
**ALL-PURPOSE LIGHTWEIGHT INDIVIDUAL
CARRYING EQUIPMENT
(ALICE)**



**Prepared by
Clothing and Personal Life Support Equipment Laboratory
U.S. Army Natick Laboratories, U.S. Army Troop Support Command**

NOVEMBER 1973

TABLE OF CONTENTS

INTRODUCTION	1
YOUR INDIVIDUAL FIGHTING LOAD CARRIERS	6
ASSEMBLING YOUR FIGHTING LOAD CARRIERS	8
Adjusting your Equipment Belt	8
Attaching the Ammunition Cases to your Belt	10
Attaching the Suspenders to the Ammunition Cases and Belt	12
Attaching the Intrenching Tool Carrier, Canteen Cover, First Aid Dressing/Compass Case, and Bayonet Scabbard	14
Adjusting the Front and Back Suspender Straps	16
YOUR INDIVIDUAL EXISTENCE LOAD CARRIERS	18
ASSEMBLING YOUR EXISTENCE LOAD CARRIERS	20
Adjusting the Pack Frame Lower Back Strap	20
Attaching the Shoulder and Waist Straps	22
Attaching the Cargo Shelf and Cargo to the Frame	24
Adjusting the Shoulder and Waist Straps	26
MEDIUM PACK	28
General Description	28
Closing the Loaded Pack	30
Attaching the Shoulder Straps to the Medium Pack	32
Attaching your Bed Roll	32
LARGE PACK	35
General Description	35
Attaching the Large Pack to the Frame	36
QUICK RELEASES	38
CLEANING AND MAINTENANCE	40

INTRODUCTION

Your carrying system was designed so that you can carry equipment needed for various field conditions. You will have two types of loads to carry:

FIGHTING LOAD (see Figure 1a)

EXISTENCE LOAD (see Figure 1b)



Figure 1a. Fighting Load



Figure 1b. Existence Load

The equipment you will carry for each load will vary according to the intended mission. The fighting load includes only those items essential for accomplishing the combat mission at hand. The existence load includes the additional items you will need to exist in the field.

Most of the time, existence load items will be brought up to you on some form of transportation but in many cases you will have to man-pack the existence load with such items as extra ammo, water, rations, clothing, and sleeping gear. In addition, special loads such as radios, crew-served weapons, gasoline, etc., will also have to be man-packed by you.

Normally, you will carry the existence load in the "medium" pack. In cases where you will have to carry larger loads, a "large" pack is furnished.

You can use your load carrying system in all environments — hot or temperate, and in cold-wet or cold-dry Arctic regions.

Carrying your equipment is a hard enough job in itself, but to carry it wrong makes the job just that much more difficult. Since most of us like to do things the easiest and best way, this instruction manual was written to help you do just that — carry your equipment in the easiest and best way.

Everything you have to carry has its place in, or is attached to, your carrying equipment. The most important items are the most easily reached.

KNOW YOUR EQUIPMENT WELL!

ASSEMBLE YOUR EQUIPMENT CORRECTLY!

KEEP EVERY ITEM IN ITS PROPER PLACE!

— and DO NOT make the mistake of the soldier who makes a pack mule of himself with all kinds of unnecessary items of clothing, food, equipment, knick knacks, and whatever.



YOUR INDIVIDUAL FIGHTING LOAD CARRIERS

Your fighting load equipment is made up of the following items (See Figure 2):

- ① 1 each Belt, Individual Equipment (size – Medium or Large)
- ② 2 each Case, Small Arms Ammunition (30-Rd Mag)
- ③ 1 each Suspenders, Belt, Individual Equipment
- ④ 1 each Carrier, Intrenching Tool, Plastic
- ⑤ 1 each Cover, Canteen (1 Quart)
- ⑥ 1 each Case, Field First Aid Dressing/Unmounted Magnetic Compass

This instruction manual describes and illustrates the latest standard carriers. However, any of the following M-56 components can be used together with the new items until supplies are exhausted.

Belt, Individual Equipment
Suspenders, Belt, Individual Equipment
Case, Ammunition (20-Rd Mag, M-14)
Case, Ammunition (20-Rd Mag, M-16)
Case, First Aid/Compass
Cover, Canteen
Carrier, Intrenching Tool (for use with wooden handle intrenching tool only)
Pack, Combat

Illustrations are shown where attachment of the older equipment is different.

NOTE: The new Lightweight Pack Frame, Shoulder Straps and Medium and Large Packs are not interchangeable with any components of the Tropical Rucksack or the Lightweight Rucksack with Frame. Either of these Rucksacks, however, may be worn together with the new fighting load carriers.

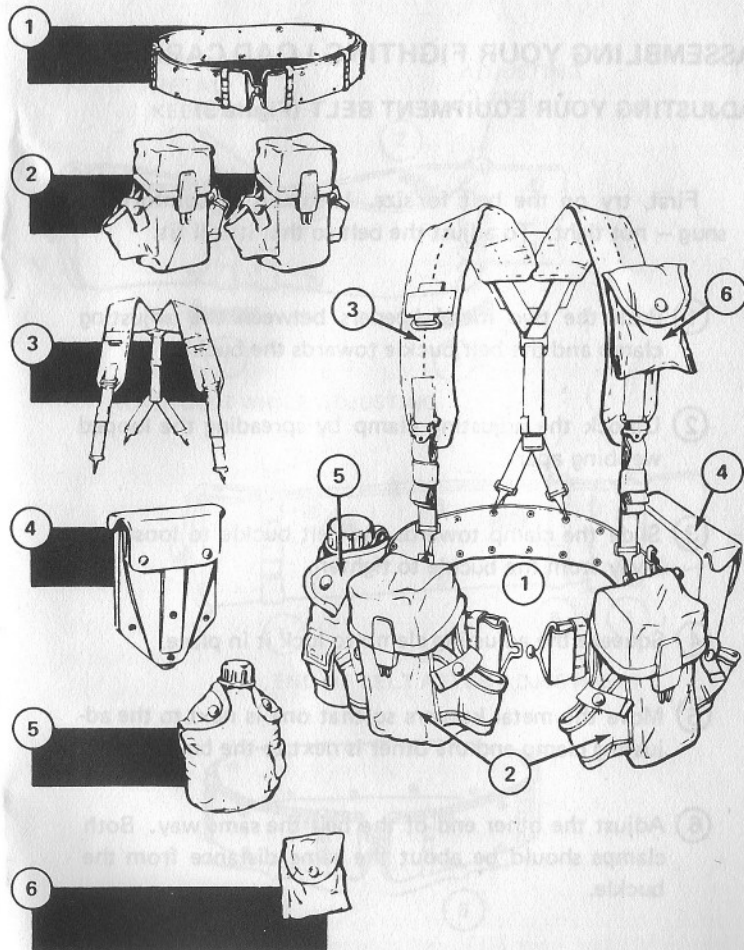


Figure 2. Fighting Load Carriers

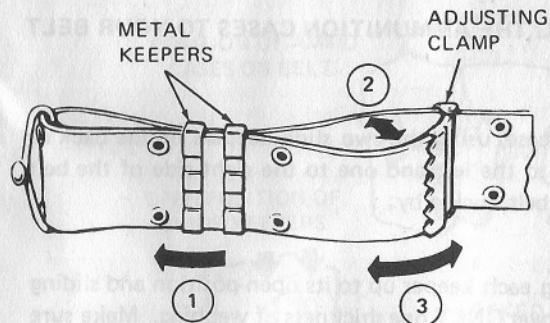
ASSEMBLING YOUR FIGHTING LOAD CARRIERS

ADJUSTING YOUR EQUIPMENT BELT (Figure 3)

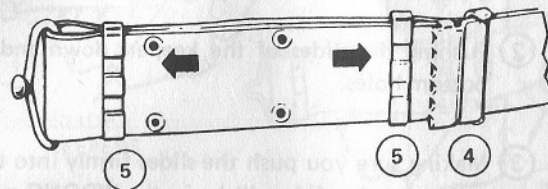
First, try on the belt for size. It should be comfortably snug – not tight. To adjust the belt so that it will fit:

- 1 Push the two metal keepers between the adjusting clamp and the belt buckle towards the buckle.
- 2 Unlock the adjusting clamp by spreading the looped webbing apart.
- 3 Slide the clamp towards the belt buckle to loosen or away from the buckle to tighten.
- 4 Squeeze the adjusting clamp to lock it in place.
- 5 Move the metal keepers so that one is next to the adjusting clamp and the other is next to the buckle.
- 6 Adjust the other end of the belt the same way. Both clamps should be about the same distance from the buckle.

Your belt is now ready for attaching the equipment onto it.



END OF BELT WHILE ADJUSTING



END OF BELT AFTER ADJUSTMENT

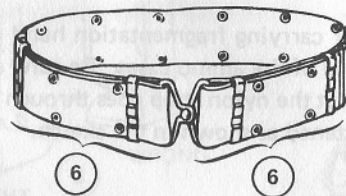


Figure 3. Adjusting the Carrier Belt

ATTACHING THE AMMUNITION CASES TO YOUR BELT (Figure 4)

Attach a case, using the two slide keepers on the back of it, one case to the left and one to the right side of the belt close to the belt buckle by:

- 1 Pulling each keeper up to its open position and sliding them over **ONLY** one thickness of webbing. Make sure the keepers are vertical and the bottoms are out beyond the webbing.
- 2 Pushing the slides of the keepers down and into the bottom holes.
- 3 Making sure you push the slides firmly into the holes, otherwise the slide will be in the **WRONG** position as shown in the sketch, and the equipment could fall off.
- 4 Pockets for carrying fragmentation hand grenades are on each side of the ammo cases. Be sure, after putting them in, that the nylon strap goes through the ring and is snap fastened as shown in the sketch.
- 5 If you have 20-round magazine cases for the M-14 or M-16 rifle, the sketch in the block on Figure 5 shows the way to attach them.

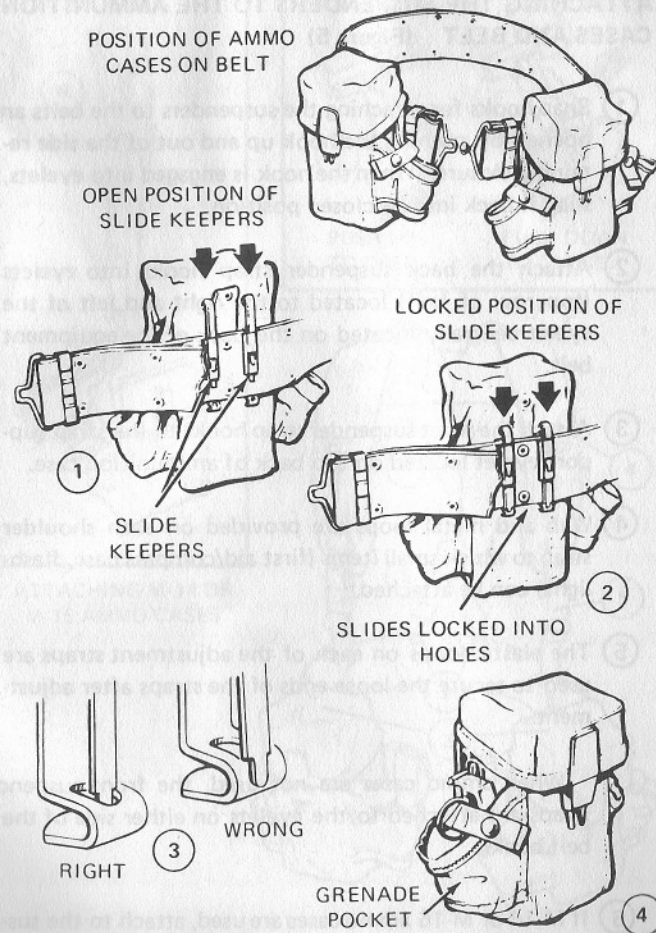


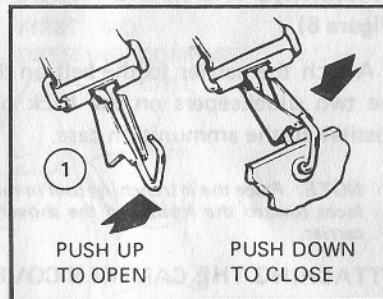
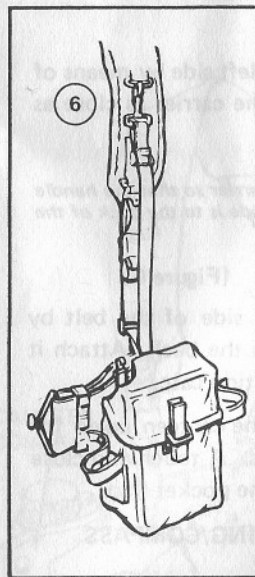
Figure 4. Attaching Ammunition Cases to Your Belt

ATTACHING THE SUSPENDERS TO THE AMMUNITION CASES AND BELT (Figure 5)

- 1 Snap hooks for attaching the suspenders to the belts are opened by pushing the hook up and out of the side retaining closure. When the hook is engaged into eyelets, snap it back into its closed position.
- 2 Attach the back suspender strap hooks into eyelets (top row of belt) located to the right and left of the eyelet centrally located on the back of the equipment belt.
- 3 Attach the front suspender strap hooks to the strap support eyelet located on top back of ammunition case.
- 4 Web and metal loops are provided on each shoulder strap to which small items (first aid/compass case, flashlight) can be attached.
- 5 The elastic loops on each of the adjustment straps are used to secure the loose ends of the straps after adjustment.

When ammo cases are not used, the front suspender straps are attached to the eyelets on either side of the belt buckle.

- 6 If M-14 or M-16 ammo cases are used, attach to the suspenders, as shown in the sketch.



ATTACHING M-14 OR
M-16 AMMO CASES

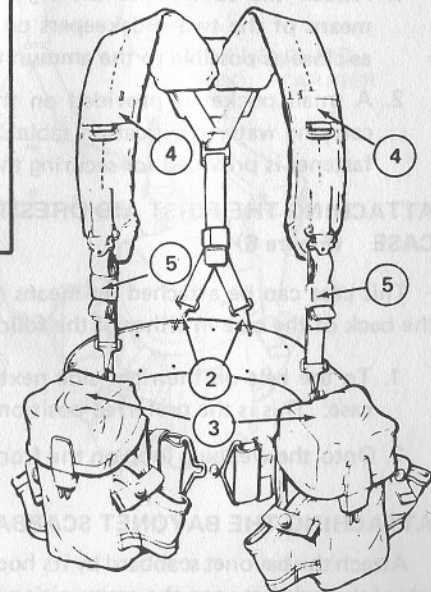


Figure 5. Attaching Suspenders to Ammunition Cases and Belt

ATTACHING THE INTRENCHING TOOL CARRIER

(Figure 6)

Attach the carrier to the belt on the left side by means of the two slidekeepers on the back of the carrier as close as possible to the ammunition case.

NOTE: Place the intrenching tool in the carrier so that the handle faces toward the front and the shovel blade is to the back of the carrier.

ATTACHING THE CANTEEN COVER (Figure 6)

1. Attach the cover onto the right side of the belt by means of the two slidekeepers on the back. Attach it as close as possible to the ammunition case.
2. A small pocket is provided on the canteen cover for carrying water purification tablets. A touch and close fastener is provided for securing the pocket flap.

ATTACHING THE FIRST AID DRESSING/COMPASS CASE (Figure 6)

(Figure 6)

This case can be attached by means of the slidekeeper on the back of the case in either of the following positions.

1. To the belt on the right side next to the ammunition case. This is the preferred position.
2. Onto the webbing loop on the front of the suspenders.

ATTACHING THE BAYONET SCABBARD

Attach the bayonet scabbard by its hooks to the lower eyelets of the belt between the ammunition case and intrenching tool carrier.

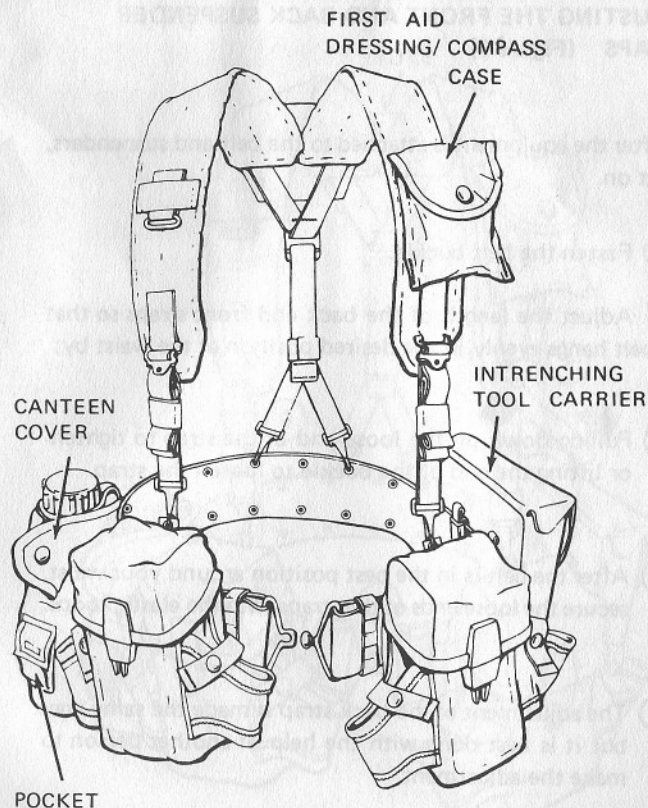


Figure 6. Attaching Intrenching Tool Carrier, Canteen Cover, and First Aid Dressing/Compass Case

ADJUSTING THE FRONT AND BACK SUSPENDER STRAPS (Figure 7)

After the equipment is attached to the belt and suspenders, put it on.

- 1 Fasten the belt buckle.

Adjust the length of the back and front straps so that the belt hangs evenly in the desired position at the waist by;

- 2 Pulling down on the loose end of the strap to tighten or lifting the end of the buckle to loosen the strap.
- 3 After the belt is in the best position around your waist, secure the loose ends of the straps with the elastic loops.

- 4 The adjustment of the back strap is made the same way but it is best done with the help of another person to make the adjustment.

- 5 Care should be taken in adjusting the straps so that not only does the belt hang at the proper waist level but that the yoke is positioned for your maximum comfort.

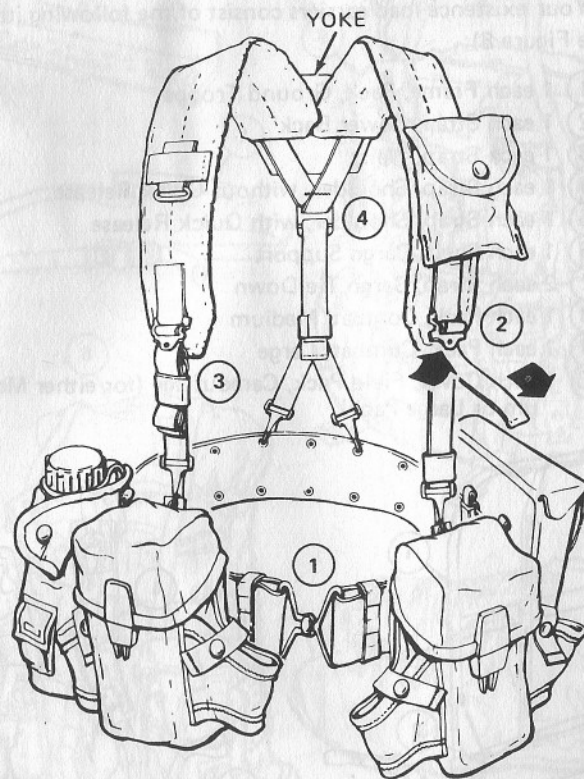


Figure 7. Adjusting Suspender Straps

YOUR INDIVIDUAL EXISTENCE LOAD CARRIERS

Your existence load carriers consist of the following items (see Figure 8):

- ① 1 each Frame, Pack, Ground Troops
- ② 1 each Strap, Lower Back
- ③ 1 each Strap, Waist
- ④ 1 each Strap, Shoulder, without Quick Release
- ⑤ 1 each Strap, Shoulder, with Quick Release
- ⑥ 1 each Shelf, Cargo Support
- ⑦ 2 each Strap, Cargo Tie-Down
- ⑧ 1 each Pack, Combat, Medium
- ⑨ 1 each Pack, Combat, Large
- ⑩ 1 each Cover, Field Pack, Camouflage (for either Medium or Large Pack)

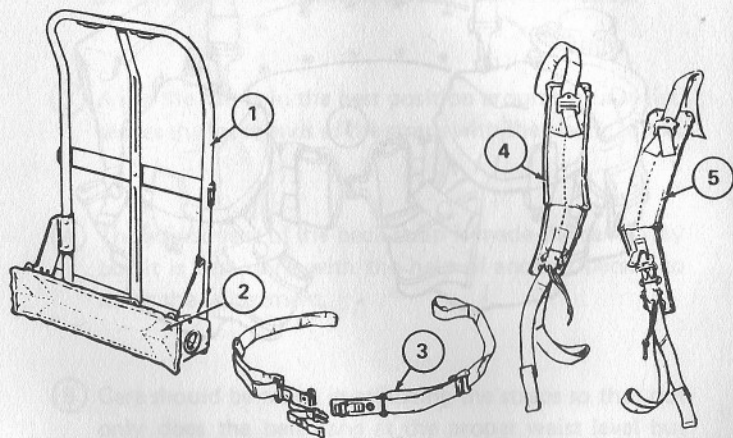


Figure 8. Individual Existence Load Carriers

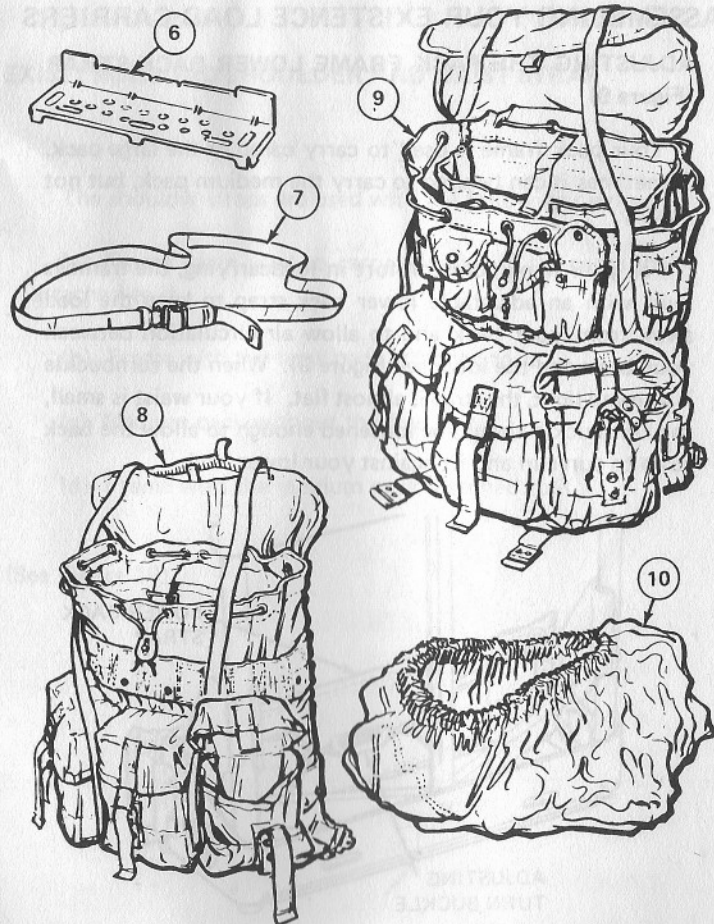


Figure 8. (Cont.)

ASSEMBLING YOUR EXISTENCE LOAD CARRIERS

ADJUSTING THE PACK FRAME LOWER BACK STRAP

(Figure 9)

Your pack frame is used to carry cargo or the large pack. Sometimes it can be used to carry the medium pack, but not usually.

For your maximum comfort in loadcarrying, the frame is built with an adjustable lower back strap to keep the load away from your back and to allow air circulation between your back and the load (see Figure 9). When the turnbuckle is screwed tight, the strap is almost flat. If your waist is small, the turnbuckle should be loosened enough to allow the back strap to curve in and fit against your lower back.

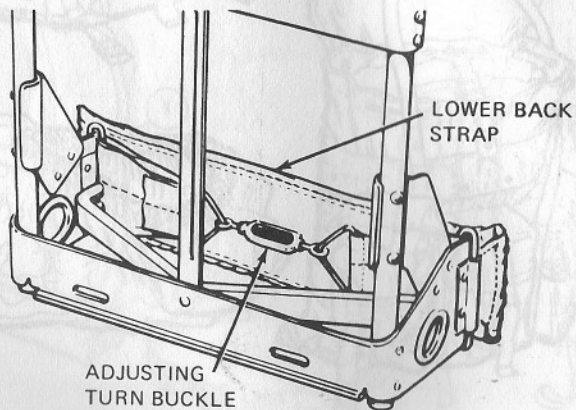


Figure 9. Lower Part of Pack Frame

EXISTENCE LOAD SHOULDER AND WAIST STRAP

The shoulder straps are used with the following carriers:

- (a) Frame when used to carry a load with the cargo shelf attached to it,
- (b) Frame with the large pack attached to it,
- (c) Medium pack without the frame,
- (d) Frame with the medium pack attached to it.

(See Figure 10)

ATTACHING THE SHOULDER STRAPS (Figure 10)

One strap is for your right shoulder, the other, with the quick release assembly is for your left shoulder. The quick release assembly is described later in this manual.

To attach the straps to the frame:

- 1 Insert the looped end of the strap from the **INSIDE** of the frame through the nylon ring at the bottom side, thread the strap through the loop, and pull tight.
- 2 Insert the webbing at the top of your strap through the metal keeper on the top of the frame, through the buckle, and pull tight. The padded end of the strap should normally be under the frame bar.

ATTACHING THE WAIST STRAPS

Like the shoulder straps, the waist straps also are made with a quick release assembly. The pull tab is shown on the strap assembled to the frame. Attach the strap with the pull tab, either on the left or right of the frame depending on which hand you use to pull it open.

To attach the strap:

- 3 Insert the looped end of the waist strap around the lower part of the frame as shown and pull tight.

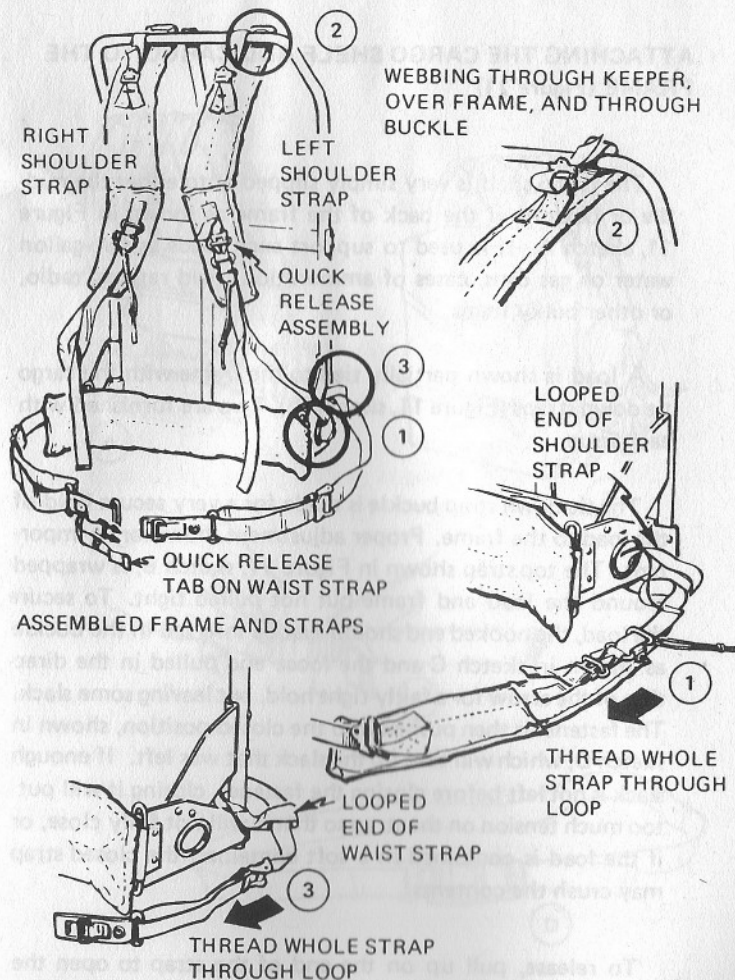


Figure 10. Attaching Shoulder and Waist Straps to Pack Frame

ATTACHING THE CARGO SHELF AND CARGO TO THE FRAME (Figure 11)

The cargo shelf is very simply slipped onto either the middle or bottom of the back of the frame as shown in Figure 11, sketch A. It is used to support such loads as five-gallon water or gas cans, cases of ammunition, field rations, radio, or other bulky items.

A load is shown partially tied to the frame with the cargo tie down straps (Figure 11, sketch B.) Two are furnished with each issue.

The tie down strap buckle is made for a very secure hold of the load to the frame. Proper adjustment, however, is important. The top strap shown in Figure 11, sketch B, is wrapped around the load and frame but not pulled tight. To secure the load, the hooked end should first be inserted in the buckle as shown in sketch C and the loose end pulled in the direction of the arrow for a fairly tight hold, but leaving some slack. The fastener is then pushed into the closed position, shown in sketch D, which will take up the slack that was left. If enough slack is not left before closing the fastener, closing it will put too much tension on the strap so that it will not fully close, or if the load is contained in a soft container, the closed strap may crush the contents.

To release, pull up on the end of the strap to open the fastener.

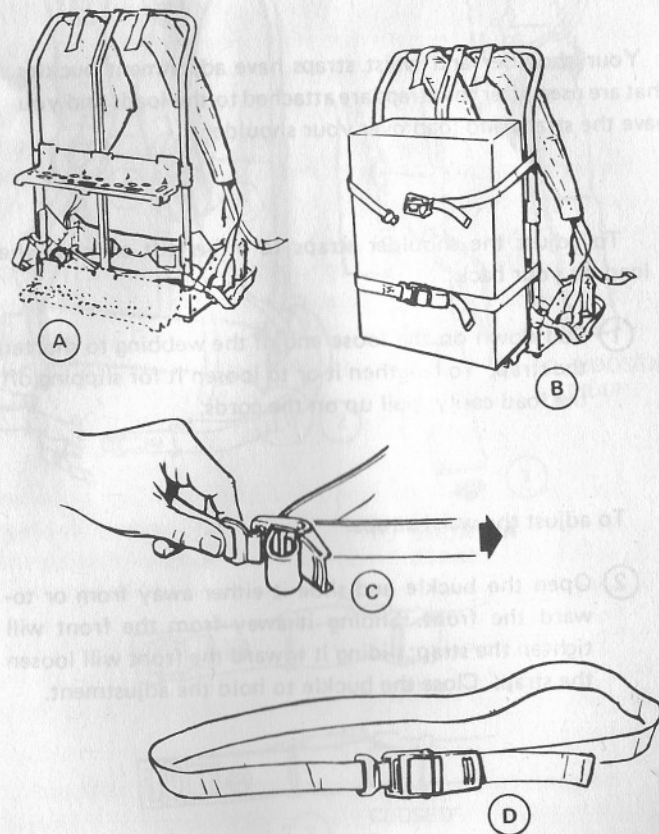


Figure 11. Attaching Cargo Shelf and Load

ADJUSTING THE SHOULDER AND WAIST STRAPS (Figure 12)

Your shoulder and waist straps have adjustment buckles that are used after the straps are attached to the loads and you have the straps and load over your shoulder.

To adjust the shoulder straps to either lift or lower the load on your back:

- 1 Pull down on the loose end of the webbing to shorten the strap. To lengthen it or to loosen it for slipping off the load easily, pull up on the cords.

To adjust the waist straps:

- 2 Open the buckle and slide it either away from or toward the front. Sliding it away from the front will tighten the strap; sliding it toward the front will loosen the strap. Close the buckle to hold the adjustment.

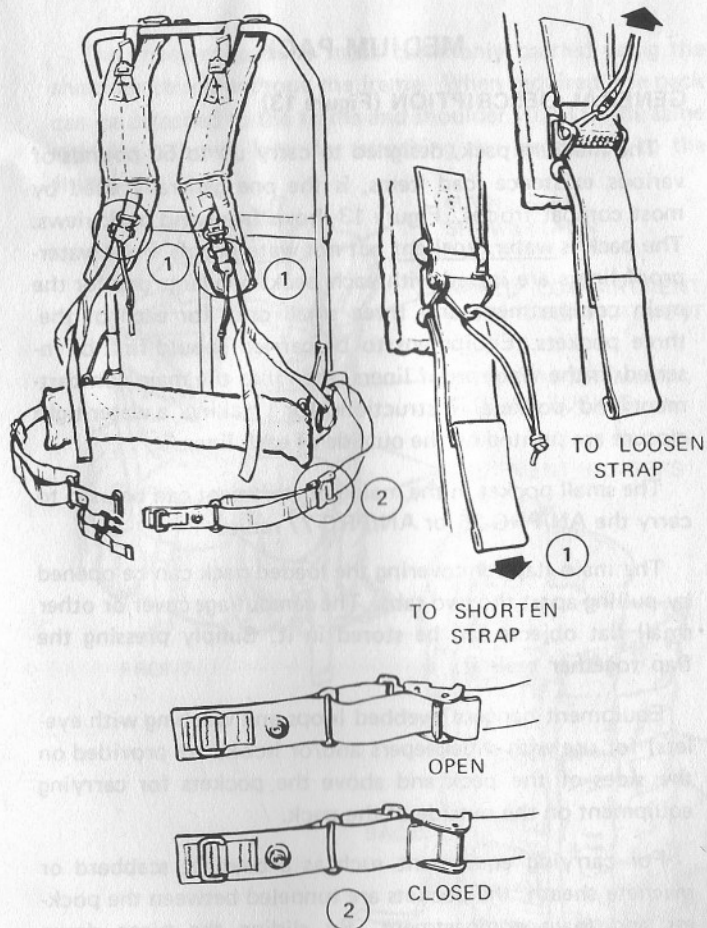


Figure 12. Adjusting Shoulder and Waist Straps

MEDIUM PACK

GENERAL DESCRIPTION (Figure 13)

The medium pack, designed to carry up to 50 pounds of various existence load items, is the one generally used by most combat troops. Figure 13 shows front and back views. The pack is water repellent but not waterproof. Four waterproof liners are issued with each pack; one large one for the main compartment and three small ones for each of the three pockets. Equipment to be carried should first be inserted in the waterproof liners, then into the main compartment and pockets. Instructions for making a water-tight closure are printed on the outside of each liner.

The small pocket in the main compartment can be used to carry the AN/PRC-25 or AN/PRC-77 radio.

The main flap for covering the loaded pack can be opened by pulling apart the two tabs. The camouflage cover or other small flat objects can be stored in it. Simply pressing the flap together seals it.

Equipment hangers (webbed loops and webbing with eyelets) for use with slidekeepers and/or hooks are provided on the sides of the pack and above the pockets for carrying equipment on the outside of the pack.

For carrying equipment such as a bayonet scabbard or machete sheath, the pockets are tunneled between the pockets and main compartment. By sliding the piece down through the tunnel, it can be fastened to the hanger above it with slidekeepers or hooks.

The medium pack is most commonly carried using the shoulder straps without the frame. When required, the pack can be attached to the frame and shoulder straps in the same way as is shown later for attaching the large pack to the frame.

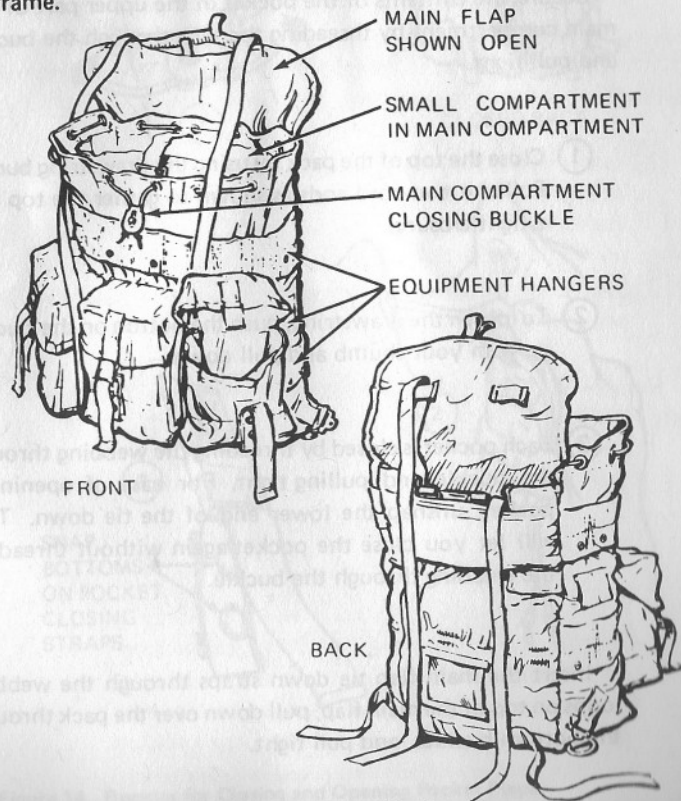


Figure 13. Front and Back Views of Medium Pack

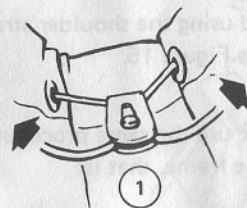
CLOSING THE LOADED PACK (Figure 14)

Once your pack is loaded, close and tighten as follows:

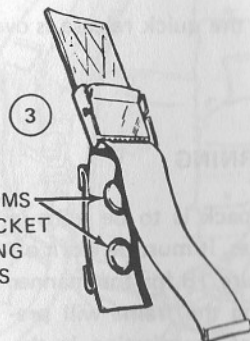
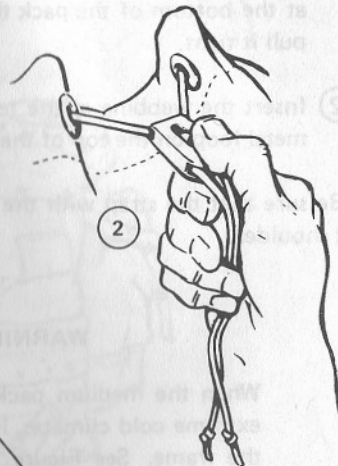
Secure the contents of the pocket in the upper part of the main compartment by threading the tape through the buckle and pull tight.

- 1 Close the top of the pack by using the drawstring buckle. Pull the two cord ends as shown to gather the top into a tight closure.
- 2 To loosen the drawstring, push the button on the buckle up with your thumb and pull down.
- 3 Each pocket is closed by threading the webbing through the buckle and pulling tight. For ease of opening a pocket, unsnap the lower end of the tie down. This will let you close the pocket again without threading the webbing through the buckle.

Insert the main flap tie down straps through the webbed loops on top of the main flap, pull down over the pack through the bottom buckles, and pull tight.



CLOSED PACK



SNAP
BOTTOMS
ON POCKET
CLOSING
STRAPS

Figure 14. Buckles for Closing and Opening Pocket Flaps and Main Compartments

ATTACHING THE SHOULDER STRAPS TO THE MEDIUM PACK (Figure 15)

The medium pack is often carried using the shoulder straps without the pack frame as shown in Figure 15.

To attach the straps to the pack use the same procedure as used in attaching the straps to the frame, that is:

- 1 Insert the looped end of the strap through the "D" ring at the bottom of the pack through the strap loop, and pull it tight.
- 2 Insert the webbing at the top of the strap through the metal loop on the top of the pack and pull it tight.

Be sure that the strap with the quick release is over your left shoulder.

WARNING

When the medium pack is to be worn in extreme cold climates, it must be worn on the frame. See Figure 18 for the manner of attachment. Using the frame will prevent accumulation of perspiration in the area where the pack contacts the back of the soldier, which could cause rapid cooling of the individual.

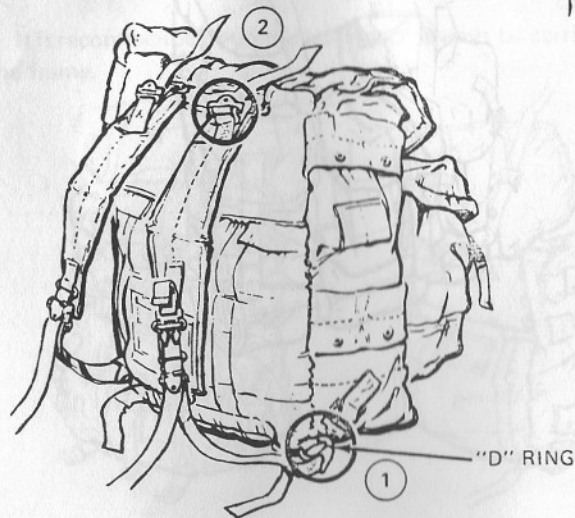
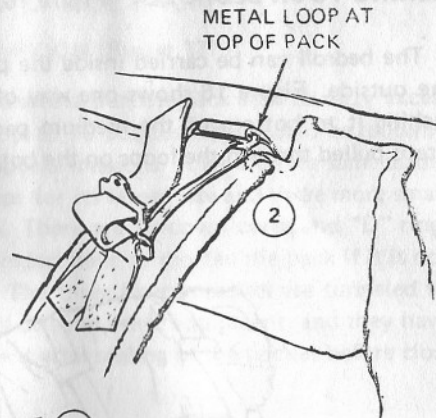


Figure 15. Attaching Shoulder Straps to Medium Pack

ATTACHING YOUR BEDROLL (Figure 16)

The bedroll can be carried inside the pack or attached to the outside. Figure 16 shows one way of carrying it by attaching it to bottom of the medium pack with two cargo straps pulled through the loops on the bottom of the pack.

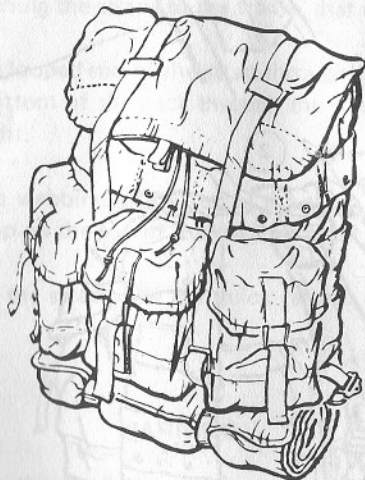


Figure 16. Bedroll Attached to Medium Pack

LARGE PACK

GENERAL DESCRIPTION (Figure 17)

The large pack is a special purpose pack used to carry excessively large loads (up to 70 pounds) that would be required for Arctic or other special missions. It is much the same as the medium pack except for its larger size and three more small pockets at the top. There are tie-down cords and "D" rings inside the main compartment to shorten the pack if it is not filled to capacity. The three lower pockets are tunneled to allow the carrying of skis and other equipment, and they have cords at the top for better sealing of the pocket before closing the flap.

It is recommended that the large pack always be carried on the frame.



Figure 17. Front and Back Views of Large Pack

ATTACHING THE LARGE PACK TO THE FRAME

(Figure 18)

Figure 18 shows the large pack on the pack frame. To attach it:

- ① Insert the bare frame into the envelope on the back of the pack.
- ② Secure the bottom of the pack to the frame as shown. Note that the webbing is looped around the frame TWICE before buckling. Attach the shoulder straps and waist straps as previously described.

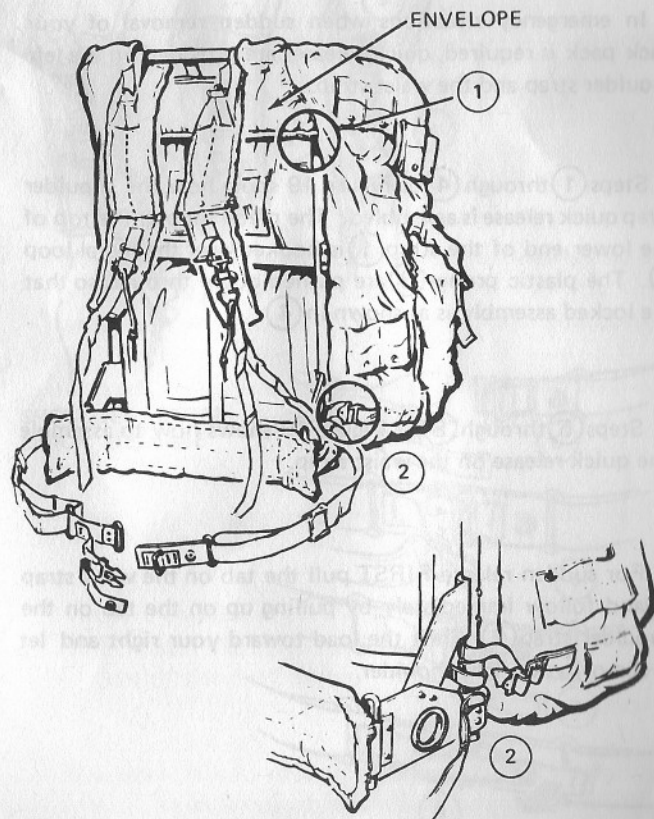


Figure 18. Attaching the Large Pack to the Frame

QUICK RELEASES (Figure 19)

In emergency situations when sudden removal of your back pack is required, quick releases are provided on the left shoulder strap and the waist strap.

Steps ① through ④ of Figure 19 show how the shoulder strap quick release is assembled. The metal loop at the top of the lower end of the strap ① is hooked over the metal loop ②. The plastic prongs ③ are pushed down through so that the locked assembly is as shown in ④.

Steps ⑤ through ⑧ of Figure 19 shows how to assemble the quick release on the waist strap.

For sudden release FIRST pull the tab on the waist strap ⑧ and follow immediately by pulling up on the tab on the shoulder strap ⑨. Shift the load toward your right and let it slip off your right shoulder.

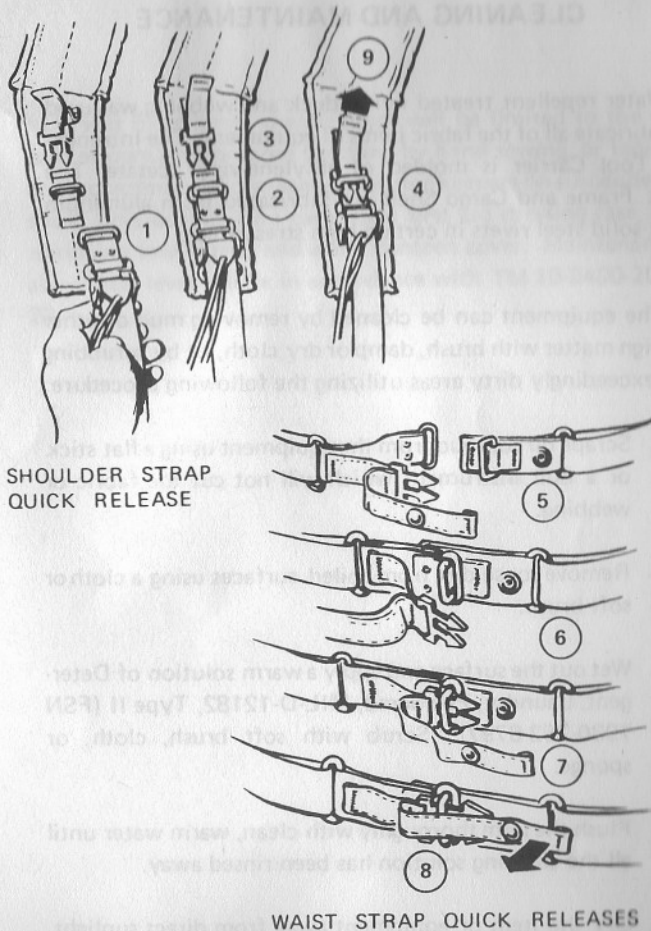


Figure 19. Shoulder Strap and Waist Strap Quick Releases

CLEANING AND MAINTENANCE

Water repellent treated nylon duck and webbing was used to fabricate all of the fabric items of equipment. The Intrenching Tool Carrier is molded of ethylene-vinyl acetate. The Pack Frame and Cargo Shelf are fabricated from aluminum with solid steel rivets in certain high stress areas.

The equipment can be cleaned by removing mud or other foreign matter with brush, damp or dry cloth, or by scrubbing the exceedingly dirty areas utilizing the following procedure:

1. Scrape dirt or mud from the equipment using a flat stick or a dull instrument which will not cut the fabric or webbing.
2. Remove loose dirt from soiled surfaces using a cloth or soft brush.
3. Wet out the surface and apply a warm solution of Detergent, Laundry, Powdered, MIL-D-12182, Type II (FSN 7930-252-6797). Scrub with soft brush, cloth, or sponge.
4. Flush the item thoroughly with clean, warm water until all the cleaning solution has been rinsed away.
5. Dry the item or equipment away from direct sunlight, direct heat and open flames.

"Field Expedient" maintenance will be limited to the repair of damaged or loose stitching by hand sewing, or taping and replacement of damaged or missing keepers on suspenders, small arms ammunition case, field first aid dressing case, intrenching tool carrier and water canteen cover. Maintenance above user level will be in accordance with TM 10-8400-201-23.