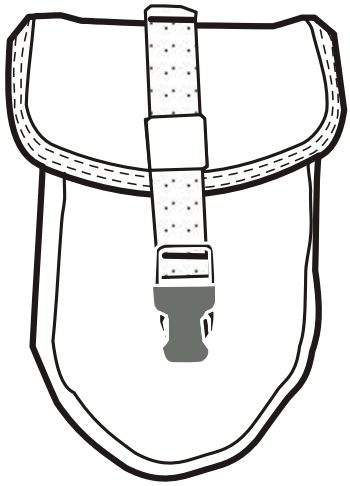


Figure 9. Entrenching Tool Carrier.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS — CONTINUED

Ammunition Pouches Bandoleer. This pouch (Figure 10) carries six magazines.

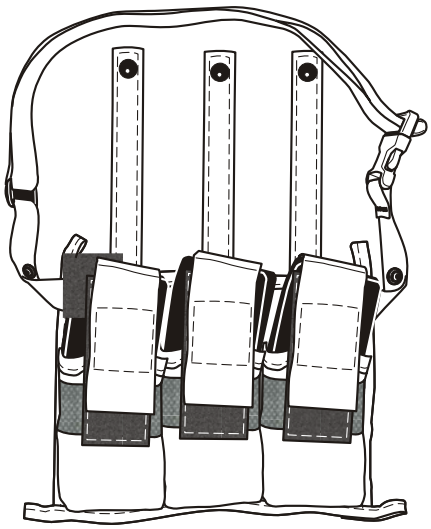


Figure 10. Ammunition Pouches Bandoleer.

Flash Bang Grenade Pouch. The rifleman set comes with one flash bang grenade pouch (Figure 11).

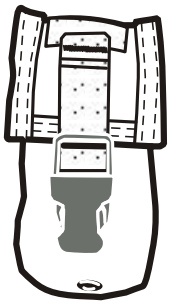


Figure 11. Flash Bang Grenade Pouch**.**

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS — CONTINUED

Large Field Pack Set

The Large Field Pack Set consists of a rucksack, two sustainment pouches, a frame, a molded hip belt, enhanced frame shoulder straps, load lifter attachment strap, and male shoulder buckle

Large Rucksack. The Large Rucksack (Figure 12) provides up to 4,000 cubic inches of space. In legacy systems, the Large Rucksack was called the “main pack.”

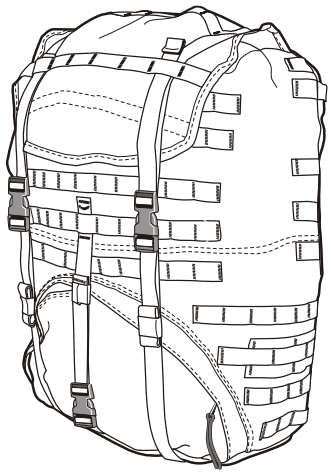


Figure 12. Large Rucksack.

Medium Rucksack Set. The Medium Rucksack Set is made up of the rucksack, waistbelt, and shoulder straps. The shoulder straps and waistbelt come pre-assembled to polymer frame. The side sustainment pouch from Large Pack can be attached to Medium Pack.

Medium Rucksack. The Medium Rucksack (Figure 13) provides up to 3,000 cubic inches of space. The Medium Pack has numerous internal and external compartments. These compartments allow the Soldier to organize their equipment. The Medium Pack has a top carrying handle with two side-release attachment straps, which allow the Soldier to carry items of equipment externally to the pack. There are three hook-and-loop ports designed to allow Soldier to route antenna(es), handsets, and to route their hydration system to outside of pack.

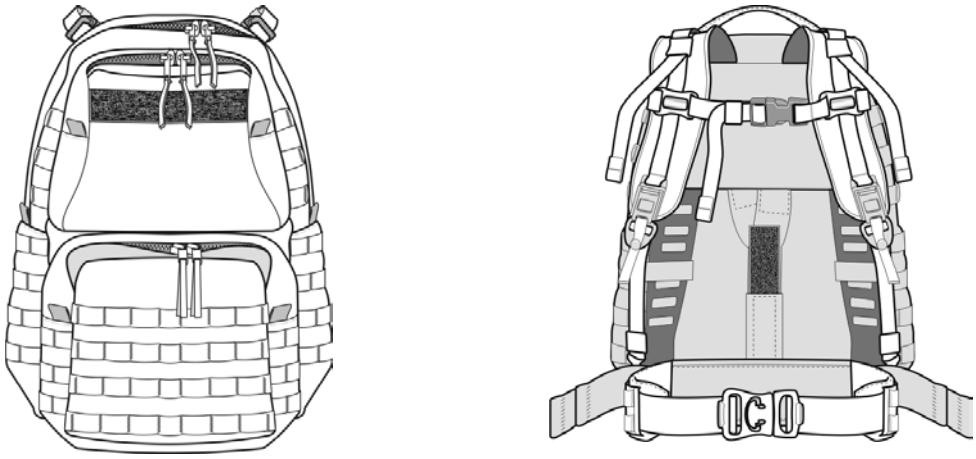


Figure 13. Medium Rucksack, Front and Back View.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS — CONTINUED

Side Sustainment Pouch. The two detachable side sustainment pouches (Figure 14) provide an additional 500 cubic inches each and attach to the side of the large field pack.

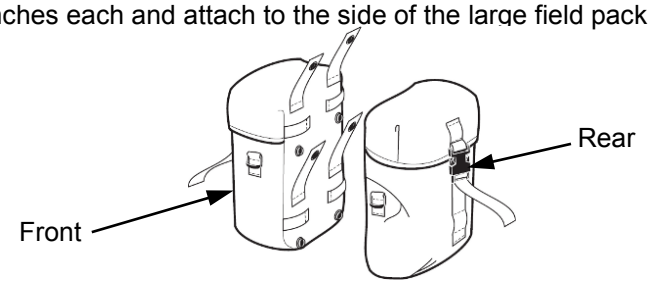


Figure 14. Side Sustainment Pouch.

MOLLE II Large Pack Frame. The frame (Figure 15) is contoured to comfortably fit closely to the body to prevent swaying of the load. The frame will allow proper head rotation while wearing a helmet and when the wearer is in the prone position. The frame is also compatible with body armor.

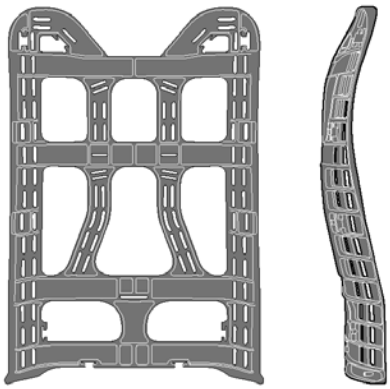


Figure 15. MOLLE II Large Pack Frame.

Shoulder Strap Suspension. The shoulder strap suspension of the large frame is adjusted by securing the 1-inch webbing around the frame in the appropriate location using the double rectangular ring. The proper location is determined by donning the large frame and fastening the hip belt buckle while wearing the vest. Position the shoulder straps so there is complete contact with the shoulder. Secure 4 horizontal straps in appropriate location (Figure 16) for individual torso length.

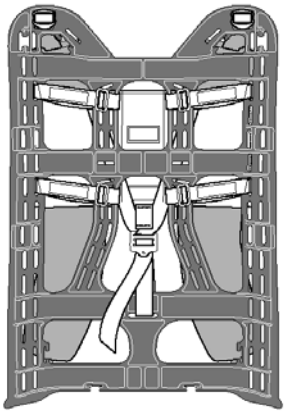


Figure 16. Adjusting Straps on Large Frame.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS — CONTINUED

Enhanced Large Frame Shoulder Straps. The enhanced large frame shoulder straps (Figure 17) are extra-wide, padded shoulder straps that attach to the enhanced large frame. The load lifter straps on the shoulder straps allow the Soldier to transfer the weight of the large field pack between the hips and the shoulder and back again during long road marches to reduce fatigue.

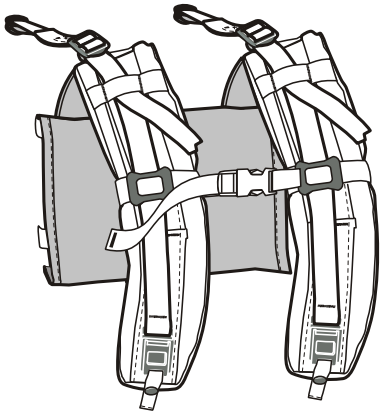


Figure 17. Enhanced Large Frame Shoulder Straps.

Molded Hip Belt. The large frame is fitted to the hip belt (Figure 18) with four attachment straps to provide adjustment.

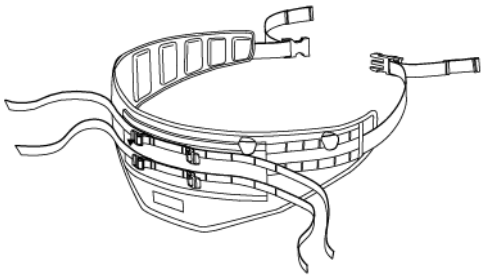


Figure 18. Molded Hip Belt.

MOLLE II Medium Pack Frame. The molded medium frame (Figure 19) is contoured to fit the shape of the back and allow the user to wear the rear ballistic plate of standard body armor without discomfort.

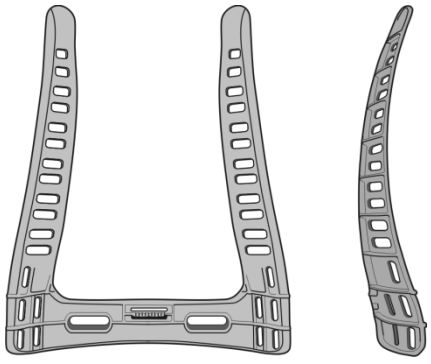


Figure 19. MOLLE II Medium Pack Frame.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS — CONTINUED

Load Lifter Straps. The shoulder strap suspension of the frame is adjusted by securing the vertical strap and the 2-inch webbing around the medium frame (Figure 20), in the appropriate location, using the slide buckle.

Proper location is determined by donning the frame and fastening the hip belt buckle, while wearing the vest. Position the shoulder straps so there is complete contact with the shoulder.

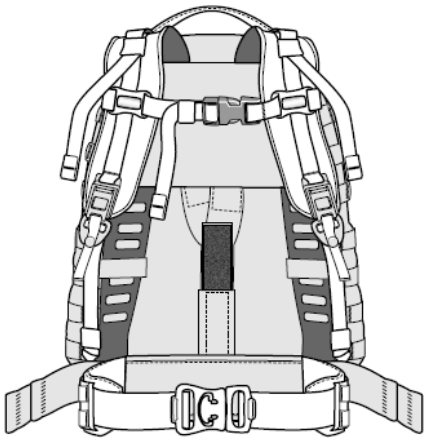


Figure 20. MOLLE II Medium Pack on Medium Frame.

Buckle Set. The repair kit (Buckle Set) (Figure 21) comes with each MOLLE II set and is used for quick, common field repairs that can be done by the individual Soldier without any special skills or equipment.

Figure 21. Buckle Set.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS — CONTINUED

Pistol Set

The pistol set consists of a holster leg extender and four, 9mm magazine pouches. This set is duty-specific and is issued in addition to the rifleman set.

Holster Leg Extender. The holster leg extender moves the position of the pistol holster from the hip to the thigh.

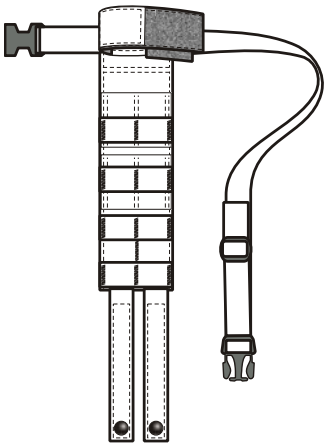


Figure 22. Holster Leg Extender.

9mm Magazine Pouch. The 9mm pouch (Figure 23) provides additional storage for 9 mm pistol magazines.

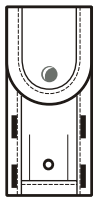


Figure 23. 9mm Magazine Pouch.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS — CONTINUED

SAW Gunner Set

The SAW gunner set consists of two, 100-round utility pouches and two, 200-round SAW gunner pouches. This set is duty-specific and is issued in addition to the rifleman set.

100-Round Utility Pouch. The 100-round utility pouch (Figure 24) has room for 100 rounds of 5.56mm ammunition for the SAW.

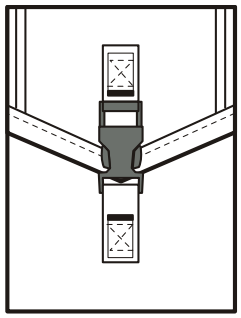


Figure 24. 100-Round Utility Pouch.

200-Round SAW Gunner Pouch. The 200-round SAW gunner pouch (Figure 25) provides room for 200 rounds of 5.56mm ammunition for the SAW.

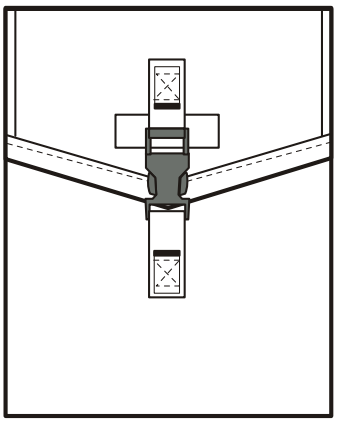
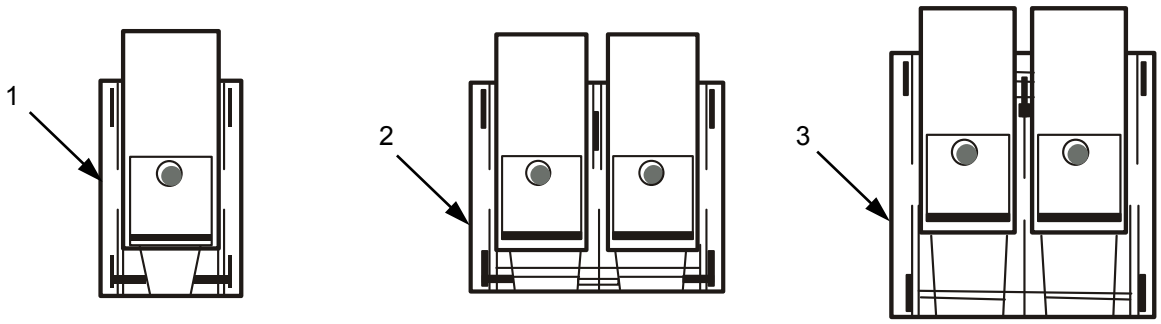


Figure 25. 200-Round SAW Gunner Pouch.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS — CONTINUED

Grenadier Set

The grenadier set (Figure 26) consists of ten, 40mm high explosive pouches (single), four, 40mm high explosive pouches (double) and two, 40mm pyrotechnic pouches (double). This set is duty-specific and is issued in addition to the rifleman set.



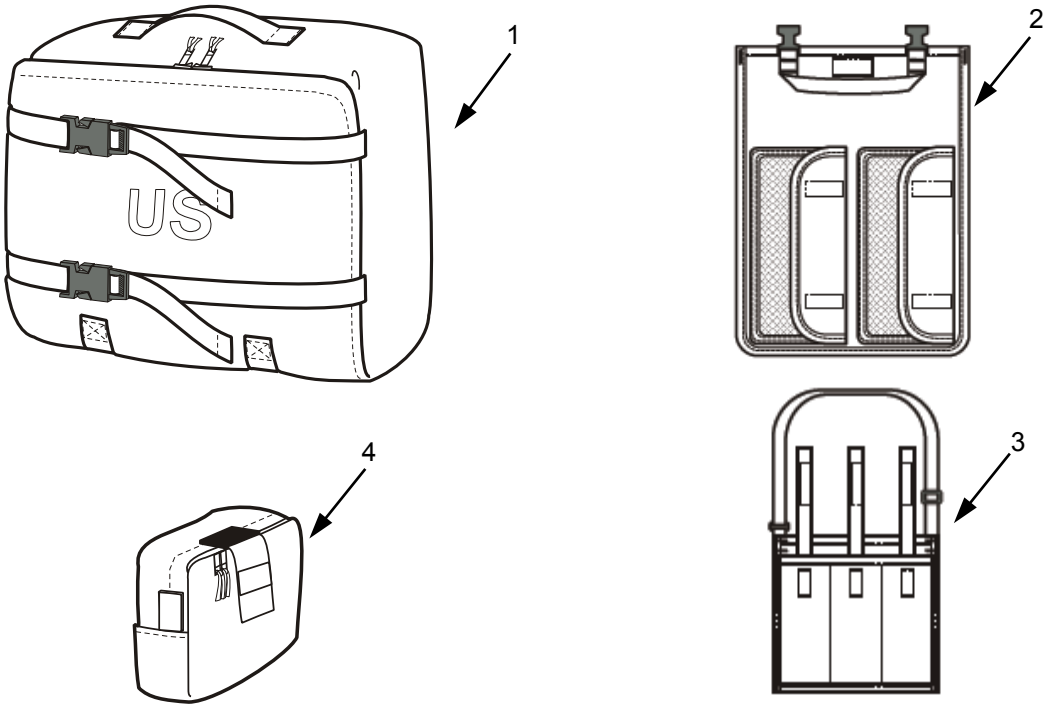
Legend
1. 40mm High Explosive Pouch (Single)
2. 40mm High Explosive Pouch (Double)
3. 40mm Pyrotechnic Pouch (Double)

Figure 26. Grenadier Set Pouches.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS — CONTINUED

Medic Set

The medic set (Figure 27) consists of a medic bag and eight external medic modular pouches. This set is duty-specific and is issued in addition to the rifleman set.



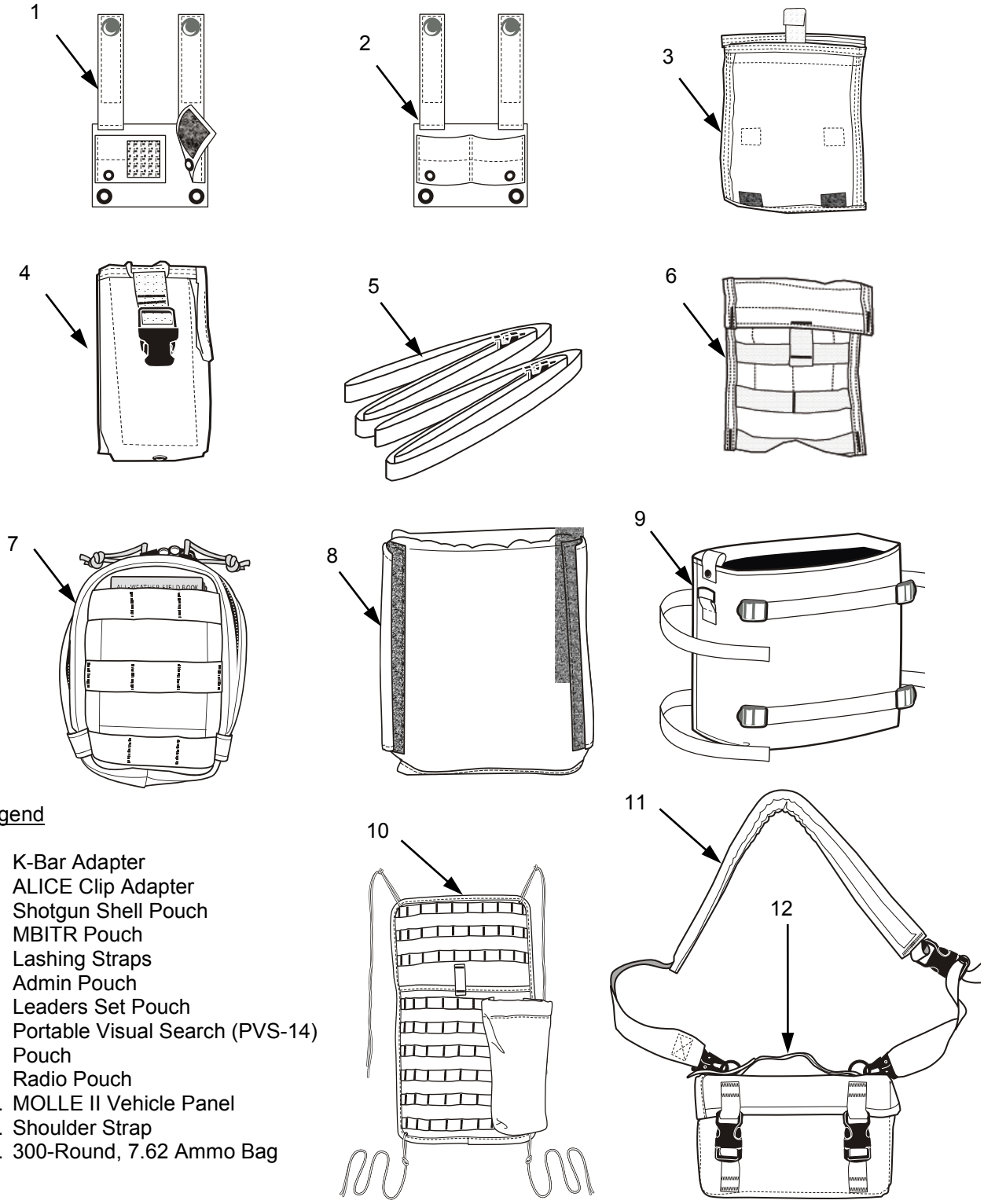
Legend
1. Medic Bag
2. Medical Bag Panel
3. Medical Bag IV Bandoleer
4. External Medic Modular Pocket

Figure 27. Medic Set.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS — CONTINUED

Additional MOLLE II Components

In addition to the pre-configured duty sets, the MOLLE II system has additional components (Figure 28) that may be added to meet more specific mission needs.



Legend

1. K-Bar Adapter
2. ALICE Clip Adapter
3. Shotgun Shell Pouch
4. MBITR Pouch
5. Lashing Straps
6. Admin Pouch
7. Leaders Set Pouch
8. Portable Visual Search (PVS-14) Pouch
9. Radio Pouch
10. MOLLE II Vehicle Panel
11. Shoulder Strap
12. 300-Round, 7.62 Ammo Bag

Figure 28. Additional MOLLE II Components.

EQUIPMENT DATA

MOLLE II Rifleman Set
Load Weight (Pack and Vest System combined).....120 lbs (54.4 kg) (approx)
Empty Weight (Large Field Pack, Frame, FLC, Rifleman Pouches) .....8.25 lbs (3.74 kg) (approx.)

Fighting Load Carrier (FLC)
Empty Weight (with pouches) .....1.6 lbs (635 g) (approx.)
Weight with Rifleman Pouches ..... 4 lbs. (1814.4 g) (approx)
Volume/Capacity .....4,000 cubic inches (65.5 liters)

Tactical Assault Panel (TAP)
Weight with harness.....1.4 lbs (725 g) (approx.)

Hydration System
Empty Weight..... 1.05.lbs (476 g) (approx.)
Volume/Capacity ..... 100 ounces (295 liters)

Assault Pack
Empty Weight (with pouches) .....3.875 lbs (1.757 kg) (approx.)
Volume/Capacity .....2,000 cubic inches (13.5 liters)

Waist Pack
Empty Weight (with pouches) ..... 13 oz (368 g) (approx.)
Load Capacity ..... 350 cubic inches (5.73 liters)

Large Field Pack Set
Large Rucksack
Weight (with frame and straps) .....8 lbs (3.6 kg) (approx.)
Volume/Capacity……..4,000 cubic inches (65.5 liters)

Medium Field Pack Set
Medium Rucksack
Empty Weight.....3.5 lbs (1.59 kg) (approx.)
Volume/Capacity .....3,000 cubic inches (49 liters) (approx)

Molded Waistbelt
Weight ..... 1.19 lbs (539 g) (approx.)

Grenadier Set
Weight .....2.625 lbs (1.19 kg) (approx.)

Medic Set
Weight (with pouches).....5 lbs (2.27 kg) (approx.)

MOLLE II Auxiliary Equipment
K-Bar Adapter ..... .2 oz (56.7 g) (approx.)
ALICE Clip Adapter ..... 2 oz (56.7 g) (approx.)
Lashing Straps ..... .4 oz (113.4) (approx.)
Radio Pouch..... .10 oz (283.5 g) (approx.)
Shotgun Shell Pouch..... .6 oz (170.1g) (approx.)
MBITR Pouch..... .5 oz (141.7g) (approx.)
Shoulder Strap ..... 1.375 lb (623.7 g) (approx.)
300-Round, 7.62mm Ammo Bag ..... 1.9375 lb (878.8 g) (approx.)
Admin Pouch..... 3.3 oz (93.5 g) (approx.)

END OF WORK PACKAGE

FIELD AND SUSTAINMENT MAINTENANCE
MODULAR LIGHTWEIGHT LOAD-CARRYING EQUIPMENT (MOLLE) II
THEORY OF OPERATION

GENERAL

MOLLE II is a modular load-carrying system for soldiers to wear to enhance their capability, mobility, and lethality. The modularity permits tailoring for mission requirements and minimizes the combat load. The MOLLE II is designed as a replacement to the All-Purpose Lightweight Individual Carrying Equipment (ALICE) system.

END OF WORK PACKAGE

CHAPTER 2

PREVENTIVE MAINTENANCE CHECKS AND SERVICES FOR MODULAR LIGHTWEIGHT LOAD-CARRYING EQUIPMENT (MOLLE) II

FIELD MAINTENANCE
MODULAR LIGHTWEIGHT LOAD-CARRYING EQUIPIMENT (MOLLE) II
PREVENTIVE MAINTENANCE CHECKS AND SERVICES INTRODUCTION

GENERAL

The following information describes PMCS procedures on the field maintenance level. The PMCS table has been provided to ensure that the MOLLE II gear is in proper operating condition, and ready for use.

PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

Frequency of Performing PMCS

PMCS will be performed upon receipt of new equipment, upon turn-in, after repair, and during issue.

PMCS Columnar Entries Table 1.

Item Number. The item number column shall be used as a source of the item number required for the TM Number column on DA Form 2404 (Equipment Inspection and Maintenance Worksheet), when recording the results of the PMCS.

Interval. This column identifies the required PMCS interval.

Item to be inspected. Contains the common name of the item to be inspected.

Procedures. Provides a brief description of the procedures by which the checks are to be performed.

Recording Defects

All defects discovered during the inspection will be recorded using the applicable specifics in DA PAM 750-8.

Lubrication Service Intervals

The MOLLE II gear does not require lubrication service.

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.

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) User's Manual.

END OF WORK PACKAGE

FIELD MAINTENANCE
MODULAR LIGHTWEIGHT LOAD-CARRYING EQUIPMENT (MOLLE) II
PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

INITIAL SETUP:

Tools and Special Tools

Ruler, Tab, Metal, 16-inch (WP 0042, Table 2, Item 3)

Personnel Required

Non-MOS specific (1)

Equipment Condition

Unpacked

References

WP 0022
WP 0023
WP 0024
WP 0025
WP 0026
WP 0027
WP 0028
WP 0029
WP 0032
WP 0033

GENERAL

This work package describes PMCS procedures on the field maintenance level. The PMCS table has been provided to ensure the MOLLE II equipment is in proper operating condition and ready for issue.

Table 1. PMCS for MOLLE II.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	Before Issue/ After Receipt	Fighting Load Carrier (FLC)/ Tactical Assault Panel (TAP)	Webbing (Stiffened Adjustment Tab(s)). Inspect for cuts, breaks, frays, burns, improper installation, and loose or broken stitching.	Presence of cuts, breaks, frays, burns, improper installation, and loose or broken stitching.
			Buckles. Inspect for proper operation and cracks or broken or missing parts.	Presence of cracks or broken or missing parts.
			Slide Fastener. Inspect for proper operation, loose or broken stitching, missing teeth, and missing parts.	Presence of loose or broken stitching, missing teeth, burns, tears, or missing parts. Improper operation of slide fastener.
			Fabric and Mesh. Inspect for rips, burns, holes, tears, frays, broken or loose stitching, and marred or illegible marks.	Presence of holes, cuts, frays, tears, burns, and loose or broken stitching.
			Hook-and-loop. Inspect for proper operation.	Improper operation of hook-and-loop tape. Refer to WP 0022 and WP 0023 for repair procedures.

PREVENTIVE MAINTENANCE CHECKS AND SERVICES — CONTINUED

Table 1. PMCS for MOLLE II — Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
2	Before Issue/ After Receipt	Pouches, Ammunition, Grenade and Miscellaneous	Webbing. Inspect for cuts, breaks, frays, burns, and loose or broken stitching.	Presence of cuts, breaks, frays, burns, non-secure hook-and-loop, and loose or broken stitching.
			Buckles. Inspect for proper operation and cracks or broken parts.	Presence of burns, cuts, breaks, and loose or broken stitching.
			Fabric and Mesh. Inspect for rips, burns, holes, tears, frays, broken or loose stitching, and marred or illegible marks.	Presence of holes, cuts, frays, tears, burns, and loose or broken stitching.
			Snaps. Inspect for proper operation, corrosion, debris and damage to surrounding fabric.	Presence of loose or broken stitching, burns, frays, and missing (or damaged) snap fasteners. See WP 0033 for repair procedures.
			Hook-and-loop Tape. Inspect for proper operation.	Improper operation of hook-and-loop tape.
3	Before Issue/ After Receipt	Assault Pack/ Large Field Pack/Medium Pack/Waist Pack	Webbing. Inspect for cuts, breaks, frays, burns, improper installation, and loose or broken stitching.	Presence of cuts, breaks, frays, burns, improper installation, and loose or broken stitching.
			Buckles. Inspect for proper operation and cracks and broken or missing parts.	Presence of burns, cuts, breaks, and loose or broken stitching.
			Slide Fastener. Inspect for proper operation, loose or broken stitching, missing teeth and missing parts.	Presence of loose or broken stitching, frays, burns, or tears.
			Fabric and Mesh. Inspect for rips, burns, holes, tears, debris, frays, broken or loose stitching, and marred or illegible marks.	Presence of holes, cuts, frays, tears, burns, and loose or broken stitching.
			Snaps. Inspect for proper operation, corrosion, debris, and damage to surrounding fabric.	Presence of loose or broken stitching, burns, frays, and missing (or damaged) snap fasteners
			Drawstring and Closure. Inspect for cuts, abrasions, burns, improper routing, and exposed core material.	See WP 0025, WP 0026, and WP 0027 for repair procedures.
			Hook-and-loop Tape. Inspect for proper operation.	Improper operation of hook-and-loop tape.

PREVENTIVE MAINTENANCE CHECKS AND SERVICES — CONTINUED

Table 1. PMCS for MOLLE II — Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
4	Before Issue/ After Receipt	Shoulder Straps/Hip Belt/Frame	Webbing. Inspect for cuts, breaks, frays, burns, improper installation, and loose or broken stitching.	Presence of cuts, breaks, frays, burns, improper installation, and loose or broken stitching.
			Buckles. Inspect for proper operation and cracks or broken parts.	Presence of burns, cuts, breaks, and loose or broken stitching.
			Fabric and Mesh. Inspect for rips, burns, holes, tears, dampness, debris, frays, broken or loose stitching, and marred or illegible marks.	Presence of holes, cuts, frays, tears, burns, and loose or broken stitching.
			Snaps. Inspect for proper operation, corrosion, debris, and damage to surrounding fabric.	Presence of loose or broken stitching, burns, frays, and missing (or damaged) snap fasteners.
			Plastic Material. Inspect for cracked, bent, or broken material in the frame.	Cracked, bent, or broken material. See WP 0028 for repair procedures.
5	Before Issue/ After Receipt	Hydration System Carrier Assembly	Webbing. Inspect for cuts, breaks, frays, burns, loose, broken or missing stitching.	Presence of cuts, breaks, frays, burns, improper installation, and loose, broken or missing stitching.
			Buckles. Inspect for proper operation, cracks, or broken parts.	Presence of burns, cuts, breaks, and loose or broken stitching seam.
			Fabric and Mesh. Inspect for rips, burns, holes, tears, broken or loose stitching.	Presence of holes, cuts, frays, tears, burns, and loose or broken stitching See WP 0024 for repair procedures.
6	Before Issue	Hydration System Reservoir and Bite Valve	Hydration Reservoir. Inspect for cleanliness of exterior and interior of reservoir. Inspect for presence of mold or other contaminants inside the reservoir. The hydration reservoir may not be re-issued.	Dirty, mold, or other contaminants inside the reservoir.
			Bite Valve. Inspect for cleanliness of the bite valve. Inspect for deterioration of material and presence of mold or other contaminants. The bite valve may not be re-issued.	Dirty, deterioration of material, mold and other contaminants present.
			Cap. Inspect to see there is a seal, if cap is loose or missing, and if the lanyard is present.	Does not seal, is loose or missing, or lanyard is missing. See WP 0024 for repair procedures.

PREVENTIVE MAINTENANCE CHECKS AND SERVICES — CONTINUED

Table 1. PMCS for MOLLE II — Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
7	Before Issue / After Receipt	Medic Set	Webbing. Inspect for cuts, breaks, frays, burns, improper installation, and loose or broken stitching.	Presence of cuts, breaks, frays, burns, improper installation, and loose or broken stitching.
			Buckles. Inspect for proper operation and cracks or broken parts.	Presence of burns, cuts, breaks, and loose or broken stitching.
			Fabric and Mesh. Inspect for rips, burns, holes, tears, frays, broken or loose stitching, and marred or illegible marks.	Presence of holes, cuts, frays, tears, burns, and loose or broken stitching.
			Slide Fastener. Inspect for proper operation, loose or broken stitching, missing teeth and missing parts.	Presence of loose or broken stitching, missing teeth, burns, tears, or missing parts. Improper operation of slide fastener.
			Snaps. Inspect for proper operation, corrosion, debris, and damage to surrounding fabric.	Presence of loose or broken stitching, burns, frays, and missing (or damaged) snap fasteners. See WP 0032 for repair procedures.
8	Before Issue / After Receipt	Leg Holster Extender	Webbing. Inspect for cuts, breaks, frays, burns, improper installation, and loose or broken stitching.	Presence of cuts, breaks, frays, burns, improper installation, and loose or broken stitching.
			Buckles. Inspect for proper operation and cracks or broken parts.	Presence of burns, cuts, breaks, and loose or broken stitching.
			Fabric. Inspect for rips, burns, holes, tears, frays, broken or loose stitching.	Presence of holes, cuts, frays, tears, burns, and loose or broken stitching.
			Snaps. Inspect for proper operation, corrosion, debris and damage to surrounding fabric.	Presence of loose or broken stitching, burns, frays, and missing (or damaged) snap fasteners.
			Hook-and-loop Tape. Inspect for proper operation.	Improper operation of hook-and-loop tape. See WP 0029 for repair procedures.

MANDATORY REPLACEMENT PARTS

There are no mandatory replacement parts required for these PMCS procedures.

END OF TASK

END OF WORK PACKAGE

CHAPTER 3

FIELD MAINTENANCE INSTRUCTIONS
FOR
MODULAR LIGHTWEIGHT LOAD-CARRYING EQUIPMENT (MOLLE) II

FIELD MAINTENANCE
MODULAR LIGHTWEIGHT LOAD-CARRYING EQUIPMENT (MOLLE II)
SERVICE UPON RECEIPT

INITIAL SETUP:

Tools and Special Tools

None Required

Personnel Required

Maintainer (1)

Materials/Parts

None Required

References

WP 0042

Equipment Condition

Unpacked

SERVICE UPON RECEIPT OF MATERIEL

Upon initial receipt of MOLLE II gear, proceed as follows:

1. For new equipment, check each component for damage and foreign material contaminations.
2. For used equipment, check each component for damage, foreign material contamination, and excessive wear and tear.
3. If defects or damages are discovered, process the equipment for maintenance at the maintenance level assigned by the Maintenance Allocation Chart (MAC), WP 0042.

END OF TASK

INSTALLATION INSTRUCTIONS

The MOLLE II gear does not require installation.

END OF WORK PACKAGE

FIELD MAINTENANCE
FIGHTING LOAD CARRIER (FLC) SET
REPAIR, REPLACE

INITIAL SETUP:

Tools

Knife, Hot Metal (WP 0042, Table 2, Item 2)
Ruler, Tab, Metal, 16-inch (WP 0042, Table 2, Item 3)
Sewing Machine, Industrial Bar Tack (WP 0042, Table 2, Item 4)
Sewing Machine, Medium Duty (WP 0042, Table 2, Item 5)
Shears, Tailor's, 12-inch (WP 0042, Table 2, Item 6)
Stitch Removal Tool (WP 0042, Table 2, Item 7)
Tape, Measuring (WP 0042, Table 2, Item 8)

Personnel Required

Non-MOS specific (1)

References

FM 10-16
WP 0034

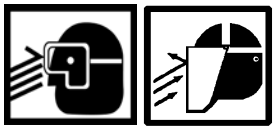
Materials/Parts

Pencil, China Marker, Yellow, A-A-87 (WP 0043, Item 2)
Thread, Nylon, V-T-295, Size E, TY I, II, or III CL A, FG504 (WP 0043, Item 4)
Thread, Nylon, V-T-295, Size F, TY I, II, or III CL A, FG504 (WP 0043, Item 5)
Thread, Nylon, V-T-295, Size FF, TY I, II, or III CL A, FG504 (WP 0043, Item 6)

Equipment Condition

Lay out on flat surface or other suitable area.

REPAIR

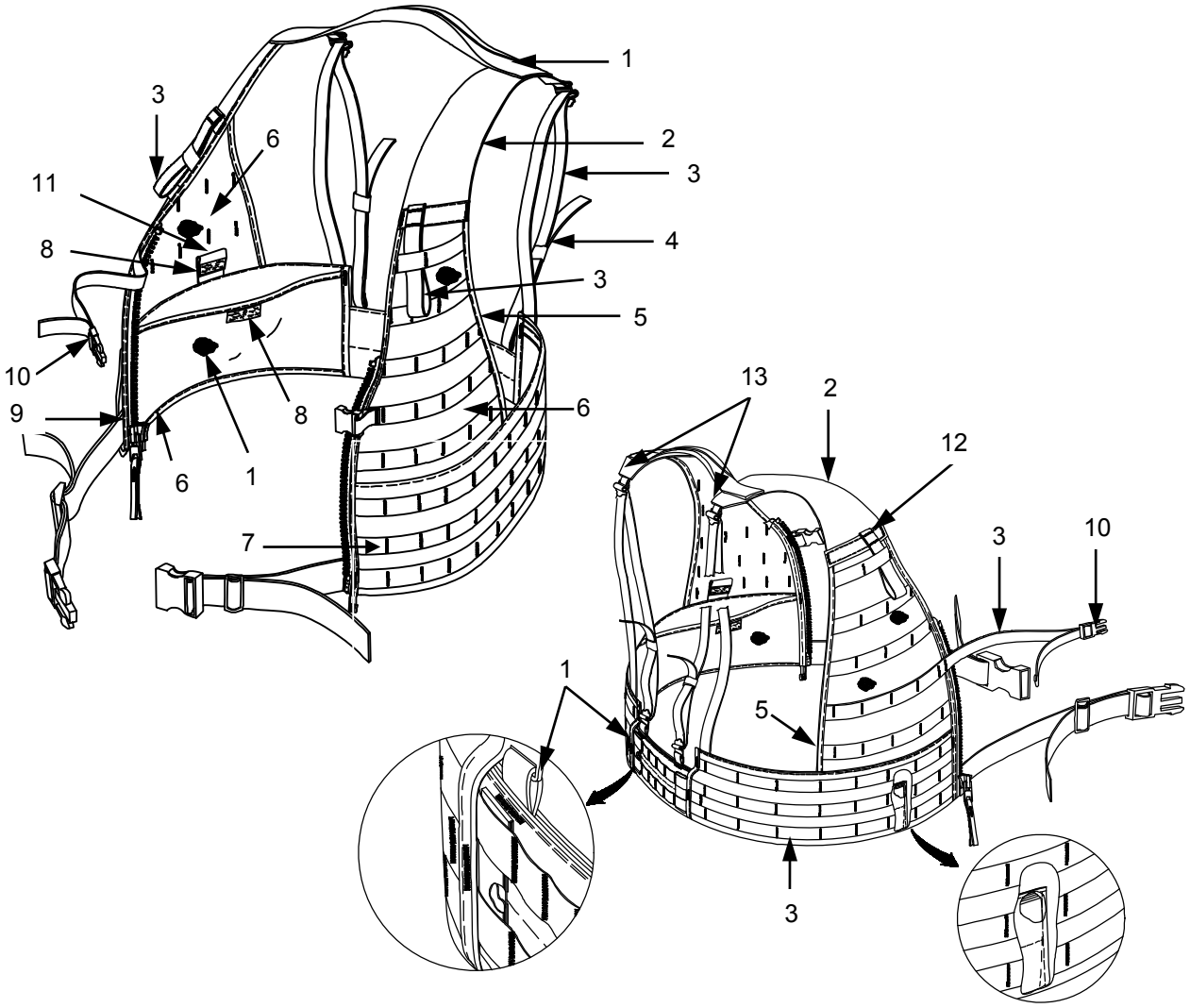


Eye protection should be worn to protect the Soldier from flying particles when operating a sewing machine. Sewing machine needles can break with great force. Failure to wear eye protection may result in injury to eye(s).

Prior to repair operations, each component of the MOLLE II system shall be inspected by qualified personnel to determine the extent of the repair necessary. With the exception of the replacement of hardware items furnished the user as a repair kit, all repairs to these components will be accomplished at the maintainer level or higher, using FM 10-16 as a general guide.

Use Figures 1 through 5 to determine the location and construction of equipment in repair procedures.

REPAIR — CONTINUED

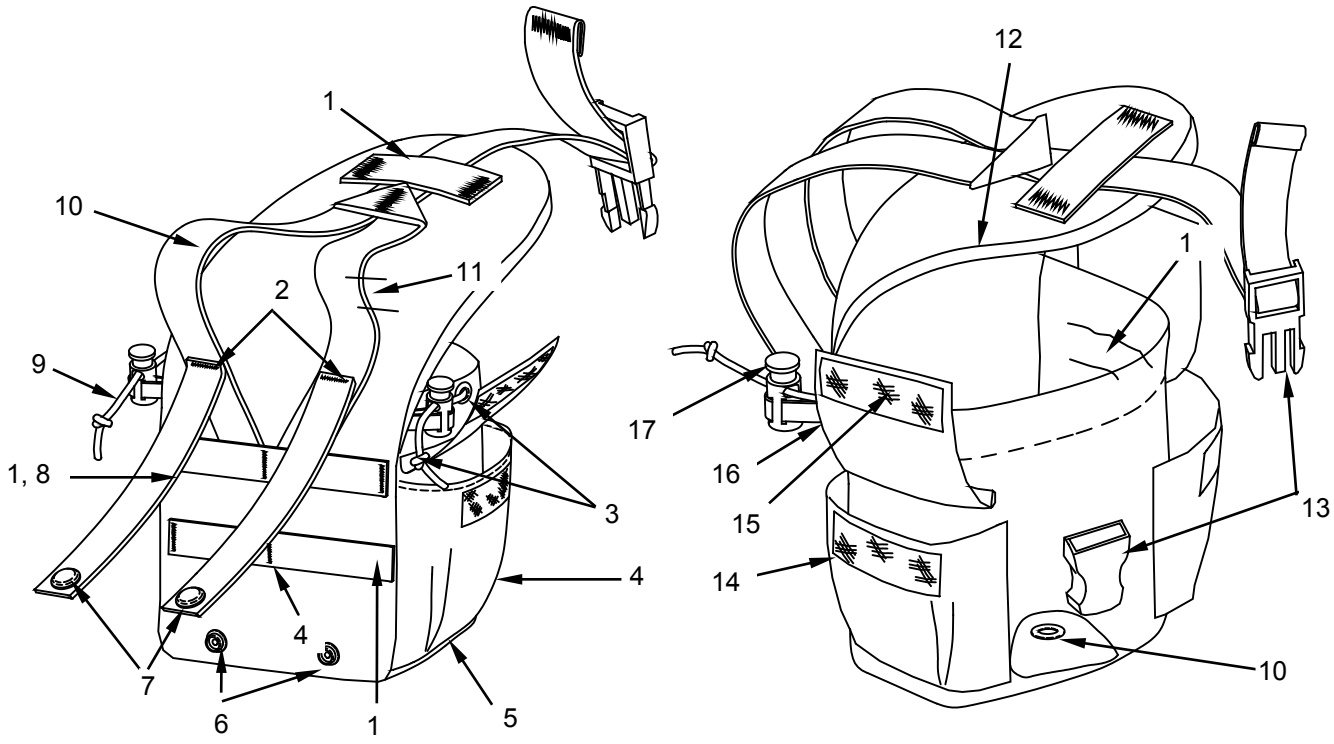


Legend

1. Textured Nylon Duck
2. 3 ½-inch Webbing
3. 1-inch Webbing
4. 1-inch Elastic Webbing
5. Binding Tape
6. Raschel Knit Cloth
7. Size E Thread
8. Hook-and-Loop Fastener
9. Slide Fastener
10. 1-inch Side Release Buckle
11. 2-Inch Webbing
12. Size F Thread
13. 1-inch Slide Buckle

Figure 1. FLC Vest.

REPAIR — CONTINUED

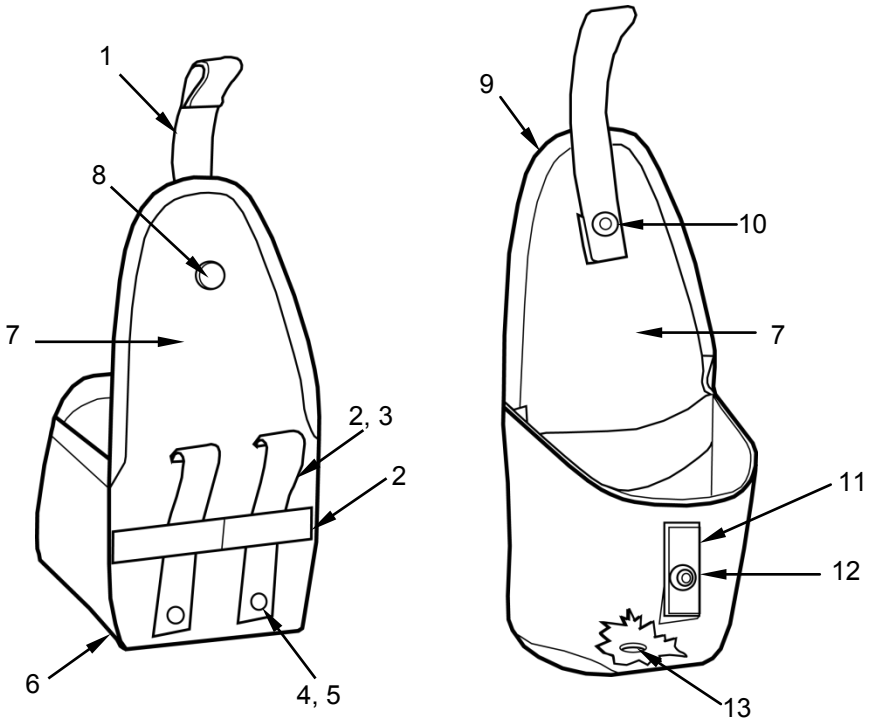


Legend

1. Webbing, Nylon, 1-inch
2. Thread, Size E
3. Eyelet
4. Textured Nylon Duck
5. Thread, Size F
6. Snap Fastener, Eyelet/Stud
7. Snap Fastener, Button/Socket
8. Polyethylene
9. Cord, Elastic, round
10. Eyelet, Drain
11. Webbing, Elastic, 1-inch
12. Binding Tape, 1-inch
13. Side Release Buckle, 1-inch
14. Fastener, Loop, 1-inch
15. Fastener, Hook, 1-inch
16. Webbing $^{11}/_{32}$ -inch
17. Barrel Lock

Figure 2. FLC Pouch.

REPAIR — CONTINUED

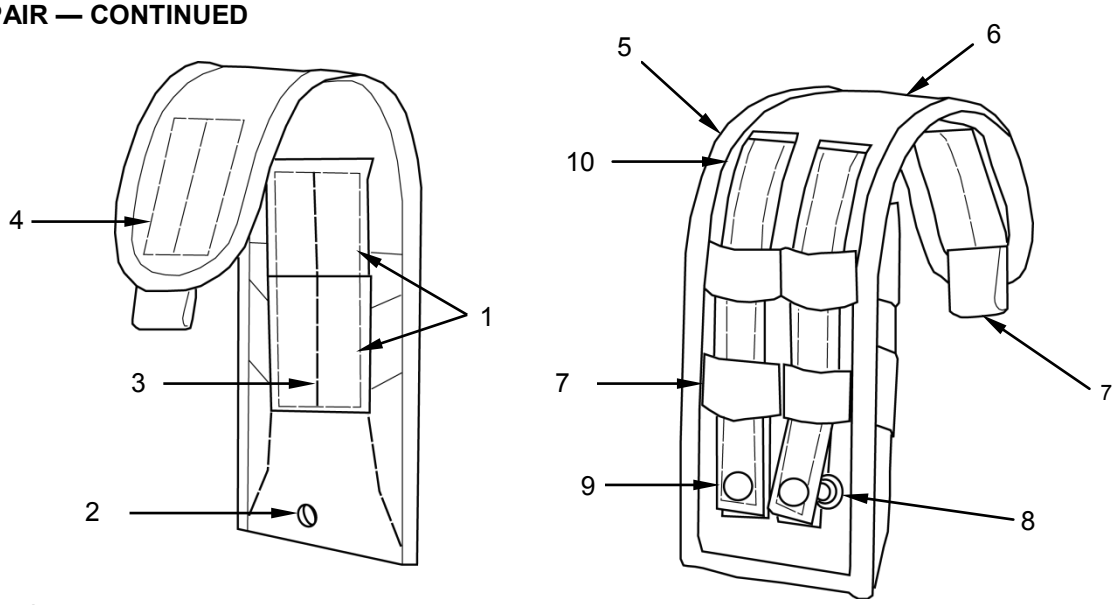


Legend

1. Webbing, Nylon, ¾ -inch
2. Webbing, Nylon, 1-inch
3. Polyethylene, 0.030-inch x 0.875-inch
4. Snap Fastener, Button/Socket
5. Snap Fastener, Eyelet/Stud
6. Thread, Size F
7. Textured Nylon Duck, Class III
8. Snap Fastener, Eyelet/Stud
9. Binding Tape, 1-inch
10. Snap Fastener, Button/Socket
11. Webbing, Nylon, 1-inch
12. Snap Fastener, Button/Socket
13. Eyelet (Drain)

Figure 3. Hand Grenade Pouch.

REPAIR — CONTINUED

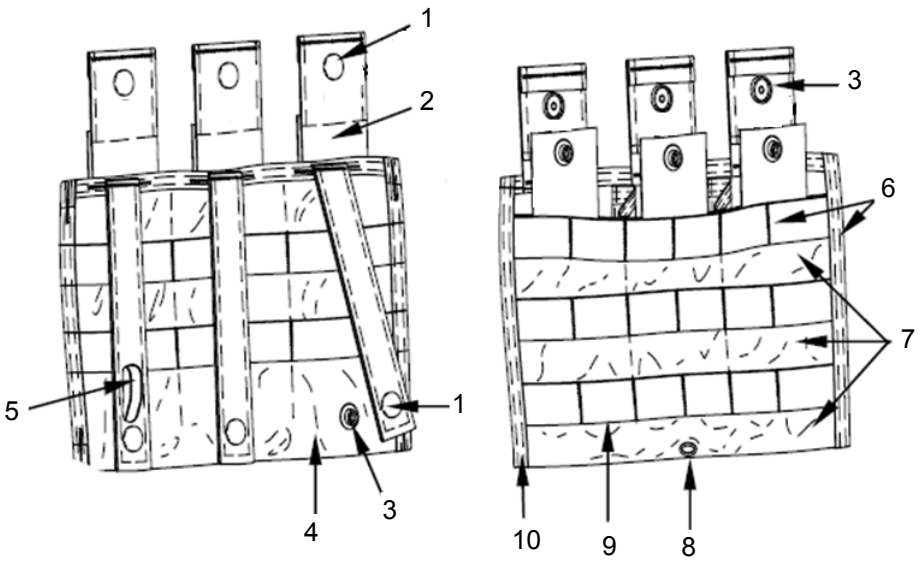


Legend

1. Hook and-Loop Fastener, 2-inch
2. Eyelet (Drain)
3. Thread, Size F
4. Polyethylene, 0.030-inch x 2.000-inch,
5. Binding Tape, 1-inch
6. Textured Nylon Duck, Class III
7. Webbing, Nylon, 1-inch
8. Snap Fastener, Eyelet/Stud
9. Snap Fastener, Button/Socket
10. Thread, Size E

Figure 4. M-4 Two Magazine Pouch.

REPAIR — CONTINUED



Legend

1. Snap Fastener, Button/Socket
2. Webbing, 2-inch
3. Snap Fastener, Stud/Eyelet
4. Textured Nylon Duck Fabric
5. Polyethylene, High Density, .030-inch
6. Thread, Size E
7. Hook-and-Loop Fastener
8. Grommet
9. Thread, Size F
10. Binding Tape, 1-inch

Figure 5. M-4 Three Magazine Side-by-Side Pouch.

REPAIR — CONTINUED

Restitching

1. Use Figures 1 through 5 to identify component to be repaired.
2. Use Table 1 to determine specific sewing machine, thread size, and stitching requirements.
3. Overstitch or backstitch by 1/2 inch for all 301-lockstitch seams.
4. Trim running ends of thread.

Table 1. Fighting Load Carrier (FLC) Stitching Requirements.

COMPONENT	RECOMMENDED SEWING MACHINE	STITCHES PER INCH	THREAD SIZE
Rifleman Set **Fighting Load Carrier (FLC)**			
Binding Tape	Medium Duty	7 to 11	E
1-inch MOLLE II Webbing	Bar Tack	42 to 48	E
Waistbelt Webbing	Bar Tack	42 to 48	E
All Other Components	Medium Duty	7 to 11	F

Buckle Replacement

Replace buckles using replacement procedures in WP 0034.

END OF TASK

REPLACE

Replace Fighting Load Carrier Set with serviceable item from stock.

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE
TACTICAL ASSAULT PANEL (TAP)
REPAIR, REPLACE

INITIAL SETUP:

Tools

Knife, Hot Metal (WP 0042, Table 2, Item 2)
Ruler, Tab, Metal, 16-inch (WP 0042, Table 2, Item 3)
Sewing Machine, Industrial Bar Tack (WP 0042, Table 2, Item 4)
Sewing Machine, Medium Duty (WP 0042, Table 2, Item 5)
Shears, Tailor's, 12-inch (WP 0042, Table 2, Item 6)
Stitch Removal Tool (WP 0042, Table 2, Item 7)
Tape, Measuring (WP 0042, Table 2, Item 8)

Personnel Required

Non-MOS specific (1)

References

FM 10-16
WP 0034

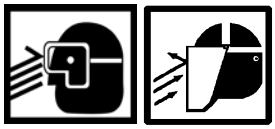
Materials/Parts

Pencil, China Marker, Yellow, A-A-87 (WP 0043, Item 2)
Thread, Nylon, V-T-295, Size E, TY I, II, or III CL A, FG504 (WP 0043, Item 4)
Thread, Nylon, V-T-295, Size F, TY I, II, or III CL A, FG504 (WP 0043, Item 5)
Thread, Nylon, V-T-295, Size FF, TY I, II, or III CL A, FG504 (WP 0043, Item 6)

Equipment Condition

Lay out on flat surface or other suitable area.

REPAIR

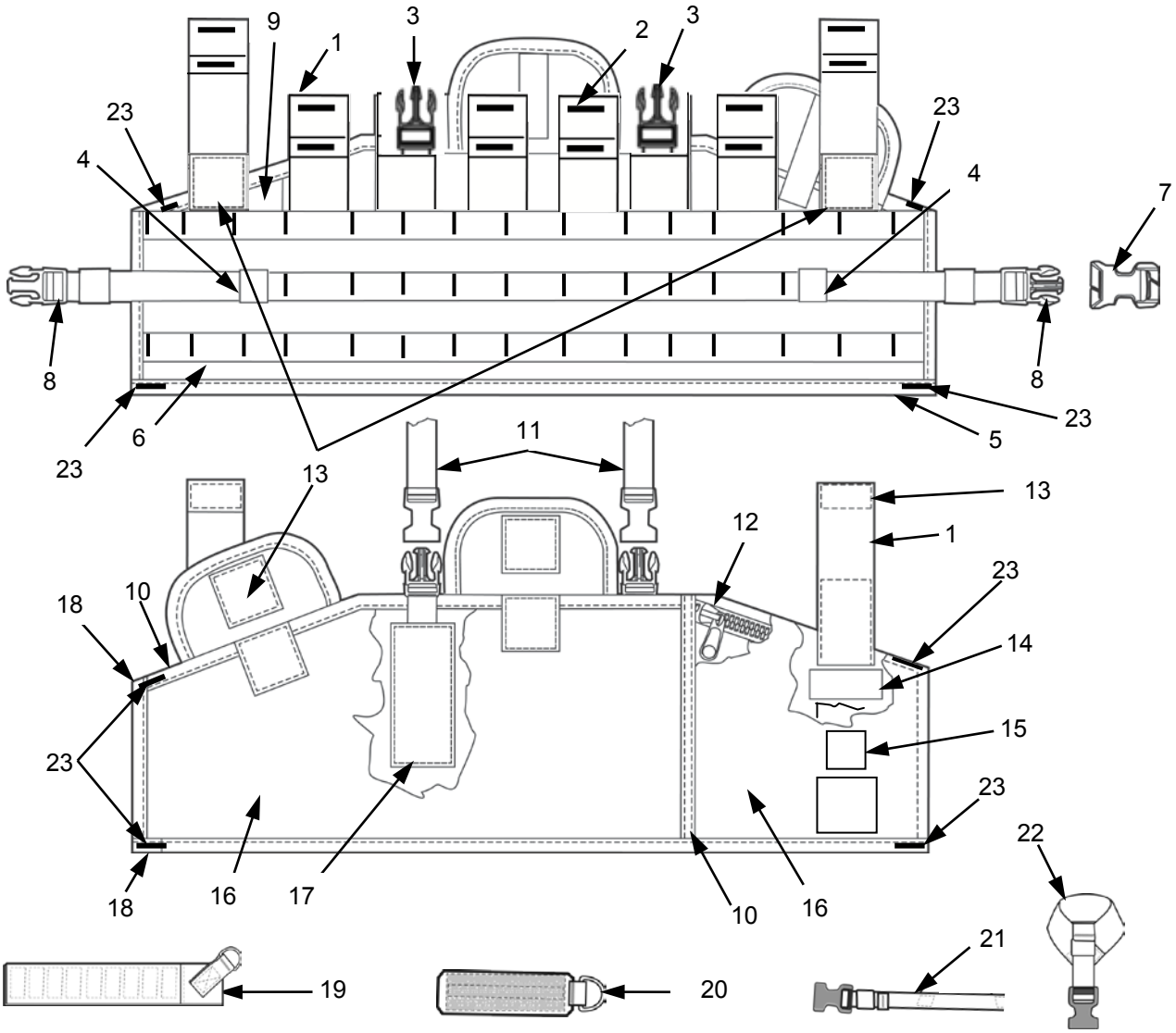


Eye protection should be worn to protect the Soldier from flying particles when operating a sewing machine. Sewing machine needles can break with great force. Failure to wear eye protection may result in injury to eye(s).

Prior to repair operations, each component of the MOLLE II system shall be inspected by qualified personnel to determine the extent of the repair necessary. With the exception of the replacement of hardware items furnished the user as a repair kit, all repairs to these components will be accomplished at the maintainer level or higher, using FM 10-16 as a general guide.

Use Figures 1 to 5 to determine the location and construction of equipment in repair procedures.

REPAIR — CONTINUED



Legend (Front View)

1. Webbing, 2-inch
2. Pattern, Flap
3. Single Bar Side Release Buckle 1-inch, Male
4. Elastic Webbing
5. Tape, Binding, 1-inch
6. Pattern, Front
7. Quick Attach Slide Release Buckle, 1-inch, Female
8. Anti-Slip Side Release Buckle 1-inch, Male
9. Pattern, Back

Legend (Back View)

10. Tape, Binding, 1-inch
11. Harness Assembly
12. Slide, Fastener (Coil Chain Zipper)
13. Fastener Tape, Loop, 2-inch
14. Webbing, 1-inch
15. Fastener Tape, Hook, 1½-inch
16. Pattern, Inside Mesh
17. Identification/Instruction, Labels
18. Thread, Size E
19. Right Side Adapter Assembly
20. Left Side Adapter Assembly
21. Attaching Strap Assembly
22. Soldier Plate Carrier System (SPCS) Adapter
23. Bar Tack (Back and Front View)

Figure 1. Tactical Assault Panel (TAP).

REPAIR — CONTINUED

Restitching

1. Use Figure 1 to identify component(s) to be repaired.
2. Use Table 1 to determine specific sewing machine, thread size, and stitching requirements.
3. Overstitch or backstitch by ½ inch for all 301-lockstitch seams.
4. Trim running ends of thread.

Table 1. Tactical Assault Panel (TAP) Stitching Requirements.

COMPONENT	RECOMMENDED SEWING MACHINE	STITCHES PER INCH	THREAD SIZE
Tactical Assault Panel			
Binding Tape	Medium Duty	7 to 11	E
1-inch MOLLE II Webbing	Bar Tack	42 to 48	E
All Other Components	Medium Duty	7 to 11	F

END OF TASK

Buckle Replacement

Replace buckles using replacement procedures in WP 0034.

END OF TASK

REPLACE

Replace Tactical Assault Panel with serviceable item from stock.

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE
HYDRATION SYSTEM CARRIER ASSEMBLY
REPAIR, REPLACE

INITIAL SETUP:

Tools

Knife, Hot Metal (WP 0042, Table 2, Item 2)
Ruler, Tab, Metal, 16-inch (WP 0042, Table 2, Item 3)
Sewing Machine, Industrial Bar Tack (WP 0042, Table 2, Item 4)
Sewing Machine, Medium Duty (WP 0042, Table 2, Item 5)
Shears, Tailor's, 12-inch (WP 0042, Table 2, Item 6)
Stitch Removal Tool (WP 0042, Table 2, Item 7)
Tape, Measuring (WP 0042, Table 2, Item 8)

Personnel Required

Non-MOS specific (1)

References

FM 10-16

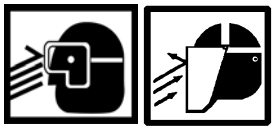
Materials/Parts

Pencil, China Marker, Yellow, A-A-87 (WP 0043, Item 2)
Thread, Nylon, V-T-295, Size E, TY I, II, or III CL A, FG504 (WP 0043, Item 4)
Thread, Nylon, V-T-295, Size F, TY I, II, or III CL A, FG504 (WP 0043, Item 5)
Thread, Nylon, V-T-295, Size FF, TY I, II, or III CL A, FG504 (WP 0043, Item 6)

Equipment Condition

Unpacked

REPAIR

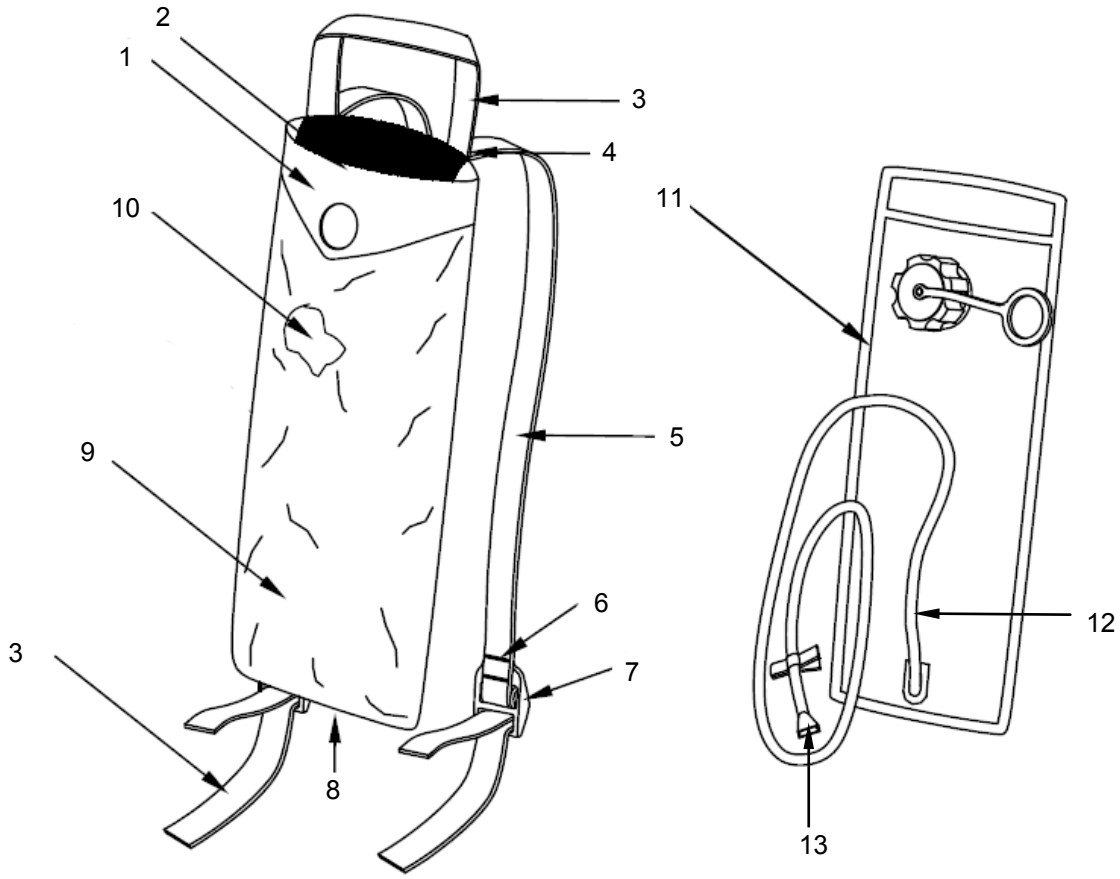


Eye protection should be worn to protect the Soldier from flying particles when operating a sewing machine. Sewing machine needles can break with great force. Failure to wear eye protection may result in injury to eye(s).

Prior to repair operations, each component of the MOLLE II system shall be inspected by qualified personnel to determine the extent of the repair necessary. With the exception of the replacement of hardware items furnished to the user as a repair kit, all repairs to these components will be accomplished at the maintainer level or higher, using FM 10-16 as a general guide.

Use Figures 1 and 2 to determine location and construction of equipment in repair procedures.

REPAIR — CONTINUED

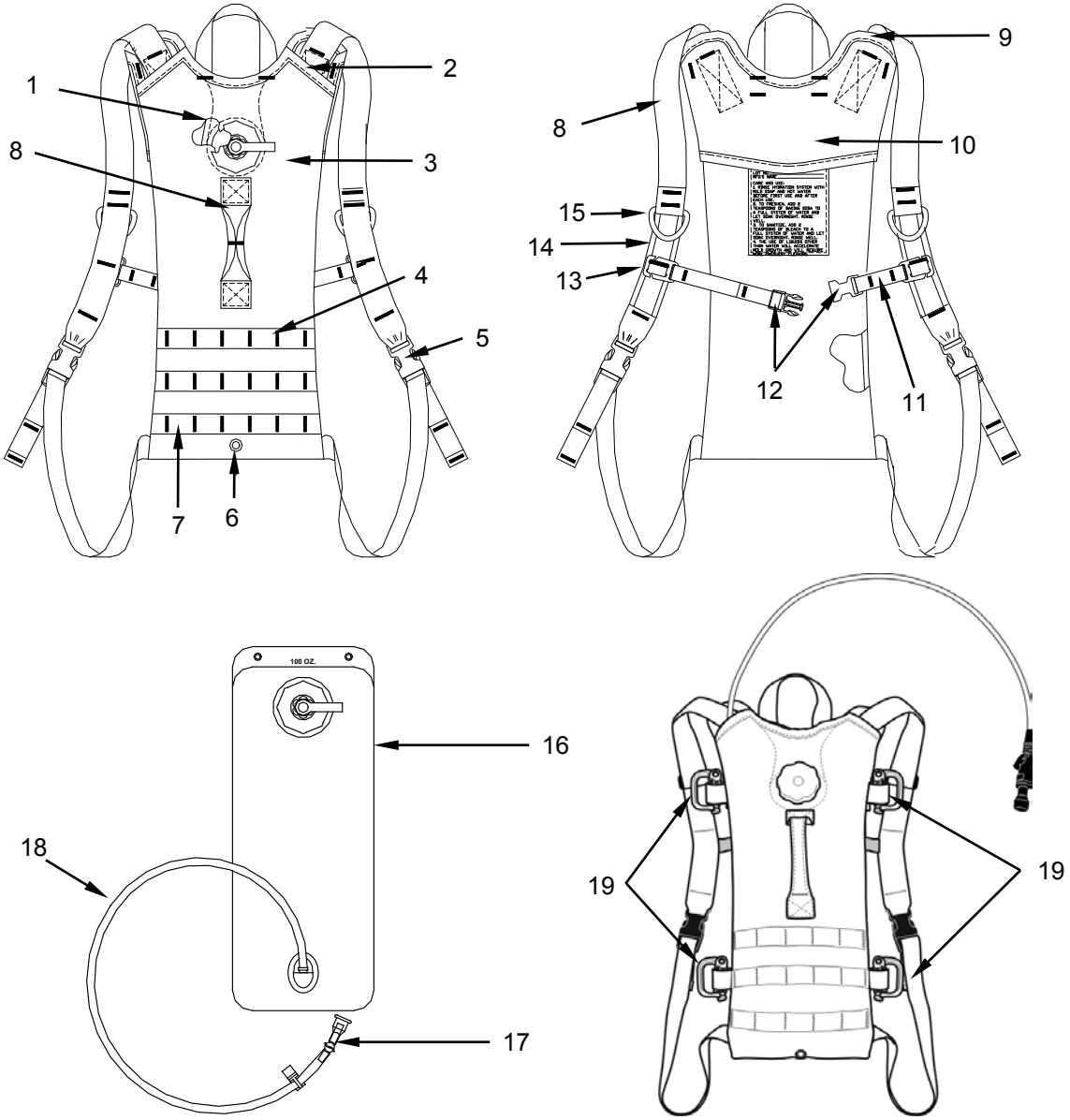


Legend

1. Nylon Duck Fabric (Black)
2. Fastener Tape, Hook-and-Loop, 2-inch wide
3. Webbing, 1-inch wide
4. Thread, Size F
5. Webbing, 1½-inch wide
6. Thread, Size E
7. Buckle, 1-inch
8. Grommet
9. Nylon Duck Fabric
10. Foam, ¼-inch
11. Bladder
12. Drink Tube
13. Bite Valve

Figure 1. Hydration System Carrier Assembly.

REPAIR — CONTINUED



Legend

1. Polyethylene, 0.030-inch
2. Binding Tape, 1-inch
3. Nylon/Foam Laminate
4. Thread, Nylon, Size E
5. Side Release Buckle, 1-inch
6. Eyelet and Washer
7. Webbing, Nylon, 1-inch
8. Webbing, Nylon, 1½-inch
9. Thread, Nylon, Size E
10. Textured Nylon Duck
11. Webbing, ¾-inch
12. Side Release Buckle, ¾-in
13. Adjuster Buckle, ¾- to 1-inch
14. Thread, Nylon, Size F
15. D-Ring, 1½-inch
16. Bladder
17. Bite Valve
18. Drink Tube
19. Grimlocks

Figure 2. Hydration System Carrier Assembly (Alternate).

REPAIR — CONTINUED

Restitching

1. Use Figures 1 and 2 to identify component to be repaired.
2. Use Table 1 to determine specific sewing machine, thread size, and stitching requirements.
3. Overstitch or backstitch by ½ inch for all straight seams.
4. Trim running ends of thread.

Table 1. Hydration System Carrier Assembly Stitching Requirements.

COMPONENT	RECOMMENDED SEWING MACHINE	STITCHES PER INCH	THREAD SIZE
Rifleman Set			
Hydration System Carrier			
General	Medium Duty	8 to 10	F
Edge Binding	Medium Duty	7 to 11	E
Bar Tacks	Bar Tack	42 to 48	E

END OF TASK

REPLACE

Hydration System Bladder

A used hydration system bladder cannot be repaired or re-issued. A new bladder is used to replace an existing one.

END OF TASK

Hydration System Tubing

Used hydration system tubing cannot be repaired or re-issued. New hydration system tubing is used to replace existing tubing.

END OF TASK

Hydration System Valve

A used hydration system valve cannot be repaired or re-issued. A new hydration system valve is used to replace an existing system valve.

END OF TASK

Hydration System Carrier Assembly

Replace the Hydration System Carrier Assembly with serviceable item from stock.

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE
ASSAULT PACK
REPAIR, REPLACE

INITIAL SETUP:

Tools

Knife, Hot Metal (WP 0042, Table 2, Item 2)
Ruler, Tab, Metal, 16-inch (WP WP 0042, Table 2, Item 3)
Sewing Machine, Industrial Bar Tack (WP 0042, Table 2, Item 4)
Sewing Machine, Medium Duty (WP 0042, Table 2, Item 5)
Shears, Tailor's, 12-inch (WP 0042, Table 2, Item 6)
Stitch Removal Tool (WP 0042, Table 2, Item 7)
Tape, Measuring (WP 0042, Table 2, Item 8)

Personnel Required

Non-MOS specific (1)

References

FM 10-16
WP 0034

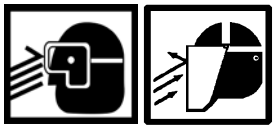
Materials/Parts

Pencil, China Marker, Yellow, A-A-87 (WP 0043, Item 2)
Thread, Nylon, V-T-295, Size E, TY I, II, or III CL A, FG504 (WP 0043, Item 4)
Thread, Nylon, V-T-295, Size F, TY I, II, or III CL A, FG504 (WP 0043, Item 5)
Thread, Nylon, V-T-295, Size FF, TY I, II, or III CL A, FG504 (WP 0043, Item 6)

Equipment Condition

Lay out on flat surface or other suitable area.

REPAIR



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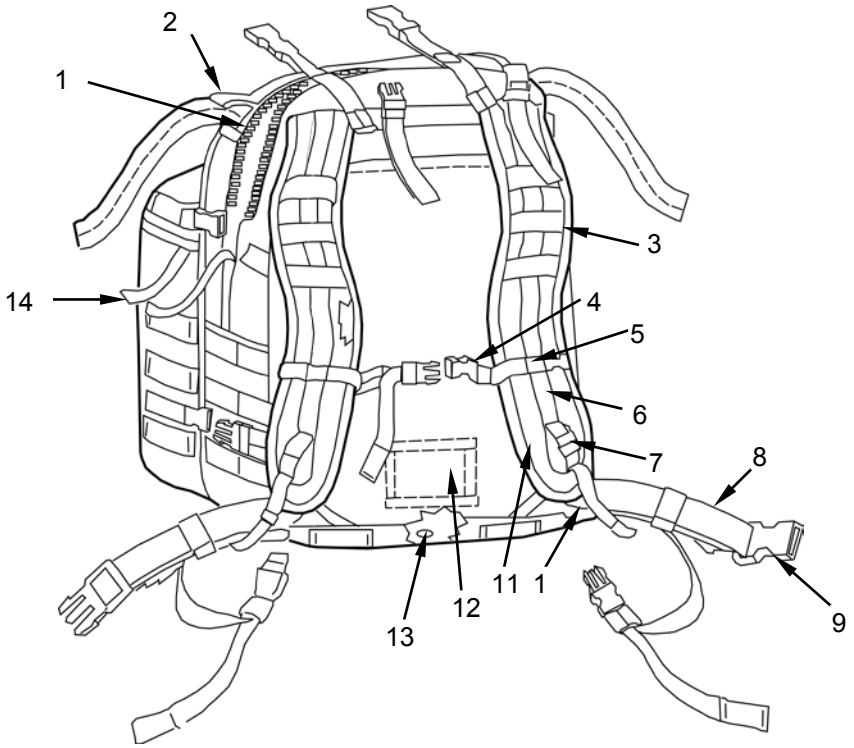
Use Figures 1 and 2 to determine location and construction of equipment in repair procedures.

REPAIR — CONTINUED

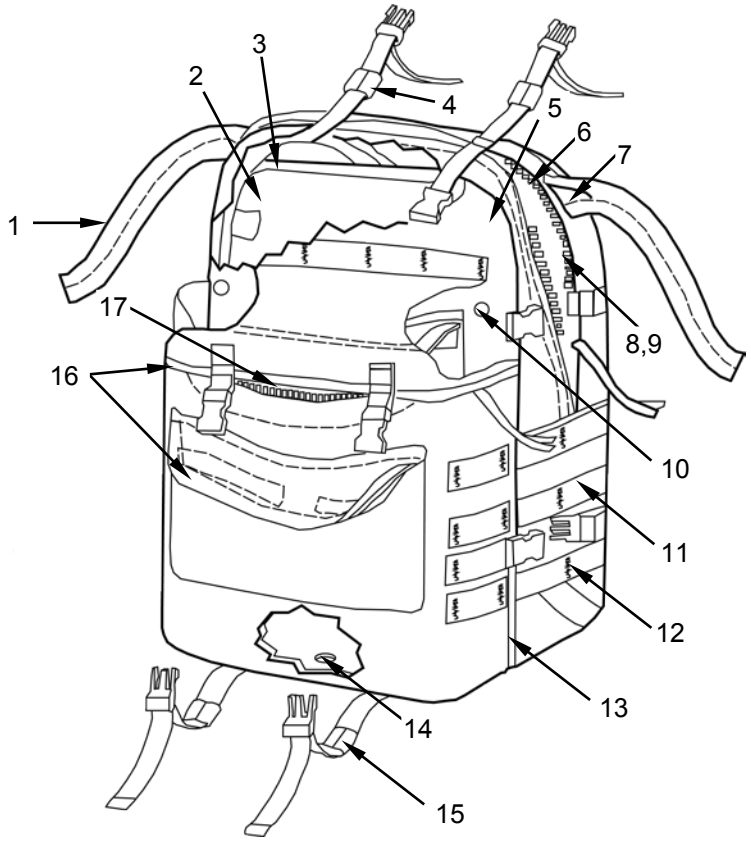


Legend

1. Slide Fastener
2. Thread, Size FF
3. Binding Tape, 1-inch
4. Side Release Buckle, 1-inch
5. Keeper, Sternum Strap
6. Webbing, 1-inch
7. Webbing, Nylon, $^{9}/_{16}$-inch
8. Webbing, 1½-inch
9. Side Release Buckle, 1½-inch
10. D-Ring, 1-inch
11. Textured Nylon Duck
12. Polyethylene, .020-inch
13. Eyelet (Drain)
14. Tubular Braid

Figure 1. Assault Pack (Front View).

REPAIR — CONTINUED



Legend

1. Webbing, Tan, $1^{23}/_{32}$-inch
2. Plastic Shield
3. Foam ¼-inch
4. Webbing, Elastic, 1-inch
5. Textured Nylon Duck
6. Slide Fastener
7. Hook-and-Loop Fastener 2-inch
8. Metal Loop
9. Webbing, 1-inch
10. Snap Fastener/Stud Eyelet
11. Webbing, 1-inch
12. Thread, Size E
13. Thread, Size F
14. Eyelet (Drain)
15. Webbing, Elastic, 1-inch
16. Binding Tape, 1-inch
17. Side Release Buckle, 1-inch

Figure 2. Assault Pack (Rear View).

REPAIR — CONTINUED

Re-stitching

1. Use Figures 1 and 2 to identify the component to be repaired.
2. Use Table 1 to determine specific sewing machine, thread size, and stitching requirements.
3. Overstitch or backstitch by ½ inch for all 301-lockstitch seams.
4. Trim running ends of thread.

Table 1. Assault Pack Stitching Requirements.

COMPONENT	RECOMMENDED SEWING MACHINE	STITCHES PER INCH	THREAD SIZE
Rifleman Set			
Assault Pack			
General	Medium Duty	8 to 10	F
Parachute attaching straps/handle	Medium Duty	1 to 11	FF
Binding Tape	Medium Duty	7 to 11	E
1-inch MOLLE II Webbing	Bar Tack	42 to 48	E

END OF TASK

Buckle Replacement

Replace buckles using replacement procedures in WP 0034.

END OF TASK

REPLACE

Replace Assault Pack with serviceable item from stock.

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE
WAIST PACK
REPAIR, REPLACE

INITIAL SETUP:

Tools

Knife, Hot Metal (WP 0042, Table 2, Item 2)
Ruler, Tab, Metal, 16-inch (WP 0042, Table 2, Item 3)
Sewing Machine, Industrial Bar Tack (WP 0042, Table 2, Item 4)
Sewing Machine, Medium Duty (WP 0042, Table 2, Item 5)
Shears, Tailor's, 12-inch (WP 0042, Table 2, Item 6)
Stitch Removal Tool (WP 0042, Table 2, Item 7)
Tape, Measuring (WP 0042, Table 2, Item 8)

Personnel Required

Non-MOS specific (1)

References

FM 10-16
WP 0034

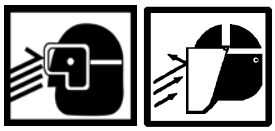
Materials/Parts

Pencil, China Marker, Yellow, A-A-87 (WP 0043, Item 2)
Thread, Nylon, V-T-295, Size E, TY I, II, or III CL A, FG504 (WP 0043, Item 4)
Thread, Nylon, V-T-295, Size F, TY I, II, or III CL A, FG504 (WP 0043, Item 5)
Thread, Nylon, V-T-295, Size FF, TY I, II, or III CL A, FG504 (WP 0043, Item 6)

Equipment Condition

Lay out on flat surface or other suitable area.

REPAIR



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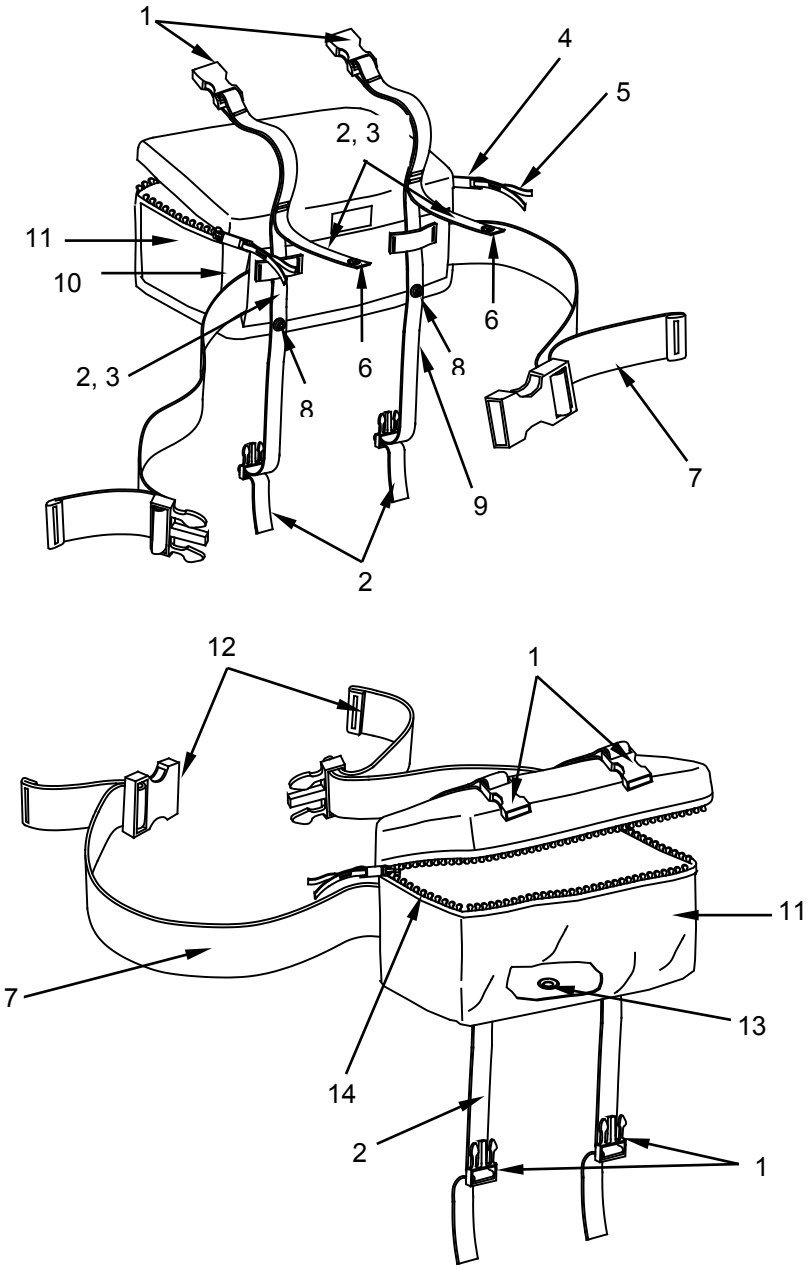
Prior to repair operations, each component of the MOLLE II System shall be inspected by qualified personnel to determine the extent of the repair necessary. With the exception of the replacement of hardware items furnished to the user as a repair kit, all repairs to these components will be accomplished at the maintainer level or higher, using FM 10-16 as a general guide.

Use Figure 1 to determine the location and construction of equipment in repair procedures.

REPAIR — CONTINUED



Legend

1. Side Release Buckles, 1-inch
2. Webbing, 1-inch
3. Polyethylene
4. Thread, Size E
5. Braid Tubular, $^{11}/_{32}$-inch
6. Snap Fasteners, Button/Socket
7. Webbing, 2-inch
8. Snap Fasteners, Eyelet/Stud
9. Webbing, Elastic, 1-inch
10. Thread, Size F
11. Textured Nylon Duck
12. Center Release Buckles, 2-inch
13. Grommet
14. Slide Fastener

Figure 1. Waist Pack.

REPAIR — CONTINUED

Restitching

1. Use Figure 1 to identify component to be repaired.
2. Use Table 1 to determine specific sewing machine, thread size, and stitching requirements.
3. Overstitch or backstitch by ½ inch for all 301-lockstitch seams.
4. Trim running ends of thread.

Table 1. Waist Pack Stitching Requirements.

COMPONENT	RECOMMENDED SEWING MACHINE	STITCHES PER INCH	THREAD SIZE
Rifleman Set			
Waist Pack			
Binding Tape	Medium Duty	7 to 11	E
Waistbelt Webbing	Bar Tack	42 to 48	E
All Other Components	Medium Duty	7 to 11	F

END OF TASK

Buckle Replacement

Replace buckles using replacement procedures in WP 0034.

END OF TASK

REPLACE

Replace Waist Pack with serviceable item from stock.

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE
LARGE FIELD PACK RUCKSACK AND SUSTAINMENT POUCH AND MEDIUM PACK RUCKSACK REPAIR, REPLACE

INITIAL SETUP:

Tools

Knife, Hot Metal (WP 0042, Table 2, Item 2)
Ruler, Tab, Metal, 16-inch (WP 0042, Table 2, Item 3)
Sewing Machine, Industrial Bar Tack (WP 0042, Table 2, Item 4)
Sewing Machine, Medium Duty (WP 0042, Table 2, Item 5)
Shears, Tailor's, 12-inch (WP 0042, Table 2, Item 6)
Stitch Removal Tool (WP 0042, Table 2, Item 7)
Tape, Measuring (0042, Table 2, Item 8)

Personnel Required

Non-MOS specific (1)

References

FM 10-16
WP 0034

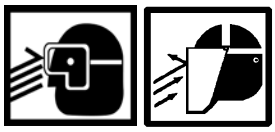
Materials/Parts

Pencil, China Marker, Yellow, A-A-87 (WP 0043, Item 2)
Thread, Nylon, V-T-295, Size E, TY I, II, or III CL A, FG504 (WP 0043, Item 4)
Thread, Nylon, V-T-295, Size F, TY I, II, or III CL A, FG504 (WP 0043, Item 5)
Thread, Nylon, V-T-295, Size FF, TY I, II, or III CL A, FG504 (WP 0043, Item 6)

Equipment Condition

Lay out on flat surface or other suitable area.

REPAIR



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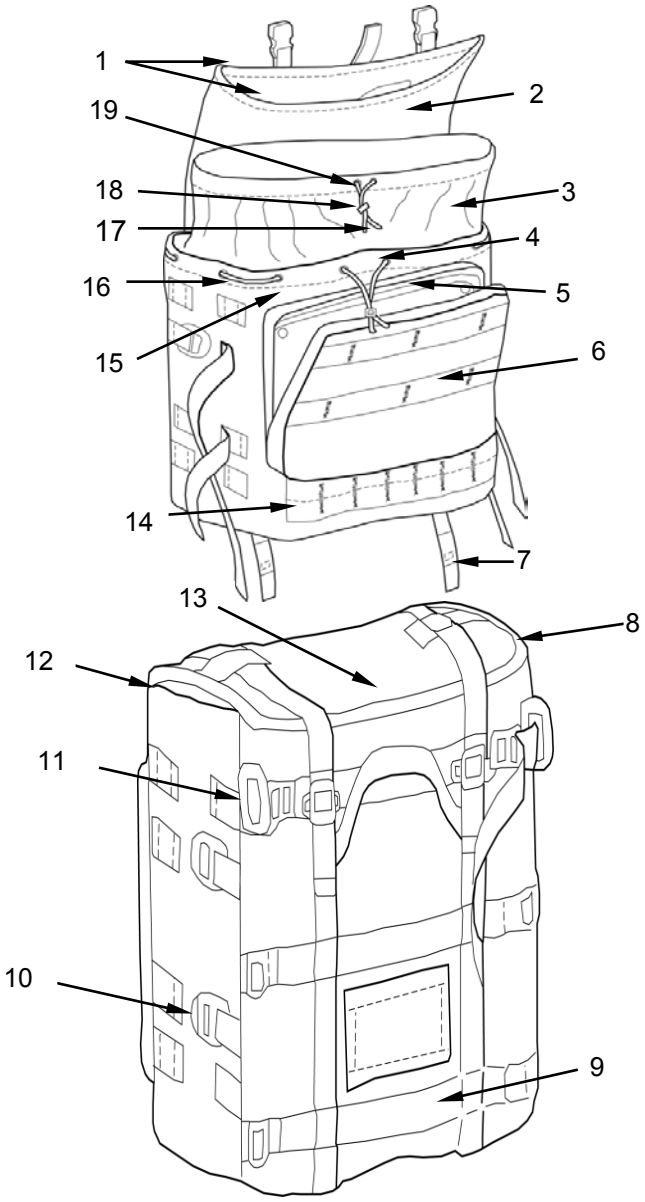
Use Figures 1 and 2 to determine the location and construction of equipment in repair procedures.

REPAIR — CONTINUED

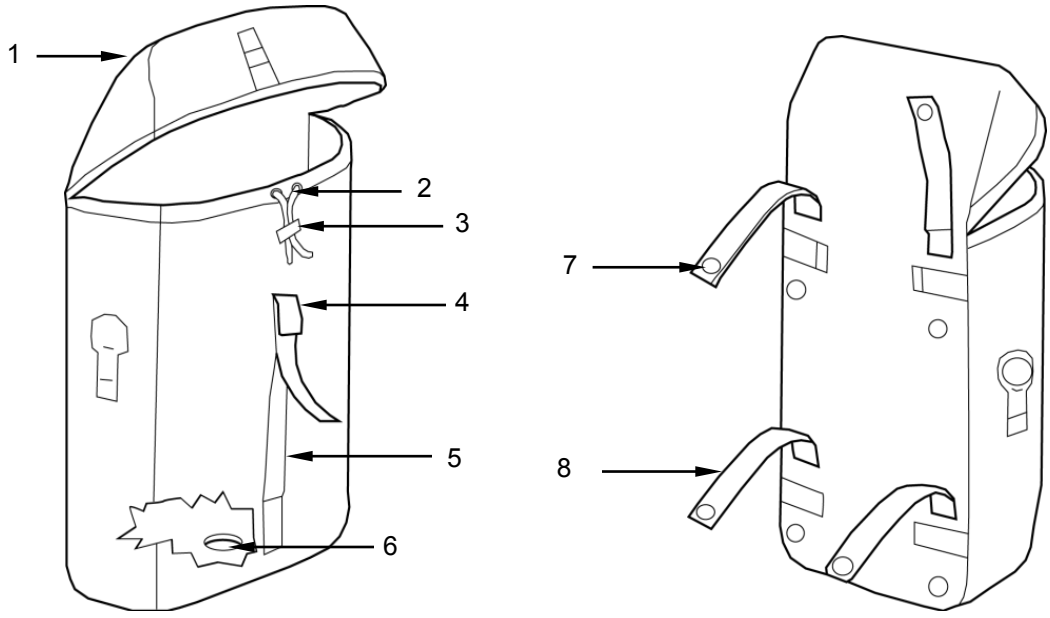


Legend

1. Hook-and-Loop Fastener
2. Film
3. Nylon Cloth
4. Eyelet/Washer
5. Slide Fastener
6. Polyethylene 0.020-inch
7. Side Release Buckle, 1-inch
8. Binding Tape, 1-inch
9. Webbing, 1-inch
10. Buckle, Single Bar
11. Buckle, Double-Bar, 1-inch
12. Thread, Size E
13. Textured Nylon Duck
14. Webbing, 2¼ -inch
15. Thread, Size F
16. Grommet/Washer
17. Cord Lock
18. Nylon Cord (Flat)
19. Eyelet/Washer

Figure 1. Large Field Pack Rucksack (Front and Rear).

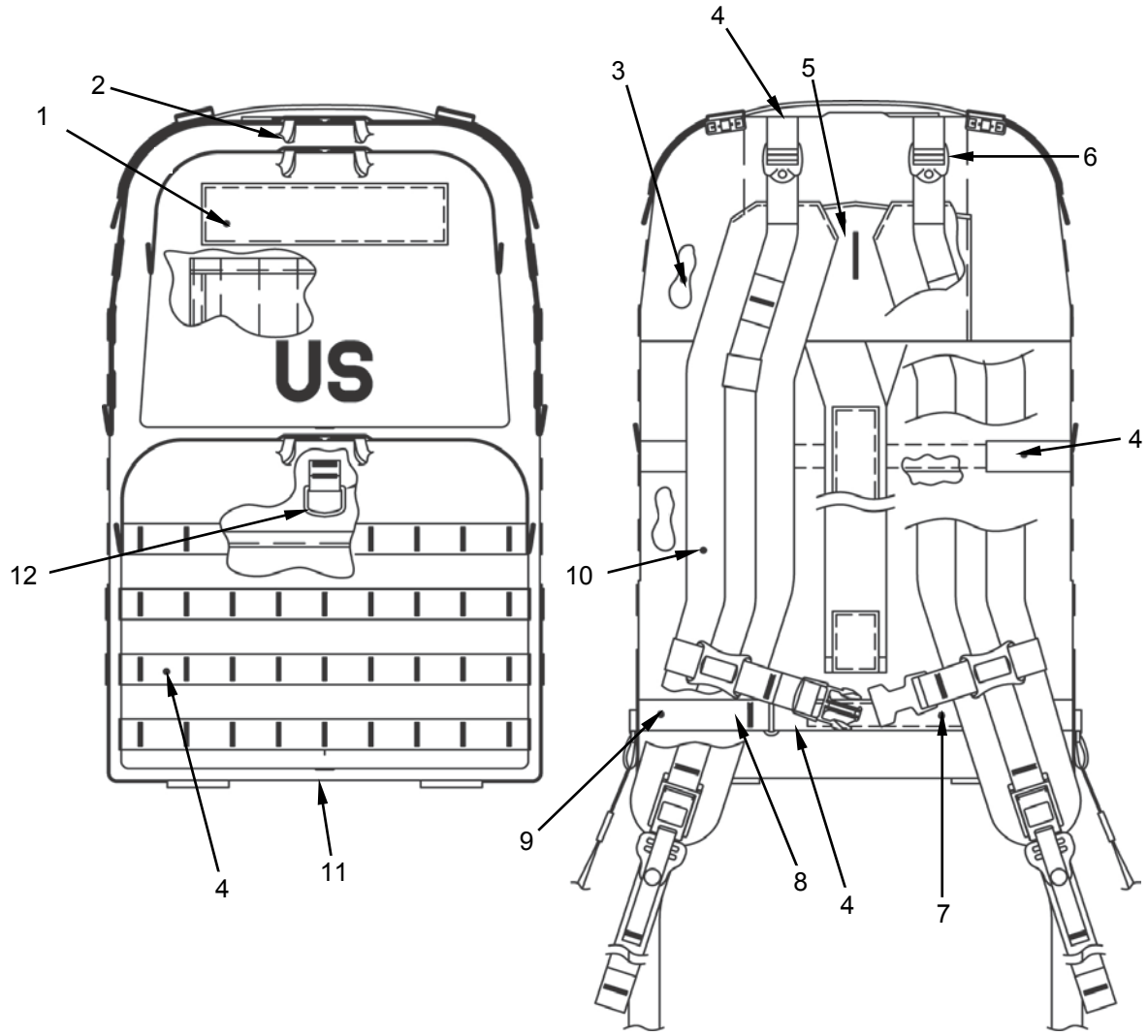
REPAIR — CONTINUED



Legend
1. Binding Tape 1-inch
2. Eyelet/Washer
3. Cord Lock
4. Side Release Buckle, 1-inch
5. Webbing, 1-inch
6. Eyelet
7. Snap Fastener, Eyelet/Stud
8. Polyethylene 0.030-inch

Figure 2. Sustainment Pouch (Front and Rear).

REPAIR — CONTINUED



Legend

1. Fastener Tape, Loop
2. Slide Fastener
3. Foam Padding, Back Support
4. Webbing, 1-Inch
5. Reinforcement, Routing Sleeve
6. 1-Inch Ladderlock Buckle
7. Fastener Tape, Hook
8. Fastener Tape, Loop
9. 1-Inch Brass Loop
10. Shoulder Strap Assembly, Rucksack, Medium
11. Eyelet, Large
12. 1-Inch D-Ring

Figure 3. Medium Field Pack Rucksack (Front and Rear).

REPAIR — CONTINUED

Restitching

1. Use Figures 1 through 3 to identify component to be repaired.
2. Use Table 1 to determine specific sewing machine, thread size, and stitching requirements.
3. Overstitch or backstitch by ½ inch for all 301-lockstitch seams.
4. Trim running ends of thread.

Table 1. Large Field Pack Rucksack and Sustainment Pouch and Medium Pack Rucksack Stitching Requirements.

COMPONENT	RECOMMENDED SEWING MACHINE	STITCHES PER INCH	THREAD SIZE
Rifleman Set			
Rucksack (Large and Medium) and Sustainment Pouch			
Binding Tape	Medium Duty	7 to 11	E
1-inch MOLLE II Webbing	Bar Tack	42 to 48	E
Waistbelt Webbing	Bar Tack	42 to 48	E
All Other Components	Medium Duty	7 to 11	F

END OF TASK

Buckle Replacement

Replace buckles using replacement procedures in WP 0034.

END OF TASK

REPLACE

Replace Large Field Pack Rucksack and Sustainment Pouch and Medium Pack Rucksack with serviceable item from stock.

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE
MOLLE II LARGE PACK FRAME WITH MOLDED HIP BELT, ENHANCED FRAME SHOULDER STRAPS, LOAD LIFTER ATTACHMENT STRAP AND SHOULDER SUSPENSION MALE BUCKLE AND MOLLE II MEDIUM PACK FRAME WITH WAISTBELT ASSEMBLY AND SHOULDER STRAP ASSEMBLY
REPAIR, REPLACE

INITIAL SETUP:

Tools

Knife, Hot Metal (WP 0042, Table 2, Item 2)
Ruler, Tab, Metal, 16-inch (WP 0042, Table 2, Item 3)
Sewing Machine, Bar Tack (WP 0042, Table 2, Item 4)
Sewing Machine, Medium Duty (WP 0042, Table 2, Item 5)
Shears, Tailor's, 12-inch (WP 0042, Table 2, Item 6)
Stitch Removal Tool (WP 0042, Table 2, Item 7)
Tape, Measuring (WP 0042, Table 2, Item 8)

Personnel Required

Non-MOS specific (1)

References

FM 10-16
WP 0034

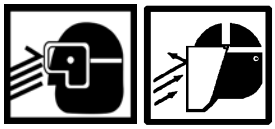
Materials/Parts

Pencil, China Marker, Yellow, A-A-87 (WP 0043, Item 2)
Thread, Nylon, V-T-295, Size E, TY I, II, or III CL A, FG504 (WP 0043, Item 4)
Thread, Nylon, V-T-295, Size F, TY I, II, or III CL A, FG504 (WP 0043, Item 5)
Thread, Nylon, V-T-295, Size FF, TY I, II, or III CL A, FG504 (WP 0043, Item 6)

Equipment Condition

Lay out on flat surface or other suitable area.

REPAIR

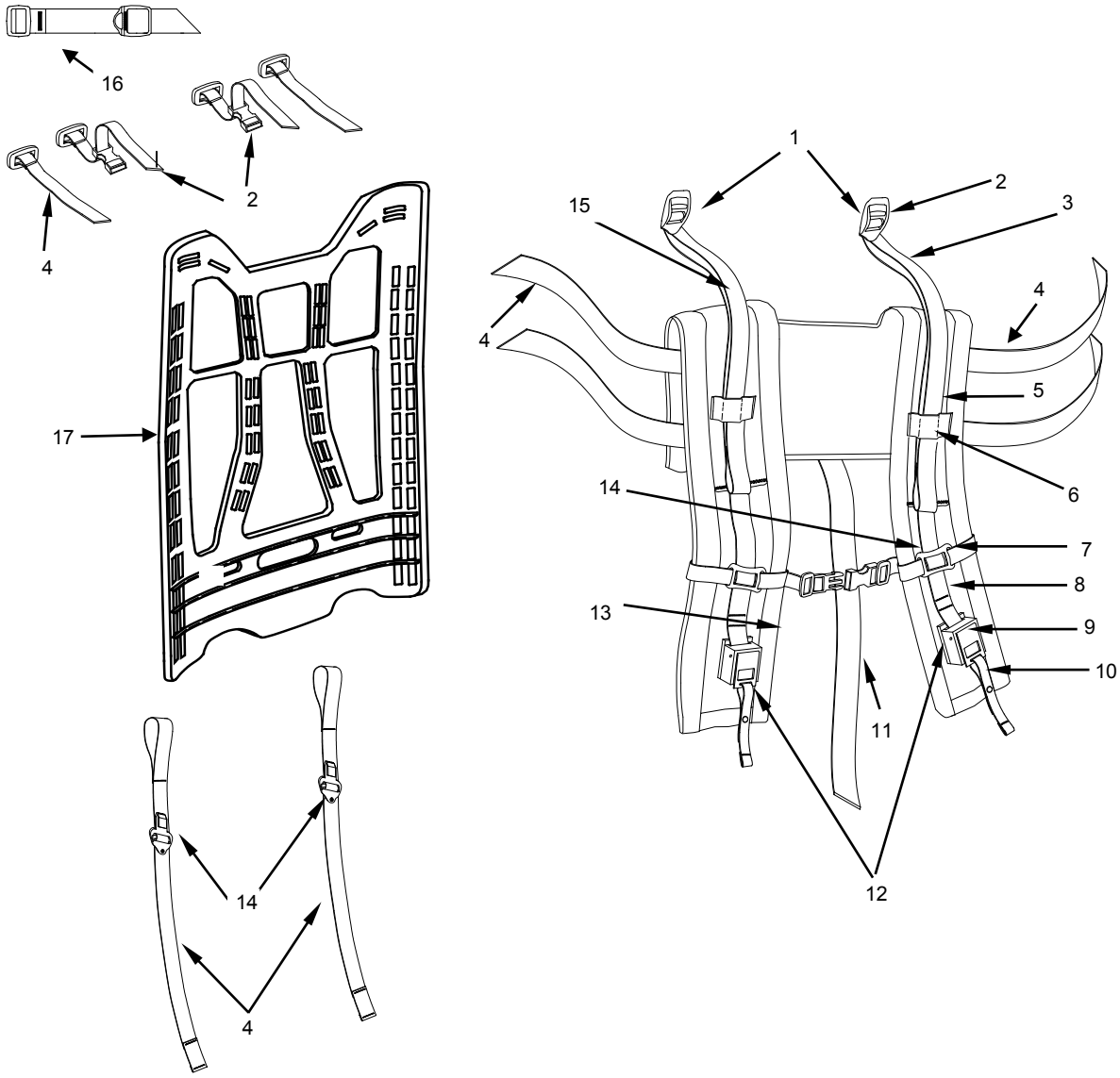


Eye protection should be worn to protect the Soldier from flying particles when operating a sewing machine. Sewing machine needles can break with great force. Failure to wear eye protection may result in injury to eye(s).

Prior to repair operations, each component of the MOLLE II system shall be inspected by qualified personnel to determine the extent of the repair necessary. With the exception of the replacement of hardware items furnished to the user as a repair kit, all repairs to these components will be accomplished at the maintainer level or higher, using FM 10-16 as a general guide.

Use Figures 1 through 6 to determine the location and construction of equipment in repair procedures.

REPAIR — CONTINUED

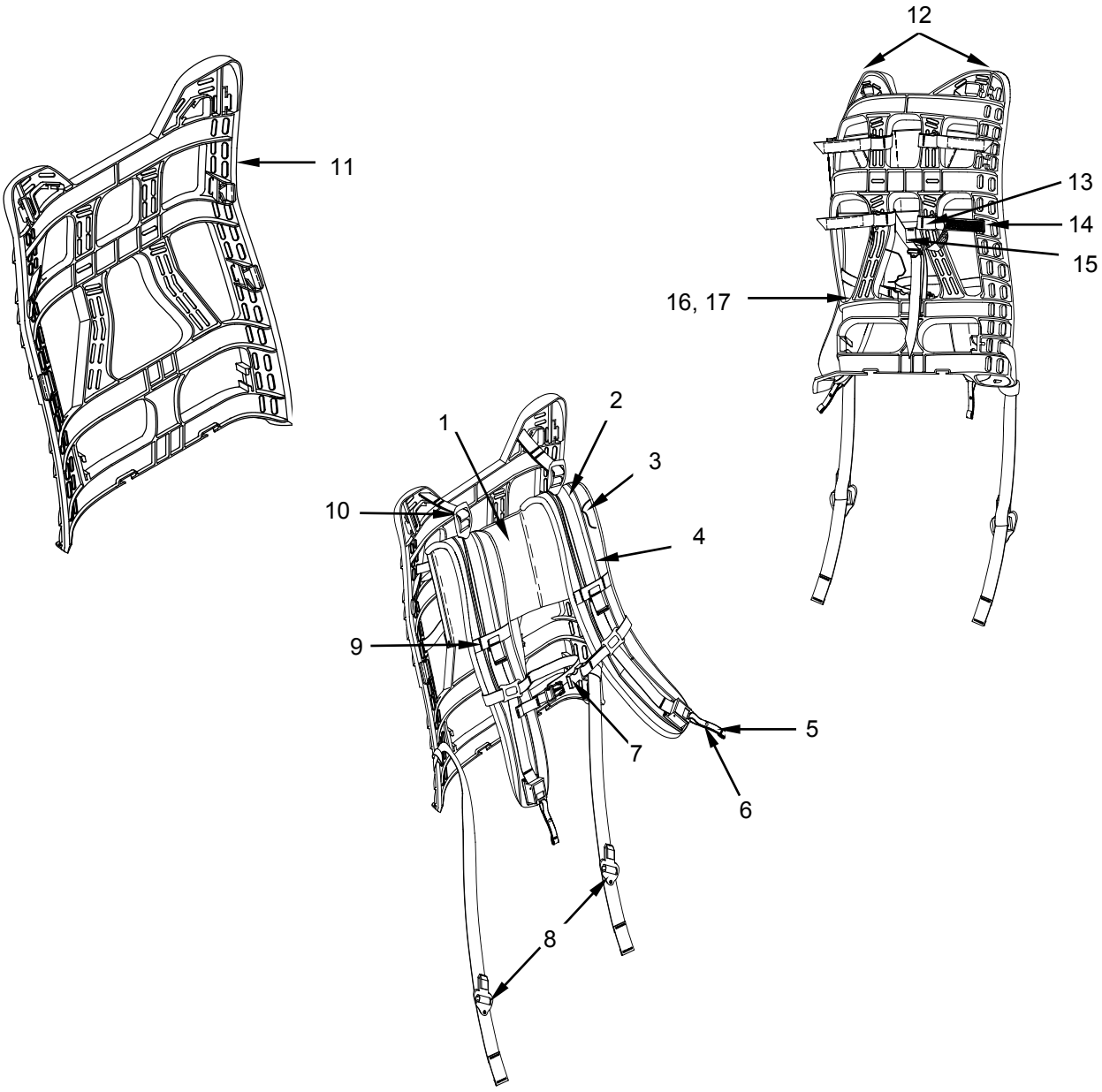


Legend

1. Double Bar Buckle 1½-inch
2. Double Bar Buckle, 1-inch
3. Textured Nylon Duck
4. Webbing, 1-inch
5. Thread, Size E
6. Binding Tape, 1-inch
7. Keeper, Sternum Strap
8. Foam ¼-inch
9. Snap Fastener Enhanced Frame
10. Webbing, $^{9}/_{16}$-inch, Type I
11. Webbing, 1½-inch
12. Quick Release Buckle
13. Thread, Size F
14. Side Release Buckle, 1-inch
15. Webbing, 2-inch
16. Slide, 1-inch
17. Enhanced Frame

Figure 1. Large Pack Frame (View 1).

REPAIR — CONTINUED

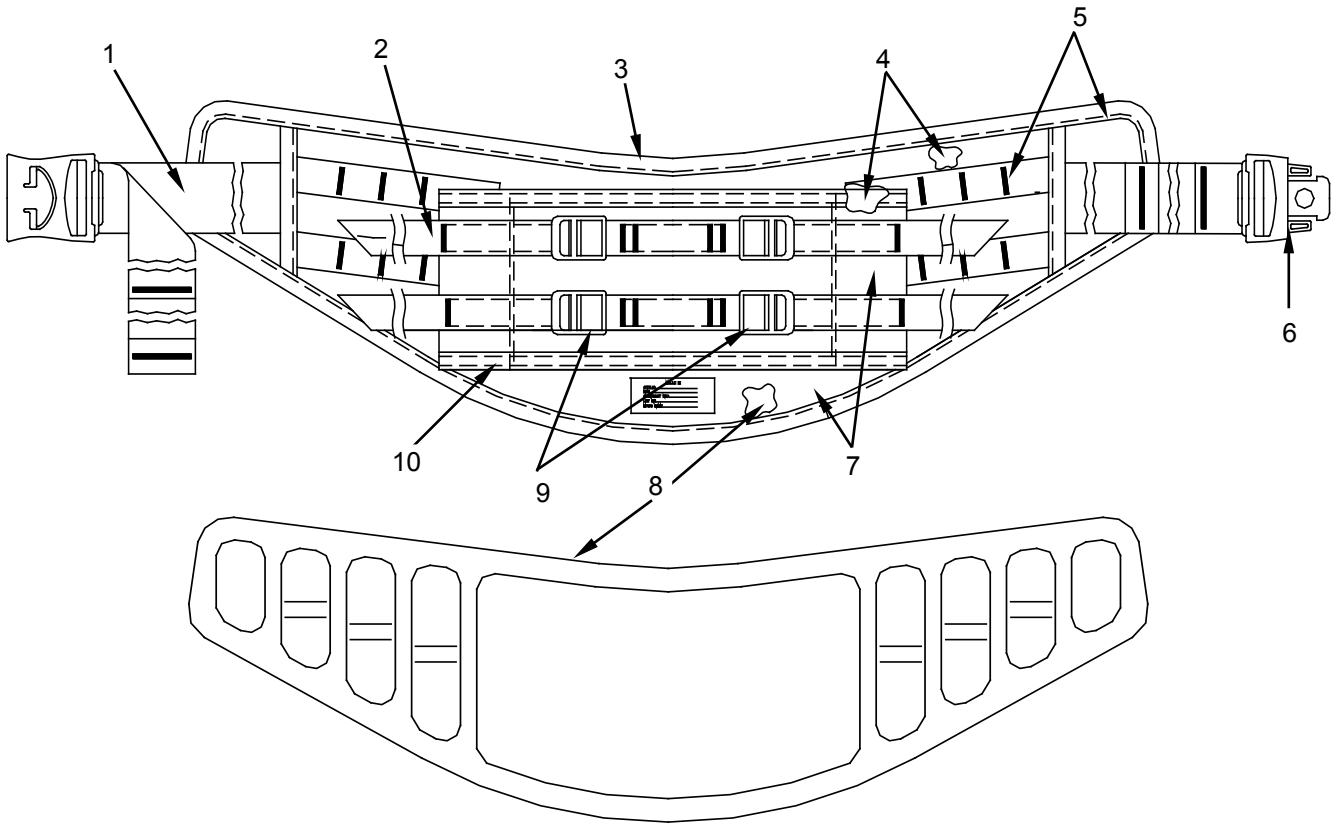


Legend

1. Textured Nylon Duck
1. Webbing, 2-inch
3. Foam, ¼-inch
4. Thread, Size F
5. Webbing, $^{9}/_{16}$-inch, Type I
6. Snap Fastener, Button/Socket
7. Side Release Buckle, 1-inch
8. Buckles
9. Webbing, 1-inch
10. Double Bar Buckle, 1-inch
11. Frame
12. Metal Slides, 1-inch
13. Webbing, 1-inch
14. Brass Loop, 1-inch
14. Fastener Tape, Hook-and-Tape, 1-inch
15. Cinch Buckle, 1-inch
16. Binding Tape, 1-inch
17. Thread, Size E

Figure 2. Large Pack Frame (View 2).

REPAIR — CONTINUED



Legend
1. Webbing, 2-inch
2. Webbing, 1-inch
3. Binding Tape, 1-inch
4. Plastic, Polyethylene
5. Thread, Size E
6. Center Release Buckle, 2-inch
7. Textured Nylon Duck
8. Molded Hip Belt
9. Tension Lock, 1-inch
10. Thread Size F

Figure 3. Molded Hip Belt.

REPAIR — CONTINUED

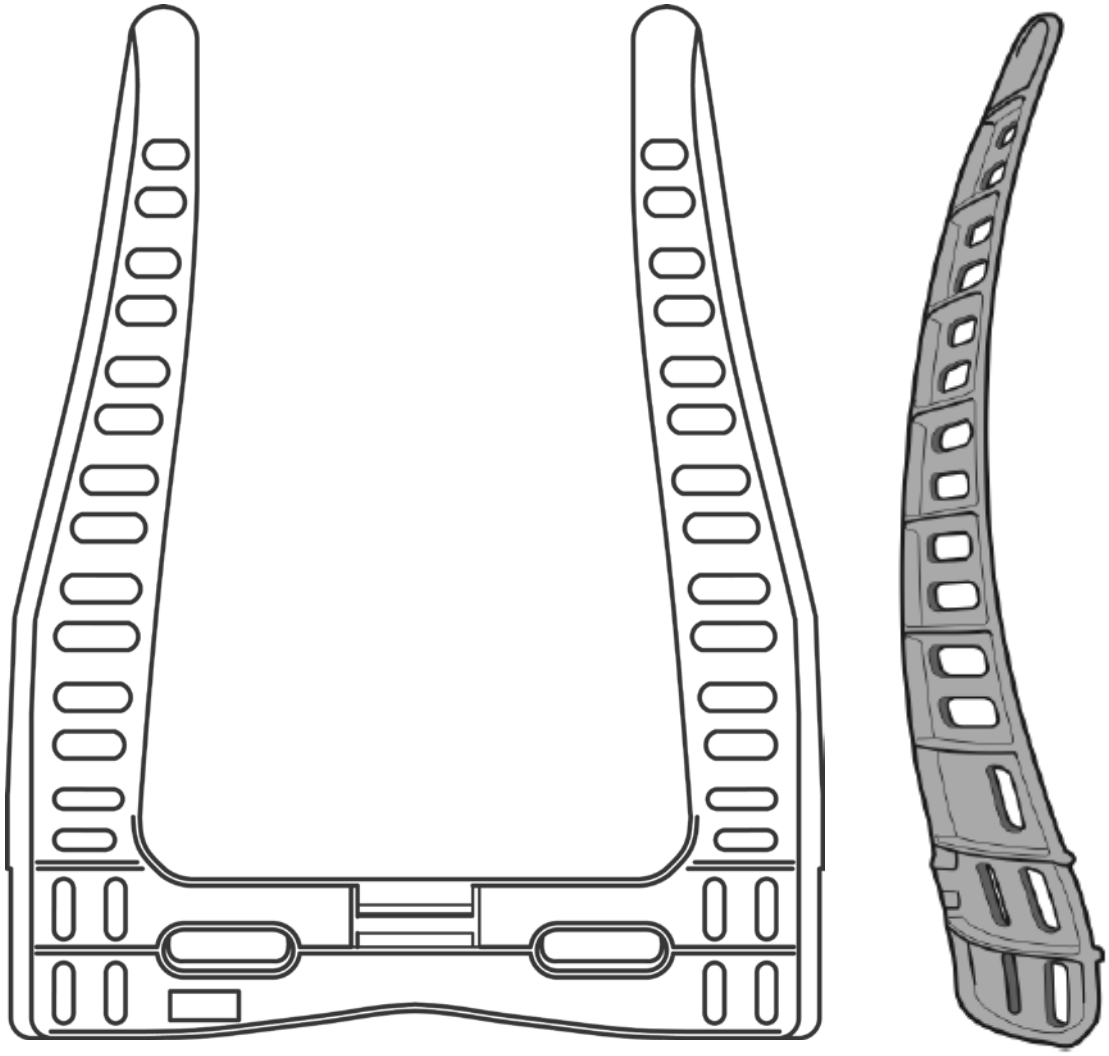
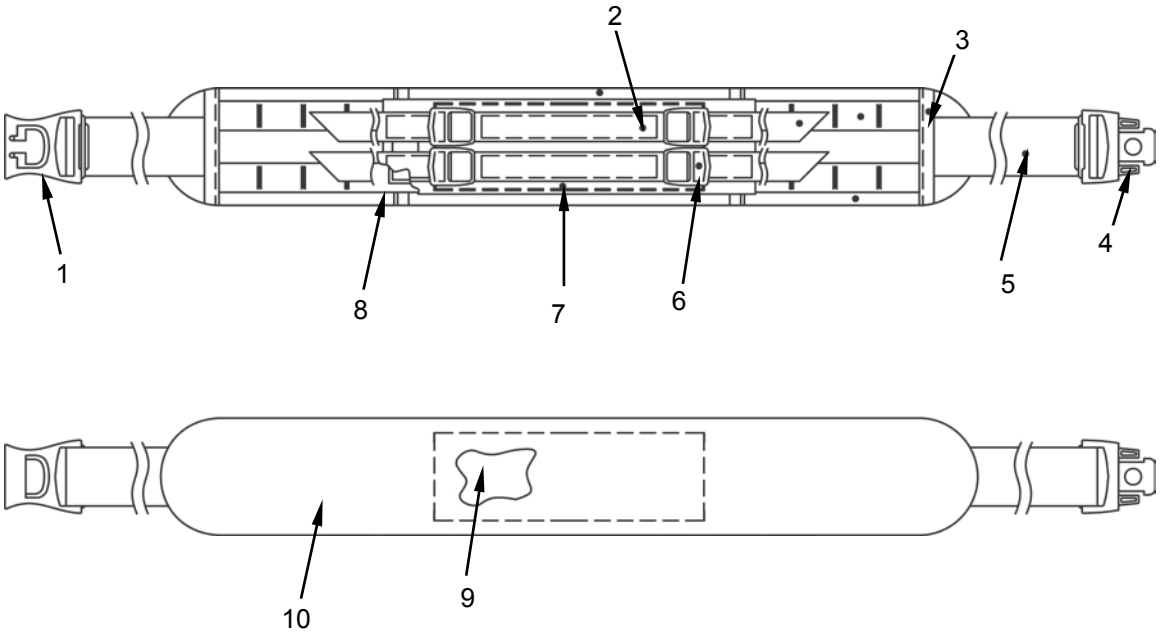


Figure 4. Medium Pack Frame, Front and Side View.

REPAIR — CONTINUED

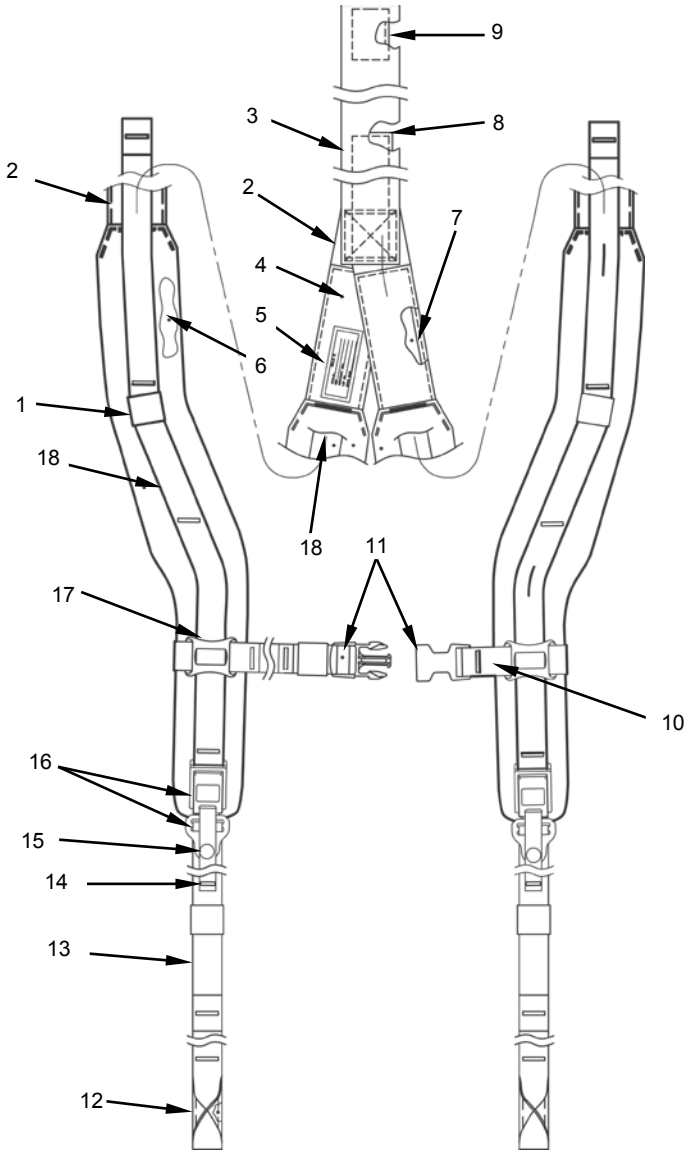


Legend

1. 2-inch Center Release Buckle (Female)
2. Webbing, 1-inch
3. Tape, Binding, 1-inch
4. 2-inch Center Release Buckle (Male)
5. Webbing, 2-inch
6. 1-inch Ladderlock Buckle
7. Webbing, 3 1/2-inch
8. I.D./Instruction Label
9. Foam Padding
10. Pattern, Inside

Figure 5. Waistbelt Assembly.

REPAIR — CONTINUED



Legend

1. Elastic Webbing, 1-inch (cut length 2 5/8")
2. Webbing, 2-inch (cut length 20")
3. Webbing, 2-inch (cut length 17 1/2")
4. Webbing, 2-inch (cut length 6 3/8")
5. Identification Label, Shoulder Strap
6. Foam Padding
7. Plastic Stiffener
8. Fastener Tape, Loop, 1 1/2-inch
9. Foam Padding
10. Identification Label, Shoulder Strap
11. 1-inch Side Release Buckle
12. Identification Label, Strap
13. Webbing, 1-inch (cut length 33")
14. Webbing, 9/16-inch (cut length 11 1/2")
15. Snap Fastener, Shoulder Strap
16. Quick Release
17. Sternum Strap
18. Webbing, 1-inch (cut length 28")

Figure 6. Shoulder Strap Assembly.

END OF TASK

REPAIR — CONTINUED

Restitching

1. Use Figures 1 through 6 to identify component to be repaired.
2. Use Table 1 to determine specific sewing machine, thread size, and stitching requirements.
3. Overstitch or backstitch by ½ inch for all 301-lockstitch seams.
4. Trim running ends of thread.

Table 1. Large Pack Frame with Molded Hip Belt, Enhanced Frame Shoulder Straps, and Load Lifter Attachment Strap and Medium Pack Frame with Waistbelt Assembly and Shoulder Strap Assembly Stitching Requirements.

COMPONENT	RECOMMENDED SEWING MACHINE	STITCHES PER INCH	THREAD SIZE
Large Field Pack Set: **Molded Hip Belt, Enhanced Frame Shoulder Straps, and Load Lifter Attachment Strap** **Medium Field Pack Set:** **Medium Frame, Waistbelt Assembly, and Shoulder Strap Assembly**			
Binding Tape	Medium Duty	7 to 11	E
1-inch MOLLE II Webbing	Bar Tack	42 to 48	E
Waistbelt Webbing	Bar Tack	42 to 48	E
All Other Components	Medium Duty	7 to 11	F

END OF TASK

Buckle Replacement

Replace buckles using replacement procedures in WP 0034.

END OF TASK

REPLACE

Replace Large Pack Frame, Molded Hip Belt, Enhanced Frame Shoulder Straps, Load Lifter Attachment Strap, Shoulder Suspension Male Buckle, Medium Pack Frame, Waistbelt Assembly, and Shoulder Strap Assembly with serviceable items from stock.

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE
PISTOL SET
REPAIR, REPLACE

INITIAL SETUP:

Tools

Knife, Hot Metal (WP 0042, Table 2, Item 2)
Ruler, Tab, Metal, 16-inch (WP 0042, Table 2, Item 3)
Sewing Machine, Industrial Bar Tack (WP 0042, Table 2, Item 4)
Sewing Machine, Medium Duty (WP 0042, Table 2, Item 5)
Shears, Tailor's, 12-inch (WP 0042, Table 2, Item 6)
Stitch Removal Tool (WP 0042, Table 2, Item 7)
Tape, Measuring (WP 0042, Table 2, Item 8)

Personnel Required

Non-MOS specific (1)

References

FM 10-16
WP 0034

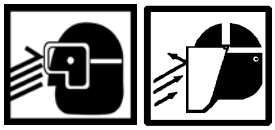
Materials/Parts

Pencil, China Marker, Yellow, A-A-87 (WP 0043, Item 2)
Thread, Nylon, V-T-295, Size E, TY I, II, or III CL A, FG504 (WP 0043, Item 4)
Thread, Nylon, V-T-295, Size F, TY I, II, or III CL A, FG504 (WP 0043, Item 5)
Thread, Nylon, V-T-295, Size FF, TY I, II, or III CL A, FG504 (WP 0043, Item 6)

Equipment Condition

Lay out on flat surface or other suitable area.

REPAIR



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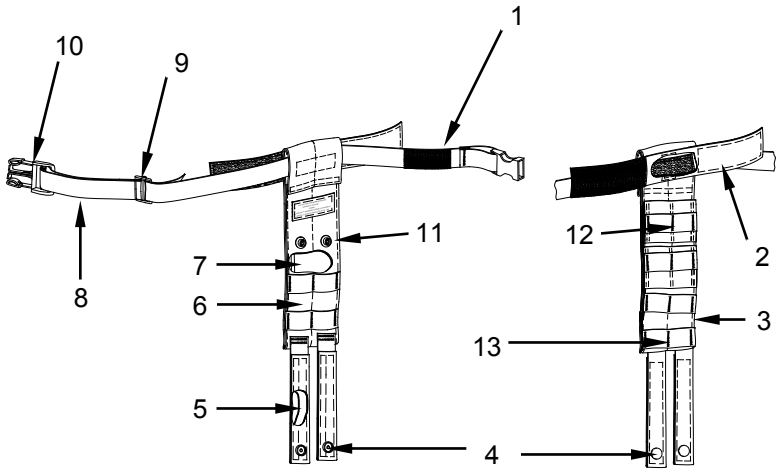
Prior to repair operations, each component of the MOLLE II system shall be inspected by qualified personnel to determine the extent of the repair necessary. With the exception of the replacement of hardware items furnished to the user as a repair kit, all repairs to these components will be accomplished at the maintainer level or higher, using FM 10-16 as a general guide.

Use Figures 1 and 2 to determine location and construction of equipment in repair procedures.

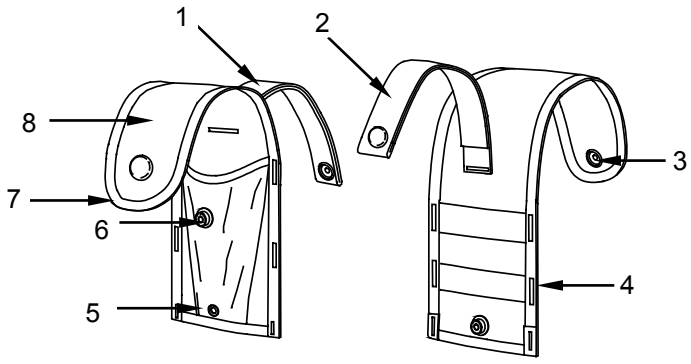
REPAIR — CONTINUED



Legend

1. Hook-and-Loop Fastener
2. Webbing, 1½-inch
3. Thread, Size F
4. Snap Fastener, Button/Socket
5. Polyethylene, High Density, .030-inch
6. Textured Nylon Duck Fabric
7. Polyethylene, High Density, .050-inch
8. Webbing, 1-inch
9. Slide Buckle, 1-inch
10. Side Release Buckle, 1-inch
11. Snap Fastener, Stud/Eyelet
12. Webbing, 2¼-inch
13. Thread Size E

Figure 1. Holster/Leg Extender.



Legend

1. Polyethylene, 0.030-inch x 0.875-inch
2. Webbing, Nylon, 1-inch
3. Snap Fastener, Button/Socket
4. Thread, Size E
5. Snap Fastener, Eyelet/Stud
6. Eyelet (Drain)
7. Binding Tape, 1-inch
8. Textured Nylon Duck, Class III

Figure 2. 9mm Magazine Pouch.

END OF TASK

REPAIR — CONTINUED

Restitching

1. Use Figure 1 to identify component to be repaired.
2. Use Table 1 to determine specific sewing machine, thread size, and stitching requirements.
3. Overstitch or backstitch by ½ inch for all 301-lockstitch seams.
4. Trim running ends of thread.

Table 1. Pistol Set Stitching Requirements.

COMPONENT	RECOMMENDED SEWING MACHINE	STITCHES PER INCH	THREAD SIZE
Pistol Set			
Holster/Leg Extender and 9mm Magazine Pouch			
Binding Tape	Medium Duty	7 to 11	E
1-inch MOLLE II Webbing	Bar Tack	42 to 48	E
All Other Components	Medium Duty	7 to 11	F

END OF TASK

Buckle Replacement

Replace buckles using replacement procedures in WP 0034.

END OF TASK

REPLACE

Replace Pistol Set with serviceable items from stock.

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE
SQUAD AUTOMATIC WEAPON (SAW) GUNNER SET
REPAIR, REPLACE

INITIAL SETUP:

Tools

Knife, Hot Metal (WP 0042, Table 2, Item 2)
Ruler, Tab, Metal, 16-inch (WP 0042, Table 2, Item 3)
Sewing Machine, Industrial Bar Tack (WP 0042, Table 2, Item 4)
Sewing Machine, Medium Duty (WP 0042, Table 2, Item 5)
Shears, Tailor's, 12-inch (WP 0042, Table 2, Item 6)
Stitch Removal Tool (WP 0042, Table 2, Item 7)
Tape, Measuring (WP 0042, Table 2, Item 8)

Personnel Required

Non-MOS specific (1)

References

FM 10-16
WP 0034

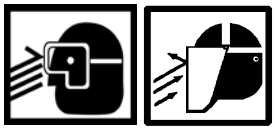
Materials/Parts

Pencil, China Marker, Yellow, A-A-87 (WP 0043, Item 2)
Thread, Nylon, V-T-295, Size E, TY I, II, or III CL A, FG504 (WP 0043, Item 4)
Thread, Nylon, V-T-295, Size F, TY I, II, or III CL A, FG504 (WP 0043, Item 5)
Thread, Nylon, V-T-295, Size FF, TY I, II, or III CL A, FG504 (WP 0043, Item 6)

Equipment Condition

Lay out on flat surface or other suitable area.

REPAIR

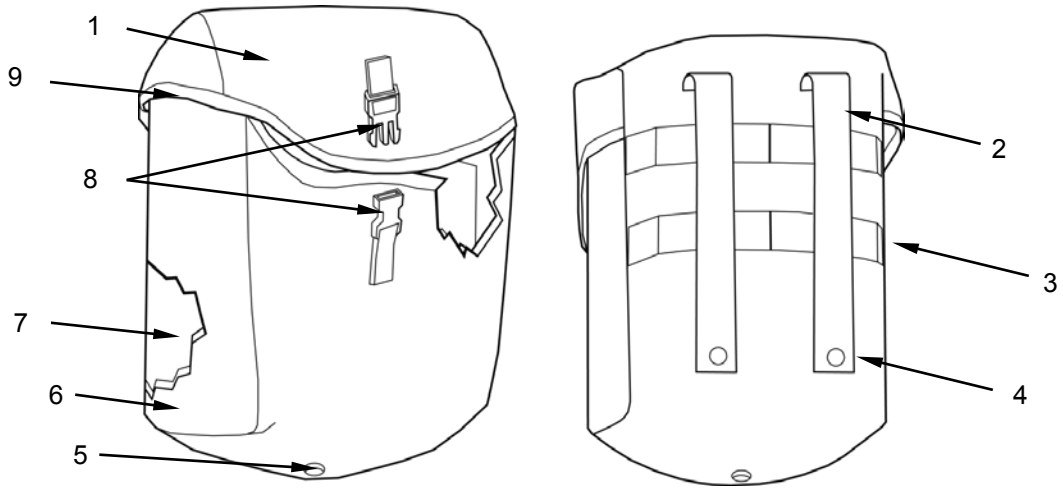


Eye protection should be worn to protect the Soldier from flying particles when operating a sewing machine. Sewing machine needles can break with great force. Failure to wear eye protection may result in injury to eye(s).

Prior to repair operations, each component of the MOLLE II system shall be inspected by qualified personnel to determine the extent of the repair necessary. With the exception of the replacement of hardware items furnished to the user as a repair kit, all repairs to these components will be accomplished at the maintainer level or higher, using FM 10-16 as a general guide.

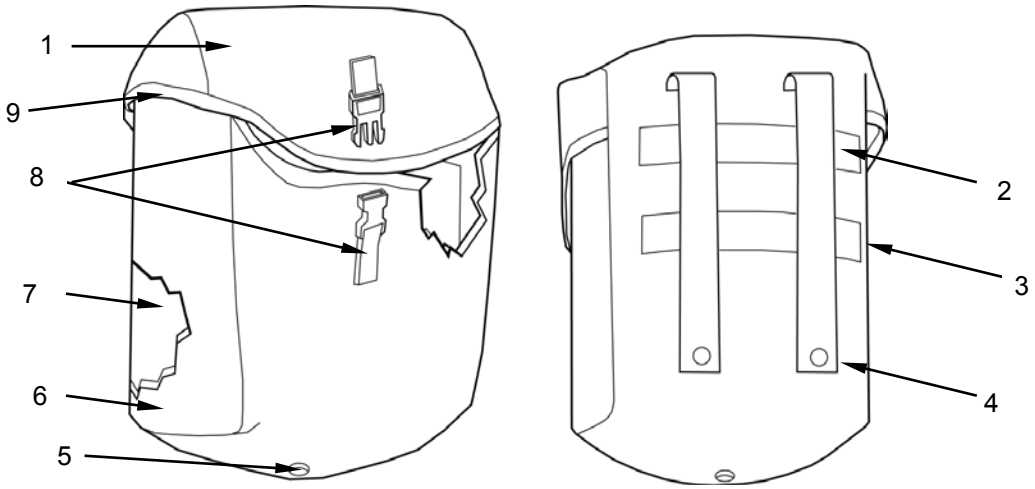
Use Figures 1 and 2 to determine location and construction of equipment in repair procedures.

REPAIR — CONTINUED



Legend
1. Textured Nylon Duck, Class III
2. Webbing, Nylon, 1-inch
3. Polyethylene, 0.030-inch x 0.875-inch
4. Snap Fastener
5. Eyelet, Drain
6. Textured Nylon Duck, Class IV
7. Polyethylene, 0.030-inch x 2.00-inch
8. Buckle, Side Release, 1-inch
9. Binding Tape, 1-inch

Figure 1. 100-Round Utility Pouch.



Legend
1. Textured Nylon Duck, Class III
2. Webbing, Nylon, 1-inch
3. Polyethylene, 0.030-inch x 0.875-inch
4. Snap Fastener
5. Eyelet, Drain
6. Textured Nylon Duck, Class IV
7. Polyethylene, 0.030-inch x 2.00-inch
8. Buckle, Side Release, 1-inch
9. Binding Tape, 1-inch

Figure 2. 200-Round SAW Gunner Pouch.

REPAIR — CONTINUED

Restitching

1. Use Figures 1 and 2 to identify component to be repaired.
2. Use Table 1 to determine specific sewing machine, thread size, and stitching requirements.
3. Overstitch or backstitch by ½ inch for all 301-lockstitch seams.
4. Trim running ends of thread.

Table 1. SAW Gunner Set Stitching Requirements.

COMPONENT	RECOMMENDED SEWING MACHINE	STITCHES PER INCH	THREAD SIZE
SAW Gunner Set			
100-Round Utility Pouch and 200-Round SAW Gunner Pouch			
Binding Tape	Medium Duty	7 to 11	E
1-inch MOLLE II Webbing	Bar Tack	42 to 48	E
All Other Components	Medium Duty	7 to 11	F

END OF TASK

Buckle Replacement

Replace buckles using replacement procedures in WP 0034.

END OF TASK

REPLACE

Replace SAW Gunner Set with serviceable item from stock.

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE
GRENADIER SET
REPAIR, REPLACE

INITIAL SETUP:

Tools

Knife, Hot Metal (WP 0042, Table 2, Item 2)
Ruler, Tab, Metal, 16-inch (WP 0042, Table 2, Item 3)
Sewing Machine, Industrial Bar Tack (WP 0042, Table 2, Item 4)
Sewing Machine, Medium Duty (WP 0042, Table 2, Item 5)
Shears, Tailor's, 12-inch (WP 0042, Table 2, Item 6)
Stitch Removal Tool (WP 0042, Table 2, Item 7)
Tape, Measuring (WP 0042, Table 2, Item 8)

Personnel Required

Non-MOS specific (1)

References

FM 10-16
WP 0034

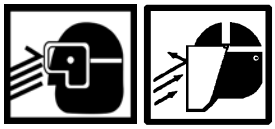
Materials/Parts

Pencil, China Marker, Yellow, A-A-87 (WP 0043, Item 2)
Thread, Nylon, V-T-295, Size E, TY I, II, or III CL A, FG504 (WP 0043, Item 4)
Thread, Nylon, V-T-295, Size F, TY I, II, or III CL A, FG504 (WP 0043, Item 5)
Thread, Nylon, V-T-295, Size FF, TY I, II, or III CL A, FG504 (WP 0043, Item 6)

Equipment Condition

Lay out on flat surface or other suitable area.

REPAIR



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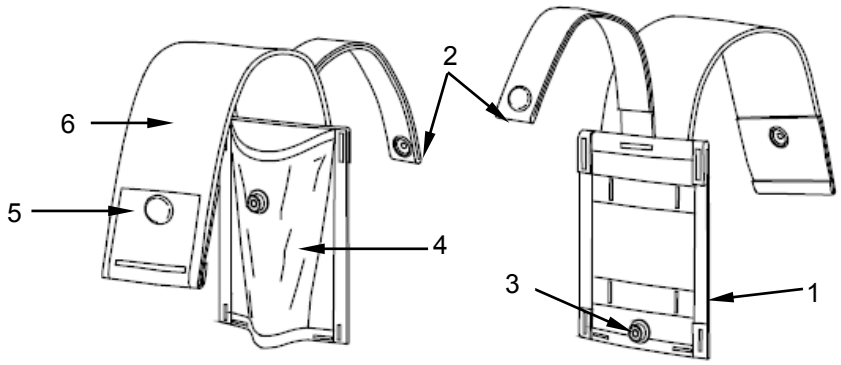
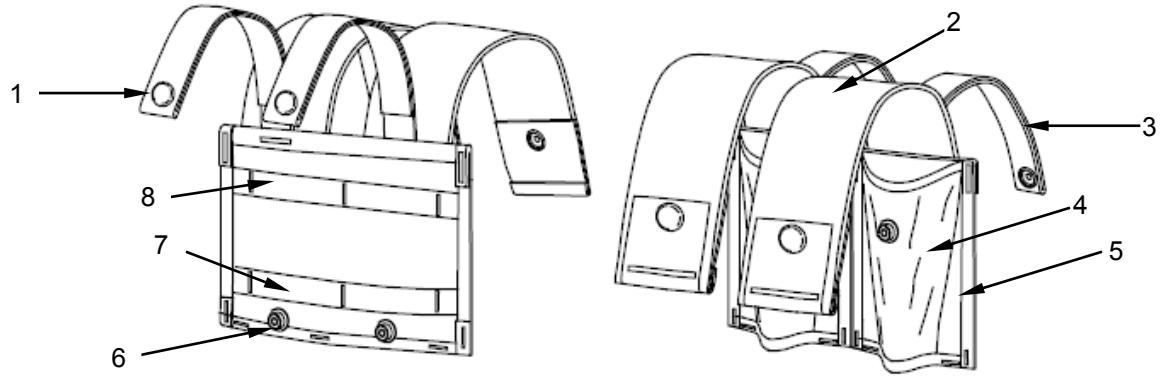
Prior to repair operations, each component of the MOLLE II system shall be inspected by qualified personnel to determine the extent of the repair necessary. With the exception of the replacement of hardware items furnished the user as a repair kit, all repairs to these components will be accomplished at the maintenance level or higher, using FM 10-16 as a general guide. Use Figures 1 through 3 to determine the location and construction of equipment in repair procedures.

REPAIR — CONTINUED



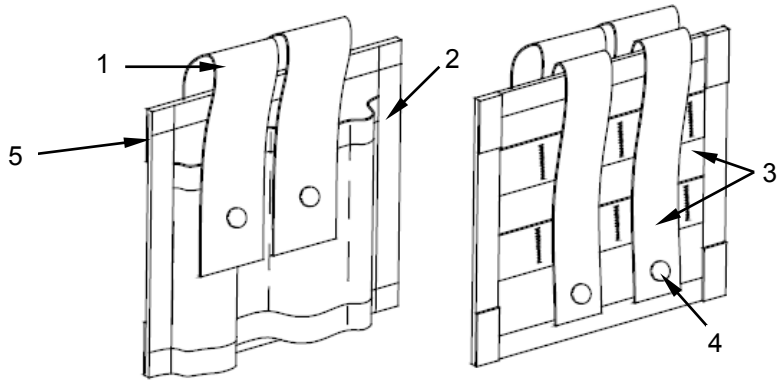
Legend
1. Polyethylene, 0.030-inch
2. Webbing, Nylon, 1-inch
3. Snap Fastener, Eyelet/Stud
4. Textured Nylon Duck
5. Snap Fastener, Button/Socket
6. Webbing, Nylon, 2-inch

Figure 1. 40mm High Explosive Pouch (Single).



Legend
1. Snap Fastener, Button/Socket
2. Webbing, Nylon, 2-inch
3. Polyethylene, 0.030-inch
4. Textured Nylon Duck
5. Binding Tape, 1-inch
6. Snap Fastener, Eyelet/Stud
7. Thread, Size F
8. Webbing, Nylon, 1-inch

Figure 2. 40mm High Explosive Pouch (Double).



Legend
1. Webbing, Nylon, 2-inch
2. Binding Tape, 1-inch
3. Webbing, Nylon, 1-inch
4. Snap Fastener, Button/Socket
5. Thread, Size E

Figure 3. 40mm Pyrotechnic Pouch (Double).

REPAIR — CONTINUED

Restitching

1. Use Figures 1 through 3 to identify component to be repaired.
2. Use Table 1 to determine specific sewing machine, thread size, and stitching requirements.
3. Overstitch or backstitch by ½ inch for all 301-lockstitch seams.
4. Trim running ends of thread.

Table 1. Grenadier Set Stitching Requirements.

COMPONENT	RECOMMENDED SEWING MACHINE	STITCHES PER INCH	THREAD SIZE
Grenadier Set			
All Pouches			
Binding Tape	Medium Duty	7 to 11	E
1-inch MOLLE II Webbing	Bar Tack	42 to 48	E
Waistbelt Webbing	Bar Tack	42 to 48	E
All Other Components	Medium Duty	7 to 11	F

END OF TASK

Buckle Replacement

Replace buckles using replacement procedures in WP 0034.

END OF TASK

REPLACE

Replace Grenadier Set with serviceable items from stock.

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE
MEDIC SET
REPAIR, REPLACE

INITIAL SETUP:

Tools

Knife, Hot Metal (WP 0042, Table 2, Item 2)
Ruler, Tab, Metal, 16-inch (WP 0041, Table 2, Item 3)
Sewing Machine, Industrial Bar Tack (WP 0042, Table 2, Item 4)
Sewing Machine, Medium Duty (WP 0042, Table 2, Item 5)
Shears, Tailor's, 12-inch (WP 0042, Table 2, Item 6)
Stitch Removal Tool (WP 0042, Table 2, Item 7)
Tape, Measuring (WP 0042, Table 2, Item 8)

Personnel Required

Non-MOS specific (1)

References

FM 10-16
WP 0034

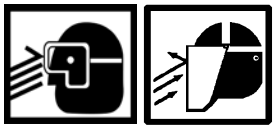
Materials/Parts

Pencil, China Marker, Yellow, A-A-87 (WP 0043, Item 2)
Thread, Nylon, V-T-295, Size E, TY I, II, or III CL A, FG504 (WP 0043, Item 4)
Thread, Nylon, V-T-295, Size F, TY I, II, or III CL A, FG504 (WP 0043, Item 5)
Thread, Nylon, V-T-295, Size FF, TY I, II, or III CL A, FG504 (WP 0043, Item 6)

Equipment Condition

Lay out on flat surface or other suitable area.

REPAIR

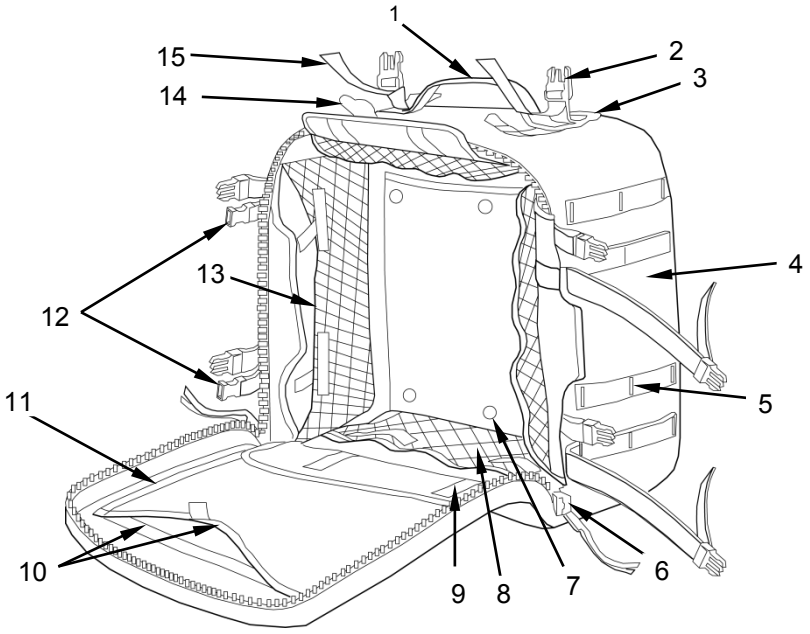


Eye protection should be worn to protect the Soldier from flying particles when operating a sewing machine. Sewing machine needles can break with great force. Failure to wear eye protection may result in injury to eye(s).

Prior to repair operations, each component of the MOLLE II system shall be inspected by qualified personnel to determine the extent of the repair necessary. With the exception of the replacement of hardware items furnished to the user as a repair kit, all repairs to these components will be accomplished at the maintainer level or higher, using FM 10-16 as a general guide.

Use Figures 1 through 5 to determine location and construction of equipment in repair procedures.

REPAIR — CONTINUED

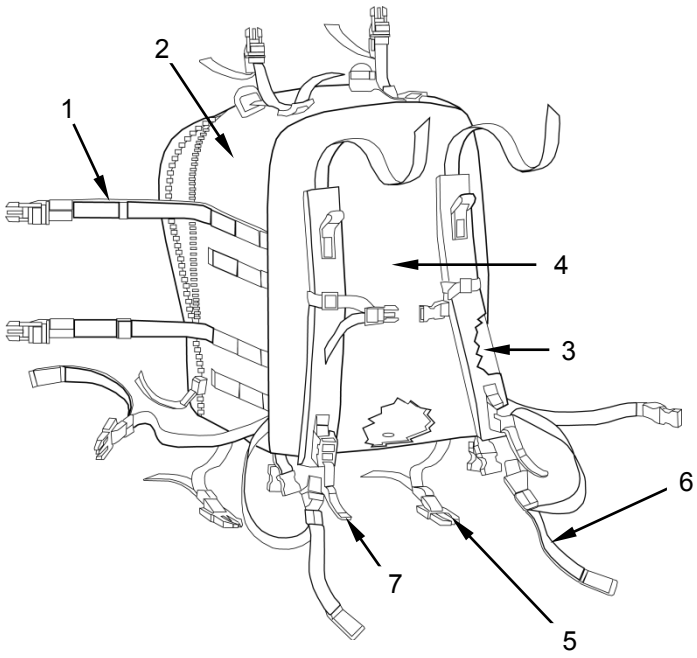


Legend

1. Webbing, 2-inch
2. Side Release Buckle, 2-inch
3. Metal Loop, 1-inch
4. Textured Nylon Duck
5. Thread, Size E
6. Slide Fastener
7. Snap Fastener
8. Elastic Webbing, ½-inch
9. Hook-and-Loop Fastener, 1-inch
10. Hook-and-Loop Fastener, ⅝-inch
11. Thread, Size E
12. Side Release Buckle, 1-inch
13. Nylon Raschel Knit Cloth
14. Double Bar Buckles
15. Webbing, 1-inch

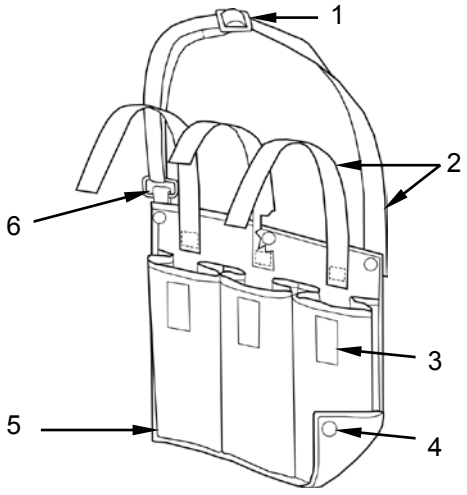
Figure 1. Medical Bag with Four Internal Pockets.

REPAIR — CONTINUED



Legend
1. Webbing, 1-inch
2. Textured Nylon Duck
3. Foam
4. Textured Nylon Duck
5. Quick Release Buckles
6. Webbing, Elastic, 1-inch
7. Webbing, $^{9}/_{16}$-inch

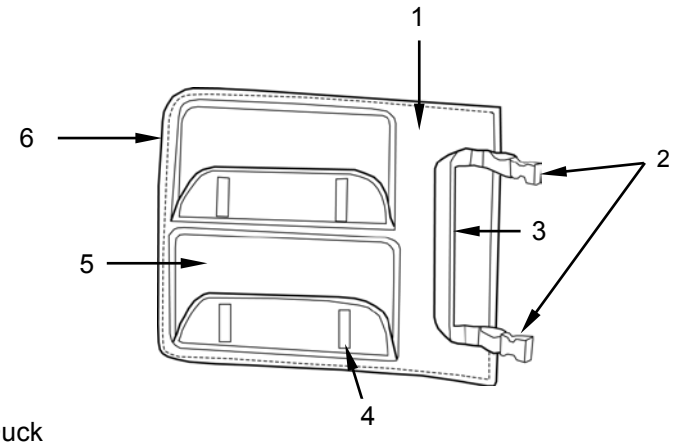
Figure 2. Medical Bag Exterior.



Legend
1. Double Bar Buckles
2. Webbing, 1-inch
3. Hook-and-Loop Fastener, 1-inch
4. Snap Fastener
5. Thread, Size E
6. Metal Hook, 1-inch

Figure 3. Medical IV Bandoleer Bag.

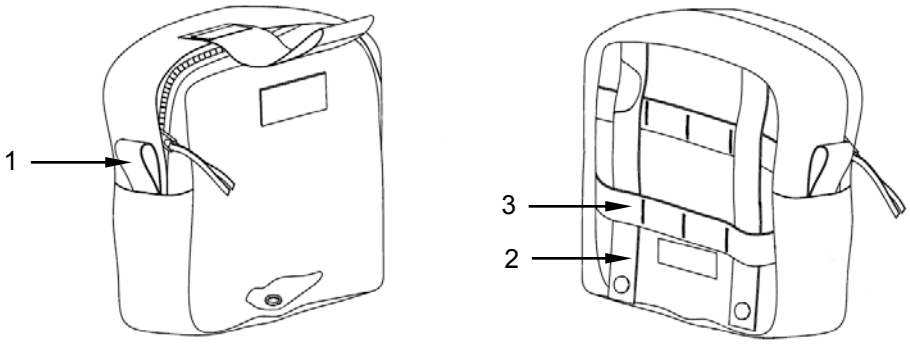
REPAIR — CONTINUED



Legend

1. Textured Nylon Duck
2. Side Release Buckle, 1-inch
3. Webbing, 1-inch
4. Hook-and-Loop Fastener, 1-inch
5. Nylon Raschel Knit Cloth
6. Binding Tape, 1-inch

Figure 4. Medical Bag Panel.



Legend

1. Loop
2. Attachment Strap
3. Rear Strap

Figure 5. External Medic Modular Pocket.

REPAIR — CONTINUED

Restitching

1. Use Figures 1 through 5 to identify component to be repaired.
2. Use Table 1 to determine specific sewing machine, thread size, and stitching requirements.
3. Overstitch or backstitch by ½ inch for all 301-lockstitch seams.
4. Trim running ends of thread.

Table 1. Medic Set Stitching Requirements.

COMPONENT	RECOMMENDED SEWING MACHINE	STITCHES PER INCH	THREAD SIZE
Medic Set			
Bag and Pouches			
Binding Tape	Medium Duty	7 to 11	E
1-inch MOLLE II Webbing	Bar Tack	42 to 48	E
Waistbelt Webbing	Bar Tack	42 to 48	E
All Other Components	Medium Duty	7 to 11	F

END OF TASK

Buckle Replacement

Replace buckles using replacement procedures in WP 0034.

END OF TASK

REPLACE

Replace Medic Set with serviceable items from stock.

END OF TASK

END OF WORK PACKAGE

FIELD MAINTENANCE
RADIO POUCH, 300-ROUND AMMUNITION BAG, SHOTGUN SHELL POUCH, MBITR POUCH, ALICE CLIP ADAPTER, K-BAR ADAPTER, VEHICLE PANEL (MVP) UNIVERSAL, LEADERS SET UNIVERSAL, PVS-14 POUCH UNIVERSAL, ADMIN POUCH, BUCKLE SET, LASHING STRAPS, SHOULDER STRAP ASSEMBLY, LARGE RUCK FLAP
REPAIR, REPLACE

INITIAL SETUP:

Tools

Knife, Hot Metal (WP 0042, Table 2, Item 2)
Ruler, Tab, Metal, 16-inch (WP 0041, Table 2, Item 3)
Sewing Machine, Industrial Bar Tack (WP 0042, Table 2, Item 4)
Sewing Machine, Medium Duty (WP 0042, Table 2, Item 5)
Shears, Tailor's, 12-inch (WP 0042, Table 2, Item 6)
Stitch Removal Tool (WP 0042, Table 2, Item 7)
Tape, Measuring (WP 0042, Table 2, Item 8)

Personnel Required

Non-MOS specific (1)

References

FM 10-16
WP 0034

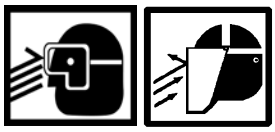
Materials/Parts

Pencil, China Marker, Yellow, A-A-87 (WP 0043, Item 2)
Thread, Nylon, V-T-295, Size E, TY I, II, or III CL A, FG504 (WP 0043, Item 4)
Thread, Nylon, V-T-295, Size F, TY I, II, or III CL A, FG504 (WP 0043, Item 5)
Thread, Nylon, V-T-295, Size FF, TY I, II, or III CL A, FG504 (WP 0043, Item 6)

Equipment Condition

Lay out on flat surface or other suitable area.

REPAIR

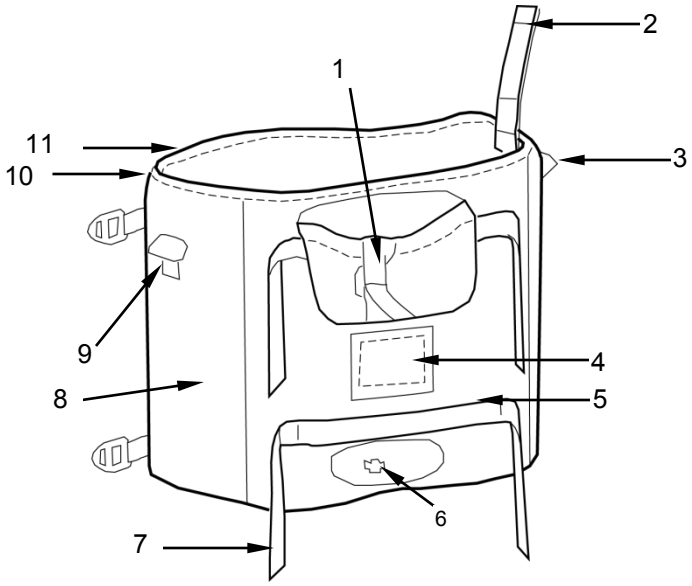


Eye protection should be worn to protect the Soldier from flying particles when operating a sewing machine. Sewing machine needles can break with great force. Failure to wear eye protection may result in injury to eye(s).

Prior to repair operations, each component of the MOLLE II system shall be inspected by qualified personnel to determine the extent of the repair necessary. With the exception of the replacement of hardware items furnished to the user as a repair kit, all repairs to these components will be accomplished at the maintainer level or higher, using FM 10-16 as a general guide.

Use Figures 1 through 14 to determine location and construction of equipment in repair procedures.

REPAIR — CONTINUED

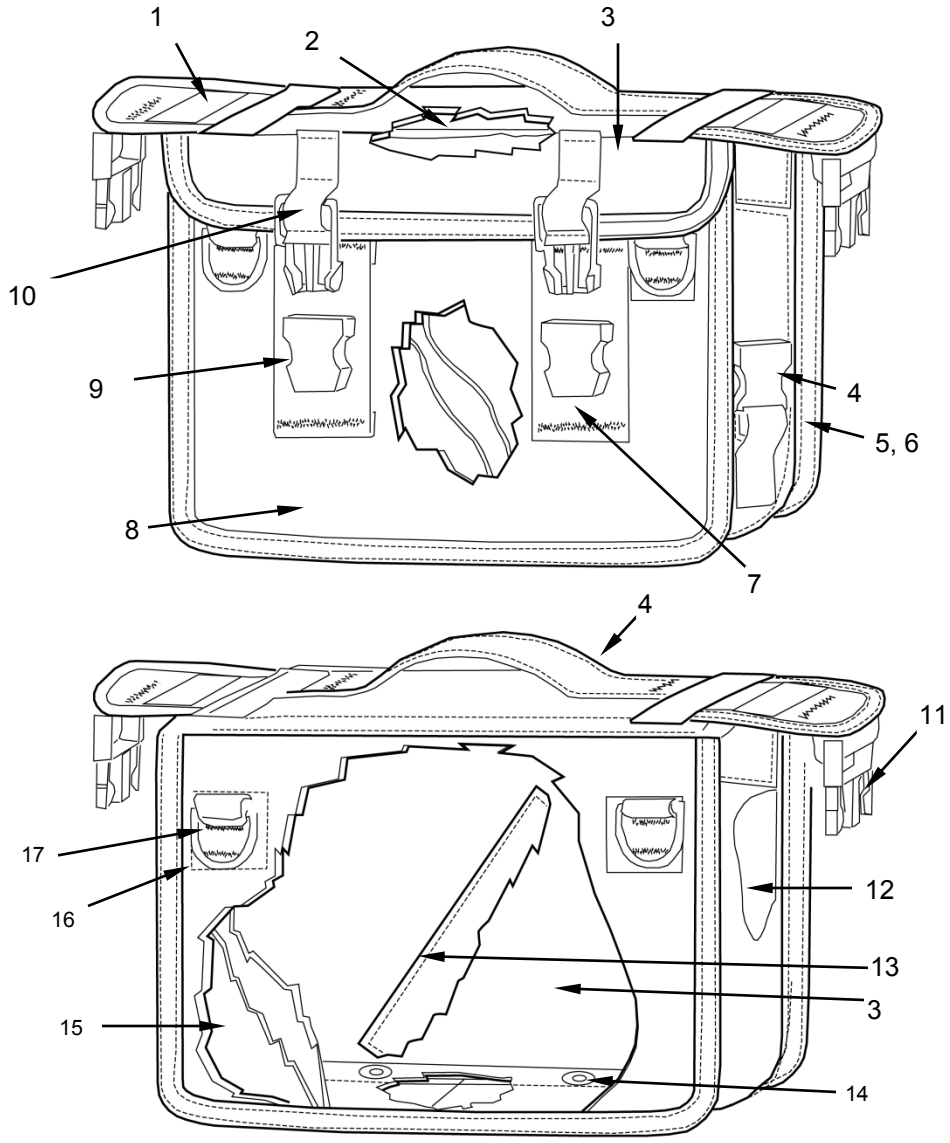


Legend

1. Buckle, 1-inch, Ladder-Type
2. Snap Fastener, Button/Socket
3. Snap Fastener, Eyelet/Stud
4. Polyethylene, 0.020-inch
5. Thread, Size F
6. Eyelet
7. Webbing, 1-inch
8. Textured Nylon Duck
8. D-Ring, 1-inch
9. Thread, Size E
10. Binding Tape, 1-inch
11. Thread

Figure 1. Radio Pouch.

REPAIR — CONTINUED

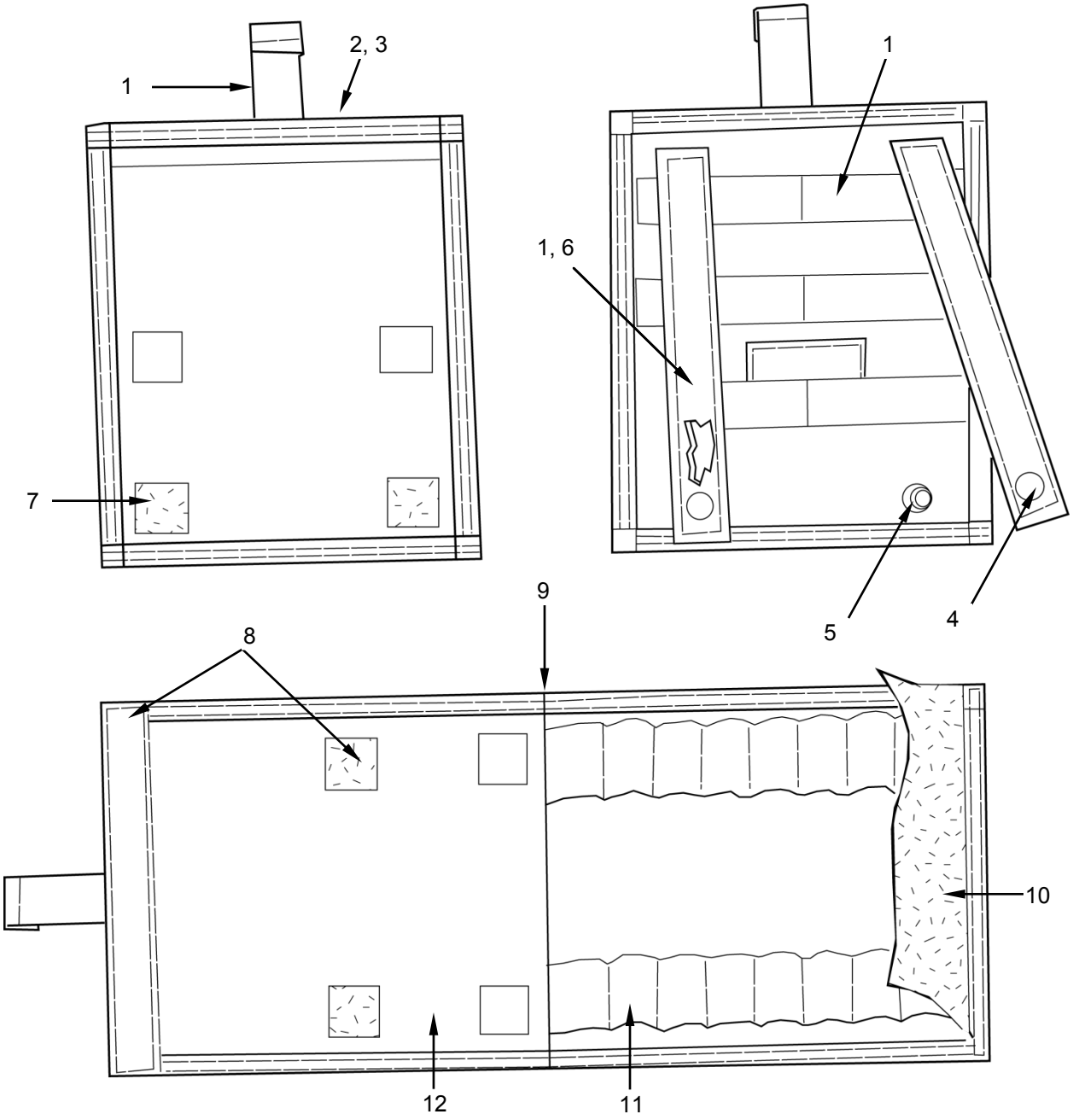


Legend

1. Hook-and-Loop Fastener
2. Polyethylene, High Density, .050-inch
3. Textured Nylon Duck Fabric
4. Side Release Buckle, 1-inch
5. Thread, Size E
6. Binding Tape, 1-inch
7. Webbing, 2-inch
8. Textured Nylon Duck Fabric
9. Fastener, 3-hole, 1-inch
10. Webbing, Nylon, 1-inch
11. Slide Buckle, 1-inch
12. Thread, Size F
13. Snap Fasteners, Button/Socket
14. Grommet
15. Polyethylene, High Density, .050-inch
16. Webbing, 1-inch
17. D-Ring, 1-inch

Figure 2. 300-Round, 7.62 Ammo Bag.

REPAIR — CONTINUED

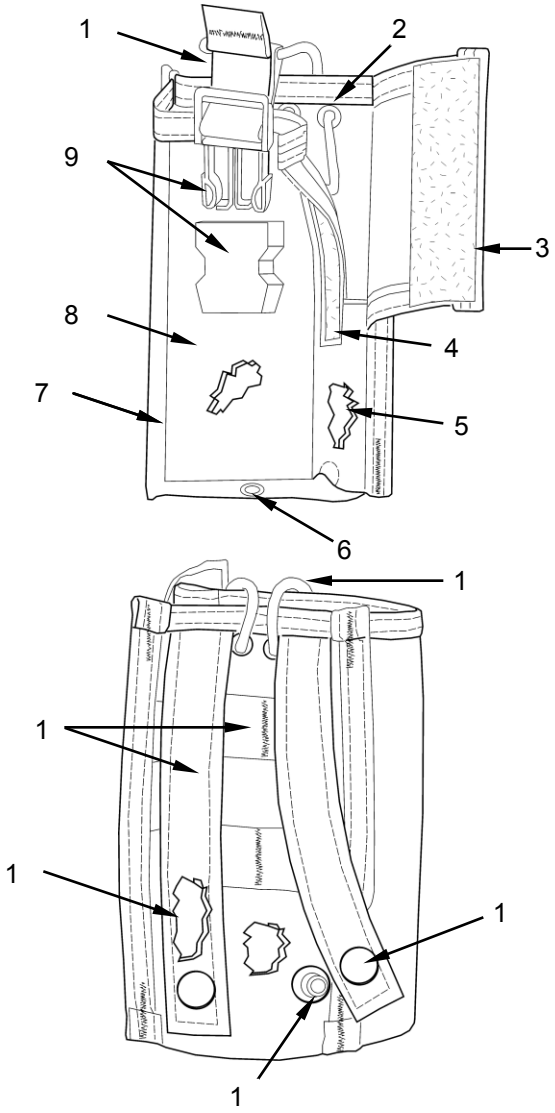


Legend

1. Webbing, Nylon, 1-inch
2. Binding Tape, 1-inch
3. Thread, Size E
4. Snap Fasteners, Button/Socket
5. Snap Fasteners, Stud/Eyelet
6. Polyethylene, 0.030-inch
7. Loop Fastener Tape, 1-inch
8. Hook Fastener Tape, 1-inch
9. Thread, Size F
10. Loop Fastener Tape, 2-inch
11. Webbing, Nylon, Elastic, 1½-inch
12. Textured Nylon Duck

Figure 3. Shotgun Shell Pouch.

REPAIR — CONTINUED

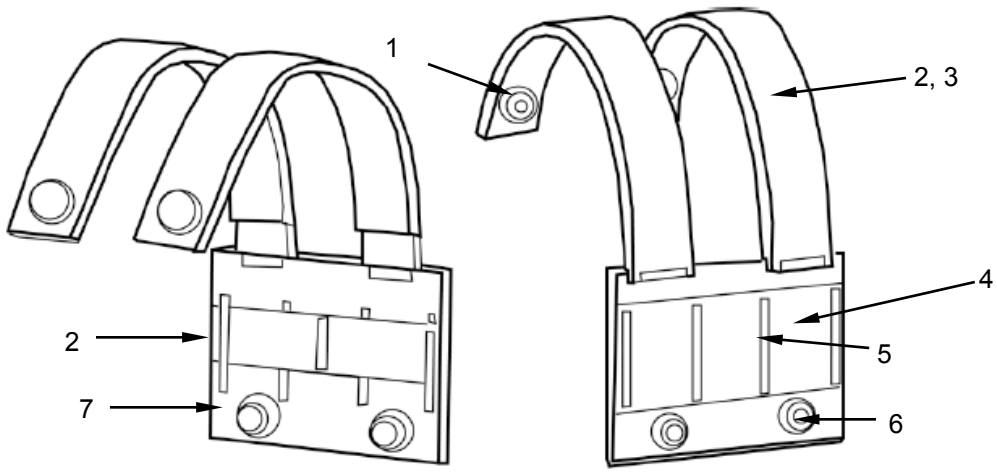


Legend

1. Webbing, Nylon, 1-inch
2. Eyelet/Washer
3. Fastener Tape, Hook, 1-inch wide
4. Fastener Tape, Loop, ½-inch wide
5. Foam, ¼-inch
6. Grommet
7. Thread Size F
8. Textured Nylon Duck
9. Fastener, 3-hole, 1-inch (Side Release)
10. Cord, Round
11. Snap Fasteners, Button/Socket
12. Snap Fasteners, Stud/Eyelet
13. Polyethylene, 0.030-inch

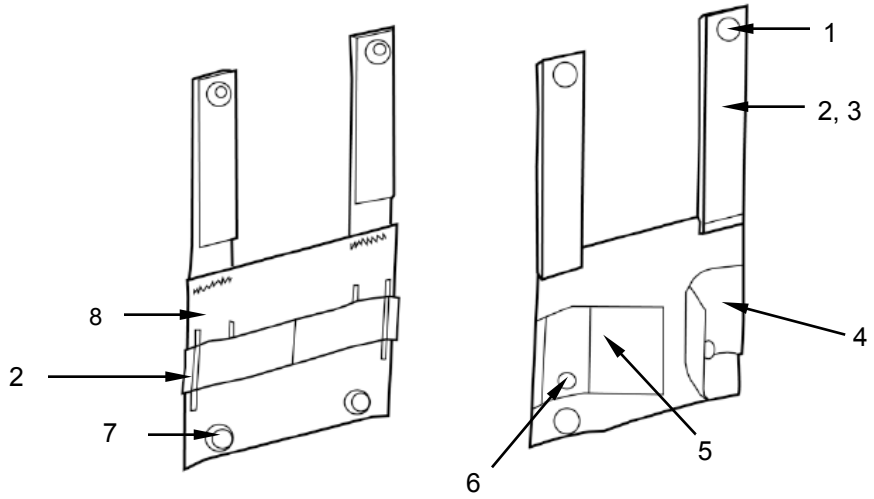
Figure 4. MBITR Pouch.

REPAIR — CONTINUED



Legend
1. Snap Fastener, Button/Socket
2. Webbing, 1-inch
3. Polyethylene, 0.030-inch
4. Textured Nylon Duck
5. Thread, Size E
6. Snap Fastener, Eyelet/Washer
7. Webbing, 3½-inch

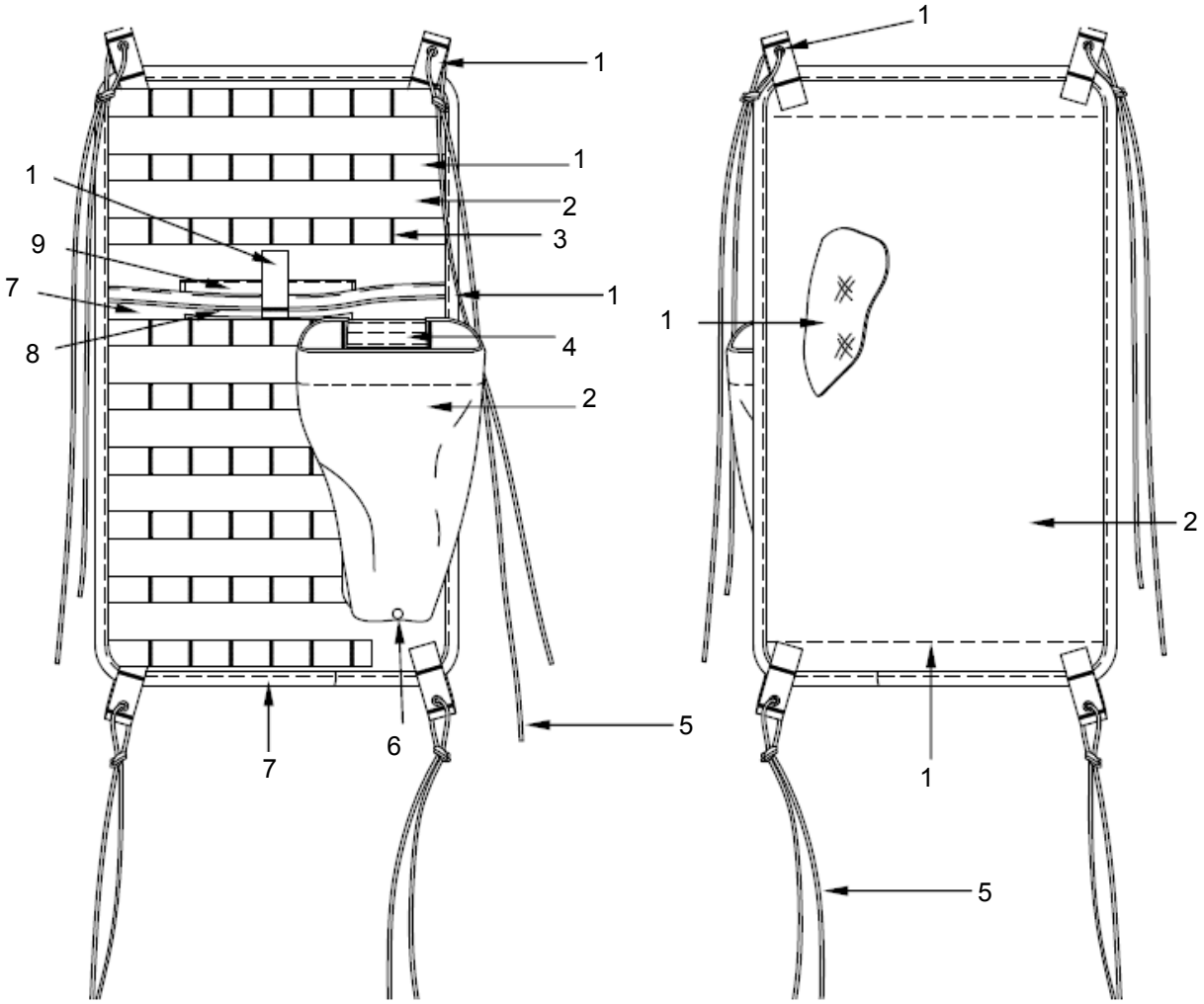
Figure 5. ALICE Clip Adapter.



Legend
1. Snap Fastener, Button/Socket
2. Webbing, 1-inch
3. Polyethylene, 0.030-inch
4. Webbing, 2 ¼-inch
5. Hook-and-Loop Fastener
6. Snap Fastener, Eyelet/Washer
7. Snap Fastener, Eyelet/Stud
8. Webbing, 3½-inch

Figure 6. K-Bar Adapter.

REPAIR — CONTINUED

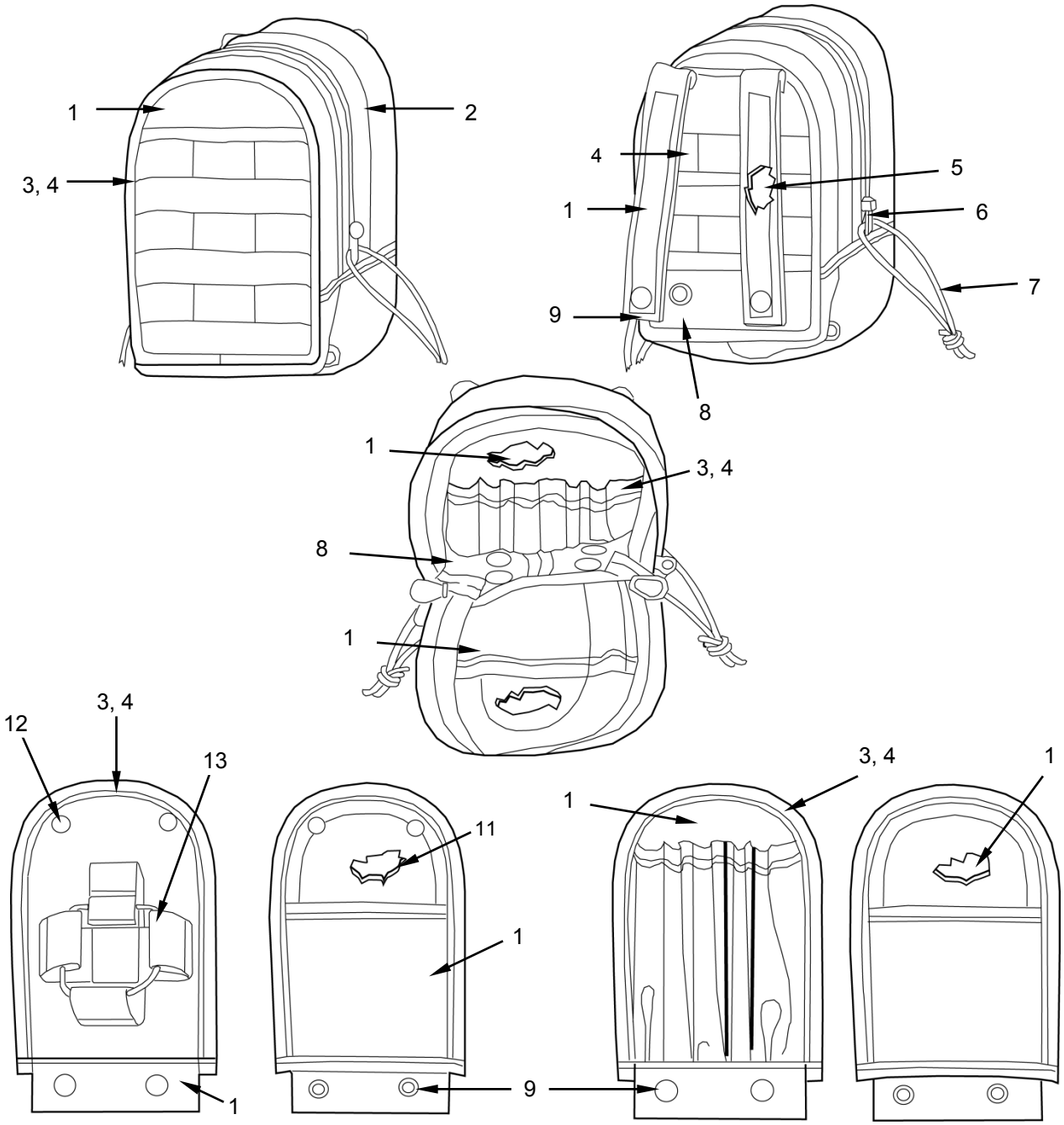


Legend

1. Webbing, 1-inch
2. Textured Nylon Duck
3. Thread, Size E
4. Coated Webbing
5. Cord, Round
6. Eyelet Fastener, Hook, 1-inch
7. Binding Tape, 1-inch
8. Fastener, Hook, 1-inch
9. Fastener, Loop, 1-inch
10. Grommet
11. Thread, Size F
12. Polyethylene, .050-inch

Figure 7. Vehicle Panel (MVP) Universal.

REPAIR — CONTINUED

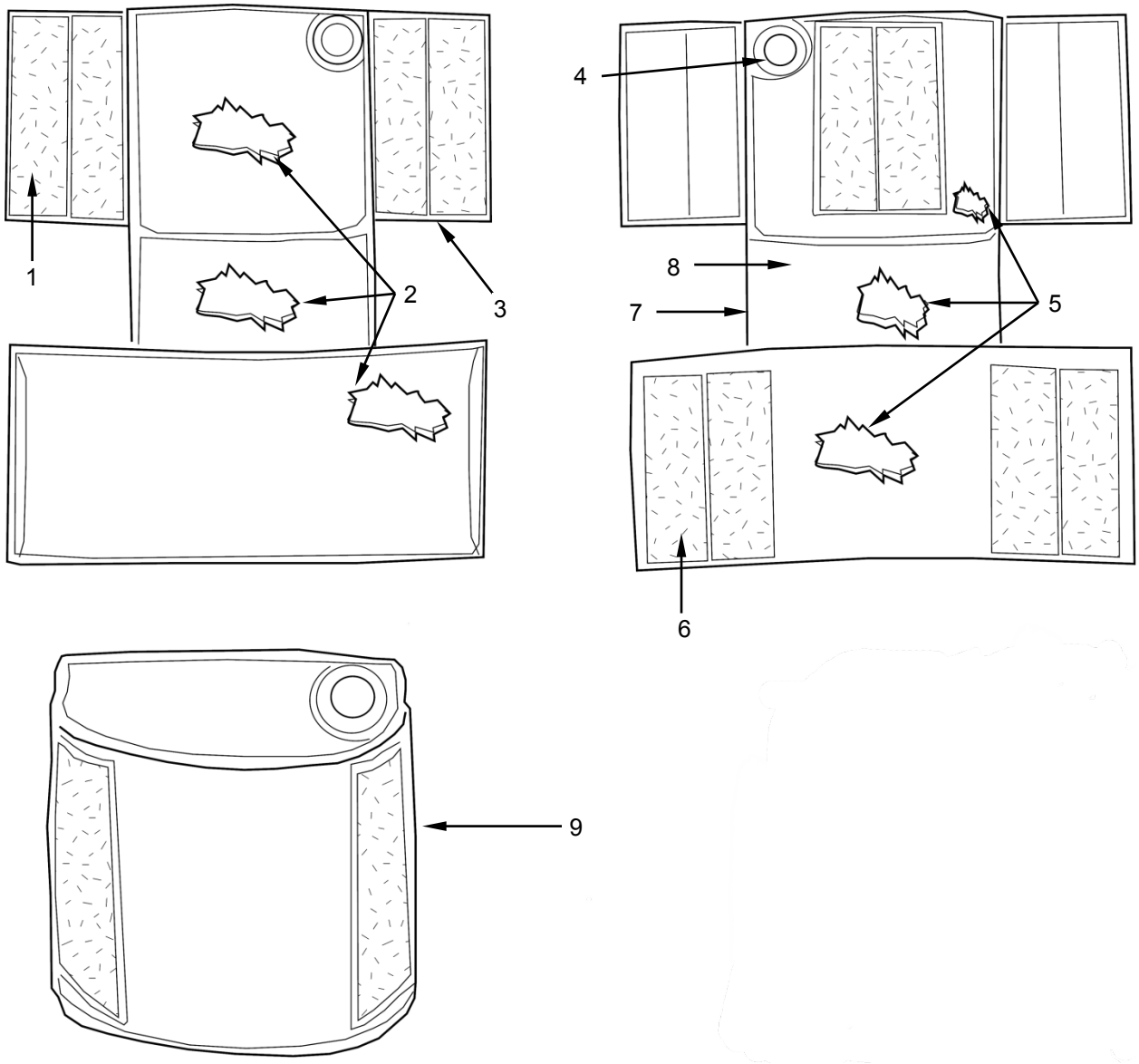


Legend

1. Textured Nylon Duck
2. Thread, Size F
3. Binding Tape, 1-inch
4. Thread, Size E
5. Polyethylene, 0.030-inch
6. Slide Fastener
7. Cord, Flat
8. Stud/Eyelet
9. Snap Fastener
10. Webbing, 1-inch
11. Polyethylene, .050-inch
12. Eyelet
13. Cord, Elastic
14. Webbing, 1½-inch

Figure 8. Leaders Set Universal.

REPAIR — CONTINUED

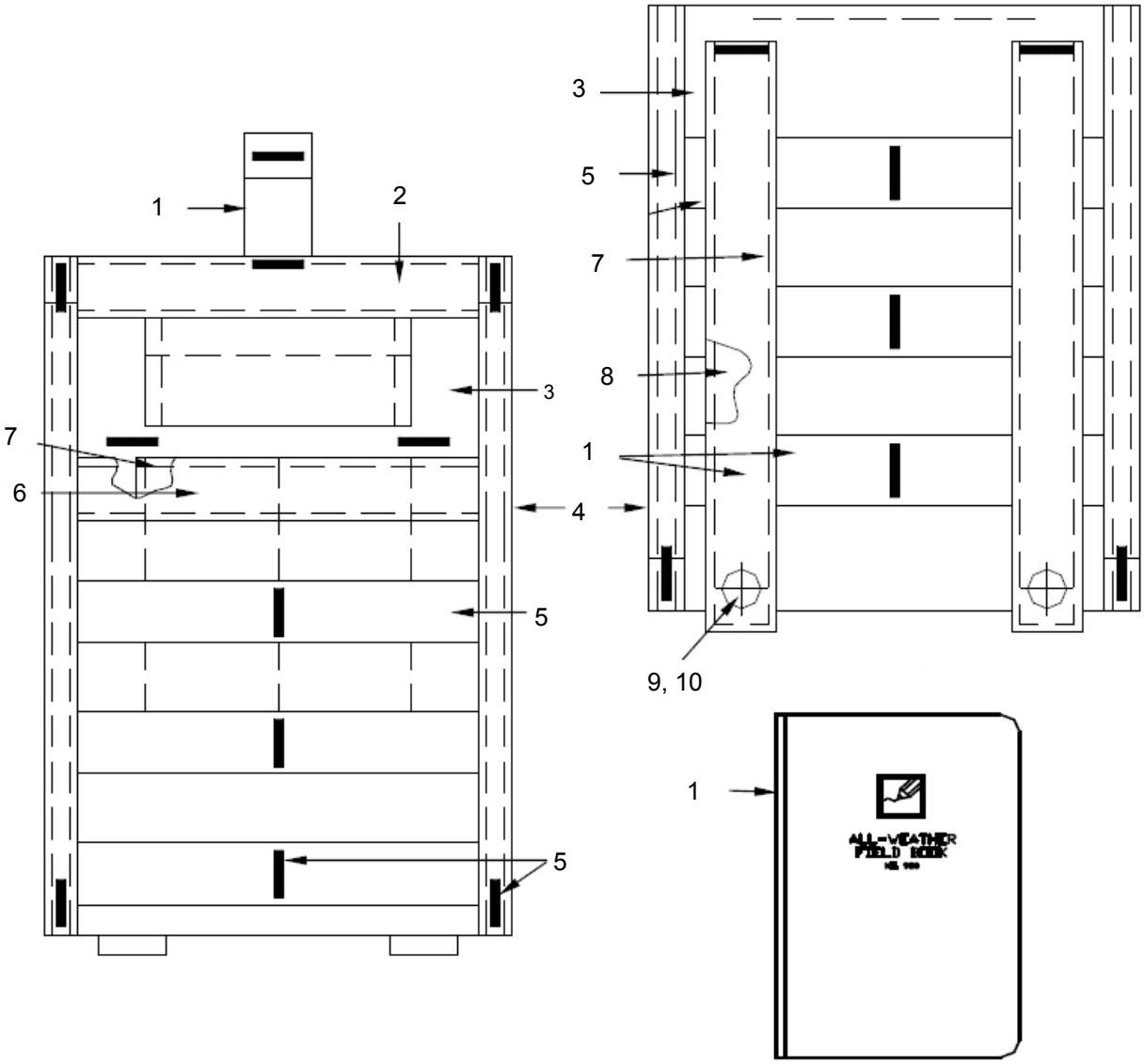


Legend

1. Fastener, Hook, 2-inch
2. Foam, $^{3}/_{16}$-inch
3. Thread, Size E
4. Eyelet
5. Polyethylene, 0.050-inch
6. Fastener, Loop, 2-inch
7. Thread, Size F
8. Textured Nylon Duck
9. Assembled Pouch

Figure 9. PVS-14 Pouch Universal.

REPAIR — CONTINUED

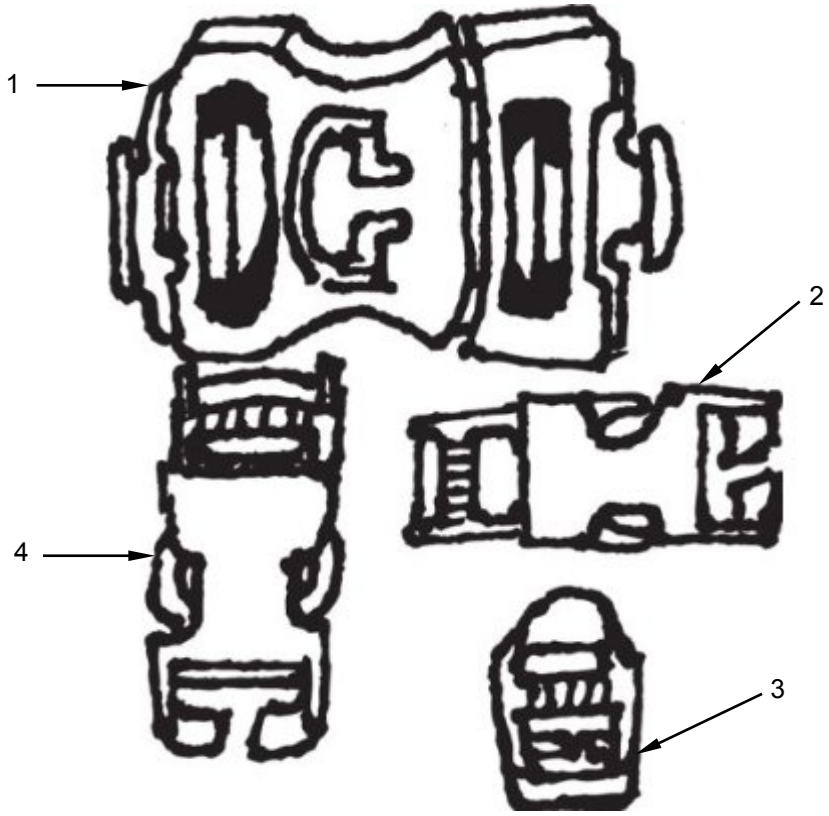


Legend

1. Webbing, 1-inch
2. Fastener Tape, Loop, 1-inch
3. Textured Nylon Duck
4. Tape, Binding, 1-inch
5. Thread, Size E
6. Fastener, Tape Hook, 1-inch
7. Thread, Size F
8. Polyethylene, 0.030-inch
9. Snap Fastener, Button/Socket
10. Snap Fastener, Stud/Eyelet
11. All-Weather Field Book

Figure 10. Admin Pouch.

REPAIR — CONTINUED

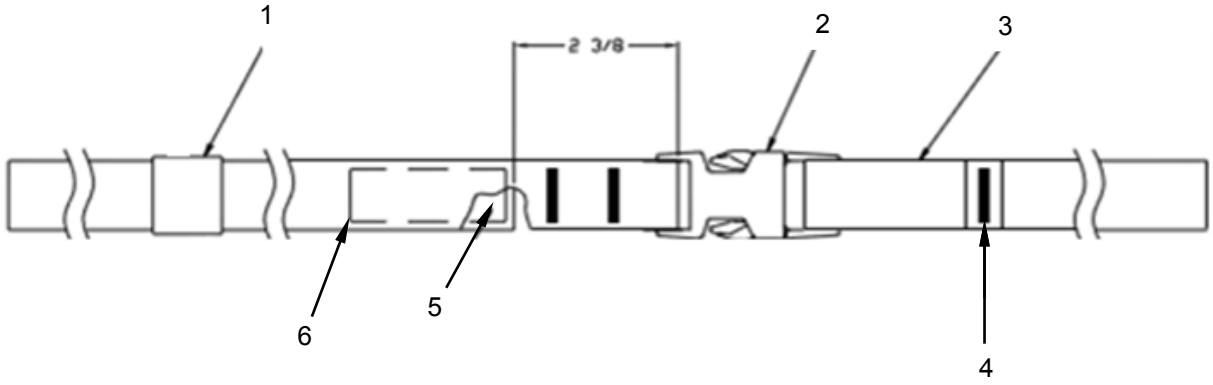


Legend

1. Buckle, 2-inch Field Expedient Blast (1 ea)
2. Buckle, 1-inch Side-Release (4 ea)
3. Slides, 1-inch Splitloop Ladderlock (2 ea)
4. Buckle, 1½-inch Side-Release (2 ea)

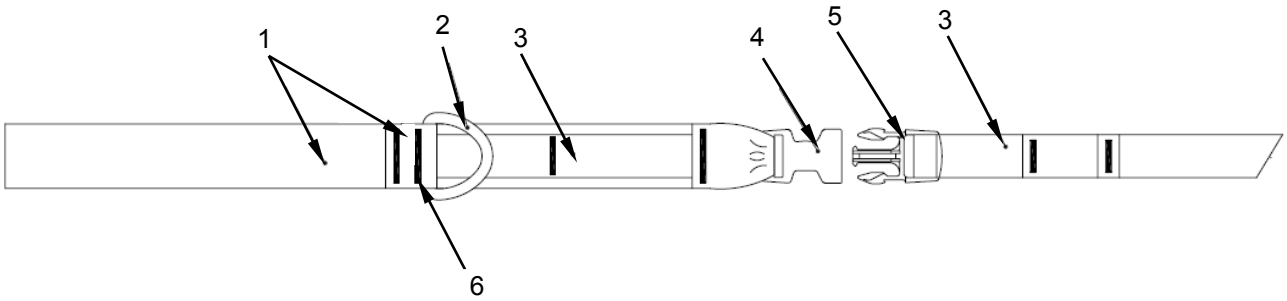
Figure 11. Buckle Set.

REPAIR — CONTINUED



Legend
1. Webbing, Elastic, 1-inch Wide
2. 1-inch Release Buckle
3. Webbing, 1-inch Wide
4. Thread, Size E
5. Identification/Label
6. Thread, Size F

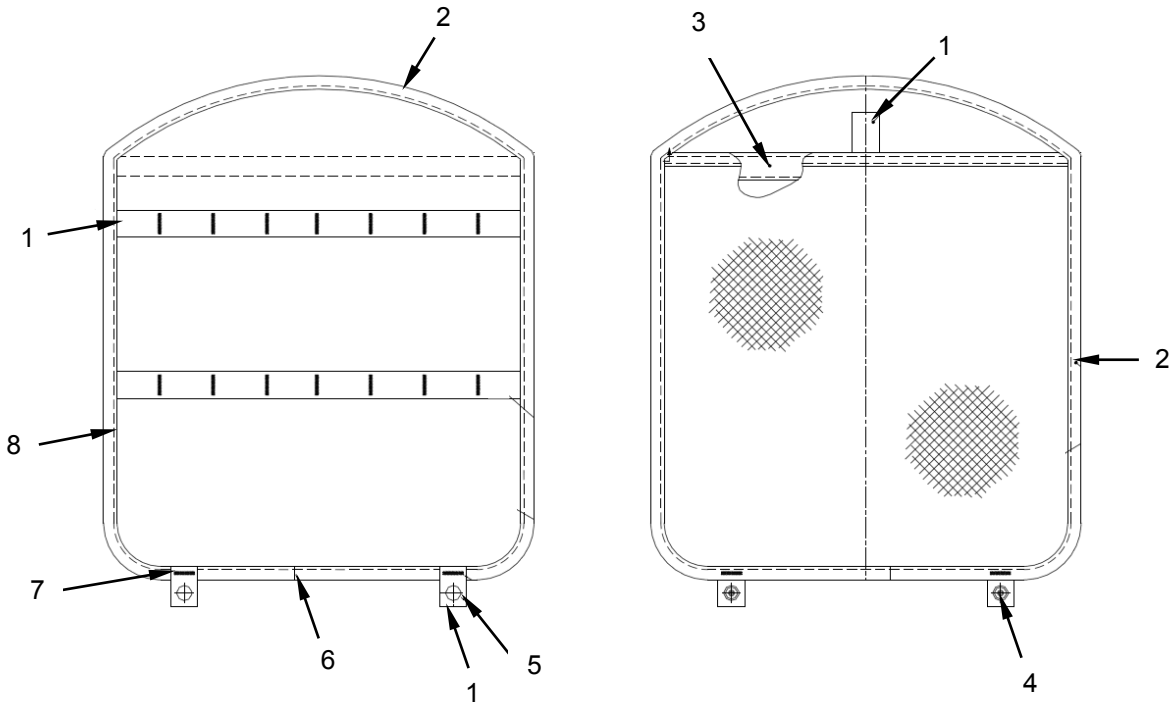
Figure 12. Lashing Straps.



Legend
1. Webbing, 1 ½-inch
2. 1 ½-inch D-Ring
3. Webbing, 1-inch
4. 1-inch Side Release Buckle (Female)
5. 1-inch Side Release Buckle (Male)
6. Thread, Size E

Figure 13. Shoulder Strap Assembly.

REPAIR — CONTINUED



Legend

1. Webbing, 1-inch Wide
2. Tape, Binding, 1-inch Wide
3. Fastener Tape, Hook, 1-inch Wide
4. Snap Fastener, Button
5. Snap Fastener, Socket
6. Fastener Tape, Loop, 1-inch Wide
7. Thread, Size E
8. Thread, Size F

Figure 14. Large Ruck Flap.

Restitching

1. Use Figures 1 through 14 to identify component to be repaired.
2. Use Table 1 to determine specific sewing machine, thread size, and stitching requirements.
3. Overstitch or backstitch by ½ inch for all 301-lockstitch seams.
4. Trim running ends of thread.

Table 1. Additional MOLLE II Components Stitching Requirements.

COMPONENT	RECOMMENDED SEWING MACHINE	STITCHES PER INCH	THREAD SIZE
Additional MOLLE II Components			
Binding Tape	Medium Duty	7 to 11	E
1-inch MOLLE II Webbing	Bar Tack	42 to 48	E
Waistbelt Webbing	Bar Tack	42 to 48	E
All Other Components	Medium Duty	7 to 11	F

END OF TASK

Buckle Replacement

Replace buckles using replacement procedures in WP 0034.

END OF TASK

REPLACE

Replace additional MOLLE components with serviceable items from stock.

END OF TASK

END OF WORK PACKAGE

CHAPTER 4

SUSTAINMENT MAINTENANCE INSTRUCTIONS FOR MODULAR LIGHTWEIGHT LOAD-CARRYING EQUIPMENT (MOLLE) II

SUSTAINMENT MAINTENANCE
MODULAR LIGHTWEIGHT LOAD-CARRYING EQUIPMENT (MOLLE) II
SERVICE UPON RECEIPT

INITIAL SETUP:

Tools and Special Tools

None Required

Materials/Parts

None Required

Equipment Condition

Unpacked

Personnel Required

Maintainer (1)

References

DA PAM 750-8
DD Form 361

SERVICE UPON RECEIPT OF MATERIEL

1. Inspect equipment for damage incurred during shipment. If the equipment has been damaged, report the damage on a DD Form 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.

END OF TASK

INSTALLATION INSTRUCTIONS

The MOLLE II gear does not require installation.

END OF WORK PACKAGE

SUSTAINMENT MAINTENANCE
MODULAR LIGHTWEIGHT LOAD-CARRYING EQUIPMENT (MOLLE) II
SERVICE

INITIAL SETUP:

Tools and Special Tools

Brush, Scrub, Household (WP 0042, Table 2, Item 1)

Personnel Required

Non-MOS specific (1)

Materials/Parts

Detergent, Laundry, Powdered, MIL-D-12182, Type II (WP 0043, Table 1, Item 1)
Rag, Wiping (WP 0043, Item 1)

SERVICE

Field Cleaning of MOLLE II Components

1. Disassemble all components.
2. Remove loose dirt and mud from equipment with a stick or other dull instrument to prevent damage to equipment. A brush or cloth can also be used to remove dirt or debris.

END OF TASK

Garrison Cleaning of MOLLE II Components

CAUTION

Do not use chlorine bleach, yellow soap, cleaning fluids, or solvents that will discolor and deteriorate the item.

Do not launder or dry clean MOLLE II components in fixed commercial or home type laundry equipment as it will cause damage to equipment.

Do not dry in a commercial dryer as it will cause damage to the equipment.

1. Wash the component by immersing it in a solution of Type II powdered laundry detergent or any mild commercial detergent or soap and warm water.
2. Scrub vigorously and repeatedly with a brush as necessary.
3. Flush the component thoroughly with clean, warm water until all the cleaning solution has been rinsed out.
4. Air dry washed and rinsed components away from direct sun light and heat or open flame.

END OF TASK

SERVICE — CONTINUED

Central Issue Facility (CIF) Cleaning of MOLLE II Components

1. Prepare MOLLE II components for laundering by removing excessive dirt.

NOTE

Do not launder the waistbelt plastic insert and plastic frame. Ensure all pockets and compartments of components are empty.

2. Separate all attached MOLLE II components from each other before cleaning.
3. Remove the main pack and shoulder straps from the plastic frame.
4. Remove the foam pad material from the patrol pack insert pocket.
5. Remove all hardware items from MOLLE II components, except those permanently attached.
6. Discard used hydration components.
7. Soak MOLLE II components in a warm water tank for at least five minutes.

CAUTION

Do not use chlorine bleach, yellow soap, cleaning fluids, or solvents that will discolor and deteriorate the item.

Do not launder or dry clean MOLLE II components in fixed commercial or home type laundry equipment.

8. After soaking, wash the items in a solution of Type II powdered laundry detergent, scrubbing vigorously and repeatedly with a brush, as necessary.
9. Flush the washed MOLLE II components with clean warm water until all cleaning solution has been rinsed out.
10. Air dry washed and rinsed components away from direct sun light and heat or open flame.
11. Replace the foam pad into the patrol pack.
12. Replace hydration components with serviceable item from stock.
13. Ensure all components are present and ready for issue.

END OF TASK

Hydration System Cleaning

NOTE

Be sure the cap is screwed all the way down to prevent leaking. If the cap leaks, make sure the cap lanyard is pushed down past the screw threads; otherwise, the lanyard could prevent the cap from completely closing.

The use of liquids other than water will accelerate mold growth and will require more frequent cleaning.

1. Wash hydration system with small amount of mild soap and hot water before and after each use.
2. Rinse thoroughly with clean water to eliminate any residual soap.

END OF TASK

END OF WORK PACKAGE

SUSTAINMENT MAINTENANCE
MODULAR LIGHTWEIGHT LOAD-CARRYING EQUIPMENT (MOLLE) II
INSPECTION

INITIAL SETUP:

Tools and Special Tools

Not Applicable

Materials/Parts

Not Applicable

Personnel Required

Non-MOS specific (1)

References

TB 43-0002-27 WP 0033
WP 0022
WP 0023
WP 0024
WP 0025
WP 0026
WP 0027
WP 0029
WP 0030
WP 0031
WP 0032

INSPECT

All components of the MOLLE II system shall be inspected when turned in by the Soldier to determine serviceability. Table 1 contains general guidelines for the classification of equipment.

Table 1. Item Classification 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 Class B condition for not more than 65 percent 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 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 equipment.

Organizational Clothing and Equipment 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.

INSPECT — CONTINUED

- 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.
- 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.
- Pockets. Pockets must be clean and in a complete state of repair. Any repairs will be of a wear expectancy similar to that of the remainder of the garment. Replaced pockets must be of a size consistent with those originally in garment.
- 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. A mark is considered lined out when its cancellation is readily evident.
- Spots and stains will not be considered a determining factor in classifying this category of property if such spots and stains are of a minor nature.
- Hardware. Hardware will not be bent, broken, or missing.

Inspection and Classification Procedures for MOLLE II

Instructions contained in this paragraph will be used as a guide in making inspections of clothing and individual equipment in the hands of units or individuals for the purpose of determining serviceability and repair eligibility. Items of clothing and individual equipment are listed followed by Line Item Number (LIN).

NOTE

Restitching of open seams is NOT to be counted as a tear with no limitation length.

Maximum repairs mean the number of repairs authorized on an item each time it is turned in for repair.

Additional repairs are authorized as long as expenditure limits do not exceed 65 percent replacement cost. Refer to TB 43-0002-27, Maintenance Expenditure Limits for FSC Groups 72, 83, and 84, FSC Classes 7210, 8340, 8400.

1. Set, Squad Automatic Weapon (SAW) Gunner (S37688)
   a. Inspect for missing or damaged grommets and drawstrings. Check for rips, tears, burns, snags, oil, grease, or other contaminants.

      Code A. See Table 1.

      Code B. Complete and clean. No damage.

      Code F. Unserviceable (Reparable). Economically reparable items that require repair, reconditioning, or overhaul.

      Code H. Any damage. Any contamination that cannot be cleaned.

   b. Refer to WP 0030 for maintenance procedures.
2. Set, Grenadier (G23298)
   a. Inspect for rips, tears, holes, dry rot, mildew, missing parts, or weakened material. Check to determine if the bag has a hard-painted area for stenciling owner's name.

      Code A. See Table 1.

      Code B. Complete and clean. No damage.

      Code F. Unserviceable (Reparable). Economically reparable items that require repair, reconditioning, or overhaul

INSPECT — CONTINUED

Code H. Any damage. Any contamination that cannot be cleaned.

b. Refer to WP 0031 for maintenance procedures.

3. Set, Pistol (P44064)

a. Inspect for rips, tears, holes, and bums on outside or on the inside liner. Check for broken or missing zippers and snaps. Check hook-and-loop tape fasteners and handles for damage. Check inside pockets for rips and tears.

Code A. See Table 1.

Code B. Complete and clean. No damage.

Code F. Unserviceable (Reparable). Economically reparable items that require repair, reconditioning, or overhaul.

Code H. Any damage. Any contamination that cannot be cleaned.

b. Refer to WP 0029 for maintenance procedures.

4. Set, Rifleman (R97425)

a. Inspect for rips, tears, holes, and burns on outside or on the inside liner. Check for broken or missing zippers and snaps. Check hook-and-loop tape fasteners and handles for damage. Check inside pockets for rips and tears.

Code A. See Table 1.

Code B. Complete and clean. No damage.

Code F. Unserviceable (Reparable). Economically reparable items that require repair, reconditioning, or overhaul.

Code H. Any damage. Any contamination that cannot be cleaned.

b. Refer to WP 0022, WP 0023, WP 0024, WP 0025, WP 0026, WP 0027, 0032, and WP 0033 for maintenance procedures.

5. Set, Medic (M33390)

a. Inspect for rips, tears, holes, and bums on outside or on the inside liner. Check for broken or missing zippers and snaps. Check hook-and-loop tape fasteners and handles for damage. Check inside pockets for rips and tears.

Code A. See Table 1.

Code B. Complete and clean. No damage.

Code F. Unserviceable (Reparable). Economically reparable items that require repair, reconditioning, or overhaul.

Code H. Any damage. Any contamination that cannot be cleaned.

b. Refer to WP 0032 for maintenance procedures.

6. Set, Large Field Pack (F59856)

a. Inspect for rips, tears, holes, and burns on outside or on the inside liner. Check for broken or missing zippers and snaps. Check hook-and-loop tape fasteners and handles for damage. Check inside pockets for rips and tears.

Code A. See Table 1.

Code B. Complete and clean. No damage.

Code F. Unserviceable (Reparable). Economically reparable items that require repair, reconditioning, or overhaul.

Code H. Any damage. Any contamination that cannot be cleaned.

b. Refer to WP 0027 for maintenance procedures.

INSPECT — CONTINUED

7. Bag, 300-Round, 7.62mm (B13701)

   a. Inspect for rips, tears, holes, and bums on outside or on the inside liner. Check for broken or missing zippers and snaps. Check hook-and-loop tape fasteners and handles for damage. Check inside pockets for rips and tears.

      Code A. See Table 1.

      Code B. Complete and clean. No damage.

      Code F. Unserviceable (Reparable). Economically reparable items that require repair, reconditioning, or overhaul.

      Code H. Any damage. Any contamination that cannot be cleaned.

   b. Refer to WP 0033 for maintenance procedures.

8. Set, Medium Field Pack (UCP: DA657R) (OCP: M48214)

   a. Inspect for rips, tears, holes, and burns on outside or on the inside liner. Check for broken or missing zippers and snaps. Check hook-and-loop tape fasteners and handles for damage. Check inside pockets for rips and tears.

      Code A. See Table 1.

      Code B. Complete and clean. No damage.

      Code F. Unserviceable (Reparable). Economically reparable items that require repair, reconditioning, or overhaul.

      Code H. Any damage. Any contamination that cannot be cleaned.

   b. Refer to WP 0027 for maintenance procedures.

9. Set, Rifleman with Tactical Assault Panel (TAP) (UCP: DA6508) (OCP: R997493)

   a. Inspect for rips, tears, holes, and burns on outside or on the inside liner. Check for broken or missing zippers and snaps. Check hook-and-loop tape fasteners and handles for damage. Check inside pockets for rips and tears.

      Code A. See Table 1.

      Code B. Complete and clean. No damage.

      Code F. Unserviceable (Reparable). Economically reparable items that require repair, reconditioning, or overhaul.

      Code H. Any damage. Any contamination that cannot be cleaned.

   b. Refer to WP 0023 for maintenance procedures.

END OF TASK

END OF WORK PACKAGE

SUSTAINMENT MAINTENANCE
MODULAR LIGHTWEIGHT LOAD-CARRYING EQUIPMENT (MOLLE) II
FIGHTING LOAD CARRIER (FLC) SET
SERVICE, INSPECT, REPAIR, REPLACE

INITIAL SETUP:

Tools

Knife, Hot Metal (WP 0042, Table 2, Item 2)
Ruler, Tab, Metal, 16-inch (WP 0042, Table 2, Item 3)
Sewing Machine, Industrial Bar Tack (WP 0042, Table 2, Item 4)
Sewing Machine, Medium Duty (WP 0042, Table 2, Item 5)
Shears, Tailor's, 12-inch (WP 0042, Table 2, Item 6)
Stitch Removal Tool (WP 0042, Table 2, Item 7)
Tape, Measuring (WP 0042, Table 2, Item 8)

Personnel Required

Non-MOS specific (1)

References

FM 10-16
WP 0020
WP 0021
WP 0034

Materials/Parts

Fastener Tape, Hook, A-A-55126, Type II, Class 1, 1 inch (WP 0037, Item 43)
Fastener Tape, Hook, A-A-55126, Type II, Class 1, 2 inch (WP 0037, Item 45)
Fastener Tape, Loop, A-A-55126, Type II, Class 1, 1 inch (WP 0037, Item 48)
Fastener Tape, Loop, A-A-55126, Type II, Class 1, 2 inch (WP 0037, Item 50)
Pencil, China Marker, Yellow, A-A-87 (WP 0043, Item 2)
Tape, Textile (Binding Tape), 1 inch (WP 0037, Item 82)
Thread, Nylon, V-T-295, Size E, TY I, II, or III CL A, FG504 (WP 0043, Item 4)
Thread, Nylon, V-T-295, Size F, TY I, II, or III CL A, FG504 (WP 0043, Item 5)
Thread, Nylon, V-T-295, Size FF, TY I, II, or III CL A, FG504 (WP 0043, Item 6)
Webbing, as specified (WP 0037, Items 83-96)

Equipment Condition

Lay out on flat surface or other suitable area.

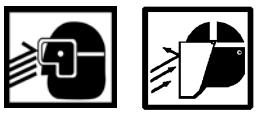
SERVICE

Clean the Fighting Load Carrier IAW WP 0020, Cleaning and Drying.

INSPECT

Conduct a preliminary examination IAW WP 0021 after components have been laundered as described in WP 0020. Discard decayed items. Test seams by grasping the item with both hands and pulling at right angles to the seams. Mark areas to be repaired. Cross out nonspecific and personal markings.

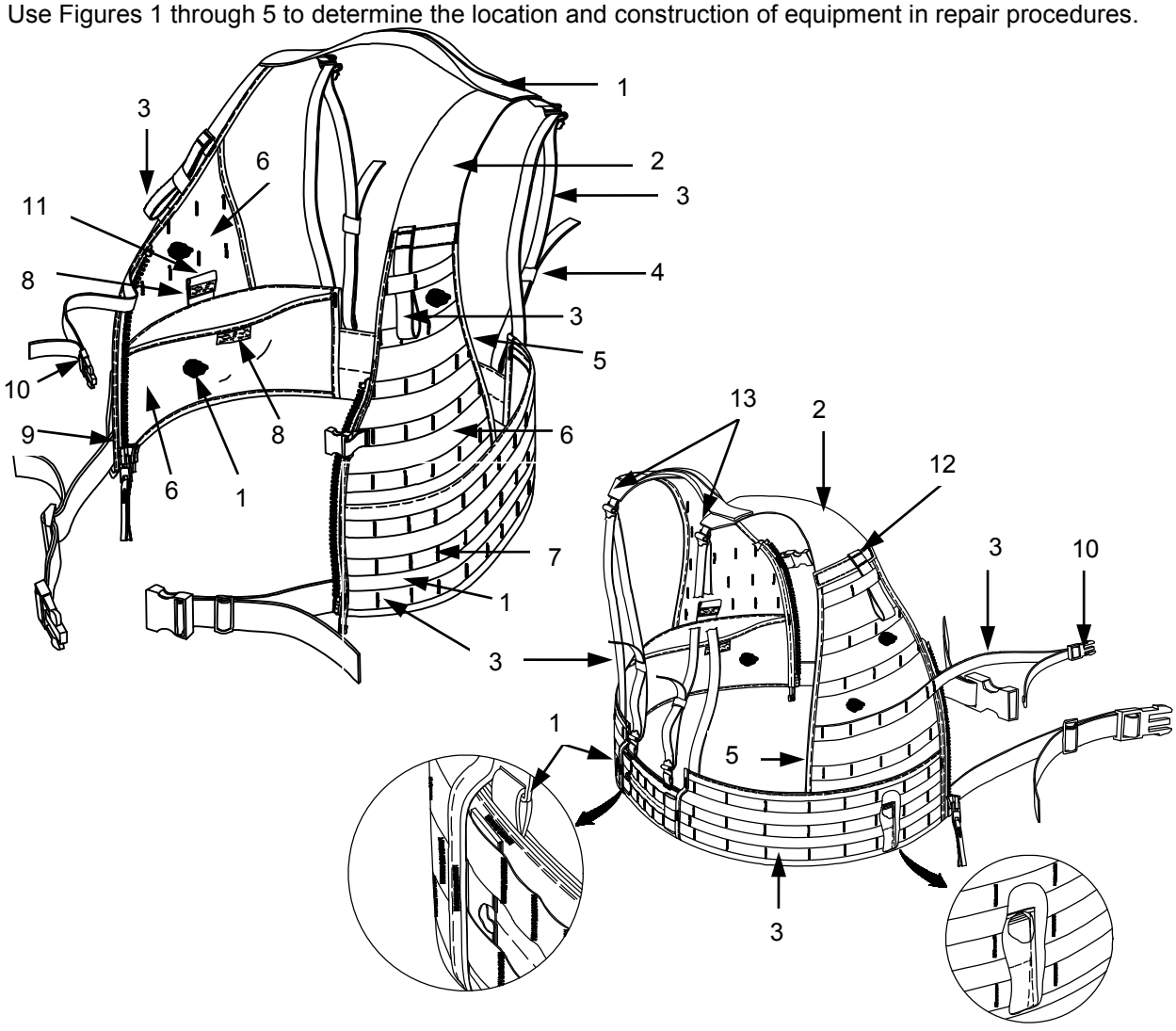
REPAIR



Eye protection should be worn to protect the Soldier from flying particles when operating a sewing machine. Sewing machine needles can break with great force. Failure to wear eye protection may result in injury to eye(s).

Prior to repair operations, each component of the MOLLE II system shall be inspected by qualified personnel to determine the extent of the repair necessary. With the exception of the replacement of hardware items furnished the user as a repair kit, all repairs to these components will be accomplished at the CIF or approved facility, using FM 10-16 as a general guide.

Use Figures 1 through 5 to determine the location and construction of equipment in repair procedures.



Legend

1. Textured Nylon Duck
2. 3 ½-inch Webbing
3. 1-inch Webbing
4. 1-inch Elastic Webbing
5. Binding Tape
6. Raschel Knit Cloth
7. Size E Thread
8. Hook-and-Loop Fastener
9. Slide Fastener
10. 1-inch Side Release Buckle
11. 2-Inch Webbing
12. Size F Thread
13. 1-inch Slide Buckle

Figure 1. Fighting Load Carrier Vest.

REPAIR — CONTINUED

Restitching

1. Use Figure 1 to identify component to be repaired.
2. Use Table 1 to determine specific sewing machine, thread size, and stitching requirements.
3. Overstitch or backstitch by ½ inch for all 301-lockstitch seams.
4. Trim running ends of thread.

Table 1. Fighting Load Carrier Stitching Requirements.

COMPONENT	RECOMMENDED SEWING MACHINE	STITCHES PER INCH	THREAD SIZE
Rifleman Set			
Fighting Load Carrier (FLC)			
Binding Tape	Medium Duty	7 to 11	E
1-inch MOLLE II Webbing	Bar Tack	42 to 48	E
Waistbelt Webbing	Bar Tack	42 to 48	E
All Other Components	Medium Duty	7 to 11	F

END OF TASK

Hook-and-Loop Tape

1. Mark the location of the faulty hook-and-loop tape on the FLC pocket closures.
2. Remove faulty hook-and-loop tape from FLC pocket closures. Do not damage the fabric.
3. Measure and cut a 2-inch (± 1/16 inch) piece of 1-inch wide hook-and-loop tape.
4. Using a medium duty sewing machine, size E thread of the appropriate color, sew new hook-and-loop tape to FLC pocket closure, using the marks made in step 1. Overstitch by ½ inch.
5. Trim running ends of thread.

END OF TASK

Slide Fasteners

1. Remove inner waistbelt from FLC.
2. Cut the fastener tape on the faulty slide fastener as close as possible to the outer row of stitching holding the slide fastener.
3. Trim any raveled yarns from the remaining fastener tape.
4. Measure the length of the damaged area.
5. Obtain a new 11/16-inch slide fastener in the same length as the damaged area.
6. Lay the FLC on a work surface with the MOLLE II webbing facing down.
7. Mark the location of the two bar tacks holding the interior pocket to the FLC. Repeat for opposite side.

REPAIR — CONTINUED

8. Using a stitch removal tool, remove the bar tack and approximately 1 inch of stitching from the interior pocket to the vest. Repeat for opposite side.
9. Using a medium duty sewing machine, size F thread, 7 to 11 stitches per inch, sew the new slide fastener to the FLC.
10. Using a medium duty sewing machine, size F thread, 7 to 11 stitches per inch, sew the interior pocket of the FLC back onto the vest. Overstitch at both ends by ½ inch.
11. Using a bar tack sewing machine, size E thread, 42 to 48 stitches per inch, place a ½ x 1-inch bar tack at the locations marked in step 6. There are four bar tacks, two on each side.
12. Trim all threads.

END OF TASK

Binding Tape

1. Place marks 1 inch on each side of the damaged area.
2. Measure the distance between marks.
3. Cut a length of new binding tape of the same type as original (1 inch) to the length indicated in step 2 plus 1 inch.
4. Sear raw ends of binding tape.
5. Place binding tape between marks in the same manner as the original.
6. Turn binding edges under ½ inch.
7. Using a medium duty sewing machine, size E thread, FG504, stitch $^{1}/_{8}$ inch from edge of tape. Overstitch both ends by ½ inch.

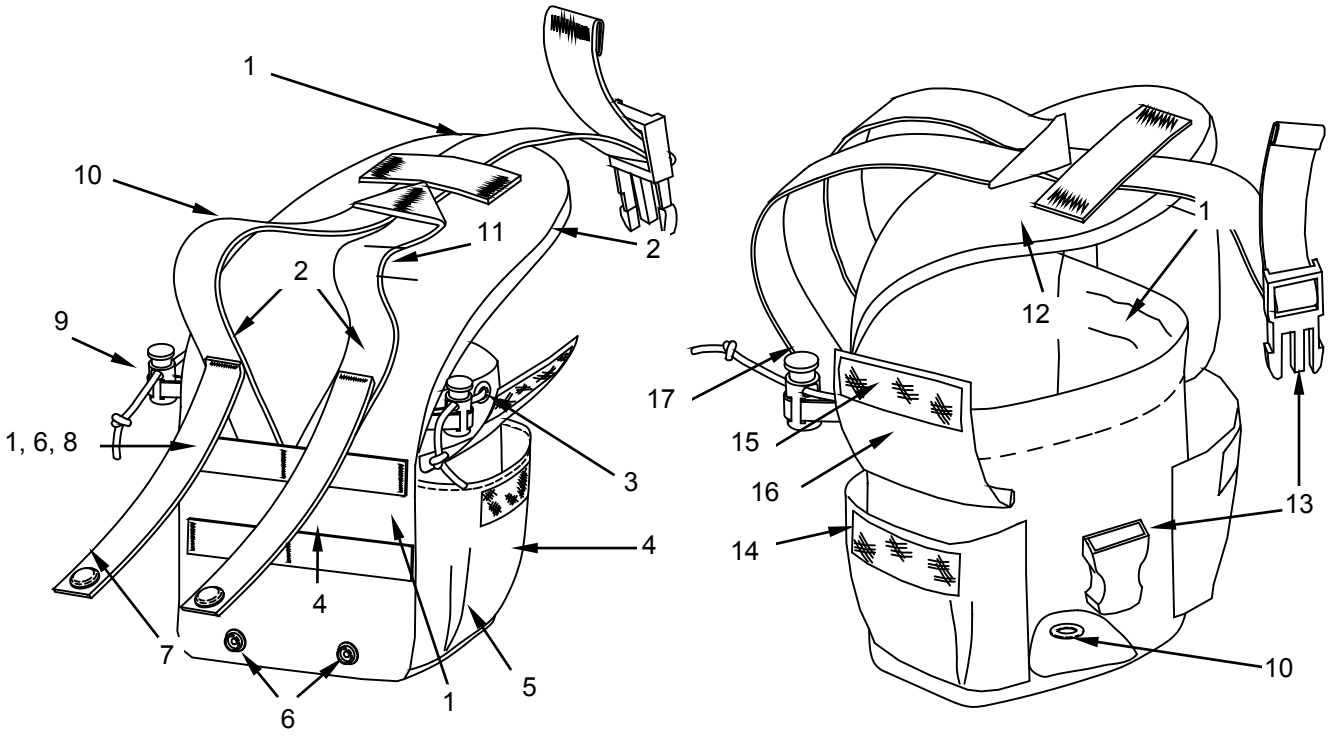
END OF TASK

Replace Harness Back Straps

1. If necessary, remove the plastic locking D-ring on the FLC.
2. Mark the location of the harness back strap on the front panel.
3. Using a stitch removal tool, remove the bar tacks and stitching securing the harness back strap to the panel.
4. Cut and sear a 45-inch length of 1-inch nylon webbing.
5. Place approximately ½ inch of the1-inch webbing between the layers of the panel. Using a bar tack sewing machine, size E thread, 42 to 48 stitches per inch, replace the bar tacks you removed.

END OF TASK

REPAIR — CONTINUED

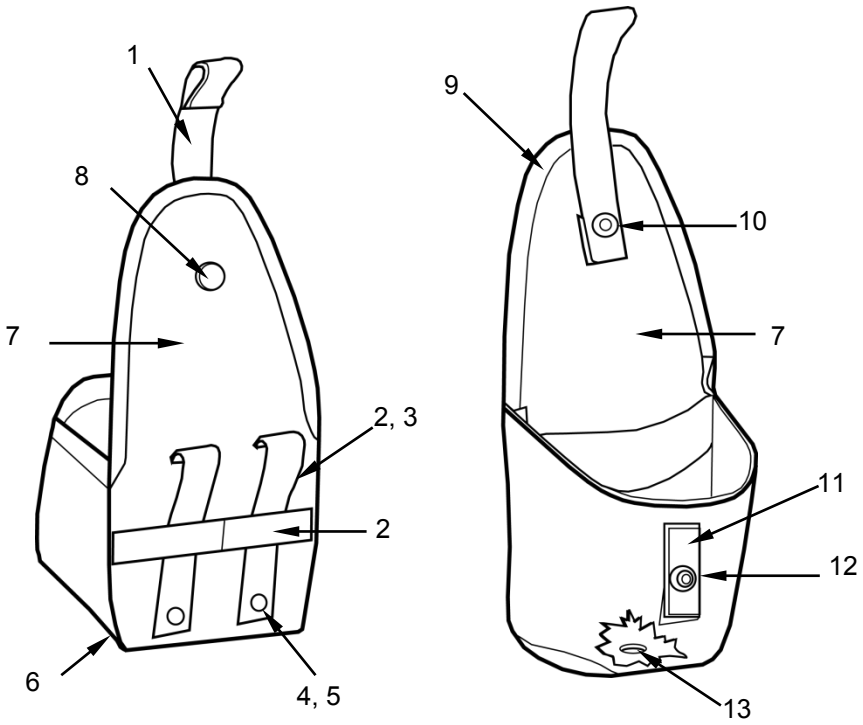


Legend

1. Webbing, Nylon, 1-inch
2. Thread, Size E
3. Eyelet
4. Textured Nylon Duck
5. Thread, Size F
6. Snap Fastener, Eyelet/Stud
7. Snap Fastener, Button/Socket
8. Polyethylene
9. Cord, Elastic, Round
10. Eyelet, Drain
11. Webbing, Elastic, 1-inch
12. Binding Tape, 1-inch
13. Side Release Buckle, 1-inch
14. Fastener, Loop, 1-inch
15. Fastener, Hook, 1-inch
16. Webbing $^{11}/_{32}$ -inch
17. Barrel Lock

Figure 2. Fighting Load Carrier Pouch.

REPAIR — CONTINUED

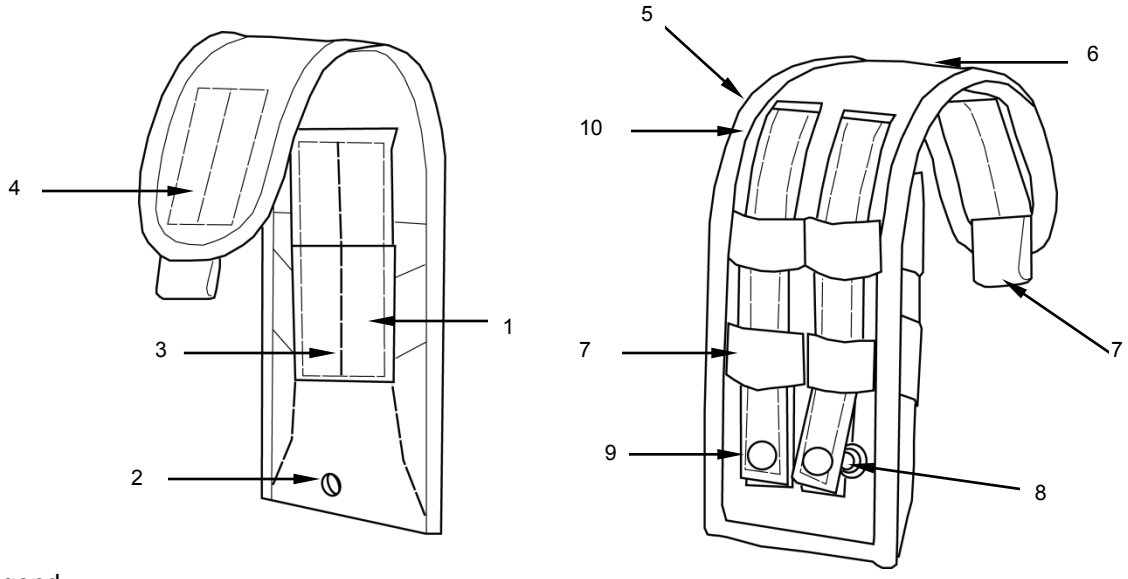


Legend

1. Webbing, Nylon, ¾ -inch
2. Webbing, Nylon, 1-inch
3. Polyethylene, 0.030-inch x 0.875-inch
4. Snap Fastener, Button/Socket
5. Snap Fastener, Eyelet/Stud
6. Thread, Size F
7. Textured Nylon Duck, Class III
8. Snap Fastener, Eyelet/Stud
9. Binding Tape, 1-inch
10. Snap Fastener, Button/Socket
11. Webbing, Nylon, 1-inch
12. Snap Fastener, Button/Socket
13. Eyelet (Drain)

Figure 3. Hand Grenade Pouch.

REPAIR — CONTINUED

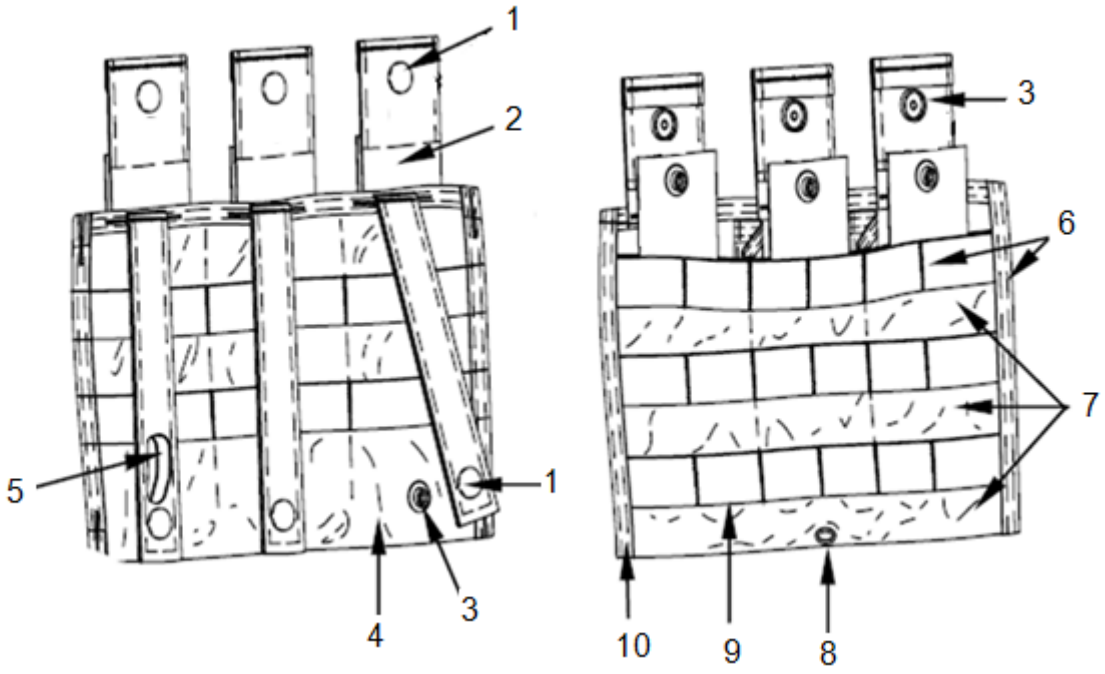


Legend

1. Hook-and-Loop Fastener, 2-inch
2. Eyelet (Drain)
3. Thread, Size F
4. Polyethylene, 0.030-inch x 2.000-inch,
5. Binding Tape, 1-inch
6. Textured Nylon Duck, Class III
7. Webbing, Nylon, 1-inch
8. Snap Fastener, Eyelet/Stud
9. Snap Fastener, Button/Socket
10. Thread, Size E

Figure 4. M-4 Two Magazine Pouch.

REPAIR — CONTINUED



Legend

1. Snap Fastener, Button/Socket
2. Webbing, 2-inch
3. Snap Fastener, Stud/Eyelet
4. Textured Nylon Duck Fabric
5. Polyethylene, High Density, .030-inch
6. Thread, Size E
7. Hook-and-Loop Fastener
8. Grommet
9. Thread, Size F
10. Binding Tape, 1-inch

Figure 5. M-4 Three Magazine Side-by-Side Pouch.

REPAIR — CONTINUED

Restitching

1. Use Figures 1 through 5 to identify component to be repaired.
2. Use Table 2 to determine specific sewing machine, thread size, and stitching requirements.
3. Overstitch or backstitch by ½ inch for all 301-lockstitch seams.
4. Trim running ends of thread.

Table 2. Stitching Requirements for Fighting Load Carrier Pouches.

COMPONENT	RECOMMENDED SEWING MACHINE	STITCHES PER INCH	THREAD SIZE
Fighting Load Carrier			
Pouches			
Binding Tape	Medium Duty	7 to 11	E
1-inch MOLLE II Webbing	Bar Tack	42 to 48	E
Waistbelt Webbing	Bar Tack	42 to 48	E
All Other Components	Medium Duty	7 to 11	F

END OF TASK

Canteen Pouch Drawcord Repair

1. Cut a 14-inch length (± ¼ inch) of 1/8-inch cord.
2. Sear raw ends of cord.
3. Place an overhand knot in one end of cord.
4. Route cord through appropriate channels or guides in equipment, ensuring the cord goes through the barrel lock.
5. Place an overhand knot in remaining end of cord.

END OF TASK

Hook-and-Loop Tape

1. Remove faulty hook-and-loop tape from pocket closures. Do not damage the fabric.
2. Measure and cut a new length of the appropriate width hook-and-loop tape IAW Table 3.
3. Using a medium duty sewing machine, size F thread of the appropriate color, sew new hook-and-loop tape to pocket closure 1/8 inch from the edge, overstitching by ½ inch.
4. Trim running ends of thread.

REPAIR — CONTINUED

Table 3. Hook-and-Loop Requirements for Fighting Load Carrier Pouches.

COMPONENT	APPLICATION	TYPE	WIDTH	LENGTH	TOLERANCE
Canteen/General Purpose Pouch	Side Pocket Closure	Hook-and-Loop	1"	3"	+ or - $^1/_8$ Inch
M-4 Two Magazine Pouch	Pocket Closures	Hook	2"	3"	+ or - $^1/_8$ Inch
M-4 Three Magazine Pouch	Pocket Closures	Loop	2"	5"	+ or - $^1/_8$ Inch

END OF TASK

Binding Tape

1. Place marks 1 inch on each side of the damaged area.
2. Measure the distance between marks.
3. Cut a length of new binding tape of the same type as original (1-inch wide) to the length indicated in step 2.
4. Sear raw ends of binding tape.
5. Place binding tape between marks in the same manner as the original.
6. Turn binding edges under ½ inch.
7. Using a medium duty sewing machine, size E thread of appropriate color, stitch $^1/_8$ inch from edge of tape.

END OF TASK

Attachment Webbing Repair

1. Remove old attachment webbing by cutting away bar tacks and lifting edge binding or seam. Do not damage underlying fabric.
2. Cut a new piece of webbing the same length as the old webbing.
3. Sear both ends of new webbing.
4. Measure the distance between bar tacks on the old webbing and transfer those measurements to the new webbing.
5. Place new webbing component where old webbing was removed.
6. Using a bar tack sewing machine, place a 42- to 48- inch bar tack on each of the marked locations.
7. Place ends of webbing into the seam tape or seam in the same manner as the original construction.
8. Using a medium duty sewing machine, size F thread, 7 to 11 stitches per inch, sew the webbing back into the seam tape or seam, overstitching by a minimum of ½ inch.
9. Trim thread ends.

END OF TASK

REPAIR — CONTINUED

Snap Fastener Replacement

Replace snap fasteners using replacement procedures in WP 0034.

END OF TASK

Eyelet Replacement

Replace eyelets using replacement procedures in WP 0034.

END OF TASK

Buckle Replacement

Replace buckles using replacement procedures in WP 0034.

END OF TASK

Fighting Load Carrier Replacement

Replace the Fighting Load Carrier set with serviceable items from stock.

END OF TASK

END OF WORK PACKAGE

SUSTAINMENT MAINTENANCE
MODULAR LIGHTWEIGHT LOAD-CARRYING EQUIPMENT (MOLLE) II
TACTICAL ASSAULT PANEL (TAP)
SERVICE, INSPECT, REPAIR, REPLACE

INITIAL SETUP:

Tools

Knife, Hot Metal (WP 0042, Table 2, Item 2)
Ruler, Tab, Metal, 16-inch (WP 0042, Table 2, Item 3)
Sewing Machine, Industrial Bar Tack (WP 0042, Table 2, Item 4)
Sewing Machine, Medium Duty (WP 0042, Table 2, Item 5)
Shears, Tailor's, 12-inch (WP 0042, Table 2, Item 6)
Stitch Removal Tool (WP 0042, Table 2, Item 7)
Tape, Measuring (WP 0042, Table 2, Item 8)

Personnel

Non-MOS specific (1)

References

FM 19-16
WP 0020
WP 0021
WP 0034

Materials/Parts

Fastener Tape, Hook, A-A-55126, Type II, Class 1, 1 inch (WP 0037, Item 43)
Fastener Tape, Hook, A-A-55126, Type II, Class 1, 2 inch (WP 0037, Item 45)
Fastener Tape, Loop, A-A-55126, Type II, Class 1, 1 inch (WP 0037, Item 48)
Fastener Tape, Loop, A-A-55126, Type II, Class 1, 2 inch (WP 0037, Item 50)
Pencil, China Marker, Yellow, A-A-87 (WP 0043, Item 2)
Tape, Textile (Binding Tape), 1 inch (WP 0037, Item 82)
Thread, Nylon, V-T-295, Size E, TY I, II, or III CL A, FG504 (WP 0043, Item 4)
Thread, Nylon, V-T-295, Size F, TY I, II, or III CL A, FG504 (WP 0043, Item 5)
Thread, Nylon, V-T-295, Size FF, TY I, II, or III CL A, FG504 (WP 0043, Item 6)
Webbing, as specified (WP 0037, Items 83-96)

Equipment Condition

Lay out on flat surface or other suitable area.

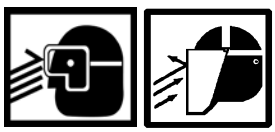
SERVICE

Clean the Tactical Assault Panel (TAP) IAW WP 0020, Cleaning and Drying.

INSPECT

Conduct a preliminary examination IAW WP 0021 after components have been laundered as described in WP 0020. Discard decayed items. Test seams by grasping the item with both hands and pulling at right angles to the seams. Mark areas to be repaired. Cross out nonspecific and personal markings.

REPAIR

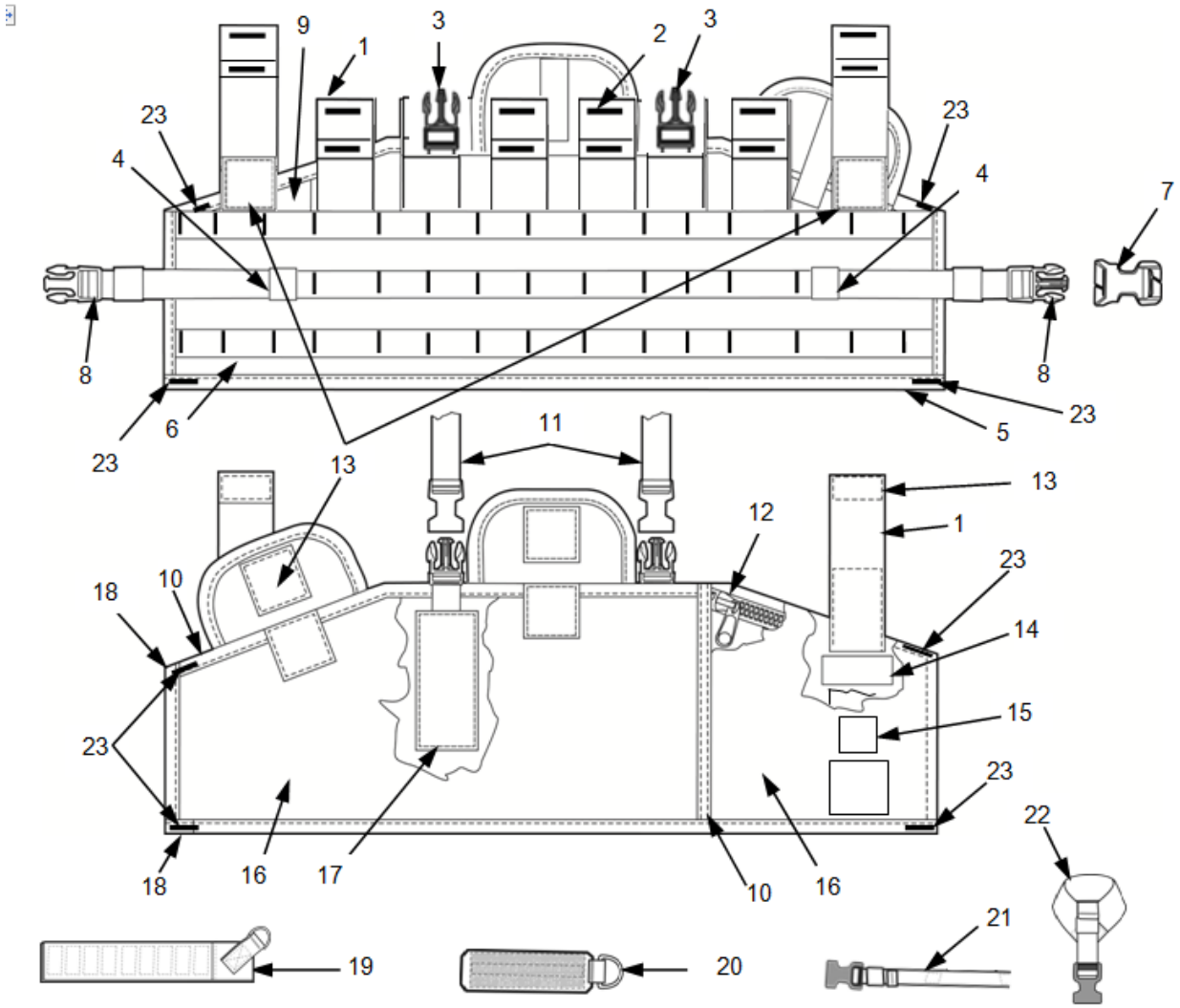


Eye protection should be worn to protect the Soldier from flying particles when operating a sewing machine. Sewing machine needles can break with great force. Failure to wear eye protection may result in injury to eye(s).

Prior to repair operations, each component of the MOLLE II system shall be inspected by qualified

REPAIR — CONTINUED

personnel to determine the extent of the repair necessary. With the exception of the replacement of hardware items furnished the user as a repair kit, all repairs to these components will be accomplished at the CIF or approved facility, using FM 10-16 as a general guide.



Legend (Front View)

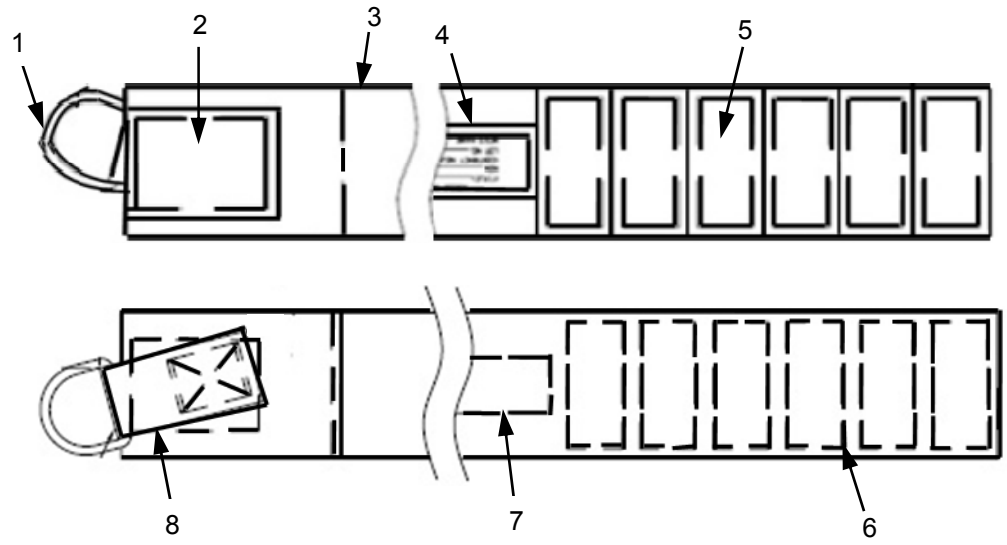
1. Webbing, 2-inch
2. Pattern, Flap
3. Single Bar Side Release Buckle 1-inch, Male
4. Elastic Webbing
5. Tape, Binding, 1-inch
6. Pattern, Front
7. Quick Attach Slide Release Buckle, 1-inch, Female
8. Anti-Slip Side Release Buckle 1-inch, Male
9. Pattern, Back

Legend (Back View)

10. Tape, Binding, 1-inch
11. Harness Assembly
12. Slide, Fastener (Coil Chain Zipper)
13. Fastener Tape, Loop, 2-inch
14. Webbing, 1-inch
15. Fastener Tape, Hook, 1½-inch
16. Pattern, Inside Mesh
17. Identification/Instruction, Labels
18. Thread, Size E
19. Right Side Adapter Assembly
20. Left Side Adapter Assembly
21. Attaching Strap Assembly
22. Soldier Plate Carrier System (SPCS) Adapter
23. Bar Tack (Front and Back View)

Figure 1. Tactical Assault Panel (TAP).

REPAIR — CONTINUED



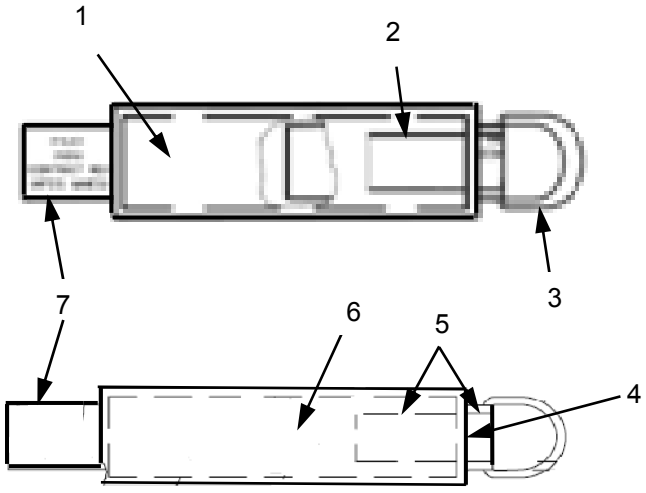
Legend (Front View)

1. 1-inch D-Ring, Metal
2. Fastener Tape, Hook, 1½-inch
3. Webbing, 2-inch
4. Identification/Instruction Labels
5. Fastener Tape, Loop, 1-inch

Legend (Back View)

6. Thread, Size F
7. Identification/Instruction Labels
8. Webbing, 1-inch

Figure 2. Right Side Adapter Assembly (TAP), Front and Back.



Legend (Front View)

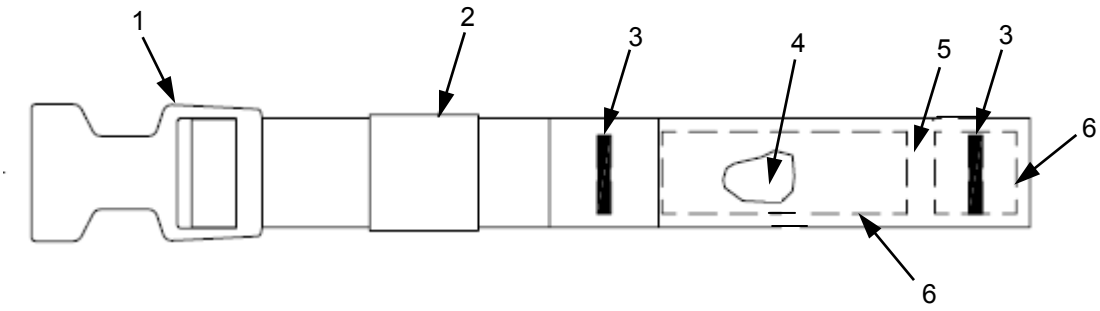
1. Fastener Tape, Hook, 1 ½-inch
2. Webbing, 1-inch
3. 1-inch D-Ring, Metal

Legend (Back View)

4. Thread, Size F
5. Webbing, 1-inch
6. Fastener Tape, Loop 1 ½-inch
7. Identification/Instruction Labels

Figure 3. Left Side Adapter Assembly (TAP), Front and Back.

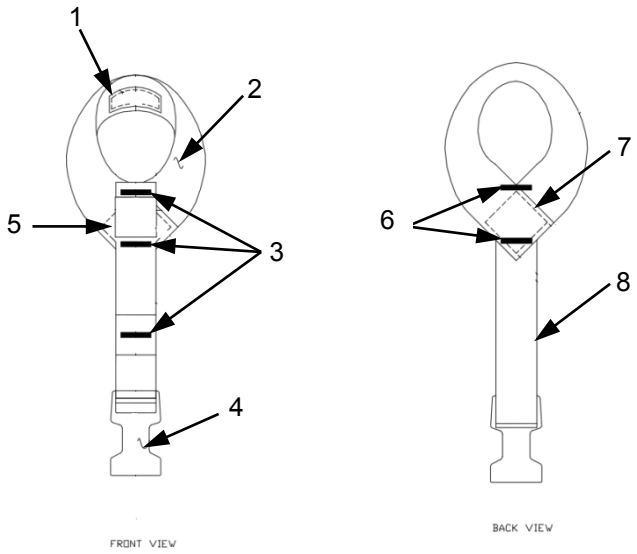
REPAIR — CONTINUED



Legend

1. Anti-Slip Release Buckle, 1-inch
2. Webbing, Elastic, 1-inch
3. Thread, Size E
4. Identification/Instruction, Labels
5. Webbing, 1-inch
6. Thread, Size F

Figure 4. Attaching Strap Assembly (TAP).



1

Legend (Front View)

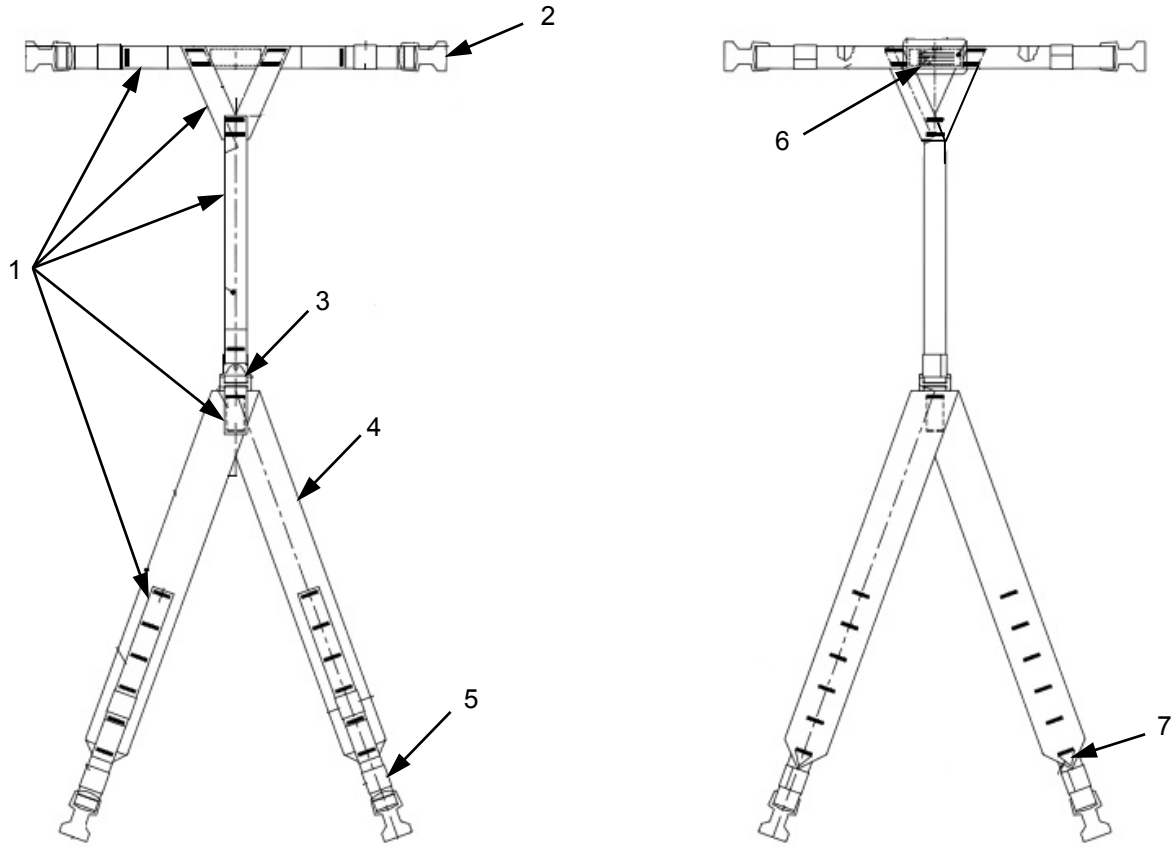
1. Identification/Instruction, Labels
2. Webbing, 1 ½-inch Webbing, Elastic, 1-inch
3. Thread, Size E
4. Anti-Slip Release Buckle, 1-inch
5. Elastic Webbing, 1-inch

Legend (Back View)

6. Thread, Size E
7. Thread, Size F
8. Webbing, 1-inch

Figure 5. Soldier Plate Carrier System (SPCS) Adapter.

REPAIR — CONTINUED



FRONT VIEW BACK VIEW

Legend (Front View)

1. Webbing, 1-inch
2. Anti-Slip Release Buckle, 1-inch (Female)
3. Double Bar, Nonslip Buckle, 1-inch
4. Webbing, 2-inch
5. Webbing, Elastic, 1-inch

Legend (Back View)

6. Identification/Instruction, Labels MOLLE II
7. Thread, Size F

Figure 6. Harness Assembly (TAP).

REPAIR — CONTINUED

Restitching

1. Use Figures 1 through 6 to identify component to be repaired.
2. Use Table 1 to determine specific sewing machine, thread size, and stitching requirements.
3. Overstitch or backstitch by ½ inch for all 301-lockstitch seams.
4. Trim running ends of thread.

Table 1. Tactical Assault Panel (TAP) Stitching Requirements.

COMPONENT	RECOMMENDED SEWING MACHINE	STITCHES PER INCH	THREAD SIZE
Tactical Assault Panel (TAP)			
Binding Tape	Medium Duty	7 to 11	E
1-inch MOLLE II Webbing	Bar Tack	42 to 48	E
1 ½-inch MOLLE II Webbing	Bar Tack	42 to 48	E
2-inch MOLLE II Webbing	Bar Tack	42 to 48	E
All Other Components	Medium Duty	7 to 11	F

END OF TASK

Hook-and-Loop Tape

1. Mark the location of the faulty hook-and-loop tape on the TAP.
2. Remove faulty hook-and-loop tape from TAP. Do not damage the fabric.
3. Measure and cut a 2-inch (± 1/16 inch) piece of 1-inch wide hook-and-loop tape.
4. Using a medium duty sewing machine, size E thread, of the appropriate color, sew new hook-and-loop tape to TAP, using the marks made in step 1. Overstitch by ½ inch.
5. Trim running ends of thread.

Table 2. Tactical Assault Panel (TAP) Hook-and-Loop Stitching Requirements.

COMPONENT	APPLICATION	TYPE	WIDTH	LENGTH	TOLERANCE
TAP	Closures for front and back pouches	Hook-and-loop	1 ½" 2"	1" 1 ½" 2" 3 ½"	+ or - $^{1}/_{8}$ Inch
Right and Left Side Adapter Assembly	Attachment to body armor	Hook-and-loop	1" 1 ½"	2" 5"	+ or - $^{1}/_{8}$ Inch

END OF TASK

REPAIR — CONTINUED

Slide Fastener

1. Cut the fastener tape on the faulty slide fastener as close as possible to the outer row of stitching holding the slide fastener.
2. Trim any raveled yarns from the remaining fastener tape.
3. Measure the length of the damaged area.
4. Obtain a new (coil chain zipper) (1 inch x 8-inch) slide fastener in the same length as the damaged area.
5. Lay the TAP on a work surface with the MOLLE II webbing facing down.
6. Mark the location of the two bar tacks holding the interior pocket to the TAP. Repeat for opposite side.
7. Remove the bar tack and approximately 1 inch of stitching, from the interior pocket to the vest, using a stitch removal tool. Repeat for opposite side.
8. Using a medium duty sewing machine, size F thread, 7 to 11 stitches per inch, sew the new slide fastener to the TAP.
9. Using a medium duty sewing machine, size F thread, 7 to 11 stitches per inch, sew the interior pocket of the TAP back onto the vest. Overstitch at both ends by ½ inch.
10. Using a bar tack sewing machine, size E thread, 42 to 48 stitches per inch, place a ½ x 1-inch bar tack at the locations marked in step 6. There are four bar tacks, two on each side.
11. Trim all threads.

END OF TASK

Binding Tape

1. Place marks 1 inch on each side of the damaged area.
2. Measure the distance between marks.
3. Cut a length of new binding tape of the same type as original (1 inch) to the length indicated in step 2 plus 1 inch.
4. Sear raw ends of binding tape.
5. Place binding tape between marks in the same manner as the original.
6. Turn binding edges under ½ inch.
7. Using a medium duty sewing machine, size E thread, FG504, stitch $^{1}/_{8}$ inch from edge of tape.
8. Overstitch both ends by ½ inch.

END OF TASK

Attachment Webbing Repair

1. Remove old attachment webbing by cutting away bar tacks and lifting edge binding or seam. Do not damage underlying fabric.
2. Cut a new piece of webbing the same length as the old webbing.
3. Sear both ends of new webbing.
4. Measure the distance between bar tacks on the old webbing and transfer those measurements to the new webbing.
5. Place new webbing component where old webbing was removed.

REPAIR — CONTINUED

6. Using a bar tack sewing machine, place a 42- to 48-inch bar tack on each of the marked locations.
7. Place ends of webbing into the seam tape or seam in the same manner as the original construction.
8. Using a medium duty sewing machine, size F thread, 7 to 11 stitches per inch, sew the webbing back into the seam tape or seam, overstitching by a minimum of ½ inch.
9. Trim thread ends.

END OF TASK

Buckle Replacement

Replace buckles using replacement procedures in WP 0034.

END OF TASK

REPLACE

Replace the Tactical Assault Panel (TAP) with serviceable items from stock.

END OF TASK

END OF WORK PACKAGE

SUSTAINMENT MAINTENANCE
HYDRATION SYSTEM CARRIER ASSEMBLY
SERVICE, INSPECT, REPAIR, REPLACE

INITIAL SETUP:

Tools

Knife, Hot Metal (WP 0042, Table 2, Item 2)
Ruler, Tab, Metal, 16-inch (WP 0042, Table 2, Item 3)
Sewing Machine, Industrial Bar Tack (WP 0042, Table 2, Item 4)
Sewing Machine, Medium Duty (WP 0042, Table 2, Item 5)
Shears, Tailor's, 12-inch (WP 0042, Table 2, Item 6)
Stitch Removal Tool (WP 0042, Table 2, Item 7)
Tape, Measuring (WP 0042, Table 2, Item 8)

Personnel Required

Non-MOS specific (1)

References

FM 10-16
WP 0020
WP 0021

Materials/Parts

Pencil, China Marker, Yellow, A-A-87 (WP 0043, Item 2)
Tape, Textile (Binding Tape), 1 inch (WP 0037, Item 82)
Thread, Nylon, V-T-295, Size E, TY I, II, or III CL A, FG504 (WP 0043, Item 4)
Thread, Nylon, V-T-295, Size F, TY I, II, or III CL A, FG504 (WP 0043, Item 5)
Thread, Nylon, V-T-295, Size FF, TY I, II, or III CL A, FG504 (WP 0043, Item 6)
Webbing, as specified (WP 0037, Items 83-96)

Equipment Condition

Unpacked

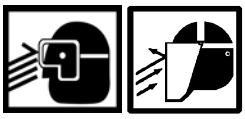
SERVICE

Clean the Hydration System IAW WP 0020, Cleaning and Drying.

INSPECT

Conduct a preliminary examination IAW WP 0021 after components have been laundered as described in WP 0020. Discard decayed items. Test seams by grasping the item with both hands and pulling at right angles to the seams. Mark areas to be repaired. Cross out nonspecific and personal markings.

REPAIR

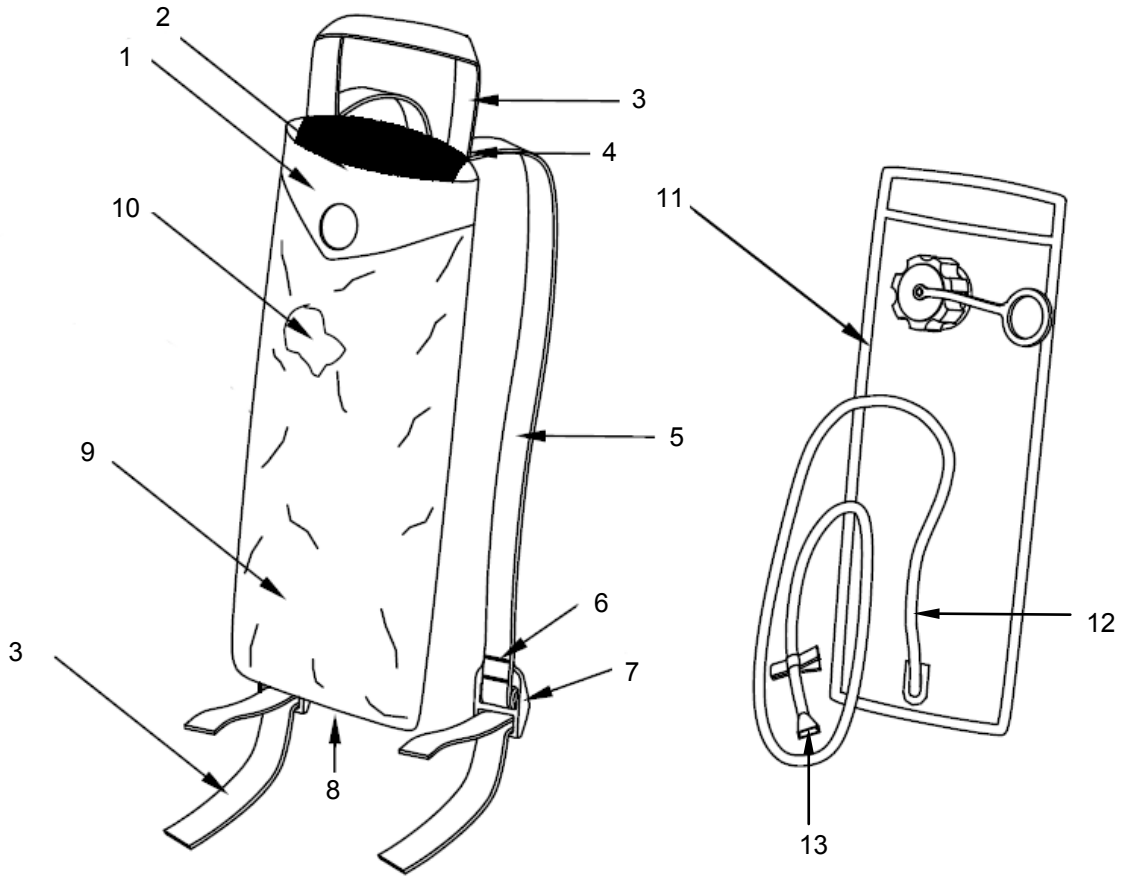


Eye protection should be worn to protect the Soldier from flying particles when operating a sewing machine. Sewing machine needles can break with great force. Failure to wear eye protection may result in injury to eye(s).

Prior to repair operations, each component of the MOLLE II hydration system shall be inspected by qualified personnel to determine the extent of the repair necessary. With the exception of the replacement of hardware items furnished to the user as a repair kit, all repairs to these components will be accomplished at the CIF or appropriate facility, using FM 10-16 as a general guide.

REPAIR — CONTINUED

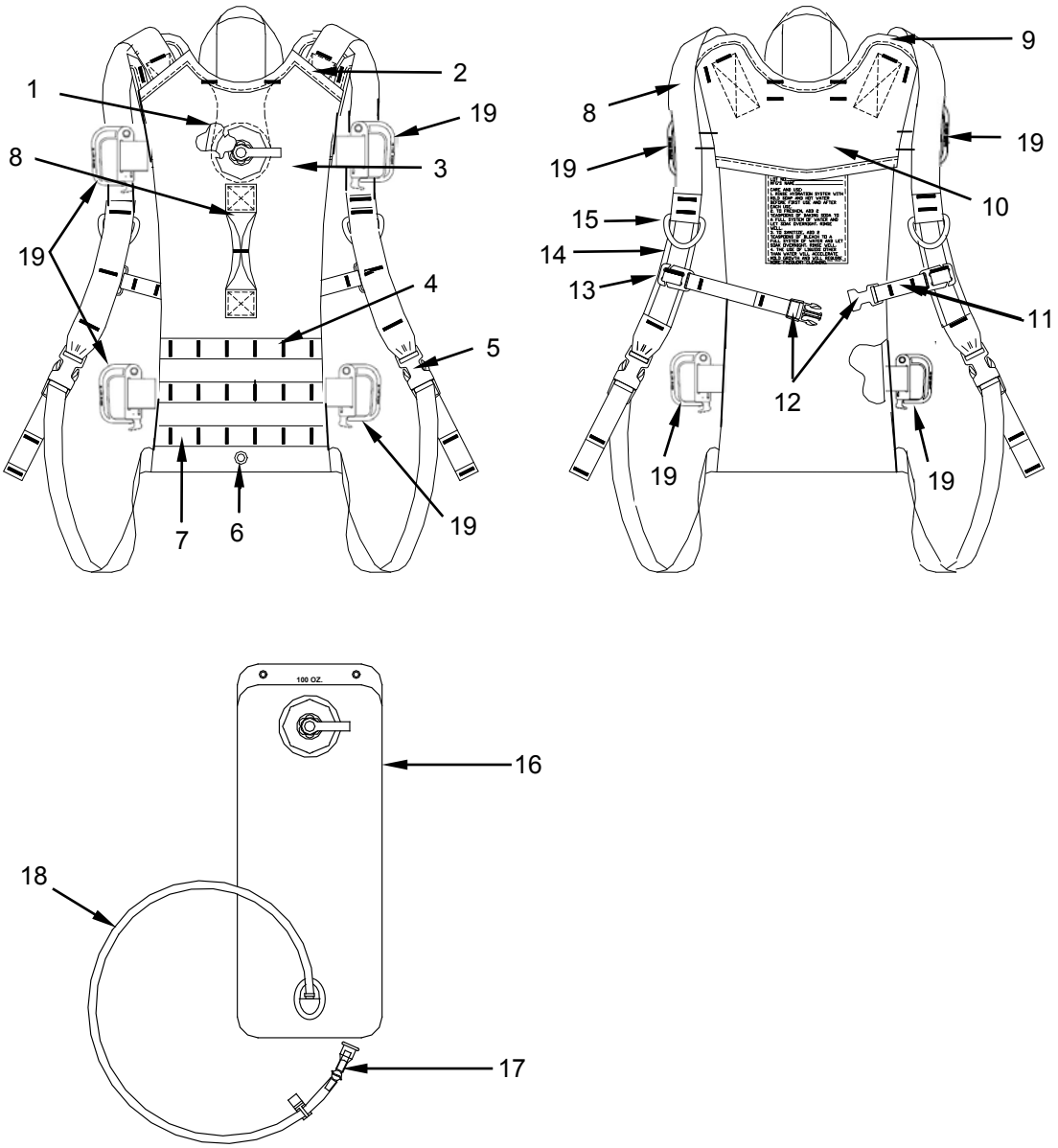
Use Figures 1 and 2 to determine location and construction of equipment in repair procedures.



Legend
1. Nylon Duck Fabric (Black)
2. Fastener Tape, Hook-and-Loop, 2-inch wide
3. Webbing, 1-inch wide
4. Thread, Size F
5. Webbing, 1½-inch wide
6. Thread, Size E
7. Buckle, 1-inch
8. Grommet
9. Nylon Duck Fabric
10. Foam, ¼-inch
11. Bladder
12. Drink Tube
13. Bite Valve

Figure 1. Hydration System Carrier Assembly.

REPAIR — CONTINUED



Legend

1. Polyethylene, 0.030-inch
2. Binding Tape, 1-inch
3. Nylon/Foam Laminate
4. Thread, Nylon, Size E
5. Side Release Buckle, 1-inch
6. Eyelet and Washer
7. Webbing, Nylon, 1-inch
8. Webbing, Nylon, 1½-inch
9. Thread, Nylon, Size E
10. Textured Nylon Duck
11. Webbing, ¾-inch
12. Side Release Buckle, ¾-inch
13. Adjuster Buckle, 1-in to ¾-inch
14. Thread, Nylon, Size F
15. D-Ring, 1½-inch
16. Bladder
17. Bite Valve
18. Drink Tube
19. Carabiner Locking

Figure 2. Hydration System Carrier (Alternate).

REPAIR — CONTINUED

Restitching

1. Use Figures 1 and 2 to identify component to be repaired.
2. Use Table 1 to determine specific sewing machine, thread size, and stitching requirements.
3. Overstitch or backstitch by ½ inch for all straight seams.
4. Trim running ends of thread.

Table 1. Hydration System Carrier Stitching Requirements.

COMPONENT	RECOMMENDED SEWING MACHINE	STITCHES PER INCH	THREAD SIZE
Rifleman Set			
Hydration System Carrier			
General	Medium Duty	8 to 10	F
Edge Binding	Medium Duty	7 to 11	E
Bar Tacks	Bar Tack	42 to 48	E

END OF TASK

Binding Tape

1. Place marks 1 inch on each side of the damaged area.
2. Measure the distance between marks.
3. Cut a length of new binding tape of the same type as original (1-inch wide) to the length indicated in step 2.
4. Sear raw ends of binding tape.
5. Place binding tape between marks in the same manner as the original.
6. Turn binding edges under ½ inch.
7. Using a medium duty sewing machine, size E thread of appropriate color, stitch $^{1}/_{8}$ inch from edge of tape.

END OF TASK

REPAIR — CONTINUED

Attachment Webbing Repair

1. Remove old attachment webbing by cutting away bar tacks and lifting edge binding or seam. Do not damage underlying fabric.
2. Cut a new piece of webbing the same length as the old webbing.
3. Sear both ends of new webbing.
4. Measure the distance between bar tacks on the old webbing and transfer those measurements to the new webbing.
5. Place new webbing component where old webbing was removed.
6. Using a bar tack sewing machine, place a 42- to 48-inch bar tack on each of the marked locations.
7. Place ends of webbing into the seam tape or seam in the same manner as the original construction.
8. Using a medium duty sewing machine, size F thread, 7 to 11 stitches per inch, sew the webbing back into the seam tape or seam, overstitching by a minimum of ½ inch.
9. Trim thread ends.

END OF TASK

REPLACE

Hydration System Bladder

A used hydration system bladder cannot be repaired or re-issued. A new bladder is used to replace an existing one.

Hydration System Tubing

Used hydration system tubing cannot be repaired or re-issued. New hydration system tubing is used to replace existing tubing.

Hydration System Valve

A used hydration system valve cannot be repaired or re-issued. A new hydration system valve is used to replace an existing system valve.

Hydration System Carrier Assembly

Replace the Hydration System Carrier Assembly with serviceable item from stock.

END OF WORK PACKAGE

SUSTAINMENT MAINTENANCE
ASSAULT PACK
SERVICE, INSPECT, REPAIR, REPLACE

INITIAL SETUP:

Tools

Knife, Hot Metal (WP 0042, Table 2, Item 2)
Ruler, Tab, Metal, 16-inch (WP 0042, Table 2, Item 3)
Sewing Machine, Industrial Bar Tack (WP 0042, Table 2, Item 4)
Sewing Machine, Medium Duty (WP 0042, Table 2, Item 5)
Shears, Tailor's, 12-inch (WP 0042, Table 2, Item 6)
Stitch Removal Tool (WP 0042, Table 2, Item 7)
Tape, Measuring (WP 0042, Table 2, Item 8)

Personnel Required

Non-MOS specific (1)

References

FM 10-16
WP 0020
WP 0021

Materials/Parts

Fastener Tape, Hook, A-A-55126, Type II, Class 1, 1 inch (WP 0037, Item 43)
Fastener Tape, Hook, A-A-55126, Type II, Class 1, 2 inch (WP 0037, Item 45)
Fastener Tape, Loop, A-A-55126, Type II, Class 1, 1 inch (WP 0037, Item 48)
Fastener Tape, Loop, A-A-55126, Type II, Class 1, 2 inch (WP 0037, Item 50)
Pencil, China Marker, Yellow, A-A-87 (WP 0043, Item 2)
Tape, Textile (Binding Tape), 1 inch (WP 0037, Item 82)
Thread, Nylon, V-T-295, Size E, TY I, II, or III CL A, FG504 (WP 0043, Item 4)
Thread, Nylon, V-T-295, Size F, TY I, II, or III CL A, FG504 (WP 0043, Item 5)
Thread, Nylon, V-T-295, Size FF, TY I, II, or III CL A, FG504 (WP 0043, Item 6)
Webbing, as specified (WP 0037, Items 83-96)

Equipment Condition

Lay out on flat surface or other suitable area.

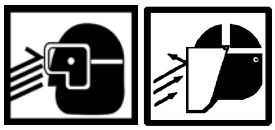
SERVICE

Clean the assault pack IAW WP 0020, Cleaning and Drying.

INSPECT

Conduct a preliminary examination IAW WP 0021 after components have been laundered as described in WP 0020. Discard rotten items. Test seems by grasping the item with both hands and pulling at right angles to the seams. Mark areas to be repaired. Cross out nonspecific and personal markings.

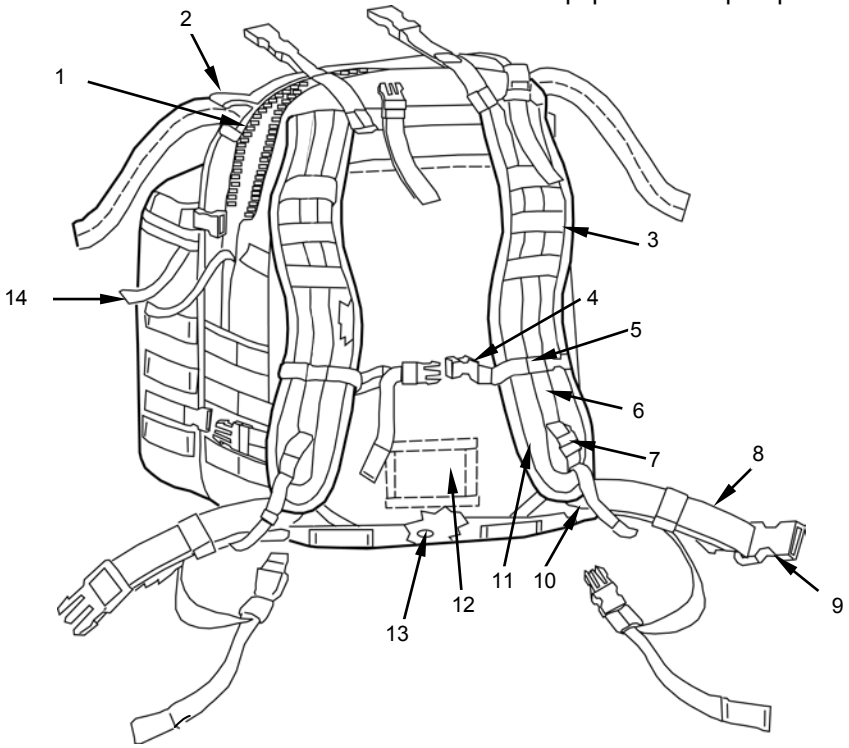
REPAIR



Eye protection should be worn to protect the Soldier from flying particles when operating a sewing machine. Sewing machine needles can break with great force. Failure to wear eye protection may result in injury to eye(s).

Prior to repair operations, each component of the MOLLE II system shall be inspected by qualified personnel to determine the extent of the repair necessary. With the exception of the replacement of hardware items furnished to the user as a repair kit, all repairs to these components will be accomplished at the CIF or appropriate facility, using FM 10-16 as a general guide.

Use Figures 1 and 2 to determine location and construction of equipment in repair procedures.

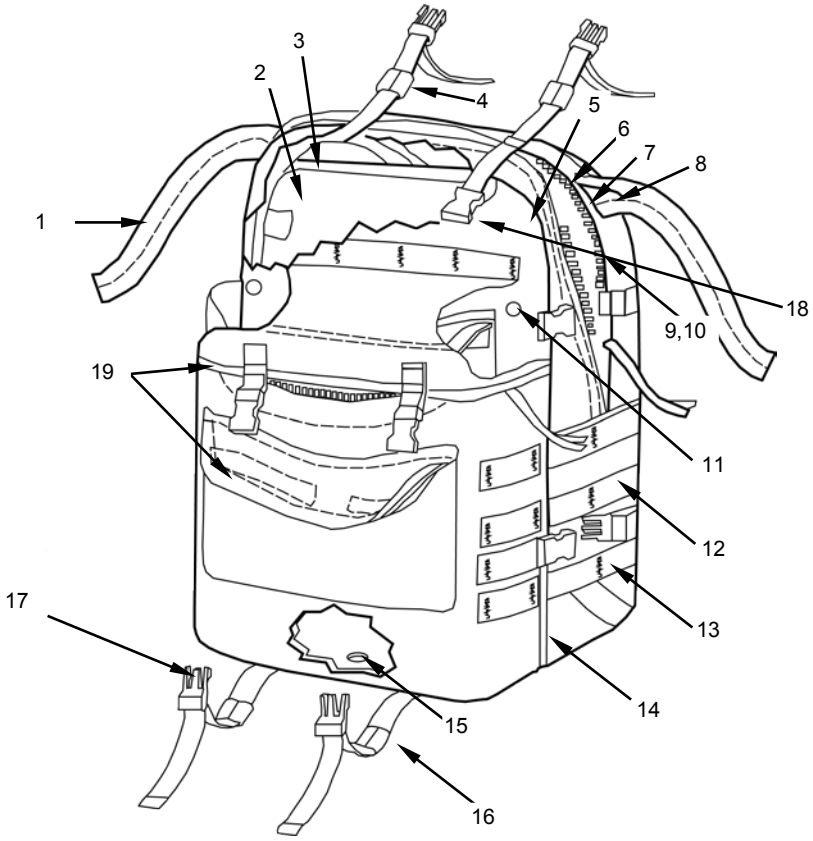


Legend

1. Slide Fastener
2. Thread, Size FF
3. Binding Tape, 1-inch
4. Side Release Buckle, 1-inch
5. Keeper, Sternum Strap
6. Webbing, 1-inch
7. Webbing, Nylon, $^{9}/_{16}$-inch
8. Webbing, 1½-inch
9. Side Release Buckle, 1½-inch
10. D-Ring, 1-inch
11. Textured Nylon Duck
12. Polyethylene, .020-inch
13. Eyelet (Drain)
14. Tubular Braid

Figure 1. Assault Pack (Front View).

REPAIR — CONTINUED



Legend:

1. Webbing, Tan 1 $^{23}/_{32}$-inch
2. Plastic Shield
3. Foam ¼-inch
4. Webbing, Elastic, 1-inch
5. Textured Nylon Duck
6. Slide Fastener
7. Slide Fastener Thong
8. Hook-and-Loop Fastener 2-inch
9. Metal Loop
10. Webbing, 1-inch
11. Snap Fastener/Stud Eyelet
12. Webbing, 1-inch
13. Thread, Size E
14. Thread, Size F
15. Eyelet (Drain)
16. Webbing, Elastic, 1-inch
17. 1-inch Side Release Buckle (Male)
18. 1-inch Side Release Buckle (Female)
19. Binding Tape, 1-inch

Figure 2. Assault Pack (Rear View).

REPAIR — CONTINUED

Restitching

1. Use Figures 1 and 2 to identify component to be repaired.
2. Use Table 1 to determine specific sewing machine, thread size and stitching requirements.
3. Overstitch or backstitch by ½ inch for all 301-lockstitch seams.
4. Trim running ends of thread.

Table 1. Assault Pack Stitching Requirements.

COMPONENT	RECOMMENDED SEWING MACHINE	STITCHES PER INCH	THREAD SIZE
Rifleman Set			
Assault Pack			
General	Medium Duty	8 to 10	F
Parachute attaching straps/handle	Medium Duty	1 to 11	FF
Binding Tape	Medium Duty	7 to 11	E
1-inch MOLLE II Webbing	Bar Tack	42 to 48	E

END OF TASK

Hook-and-Loop Tape

1. Remove faulty hook-and-loop tape from assault pack. Do not damage the fabric.
2. Measure and cut a new piece of hook-and-loop fastener tape to the appropriate length and width listed in Table 2.

WARNING

If sewing the parachute interface slot, be careful to sew slowly as the needle has to go through plastic stiffeners. The needle could break and cause eye damage.

3. Using a medium duty sewing machine, size F thread of the appropriate color, sew new hook-and-loop tape to the assault pack closure flap, overstitching by ½ inch.
4. Trim running ends of thread.

Table 2. Hook-and-Loop Tape Measurements.

COMPONENT	APPLICATION	TYPE	WIDTH	LENGTH	TOLERANCE
Assault Pack	Parachute Interface Slots	Hook-and-Loop	2"	3½"	+ or − $^{1}/_{16}$ inch
Assault Pack	Closure Flap	Hook-and-Loop	1"	AR	+ or − $^{1}/_{16}$ inch

END OF TASK

REPAIR — CONTINUED

Slide Fasteners and Slide Fastener Thong Replacement

1. Cut the fastener tape on the faulty slide fastener as close as possible to the outer row of stitching holding the slide fastener.
2. Trim any raveled yarns from the remaining fastener tape.
3. Measure the length of the damaged area.
4. Obtain a new slide fastener (Table 3).
5. Using a medium duty sewing machine, size F thread, 7-11 stitches per inch, sew the new slide fastener to the assault pack.
6. Trim threads.
7. Replace slide fastener thongs with a new 6-inch length of 11/32-inch nylon webbing.

Table 3. Slide Fastener Lengths.

COMPONENT	APPLICATION	FASTENER WIDTH	LENGTH	TOLERANCE
Assault Pack	Main Pocket Closure	0.435"	AR	+ or – $^{1}/_{8}$ Inch
Assault Pack	Front Pocket Closure	0.435"	AR	+ or – $^{1}/_{8}$ Inch

END OF TASK

Binding Tape

1. Place marks 1 inch on each side of the damaged area.
2. Measure the distance between marks.
3. Cut a length of new binding tape of the same type as original (1-inch wide) to the length indicated in step 2.
4. Sear raw ends of binding tape.
5. Place binding tape between marks in the same manner as the original.
6. Turn binding edges under ½ inch.
7. Using a medium duty sewing machine, size E thread of appropriate color, stitch $^{1}/_{8}$ inch from edge of tape.

END OF TASK

REPAIR — CONTINUED

Attachment Webbing Repair

1. Remove old attachment webbing by cutting away bar tacks and lifting edge binding or seam. Do not damage underlying fabric.
2. Cut a new piece of webbing the same length as the old webbing.
3. Sear both ends of new webbing.
4. Measure the distance between bar tacks on the old webbing and transfer those measurements to the new webbing.
5. Place new webbing component where old webbing was removed.
6. Using a bar tack sewing machine, place a 42- to 48-inch bar tack on each of the marked locations.
7. Place ends of webbing into the seam tape or seam in the same manner as the original construction.
8. Using a medium duty sewing machine, size F thread, 7 to 11 stitches per inch, sew the webbing back into the seam tape or seam, overstitching by a minimum of ½ inch.
9. Trim thread ends.

END OF TASK

REPLACE

Replace Assault Pack with serviceable item from stock.

END OF TASK

END OF WORK PACKAGE

SUSTAINMENT MAINTENANCE
WAIST PACK
SERVICE, INSPECT, REPAIR, REPLACE

INITIAL SETUP:

Tools

Knife, Hot Metal (WP 0042, Table 2, Item 2)
Ruler, Tab, Metal, 16-inch (WP 0042, Table 2, Item 3)
Sewing Machine, Industrial Bar Tack (WP 0042, Table 2, Item 4)
Sewing Machine, Medium Duty (WP 0042, Table 2, Item 5)
Shears, Tailor's, 12-inch (WP 0042, Table 2, Item 6)
Stitch Removal Tool (WP 0042, Table 2, Item 7)
Tape, Measuring (WP 0042, Table 2, Item 8)

Personnel Required

Non-MOS specific (1)

References

FM 10-16
WP 0020
WP 0021
WP 0034

Materials/Parts

Pencil, China Marker, Yellow, A-A-87 (WP 0043, Item 2)
Tape, Textile (Binding Tape), 1 inch (WP 0037, Item 82)
Thread, Nylon, V-T-295, Size E, TY I, II, or III CL A, FG504 (WP 0043, Item 4)
Thread, Nylon, V-T-295, Size F, TY I, II, or III CL A, FG504 (WP 0043, Item 5)
Thread, Nylon, V-T-295, Size FF, TY I, II, or III CL A, FG504 (WP 0043, Item 6)
Slide Fastener, VFGOL-16 (WP 0036, Item 77)
Webbing, as specified (WP 0037, Items 83-96)

Equipment Condition

Lay out on flat surface or other suitable area.

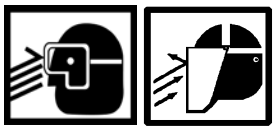
SERVICE

Clean the waist pack IAW WP 0020, Cleaning and Drying.

INSPECT

Conduct a preliminary examination IAW WP 0021 after components have been laundered as described in WP 0020. Discard decayed items. Test seams by grasping the item with both hands and pulling at right angles to the seams. Mark areas to be repaired. Cross out nonspecific and personal markings.

REPAIR

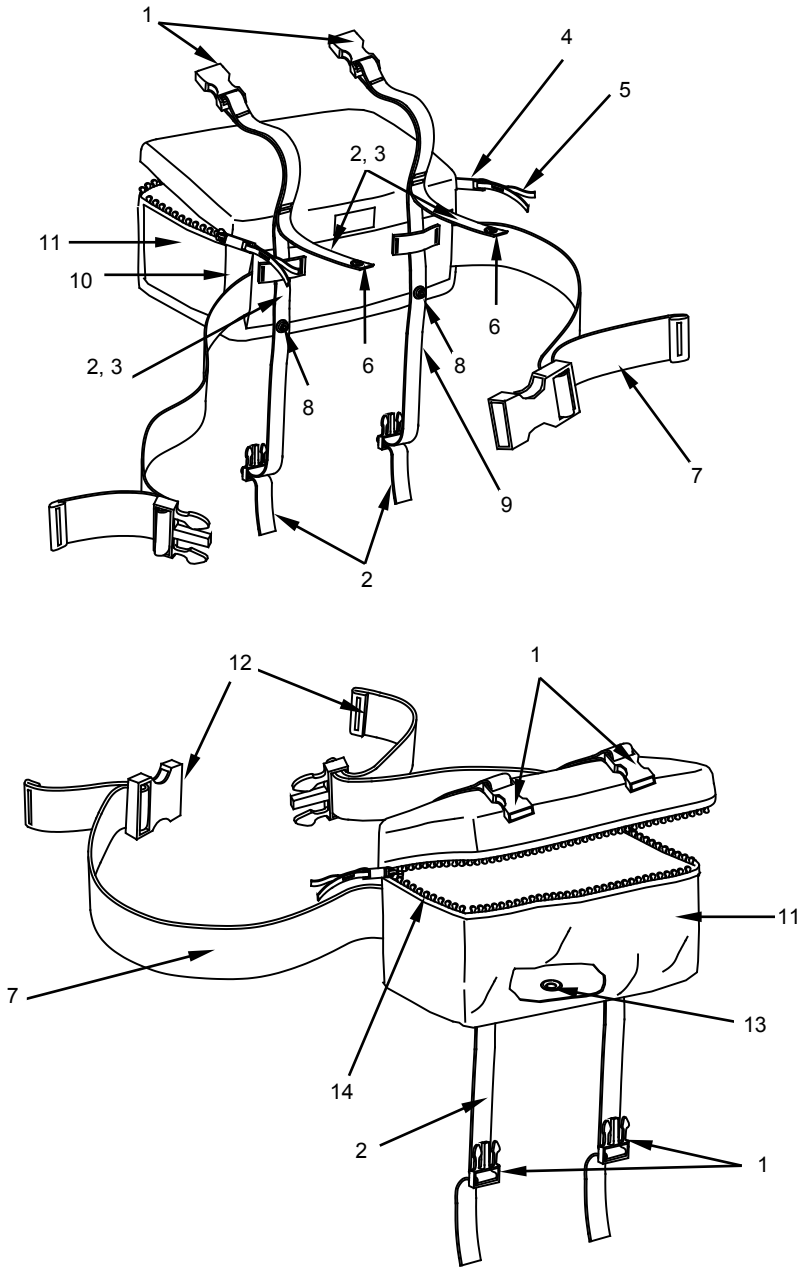


Eye protection should be worn to protect the Soldier from flying particles when operating a sewing machine. Sewing machine needles can break with great force. Failure to wear eye protection may result in injury to eye(s).

Prior to repair operations, each component of the MOLLE II system shall be inspected by qualified personnel to determine the extent of the repair necessary. With the exception of the replacement of hardware items furnished to the user as a repair kit, all repairs to these components will be accomplished at the CIF or approved facility, using FM 10-16 as a general guide.

REPAIR — CONTINUED

Use Figure 1 to determine location and construction of equipment in repair procedures.



Legend

1. Side Release Buckles, 1-inch
2. Webbing, 1-inch
3. Polyethylene
4. Thread, Size E
5. Braid Tubular, $^{11}/_{32}$-inch
6. Snap Fasteners, Button/Socket
7. Webbing, 2-inch
8. Snap Fasteners, Eyelet/Stud
9. Webbing, Elastic, 1-inch
10. Thread, Size F
11. Textured Nylon Duck
12. Center Release Buckles, 2-inch
13. Grommet
14. Slide Fastener

Figure 1. Waist Pack.

END OF TASK

REPAIR — CONTINUED

Restitching

1. Use Figure 1 to identify component to be repaired.
2. Use Table 1 to determine specific sewing machine, thread size, and stitching requirements.
3. Overstitch or backstitch by ½ inch for all 301-lockstitch seams.
4. Trim running ends of thread.

Table 1. Waist Pack Stitching Requirements.

COMPONENT	RECOMMENDED SEWING MACHINE	STITCHES PER INCH	THREAD SIZE
Rifleman Set			
Waist Pack			
Binding Tape	Medium Duty	7 to 11	E
Waistbelt Webbing	Bar Tack	42 to 48	E
All Other Components	Medium Duty	7 to 11	F

END OF TASK

Slide Fasteners

1. Cut the fastener tape on the faulty slide fastener as close as possible to the outer row of stitching holding the slide fastener.
2. Trim any raveled yarns from the remaining fastener tape.
3. Measure the length of the damaged area.
4. Obtain a new 11/16-inch slide fastener, the same length as the damaged area.
5. Using a medium duty sewing machine, size F thread, 7-11 stitches per inch, sew the new slide fastener to the waist pack.
6. Trim threads.

Table 2. Main Pocket Closure Stitching Requirements.

COMPONENT	APPLICATION	FASTENER WIDTH	LENGTH	TOLERANCE
Waist Pack	Main Pocket Closure	0.270"	AR	+ or – $^{1}/_{8}$ inch

END OF TASK

Snap Fastener Replacement

Replace snap fasteners using replacement procedures in WP 0034.

END OF TASK

REPAIR — CONTINUED

Eyelet Replacement

Replace eyelets using replacement procedures in WP 0034.

END OF TASK

Buckle Replacement

Replace buckles using replacement procedures in WP 0034.

END OF TASK

REPLACE

Replace Waist Pack with serviceable item from stock.

END OF TASK

END OF WORK PACKAGE

SUSTAINMENT MAINTENANCE
LARGE FIELD PACK RUCKSACK AND SUSTAINMENT POUCH AND MEDIUM PACK RUCKSACK
SERVICE, INSPECT, REPAIR, REPLACE

INITIAL SETUP:

Tools

Knife, Hot Metal (WP 0042, Table 2, Item 2)
Ruler, Tab, Metal, 16-inch (WP 0042, Table 2, Item 3)
Sewing Machine, Industrial Bar Tack (WP 0042, Table 2, Item 4)
Sewing Machine, Medium Duty (WP 0042, Table 2, Item 5)
Shears, Tailor's, 12-inch (WP 0042, Table 2, Item 6)
Stitch Removal Tool (WP 0042, Table 2, Item 7)
Tape, Measuring (WP 0042, Table 2, Item 8)

Equipment Condition

Lay out on flat surface or other suitable area.

Personnel Required

Non-MOS specific (1)

References

FM 10-16
WP 0020
WP 0021
WP 0034

Materials/Parts

Cord, Round, Type II, MIL-C-5040 (WP 0037, Item 33)
Cord, Flat, Type IIA, MIL-C-5040 (WP 0037, Item 30)
Fastener Tape, Hook, A-A-55126, Type II, Class 1, 1 inch (WP 0037, Item 43)
Fastener Tape, Hook, A-A-55126, Type II, Class 1, 2 inch (WP 0037, Item 45)
Fastener Tape, Loop, A-A-55126, Type II, Class 1, 1 inch (WP 0037, Item 48)
Fastener Tape, Loop, A-A-55126, Type II, Class 1, 2 inch (WP 0037, Item 50)
Pencil, China Marker, Yellow, A-A-87 (WP 0043, Item 2)
Tape, Textile (Binding Tape), 1 inch (WP 0037, Item 82)
Thread, Nylon, V-T-295, Size E, TY I, II, or III CL A, FG504 (WP 0043, Item 4)
Thread, Nylon, V-T-295, Size F, TY I, II, or III CL A, FG504 (WP 0043, Item 5)
Thread, Nylon, V-T-295, Size FF, TY I, II, or III CL A, FG504 (WP 0043, Item 6)
Slide Fastener, VFGOL-16 (WP 0037, Item 77)
Webbing, as specified (WP 0037, Items 83-96)

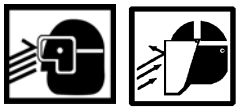
SERVICE

Clean the Large and Medium Rucksacks IAW WP 0020, Cleaning and Drying.

INSPECT

Conduct a preliminary examination IAW WP 0021, after components have been laundered as described in WP 0020. Discard decayed items. Test seams by grasping the item with both hands and pulling at right angles to the seams. Mark areas to be repaired. Cross out nonspecific and personal markings.

REPAIR



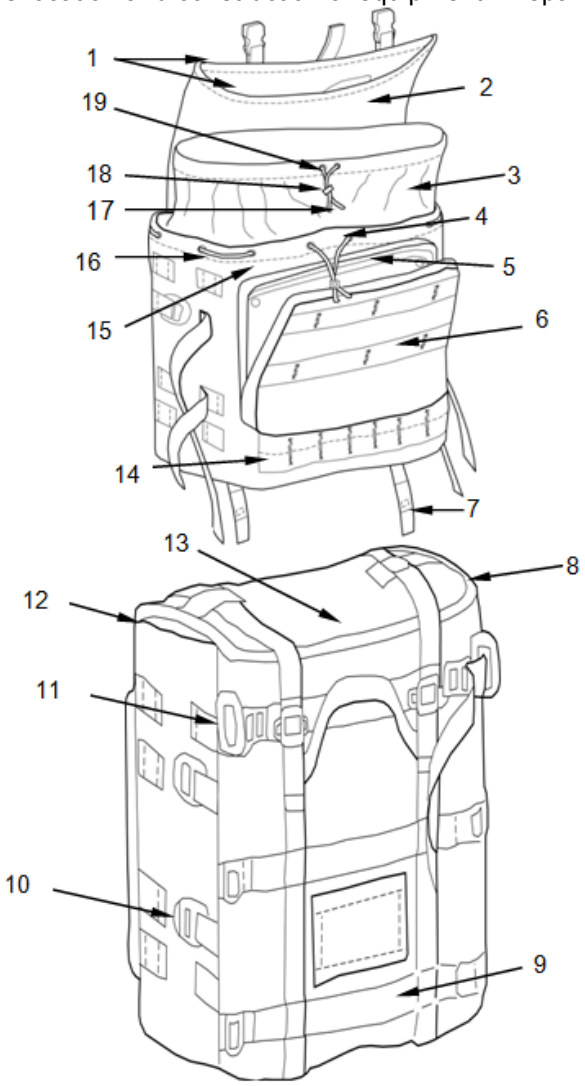
Eye protection should be worn to protect the Soldier from flying particles when operating a sewing machine. Sewing machine needles can break with great force. Failure to wear eye protection may result in injury to eye(s).

Prior to repair operations, each component of the MOLLE II system shall be inspected by qualified personnel to determine the extent of the repair necessary. With the exception of the replacement of

REPAIR — CONTINUED

hardware items furnished to the user as a repair kit, all repairs to these components will be accomplished at the CIF or approved facility, using FM 10-16 as a general guide.

Use Figures 1 through 3 to determine location and construction of equipment in repair procedures.

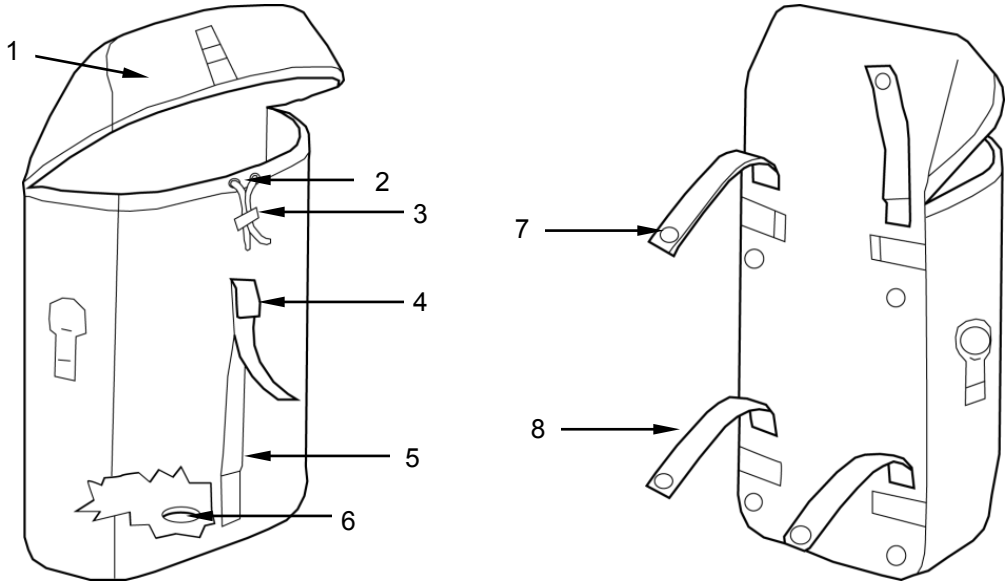


Legend

1. Hook-and-Loop Fastener
2. Film
3. Nylon Cloth
4. Eyelet/Washer
5. Slide Fastener
6. Polyethylene0.020-inch
7. Side Release Buckle, 1-inch
8. Binding Tape 1-inch
9. Webbing, 1-inch
10. Buckle, Single Bar
11. Buckle, Double-Bar, 1-inch
12. Thread, Size E
13. Textured Nylon Duck
14. Webbing, 2¼ -inch
15. Thread, Size F
16. Grommet/Washer
17. Cord Lock
18. Nylon Cord (Flat)
19. Eyelet/Washer

Figure 1. Large Field Pack Rucksack (Front and Rear).

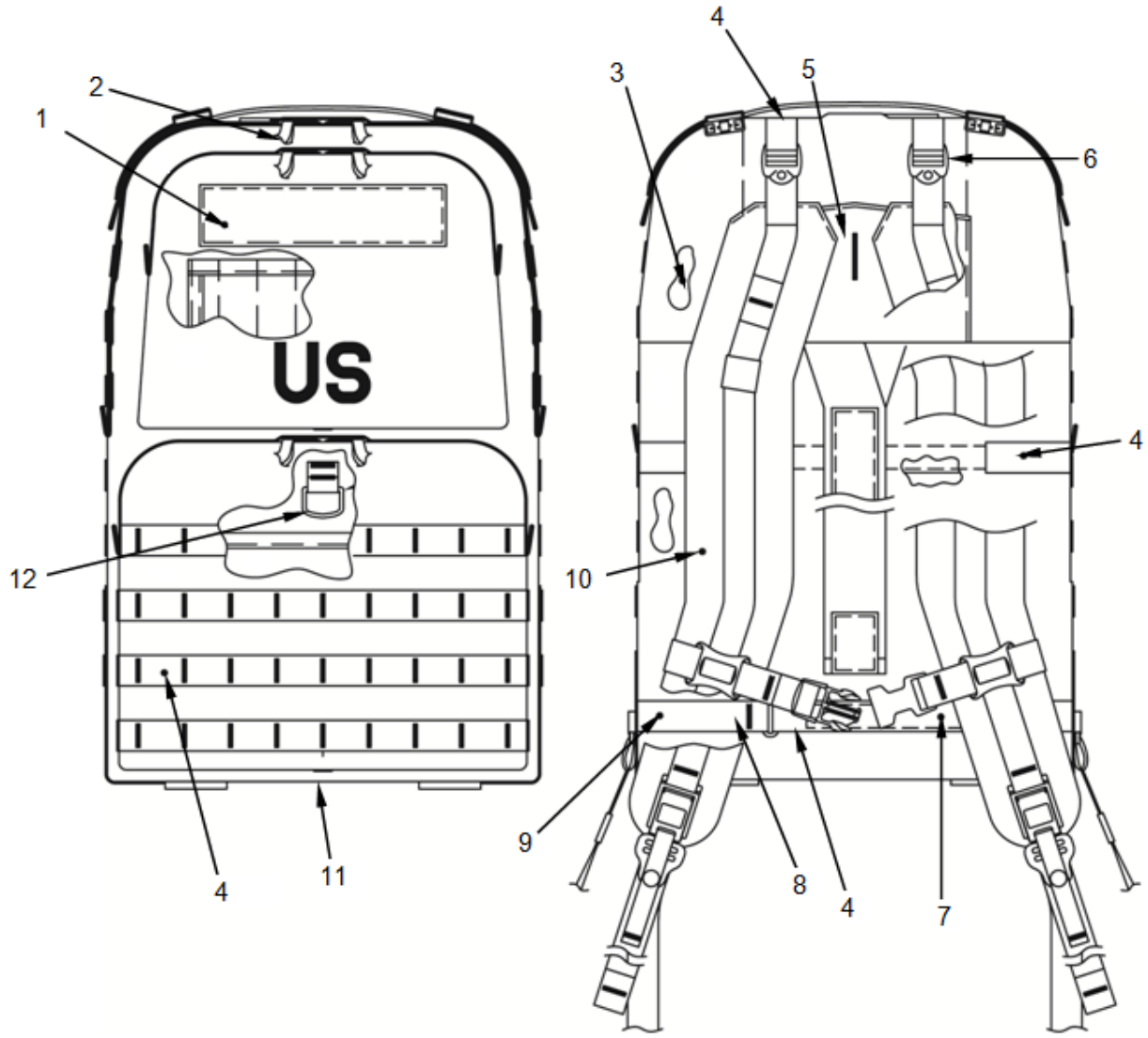
REPAIR — CONTINUED



Legend
1. Binding Tape 1-inch
2. Eyelet/Washer
3. Cord Lock
4. Side Release Buckle, 1-inch
5. Webbing, 1-inch
6. Eyelet
7. Snap Fastener, Button/Socket
8. Polyethylene, 0.030-inch
9. Snap Fastener, Stud/Eyelet

Figure 2. Sustainment Pouch (Front and Rear).

REPAIR — CONTINUED



Legend

1. Fastener Tape, Loop
2. Slide Fastener
3. Foam Padding, Back Support
4. Webbing, 1-Inch
5. Reinforcement, Routing Sleeve
6. 1-Inch Ladderlock Buckle
7. Fastener Tape, Hook
8. Fastener Tape, Loop
9. 1-Inch Brass Loop
10. Shoulder Strap Assembly, Rucksack, Medium
11. Eyelet, Large
12. 1-Inch D-Ring

Figure 3. Medium Pack Rucksack (Front and Rear).

REPAIR — CONTINUED

Restitching for Large Field Pack and Medium Pack Rucksack

1. Use Figures 1 through 3 to identify component to be repaired.
2. Use Table 1 to determine specific sewing machine, thread size and stitching requirements.
3. Overstitch or backstitch by ½ inch for all 301-lockstitch seams.
4. Trim running ends of thread.

Table 1. Large Field Pack Rucksack and Sustainment Pouch and Medium Pack Rucksack Stitching Requirements.

COMPONENT	RECOMMENDED SEWING MACHINE	STITCHES PER INCH	THREAD SIZE
Rifleman Set Rucksack (Large and Medium) and Sustainment Pouch			
Binding Tape	Medium Duty	7 to 11	E
1-inch MOLLE II Webbing	Bar Tack	42 to 48	E
Waistbelt Webbing	Bar Tack	42 to 48	E
All Other Components	Medium Duty	7 to 11	F

END OF TASK

Hook-and-Loop Tape for Large Field Pack and Medium Pack Rucksack

1. Remove faulty hook-and-loop tape from rucksack. Do not damage the fabric.
2. Measure and cut a new piece of hook-and-loop tape of the size and length indicated in Table 2.
3. Using a medium duty sewing machine, size F thread of the appropriate color, sew new hook-and-loop tape to rucksack IAW WP 0034, overstitching by ½ inch.
4. Trim running ends of thread.

Table 2. Hook-and-Loop Tape Measurements for Large Field Pack Rucksack.

COMPONENT	APPLICATION	TYPE	WIDTH	LENGTH	TOLERANCE
Large Field Pack	Map Case Closure	Hook-and-Loop	1"	$14\frac{5}{8}$"	+ or − $\frac{1}{8}$ inch
Large Field Pack	Inside Dividers	Hook-and-Loop	2"	2"	+ or − $\frac{1}{16}$ inch
Large Field Pack	Inside Side Flaps	Hook-and-Loop	1"	1½"	+ or − $\frac{1}{16}$ inch
Large Field Pack	Flap Pouch Closure	Hook-and-Loop	1"	AR	+ or − $\frac{1}{16}$ inch

REPAIR — CONTINUED

Table 3. Hook-and-Loop Tape Measurements for Medium Pack Rucksack.

COMPONENT	APPLICATION	TYPE	WIDTH	LENGTH	TOLERANCE
Medium Rucksack	Top of Rucksack	Hook-and Loop	2"	3 3/4"	+ or − $^{1}/_{8}$ inch
Medium Rucksack	Front, Upper Pouch	Loop	2"	8"	+ or − $^{1}/_{8}$ inch
Medium Rucksack	Back, Lower, Rear	Hook-and-Loop	1"	5"	+ or − $^{1}/_{16}$ inch

END OF TASK

Slide Fasteners for Large Field Pack and Medium Pack Rucksack

1. Cut the fastener tape on the faulty slide fastener as close as possible to the outer row of stitching holding the slide fastener.
2. Trim any raveled yarns from the remaining fastener tape.
3. Measure the length of the damaged area.
4. Obtain a new slide fastener, the length of the damaged area.
5. Using a medium duty sewing machine, size F thread, 7-11 stitches per inch, sew the new slide fastener to the rucksack.
6. Trim threads.

Table 4. Slide Closure (Slide Fastener) Measurements.

COMPONENT	APPLICATION	CLOSED CHAIN WIDTH	LENGTH	TOLERANCE
Large Field Pack	Front Pocket Closure	0.435"	AR	+ or − $^{1}/_{8}$ inch
Large Field Pack	Bottom Closure	0.435"	AR	+ or − $^{1}/_{8}$ inch
Medium Pack	Top Closure	0.435"	AR	+ or − $^{1}/_{8}$ inch
Medium Pack	Upper Pouch Closure	0.435"	AR	+ or − $^{1}/_{8}$ inch
Medium Pack	Lower Pouch Closure	0.435"	AR	+ or − $^{1}/_{8}$ inch

END OF TASK

Binding Tape for Large Field Pack and Medium Pack Rucksack

1. Place marks 1 inch on each side of the damaged area.
2. Measure the distance between marks.
3. Cut a length of new binding tape of the same type as original to the length indicated in step 2.
4. Sear raw ends of binding tape.
5. Place binding tape between marks in the same manner as the original.
6. Turn binding edges under ½ inch.
7. Using a medium duty sewing machine and size E thread of appropriate color, stitch $^{1}/_{8}$ inch from edge of tape.

REPAIR — CONTINUED

Table 5. Binding Tape Measurements.

COMPONENT	APPLICATION	WIDTH	LENGTH
Large Field Pack	Map Case Polyethylene Edging	1"	AR
Large Field Pack	Drawcord Tunnel	1"	58"
Large Field Pack	Spindrift Collar Tunnel Eyelet Reinforcement	1"	3"
Large Field Pack	Nylon Cloth Collar Assembly	1"	AR
Large Field Pack	Back Panel and Upper Pocket Edge Lining	1"	AR
Large Field Pack	Radio Pocket Rim Edging	1"	33"
Large Field Pack	Radio Pocket Polyethylene Edging	1"	AR
Large Field Pack	Bandoleer Pouch Edging	1"	AR
Large Field Pack	Sustainment Pouch Edging	1"	AR
Medium Pack	Fabric Edging, bottom, top, and lower side	1"	AR

*AR=As Required

END OF TASK

Drawcord Repair

1. Cut a new length of cord of the type and length indicated in Table 5.
2. Sear raw ends of cord.
3. Place an overhand knot in one end of cord.
4. Route cord through appropriate channels or guides in equipment, ensuring the cord goes through the barrel lock.
5. Place an overhand knot in remaining end of cord.

Table 6. Drawcord Lengths.

COMPONENT	APPLICATION	CORD TYPE	LENGTH	TOLERANCE
Main Pack (Legacy)	Main Closure (Outer)	MIL-C-5040, Type II	72"	+ or − ¼ inch
Main Pack (Legacy)	Main Closure (Spindrift)	MIL-C-5040, Type IIA	70"	+ or − ¼ inch
Pouch, Sustainment	Main Closure	MIL-C-5040, Type IIA	20"	+ or − ¼ inch
Large Rucksack	Main Closure	MIL-C-5040, Type II	80"	± ¼ inch
Medium Rucksack	Main Closure	MIL-C-5040, Type II	80"	+ or − ¼ inch

END OF TASK

Attachment Webbing Repair

1. Remove old attachment webbing by cutting away bar tacks and lifting edge binding or seam. Do not damage underlying fabric.
2. Cut a new piece of webbing the same length as the old webbing.
3. Sear both ends of new webbing.
4. Measure the distance between bar tacks on the old webbing and transfer those measurements to the new webbing.

REPAIR — CONTINUED

5. Place new webbing component where old webbing was removed.
6. Using a bar tack sewing machine, place a 42- to 48-inch bar tack on each of the marked locations.
7. Place ends of webbing into the seam tape or seam in the same manner as the original construction.
8. Using a medium duty sewing machine, size F thread, 7 to 11 stitches per inch, sew the webbing back into the seam tape or seam, overstitching by a minimum of ½ inch.
9. Trim thread ends.

END OF TASK

REPLACE

Snap Fastener Replacement

Replace snap fasteners using replacement procedures in WP 0034.

END OF TASK

Eyelet Replacement

Replace eyelets using replacement procedures in WP 0034.

END OF TASK

Buckle Replacement

Replace buckles using replacement procedures in WP 0034.

END OF TASK

REPLACE

Replace Large Field Pack Rucksack, Medium Pack Rucksack or Sustainment Pouch with serviceable item from stock.

END OF TASK

END OF WORK PACKAGE

SUSTAINMENT MAINTENANCE
LARGE PACK FRAME WITH
MOLDED HIP BELT, ENHANCED FRAME SHOULDER STRAPS, LOAD LIFTER ATTACHMENT STRAP, SHOULDER SUSPENSION MALE BUCKLE, AND
MEDIUM PACK FRAME WITH
WAISTBELT ASSEMBLY AND SHOULDER STRAP ASSEMBLY
SERVICE, INSPECT, REPAIR, REPLACE

INITIAL SETUP:

Tools

Knife, Hot Metal (WP 0042, Table 2, Item 2)
Ruler, Tab, Metal, 16-inch (WP 0042, Table 2, Item 3)
Sewing Machine, Bar Tack (WP 0042, Table 2, Item 4)
Sewing Machine, Medium Duty (WP 0042, Table 2, Item 5)
Shears, Tailor's, 12-inch (WP 0042, Table 2, Item 6)
Stitch Removal Tool (WP 0042, Table 2, Item 7)
Tape, Measuring (WP 0042, Table 2, Item 8)

Equipment Condition

Lay out on flat surface or other suitable area.

Personnel Required

Non-MOS specific (1)

Materials/Parts

Fastener Tape, Hook, A-A-55126, Type II, Class 1, 1 inch (WP 0037, Item 43)
Fastener Tape, Loop, A-A-55126, Type II, Class 1, 1 inch (WP 0037, Item 48)
Pencil, China Marker, Yellow, A-A-87 (WP 0043, Item 2)
Tape, Textile (Binding Tape), 1 inch (WP 0037, Item 82)

Thread, Nylon, V-T-295, Size E, TY I, II, or III CL A, FG504 (WP 0042, Item 4)
Thread, Nylon, V-T-295, Size F, TY I, II, or III CL A, FG504 (WP 0042, Item 5)
Thread, Nylon, V-T-295, Size FF, TY I, II, or III CL A, FG504 (WP 0042, Item 6)
Webbing, as specified (WP 0037, Items 83-96)

References

FM 10-16
WP 0020
WP 0021
WP 0034

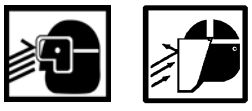
SERVICE

Clean the equipment IAW WP 0020, Cleaning and Drying.

INSPECT

Conduct a preliminary examination IAW WP 0021 after components have been laundered as described in WP 0020. Discard decayed items. Test seams by grasping the item with both hands and pulling at right angles to the seams. Mark areas to be repaired. Cross out nonspecific and personal markings.

REPAIR



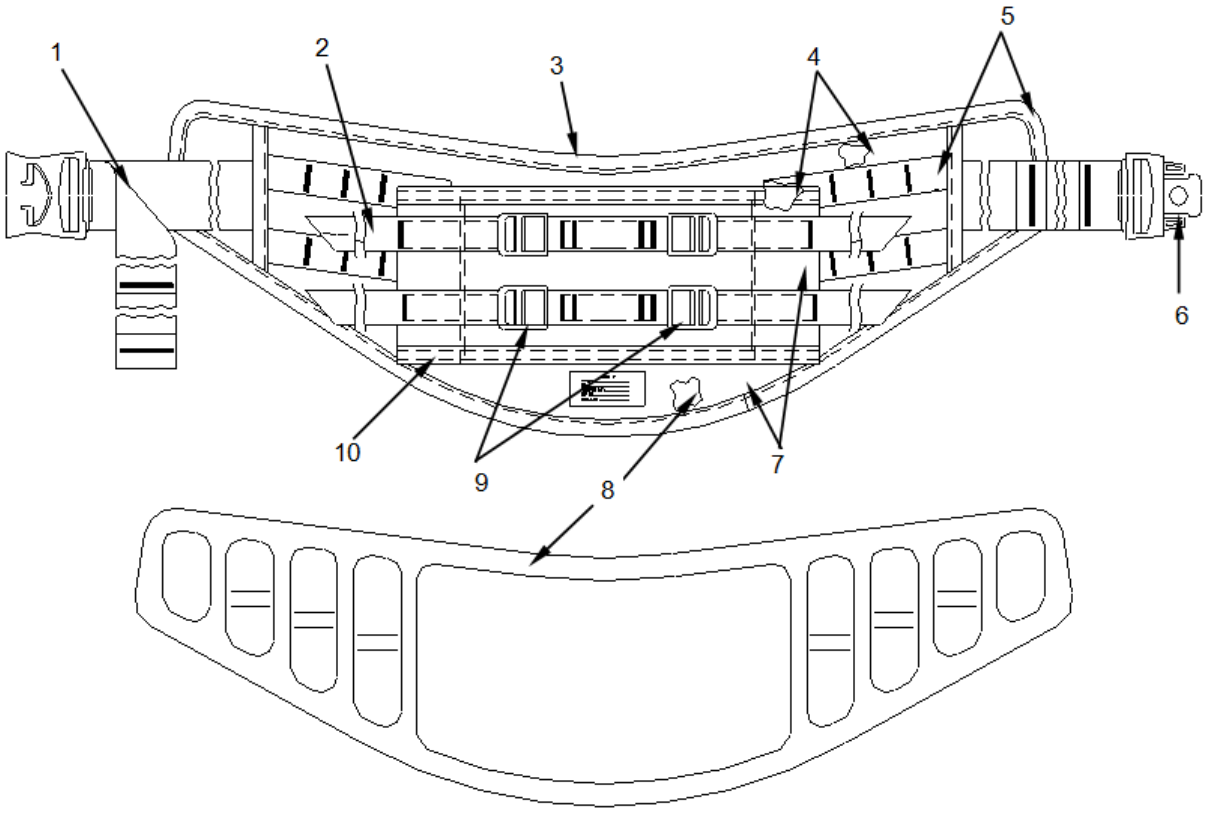
Eye protection should be worn to protect the Soldier from flying particles when operating a sewing machine. Sewing machine needles can break with great force. Failure to wear eye protection may result in injury to eye(s).

Prior to repair operations, each component of the Modular Lightweight Load-Carrying Equipment (MOLLE) II system shall be inspected by qualified personnel to determine the extent of the repair necessary. With the exception of the replacement of hardware items furnished to the user as a repair kit,

REPAIR — CONTINUED

all repairs to these components will be accomplished at the CIF or approved facility, using FM 10-16 as a general guide.

Use Figures 1 through 6 to determine location and construction of equipment in repair procedures.

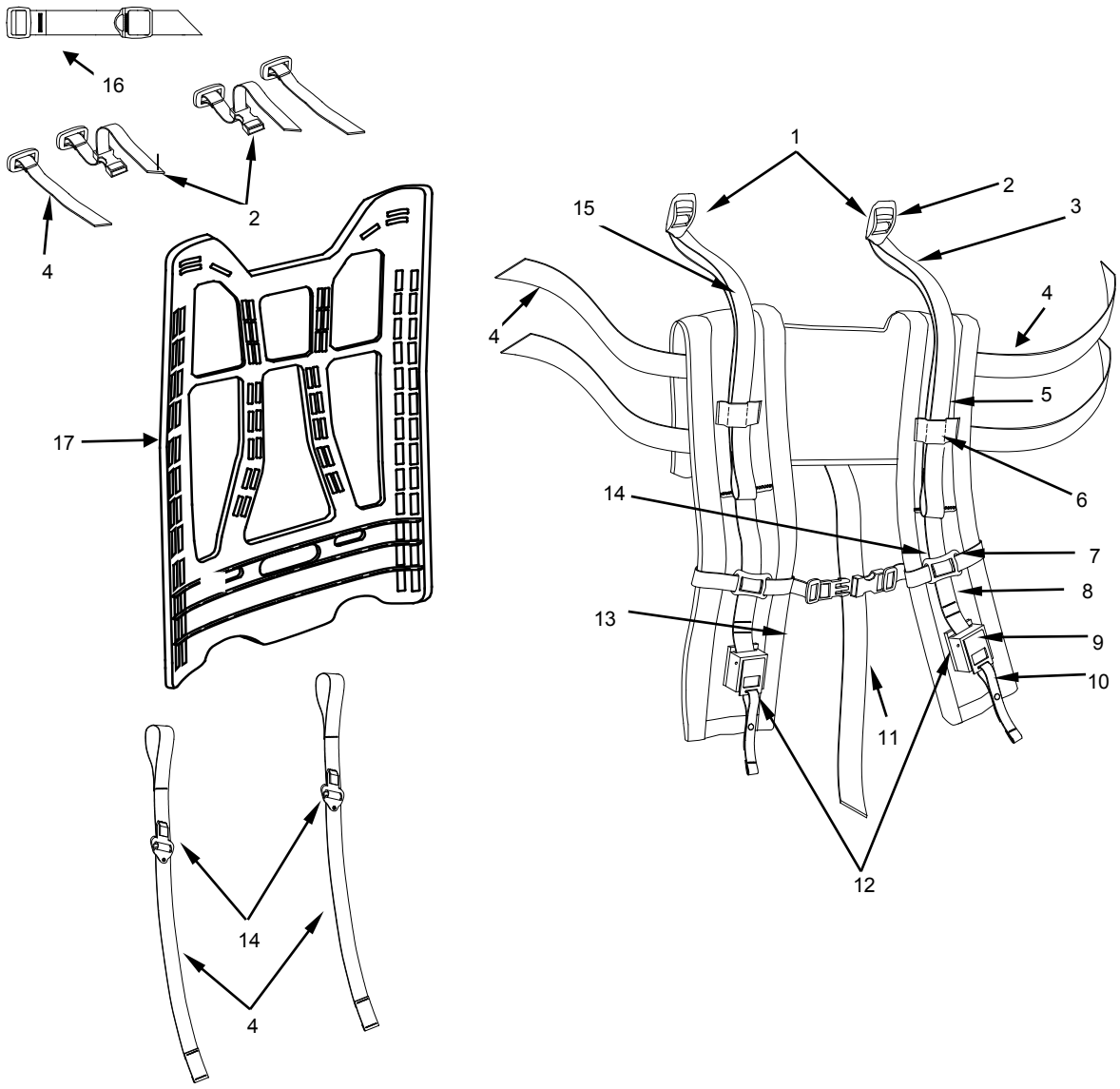


Legend

1. Webbing, 2-inch
2. Webbing, 1-inch
3. Binding Tape, 1-inch
4. Plastic, Polyethylene
5. Thread, Size E
6. Center Release Buckle, 2-inch
7. Textured Nylon Duck
8. Molded Hip Belt
9. Tension Lock, 1-inch
10. Thread Size F

Figure 3. Molded Hip Belt.

REPAIR — CONTINUED

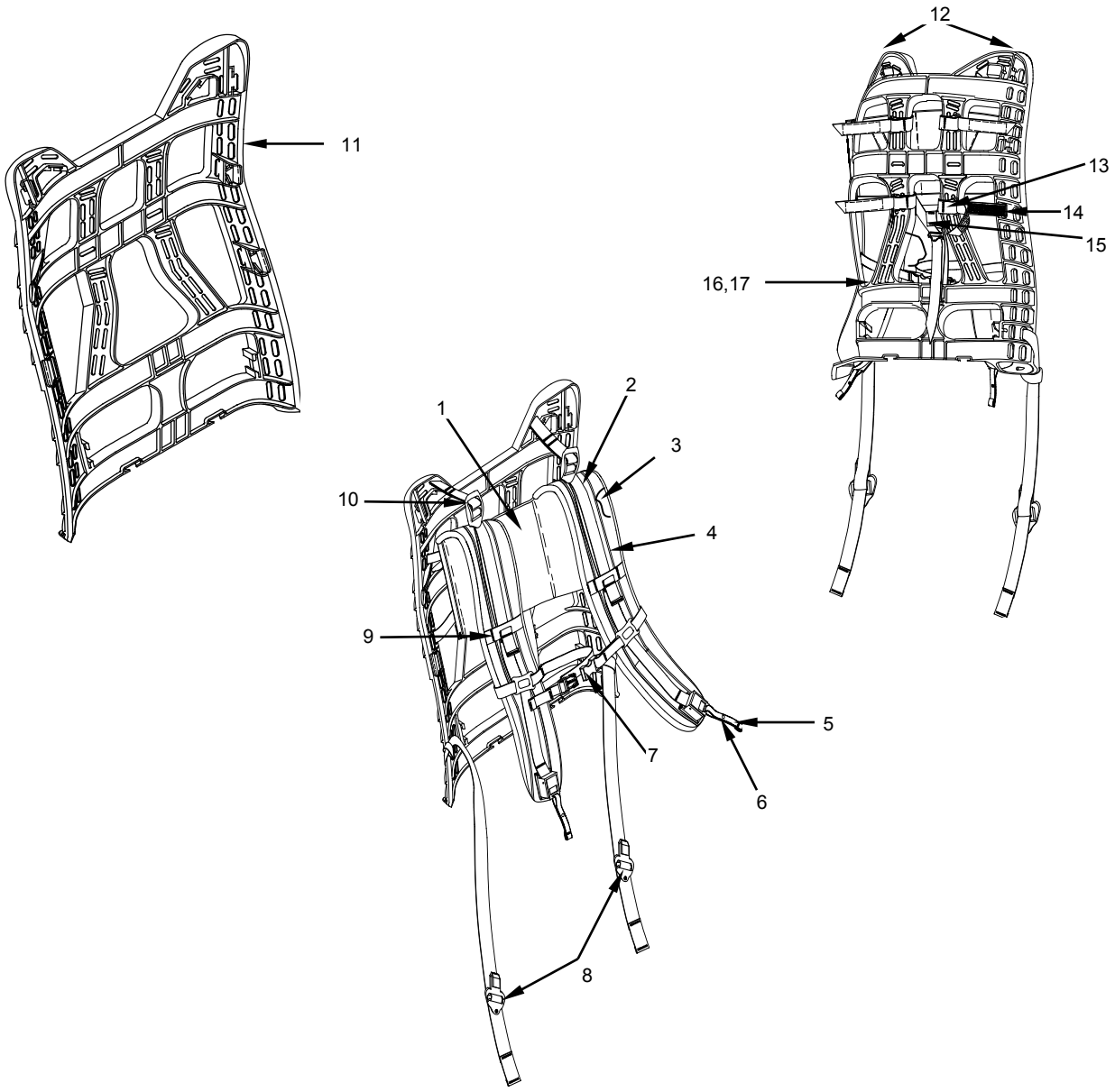


Legend

1. Double Bar Buckle, 1½-inch
2. Double Bar Buckle, 1-inch
3. Textured Nylon Duck
4. Webbing, 1-inch
5. Thread, Size E
6. Binding Tape, 1-inch
7. Keeper, Sternum Strap
8. Foam ¼-inch
9. Snap Fastener
10. Webbing, $^{9}/_{16}$-inch, Type I
11. Webbing, 1½-inch
12. Quick Release Buckle
13. Thread, Size F
14. Side Release Buckle, 1-inch
15. Webbing, 2-inch
16. Slide, 1-inch
17. Enhanced Frame

Figure 1. Large Pack Frame (View 1).

REPAIR — CONTINUED



Legend

1. Textured Nylon Duck
2. Webbing, 2-inch
3. Foam, ¼-inch
4. Thread, Size F
5. Webbing, $^{9}/_{16}$-inch, Type I
6. Snap Fastener, Button/Socket
7. Side Release Buckle, 1-inch
8. Buckles
9. Webbing, 1-inch
10. Double Bar Buckle, 1-inch
11. Frame
12. Metal Slides, 1-inch Webbing, 1-inch
13. Brass Loop, 1-inch
14. Fastener Tape, Hook-and-Loop, 1-inch
15. Cinch Buckle, 1-inch
16. Binding Tape, 1-inch
17. Thread, Size E

Figure 2. Large Pack Frame (View 2).

REPAIR — CONTINUED

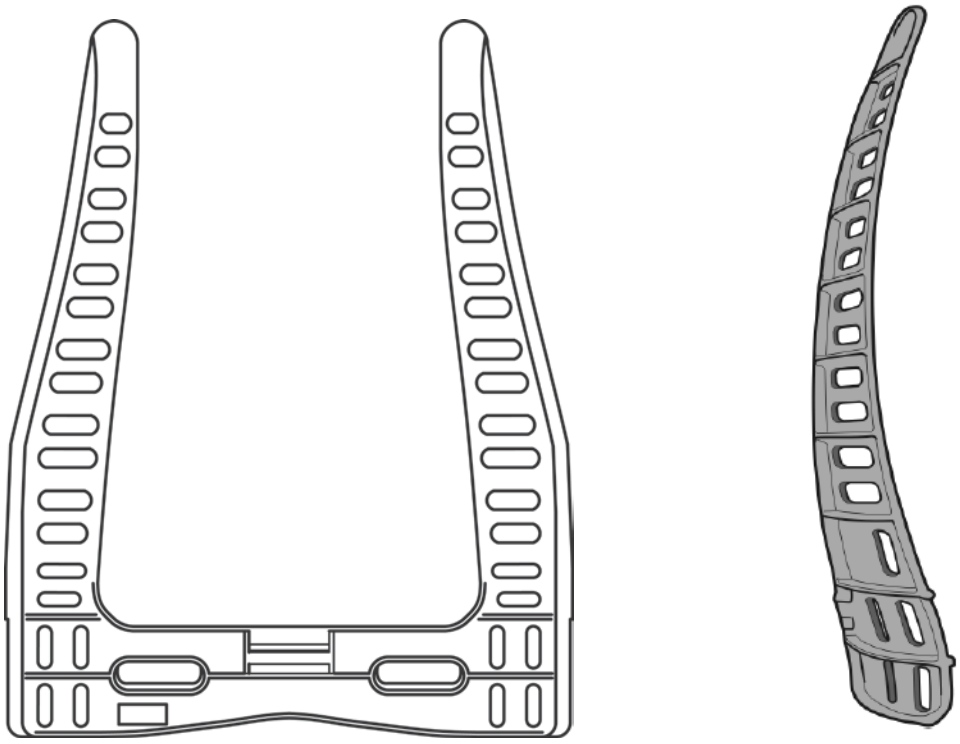
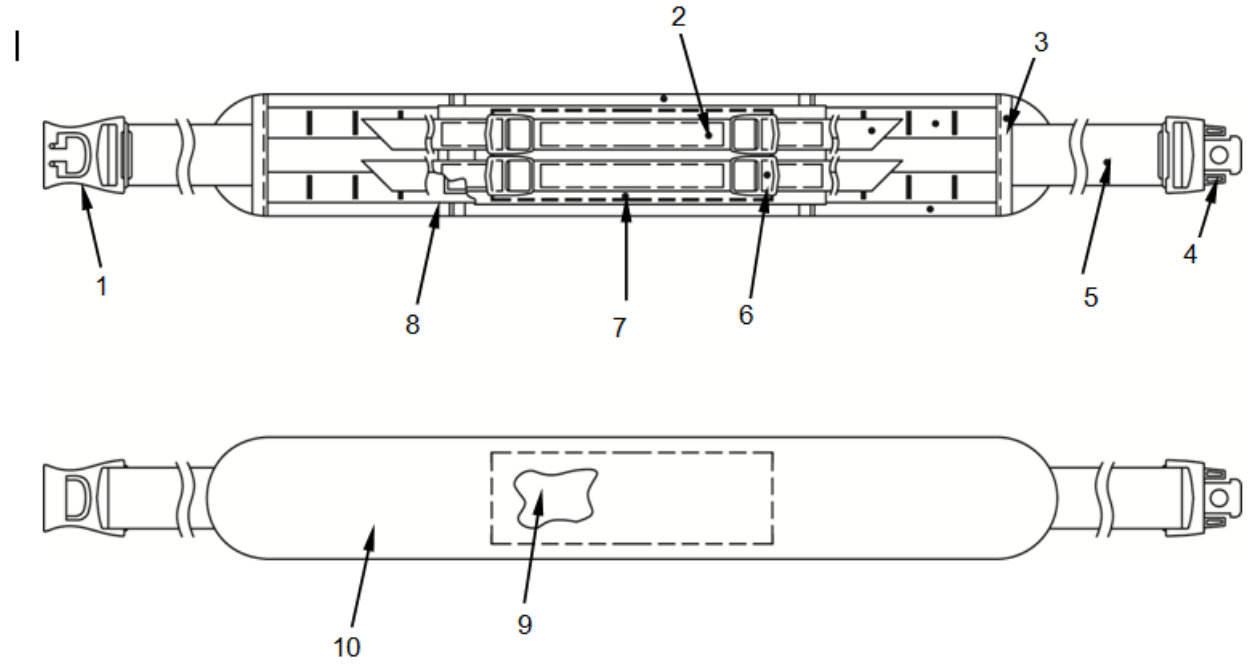


Figure 4. Medium Pack Frame (Front and Side View).

REPAIR — CONTINUED

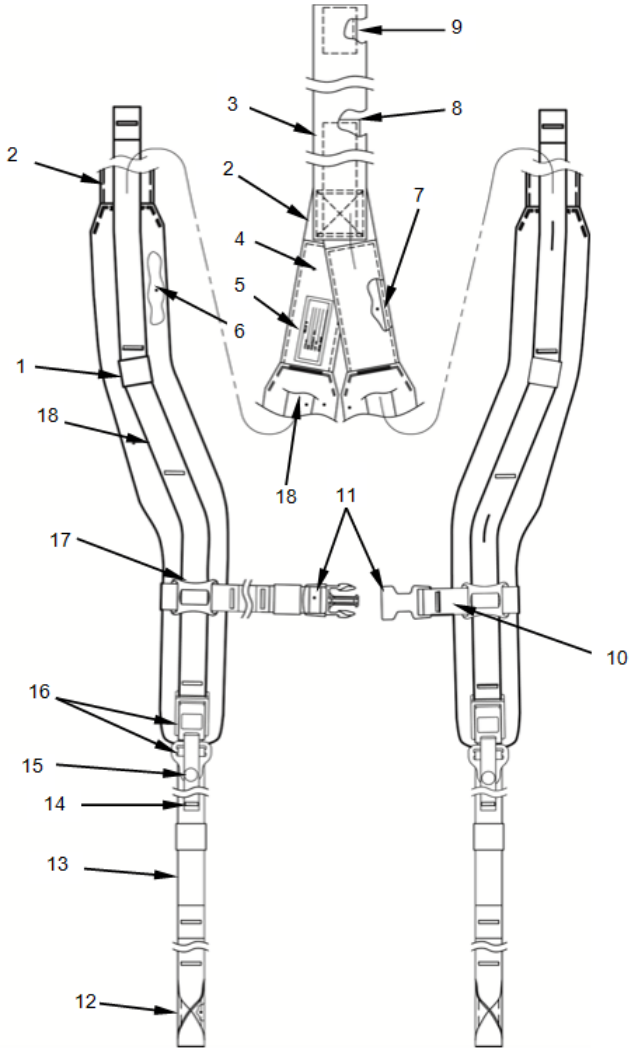


Legend

1. 2-inch Center Release Buckle (Female)
2. Webbing, 1-inch
3. Tape, Binding, 1-inch
4. 2-inch Center Release Buckle (Male)
5. Webbing, 2-inch
6. 1-inch Ladderlock Buckle
7. Webbing, 3 1/2-inch
8. I.D./Instruction Label
9. Foam Padding
10. Pattern, Inside

Figure 5. Waistbelt Assembly.

REPAIR — CONTINUED



Legend

1. Elastic Webbing, 1-inch (cut length 2 5/8")
2. Webbing, 2-inch (cut length 20")
3. Webbing, 2-inch (cut length 17 1/2")
4. Webbing, 2-inch (cut length 6 3/8")
5. Identification Label, Shoulder Strap
6. Foam Padding
7. Plastic Stiffener
8. Fastener, Tape, Loop, 1 1/2-inch
9. Foam Padding
10. Identification Label, Shoulder Strap
11. 1-inch Side Release Buckle
12. Identification Label, Strap
13. Webbing, 1-inch (cut length 33")
14. Webbing, 9/16-inch (cut length 11 1/2")
15. Snap Fastener, Shoulder Strap
16. Quick Release
17. Sternum Strap
18. Webbing, 1-inch (cut length 28")

Figure 6. Shoulder Strap Assembly.

REPAIR — CONTINUED

Restitching

1. Use Figures 1 through 6 to identify component to be repaired.
2. Use Table 1 to determine specific sewing machine, thread size and stitching requirements.
3. Overstitch or backstitch by ½ inch for all 301-lockstitch seams.
4. Trim running ends of thread.

Table 1. Large Pack Frame with Molded Hip Belt, Enhanced Frame Shoulder Straps, and Load Lifter Attachment Strap and Medium Pack Frame with Waistbelt Assembly and Shoulder Strap Assembly Stitching Requirements.

COMPONENT	RECOMMENDED SEWING MACHINE	STITCHES PER INCH	THREAD SIZE
Large Field Pack Set: **Molded Hip Belt, Enhanced Frame Shoulder Straps, and Load Lifter Attachment Strap** **Medium Field Pack Set:** **Medium Frame, Waistbelt Assembly, and Shoulder Strap Assembly**			
Binding Tape	Medium Duty	7 to 11	E
1-inch MOLLE II Webbing	Bar Tack	42 to 48	E
Waistbelt Webbing	Bar Tack	42 to 48	E
All Other Components	Medium Duty	7 to 11	F

END OF TASK

Hook-and-Loop Tape

1. Remove faulty hook-and-loop tape from equipment. Do not damage the fabric.
2. Measure and cut a new piece of hook-and-loop tape of the size and length indicated in Table 2.
3. Using a medium duty sewing machine, size F thread of the appropriate color, sew new hook-and-loop tape to equipment IAW WP 0034, overstitching by ½ inch.
4. Trim running ends of thread.

REPAIR — CONTINUED

Table 2. Hook-and-Loop Tape Measurements for Large and Medium Frame Assembly.

COMPONENT	APPLICATION	TYPE	WIDTH	LENGTH	TOLERANCE
Large Pack Enhanced Frame	Rear Attachment Strap	Hook-and-Loop	1"	AR	+ or − $^{1}/_{16}$ inch
Medium Pack Shoulder Strap Assembly		Hook-and-Loop	1 1/2" 1 1/2"	2" 6"	+ or − $^{1}/_{16}$ inch + or − $^{1}/_{16}$ inch

END OF TASK

Binding Tape

1. Place marks 1 inch on each side of the damaged area.
2. Measure the distance between marks.
3. Cut a length of new binding tape of the same type as original to the length indicated in step 2.
4. Sear raw ends of binding tape.
5. Place binding tape between marks in the same manner as the original.
6. Turn binding edges under ½ inch.
7. Using a medium duty sewing machine and size E thread of appropriate color, stitch $^{1}/_{8}$ inch from edge of tape.

Table 3. Binding Tape Measurements for Large and Medium Frame Assembly.

COMPONENT	APPLICATION	WIDTH	LENGTH
Large Pack Molded Hip Belt	Cover Edging	1"	AR
Large Pack Molded Hip Belt	Tunnel Edging	1"	AR
Medium Pack Waistbelt Assembly	Cover Edging	1"	AR

END OF TASK

Snap Fastener Replacement

Replace snap fasteners using replacement procedures in WP 0034.

END OF TASK

Eyelet Replacement

Replace eyelets using replacement procedures in WP 0034.

END OF TASK

Buckle Replacement

Replace buckles using replacement procedures in WP 0034.

END OF TASK

REPLACE

Replace Large Pack Frame, Molded Hip Belt, Enhanced Frame Shoulder Straps, Load Lifter Attachment Strap, Shoulder Suspension Male Buckle, Medium Pack Frame, Waistbelt Assembly, and Shoulder Strap Assembly with serviceable items from stock.

END OF TASK

END OF WORK PACKAGE

SUSTAINMENT MAINTENANCE
PISTOL SET
SERVICE, INSPECT, REPAIR, REPLACE

INITIAL SETUP:

Tools

Knife, Hot Metal (WP 0042, Table 2, Item 2)
Ruler, Tab, Metal, 16-inch (WP 0042, Table 2, Item 3)
Sewing Machine, Industrial Bar Tack (WP 0042, Table 2, Item 4)
Sewing Machine, Medium Duty (WP 0042, Table 2, Item 5)
Shears, Tailor's, 12-inch (WP 0042, Table 2, Item 6)
Stitch Removal Tool (WP 0042, Table 2, Item 7)
Tape, Measuring (WP 0042, Table 2, Item 8)

Personnel Required

Non-MOS specific (1)

References

FM 10-16
WP 0020
WP 0021
WP 0034

Equipment Condition

Lay out on flat surface or other suitable area.

Materials/Parts

Fastener Tape, Hook, A-A-55126, Type II, Class 1, 1 inch (WP 0037, Item 43)
Fastener Tape, Hook, A-A-55126, Type II, Class 1, 1 ½ inch (WP 0037, Item 44)
Fastener Tape, Loop, A-A-55126, Type II, Class 1, 1 inch (WP 0037, Item 48)
Fastener Tape, Loop, A-A-55126, Type II, Class 1, 1 ½ inch (WP 0036, Item 49)

Pencil, China Marker, Yellow, A-A-87 (WP 0043, Item 2)
Tape, Textile (Binding Tape), 1 inch (WP 0037, Item 82)
Thread, Nylon, V-T-295, Size E, TY I, II, or III CL A, FG504 (WP 0043, Item 4)
Thread, Nylon, V-T-295, Size F, TY I, II, or III CL A, FG504 (WP 0043, Item 5)
Thread, Nylon, V-T-295, Size FF, TY I, II, or III CL A, FG504 (WP 0043, Item 6)
Webbing, as specified (WP 0037, Items 83-96)

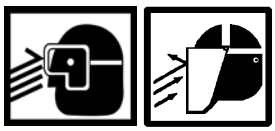
SERVICE

Clean the Pistol Set IAW WP 0020, Cleaning and Drying.

INSPECT

Conduct a preliminary examination IAW WP 0021 after components have been laundered as described in WP 0020. Discard decayed items. Test seams by grasping the item with both hands and pulling at right angles to the seams. Mark areas to be repaired. Cross out nonspecific and personal markings.

REPAIR

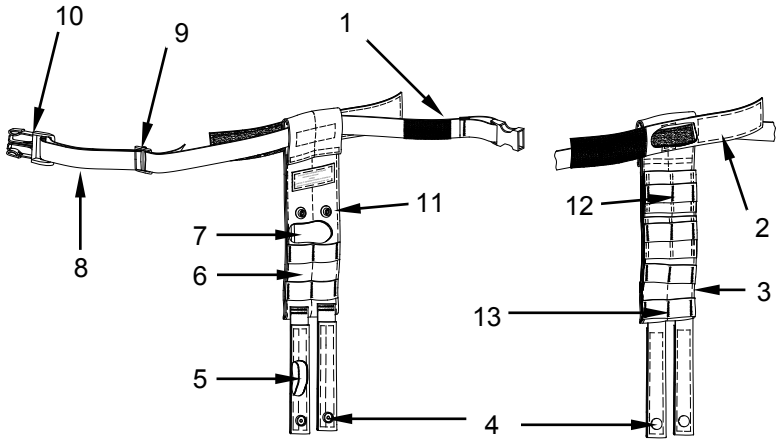


Eye protection should be worn to protect the Soldier from flying particles when operating a sewing machine. Sewing machine needles can break with great force. Failure to wear eye protection may result in injury to eye(s).

Prior to repair operations, each component of the MOLLE II system shall be inspected by qualified personnel to determine the extent of the repair necessary. With the exception of the replacement of hardware items furnished the user as a repair kit, all repairs to these components will be accomplished at the CIF or approved facility, using FM 10-16 as a general guide.

REPAIR — CONTINUED

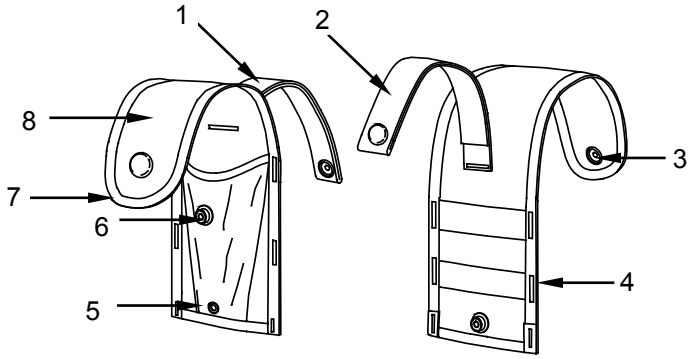
Use Figures 1 and 2 to determine location and construction of equipment in repair procedures.



Legend

1. Hook-and-Loop Fastener
2. Webbing, 1½-inch Thread
3. Thread, Size F
4. Snap Fastener, Button/Socket
5. Polyethylene, High Density, .030-inch
6. Textured Nylon Duck Fabric
7. Polyethylene, High Density, .050-inch
8. Webbing, 1-inch
9. Slide Buckle, 1-inch
10. Side Release Buckle, 1-inch
11. Snap Fastener, Stud/Eyelet
12. Webbing, 2¼-inch
13. Thread Size E

Figure 1. Holster/Leg Extender.



Legend

1. Polyethylene, 0.030-inch x 0.875-inch
2. Webbing, Nylon, 1-inch
3. Snap Fastener, Button/Socket
4. Thread, Size E
5. Snap Fastener, Eyelet/Stud
6. Eyelet (Drain)
7. Binding Tape, 1-inch
8. Textured Nylon Duck, Class III

Figure 2. 9mm Magazine Pouch.

END OF TASK

REPAIR — CONTINUED

Restitching

1. Use Figures 1 and 2 to identify component to be repaired.
2. Use Table 1 to determine specific sewing machine, thread size, and stitching requirements.
3. Overstitch or backstitch by ½ inch for all 301-lockstitch seams.
4. Trim running ends of thread.

Table 1. Pistol Set Stitching Requirements.

COMPONENT	RECOMMENDED SEWING MACHINE	STITCHES PER INCH	THREAD SIZE
Pistol Set			
Holster/Leg Extender and 9mm Magazine Pouch			
Binding Tape	Medium Duty	7 to 11	E
1-inch MOLLE II Webbing	Bar Tack	42 to 48	E
All Other Components	Medium Duty	7 to 11	F

END OF TASK

Hook-and-LoopTape

1. Remove faulty hook-and-loop tape from components. Do not damage the fabric.
2. Measure and cut a new piece of hook-and-loop tape of the size and length indicated in Table 2.
3. Using a medium duty sewing machine, size F thread of the appropriate color, sew new hook-and-loop tape to equipment IAW WP 0034, overstitching by ½ inch.
4. Trim running ends of thread.

Table 2. Hook-and-Loop Tape Measurements.

COMPONENT	APPLICATION	TYPE	WIDTH	LENGTH	TOLERANCE
Holster Extender	Fastener Strap and Retainer	Hook-and-Loop	1"	3"	+ or − $^{1}/_{16}$ inch
Holster Extender	Securing Strap	Hook-and-Loop	1 1/2"	4"	+ or − $^{1}/_{16}$ inch

END OF TASK

REPAIR — CONTINUED

Binding Tape

1. Place marks 1 inch on each side of the damaged area.
2. Measure the distance between marks.
3. Cut a length of new binding tape of the same type as original to the length indicated in step 2.
4. Sear raw ends of binding tape.
5. Place binding tape between marks in the same manner as the original.
6. Turn binding edges under ½ inch.
7. Using a medium duty sewing machine and size E thread of appropriate color, stitch $^{1}/_{8}$ inch from the edge of tape.

Table 3. Binding Tape Measurements.

COMPONENT	APPLICATION	WIDTH	LENGTH
9mm Magazine Pouch	Closure flap and pocket edging	1"	AR

END OF TASK

Snap Fastener Replacement

Replace snap fasteners using replacement procedures in WP 0034.

END OF TASK

Eyelet Replacement

Replace eyelets using replacement procedures in WP 0034.

END OF TASK

Buckle Replacement

Replace buckles using replacement procedures in WP 0034.

END OF TASK

REPLACE

Replace Pistol Set with serviceable item from stock.

END OF TASK

END OF WORK PACKAGE

SUSTAINMENT MAINTENANCE
SQUAD AUTOMATIC WEAPON (SAW) GUNNER SET
SERVICE, INSPECT, REPAIR, REPLACE

INITIAL SETUP:

Tools

Knife, Hot Metal (WP 0042, Table 2, Item 2)
Ruler, Tab, Metal, 16-inch (WP 0042, Table 2, Item 3)
Sewing Machine, Industrial Bar Tack (WP 0042, Table 2, Item 4)
Sewing Machine, Medium Duty (WP 0042, Table 2, Item 5)
Shears, Tailor's, 12-inch (WP 0042, Table 2, Item 6)
Stitch Removal Tool (WP 0042, Table 2, Item 7)
Tape, Measuring (WP 0042, Table 2, Item 8)

Personnel Required

Non-MOS specific (1)

References

FM 10-16
WP 0020
WP 0021
WP 0034

Materials/Parts

Pencil, China Marker, Yellow, A-A-87 (WP 0043, Item 2)
Tape, Textile (Binding Tape), 1 inch (WP 0037, Item 82)
Thread, Nylon, V-T-295, Size E, TY I, II, or III CL A, FG504 (WP 0043, Item 4)
Thread, Nylon, V-T-295, Size F, TY I, II, or III CL A, FG504 (WP 0043, Item 5)
Thread, Nylon, V-T-295, Size FF, TY I, II, or III CL A, FG504 (WP 0043, Item 6)
Webbing, as specified (WP 0037, Items 83-96)

Equipment Condition

Lay out on flat surface or other suitable area.

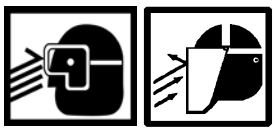
SERVICE

Clean the equipment IAW WP 0020, Cleaning and Drying.

INSPECT

Conduct a preliminary examination IAW WP 0021 after components have been laundered as described in WP 0020. Discard decayed items. Test seems by grasping the item with both hands and pulling at right angles to the seams. Mark areas to be repaired. Cross out nonspecific and personal markings.

REPAIR



Eye protection should be worn to protect the Soldier from flying particles when operating a sewing machine. Sewing machine needles can break with great force. Failure to wear eye protection may result in injury to eye(s).

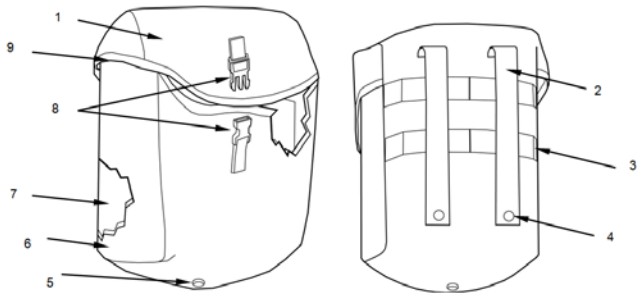
Prior to repair operations, each component of the Modular Lightweight Load-Carrying Equipment (MOLLE) II system shall be inspected by qualified personnel to determine the extent of the repair necessary. With the exception of the replacement of hardware items furnished to the user as a repair kit,

REPAIR — CONTINUED

all repairs to these components will be accomplished at the CIF or approved facility, using FM 10-16 as a general guide.

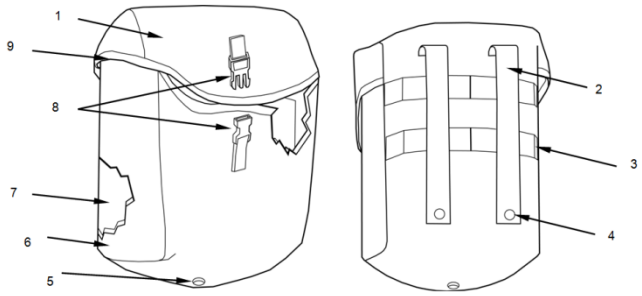
Use Figures 1 and 2 to determine location and construction of equipment in repair procedures.

END OF TASK



Legend
1. Textured Nylon Duck, Class III
2. Webbing, Nylon, 1-inch
3. Polyethylene, 0.030-inch x 0.875-inch
4. Snap Fastener
5. Eyelet, Drain
6. Textured Nylon Duck, Class IV
7. Polyethylene, 0.030-inch x 2.00-inch
8. Buckle, Side Release, 1-inch
9. Binding Tape, 1-inch

Figure 1. 100-Round Utility Pouch.



Legend
1. Textured Nylon Duck, Class III
2. Webbing, Nylon, 1-inch
3. Polyethylene, 0.030-inch x 0.875-inch
4. Snap Fastener
5. Eyelet, Drain
6. Textured Nylon Duck, Class IV
7. Polyethylene, 0.030-inch x 2.00-inch
8. Buckle, Side Release, 1-inch
9. Binding Tape, 1-inch

Figure 2. 200-Round SAW Gunner Pouch.

REPAIR — CONTINUED

Restitching

1. Use Figures 1 and 2 to identify component to be repaired.
2. Use Table 1 to determine specific sewing machine, thread size, and stitching requirements.
3. Overstitch or backstitch by ½ inch for all 301-lockstitch seams.
4. Trim running ends of thread.

Table 1. SAW Gunner Set Stitching Requirements.

COMPONENT	RECOMMENDED SEWING MACHINE	STITCHES PER INCH	THREAD SIZE
SAW Gunner Set			
100- and 200-Round Pouches			
Binding Tape	Medium Duty	7 to 11	E
1-inch MOLLE II Webbing	Bar Tack	42 to 48	E
All Other Components	Medium Duty	7 to 11	F

END OF TASK

Binding Tape

1. Place marks 1 inch on each side of the damaged area.
2. Measure the distance between marks.
3. Cut a length of new binding tape of the same type as original to the length indicated in step 2.
4. Sear raw ends of binding tape.
5. Place binding tape between marks in the same manner as the original.
6. Turn binding edges under ½ inch.
7. Using a medium duty sewing machine and size E thread of appropriate color, stitch $^{1}/_{8}$ inch from the edge of tape.

Table 2. Binding Tape Measurements.

COMPONENT	APPLICATION	WIDTH	LENGTH
SAW Gunner Pouch	Closure Flap and Pocket Edging	1"	AR
Utility Belt (Old)	Belt end Edging	1"	AR

END OF TASK

REPAIR — CONTINUED

Snap Fastener Replacement

Replace snap fasteners using replacement procedures in WP 0034.

END OF TASK

Eyelet Replacement

Replace eyelets using replacement procedures in WP 0034.

END OF TASK

Buckle Replacement

Replace buckles using replacement procedures in WP 0034.

END OF TASK

REPLACE

Replace SAW Gunner Set with serviceable items from stock.

END OF TASK

END OF WORK PACKAGE

SUSTAINMENT MAINTENANCE
GRENADIER SET
SERVICE, INSPECT, REPAIR, REPLACE

INITIAL SETUP:

Tools

Knife, Hot Metal (WP 0042, Table 2, Item 2)
Ruler, Tab, Metal, 16-inch (WP 0041, Table 2, Item 3)
Sewing Machine, Industrial Bar Tack (WP 0042, Table 2, Item 4)
Sewing Machine, Medium Duty (WP 0042, Table 2, Item 5)
Shears, Tailor's, 12-inch (WP 0042, Table 2, Item 6)
Stitch Removal Tool (WP 0042, Table 2, Item 7)
Tape, Measuring (WP 0042, Table 2, Item 8)

Personnel Required

Non-MOS specific (1)

References

FM 10-16
WP 0020
WP 0021
WP 0034

Materials/Parts

Pencil, China Marker, Yellow, A-A-87 (WP 0043, Item 2)
Tape, Textile (Binding Tape), 1 inch (WP 0037, Item 82)
Thread, Nylon, V-T-295, Size E, TY I, II, or III CL A, FG504 (WP 0043, Item 4)
Thread, Nylon, V-T-295, Size F, TY I, II, or III CL A, FG504 (WP 0043, Item 5)
Thread, Nylon, V-T-295, Size FF, TY I, II, or III CL A, FG504 (WP 0043, Item 6)
Webbing, as specified (WP 0037, Items 83-96)

Equipment Condition

Lay out on flat surface or other suitable area.

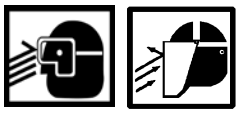
SERVICE

Clean the equipment IAW WP 0020, Cleaning and Drying.

INSPECT

Conduct a preliminary examination IAW WP 0021 after components have been laundered as described in WP 0020. Discard decayed items. Test seems by grasping the item with both hands and pulling at right angles to the seams. Mark areas to be repaired. Cross out nonspecific and personal markings.

REPAIR



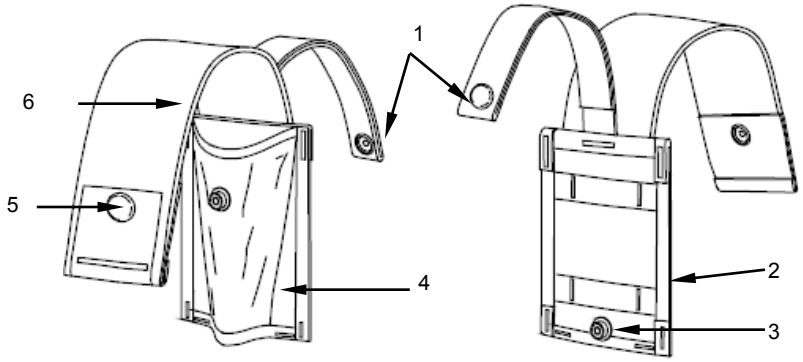
Eye protection should be worn to protect the Soldier from flying particles when operating a sewing machine. Sewing machine needles can break with great force. Failure to wear eye protection may result in injury to eye(s).

Prior to repair operations, each component of the Modular Lightweight Load-Carrying Equipment (MOLLE) II system shall be inspected by qualified personnel to determine the extent of the repair

REPAIR — CONTINUED

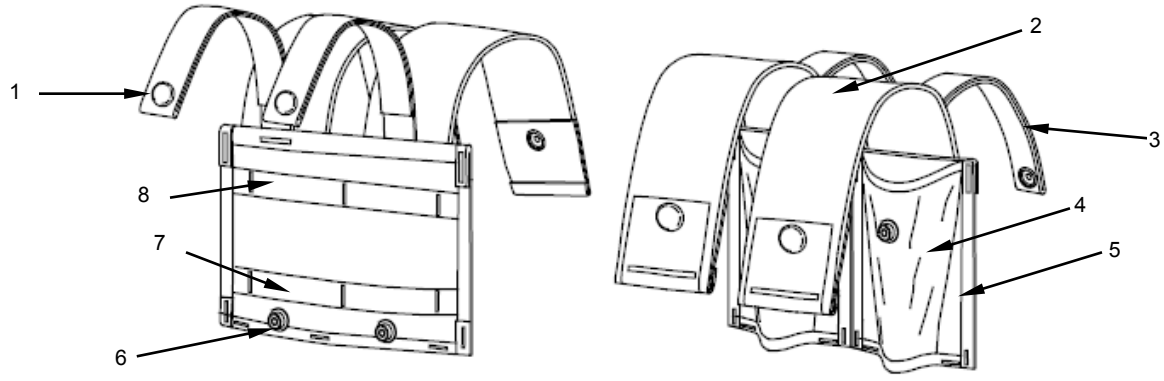
necessary. With the exception of the replacement of hardware items furnished the user as a repair kit, all repairs to these components will be accomplished at the CIF or approved facility, using FM 10-16 as a general guide.

Use Figures 1 through 3 to determine the location and construction of equipment in repair procedures.



Legend
1. Polyethylene, 0.030-inch
2. Webbing, Nylon, 1-inch
3. Snap Fastener, Eyelet/Stud
4. Textured Nylon Duck
5. Snap Fastener, Button/Socket
6. Webbing, Nylon, 2-inch

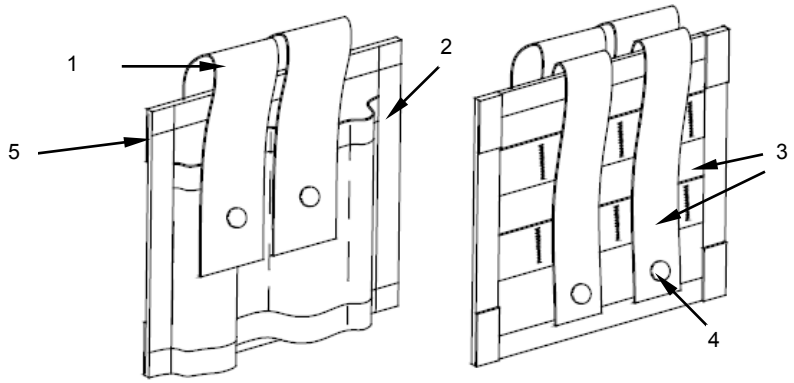
Figure 1. 40mm High Explosive Pouch (Single).



Legend
1. Snap Fastener, Button/Socket
2. Webbing, Nylon, 2-inch
3. Polyethylene, 0.030-inch
4. Textured Nylon Duck
5. Binding Tape, 1-inch
6. Snap Fastener, Eyelet/Stud
7. Thread, Size F
8. Webbing, Nylon, 1-inch

Figure 2. 40mm High Explosive Pouch (Double).

REPAIR — CONTINUED



Legend
1. Webbing, Nylon, 2-inch
2. Binding Tape, 1-inch
3. Webbing, Nylon, 1-inch
4. Snap Fastener, Button/Socket
5. Thread, Size E

Figure 3. 40mm Pyrotechnic Pouch (Double).

END OF TASK

Restitching

1. Use Figures 1 through 3 to identify component to be repaired.
2. Use Table 1 to determine specific sewing machine, thread size, and stitching requirements.
3. Overstitch or backstitch by ½ inch all 301-lockstitch seams.
4. Trim running ends of thread.

Table 1. Grenadier Set Stitching Requirements.

COMPONENT	RECOMMENDED SEWING MACHINE	STITCHES PER INCH	THREAD SIZE
Grenadier Set			
All Pouches			
Binding Tape	Medium Duty	7 to 11	E
1-inch MOLLE II Webbing	Bar Tack	42 to 48	E
Waistbelt Webbing	Bar Tack	42 to 48	E
All Other Components	Medium Duty	7 to 11	F

END OF TASK

REPAIR — CONTINUED

Binding Tape

1. Place marks 1 inch on each side of the damaged area.
2. Measure the distance between marks.
3. Cut a length of new binding tape of the same type as original to the length indicated in step 2.
4. Sear raw ends of binding tape.
5. Place binding tape between marks in the same manner as the original.
6. Turn binding edges under ½ inch.
7. Using a medium duty sewing machine and size E thread of appropriate color, stitch $^{1}/_{8}$ inch from the edge of tape.

Table 2. Binding Tape Measurements.

COMPONENT	APPLICATION	WIDTH	LENGTH
40mm High Explosive Pouch Double	Pouch edging	1"	AR
40mm High Explosive Pouch Single	Pouch side lining (2)	1"	6 ½"
40mm High Explosive Pouch Single	Pouch lower lining (2)	1"	3”
40mm High Explosive Pouch Single	Pouch upper lining (2)	1"	3”
40mm Pyrotechnic Pouch Double	Pouch edging	1"	AR

END OF TASK

Snap Fastener Replacement

Replace snap fasteners using replacement procedures in WP 0034.

END OF TASK

Eyelet Replacement

Replace eyelets using replacement procedures in WP 0034.

END OF TASK

Buckle Replacement

Replace buckles using replacement procedures in WP 0034.

END OF TASK

REPLACE

Replace Grenadier Set with serviceable item from stock.

END OF TASK

END OF WORK PACKAGE

SUSTAINMENT MAINTENANCE
MEDIC SET
SERVICE, INSPECT, REPAIR, REPLACE

INITIAL SETUP:

Tools

Knife, Hot Metal (WP 0042, Table 2, Item 2)
Ruler, Tab, Metal, 16-inch (WP 0042, Table 2, Item 3)
Sewing Machine, Industrial Bar Tack (WP 0042, Table 2, Item 4)
Sewing Machine, Medium Duty (WP 0042, Table 2, Item 5)
Shears, Tailor's, 12-inch (WP 0042, Table 2, Item 6)
Stitch Removal Tool (WP 0042, Table 2, Item 7)
Tape, Measuring (WP 0042, Table 2, Item 8)

Equipment Condition

Lay out on flat surface or other suitable area.

Personnel Required

Non-MOS specific (1)

References

FM 10-16
WP 0020
WP 0021
WP 0034

Materials/Parts

Fastener Tape, Hook, A-A-55126, Type II, Class 1, 5/8 inch (WP 0037, Item 42)
Fastener Tape, Hook, A-A-55126, Type II, Class 1, 1 inch (WP 0037, Item 43)
Fastener Tape, Loop, A-A-55126, Type II, Class 1, 5/8 inch (WP 0037, Item 47)
Fastener Tape, Loop, A-A-55126, Type II, Class 1, 1 inch (WP 0037, Item 48)
Pencil, China Marker, Yellow, A-A-87 (WP 0043, Item 2)
Slide Fastener, VFGOL-106 (WP 0037, Item 77)
Tape, Textile (Binding Tape), 1 inch (WP 0037, Item 82)
Thread, Nylon, V-T-295, Size E, TY I, II, or III CL A, FG504 (WP 0043, Item 4)
Thread, Nylon, V-T-295, Size F, TY I, II, or III CL A, FG504 (WP 0043, Item 5)
Thread, Nylon, V-T-295, Size FF, TY I, II, or III CL A, FG504 (WP 0043, Item 6)
Webbing, as specified (WP 0037, Items 83-96)

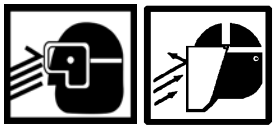
SERVICE

Clean the equipment IAW WP 0020, Cleaning and Drying.

INSPECT

Conduct a preliminary examination IAW WP 0021 after components have been laundered as described in WP 0020. Discard decayed items. Test seams by grasping the item with both hands and pulling at right angles to the seams. Mark areas to be repaired. Cross out nonspecific and personal markings.

REPAIR



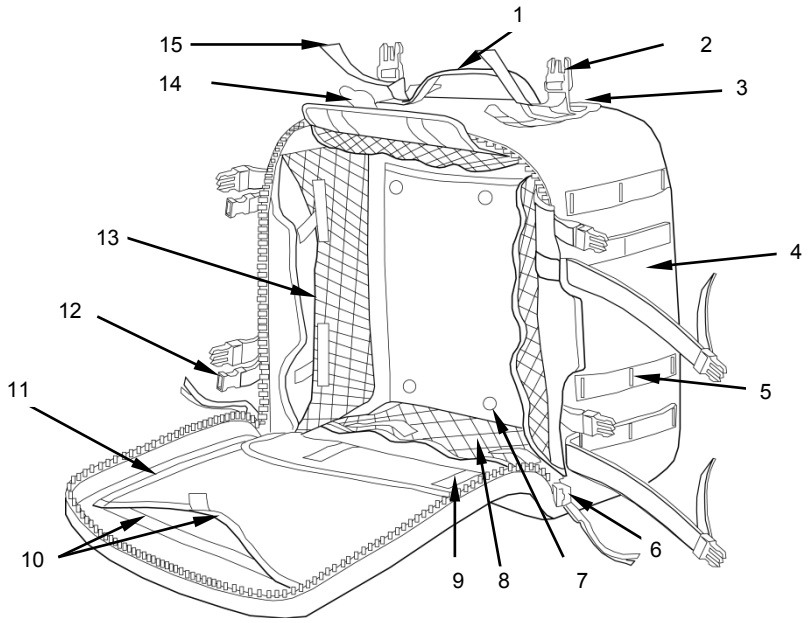
Eye protection should be worn to protect the Soldier from flying particles when operating a sewing machine. Sewing machine needles can break with great force. Failure to wear eye protection may result in injury to eye(s).

Prior to repair operations, each component of the Modular Lightweight Load-Carrying Equipment (MOLLE) II system shall be inspected by qualified personnel to determine the extent of the repair

REPAIR — CONTINUED

necessary. With the exception of the replacement of hardware items furnished the user as a repair kit, all repairs to these components will be accomplished at the CIF or approved facility, using FM 10-16 as a general guide.

Use Figures 1 through 5 to determine the location and construction of equipment in repair procedures.

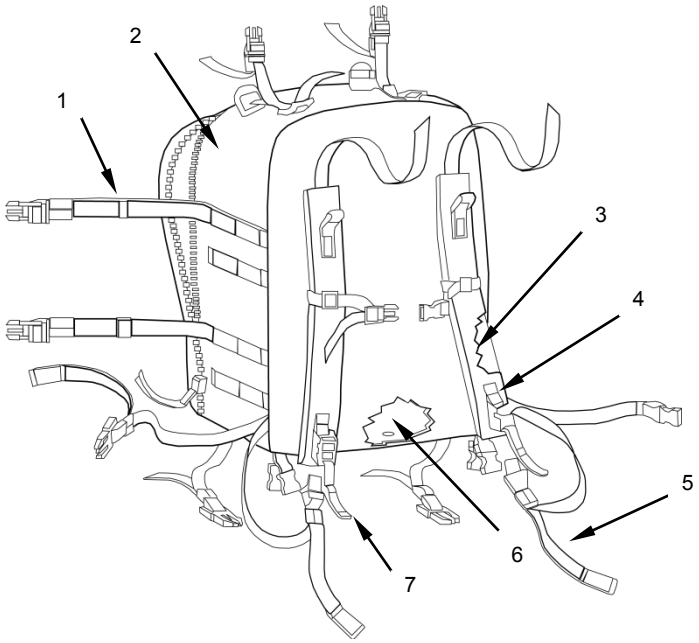


Legend

1. Webbing, 2-inch
2. Side Release Buckle, 2-inch
3. Metal Loop, 1-inch
4. Textured Nylon Duck
5. Thread, Size E
6. Slide Fastener
7. Snap Fastener
8. Elastic Webbing, ½-inch
9. Hook-and-Loop Fastener, 1-inch
10. Hook-and-Loop Fastener, $^{5}/_{8}$-inch
11. Thread, Size E
12. Side Release Buckle, 1-inch
13. Nylon Raschel Knit Cloth
14. Double Bar Buckles
15. Webbing, 1-inch

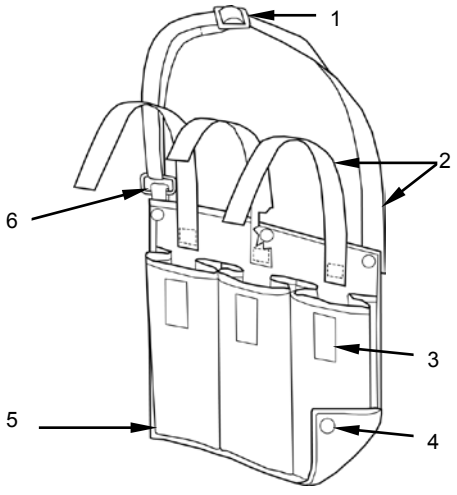
Figure 1. Medical Bag with Four Internal Pockets.

REPAIR — CONTINUED



Legend
1. Webbing, 1-inch
2. Textured Nylon Duck
3. Foam, ¼-inch
4. Textured Nylon Duck
5. Quick Release Buckles
6. Webbing, Elastic, 1-inch
7. Webbing, $^{9}/_{16}$-inch

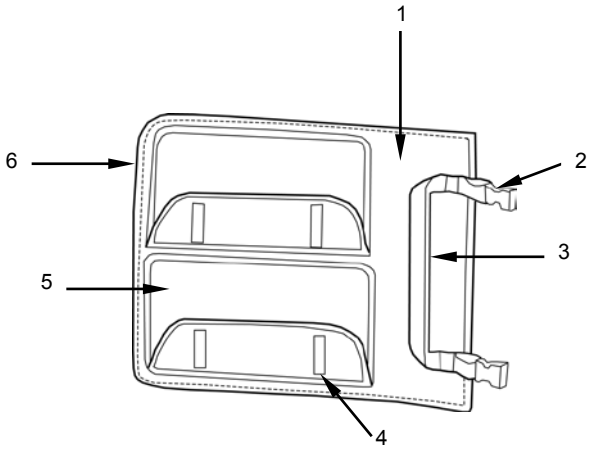
Figure 2. Medical Bag Exterior.



Legend
1. Double Bar Buckles
2. Webbing, 1-inch
3. Hook-and-Loop Fastener, 1-inch
4. Snap Fastener
5. Thread, Size E
6. Metal Look, 1-inch

Figure 3. Medical IV Bandoleer Bag.

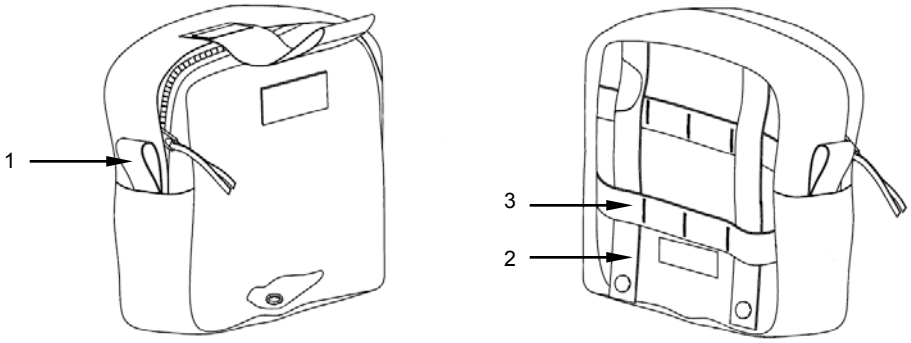
REPAIR — CONTINUED



Legend

1. Textured Nylon Duck
2. Side Release Buckle, 1-inch
3. Webbing, 1-inch
4. Hook-and-Loop Fastener, 1-inch
5. Nylon Raschel Knit Cloth
6. Binding Tape, 1-inch

Figure 4. Medical Bag Panel.



Legend

1. Loop
2. Attachment Strap
3. Rear Strap

Figure 5. External Medic Modular Pocket.

REPAIR — CONTINUED

Restitching

1. Use Figures 1 through 5 to identify component to be repaired.
2. Use Table 1 to determine specific sewing machine, thread size, and stitching requirements.
3. Overstitch or backstitch by ½ inch all 301-lockstitch seams.
4. Trim running ends of thread.

Table 1. Medic Set Stitching Requirements.

COMPONENT	RECOMMENDED SEWING MACHINE	STITCHES PER INCH	THREAD SIZE
Medic Set			
Bag and Pouches			
Binding Tape	Medium Duty	7 to 11	E
1-inch MOLLE II Webbing	Bar Tack	42 to 48	E
Waistbelt Webbing	Bar Tack	42 to 48	E
All Other Components	Medium Duty	7 to 11	F

END OF TASK

Hook-and-Loop Tape

1. Remove faulty hook-and-loop tape from equipment. Do not damage the fabric.
2. Measure and cut a new piece of hook-and-loop tape of the size and length indicated in Table 2.
3. Using a medium duty sewing machine, size F thread of the appropriate color, sew new hook-and-loop tape IAW WP 0034, overstitching by ½ inch.
4. Trim running ends of thread.

Table 2. Hook-and-Loop Tape Lengths.

COMPONENT	APPLICATION	TYPE	WIDTH	LENGTH	TOLERANCE
Medical Pouch	Attachment	Loop	1"	2"	+ or – $^{1}/_{16}$ inch
Medical Pouch	Flap Closure	Hook-and-Loop	1"	2"	+ or – $^{1}/_{16}$ inch
Medic Bag	Map Case Closure	Hook-and-Loop	5/8"	12"	+ or – $^{1}/_{8}$ inch
Medic Bag	Flap Assembly Closure	Loop	1"	3"	+ or – $^{1}/_{16}$ inch
Medic Bag	Flap Mesh Pocket	Hook	1"	4"	+ or – $^{1}/_{16}$ inch
Medic Bag	Inner Pocket Closure	Hook	1"	2"	+ or – $^{1}/_{16}$ inch
Medic Bag	Inner Pocket Straps	Loop	1"	$3^{1}/_{2}$"	+ or - $^{1}/_{16}$ inch
Medic Bag	Main Compartment Pocket Flap	Loop	1"	3"	+ or – $^{1}/_{16}$ inch
Medic Bag	Main Compartment Mesh Pocket	Hook	1"	4"	+ or – $^{1}/_{16}$ inch

END OF TASK

REPAIR — CONTINUED

Slide Fasteners

1. Cut the fastener tape on the faulty slide fastener as close as possible to the outer row of stitching holding the slide fastener.
2. Trim any raveled yarns from the remaining fastener tape.
3. Measure the length of the damaged area.
4. Obtain a new slide fastener, the length of the damaged area.
5. Using a medium duty sewing machine, size F thread, 7-11 stitches per inch, sew the new slide fastener to the equipment.
6. Trim threads.

Table 3. Slide Closure (Slide Fastener) Measurements.

COMPONENT	APPLICATION	FASTENER WIDTH	LENGTH	TOLERANCE
Medical Pouch	Main Pocket Closure	¾"	14"	+ or − $^{1}/_{8}$ inch
Medic Bag Assembly	Main Pocket Closure	¾"	43"	+ or − $^{1}/_{8}$ inch

END OF TASK

Binding Tape

1. Place marks 1 inch on each side of the damaged area.
2. Measure the distance between marks.
3. Cut a length of new binding tape of the same type as original to the length indicated in step 2.
4. Sear raw ends of binding tape.
5. Place binding tape between marks in the same manner as the original.
6. Turn binding edges under ½ inch.
7. Using a medium duty sewing machine and size E thread of appropriate color, stitch $^{1}/_{8}$ inch from the edge of tape.

Table 4. Map Case Edging Measurement.

COMPONENT	APPLICATION	WIDTH	LENGTH
Medical Bag	Map Case Edging	1"	AR

END OF TASK

REPAIR — CONTINUED

Attachment Webbing Repair

1. Remove old attachment webbing by cutting away bar tacks and lifting edge binding or seam. Do not damage underlying fabric.
2. Cut a new piece of webbing the same length as the old webbing.
3. Sear both ends of new webbing.
4. Measure the distance between bar tacks on the old webbing and transfer those measurements to the new webbing.
5. Place new webbing component where old webbing was removed.
6. Using a bar tack sewing machine, place a 42- to 48-inch bar tack on each of the marked locations.
7. Place ends of webbing into the seam tape or seam in the same manner as the original construction.
8. Using a medium duty sewing machine, size F thread, 7 to 11 stitches per inch, sew the webbing back into the seam tape or seam, overstitching by a minimum of ½ inch.
9. Trim thread ends.

END OF TASK

Snap Fastener Replacement

Replace snap fasteners using replacement procedures in WP 0034.

END OF TASK

Eyelet Replacement

Replace eyelets using replacement procedures in WP 0034.

END OF TASK

Buckle Replacement

Replace buckles using replacement procedures in WP 0034.

END OF TASK

REPLACE

Replace Medic Set with serviceable items from stock.

END OF TASK

END OF WORK PACKAGE

SUSTAINMENT MAINTENANCE
RADIO POUCH, 300-ROUND 7.62 AMMO BAG, SHOTGUN SHELL POUCH, MBITR POUCH, ALICE CLIP ADAPTER, K-BAR ADAPTER, VEHICLE PANEL (MVP) UNIVERSAL, LEADERS SET UNIVERSAL, PVS-14 POUCH UNIVERSAL, ADMIN POUCH, ENTRENCHING TOOL CARRIER, BANDOLEER AMMUNITION POUCHES, FLASH BANG GRENADE POUCH
SERVICE, INSPECT, REPAIR, REPLACE

INITIAL SETUP:

Tools

Knife, Hot Metal (WP 0042, Item 2)
Ruler, Tab, Metal, 16-inch (WP 0042, Item 3)
Sewing Machine, Industrial Bar Tack (WP 0041, Item 4)
Sewing Machine, Medium Duty (WP 0042, Item 5)
Shears, Tailor's, 12-inch (WP 0042, Item 6)
Stitch Removal Tool (WP 0042, Item 7)
Tape, Measuring (WP 0042, Item 8)

Equipment Condition

Lay out on flat surface or other suitable area.

Personnel Required

Non-MOS specific (1)

References

FM 10-16
WP 0020
WP 0021
WP 0034

Materials/Parts

Cord, Round, Type II, MIL-C-5040 (WP 0037, Item 33)
Fastener Tape, Hook, A-A-55126, Type II, Class 1,1 inch (WP 0037, Item 43)
Fastener Tape, Hook, A-A-55126, Type II, Class 1, 2 inch (WP 0037, Item 45)
Fastener Tape, Loop, A-A-55126, Type II, Class 1, 1 inch (WP 0037, Item 48)
Fastener Tape, Loop, A-A-55126, Type II, Class 1, 2 inch (WP 0037, Item 50)
Pencil, China Marker, Yellow, A-A-87 (WP 0043, Item 2)
Slide Fastener, VFGOL-106 (WP 0037, Item 77)
Tape, Textile (Binding Tape), 1 inch (WP 0037, Item 82)
Thread, Nylon, V-T-295, Size E, TY I, II, or III CL A, FG504 (WP 0043, Item 4)
Thread, Nylon, V-T-295, Size F, TY I, II, or III CL A, FG504 (WP 0043, Item 5)
Thread, Nylon, V-T-295, Size FF, TY I, II, or III CL A, FG504 (WP 0043, Item 6)
Webbing, as specified (WP 0037, Items 83-96)

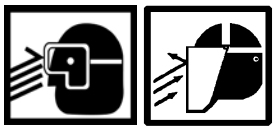
SERVICE

Clean the equipment IAW WP 0020, Cleaning and Drying.

INSPECT

Conduct a preliminary examination IAW WP 0021 after components have been laundered as described in WP 0020. Discard decayed items. Test seams by grasping the item with both hands and pulling at right angles to the seams. Mark areas to be repaired. Cross out nonspecific and personal markings.

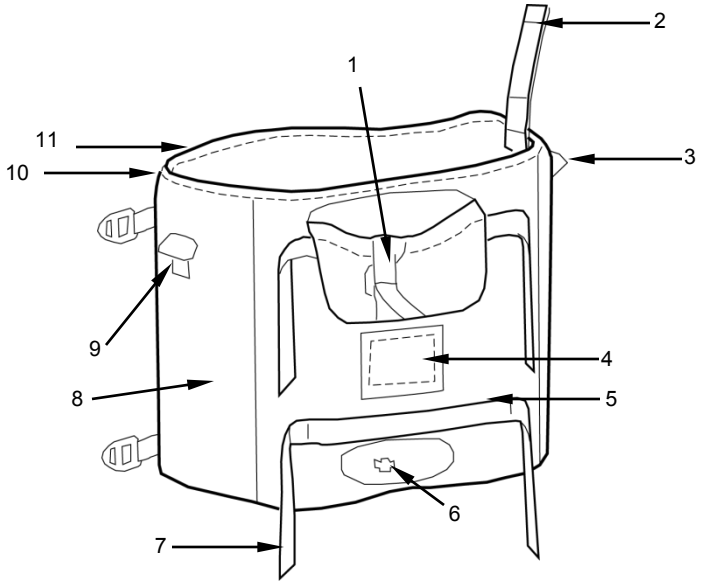
REPAIR



Eye protection should be worn to protect the Soldier from flying particles when operating a sewing machine. Sewing machine needles can break with great force. Failure to wear eye protection may result in injury to eye(s).

Prior to repair operations, each component of the Modular Lightweight Load-Carrying Equipment (MOLLE) II system shall be inspected by qualified personnel to determine the extent of the repair necessary. With the exception of the replacement of hardware items furnished to the user as a repair kit, all repairs to these components will be accomplished at the CIF or approved facility, using FM 10-16 as a general guide.

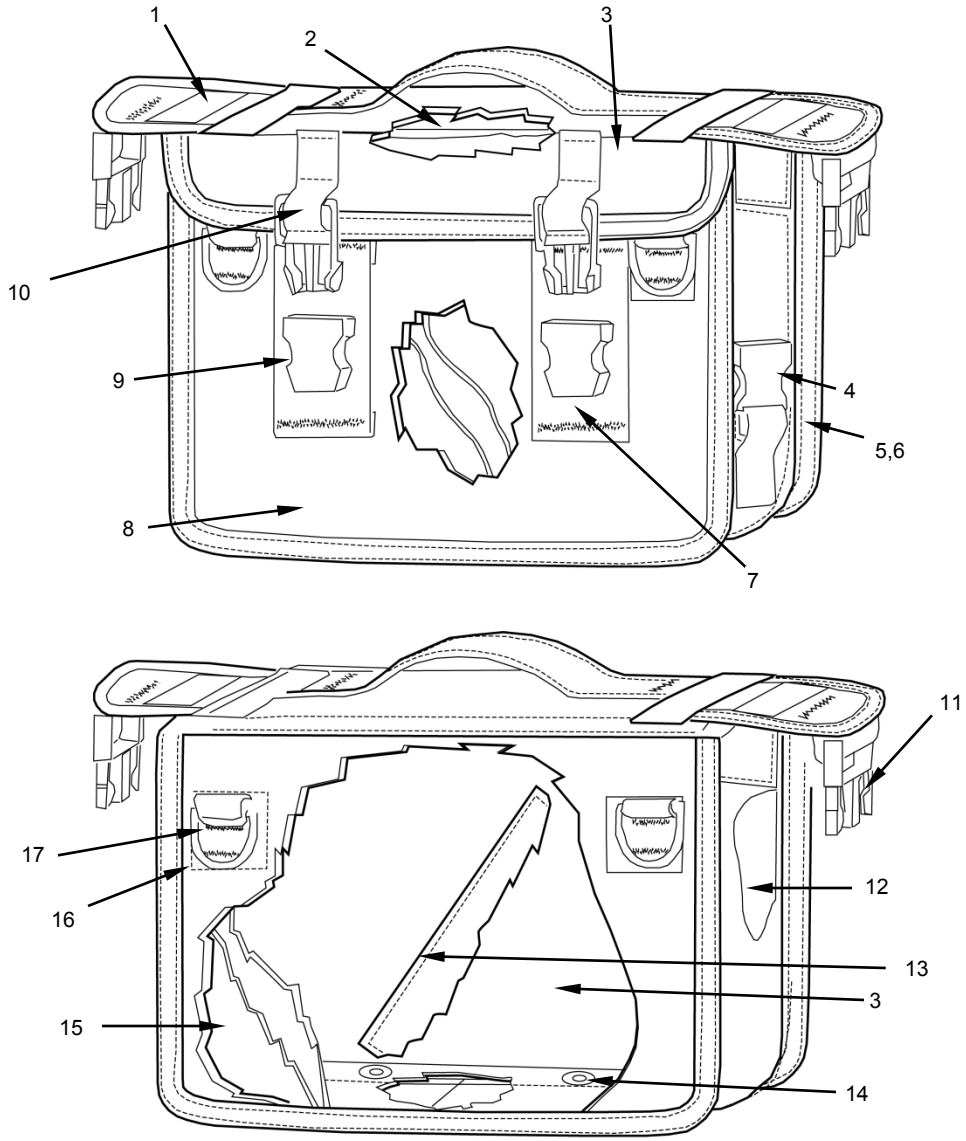
Use Figures 1 through 13 to determine the location and construction of equipment in repair procedures.



Legend
1. Buckle, 1-inch, Ladder-type
2. Snap Fastener, Button/Socket
3. Snap Fastener, Eyelet/Stud
4. Polyethylene, 0.020-inch
5. Thread, Size F
6. Eyelet
7. Webbing, 1-inch
8. Textured Nylon Duck
8. D-Ring, 1-inch
9. Thread, Size E
10. Binding Tape 1-inch

Figure 1. Radio Pouch.

REPAIR - CONTINUED

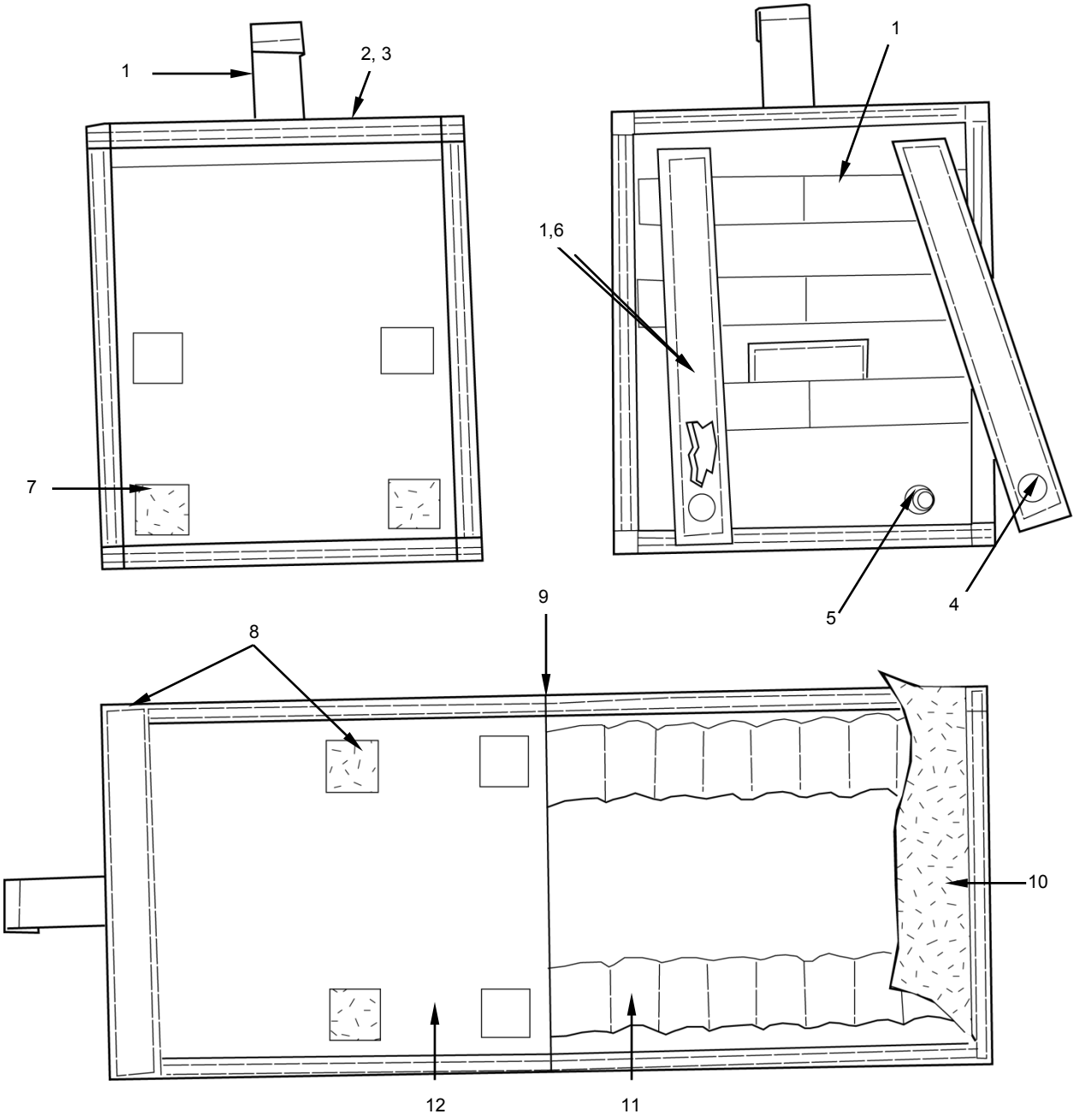


Legend

1. Hook-and-Loop Fastener
2. Polyethylene, High Density, .050-inch
3. Textured Nylon Duck Fabric
4. Side Release Buckle, 1-inch
5. Thread Size E
6. Binding Tape, 1-inch
7. Webbing, 2-inch
8. Textured Nylon Duck Fabric
9. Fastener, 3-hole, 1-inch
10. Webbing, Nylon, 1-inch
11. Slide Buckle, 1-inch
12. Thread, Size F
13. Snap Fasteners, Button/Socket
14. Grommet
15. Polyethylene, High Density, .050-inch
16. Webbing, 1-inch
17. D-Ring 1-inch

Figure 2. 300-Round 7.62 Ammo Bag.

REPAIR — CONTINUED

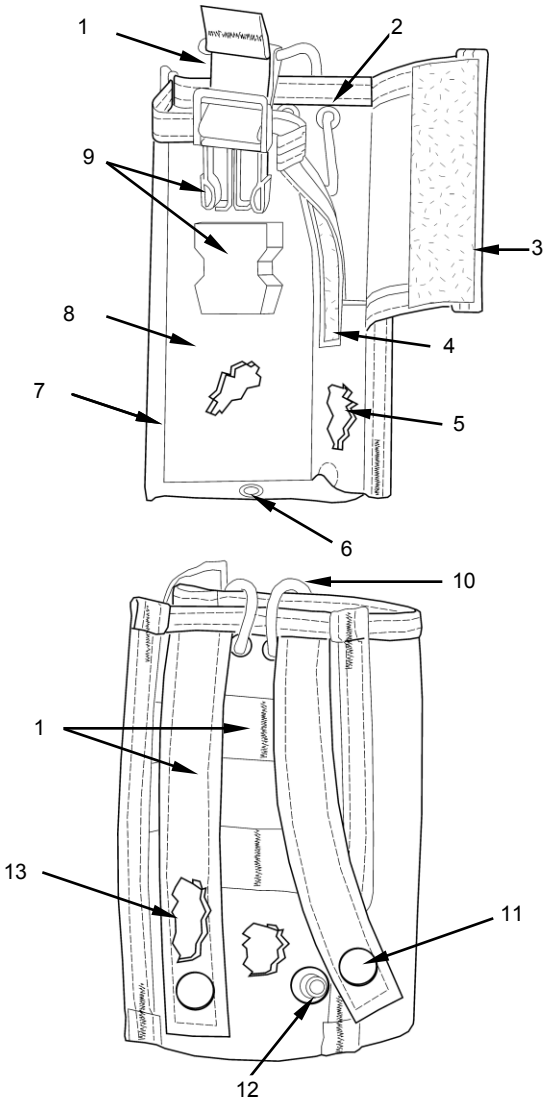


Legend

1. Webbing, Nylon, 1-inch
2. Binding Tape, 1-inch
3. Thread, Size E
4. Snap Fasteners, Button/Socket
5. Snap Fasteners, Stud/Eyelet
6. Polyethylene, 0.030-inch
7. Loop Fastener Tape, 1-inch
8. Hook Fastener Tape, 1-inch
9. Thread, Size F
10. Loop Fastener Tape, 2-inch
11. Webbing, Nylon, Elastic, 1½-inch
12. Textured Nylon Duck

Figure 3. Shotgun Shell Pouch.

REPAIR — CONTINUED

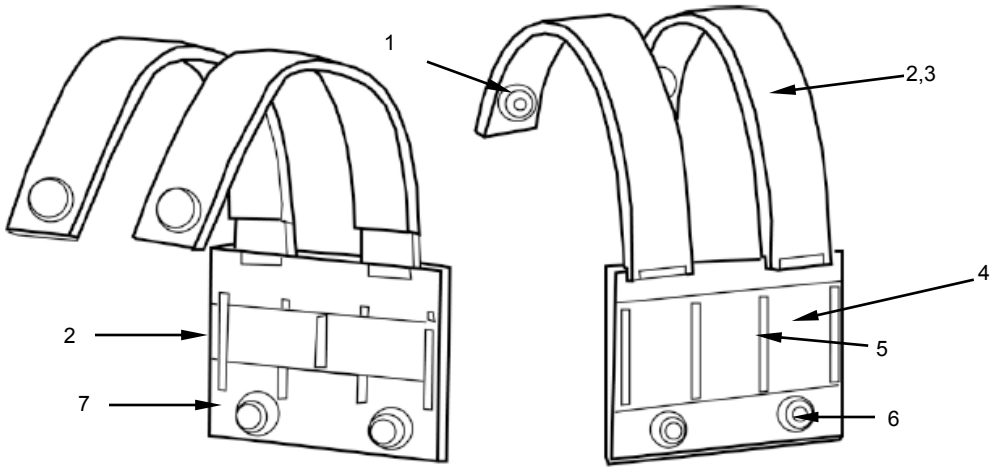


Legend

1. Webbing, Nylon, 1-inch
2. Eyelet/Washer
3. Fastener Tape, Hook, 1-inch wide
4. Fastener Tape, Loop, ½-inch wide
5. Foam, ¼-inch
6. Grommet
7. Thread, Size F
8. Textured Nylon Duck
9. Fastener, 3-hole, 1-inch (Side Release)
10. Cord, Round
11. Snap Fasteners, Button/Socket
12. Snap Fasteners, Stud/Eyelet
13. Polyethylene, 0.030-inch

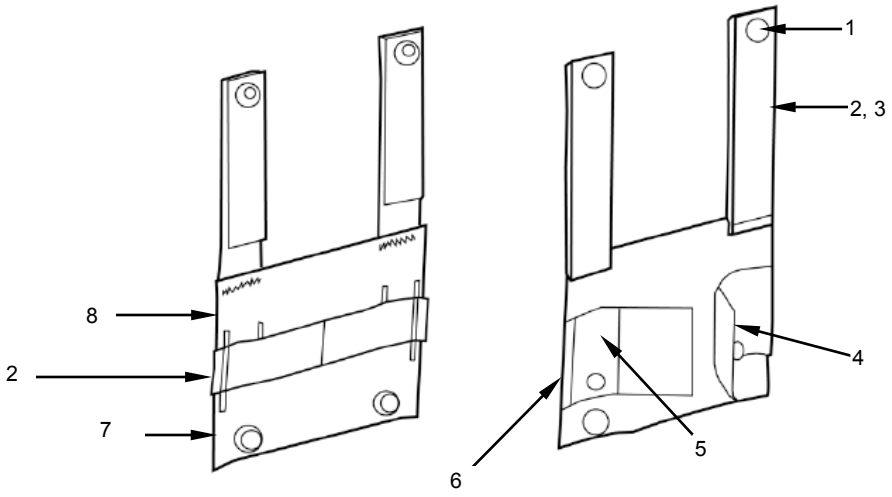
Figure 4. MBITR Pouch.

REPAIR — CONTINUED



Legend
1. Snap Fastener, Button/Socket
2. Webbing, 1-inch
3. Polyethylene, 0.030-inch
4. Textured Nylon Duck
5. Thread, Size E
6. Snap Fastener, Stud/Eyelet
7. Webbing, 3½-inch

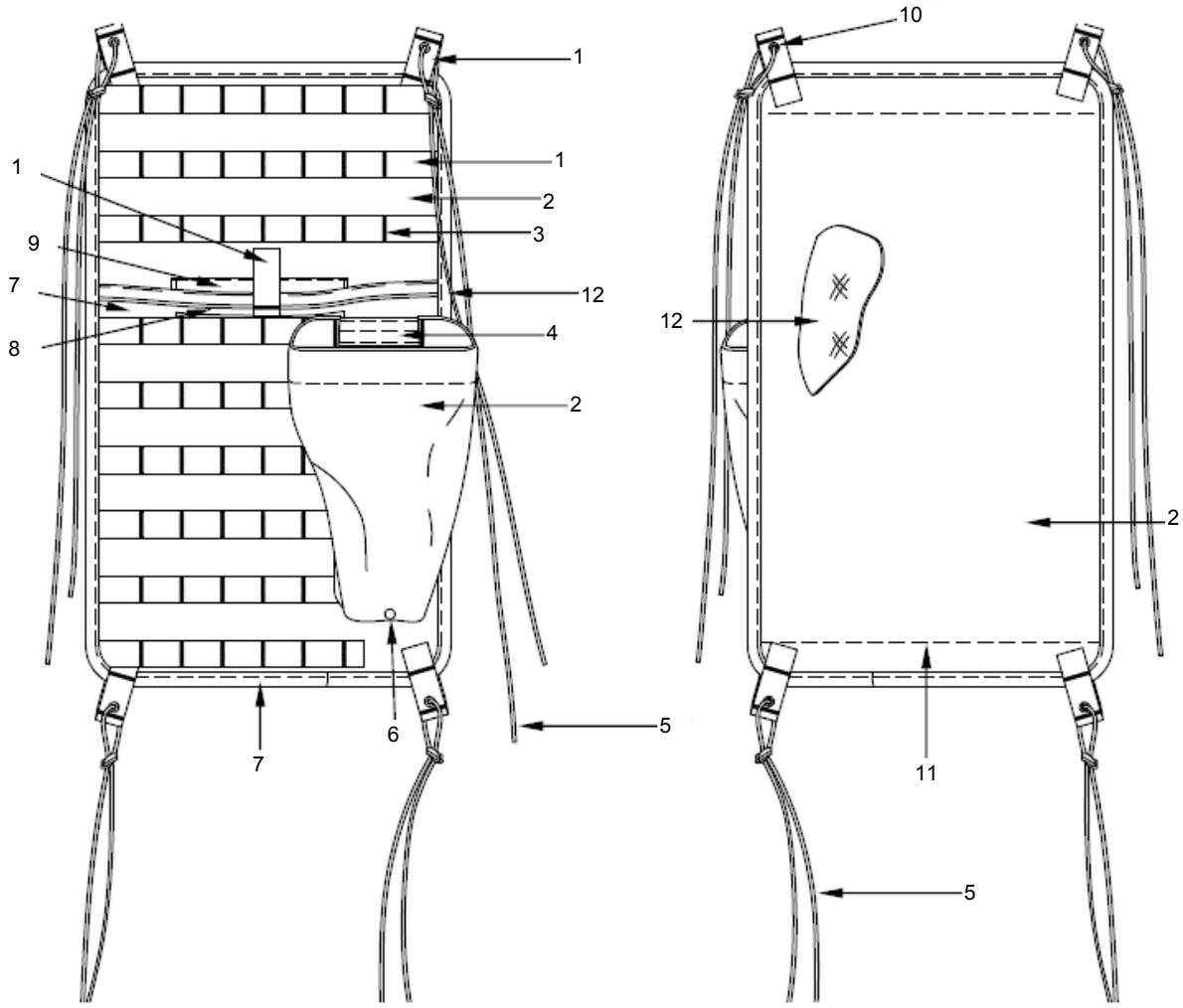
Figure 5. ALICE Clip Adapter.



Legend
1. Snap Fastener, Button/Socket
2. Webbing, 1-inch
3. Polyethylene, 0.030-inch
4. Webbing, 2 ¼-inch
5. Hook-and-Loop Fastener
6. Snap Fastener, Eyelet/Washer
7. Snap Fastener, Eyelet/Stud
8. Webbing, 3½-inch

Figure 6. K-Bar Adapter.

REPAIR — CONTINUED

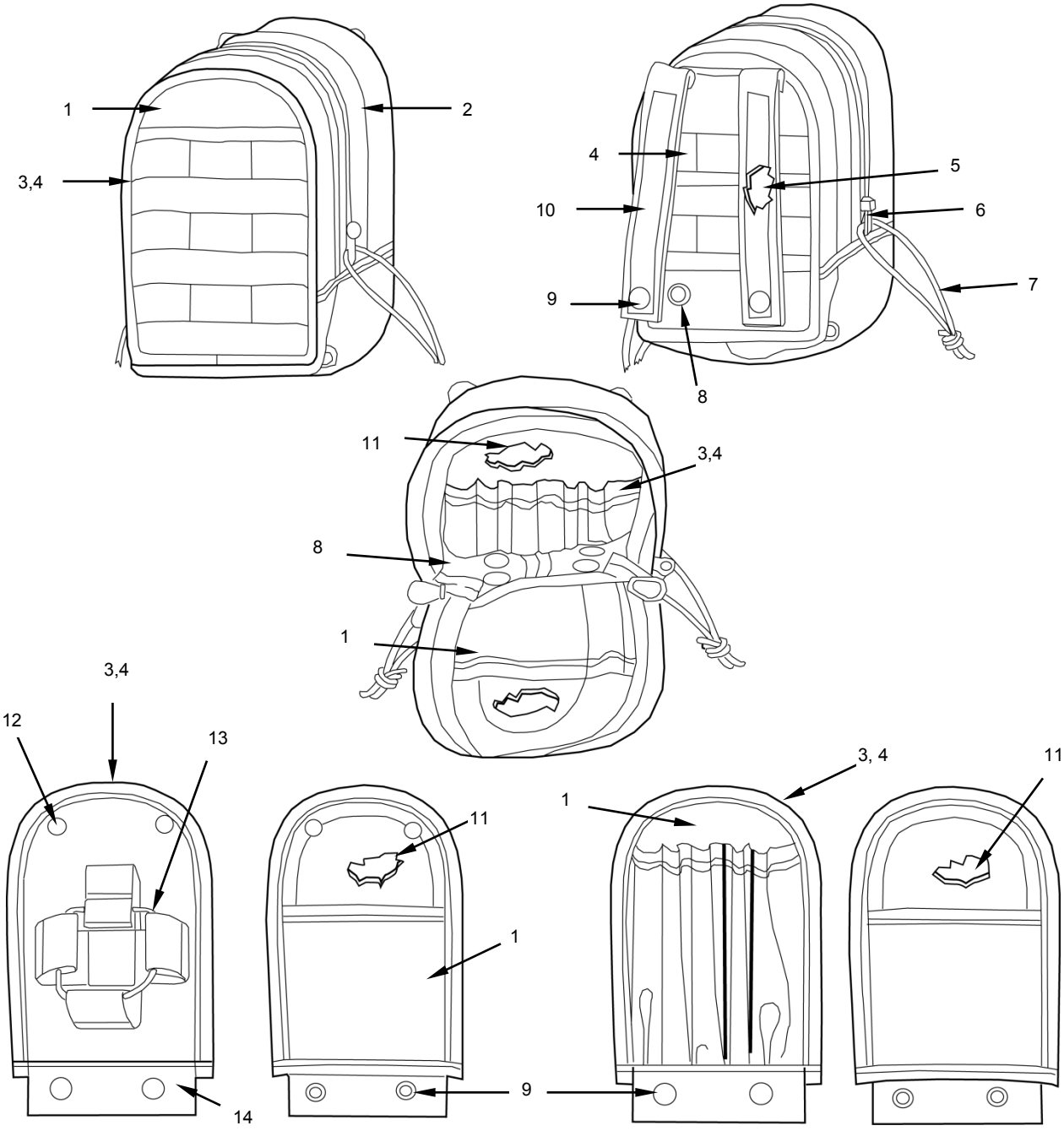


Legend

1. Webbing, 1-inch
2. Textured Nylon Duck
3. Thread, Size E
4. Coated Webbing
5. Cord, Nylon, Round
6. Eyelet Fastener, Hook, 1-inch
7. Binding Tape, 1-inch
8. Fastener, Hook, 1-inch
9. Fastener, Loop, 1-inch
10. Grommet
11. Thread, Size F
12. Polyethylene, .050-inch

Figure 7. Vehicle Panel (MVP) Universal.

REPAIR — CONTINUED

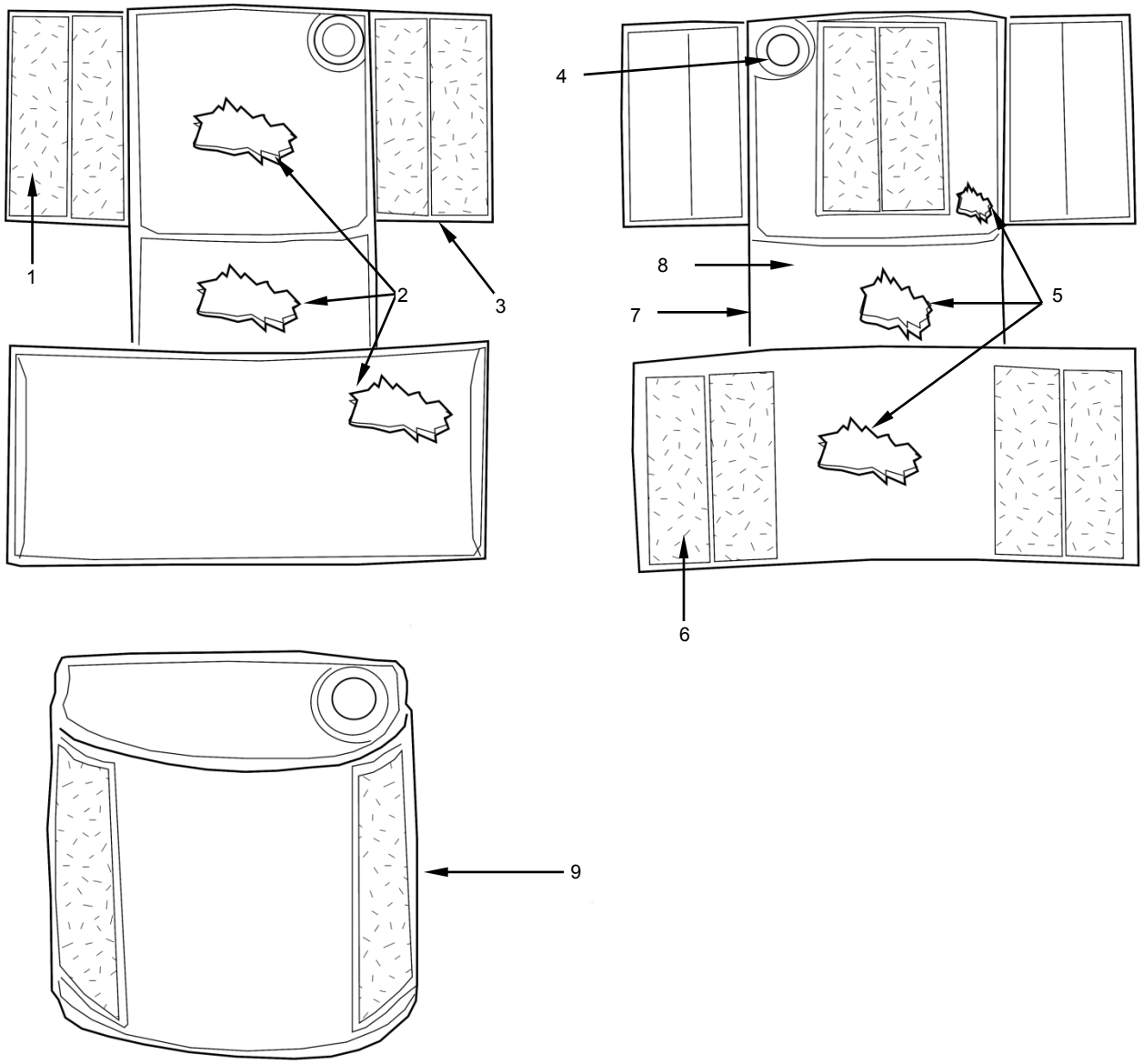


Legend

1. Textured Nylon Duck
2. Thread, Size F
3. Binding Tape, 1-inch
4. Thread, Size E
5. Polyethylene, 0.030-inch
6. Slide Fastener
7. Cord, Flat
8. Snap Fastener, Stud/Eyelet
9. Snap Fastener, Button/Socket
10. Webbing, 1-inch
11. Polyethylene, .050-inch
12. Eyelet
13. Cord, Elastic
14. Webbing, 1½-inch

Figure 8. Leaders Set Universal.

REPAIR — CONTINUED

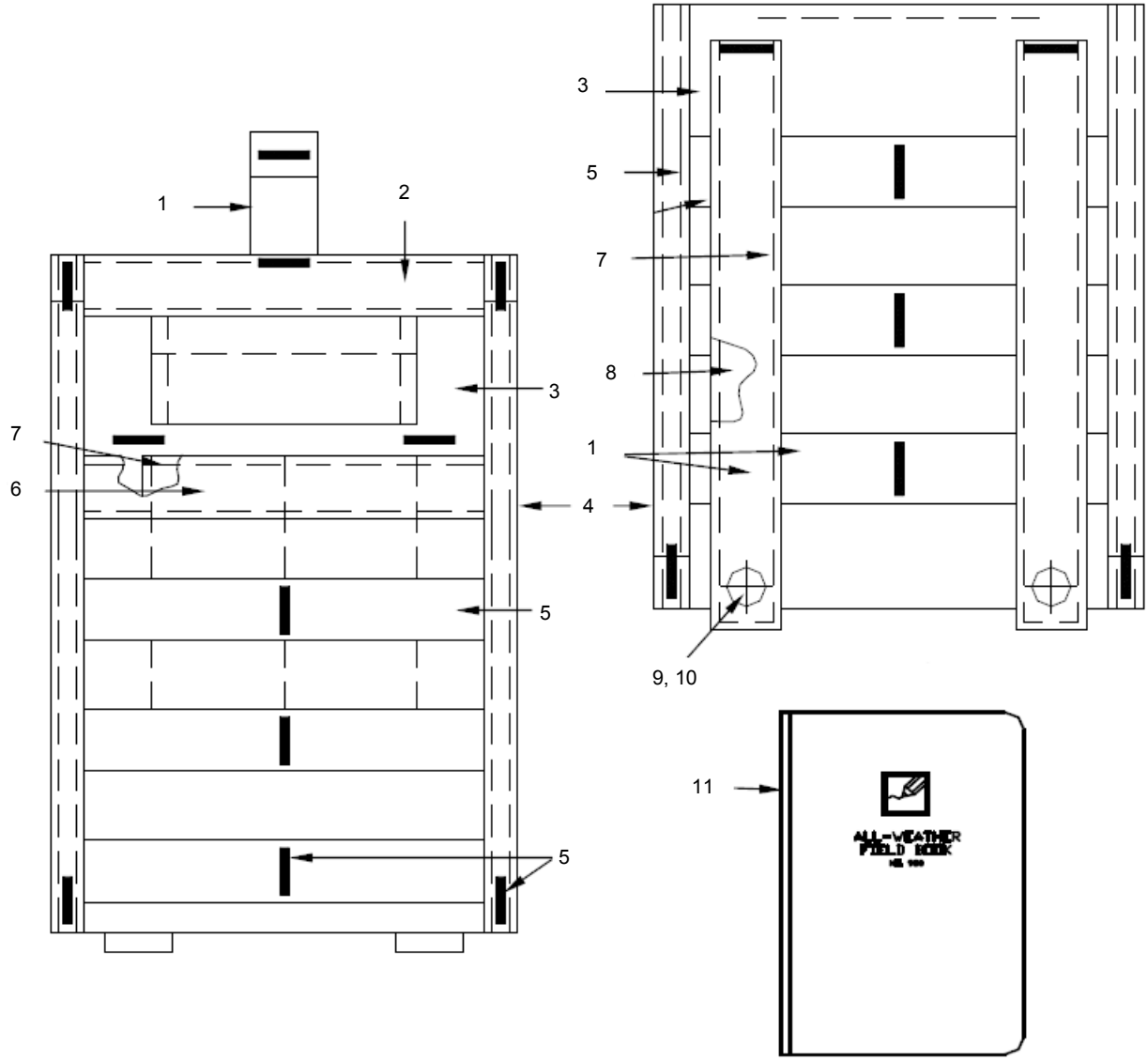


Legend

1. Fastener, Hook, 2-inch
2. Foam, $^{3}/_{16}$-inch
3. Thread, Size E
4. Eyelet
5. Polyethylene, 0.050-inch
6. Fastener, Loop, 2-inch
7. Thread, Size F
8. Textured Nylon Duck
9. Assembled Pouch

Figure 9. PVS-14 Pouch Universal.

REPAIR — CONTINUED

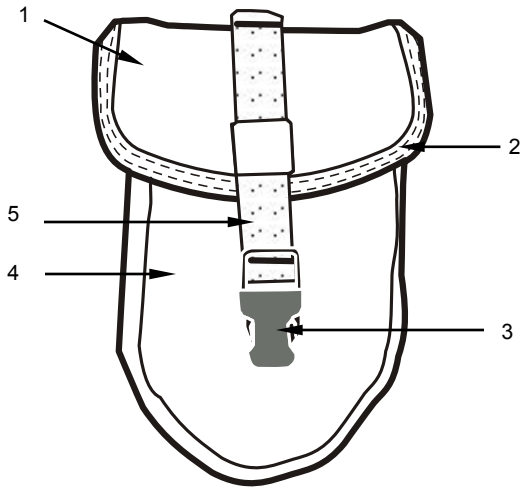


Legend

1. Webbing, 1-inch
2. Fastener Tape, Loop, 1-inch
3. Textured Nylon Duck
4. Tape, Binding, 1-inch
5. Thread, Size E
6. Fastener, Tape Hook, 1-inch
7. Thread, Size F
8. Polyethylene, 0.030-inch
9. Snap Fastener, Button/Socket
10. Snap Fastener, Stud/Eyelet
11. All-Weather Field Book

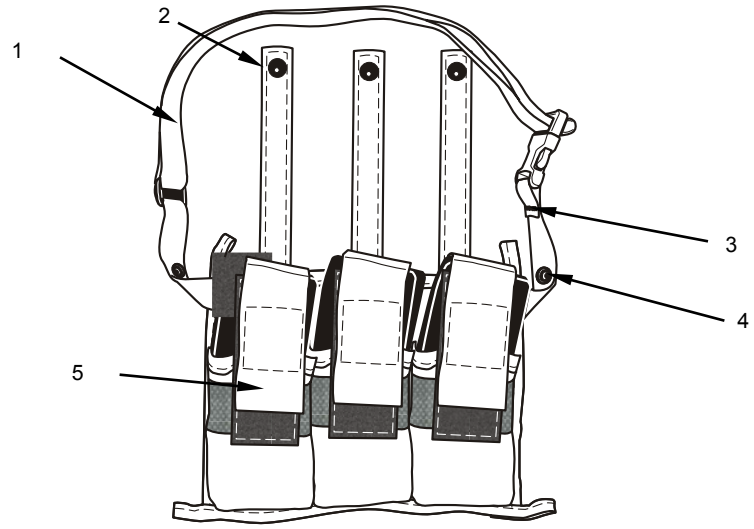
Figure 10. Admin Pouch.

REPAIR — CONTINUED



Legend
1. Webbing, Nylon, 3-inch
2. Tape, Binding, 1-inch
3. Fastener, 3-hole, 1-inch (side release)
4. Textured Nylon Duck
5. Webbing, Nylon, 1-inch

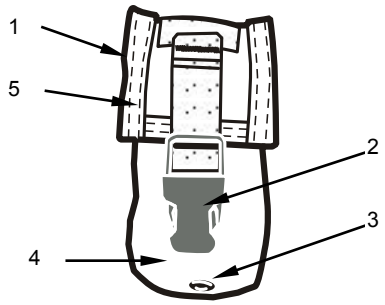
Figure 11. Entrenching Tool Carrier.



Legend
1. Webbing, 1-inch
2. Snap Fastener, Eyelet/Stud
3. Slide Buckle, 1-inch
4. Snap Fastener, Button/Socket
5. Webbing, 3-inch

Figure 12. Bandoleer Ammunition Pouches.

REPAIR — CONTINUED



Legend
1. Tape, Binding, 1-inch
2. Fastener, 3-hole, 1-inch (side release)
3. Eyelet, ABE-131
4. Textured Nylon Duck
5. Thread, Size E

Figure 13. Flash Bang Grenade Pouch.

Restitching

1. Use Figures 1 through 13 to identify component to be repaired.
2. Use Table 1 to determine specific sewing machine, thread size, and stitching requirements.
3. Overstitch or backstitch by ½ inch all 301-lockstitch seams.
4. Trim running ends of thread.

Table 1. Additional MOLLE II Components' Stitching Requirements.

COMPONENT	RECOMMENDED SEWING MACHINE	STITCHES PER INCH	THREAD SIZE
Additional MOLLE Components			
Binding Tape	Medium Duty	7 to 11	E
1-inch MOLLE Webbing	Bar Tack	42 to 48	E
Waistbelt Webbing	Bar Tack	42 to 48	E
All Other Components	Medium Duty	7 to 11	F

END OF TASK

REPAIR — CONTINUED

Hook-and-Loop Tape

1. Remove faulty hook-and-loop tape from closures. Do not damage the fabric.
2. Measure and cut a new piece of hook-and-loop tape of the size and length indicated in Table 2.
3. Using a medium duty sewing machine, size F thread of the appropriate color, sew new hook-and-loop tape IAW WP 0034, overstitching by ½ inch.
4. Trim running ends of thread.

Table 2. Hook-and-Loop Tape Measurements.

COMPONENT	APPLICATION	TYPE	WIDTH	LENGTH	TOLERANCE
Shotgun Shell Pouch	Panel Closure	Hook	1"	AR	+ or − 1/16 inch
Shotgun Shell Pouch	Panel Closure	Loop	2"	AR	+ or − 1/16 inch
Shotgun Shell Pouch	Panel Closure	Hook-and-Loop	1"	1"	+ or − 1/16 inch
Admin Pouch	Pouch Closure	Hook-and-Loop	1"	AR	+ or − 1/16 inch
K-Bar Adapter	Retainer Closure	Hook-and-Loop	2"	1¾"	+ or − 1/16 inch
300-Round Ammo Bag	Closure Flap	Hook-and-Loop	1"	3 3/8"	+ or − 1/16 inch

END OF TASK

Slide Fasteners

1. Cut the fastener tape on the faulty slide fastener as close as possible to the outer row of stitching holding the slide fastener.
2. Trim any raveled yarns from the remaining fastener tape.
3. Measure the length of the damaged area.
4. Obtain a new slide fastener, the length of the damaged area.
5. Using a medium duty sewing machine, size F thread, 7-11 stitches per inch, sew the new slide fastener to the equipment.
6. Trim threads.

Table 3. Slide Closure (Slide Fastener) Measurements.

COMPONENT	APPLICATION	FASTENER WIDTH	LENGTH	TOLERANCE
Leader's Pouch	Main Pocket Closure	0.435"	AR	+ or − 1/8 inch

END OF TASK

REPAIR — CONTINUED

Binding Tape

1. Place marks 1 inch on each side of the damaged area.
2. Measure the distance between marks.
3. Cut a length of new binding tape of the same type as original to the length indicated in step 2.
4. Sear raw ends of binding tape.
5. Place binding tape between marks in the same manner as the original.
6. Turn binding edges under ½ inch.
7. Using a medium duty sewing machine, size E thread of the appropriate color, stitch $^{1}/_{8}$ inch from the edge of tape.

Table 4. Binding Tape Measurements.

COMPONENT	APPLICATION	WIDTH	LENGTH
MBITR	Rim and seam edging	1"	AR
300-Round Ammo Bag	Side panels and closure flap edgings	1"	AR
Shotgun Shell Pouch	Closure flap edging	1"	AR
Leaders Pocket Set	Pocket and panel edgings	1"	AR
Entrenching Tool Carrier	Pouch edging	1"	AR
Bandoleer	Pouch Edging	1"	AR
Bandoleer	Pouch Sling Brass Ring Loop	4"	
Bandoleer	Pouch Sling	48"	
Bandoleer	Pocket Closure	10"	
Flash Bang Grenade Pouch	Closure Flap Ending	1"	AR

END OF TASK

Drawcord Repair

1. Cut a new length of cord of the type and length indicated in Table 5.
2. Sear raw ends of cord.
3. Place an overhand knot in one end of cord.
4. Route cord through appropriate channels or guides in equipment, ensuring the cord goes through the barrel lock.
5. Place an overhand knot in remaining end of cord.

Table 5. Drawcord Lengths.

COMPONENT	APPLICATION	CORD TYPE	LENGTH	TOLERANCE
MBITR	Retainer	MIL-C-5040, Type II	AR	+ or − ¼ inch

END OF TASK

REPAIR — CONTINUED

Snap Fastener Replacement

Replace snap fasteners using replacement procedures in WP 0034.

END OF TASK

Eyelet Replacement

Replace eyelets using replacement procedures in WP 0034.

END OF TASK

Buckle Replacement

Replace buckles using replacement procedures in WP 0034.

END OF TASK

REPLACE

Replace component with serviceable item from stock.

END OF TASK

END OF WORK PACKAGE

SUSTAINMENT MAINTENANCE
MODULAR LIGHTWEIGHT LOAD-CARRYING EQUIPMENT (MOLLE) II
GENERAL FABRIC REPAIR PROCEDURES

INITIAL SETUP:

Tools

Specified in paragraph applicable to the item being repaired.

Personnel Required

Non-MOS specific (1)

Materials/Parts

Specified in paragraph applicable to the item being repaired.

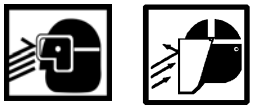
References

WP 0020
ASTM D6193-11

Equipment Condition

Lay out on flat surface or other suitable area.

REPAIR



Eye protection should be worn to protect the Soldier from flying particles when operating a sewing machine. Sewing machine needles can break with great force. Failure to wear eye protection may result in injury to eye(s).

Prior to repair operations, each component of the MOLLE II system shall be inspected by qualified personnel to determine the extent of the repair necessary. With the exception of the replacement of hardware items furnished to the user as a repair kit, all repairs to these components will be accomplished at the maintainer level or higher.

Preparation for Repair

1. Conduct a preliminary examination after components have been laundered as described in WP 0020, Service.
2. Discard decayed items.
3. Test seams by grasping the item with both hands and pulling at right angles to the seams.
4. Mark areas to be repaired.
5. Obliterate nonspecific and personal markings.

END OF TASK

Recommended Sewing Machines and Stitching and Restitching Requirements

All stitches and seams shall conform to ASTM D6193-11. Seam allowances shall be maintained with seams sewn so no raw edges, run offs, pleats, puckers, or open seams occur. When two or more methods of stitching are given for the same operation, any one may be used.

Straight stitching and restitching on MOLLE II components should be locked by at least 2 inches at each end of a stitch row, when possible. Zig-zag stitching does not require locking; however, zig-zag re-stitching should extend at least ¼ inch into undamaged stitching at each end, when possible. Recommended sewing machine codes are provided in Table 1.The stitch type, location, thread size and

REPAIR — CONTINUED

stitches per inch for the various MOLLE II components are listed in Table 2.

Table 1. Recommended Sewing Machine Code Symbols.

CODE SYMBOL	SEWING MACHINE
LD	Sewing Machine, Industrial: General Sewing; 301 Stitch; Light Duty; NSN 350-01-177-8590.
MD	Sewing Machine, Industrial: General Sewing; 301 Stitch; Medium Duty; NSN 3530-01-177-8591.
DN	Sewing Machine, Industrial: Darning; Lock Stitch; NSN 3530-01-177-8589.
LHD	Sewing Machine, Industrial: 301 Stitch; Light-Heavy Duty; NSN 3530-01-186-3079.
BT	Sewing Machine, Industrial: Bar tack; 42 stitch (Local purchase, Recommended Juki; LK 1900A-HS).

Table 2. Stitching and Restitching Specifications.

COMPONENT	RECOMMENDED SEWING MACHINE (CODE SYMBOL)	STITCHES PER INCH	THREAD SIZE
Fighting Load Carrier (FLC)			
Binding Tape	MD	7 to 11	E
1-inch MOLLE II Webbing	BT	42 to 48	E
Waistbelt Webbing	BT	42 to 48	E
All Other Components	MD	7 to 11	F
Canteen/General Purpose Pouch			
Binding Tape	MD	7 to 11	E
1-inch MOLLE II Webbing	BT	42 to 48	E
Waistbelt Webbing	BT	42 to 48	E
All Other Components	MD	7 to 11	F
Grenade Pouches (Hand and Flash Bang)			
Binding Tape	MD	7 to 11	E
1-inch MOLLE II Webbing	BT	42 to 48	E
Waistbelt Webbing	BT	42 to 48	E
All Other Components	MD	7 to 11	F
M-4 Magazine Pouches (Two and Three)			
Binding Tape	MD	7 to 11	E
1-inch MOLLE II Webbing	BT	42 to 48	E
Waistbelt Webbing	BT	42 to 48	E
All Other Components	MD	7 to 11	F

REPAIR — CONTINUED

Table 2. Stitching and Restitching Specifications — Continued.

COMPONENT	RECOMMENDED SEWING MACHINE (CODE SYMBOL)	STITCHES PER INCH	THREAD SIZE
Hydration System			
General	MD	8 to 10	F
Edge Binding	MD	7 to 11	E
Bar Tacks	BT	42 to 48	E
Assault Pack			
General	MD	8 to 10	F
Parachute attaching straps/handle	MD	1 to 11	FF
Binding Tape	MD	7 to 11	E
1-inch MOLLE II Webbing	BT	42 to 48	E
Waist Pack			
Binding Tape	MD	7 to 11	E
Waistbelt Webbing	BT	42 to 48	E
All Other Components	MD	7 to 11	F
Entrenching Tool Carrier			
Binding Tape	MD	7 to 11	E
1-inch MOLLE II Webbing	BT	42 to 48	E
Waistbelt Webbing	BT	42 to 48	E
All Other Components	MD	7 to 11	F
Large Rucksack and Sustainment Pouch			
Binding Tape	MD	7 to 11	E
1-inch MOLLE II Webbing	BT	42 to 48	E
Waistbelt Webbing	BT	42 to 48	E
All Other Components	MD	7 to 11	F
SAW Gunner Set			
Binding Tape	MD	7 to 11	E
1-inch MOLLE II Webbing	BT	42 to 48	E
All Other Components	MD	7 to 11	F

REPAIR — CONTINUED

Table 2. Stitching and Restitching Specifications — Continued.

COMPONENT	RECOMMENDED SEWING MACHINE (CODE SYMBOL)	STITCHES PER INCH	THREAD SIZE
Grenadier Set			
Binding Tape	MD	7 to 11	E
1-inch MOLLE II Webbing	BT	42 to 48	E
Waistbelt Webbing	BT	42 to 48	E
All Other Components	MD	7 to 11	F
Medic Set			
Binding Tape	MD	7 to 11	E
1-inch MOLLE II Webbing	BT	42 to 48	E
Waistbelt Webbing	BT	42 to 48	E
All Other Components	MD	7 to 11	F
Medium Rucksack			
Binding Tape	MD	7 to 11	E
1-inch MOLLE II Webbing	BT	42 to 48	E
Waistbelt Webbing	BT	42 to 48	E
All Other Components	MD	7 to 11	F
Tactical Assault Panel (TAP)			
Binding Tape	MD	7 to 11	E
1-inch MOLLE II Webbing	BT	42 to 48	E
Waistbelt Webbing	BT	42 to 48	E
All Other Components	MD	7 to 11	F
Additional MOLLE II Components			
Binding Tape	MD	7 to 11	E
1-inch MOLLE II Webbing	BT	42 to 48	E
Waistbelt Webbing	BT	42 to 48	E
All Other Components	MD	7 to 11	F

REPAIR — CONTINUED

Repair Straight Stitching

NOTE

Unless otherwise specified, all stitching on MOLLE II equipment is Type 301 lockstitch.

Ends of a continuous line of stitching shall overlap not less than ½ inch (1.25 cm).

Thread tensions shall be maintained so that there will be no loose stitching resulting in loose bobbin or top thread or excessively tight stitching resulting in puckering of materials sewn. The lock shall be embedded in the materials sewn.

When there are thread breaks, skipped stitches, run-offs, or bobbin runouts occur, during sewing, stitching shall be repaired by restarting the stitching a minimum of ½ inch (1.25 cm) back of end of the interrupted stitching.

1. Remove the loose or broken stitching from affected area, ensuring no fabric damage.
2. Start sewing a minimum of ½ inch (1.25 cm) in back of the defective area.
3. Continue sewing over the original stitch pattern, overstitching or backstitching by not less than ½ inch (1.25 cm), except where ends are turned under or caught in other seams or stitching.
4. Except for pre-stitching, thread breaks of two or more consecutive skipped or run-off stitches noted during inspection of the item shall be repaired by over stitching.

END OF TASK

Repair Bar Tacks

NOTE

Unless otherwise specified, all bar tacks shall be 7/8 inch ± 1/16 inch long and 1/8 inch ± 1/32 inch wide, and shall contain 42 – 49 stitches per inch. Stitching on MOLLE II equipment is Type 301-lockstitch.

Thread tensions shall be maintained so that there will be no loose stitching resulting in loose bobbin or top thread or excessively tight stitching resulting in puckering of materials sewn. The lock shall be embedded in the materials sewn.

1. Remove the loose or broken stitching from affected area, ensuring no fabric damage.
2. Mark location of old bar tack.
3. Place a bar tack as indicated by marks.

END OF TASK

REPAIR — CONTINUED

Drawcord Repair

Replace missing or defective drawcords in lengths to match original construction IAW applicable work package.

1. Cut correct length of new draw cord IAW referring work package.
2. Sear raw ends of drawcord.
3. Place knot in one end of drawcord.
4. Route drawcord through appropriate channels or guides in equipment.
5. Place knot in remaining end of drawcord.
6. Replace drawcord locks with types specified in referring work package.

Table 3. Drawcord Lengths.

COMPONENT	APPLICATION	CORD TYPE	LENGTH	TOLERANCE
Main Pack (Legacy)	Main Closure (Outer)	MIL-C-5040, Type II	72"	± ¼ inch
Main Pack (Legacy)	Main Closure (Spindrift)	MIL-C-5040, Type IIA	70"	± ¼ inch
Pouch, Canteen	Main Closure	Tan 499, $^{1}/_{8}$-inch diameter	14"	± ¼ inch
Pouch, Sustainment	Main Closure	MIL-C-5040, Type IIA	20"	± ¼ inch
Large Rucksack	Main Closure	MIL-C-5040, Type II	80"	± ¼ inch
Medium Rucksack	Main Closure	MIL-C-5040, Type II	80"	+ or − ¼ inch
MBITR	Retainer	MIL-C-5040, Type II	AR	± ¼ inch

END OF TASK

Retaining Hardware

Replace damaged, missing or malfunctioning side release buckles, brass loops, double bar buckles, keepers, and slides as necessary.

1. Remove stitching holding damaged hardware, or trim any raveled yarns from torn stitching.
2. Cut appropriate webbing specified in referring work package, to the length indicated.
3. Thread new hardware through webbing.
4. Sew webbing as in original construction using Type 301 stitching and size F thread, and bar tack as appropriate using size E Thread.

END OF TASK

Slide Fasteners

Replace damaged missing, or malfunctioning slide fasteners with serviceable ones. Remove damaged fasteners by carefully cutting off the fastener tape as close as possible to the outer row of stitching holding the slide fastener. Trim any raveled yarns from the remaining fastener tape. Attach a new fastener of appropriate length (see Table 4) using Type 301 stitching and size F thread.

REPAIR — CONTINUED

Table 4. Slide Fastener Lengths.

COMPONENT	APPLICATION	FASTENER WIDTH	LENGTH	TOLERANCE
Medical Pouch	Main Pocket Closure	¾"	14"	+ or – 1/8 inch
Main Pack (Legacy)	Front Pocket Closure	0.435"	AR	+ or – 1/8 inch
Main Pack (Legacy)	Bottom Closure	0.435"	AR	+ or – 1/8 inch
Medic Bag Assembly	Main Pocket Closure	¾"	43"	+ or – 1/8 inch
Fighting Load Carrier	Belt Closure	11/16"	AR	+ or – 1/8 inch
Tactical Assault Panel (TAP)	Rear Pocket Closure	0.435"	AR	+ or – 1/8 inch
Medium Rucksack	Top Closure	0.435"	AR	+ or – 1/8 inch
Medium Rucksack	Upper Pouch Closure	0.435"	AR	+ or – 1/8 inch
Medium Rucksack	Lower Pouch Closure	0.435"	AR	+ or – 1/8 inch
Waist Pack	Main Pocket Closure	0.270"	AR	+ or – 1/8 inch
Assault Pack	Main Pocket Closure	0.435"	AR	+ or – 1/8 inch
Assault Pack	Front Pocket Closure	0.435"	AR	+ or – 1/8 inch
Leaders Pouch	Main Pocket Closure	0.435"	AR	+ or – 1/8 inch
Individual Load-Carrying Universal Sling	Main and Side Closure	0.435"	AR	+ or – 1/8 inch

END OF TASK

Snap Fasteners

Replace missing, loose, or damaged snap fasteners. Repair damaged area surrounding snap fastener sockets and studs prior to attaching new fasteners. A hole will be pre-punched through the material before inserting the sockets or studs. The pre-punched hole will be smaller than the outside diameter of the fastener barrel, so that the barrel must be forced through the hole. The fastener will be securely clinched without cutting the adjacent material and no more than three splits shall occur in the button or eyelet barrels.

Eyelets

Replace missing, loose, badly split and off center eyelet holes. Remove damaged eyelets and washers by carefully cutting them with diagonal wire cutters, avoiding damage to the webbing. Holes shall be pre-punched or drilled to receive the eyelets and shall be smaller than the outside diameter of the eyelet barrel. Eyelets will be clinched without splitting and shall not damage the adjacent material.

Webbing

When webbing straps are frayed or worn, replace them with material specified in Section III in the appropriate lengths indicated. Sew them as in original construction using Type 301 stitching and size F thread.

REPAIR — CONTINUED

Binding Tape

1. Place marks 1 inch on each side of the damaged area.
2. Measure the distance between marks.
3. Cut a length of new binding tape of the same type as original to the length indicated in step 2.
4. Sear raw ends of binding tape.
5. Place binding tape between marks in the same manner as the original.
6. Turn binding edges under ½ inch.
7. Using a medium duty sewing machine, size E thread of appropriate color, stitch $^{1}/_{8}$ inch from the edge of tape.

END OF TASK

Table 5. Binding Tape Stitching Measurements.

COMPONENT	APPLICATION	WIDTH	LENGTH
Molded Waistbelt	Cover Edging	1"	AR
Molded Waistbelt	Tunnel Edging	1"	AR
Vest, FLC	Load Panel Edging	1"	AR
Vest, FLC	Load Panel Tunnel Edging	1"	AR
Vest, FLC	Pocket Edging	1"	AR
Main Pack (Legacy)	Map Case Polyethylene Edging	1"	AR
Main Pack (Legacy)	Drawcord Tunnel	1"	58"
Main Pack (Legacy)	Spindrift Collar Tunnel Eyelet Reinforcement	1"	3"
Main Pack (Legacy)	Nylon Cloth Collar Assembly	1"	AR
Main Pack (Legacy)	Back Panel and Upper Pocket Edge Lining	1"	AR
Main Pack (Legacy)	Radio Pocket Rim Edging	1"	33"
Main Pack (Legacy)	Radio Pocket Polyethylene Edging	1"	AR
Main Pack (Legacy)	Bandoleer Pouch Edging	1"	AR
Main Pack (Legacy)	Sustainment Pouch Edging	1"	AR
MBITR	Rim and Seam Edging	1"	AR
Pack, Large Frame	Upper Suspender Pad Edging (2)	1"	16"
Pack, Medium	Top of Pack, Outside of carrying handle	1"	AR
Pack, Medium	Eyelet edging	1"	AR
Magazine Pouch Single	Pocket and Closure Flap Edging	1"	AR
Magazine Pouch Double	Pocket and Closure Flap Edging	1"	AR

REPAIR — CONTINUED

Table 5. Binding Tape Stitching Measurements — Continued.

COMPONENT	APPLICATION	WIDTH	LENGTH
40mm High Explosive Pouch Double	Pouch Edging	1"	AR
40mm High Explosive Pouch Single	Pouch Side Lining (2)	1"	6 1/2"
40mm High Explosive Pouch Single	Pouch Lower Lining (2)	1"	3"
40mm High Explosive Pouch Single	Pouch Upper Lining (2)	1"	3"
40mm Pyrotechnic Pouch Double	Pouch Edging	1"	AR
Hand Grenade Pouch	Closure Flap and Pocket Edging	1"	AR
Pouch Utility	Closure Flap and Pocket Edging	1"	AR
9mm Magazine Pouch	Closure Flap and Pocket Edging	1"	AR
SAW Gunner Pouch	Closure Flap and Pocket Edging	1"	AR
Utility Belt	Belt End Edging	1"	AR
Pouch, Canteen	Closure Flap Edging	1"	AR
Medical Bag	Map Case Edging	1"	AR
Assault Pack	Polyethylene Edging	1"	AR
Assault Pack	Drain Covers	1"	2 ½"
Assault Pack	Front and Back Pattern Edging	1"	AR
Assault Pack	Bottom, Upper, Inner and Outer Pattern	1"	AR
Assault Pack	Back Pocket Pattern	1"	AR
Assault Pack	Inner Pocket Pattern	1"	AR
Assault Pack	Shoulder Strap Assembly, Pattern Edging	1"	AR
Assault Pack	Pocket Flaps Edging	1"	AR
Tactical Assault Panel (TAP)	Panel edging	1"	AR

END OF TASK

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. Note the following:

- Basting and temporary tacking should be made using thread that is of a contrasting color to the material being worked.
- Basting and temporary tacking will be performed using a single strand of size A, nylon thread, or Ticket No. 24/4 cotton thread.
- When basting, do not tie knots at any point in the thread length. Also, the sewing should be made with two stitches per inch.
- Upon completion of a repair, remove the basting or temporary tacking.

REPAIR — CONTINUED

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. A darning repair will be performed using the following procedures, as appropriate:

Machine Darning

1. Using an authorized marking aid of contrasting color, mark a square around the damaged area and ensure the marking is at least ¼ inch back from each edge of the damaged area (Figure 1).

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 2, until the hole or tear is completely darned.

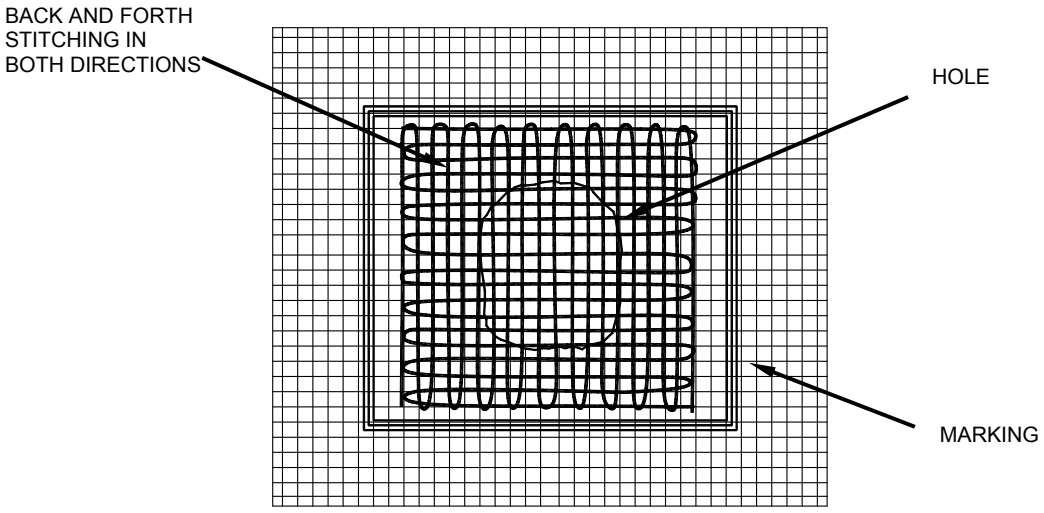


Figure 1. Machine Darning.

END OF TASK

REPAIR — CONTINUED

Hand Darning

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

1. Using an authorized marking aid of contrasting color, mark a square around the damaged area and ensure the marking is at least ¼ 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.

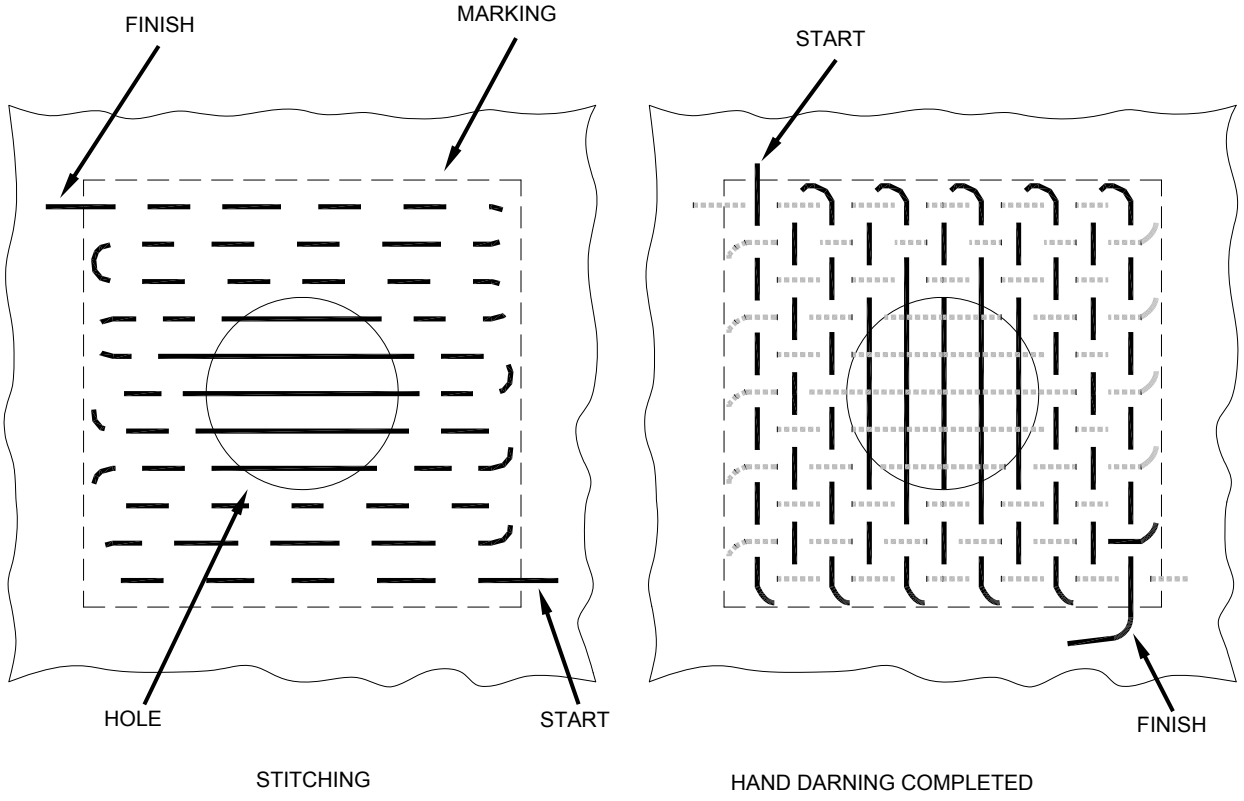


Figure 2. Hand Darning.

END OF TASK

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 the 1 position and follow the numbers in sequence finishing with a ½-inch locking stitch.

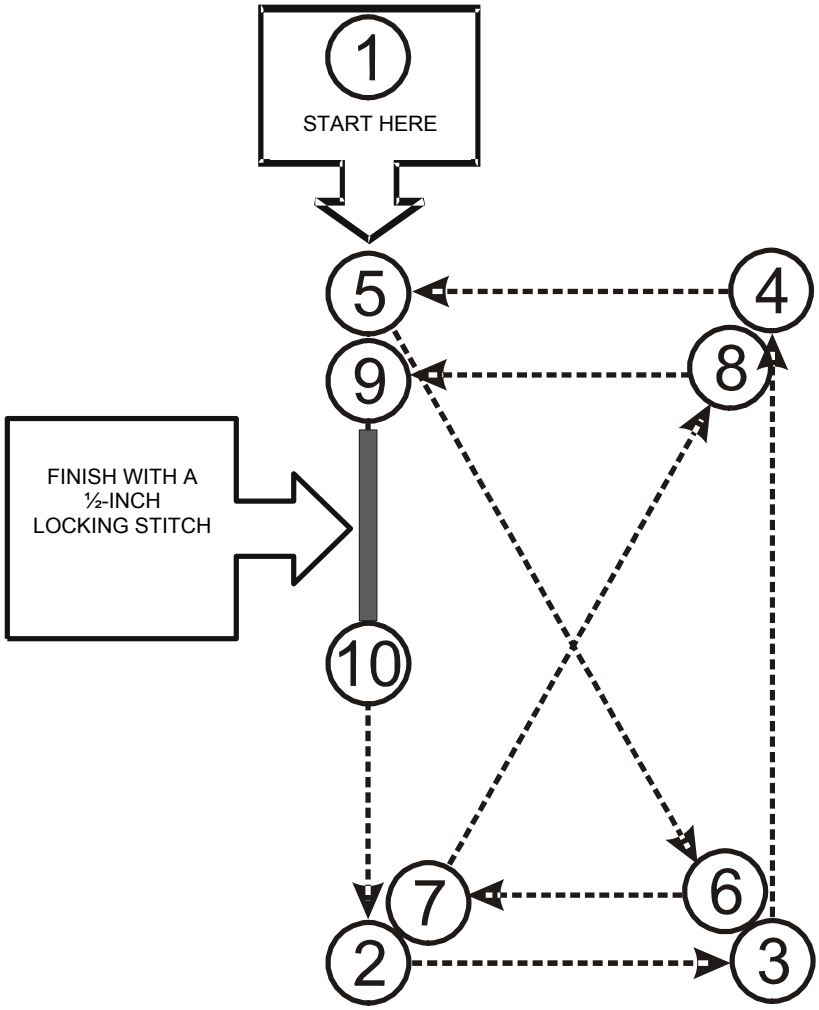


Figure 3. Box X Stitching Pattern with Locking Stitch.

END OF TASK

REPAIR — CONTINUED

Tying an Overhand Knot

1. Hold rope out parallel to the ground and cross it over to form a loop.
2. Wrap the right-hand end through the loop. Pull to tighten (Figure 4).

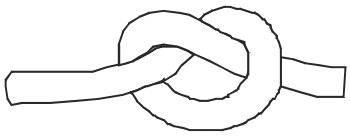


Figure 4. Overhand Knot.

END OF TASK

Tying a Square Knot

1. Make an "X" with the rope ends, with the right end on top, and tie an overhand knot, twisting the right end around the left end (Figure 5).

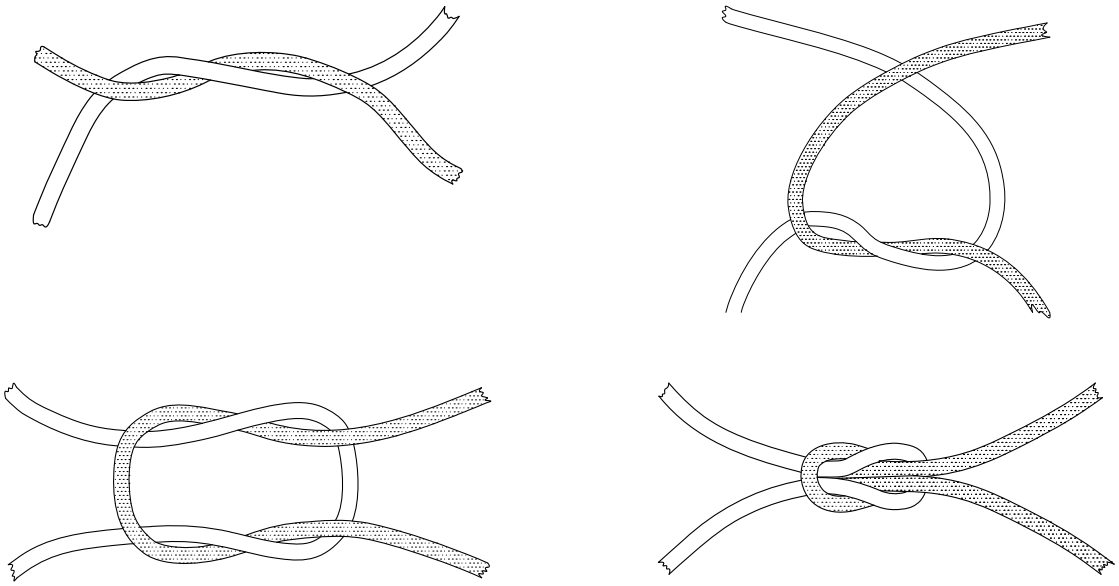


Figure 5. Square Knot.

2. With the "new" right and left, put the left over the right, and tie another overhand knot.

NOTE

The knot should look very neat — like a square — essentially looking like a loop stuck in another loop.

3. Pull tightly.

END OF TASK

REPAIR — CONTINUED

Searing

CAUTION

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

Fabric materials, such as cord, tape, and webbing that are cut for use in the maintenance of the MOLLE II system, 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 5

PARTS INFORMATION
FOR
MODULAR LIGHTWEIGHT LOAD-CARRYING EQUIPMENT (MOLLE) II

FIELD AND SUSTAINMENT MAINTENANCE
MODULAR LIGHTWEIGHT LOAD-CARRYING EQUIPMENT (MOLLE) II
REPAIR PARTS AND SPECIAL TOOLS LIST (RPSTL)
INTRODUCTION

INTRODUCTION

SCOPE

This RPSTL lists the authorized spares and repair parts; special tools; special test, measurement, and diagnostic equipment (TMDE); and other special support equipment required for performance of field maintenance and sustainment maintenance for the Modular Lightweight Load-Carrying Equipment (MOLLE) II. 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 the Bulk Items work package which follows RPSTL WP placeholder. 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. Bulk Items Work Package. This work package lists all items identified as 'bulk' in the parts lists. Due to the nature of bulk items, this work package does not include a Figure.

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.

EXPLANATION OF COLUMNS IN THE REPAIR PARTS LIST AND SPECIAL TOOLS LIST WORK PACKAGES — CONTINUED

NOTE

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.

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:

Table 2. Source Code Explanation.

Source Code	Application/Explanation
PA PB PC PD PE PF PG PH PR PZ	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 third position of **NOTE** Items are coded PC are subject to deterioration.
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 maintainer class MH-Made at below depot sustainment class ML-Made at SRA MD-Made at depot MG-Navy only	Items with these codes are not to be requisitioned/ requested individually. They must be made from bulk material which is identified by the part number in the DESCRIPTION AND MH-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 maintainer class AH-Assembled by below depot sustainment class 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 third 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 on next page.)
XB	If an item is not available from salvage, order it using the CAGEC and P/N.
XC	Installation drawings, diagrams, instruction sheets, field service drawings; identified by manufacturer's P/N.

EXPLANATION OF COLUMNS IN THE REPAIR PARTS LIST AND SPECIAL TOOLS LIST WORK PACKAGES — CONTINUED

Source Code	Application/Explanation
XD	Item is not stocked. Order an XD-coded item through Local purchase or normal supply channels using the CAGEC and P/N given, if no NSN is available.

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 classes of maintenance:

Maintenance Code	Application/Explanation
C -	Crew
F -	Maintainer maintenance can remove, replace, and use the item.
H -	Below Depot Sustainment maintenance can remove, replace, and use the item.
L -	Specialized repair activity 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, replaced, or used at any maintenance level.
D -	Depot can remove, replace, and use the item.

NOTE

Army will use C in the third position. However, for joint service publications, other services may 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 class with the capability to do complete repair (perform all authorized repair functions).

EXPLANATION OF COLUMNS IN THE REPAIR PARTS LIST AND SPECIAL TOOLS LIST WORK PACKAGES — CONTINUED

Maintenance Code	Application/Explanation
C -	Crew (Operator) is the lowest class that can do complete repair.
F -	Maintainer is the lowest class that can do complete repair of the item.
H -	Below Depot Sustainment is the lowest class that can do complete repair of the item.
L -	Specialized repair activity (*enter specialized repair activity designator*) is the lowest class that can do complete repair of the item.
D -	Depot is the lowest class 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 -	Nonreparable. 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.

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 -	Nonreparable item. When unserviceable, condemn and dispose of the item at the level of maintenance shown in the third position of the SMR code.
F -	Reparable item. When uneconomically reparable, condemn and dispose of the item at the field level.
H -	Reparable item. When uneconomically reparable, condemn and dispose of the item at the below depot sustainment.
D -	Reparable item. When beyond lower level repair capability, return to depot. Condemnation and disposal of item are not authorized below depot.
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 -	Field 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.

EXPLANATION OF COLUMNS IN THE REPAIR PARTS LIST AND SPECIAL TOOLS LIST WORK PACKAGES — CONTINUED

NSN (Column (3)). The NSN(s) 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 any bulk materials required if the item is to be locally manufactured or fabricated.

3. Hardness Critical Item (HCI). Items that require special handling or procedures to ensure protection against electromagnetic pulse (EMP) damage are marked with the letters ‘HCI.’

4. The statement ‘END OF FIGURE’ appears below the last item description in column (6) for each Figure in the repair parts list, special tools repair parts, kits, bulk items, and special tools list work packages.

5. Refer to Usable on Code details presented later in this work package under “SPECIAL INFORMATION.”

QTY (Column (7)). The QTY (quantity per Figure) column indicates the quantity of the item used in the breakout shown on the illustration/Figure. 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. NSNs 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.

EXPLANATION OF CROSS-REFERENCE INDEXES WORK PACKAGES FORMAT AND COLUMNS — CONTINUED

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. UOCs will be identified in the RPSTL, which will be published in Change 001 of this manual.

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 WP.

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 (WP).

Illustrations List. The illustrations in this RPSTL contain field authorized items. The tabular list in the repair parts list work package contains only those parts coded "F" 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
MODULAR LIGHTWEIGHT LOAD-CARRYING EQUIPMENT (MOLLE) II
REPAIR PARTS AND SPECIAL TOOLS LIST (RPSTL)

The Repair Parts and Special Tools List (RPSTL) for the Modular Lightweight Load-Carrying Equipment (MOLLE) II system will be published in Change 1.

FIELD AND SUSTAINMENT MAINTENANCE
MODULAR LIGHTWEIGHT LOAD-CARRYING EQUIPMENT (MOLLE) II
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		8465-01-524-7253 8465-01-585-1552	3T951	CO/PD-02-02	Alice Clip Adapter	EA
2		8465-01-524-7694 8465-01-585-1344	3T951	CO/PD-02-02	Bag, Ammunition, (300-Round 7.62 Ammo Bag)	EA
3	PAFZZ	8465-01-465-2096	3T951	R00475	Bladder, MOLLE	EA
4			9L141	MIL-B-371	Braid Tubular (Type VII, Class 2)	YD
5			9L141	MIL-B-371	Braid Webbing (1 1/32 inch)	YD
6			3Z8V4	154-2100	Buckle, Tension Locke	EA
7			3Z8V4	102-5050-5674	Buckle, Center Release (2 inch)	EA
8			3Z8V4	01004-20	Buckle, Double Bar (1 inch)	EA
9			3Z8V4	104-0150-5674	Buckle, Ladderlock (1 1/2 inch)	EA
10			3Z8V4	104-3100-5674	Buckle, Ladderlock (1 inch)	EA
11			2M569	1584	Buckle, Quick Release	EA
12		8465-01-524-7639 8465-01-585-1540	3T951	CO/PD-02-02	Buckle, Set	EA
13			3Z8V4	101-3150-5614	Buckle, Side Release (1 1/2 inch)	EA
14			3Z8V4	101-5150-5674	Buckle, Side Release (1 inch)	EA
15			3Z8V4	SRGT 101-4100-5674	Buckle, Side Release (1 inch)	EA
16			3Z8V4	101-0075-5674	Buckle, Side Release (3/4 inch)	EA
17			3Z8V4	101-6100-5674	Buckle, Side Release (Canteen/General)	EA

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
18			3Z8V4	101-1150-5614	Buckle, Side Release (FLC, 1 1/2 inch)	EA
19			22969	5425	Buckle, Single Bar	EA
20			3Z8V4	0890-22	Buckle, Slide (1 inch)	EA
21			3Z8V4	101-4100-5674	Buckle, Slide (Kit, 1 inch)	EA
22			3Z8V4	SS25T-5674	Buckle, Sternum Strap (1 inch)	EA
23			3Z8V4	646-2025-5674	Buckle, Sternum Strap Adjuster (1 inch)	EA
24			1BP15	MIL-C-43734	Cloth, Duck (Nylon 12 oz)	YD
25			82125	MIL-C-7219	Cloth, Duck (Nylon 7.25 oz)	YD
26			1BP15	MIL-C-43734	Cloth, Duck Textured (Nylon 12 oz)	YD
27			0HY43	MIL-C-8061	Cloth, Knit (Nylon)	YD
28			9L141	2831	Cord, Elastic (1/8 inch)	YD
29			83168	22111	Cord, Elastic, Coiled Lace	YD
30			9L141	MIL-C-5040	Cord, Flat (Type IIA)	YD
31			9L141	MIL-C-5040G	Cord, Flat (Type IIA)	EA
32			3Z8V4	350-2000-5674	Cord, Lock, Single	EA
33			9L141	MIL-C-5040	Cord, Round (Type II)	EA
34			3Z8V4	110-0100-5674	D-Ring, Acetal (1 1/2 inch)	EA
35			3Z8V4	110-0100-5674	D-Ring, Acetal (1 inch)	EA
36			02768	01047-20	D-Ring, Metal (1 inch)	EA
37			57771	MIL-E-20652/1B	Eyelet (ABE-131)	EA
38			57771	MIL-E-20652/1B	Eyelet (Aluminum, Black)	EA
39			57771	MIL-E-20652/1B	Eyelet (BBE-114) and Washer (BBW-101)	EA

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
40			57771	MIL-F-10884	Eyelet, Stud (ABE 131)	EA
41			07MZ0	5000, 5707, 5709	Fastener (1 inch, 3 hole)	EA
42			8T804	A-A-55126	Fastener Tape, Hook (Type II, Class 1, 5/8 inch)	YD
43			8T804	A-A-55126	Fastener Tape, Hook (Type II, Class 1, 1 inch)	YD
44			8T804	A-A-55126	Fastener Tape, Hook (Type II, Class 1, 1 ½ inch)	YD
45			8T804	A-A-55126	Fastener Tape, Hook (Type II, Class 1, 2 inch)	YD
46			8T804	A-A-55126	Fastener Tape, Hook (Type II, Class 1, 4 inch)	YD
47			8T804	A-A-55126	Fastener Tape, Loop (Type II, Class 1, 5/8 inch)	YD
48			8T804	A-A-55126	Fastener Tape, Loop (Type II, Class 1, 1 inch)	YD
49			8T804	A-A-55126	Fastener Tape, Loop (Type II, Class 1, 1 ½ inch)	YD
50			8T804	A-A-55126	Fastener Tape, Loop (Type II, Class 1, 2 inch)	YD
51			8T804	A-A-55126	Fastener Tape, Loop (Type II, Class 1, 4 inch)	YD
52			45368	ST-1522CL-85	Film, Clear (Map Case)	SH
53		8465-01-538-1868 8465-01-585-1687	81337 3T951	CO/PD 05-3 CO/PD-02-02	Flap, Field Pack	EA
54		8465-01-538-1647 8465-01-585-1373	81337 3T951	CO/PD-02-02 CO/PD-02-02	Flap, Pouch Field Pack (Leaders Pocket Insert)	EA
55			06XU5	MIL-R-6130	Foam, Pad (Black, 1/2 inch)	EA
56			06XU5	MIL-R-6130	Foam, Pad (Black, 1/4 inch)	EA
57			06XU5	MIL-R-6130	Foam, Pad (Black, 1/8 inch)	EA
58			2M569	1602	Frame	EA
59			2M569	1603	Frame, Pack	EA
60			57771	MIL-G-16491	Grommet (Type III, Class 3)	EA

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
61			57771	MIL-G-16491	Grommet and Washer (Type III, Class 3)	EA
62		8465-01-524-7246 8465-01-585-1545	3T951	CO/PD-02-02	K-Bar Adapter	EA
63		8465-01-524-7689 8465-01-585-1555	3T951	CO/PD-02-02	Lashing Straps	EA
64		8465-01-524-7692 8465-01-585-1299	3T951	CO/PD-02-02	MBITR	EA
65			02768	01004-20	Metal Loop (1 inch)	EA
66		8465-01-524-7232 8465-01-580-1575	3T951	CO/PD-02-02	Molded Waistbelt	EA
67		8465-01-538-1497 8465-01-585-1362	81337 3T951	CO/PD-02-02 CO/PD-02-02	Panel, Vehicle MOLLE	EA
68			02RS6	MIL-C-43128	Plain Weave (Nylon Fabric)	YD
69			1GBA3	L-P-378	Polyethylene (.20 thick)	SH
70			1GBA3	L-P-378	Polyethylene (.30 thick)	SH
71		8465-01-538-2040 8465-01-585-1501	7P200 3T951	8465-00-NSH-0614 CO/PD-02-02	Pouch, Admin MOLLE	EA
72		8465-01-538-1507 8465-01-585-1372	81337 3T951	CO/PD 05-03 CO/PD-02-02	Pouch Insert GPS MOLLE	EA
73		8465-01-538-1523 8465-01-585-1371	81337 3T951	CO/PD 05-03 CO/PD-02-02	Pouch, Leader Set MOLLE	EA
74		8465-01-538-1514 8465-01-585-1370	81337 3T951	CO/PD 05-03 CO/PD-02-02	Pouch, PVS-14 MOLLE	EA
75		8465-01-524-7684 8465-01-585-2132	3T951	CO/PD-02-02	Radio Pouch	EA
76		8465-01-524-7691 8465-01-585-1296	3T951	CO/PD-02-02	Shotgun Shell Pouch	EA
77			8M431	VFGOL-106	Slide Fastener	EA
78		8465-01-545-3444 8465-01-585-1346	81337 3T951	2-6-0493 CO/PD-02-02	Sling, Universal Individual Load	EA
79			57771	MIL-F-10884	Snap Fastener (Stud/eyelet)	EA
80			57771	MIL-F-10884	Snap Fastener, (Button/Socket)	EA
81			57771	MIL-F-10884F	Snap Fastener, (Button/Socket)	EA

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
82			85810	MIL-T-5038	Tape, Textile (Binding Tape 1 inch)	YD
83			1S3D4	MIL-W-5664D	Webbing, Elastic (Nylon 1 inch)	YD
84			1S3D4	MIL-W-5664	Webbing, Elastic (Nylon, 1 1/2 inch)	YD
85			1S3D4	MIL-W-5664	Webbing, Elastic (Nylon, Type II)	YD
86			85810	MIL-W-4088	Webbing, Textile (Nylon 1 23/32 inch)	YD
87			85810	MIL-W-43668	Webbing, Textile (Nylon 1 inch)	YD
88			85810	A-A-55301	Webbing, Textile (Nylon 1 inch, Class III)	YD
89			85810	MIL-W-4088	Webbing, Textile (Nylon 2 1/4 inch)	YD
90			85810	MIL-W-17337	Webbing, Textile (Nylon 2 inch)	YD
91			85810	MIL-W-4088	Webbing, Textile (Nylon 3 inch, Class IIIA)	YD
92			85810	MIL-W-4088	Webbing, Textile (Nylon 3/4 inch)	YD
93			85810	MIL-W-4088	Webbing, Textile (Nylon 9/16 inch, Type 1)	YD
94			85810	MIL-W-4088	Webbing, Textile (Nylon, Type VIIIC)	YD
95			85810	MIL-W-17337	Webbing, Textile (Nylon 1 1/2 inch)	YD
96			85810	MIL-W-17337	Webbing, Textile (Nylon 3 1/2 inch)	YD
					END OF FIGURE	

FIELD AND SUSTAINMENT MAINTENANCE
MODULAR LIGHTWEIGHT LOAD-CARRYING EQUIPMENT (MOLLE) II
NATIONAL STOCK NUMBER INDEX

STOCK NUMBER	FIG.	ITEM

NOTE

The National Stock Number Index will be updated in Change 1.

FIELD AND SUSTAINMENT MAINTENANCE
MODULAR LIGHTWEIGHT LOAD-CARRYING EQUIPMENT (MOLLE) II
PART NUMBER INDEX

PART NUMBER	FIG.	ITEM
A-A-55126	99	39
	99	40
	99	41
	99	42
	99	43
	99	44
	99	45
	99	46
	99	47
	99	48
	99	72
L-P-378	99	60
	99	61
MIL-B-371	99	2
	99	3
MIL-C-43128	99	59
MIL-C-43734	99	21
	99	23
MIL-C-5040	99	27
	99	30
MIL-C-5040G	99	28
MIL-C-7219	99	22
MIL-C-8061	99	24
MIL-E-20652/1B	99	34
	99	35
	99	36
MIL-F-10884	99	37
	99	63
	99	64
MIL-F-10884F	99	65
MIL-G-16491	99	55
	99	56

PART NUMBER	FIG.	ITEM
MIL-R-6130	99	50
	99	51
	99	52
MIL-T-5038	99	66
MIL-W-17337	99	74
	99	79
	99	80
MIL-W-4088	99	70
	99	73
	99	75
	99	76
	99	77
	99	78
MIL-W-43668	99	71
MIL-W-5664	99	68
	99	69
MIL-W-5664D	99	67
R00475	99	1
SRGT 101-4100-5674	99	12
SS25T-5674	99	19
ST-1522CL-85	99	49
1584	99	9
1602	99	53
1603	99	54
2831	99	25
5425	99	16
22111	99	26
01004-20	99	57
	99	6
01047-20	99	33
0890-22	99	17
101-0075-5674	99	13

PART NUMBER	FIG.	ITEM
101-1150-5614	99	15
	99	10
101-4100-5674	99	18
101-5150-5674	99	11
101-6100-5674	99	14
102-5050-5674	99	5
104-0150-5674	99	7
104-3100-5674	99	8
110-0100-5674	99	31
	99	32
154-2100	99	4
350-2000-5674	99	29
5000, 5707, 5709	99	38
646-2025-5674	99	20
0890-22	99	17
101-0075-5674	99	13

END OF WORK PACKAGE

CHAPTER 6

SUPPORTING INFORMATION
FOR
MODULAR LIGHTWEIGHT LOAD-CARRYING EQUIPMENT (MOLLE) II

FIELD AND SUSTAINMENT MAINTENANCE
MODULAR LIGHTWEIGHT LOAD-CARRYING EQUIPMENT (MOLLE) II
REFERENCES

SCOPE

This Work Package lists all field manuals, forms, technical manuals, and miscellaneous publications referenced in manual.

ARMY REGULATIONS

AR 700-138	Army Logistics Readiness and Sustainability

DA PAMPHLETS

DA PAM 25-33	User's Guide for Army Publications and Forms
DA PAM 750-8	The Army Maintenance Management System (TAMMS) User's Manual
DA PAM 738-751	Functional User's Manual for The Army Maintenance Management System – Aviation (TAMMS-A)

FIELD MANUALS

FM 4-25.11	First Aid for Soldiers
FM 10-16	General Fabric Repair

FORMS

DA Form 12-R	Army Publishing Directorate Order Form
DA Form 2028	Recommended Changes to Publications and Blank Forms
DA Form 2404	Equipment Inspection and Maintenance Worksheet
DD Form 361	Transportation Discrepancy Report (TDR)
SF 368	Product Quality Deficiency Report (PQDR)

TECHNICAL BULLETINS

TB 43-0002-27	Maintenance Expenditure Limits for FSC Groups 72, 83, and 84; FSC Classes 7210, 8340, and 8400

TECHNICAL MANUALS

TM 10-8465-236-10	Operator's Manual for Modular Lightweight Load-Carrying Equipment (MOLLE) II

COMMON TABLES OF ALLOWANCES (CTA)

CTA 50-970	Expendable/ Durable Items (Except Medical, Class V Repair Parts, and Heraldic Items)
CTA 50-909	Field Garrison Furnishings and Equipment
CTA 8-100	Army Medical Department Expendable/Durable Items

MISCELLANEOUS PUBLICATIONS

ASTM D6193-11	Standard Practice for Stitches and Seams

END OF WORK PACKAGE

FIELD AND SUSTAINMENT MAINTENANCE
MODULAR LIGHTWEIGHT LOAD-CARRYING EQUIPMENT (MOLLE) II
MAINTENANCE ALLOCATION CHART (MAC) INTRODUCTION

INTRODUCTION

The Army Maintenance System MAC

This introduction provides a general explanation of the maintenance and repair functions. The MAC (immediately following this introduction) designates overall authority and responsibility for the performance of maintenance tasks on the identified end item or component. The application of the maintenance tasks to the end item or component shall be consistent with the capacities and capabilities of the designated maintenance levels/classes, which are shown in the MAC in column (4). Column (4) is divided into two secondary columns. These columns indicate the maintenance levels/classes of “Field” and “Sustainment.” Each maintenance level column is further divided into two sub-columns. These sub-columns identify the maintenance classes and are as follows:

1. Field level maintenance classes:
    a. Crew (operator) maintenance. This is 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. Items with a “C” (“O” for joint service reporting) in the third position of the Source, Maintenance, and recoverability (SMR) code may be replaced at the crew(operator) class. A code of “C” (“O” for joint service) in the fourth position of the SMR code indicates complete repair is authorized at the crew (operator) class.

    b. Maintainer maintenance. This is maintenance accomplished on a component, accessory, assembly, subassembly, plug-in unit, or other portion by field level units. This maintenance is performed either on the system or after it is removed. An “F” in the third position of the SMR code indicates replacement of assemblies, subassemblies, or other components is authorized at this level. An “F” in the fourth position of the SMR code indicates complete repair of the identified item is allowed
    at the Maintainer class. Items repaired at this level are normally returned to the user after maintenance is performed.

2. Sustainment level maintenance classes:
    a. Below depot sustainment. This is maintenance accomplished on a component, accessory, assembly, subassembly, plug-in unit, or other portion either on the system or after it is removed. The item subject to maintenance has normally been forwarded to a maintenance facility away from the field level supporting units. An “H” in the third position of the SMR code indicates replacement of assemblies, subassemblies, or other components is authorized at this class. An "H" appearing in the fourth position of the SMR code indicates complete repair is possible at this class. Items are normally returned to the supply system after maintenance is performed at this class.

    b. Depot. This is maintenance accomplished on a component, accessory, assembly, subassembly, plug-in unit, or other portion either on the system or after it is removed. Assets to be repaired at this class are normally returned to an Army Depot or authorized contractor facility. The replace function for this class of maintenance is indicated by the letter "D" or "K" appearing in the third position of the SMR code. 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 system after maintenance is performed at this class.

The tools and test equipment requirements table (immediately following the MAC) lists the tools and test equipment (both special tools and common tool sets) required for each maintenance task as referenced from the MAC.
The remarks table (immediately following the tools and test equipment requirements) contains supplemental instructions and explanatory notes for a particular maintenance task.

INTRODUCTION — CONTINUED

Maintenance functions (tasks)
Maintenance functions are limited to and defined as follows:

1. Inspect. A function 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).
2. Test. To verify serviceability by measuring the mechanical, pneumatic, hydraulic, or electrical characteristics of an item and comparing those characteristics with prescribed standards, e.g., load testing of lift devices or hydrostatic testing of pressure hoses.
3. Service. Operations required periodically to keep an item in proper operating condition such as replenishing fuel, lubricants, chemical fluids, or gases.
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. It 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. The act of taking a component off an asset to facilitate other maintenance on a different component or on the same component (except for replace and repair.)
8. Install. The act of placing, positioning, or otherwise locating a component to make it part of a higher level end item. The install task is authorized by the LMI/MAC and the assigned maintenance level is shown as the third position code of the SMR code.
9. Replace. The act of taking off an unserviceable component and putting a serviceable component in its place. The replace task is authorized by the LMI/MAC and the assigned maintenance level is shown as the third position code of the SMR code.
10. Repair. The act of restoring an item to a completely serviceable or fully mission capable status. The repair task is authorized by the LMI/MAC and the assigned maintenance level is shown as the fourth position code of the SMR code.
11. Paint. This is a function to prepare and apply coats of paint. When used with munitions, the paint is applied so the ammunition can be identified and protected.

NOTE

The following definitions are applicable to the “repair” maintenance task: 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).
Actions. Welding, grinding, riveting, straightening, facing, machining, and/or resurfacing.

12. Overhaul. This is the maintenance effort (service/action) prescribed to restore an item to a completely serviceable/operational condition as required by maintenance standards in the appropriate technical publications. Overhaul is normally the highest degree of maintenance performed by the Army. Overhaul does not normally return an item to a like-new condition.
13. Rebuild. This 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 materiel 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.
14. Lubricate. The act of applying a material (e.g., oil or grease) to reduce friction and allow a component to operate in a more efficient manner.
15. Mark. The process of restoring obliterated identification on an asset.
16. Pack. To place an item into a container for either storage or shipment after service and other maintenance operations have been completed.
17. Unpack. The act or removing an asset from a storage or shipping container in preparation to perform further maintenance (e.g., repair or install).

INTRODUCTION — CONTINUED

Maintenance functions (tasks) – Continued

18. Preserve. The action required to treat systems and equipment whether installed or stored, to ensure a serviceable condition.
19. Prepare for use. Those steps required to make an asset ready for other maintenance (e.g., remove preservatives, lubricate, etc.).
20. Assemble. The step-by-step instructions to join the component pieces of an asset together to make a complete serviceable asset.
21. Disassemble. 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).
22. Clean. Step-by-step instructions on how to remove dirt, corrosion or other contaminants from equipment. Refer to appropriate painting, lubrication, and preservation methods to restore original corrosion prevention and control methods when removed as a result of cleaning and/or when using cleaning to remove corrosion from the item.
23. Non destructive inspection. Step-by-step instructions on preparation and accomplishment inspections which do not destroy or damage the equipment.
24. Radio interference suppression. Step-by-step instructions to ensure installed equipment, either communication or other electronics, does not interfere with installed communication equipment.
25. Place in service. Step-by-step instructions required to place an item into service that are not covered in the service upon receipt work package.
26. Towing. The step-by-step instructions to connect one vehicle to another for the purpose of having one vehicle moved through the motive power of the other vehicle.
27. Jacking. The step-by-step instructions to mechanically raise or lift a vehicle to facilitate maintenance on the vehicle.
28. Parking. Step-by-step instructions to safely place a vehicle in a lot, ramp area or other designated location.
29. Mooring. Step-by-step instructions to secure a vehicle by chains, ropes or other means to protect the vehicle from environmental conditions or secure for transportation.
30. Covering. Step-by-step instructions to place a protective wrapping over a vehicle to protect it from environmental conditions or to hide (e.g., camouflage) it.
31. Hoisting. Step-by-step instructions to allow a vehicle to be raised by cables or ropes through attaching points.
32. Sling loading. Step-by-step instructions to place a sling around a vehicle to allow it to be raised.
33. External power. Step-by-step instructions on how to apply electrical power from any authorized power source (e.g., external generator or facility power).
34. Preparation for storage or shipment. Step-by-step instructions for preparing the equipment for placement into administrative storage or for special transportation requirements.
35. Arm. Detailed instructions on activating munitions prior to use.
36. Load. This may be one of two tasks:
    a. For transportation, the act of placing assets onto a transportation medium (e.g., pallet, truck, container).
    b. For weapons/weapons systems, the act of placing munitions into the weapon/weapons system.
37. Unload. This may be one of two tasks:
    a. For transportation, the act of removing assets from a transportation medium (e.g., pallet, truck, container).
    b. For weapons/weapons systems, the act of removing munitions from the weapon/weapons system.
38. Software maintenance. Step-by-step instructions for software maintenance (e.g., installing, un-installing, etc.).

INTRODUCTION — CONTINUED

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 (tasks) outlined previously.)

Column (4) Maintenance Level. Column (4) specifies each level/class of maintenance authorized to perform each function listed in column (3), by indicating work time required in the appropriate sub-column. This work time figure represents the active time required to perform that maintenance task at the indicated level/class of maintenance. If the number or complexity of the tasks within the listed maintenance task varies at different maintenance classes, appropriate work time figures are to be shown for each class.

The work time figure represents the average time required to perform the prescribed task (assembly, subassembly, component, module, end item, or system) on the item under typical operating conditions for that maintenance level/class. 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 tasks authorized in the MAC. The symbol designations for the various maintenance levels/classes and classes are as follows:

Field:

C Crew maintenance
F Maintainer maintenance

Sustainment:

L Specialized Repair Activity (SRA)
H Below depo maintenance
D Depot maintenance

NOTE

The “L” maintenance class is not included in column (4) of the MAC. Functions to this class 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 a number 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 (6) contains a letter code, in alphabetical order, which is keyed to the remarks table entries.

INTRODUCTION — CONTINUED

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 class 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 the 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 task being performed as indicated in the MAC.

END OF WORK PACKAGE

FIELD AND SUSTAINMENT MAINTENANCE
MODULAR LIGHTWEIGHT LOAD-CARRYING EQUIPMENT (MOLLE) II
MAINTENANCE ALLOCATION CHART (MAC)

Table 1. MAC for Modular Lightweight Load-Carrying Equipment (MOLLE) II.

(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	MOLLE II							
01	RIFLEMAN SET							
0101	SET, FIGHTING LOAD CARRIER	Service Inspect Repair Replace			0.2 0.2		1	A
010101	FIGHTING LOAD CARRIER (BUCKLE OR SLIDE FASTENER)	Repair Replace		0.1 0.1	0.2 0.1		2, 3, 4, 5, 6, 7, 8	B, C
010102	POUCH, CANTEEN, GENERAL PURPOSE	Repair Replace		0.1 0.1	0.1 0.1		2, 3, 4, 5, 6, 7, 8	B, C
010103	POUCH, HAND GRENADE	Repair Replace		0.1 0.1	0.1 0.1		2, 3, 4, 5, 6, 7, 8	B, C
010104	POUCH, M4 TWO MAGAZINE	Repair Replace		0.1 0.1	0.1 0.1		2, 3, 4, 5, 6, 7, 8	B, C
010105	POUCH, M4 THREE MAGAZINE SIDE-BY-SIDE	Repair Replace		0.1 0.1	0.1 0.1		2, 3, 4, 5, 6, 7, 8	B, C
0102	HYDRATION SYSTEM	Service Inspect Replace			0.1 0.1		1	A
010201	CARRIER, HYDRATION SYSTEM	Repair Replace		0.1 0.1	0.1 0.1		2, 3, 4, 5, 6, 7, 8	B, C
010202	BLADDER, HYDRATION SYSTEM	Replace		0.1	0.1			
010203	DRINK TUBE, HYDRATION SYSTEM	Replace		0.1	0.1			

Table 1. MAC for Modular Lightweight Load-Carrying Equipment (MOLLE) II — Continued.

(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		
010204	BITE VALVE, HYDRATION SYSTEM	Replace		0.1	0.1			
0103	TACTICAL ASSAULT PANEL (TAP)	Service			0.1		1	A
		Inspect			0.1			
		Repair		0.1	0.2		2, 3, 4, 5, 6, 7, 8	B, C
		Replace		0.1	0.1			
010301	RIGHT/LEFT SIDE ADAPTER ASSEMBLY	Service			0.1		1	A
		Inspect			0.1			
		Repair		0.1	0.2		2, 3, 4, 5, 6, 7, 8	
		Replace		0.1	0.1			
010302	ATTACHING STRAP ASSEMBLY	Service						
		Inspect			0.1		1	A
		Repair			0.1			
		Replace		0.1	0.2		2, 3, 4, 5, 6, 7, 8	B, C
				0.1	0.1			
010303	SOLDIER PLATE CARRIER SYSTEM (SPCS) ADAPTER	Service			0.1		1	A
		Inspect			0.1			
		Repair		0.1	0.2		2, 3, 4, 5, 6, 7, 8	B, C
		Replace		0.1	0.1			
0104	ASSAULT PACK	Service			0.1		1	A
		Inspect			0.1			
		Repair		0.1	0.2		2, 3, 4, 5, 6, 7, 8	B, C
		Replace		0.1	0.1			
0105	WAIST PACK	Service			0.1		1	A
		Inspect			0.1			
		Repair		0.1	0.2		2, 3, 4, 5, 6, 7, 8	B, C
		Replace		0.1	0.1			
0106	CARRIER, ENTRENCHING TOOL	Service			0.1		1	A
		Inspect			0.1			
		Repair		0.1	0.1		2, 3, 4, 5, 6, 7, 8	B, C
		Replace		0.1	0.1			
0107	BANDOLEER, AMMUNITION POUCHES 6 MAGAZINE	Service			0.1		1	A
		Inspect			0.1			
		Repair		0.1	0.1		2, 3, 4, 5, 6, 7, 8	B, C
		Replace		0.1	0.1			
0108	FLASH BANG GRENADE POUCH	Service			0.1		1	A
		Inspect			0.1			
		Repair		0.1	0.1		2, 3, 4, 5, 6, 7, 8	B, C
		Replace		0.1	0.1			
0109	FIELD PACK, LARGE SET	Service			0.1		1	A
		Inspect			0.1			
		Repair						B, C
		Replace						

Table 1. MAC for Modular Lightweight Load-Carrying Equipment (MOLLE) II — Continued.

(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		
010901	RUCKSACK, LARGE	Service			0.1		1	A
		Inspect			0.1			
		Repair		0.1	0.1		2, 3, 4, 5, 6, 7, 8	B, C
		Replace		0.1	0.1			
010902	SUSTAINMENT POUCH	Service			0.1		1	A
		Inspect			0.1			
		Repair		0.1	0.1		2, 3, 4, 5, 6, 7, 8	B, C
		Replace		0.1	0.1			
010903	FRAME, PACK, MOLLE (Large)	Service			0.1		1	A
		Inspect			0.1			
		Repair		0.1	0.1		2, 3, 4, 5, 6, 7, 8	B
		Replace		0.1	0.1			C
010904	MOLDED WAISTBELT	Service			0.1		1	A
		Inspect			0.1			
		Repair		0.1	0.1		2, 3, 4, 5, 6, 7, 8	B, C
		Replace		0.1	0.1			
010905	ENHANCED FRAME SHOULDER STRAPS	Service			0.1		1	A
		Inspect			0.1			
		Repair		0.1	0.1		2, 3, 4, 5, 6, 7, 8	B, C
		Replace		0.1	0.1			
010906	LOAD LIFTER ATTACHMENT STRAP	Service			0.1		1	A
		Inspect			0.1			
		Repair		0.1	0.1		2, 3, 4, 5, 6, 7, 8	B
		Replace		0.1	0.1			C
010907	BUCKLE, MALE SHOULDER SUSPENSION	Service			0.1		1	A
		Inspect			0.1			
		Repair		0.1	0.1		2, 3, 4, 5, 6, 7, 8	B, C
		Replace		0.1	0.1			
0110	FIELD PACK, MEDIUM SET	Service			0.1		1	A
		Inspect			0.1			
		Repair						
		Replace						
011001	RUCKSACK, MEDIUM	Service			0.1		1	A
		Inspect			0.1			
		Repair		0.1	0.1		2, 3, 4, 5, 6, 7, 8	B, C
		Replace		0.1	0.1			
011002	FRAME, PACK, MOLLE (Medium)	Service			0.1		1	A
		Inspect			0.1			
		Repair		0.1	0.1		2, 3, 4, 5, 6, 7, 8	B, C
		Replace		0.1	0.1			

Table 1. MAC for Modular Lightweight Load-Carrying Equipment (MOLLE) II — Continued.

(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		
011003	WAISTBELT ASSEMBLY	Service		0.1	0.1		1	A
		Inspect		0.1	0.1			
		Repair			0.1		2, 3, 4, 5, 6, 7, 8	B, C
		Replace			0.1			
011004	SHOULDER STRAP ASSEMBLY	Service		0.1	0.1		1	A
		Inspect		0.1	0.1			
		Repair			0.1		2, 3, 4, 5, 6, 7, 8	B, C
		Replace			0.1			
02	PISTOLMAN SET							
0201	HOLSTER LEG EXTENDER	Service			0.1		1	A
		Inspect			0.1			
		Repair		0.1	0.1		2, 3, 4, 5, 6, 7, 8	B, C
		Replace		0.1	0.1			
0202	9mm MAGAZINE POUCH	Service			0.1		1	A
		Inspect			0.1			
		Repair		0.1	0.1		2, 3, 4, 5, 6, 7, 8	B, C
		Replace		0.1	0.1			
03	SAW GUNNER SET							
0301	100-ROUND UTILITY POUCH	Service			0.1		1	A
		Inspect			0.1			
		Repair		0.1	0.1		2, 3, 4, 5, 6, 7, 8	B, C
		Replace		0.1	0.1			
0302	200-ROUND SAW GUNNER POUCH	Service			0.1		1	A
		Inspect			0.1			
		Repair		0.1	0.1		2, 3, 4, 5, 6, 7, 8	B, C
		Replace		0.1	0.1			
04	GRENADIER SET							
0401	40mm HIGH EXPLOSIVE POUCH (Single)	Service			0.1		1	A
		Inspect			0.1			
		Repair		0.1	0.1		2, 3, 4, 5, 6, 7, 8	B, C
		Replace		0.1	0.1			
0402	40mm HIGH EXPLOSIVE POUCH (Double)	Service			0.1		1	A
		Inspect			0.1			
		Repair		0.1	0.1		2, 3, 4, 5, 6, 7, 8	B, C
		Replace		0.1	0.1			
0403	40mm PYROTECHNIC POUCH (Double)	Service			0.1		1	A
		Inspect			0.1			
		Repair		0.1	0.1		2, 3, 4, 5, 6, 7, 8	B, C
		Replace		0.1	0.1			
05	MEDIC SET							

Table 1. MAC for Modular Lightweight Load-Carrying Equipment (MOLLE) II — Continued.

(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		
0501	MEDICAL BAG WITH FOUR INTERNAL POCKETS	Service			0.1		1	A
		Inspect			0.1			
		Repair		0.1	0.1		2, 3, 4, 5, 6, 7, 8	B, C
		Replace		0.1	0.1			
0502	EXTERNAL MEDIC MODULAR POCKET	Service			0.1		1	A
		Inspect			0.1			
		Repair		0.1	0.1		2, 3, 4, 5, 6, 7, 8	B, C
		Replace		0.1	0.1			
0503	MEDICAL BAG IV BANDOLEER	Service			0.1		1	A
		Inspect			0.1			
		Repair		0.1	0.1		2, 3, 4, 5, 6, 7, 8	B, C
		Replace		0.1	0.1			C
0504	PANEL MEDICAL BAG	Service			0.1		1	A
		Inspect			0.1			
		Repair		0.1	0.1		2, 3, 4, 5, 6, 7, 8	B, C
		Replace		0.1	0.1			C
06	ADDITIONAL MOLLE II COMPONENTS							
0601	RADIO POUCH	Service			0.1		1	A
		Inspect			0.1			
		Repair		0.1	0.1		2, 3, 4, 5, 6, 7, 8	B, C
		Replace		0.1	0.1			
0602	SHOTGUN SHELL POUCH (16X12ga)	Service			0.1		1	A
		Inspect			0.1			
		Repair		0.1	0.1		2, 3, 4, 5, 6, 7, 8	B, C
		Replace		0.1	0.1			
0603	MBITR POUCH	Service			0.1		1	A
		Inspect			0.1			
		Repair		0.1	0.1		2, 3, 4, 5, 6, 7, 8	B, C
		Replace		0.1	0.1			
0604	300-ROUND, 7.62 AMMO BAG	Service			0.1		1	A
		Inspect			0.1			
		Repair		0.1	0.1		2, 3, 4, 5, 6, 7, 8	B, C
		Replace		0.1	0.1			
0605	SHOULDER STRAP (Sling Assembly), UNIVERSAL, INDIVIDUAL LOAD	Service			0.1		1	A
		Inspect			0.1			
		Repair		0.1	0.1		2, 3, 4, 5, 6, 7, 8	B, C
		Replace		0.1	0.1			
0606	PANEL, VEHICLE MOLLE (MVP)	Service			0.1		1	A
		Inspect			0.1			
		Repair		0.1	0.1		2, 3, 4, 5, 6, 7, 8	B, C
		Replace		0.1	0.1			

Table 1. MAC for Modular Lightweight Load-Carrying Equipment (MOLLE) II — Continued.

(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		
0607	POUCH, PVS-14 MOLLE	Service			0.1		1	A
		Inspect			0.1			
		Repair		0.1	0.1		2, 3, 4, 5, 6, 7, 8	B, C
		Replace		0.1	0.1			
0608	POUCH, LEADERS SET MOLLE	Service			0.1		1	A
		Inspect			0.1			
		Repair		0.1	0.1		2, 3, 4, 5, 6, 7, 8	B, C
		Replace		0.1	0.1			
060801	LEADERS POCKET GUIDE (GPS) UNIVERSAL	Service			0.1		1	A
		Inspect			0.1			
		Repair		0.1	0.1		2, 3, 4, 5, 6, 7, 8	B, C
		Replace		0.1	0.1			
060802	LEADERS POCKET INSERT (Writing Instrument) UNIVERSAL	Service			0.1		1	A
		Inspect			0.1			
		Repair		0.1	0.1		2, 3, 4, 5, 6, 7, 8	B, C
		Replace		0.1	0.1			
0609	K-BAR ADAPTER	Service			0.1		1	A
		Inspect			0.1			
		Repair		0.1	0.1		2, 3, 4, 5, 6, 7, 8	B, C
		Replace		0.1	0.1			
0610	ALICE CLIP ADAPTER	Service			0.1		1	A
		Inspect			0.1			
		Repair		0.1	0.1		2, 3, 4, 5, 6, 7, 8	B, C
		Replace		0.1	0.1			
0611	LASHING STRAPS	Service			0.1		1	A
		Inspect			0.1			
		Repair		0.1	0.1		2, 3, 4, 5, 6, 7, 8	B, C
		Replace		0.1	0.1			

Table 2. Tools and Test Equipment for Modular Lightweight Load-Carrying Equipment (MOLLE) II.

(1) Tool or Test Equipment	(2) Maintenance Level	(3) Nomenclature	(4) National Stock Number	(5) Tool Number
1	H	Brush, Scrub, Household	Local Purchase	
2	F	Knife, Hot, Cutting Tool, Handheld	Local Purchase	2RMC5
3	F	Ruler, Tab, Metal, 16-inch	7510-00-173-4897	16INCHMETAL
4	F	Sewing Machine, Industrial Bar Tack	Local purchase	
5	F	Sewing Machine, Medium Duty	3530-01-177-8591	255RB-3
6	F	Shears, Tailor's, 12-Inch	5110-00-223-6370	GGG-5-278
7	F	Stitch Removal Tool	Local Purchase	
8	F	Tape, Measuring	5210-00-182-4797	W7312

Table 3. Remarks for Modular Lightweight Load-Carrying Equipment (MOLLE) II.

(1) REMARK CODES	(2) REMARKS
A	Service is cleaning of equipment.
B	At maintainer level, repair by restitching or replacement.
C	At below depot level, repair by darning, replacement, restitching, retacking, searing, and splicing edge binding tape.

END OF WORK PACKAGE

SUPPORTING INFORMATION
MODULAR LIGHTWEIGHT LOAD-CARRYING EQUIPMENT (MOLLE) II
EXPENDABLE AND DURABLE ITEMS LIST

INTRODUCTION

Scope

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

Explanation of Columns in the Expendable/Durable Items List

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

Column (2) Level. This column identifies the lowest level of maintenance that requires the listed item (*include as applicable: C = Crew, O = AMC, F = Maintainer or ASB, H = Below Depot or TASMG, D = Depot*).

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).

Table 1. Expendable and Durable Items List.

(1) Item Number	(2) Level	(3) National Stock Number (NSN)	(4) Item Name, Description, Part Number/(CAGEC)	(5) U/I
1	F, H	7930-00-531-9715	Detergent, General Purpose TY2, MIL-D-16791 GL/(81349)	BT
2	F, H	7510-00-240-1525	Pencil, China Marker, Yellow, A-A-87	DZ
3	F, H	7920-00-205-1711	Rags, Wiping 7920-00-205-1711(80244)	BE
4	F, H		Thread, Nylon, V-T-295, Size E, TY I, II, or III CL A, FG504	TU
5	F, H		Thread, Nylon, V-T-295, Size F, TY I, II, or III CL A, FG504	TU
6	F, H		Thread, Nylon, V-T-295, Size FF, TY I, II, or III CL A, FG504	TU

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)*
U.S. Army TACOM Life Cycle Management Command
ATTN: AMSTA-LCL-MPP/TECH PUBS
6501 E. 11 Mile Road, Warren, MI 48397-5000

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 10-1670-296-20&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*) U.S. Army TACOM Life Cycle Management Command ATTN: AMSTA-LCL-MPP/TECH PUBS 6501 E. 11 Mile Road, Warren, MI 48397-5000	**FROM:** (*Activity and location) (Include ZIP Code)* *PFC JANE DOE* *Co A 3RD Engineer Br.* *Ft Leonard Wood, MO 63108*	**DATE** 21 October 2003

PART II – REPAIR PARTS AND SPECIAL TOOL LISTS AND SUPPLY CATALOGS/SUPPLY MANUALS

PUBLICATION NUMBER	DATE	TITLE
TM 10-1670-296-20&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-					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)* U.S. Army TACOM Life Cycle Management Command ATTN: AMSTA-LCL-MPP/TECH PUBS 6501 E. 11 Mile Road, Warren, MI 48397-5000	**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 10-8465-236-24&P	15 MARCH 2014	Field and Sustainment Maintenance Manual Including Repair Parts and Special Tools Lists for Modular Lightweight Load-Carrying Equipment (MOLLE) II

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**
U.S. Army TACOM Life Cycle Management Command ATTN: AMSTA-LCL-MPP/TECH PUBS 6501 E. 11 Mile Road, Warren, MI 48397-5000		

PART II – REPAIR PARTS AND SPECIAL TOOL LISTS AND SUPPLY CATALOGS/SUPPLY MANUALS

PUBLICATION/FORM NUMBER	DATE	TITLE
TM 10-8465-236-24&P	15 MARCH 2014	Field and Sustainment Maintenance Manual Including Repair Parts and Special Tools Lists for Modular Lightweight Load-Carrying Equipment (MOLLE) II

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)* U.S. Army TACOM Life Cycle Management Command ATTN: AMSTA-LCL-MPP/TECH PUBS 6501 E. 11 Mile Road, Warren, MI 48397-5000	**FROM:** *(Activity and location) (Include ZIP Code)*	

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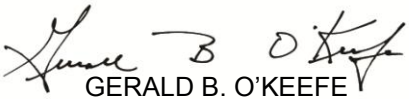
TYPED NAME, GRADE OR TITLE	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION	SIGNATURE

By Order of the Secretary of the Army:

RAYMOND T. ODIERNO
General, United States Army
Chief of Staff

Official:



GERALD B. O'KEEFE
Administrative Assistant to the
Secretary of the Army
1323101

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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 dekagrarn = 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	Iiters	.473	milliliters	fluid ounces	.034
quarts	Iiters	.946	liters	pints	2.113
gallons	Iiters	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: 086592-000