

Modular Lightweight Load-Carrying Equipment MOLLE II



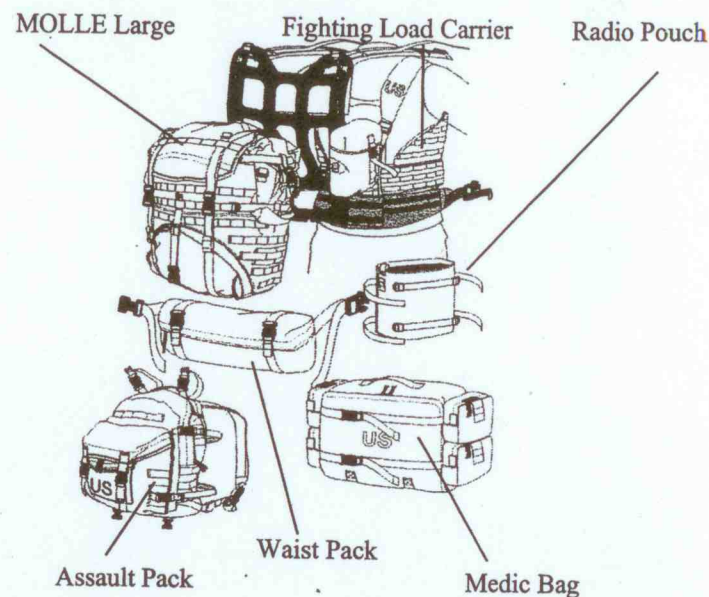
Care and Use Manual

Introduction

Congratulations, you have just been issued the Modular Lightweight Load-Carrying Equipment known as MOLLE. This system was designed based on soldier feedback.

MOLLE is a modular Load-Carrying system designed to enhance the survivability and lethality of the modern Soldier and Marine. MOLLE is a replacement for the All-Purpose Lightweight Individual Carrying Equipment system (ALICE) and components of the Integrated Individual Fighting System including the Enhanced Tactical Load-Bearing Vest.

Your Central Issue Facility or Supply should issue a complete Rifleman MOLLE set. The appropriate pouches/pockets that match your squad position will be issued at the unit level.

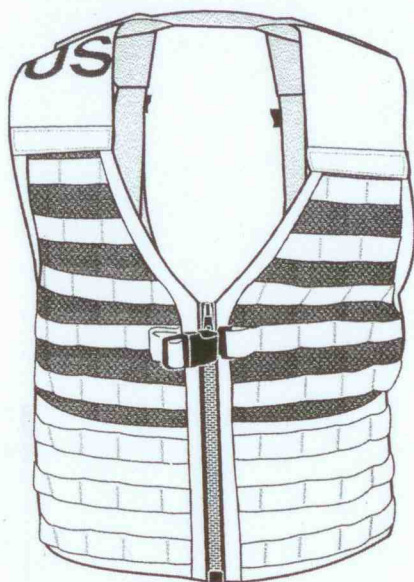


The MOLLE System

consists of the Fighting Load Carrier (FLC) with specialized pockets, the Large Ruck, the Assault Pack, the Frame, Sustainment pockets, Waist Pack, Six-foot Lashing Straps, Hydration System, Repair Kit, and additional pouches.

A common FLC vest is provided for all Soldiers and Marines with specialized removable pouches for Rifleman, Pistol, SAW Gunner, Grenadier and Medic or Corpsman configurations.

Fighting Load Carrier (FLC)



In addition to Rifleman pouches, specialized pouches exist to accommodate Grenadiers, SAW Gunners, Medic, and Pistol configurations.

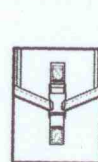


fig. 1

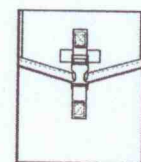


fig. 2

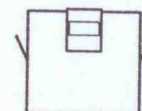


fig. 3

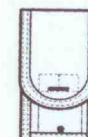


fig. 4



fig. 5

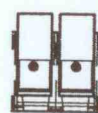


fig. 6

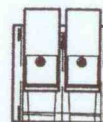


fig. 7



fig. 8



fig. 9

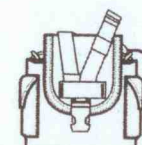


fig. 10

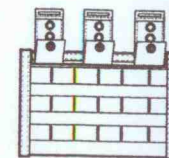


fig. 11

Pockets/Pouches

Fig.1 100 round SAW pouch

Fig.2 200 round SAW pouch

Fig.3 Medical pocket

Fig.4 M4 two magazine pouch

Fig.5 40mm high explosive grenade pouch (single)

Fig.6 40mm high explosive grenade pouch (double)

Fig.7 40mm pyrotechnic (illumination) round pouch (double)

Fig.8 9 mm magazine pouch

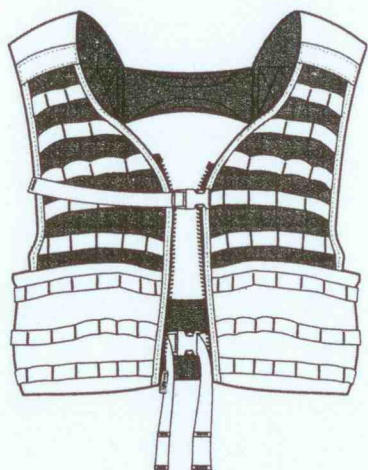
Fig.9 Fragmentation hand grenade pouch

Fig. 10 Canteen/general purpose pouch

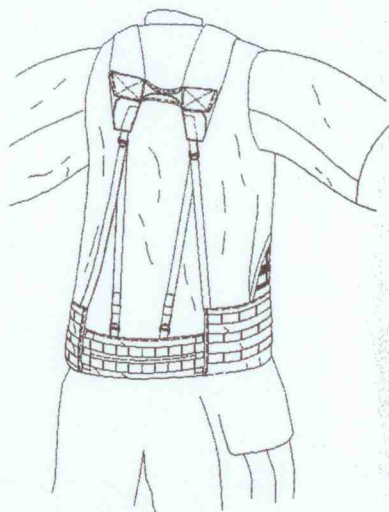
Fig. 11 M4 Three magazine side x side pouch

The MOLLE system provides far more load-carrying capabilities than the ALICE system. However, a proper new equipment training (NET) class provided by the PM-Soldier Equipment is required in order for the system to be used to its maximum capabilities. This manual illustrates the MOLLE capabilities to assist Soldiers and Marines with familiarization of the system or refresher training after receiving a NET class.

The Fighting Load Carrier (FLC) is a modular vest that allows commanders to tailor the loads to meet mission needs without unnecessary extra pouches and gear. It is one size fits all, and is designed to be worn over body armor. The MOLLE pockets can be placed directly on the 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.



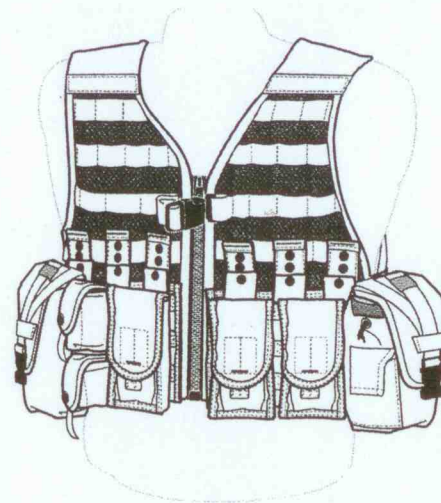
FLC - Front View



FLC - Rear View

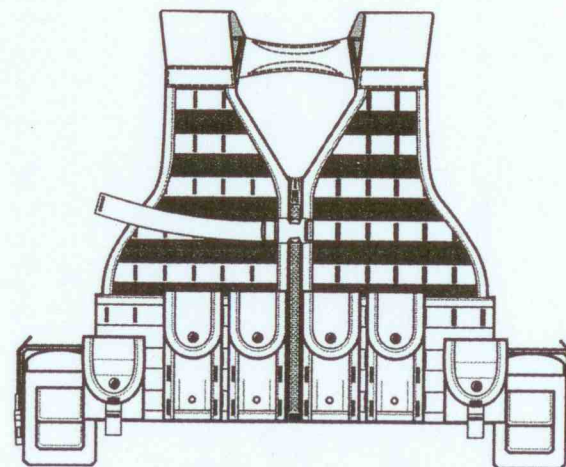
The vest is designed to reduce heat build up on the back with minimum area of coverage of the **H-Harness design**. The **wide, 3 1/2-inch shoulder straps** of the FLC help distribute the load without the need for excessive padding that can hinder mobility and sighting a weapon.

The **Rifleman configuration** is designed to hold up to 12 magazines in three M4 Two Mag pouches, two M4 Three Mag Side x Side Pouches, two Fragmentation Hand Grenade pouches, and two Canteen/General purpose pouches.



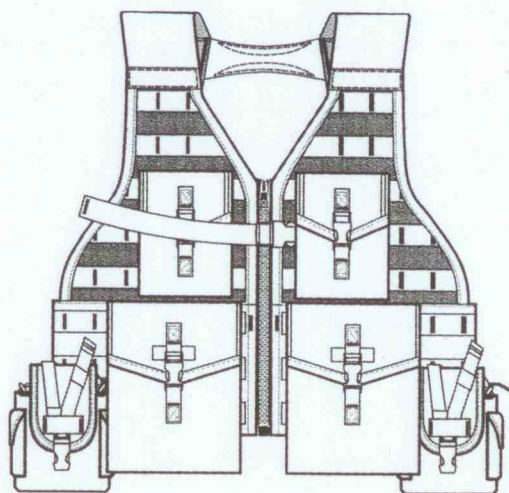
Rifleman Configuration

The **Pistol configuration** holds four single 9mm magazine pouches and two fragmentation hand grenades as shown.



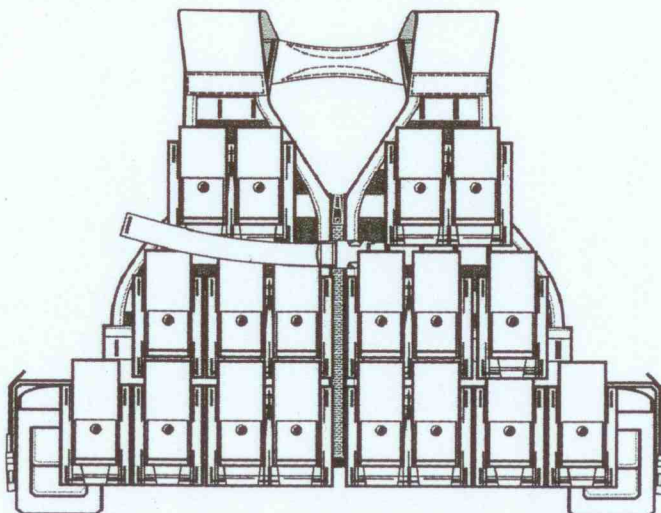
Pistol Configuration

The **SAW Gunner configuration** accommodates two 200-round magazine pouches and two 100-round magazine pouches.



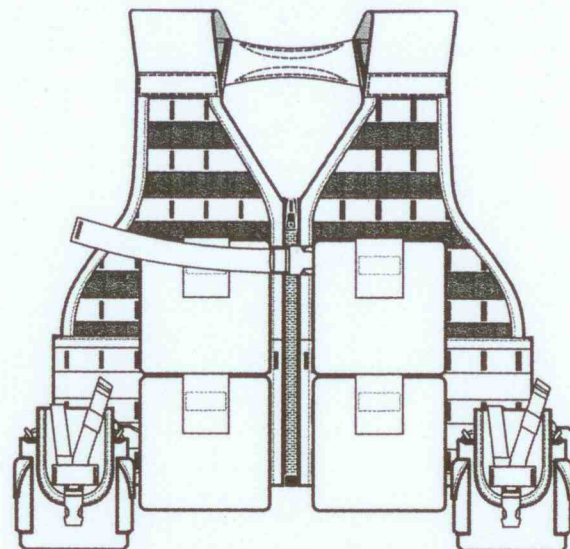
SAW Gunner Configuration

The **Grenadier configuration** consists of ten 40mm single high explosive grenade pouches, two double high explosive grenade pouches and two double pyrotechnic round pouches.

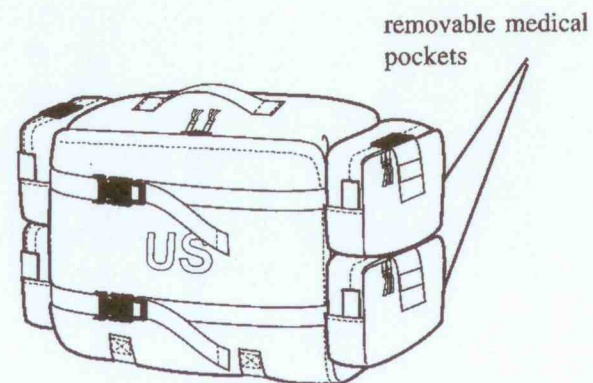


Grenadier Configuration

The **Medic configuration** will receive four zippered medical pouches for the vest and three M4 Two magazine pouches. There will also be a specialized panel loading medical bag that has an additional four removable medical pouches attached to it.



Medic Configuration



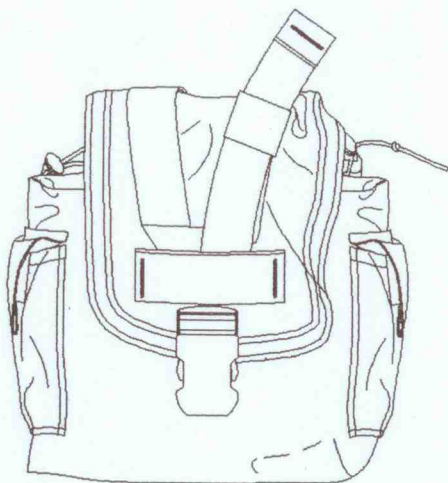
Medical Bag

Canteen/General Purpose Pouch

The canteen/general purpose pouch has a variety of uses.

When using the pouch as a canteen carrier, simply slide the top flap down inside the back of the pouch before inserting the canteen and cup. Allow the V-shaped straps to pass over the neck of the canteen and fasten the buckle.

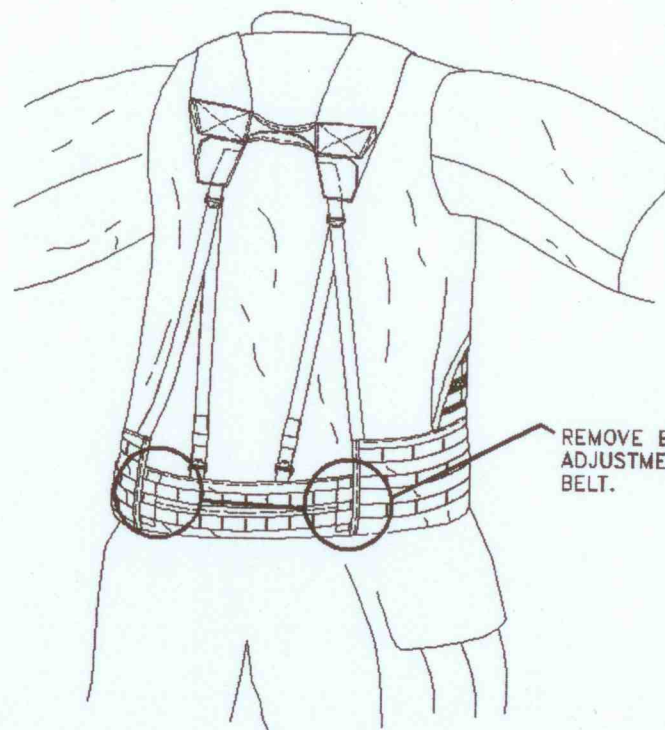
For all other applications pull the top flap out, insert the V-shaped strap under the webbing on the top flap and secure the plastic fastener on the front of the pouch. This pouch is able to hold one stripped down MRE, five M-16 or M-4 magazines, or ANPVS 14 goggles insert, and various other items. The side pockets on the pouch are designed for first aid dressings, water purification tablets, strobe light or other small equipment.



Fighting Load Carrier Adjustments

Size adjustments to the vest are made in the following manner:

- A. Remove the stiffened webbing adjustment tabs from the two slots on the vest belt.
- B. Place the vest on the body.

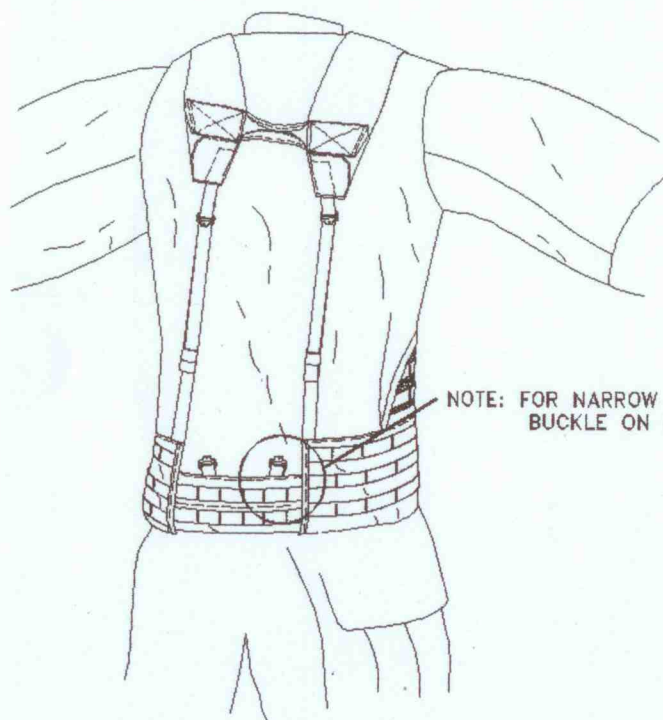


- C. Position both vest panels so they fit comfortably on the torso or body armor.
- D. Reinsert the stiffened webbing tabs on the back of the belt in the appropriate location.

To fit extremely narrow torsos, remove each of the 1-inch webbing from the two metal friction buckles on the back of the belt. Remove the stiffened adjustment tabs from the loops. Slide the vest panels towards the center back of the belt until a proper fit is achieved. Secure the webbing adjustment tabs and wear the vest as shown. Secure loose ends of 1-inch webbing with the elastic keepers.

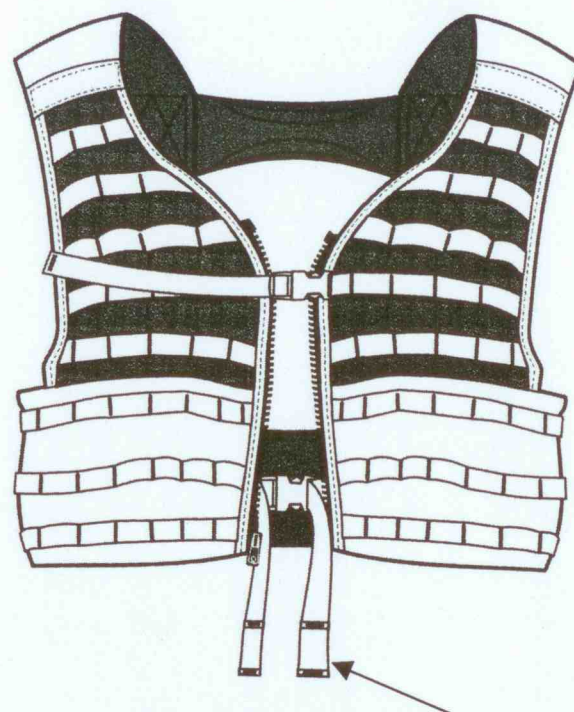
Note that with narrow waists the metal friction buckle on the belt is not used.

The buckles are shown for clarity in the illustration below, but when properly adjusted for narrow waists, they will be hidden inside the vest panel tunnels.



NOTE: FOR NARROW ADJUSTMENT
BUCKLE ON BELT IS NOT USED

Once the belt is adjusted properly, adjust the waist belt webbing and side release buckle. Stow the remaining webbing in the keeper buckle, and tuck free-running ends of webbing in the vest panel tunnels.

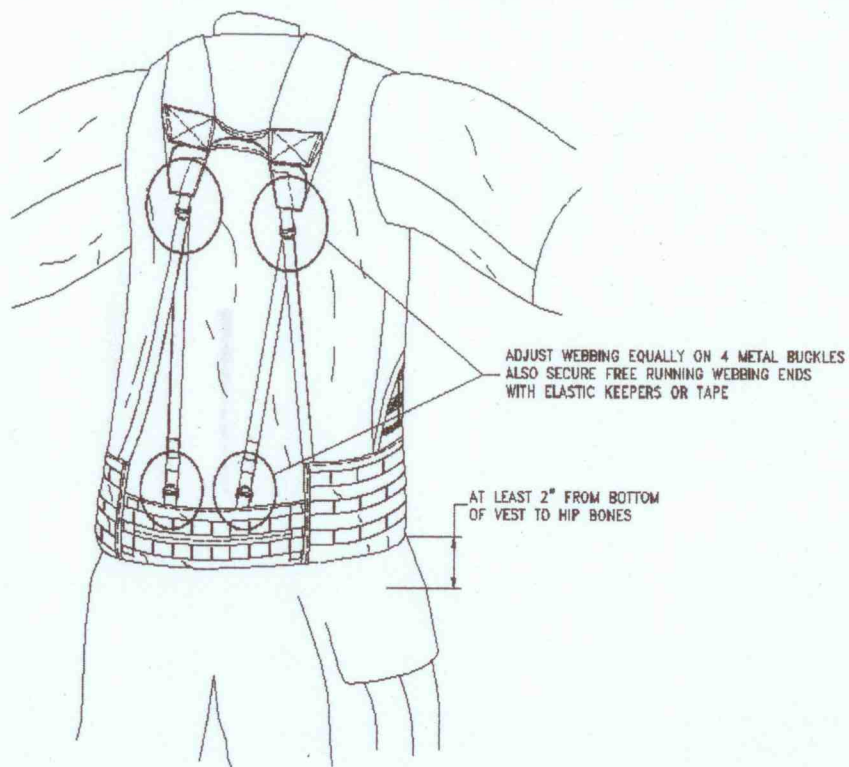


Stow webbing ends in vest panels

To adjust the height of the vest, position the bottom of the vest no less than 2 inches above the wearer's hip bones to allow space for proper use of the pack hip belt.

Adjust the webbing equally on the 4 metal buckles on the back of the vest.

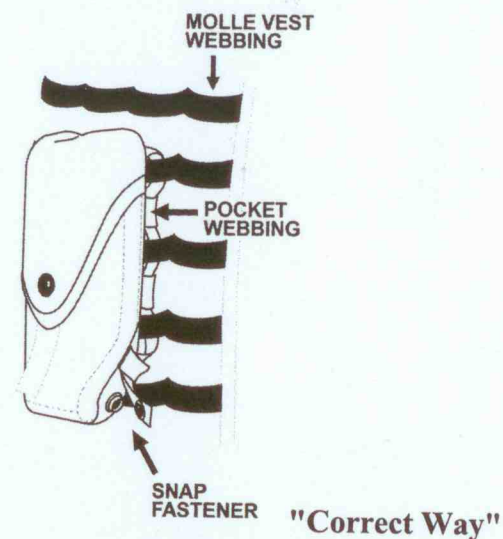
Secure the free running ends of all webbing with the elastic keepers or tape.



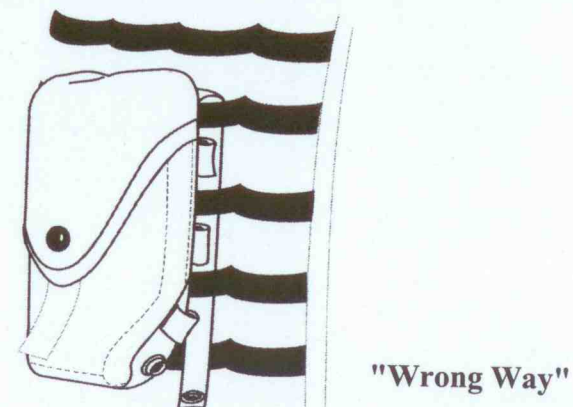
Pouch/Pocket Attachment

To properly attach a pouch/pocket, choose the desired attachment point on the vest panel. Line up the top of the pouch evenly with the top of the nearest horizontal one-inch webbing that goes across the panels. Insert the pouch attachment strap down the 1 1/2" channel, then behind the 1" webbing on the back of the pouch. Continue weaving the attaching strap behind the horizontal webbing on the vest and the webbing on the back of the pouch until the pouch is secured along its entire length.

This attachment system is extremely secure and stable when properly used.

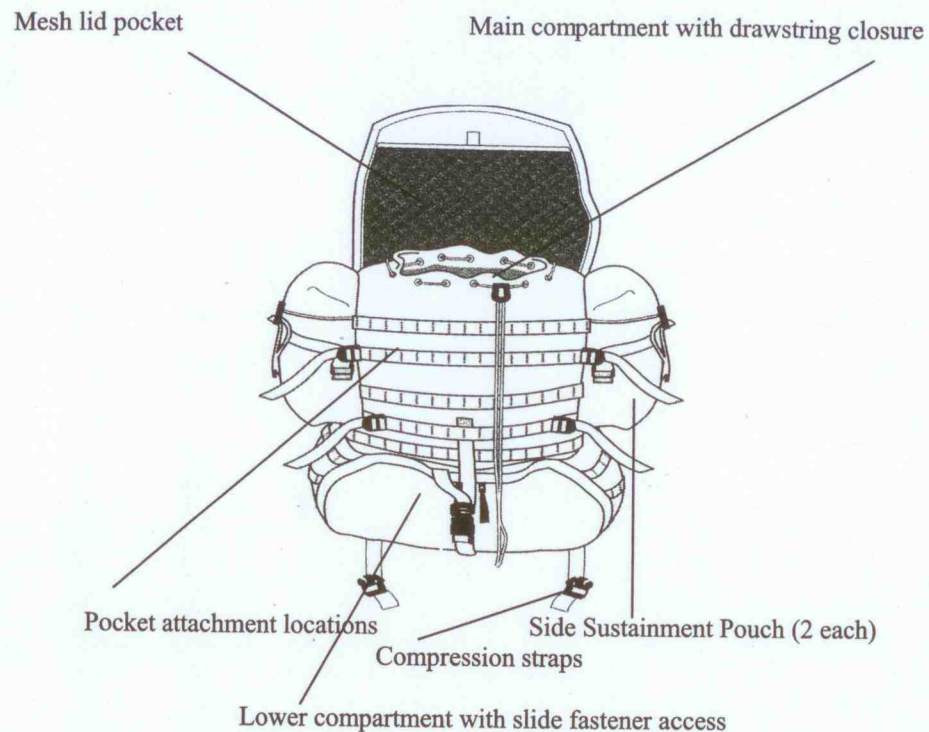


Do not simply place the attaching strap through the vest webbing without the interlocking weave. The pouches will not be secure if attached in this manner.



The **Large Ruck** shoulder straps and waist belt come pre-assembled to the **Frame**. The other components are provided as add-ons, that can be attached as needed.

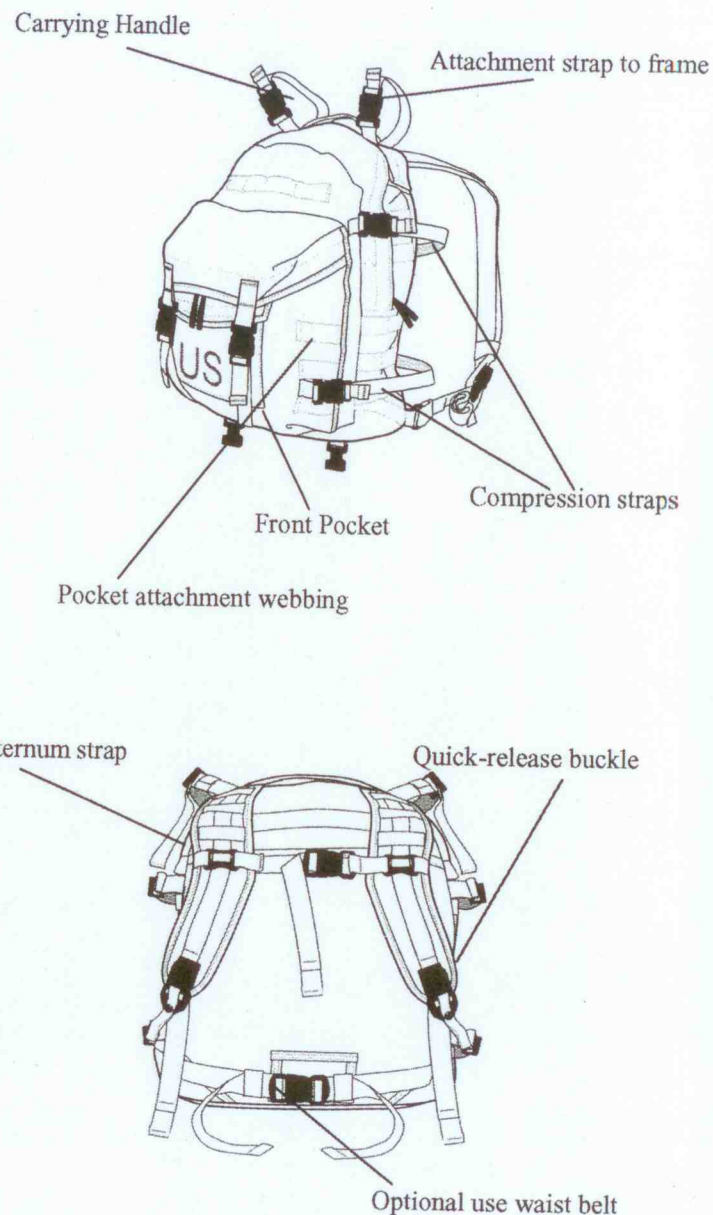
MOLLE Large Ruck:



The MOLLE Large Ruck capacity is 4000 cubic inches. The side sustainment pouch capacity is 500 cubic inches each.

The top flap of the Large Ruck is a mesh pocket for small reference and information materials. It is secured with a hook and loop closure.

Assault Pack

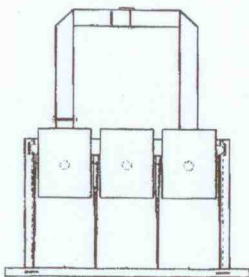


The Assault Pack has a total volume of 2000 cubic inches. The radio pouch shown on page 21 can be attached to the rear panel of the assault pack utilizing the one inch oval loops.

Inside of the Assault Pack there are two white straps used for airborne operations. These straps can attach directly to the parachute harness D-rings. If a lowering line is used there is also an attachment loop. Consult procedures in FM 3-21-220 for proper rigging instructions.

Bandoleer

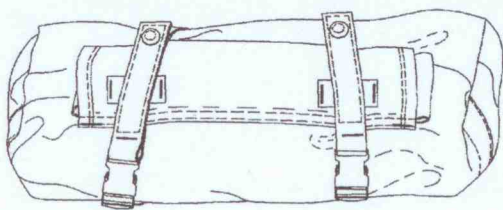
There is a removable six magazine bandoleer. It fits in the front pocket of the Assault Pack or it can be slung across the shoulders.



Waist Pack

The multi-purpose Waist Pack which 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.

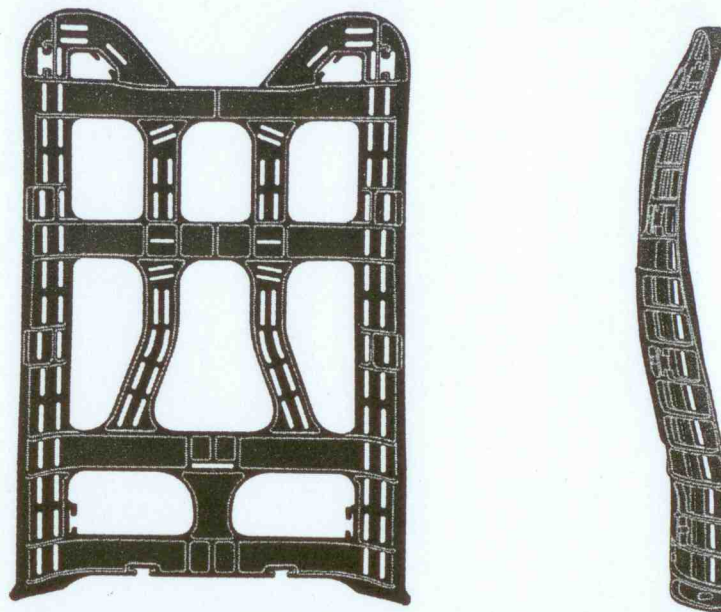
It can be attached directly to the FLC by utilizing the stiffened webbing tabs on back woven into the corresponding slots on the back of the FLC. It can be carried in the "stand alone" configuration by utilizing the attached two inch wide waist belt. This method allows the user to rotate the Waist Pack around in front to easily access the contents of the pack, without removing the FLC or Patrol Pack. [Note: When not used in this mode, ensure the attached waist belt is stowed into the tunnel on back of the Waist Pack.]



WAIST PACK

Frame

The molded frame 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.



Adjusting Straps on Frame

The shoulder strap suspension of the frame is adjusted by securing the one-inch webbing around the frame in the appropriate location using the slide buckle.

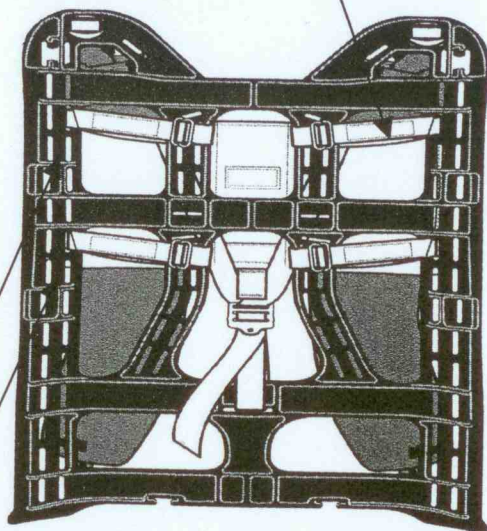
The proper location is determined by donning the frame, and fastening the waist belt buckle while wearing the vest. Position the shoulder straps so there is complete contact with the shoulder. For short torsos, move the waistbelt location on the frame as shown in the next illustration. If more adjustment is needed, move the shoulder strap location on the frame.

A properly positioned waistbelt will cover the hip bone. After the one inch webbing is secured around the frame to hold the shoulder straps in place, wrap the 1 1/2 inch webbing around the cross bar and secure with the slide buckle.

CAUTION

Proper attachment of the shoulder straps to the frame is **extremely** important to prevent unstable loads.

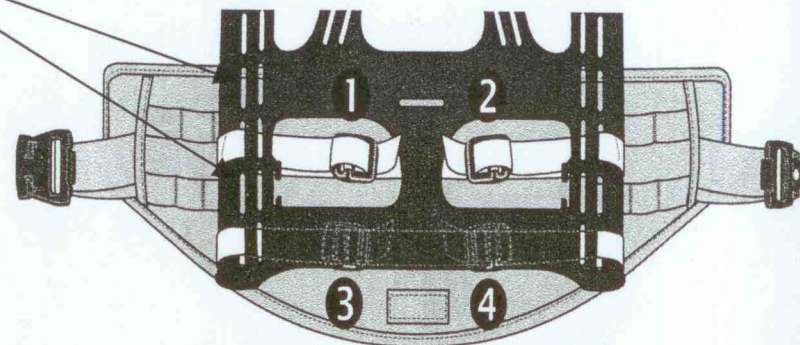
Pull tight and fasten hook and loop closure



Move location of shoulder attachment straps for short torsos

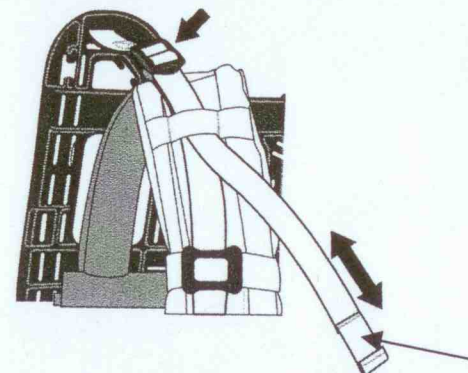
The waistbelt should be permanently connected to the frame utilizing 4 non-slip buckles as shown. For a short torso length, the waist belt can be moved as indicated in the illustration.

Move all four waist belt attachment straps up one location on frame for short torsos



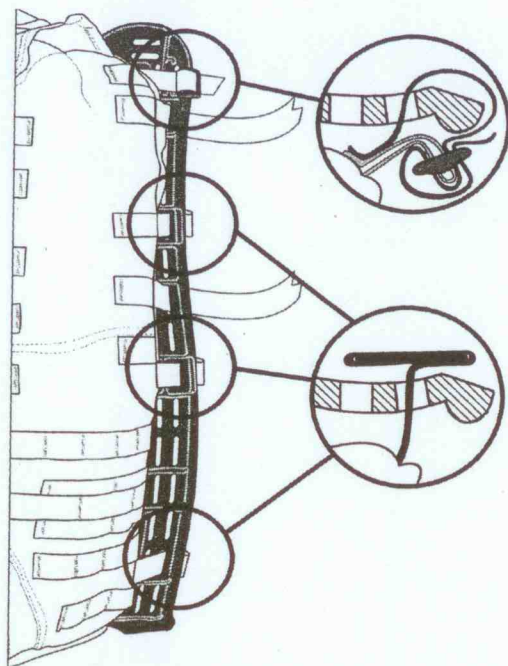
The load-lifter straps can be used to adjust the pack while marching. The weight of the pack can be transferred from the shoulders to the hips and back again by either cinching the 1" webbing down or by loosening the webbing by adjusting the non-slip buckle.

Lift buckle tab to put more weight on shoulders



Pull to place more weight on hips

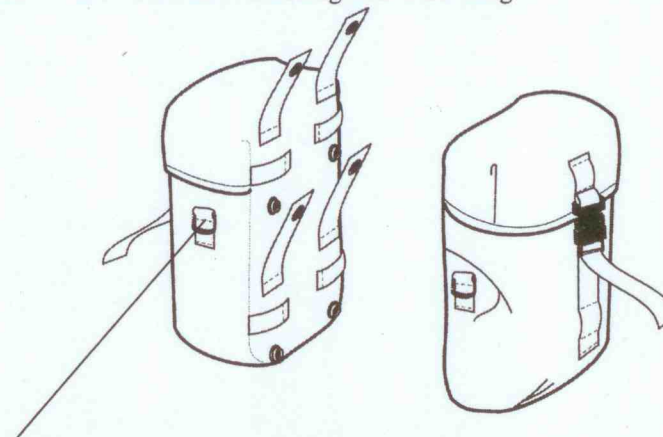
The ruck attachment straps are attached at the top slot on the frame with a three-bar buckle and webbing.



The sides of the ruck are attached to the frame by using the folded webbing as toggles through the vertical openings.

The Large Ruck has two large, removable Sustainment Pouches which attach to the side of the ruck using the same interlocking attachment system as the FLC pockets. These Sustainment Pouches each contain two D-rings on the sides, which allow them to be carried by the General Purpose Sling for alternate uses.

The Sustainment Pouches can also be added to the side of the Assault Pack to add 1000 cubic inches to its capacity. All of the large pouches of the MOLLE system have D-rings on the sides to allow the item to be slung with a GP sling.

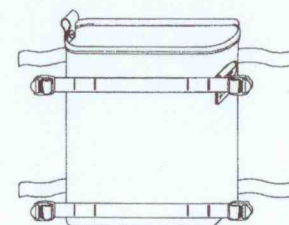


GP Sling Attachment Points

Radio Operators:

The Large Ruck contains a collar made of water-resistant material which is secured with a cord and barrel lock. Inside the Large Ruck, against the back panel is a removable radio pouch designed to carry a SINGARS/ASIP radio.

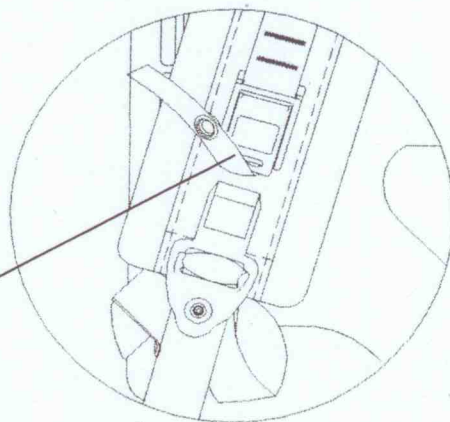
Radio Pocket



This removable pouch contains D-rings on each side to allow the radio to be carried by the General Purpose Sling when a pack is not needed. When the radio must be carried in the Large Ruck, the radio pouch is secured to the four black metal loops on the inside of the Large Ruck using the one-inch webbing.

Donning and Doffing

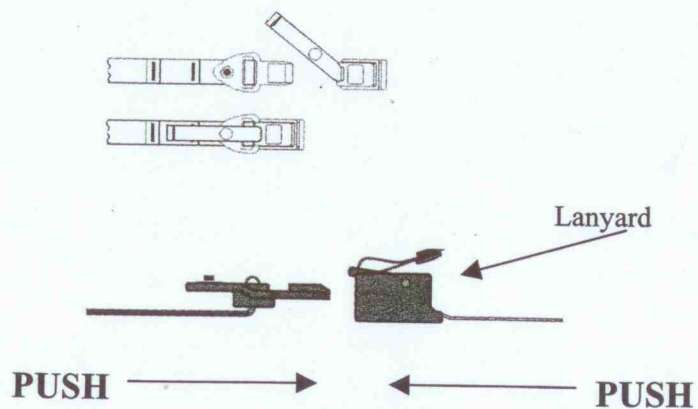
ALWAYS disengage waistbelt buckle and chest strap first.



Lanyard

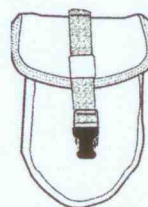
Emergency doffing can be accomplished by sharply pulling upward on the quick-release lanyard to disengage the buckle and letting the pack fall away.

The Main Pack can also be doffed when in the prone position by simply activating one of the shoulder strap quick-releases and letting the pack fall off by twisting to one side when the waist belt and chest straps are also disengaged. To re-attach the quick-release buckle, simply insert the male portion into the female portion and push until the latch tab clicks. Do not try to push down on the latch tab.

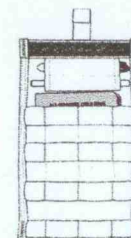


MOLLE ACCESSORIES

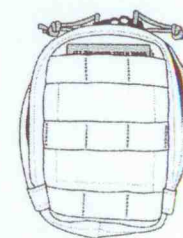
There are many accessory components to the MOLLE system that can be ordered by the unit from the supply system. These include the E-tool Carrier, and pouches for the Flashbang, MBITR Radio, PVS-14 night vision device, and administrative tools.



E-tool carrier



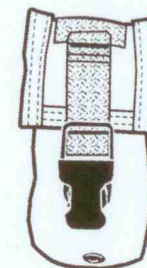
Admin. Pouch



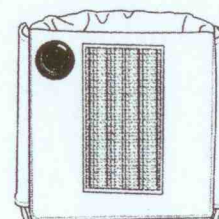
Leaders Pouch



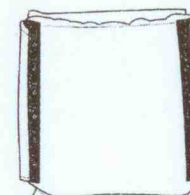
MBITR Radio Pouch



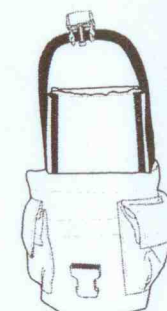
Flashbang Pouch



Rear View



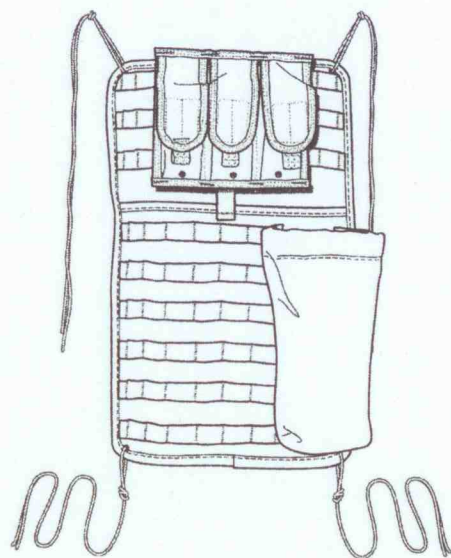
Front View



Inserted in Canteen Pouch

PVS-14 Insert

The PVS-14 Insert is a fabric/foam protective shell that is inserted in the Canteen/GP Pouch to carry the PVS-14 night vision device. It has a large grommet on the back side as a tie-down point.



MOLLE Vehicle Panel

The MOLLE Vehicle Panel (MVP) is designed to allow the user to attach ammunition pouches or other mission essential items in a vehicle without taking up valuable space on the individual's FLC. The MVP has tie cords in each corner to allow mounting on various points of military vehicles. The permanently mounted "dump pouch" is designed for storing empty M4 magazines.

MOLLE CONFIGURATIONS

Get to know your MOLLE system and experiment with different load configurations. Get used to removing items that are not needed so the load is as clean and streamlined as possible.

There are several possible load configurations. Three common configurations are:

1. The Light Fighting Load which consists of the FLC and Waist Pack.



2. The Assault Pack Load consists of the Fighting Load Carrier, Waist Pack and Assault Pack.

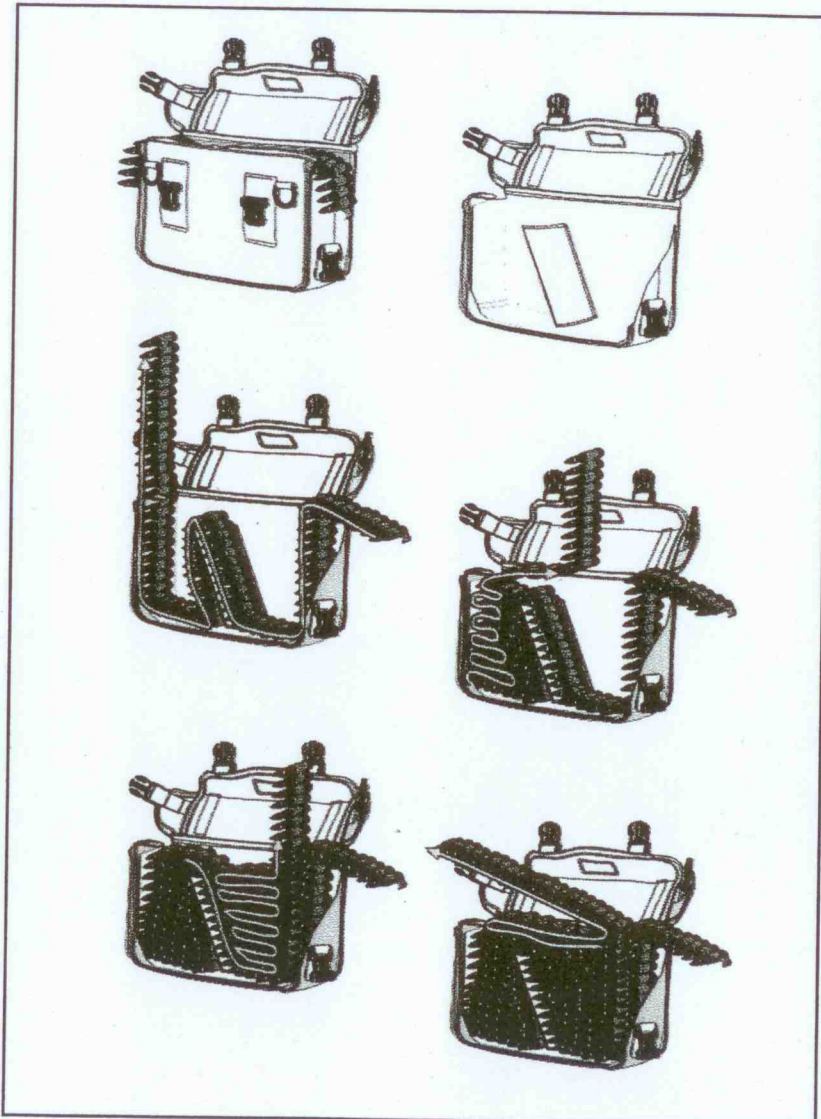


3. The Full Pack Load consists of the Fighting Load Carrier, Waist Pack, Assault Pack plus Large Ruck.



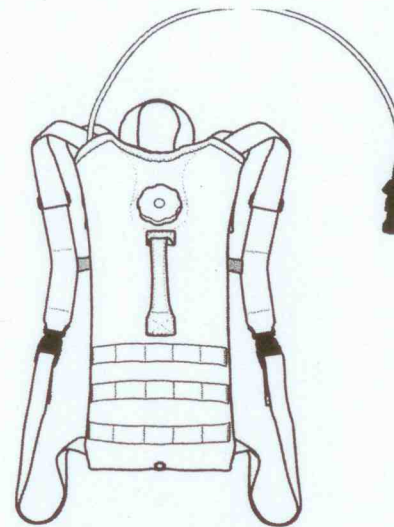
M240 Ammo Bag

The M240 ammo bag is designed to carry 300 rounds of 7.62mm linked ammo. It is slung with a three-inch-wide padded strap. The ammunition feeds directly out of the bag. The proper loading of the bag is illustrated below.

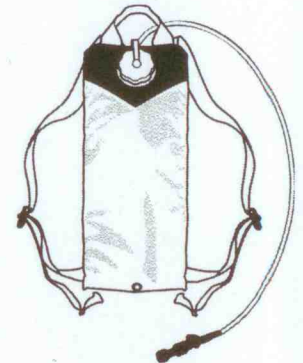


Hydration

The MOLLE comes with an On-the-Move tube hydration system for special missions where hands-free drinking is desired. This system is intended to supplement, not replace, the 1-quart canteen. There are two similar designs that are approved for use in the MOLLE. Each system is shown in the illustrations below. You will receive one of these. The hydration system requires regular cleaning as described below.



Hydramax



Storm

Care and Use:

1. Rinse hydration system with mild soap and hot water before first use and after each use.
2. To freshen, add 2 teaspoons of baking soda to a full system of water and let soak overnight. Rinse well.
3. To sanitize, add 2 teaspoons of bleach to a full system of water and let soak overnight. Rinse thoroughly.
4. The use of liquids other than water will accelerate mold growth and will require more frequent cleaning.

BE SURE THE CAP IS SCREWED DOWN ALL THE WAY 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.

Cleaning and Maintenance of MOLLE II Equipment

Scrape dirt and dust from the item using a brush that will not cut into the fabric.

Using mild detergent or soap, hose or wash the item in a pail of water.

Rinse thoroughly with clean water.

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

Dry the item in shade or indoors. Do not dry in direct sunlight, direct heat or open flame.

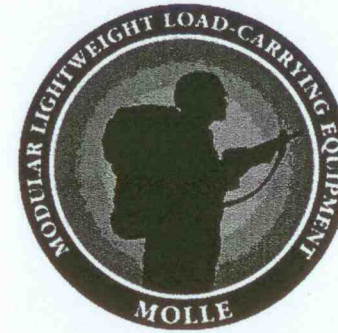
Do not launder or dry item in fixed commercial home-type laundry equipment.

Do not attempt to dye or repair.

Turn in for repair or replacement.

Remember, extremely dirty or damaged equipment can eventually fail to perform its intended function.

Our mission is to provide Soldiers and Marines with the best combat equipment possible.



If you have any questions or comments which can enhance the MOLLE system, call the Natick Soldier Center **hotline** at DSN 256-5341 or commercial 508-233-5341.

MOLLE COMPONENTS (Universal Camouflage)

Description	NSN Number
MOLLE, Rifleman Set	8465-01-525-0578
MOLLE, SAW Gunner Set	8465-01-524-7362
MOLLE, Grenadier Set	8465-01-524-7624
MOLLE, Pistol Set	8465-01-524-7328
MOLLE, Combat Medic Set	8456-01-524-7632
MOLLE, Hydration System (Storm)	8465-01-524-8396
MOLLE, Bladder, Hydration (Storm)	8465-01-465-2096
MOLLE, Carrier, Hydration (Storm)	8465-01-524-5232
MOLLE, Hydration System (Hydramax)	8465-01-525-5531
MOLLE, Bladder, Hydration (Hydramax)	8465-01-519-2304
MOLLE, Carrier, Hydration (Hydramax)	8465-01-524-8362

MOLLE, Pouch, Grenade, Hand	8465-01-525-0589
MOLLE, Pouch, M4 Two Mag	8465-01-525-0606
MOLLE, Pack, Assault	8465-01-524-5250
MOLLE, Adapter, ALICE Clip	8465-01-524-7253
MOLLE, 100 Round Pouch	8465-01-524-7365
MOLLE, Buckles, Repair Set	8465-01-524-7639
MOLLE, Waist Pack	8465-01-524-7263
MOLLE, Canteen, General Purpose Pouch	8465-01-525-0585
MOLLE, Pouch, M4 Three Mag Side x Side	8465-01-525-0598

NOTES

Description	NSN Number
MOLLE, Pouch, Radio	8465-01-524-7684
MOLLE, Straps, Lashing	8465-01-524-7689
MOLLE, Fighting Load Carrier (FLC)	8465-01-525-0577
MOLLE, Pack, Frame	8465-01-524-8368
MOLLE, Waistbelt, Molded	8456-01-524-7232
MOLLE, Pouch, Sustainment	8465-01-524-7226
MOLLE, Straps, Shoulders, Frame	8465-01-524-7240
MOLLE, Pouch, 6 Magazines, Bandoleer, M16A2	8465-01-524-7309
MOLLE, Ruck, Large	8465-01-524-5285
MOLLE, Pouch, 200 Round SAW Gunner	8465-01-524-7620
MOLLE, Adapter, K-Bar	8465-01-524-7246
MOLLE, Pouch, 40mm High Pyrotechnic Double	8465-01-524-7636
MOLLE, Pouch, 40 mm High Explosive Double	8465-01-524-7628
MOLLE, Pouch, 40mm High Explosive Single	8465-01-524-7625
MOLLE, Pouch, Flashbang	8465-01-524-7324
MOLLE, Pouch, MBITR Radio	8465-01-524-7692
MOLLE, Pouch, Shotgun Shell	8465-01-524-7691
MOLLE, Bag, Ammo, 300 Round, 7.62	8465-01-524-7694
MOLLE, Carrier, Entrenching Tool	8465-01-524-8407
MOLLE, Holster Leg Extender	8465-01-524-7345