OPERATOR'S MANUAL
AIRCRAFT MODULAR SURVIVAL SYSTEM (AMSS)

Two Crewmember Module (NSN 1680-01-362-6323)

Four Crewmember Module (NSN 1680-01-362-6324)

AH-1 (TOW Tube Survival Kit) (NSN 1680-01-362-6325)

HEADQUARTERS, DEPARTMENT OF THE ARMY
15 JULY 1993

WARNING AND FIRST AID DATA

For first aid information refer to FM 21-11, First Aid for Soldiers.

Personnel performing instructions involving operations, procedures, and practices which are included or implied in this manual shall observe the following warnings.

WARNING

An operating procedure, practice, etc., which if not correctly followed, could result in personal injury or loss of life.

CAUTION

An operating procedure, practice, etc., which if not strictly observed, could result in damage to or destruction of equipment.

NOTE

An operating procedure, condition, etc., which is essential to highlight.

GENERAL

ADDITIONAL ITEMS PLACED IN SURVIVAL KITS MUST NOT CREATE AN UNDUE HAZARD, IMPAIR CREWMEMBERS IN-FLIGHT DUTIES, OR REPLACE MANDATORY ITEMS.

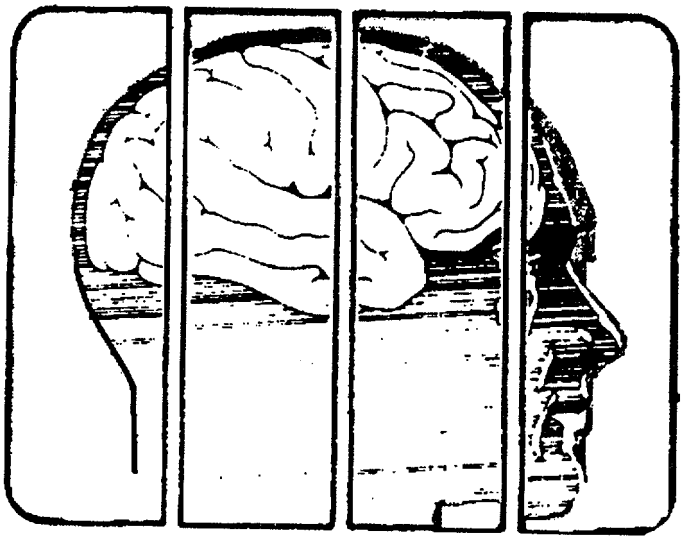
Inspect all matches to ensure that match heads are not joined together. Do not use any matches that are joined together.

Compressed trioxane fuel contains metaformaldehyde. This chemical is poisonous and could cause serious intestinal problems. Avoid skin contact, inhalation of fumes, and ingestion. Wash hands after using and before consuming food to avoid the possible ingestion of trioxane. If trioxane fuel is ingested do not induce vomiting. Drink milk, eat bread or any high protein food, and seek medical attention immediately.

Compasses that are components of survival kits, possessing luminous markings on the dial face, contain radioactive material. In the event that the face cover is cracked or broken, avoid direct contact with the dial face. Under these conditions, handling and disposal procedures shall be implemented as prescribed by TB 43-0108 and the local Radiological Protection Officer.

GAS UNDER PRESSURE. Do not loosen or attempt to remove a carbon dioxide cylinder from the valve assembly.

When flying on commercial airlines with any survival kit, REMOVE ALL PYROTECHNICS from all survival kits prior to leaving military base or aviation flight facility. Pyrotechnics cannot be put on-board ANY commercial airline in accordance with Federal Aviation Regulations.



The Will to Survive

Many survival case histories show that stubborn, strong willpower can conquer many obstacles. One case history tells of a man stranded in the desert for eight days without food and water; he had no survival training, and he did nothing right. But he wanted to survive, and through sheer willpower, he did survive.

With training, equipment, and the ***will to survive***, you will find you can overcome any obstacle you may face. You will survive.

CHANGE

NO. 2

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 31 March 1997

Operator's Manual

Aircraft Modular Survival System (AMSS)

Two Crewmember Module (NSN 1680-01-362-6323)
Four Crewmember Module (NSN 1680-01-362-6324)
AH-l (Tow Tube Survival Kit) (NSN 1680-01-362-6325)

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

TM 1-1680-354-10, 15 July 1993, is changed as follows:

1. Remove and insert pages as indicated below. New or changed text material is indicated by a vertical bar in the margin. An illustration change is indicated by a miniature pointing hand.

Remove pages	Insert pages
iii and iv	iii and iv
1-3 through 1-6	1-3 through 1-6
2-5 through 2-10	2-5 through 2-10
.....	2-10.1 through 2-10.4
2-11 and 2-12	2-11 and 2-12
2-39 through 2-42	2-39 through 2-42
Index-1 through Index-2	Index-1 through Index-2

2. Retain this sheet in front of manual for reference purposes.

By Order of the Secretary of the Army:

DENNIS J. REIMER
General, United States Army
Chief of Staff

Official:

JOEL B. HUDSON
Administrative Assistant to the Secretary of the Army
03294

DISTRIBUTION:

To be distributed in accordance with DA Form 12-31-E, block no. 3355, requirements for TM 1-1680-354-10.

CHANGE
NO. 1

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 29 September 1995

Operator's Manual

Aircraft Modular Survival System (AMSS)

Two Crewmember Module (NSN 1680-01-362-6323)
Four Crewmember Module (NSN 1680-01-362-6324)
AH-1 (TOW Tube Survival Kit) (NSN 1680-01-362-6325)

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

TM 1-1680-354-10, 15 July 1993, is changed as follows:

1. Remove and insert pages as indicated below. New or changed text material is indicated by a vertical bar in the margin. An illustration change is indicated by a miniature pointing hand.

Remove pages	Insert pages
iii and iv	iii and iv
1-3 through 1-6	1-3 through 1-6
2-1 through 2-12	2-1 through 2-12
2-19 through 2-22	2-19 through 2-22
2-39 and 2-40	2-39 and 2-40
Index-3 and Index-4	Index-3 and Index-4
Cover	Cover

2. Retain this sheet in front of manual for reference purposes.

By Order of the Secretary of the Army:

DENNIS J. REIMER
General, United States Army
Chief of Staff

Official:

YVONNE M. HARRISON
Administrative Assistant to the
Secretary of the Army
00960

DISTRIBUTION:

To be distributed in accordance with DA Form 12-31-E, block no. 3355, requirements for TM 1-1680-354-10.

TECHNICAL MANUAL
NO. 1-1680-354-10

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON D.C., 15 July 1993

OPERATOR' S MANUAL

AIRCRAFT MODULAR SURVIVAL SYSTEM (AMSS)

Two Crewmember Module (NSN 1680-01-362-6323)
Four Crewmember Module (NSN 1680-01-362-6324)
AH-1 (TOW Tube Survival Kit) (NSN 1680-01-362-6325)

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes or know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or the DA Form 2028-2 located in the back of this manual direct to the following address: Commander, U.S. Army Aviation and Troop Command, ATTN: AMSAT-I-MP, 4300 Goodfellow Blvd., St. Louis, MO 63120-1798. A reply will be furnished to you.

TABLE OF CONTENTS

TABLE OF CONTENTS

LIST OF ILLUSTRATIONS

CHAPTER 1
INTRODUCTION

SECTION I. GENERAL INFORMATION

1.1 SCOPE.

1.1.1 Type of Manual. This manual is for the utilization of the components of the Aircraft Modular Survival System (AMSS) in a survival situation. This publication provides a description of the kit's contents and brief instructions on the use of each item.

1.1.2 Model Number and Equipment Name. Aircraft Modular Survival System (AMSS).

1.1.3 Purpose of Equipment. Used to aid aircrew personnel in survival situations.

NOTE

The AMSS was designed to provide survival equipment for a 72 hour period. This does NOT mean rescue within 72 hours is guaranteed. Conserve energy and supplies.

1.2 MAINTENANCE FORMS AND PROCEDURES. N/A

1.3 SAFETY, CARE, AND HANDLING.

Combustible Materials. As referred to in this technical manual, combustible materials consist of pyrotechnics (distress signals) and flammables (fire starter, matches, and trioxane fuel packets).

a. Operation of Smoke and Illumination Signal, MK13 and MK24. All personnel who may be required to operate these signals in emergencies shall be given instructions in their use.

WARNING

Inspect all matches to ensure that match heads are not joined together. Do not use any matches that are joined together.

Inspect all matches to ensure that match heads are not placed in such a way that the head could ignite by rubbing against an adjacent match.

b. Matches, non-safety, are packed in a large round plastic container with a screw top cap that makes a water tight seal. The container holds four boxes of 30-40 matches each. A rough surface on the outside bottom of the container is for striking the match to cause ignition.

Warning

Compressed trioxane fuel contains metaformaldehyde. This chemical is poisonous and could cause serious intestinal problems. Avoid skin contact, inhalation of fumes, and ingestion. Wash hands after using and before consuming food to avoid the possible ingestion of trioxane. If trioxane fuel is ingested do not induce vomiting. Drink milk, eat bread or any high protein food, and seek medical attention immediately.

c. Trioxane fuel is considered good for an indefinite amount of time. Trioxane fuel is primarily composed of metaformaldehyde, which is highly toxic. Ingestion of trioxane fuel constitutes a medical emergency. Wash hands immediately after handling opened or leaking packages.

1.4 DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE.

For information concerning destruction of Army materiel to prevent enemy use, refer to TM 750-244-1-2, Destruction of Life Support Equipment to Prevent Enemy Use.

1.5 REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR).

If your AMSS needs improvement, let us know. You, the user, are the only one who can tell us what you don't like about your equipment. Let us know why you don't like the design or performance. Put it on Standard Form (SF) 368 (Quality Deficiency Report). Mail it to us at the following address: Commander, U.S. Army Aviation and Troop Command, ATTN: AMSAT-I-MDO, 4300 Goodfellow Blvd., St. Louis, MO 63120-1798. We will send you a reply.

1.6 CORROSION PREVENTION CONTROL(CPC). N/A

SECTION II. EQUIPMENT DESCRIPTION AND DATA

1.7 EQUIPMENT CHARACTERISTICS. CAPABILITIES, AND FEATURES.

The AMSS has three sizes of rigid containers plus the expended TOW tube case (See Table 1-2). The containers have the following qualities: back hinges, carrying handles which enable convenient transport by two people, over-center securing latches, a pressure equalizer valve, and tie-down strap indentations. The empty TOW tube casing is utilized as the outer case for the AH-1 AMSS.

1.8 LOCATION AND DESCRIPTION OF MAJOR COMPONENTS.

a. Recommended location on each Aircraft Type.

(1) AH-1 COBRA. The right wing upper, outhoard, launcher position.

(2) AH-64 APACHE. The aft bay of the APACHE has a dedicated area, with the access doors on both sides of the aircraft. Use "bungie cords" to secure the AMSS soft pack in the aircraft.

NOTE

"Bungie cords" are the acceptable tiedown method only in non-passenger areas of aircraft. This is due to flight safety factors.

(3) UH-1 IROQUOIS. Secured to either of the side "gunners" well positions with tie-down straps.

(4) UH-60 BLACK HAWK. The area behind the two sides facing seats (gunner position) and forward against the pilot's bulkhead area. Secure the AMSS with quick disconnect adapters, floor fitting tiedown, or with the tiedown straps.

(5) CH47 CHINOOK At flight station 160. The area on the left-hand side against the flight compartment and under the window of the cabin area.

(6) OH-58 KIOWA. Secure to the passenger seats using the passenger restraining straps.

(7) OH-58D Kiowa Warrior. In either the aft left hand side electronics bay using "bungie cords" to secure the soft pack or behind the observers position in the cabin avionics area.

NOTE

For recommended quick disconnect adapters and floor fitting tiedown, reference TM 1-1680-354-23&P (Figure C-8 and Appendix E).

(8) U-21 UTE. Kit is located in the aft cargo area and will be tied down with tiedown straps.

b. The survival equipment will be placed in an equipment bag. The bag will have shoulder straps and handles sewn to the bag. The filled bag will be placed in the rigid outer container(s).

The TOW tube equipment bags (2) will be connected together by a snap link at the handles. As the first equipment bag is being pulled, the second bag, being snap linked to the first bag, will be pulled to the front and out in a continuous motion. The OH-58D and the AH-64 aircraft will use soft pack module if necessary.

c. The containers for the AMSS are a high impact molded plastic case (Figure 1- 1). It consists of a lid and a bottom container hinged together on the back. An identity plate, a breather valve, a chemical contamination detector (used only during wartime conditions and in war zone areas), transport handles, and an anti-pilferage seal are components of the container.

d. The container components are listed below.

(1) HINGES - connect the top and bottom of the container from the back.

(2) IDENTITY PLATE - lists the NSN of the container, the serial number, and the manufacturer.

(3) SAFETY RELIEF VALVE - equalizes pressure inside the container during aircraft flight.

CAUTION

Press valve after each use and before storage.

(4) TRANSPORT HANDLES - used to carry the contrainer.

WARNING

Use two people to carry the AMSS to prevent personal injury.

(5) OVER-CENTER LATCHES - secure the lid to the bottom container.

(6) ANTI-PILFERAGE SEAL - indicates if container has been opened.

(7) CHEMICAL CONTAMINATION DETECTOR - indicates if a chemical or biological agent is present in the surroundings (used only during wartime conditions and in war zone areas).

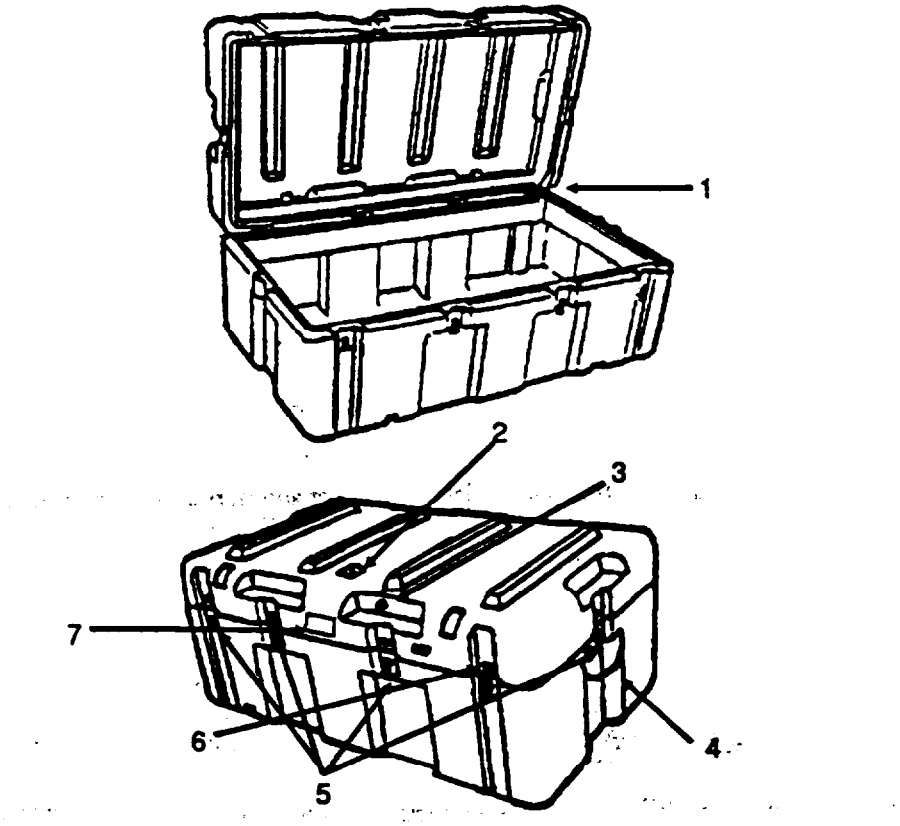


Figure 1-1. Aircraft Modular Survival System (AMSS) Container, Typical.

e. The AH-1, Survival kit is contained in an expended TOW missile tube (1, Figure 1-2). The ends are capped by locally fabricated metal discs (2) secured to the container ends with Marmon clamps (3). A lead-sealed safety wire (4) is attached to the forward marmon clamp. "SURVIVAL KIT" is stenciled to the outbard side (5) of the container. A chemical contamination detector (6), used only during wartime conditions and in war zone areas, is attached.

1.9 Differences Between Models.

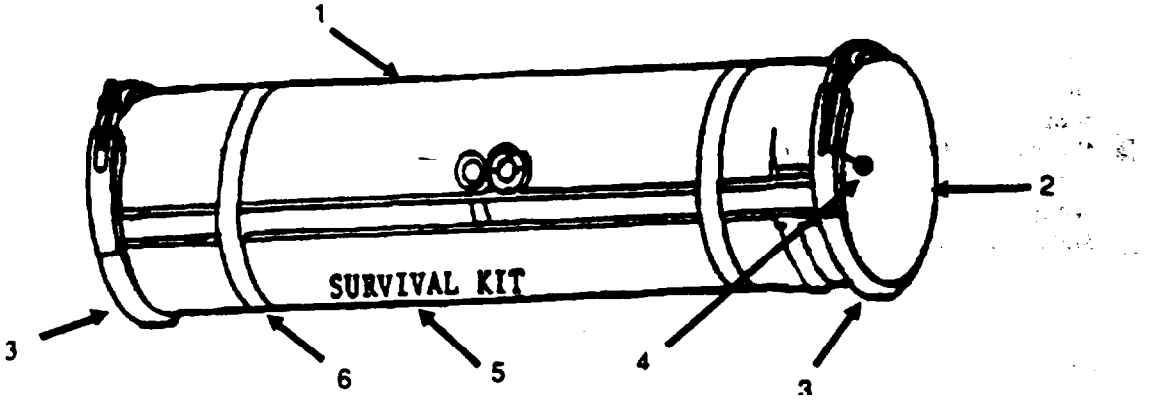


Figure 1-2. AMSS AH-1 TOW Tube Container.

a. As a minimum, each AMSS module (Figure 1-3) contains the mandatory equipment (See Table 1- 1). It may also include additional items approved by the commander.

b. The "soft pack" is the equipment bag with the mandatory components plus any approved survival equipment. The soft pack is used in the OH-58 and AH-64 aircraft or other aircraft based on unit operation requirements.

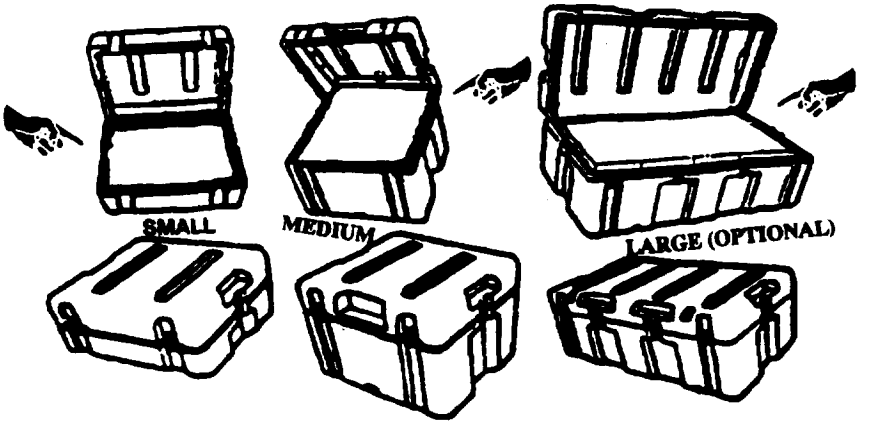


Figure 1-3. AMSS Bask Modules - Rigid Containers, Typical.

Table 1-1. Minimum Equipment Configuration.

Mandatory Items	1-Crewmember Module	2-Crewmember Module	3-Crewmember Module	4-Crewmember Module	AH-1 TOW Thbe
Equipment Bag	Deleted	2	3	4	
TOW Tube Equipment Bag					2
Chemical Lights		4	6	8	4
Emergency Water Packets		24	36	48	24
Tent		2	3	4	2
Survival Food Packets		6	9	12	6
Smoke and Illuminating Flares		4	4	4	4
Fire Starter (either Magnesium or Spark lite)		1	1	1	1
*Mechanical Reverse Osmosis Device (MROD-06)		1	1	1	1
Survival Manual		1	1	1	1
Match Container with 4 boxes of Non-safety Matches		1	1	1	1
Fuel Siphon		1	1	1	1
Pocket Stove		1	1	1	1
Distress Marker, Light SDU-5/E		1	1	1	1
Distress tight Signal Batteries		3	3	3	3

*Minimum required per aircraft during flights in excess of 30 minutes flying time or 100 nautical miles from the neatest shoreline (Ref AR 95-3).

c. The two-crewmember is stored in the small container. The medium container holds the three or four man crewmember kits and the large (optional) container holds the four or more kits.

1.10. EQUIPMENT DATA.

Table 1-2. Equipment Data

Type	Packed Weight	Height	Length	Width
	Weight of mandatory items			
1-Crewmember	Deleted			
2-Crewmembers	28 lbs. 3.2 oz			
3-Crewmembers	38 lbs. 4.4 oz.			
4-Crewmembers	48 lbs. 5.6 ox.			
AH-1 TOW Tube	28 lbs. 3.2 ox.			
Rigid containers (add container weights when used)				
small (2-man)	12 lbs.	10.4 in.	18.8 in.	18.8 in.
medium (3 or 4 man)	16 lbs.	16.2 in.	18.8 in.	18.8 in.
large (Optional)	26 lbs.	16.8 in.	34 in.	21.2 in.
AH-I TOW Tube	11 lbs. 1 oz.	6 in. inside dia.	48 in.	6 1/2 in. outside dia.

SECTION III. PRINCIPLES OF OPERATION

1.11 FUNCTIONAL DESCRIPTION.

a. The AMSS is designed to aid crewmembers in a survival situation.

NOTE

The AMSS is designed to provide survival equipment for a 72 hour period. This does NOT mean rescue within 72 hours is guaranteed. Conserve energy and supplies.

b. The AMSS is a light-weight, portable, self-contained survival kit that can provide the capability for crewmembers to survive for a minimum of 72 hours in most environments.

c. The rigid containers can be opened by releasing the overcenter latches. The AH-1 TOW Tube can be opened by releasing the forward Marmon clamp on the TOW Tube container. At this point, the equipment bags, containing the survival components, can be extracted.

d. The equipment bag contains mandatory items that provide for signal, water, shelter, and food for each member of the crew, and other equipment the commander has chosen from the approved equipment list.

e. For operation of the items, refer to Chapter 2, Section III of this Manual.

CHAPTER 2

OPERATING INSTRUCTIONS

SECTION I. DESCRIPTION AND USE OF OPERATOR'S CONTROLS AND INDICATORS

2.1 OPERATOR'S CONTROLS AND INDICATORS.

a. A chemical contamination detector is used only during wartime conditions and in war zone areas. Refer to Chapter 2, Section IV, when the detector does not give you a normal reading.

b. Safety Relief Valve. Before opening the rigid container, press the safety relief valve to equalize the pressure.

SECTION II. PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

2.2 GENERAL.

The operator is responsible to check the anti-pilferage seal for possible tampering of the AMSS.

2.2.1 PMCS Procedures.

a. Operator Preventive Maintenance Checks and Services (PMCS). Table 2-1 lists the inspections required by the operator.

b. The Item No. column gives the order in which the PMCS will be performed (in numerical order). This column is used as a source of item numbers for the TM Number column on DA Form 2404 in recording results of PMCS.

c. The Interval column describes when to do a certain check or service.

d. The Item to be Checked column explains how to do the required checks and services.

e. The Not Fully Mission Capable if: column states the criteria by which the equipment cannot be used until corrective maintenance has been performed.

Table 2-1. Preventive Maintenance Checks and Services (PMCS)

ITEM NO	INTERVAL	ITEM TO BE CHECKED	PROCEDURES	NOT FULLY MISSION CAPABLE IF:
1	Before and After Flight	Rigid Container (outer container)	a. Inspect for broken carrying handles, over center latches, and pressure relief valve. b. Inspect container for cracks and punctures. c. Integrity seal broken or missing.	If any discrepancy is noted, remove from service.
2	Before and After Flight	TOW Tube Casing	Inspect for broken anti-pilferage seals, end caps, over center latches, and container cracks.	
3	Before and After Flight	Individual Equipment Bag, Canvas/Nylon (when used as a "soft pack")	Inspect for holes, cuts, frays, tears, broken anti-pilferage seals, loose or broken stitching, defective or broken slide fastener, missing or broken pocket tie tape, broken carrying handle, grommet seating, and operator's manual in pocket.	

SECTION III. OPERATION UNDER USUAL CONDITIONS

2.3 ASSEMBLY AND PREPARATION FOR USE.

This section provides instructions on the operation and use, under usual conditions, of all components that might be contained in the AMSS. These items are from the required list from AR 95-3 and the Army approved components list. The first portion of this chapter will contain those mandatory items from the approved component list. Additional items from the list which the Commander has approved will follow as an "add-on" section. This tailors the manual to your units requirements.

2.4 INITIAL SURVIVAL PROCEDURES.

WARNING

For protection against environmental conditions, keep all flight clothing and equipment, including flight helmet and sun glasses. To prevent head injuries, the aircrew flight helmet should be used during rescue helicopter hoisting operations.

To open the AMSS rigid container use the following procedure:

a. Push the safety relief valve button to equalize the pressure within the container.

b. Break the anti-pilferage seal.

c. Lift the over-center latching tab and turn counterclockwise (to the left) and release. Do this to the front and sides of the container, release all latches.

d. Open the container and remove the equipment bags.

NOTE

At this point, if in a combat situation, begin escape and evasion procedures.

e. First check the equipment bag for any first aid kits, if needed immediately. Second, check for signaling devices. Place these in the top pocket of the equipment bag.

NOTE

Take the aircraft first aid kit and store within the equipment bag(s).

2.5 OPERATING PROCEDURES.

2.5.1 AMSS Mandatory Components.

Mandatory components of the AMSS are the following:

a. Equipment Bags. The equipment bag is used as a rucksack to store and carry the survival equipment. The equipment bag can either be carried by the top handle (1, Figure 2-la) or on the back by using the attached back straps (2). The TOW Tube equipment bag (two per tube connected with a snap link) (3, Figure 2-lb) has a handle on each end (4) and a carrying strap over the center of the bag and a slide fastener (5) with two sliders to open the bag from one end.

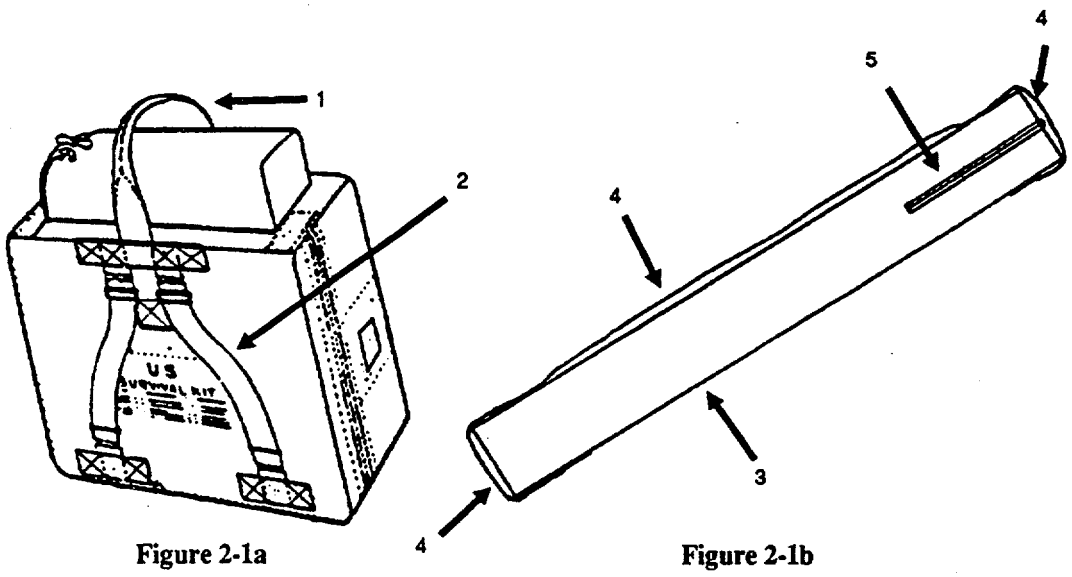


Figure 2-1a Figure 2-1b

Figure 2-1. Equipment Bags

b. Chemical Light (“chem-lite") Wands. The chemical light wands are to be used at night for signaling and lighting. Movement at night is not recommended unless it is a combat situation. If this is the case, the light must be shielded. Failure to shield may reveal your position to the enemy. The "chem-lite" consists of two parts -the outer plastic shell and the inner glass vial, both containing chemicals. To activate the wand, bend the outer plastic tube until the inner glass vial breaks, shake the wand to mix the two chemicals, and the wand will start to glow. See Figure 2-2.

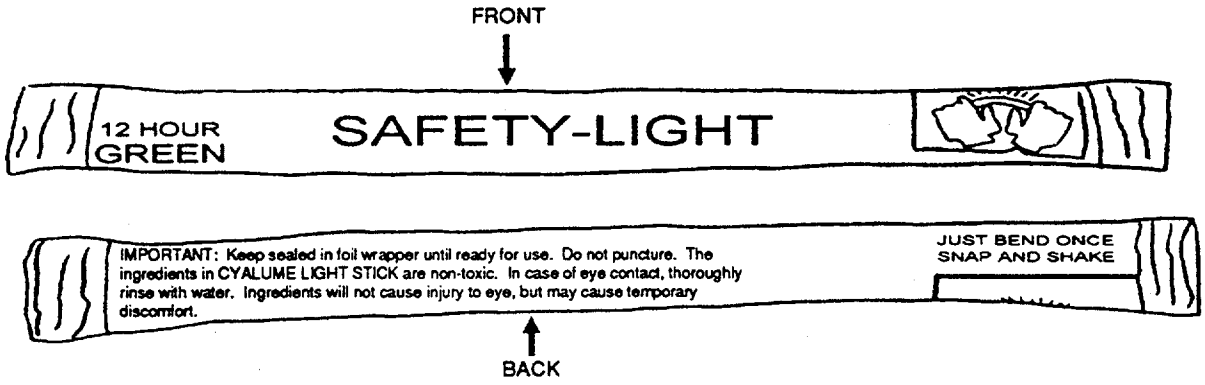


Figure 2-2. Chemical Light Wands

c. Emergency Water Packet. The survival drinking water packet is to be used after the crash. During survival conditions, conserve water and find other means to obtain drinkable water (i.e., using the solar still or mechanical reverse osmosis device). See Figure 2-3.

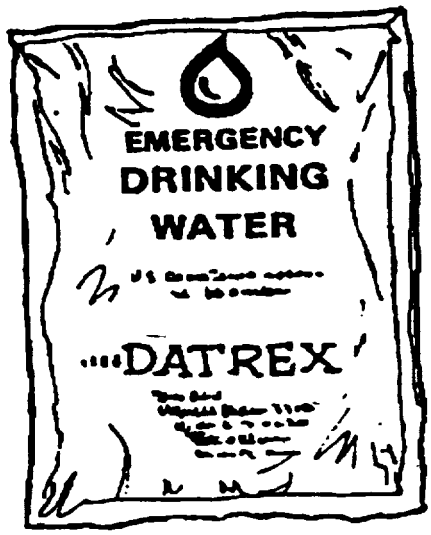


Figure 2-3. Emergency Water Packets

d. Tent. The multi-purpose tent can be used alone or zippered with another shelter. It can be used as a sit shelter, short coat, a long coat, sleeping cover, or poncho. Flexible poles for the head and foot area, pegs, summer screen, and a carrying bag are included. See Figure 2-4.

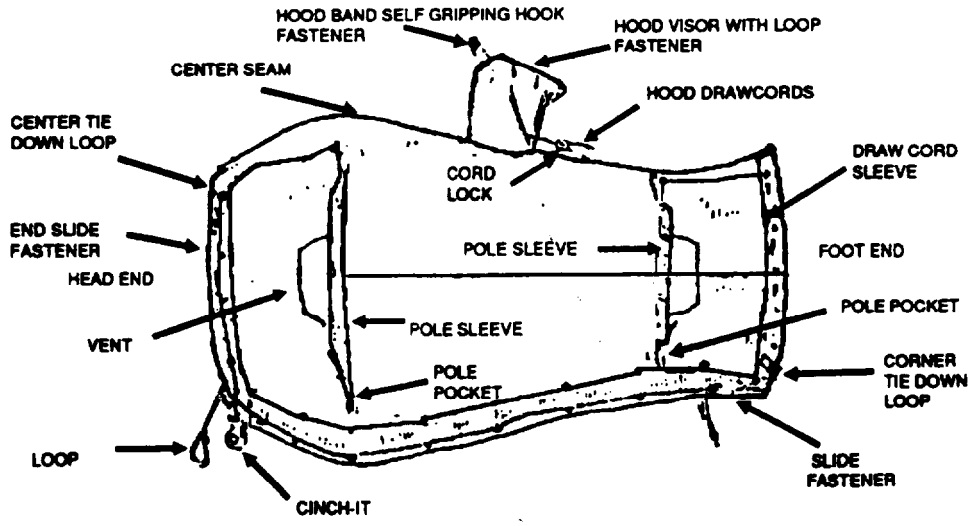


Figure 2-4. Tent

(1) To use the tent as a one-person tent (See Figure 2-5), proceed as follows:

NOTE

During cold weather operation use the 12" tent pin.

(a) Remove the tent from the carrying bag, shake the tent, and lay it out on the ground with the vents facing upward.

(b) Tie off the hood opening for storm proofing, by pulling the hood draw cord in tightly (View A). Fold the hood opening down and wrap the cord tightly around the fold. Secure with an easy to untie knot. (View B).

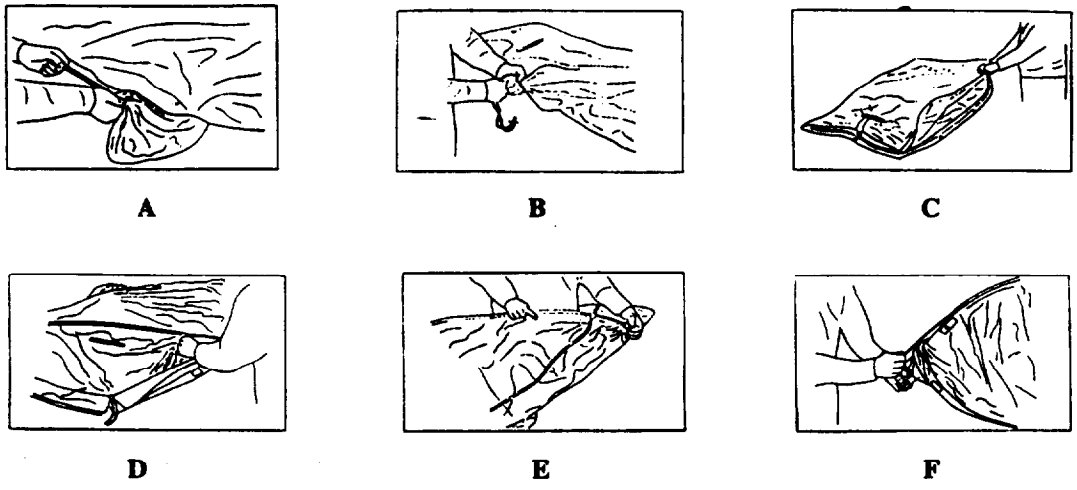


Figure 2-5. Tent Shelter

(c) Zipper the sides and ends together (View C).

(d) Remove the poles and pegs from the storage bag.

NOTE

Do not use the extra separate pole sections.
These are used with the summer screen

(e) Assemble the poles. placing the longer of the set at the widest end and the shorter pole at the narrowest end of the tent

(f) Slide the five (5) section pole through the pole sleeve at the head end (View D), insert through loop and into the pole pocket underneath the bottom edge of the tent (View E). Arch the pole and insert other end into pole pocket below zipper (View F). Repeat procedure for the foot end with three (3) section pole.

(g) Loop the shock cord through the top corner tie down straps and stake the comers down at about 30° angle to keep the tent from blowing around.

(h) Open vents by separating the top and bottom until the vent springs open.

(2) To insert the summer screen (See Figure 2-6), proceed as follows:

(a) Lay the tent on the ground, with vents facing upward and hood closed, unzip the side zipper and zip the ends closed

(b) Remove netting from bag, lay on tent with pole loops top outside and attached storage bag inside bottom (View A).

(c) Join the netting zipper to each side of the tent zipper and completely zip up both sides (View B).

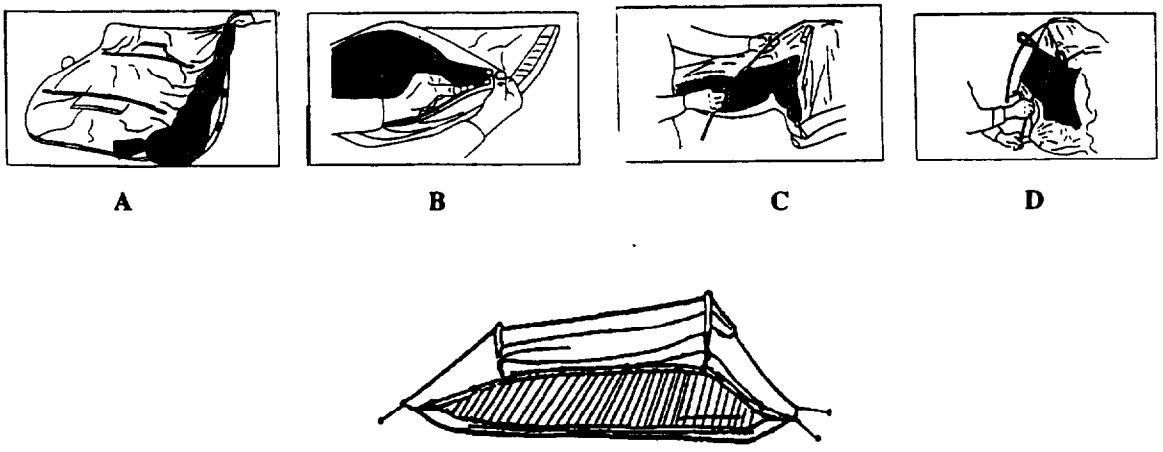


Figure 2-6. Tent with Summer Screen

(d) Slide the five (5) section pole through the pole sleeve at the head end (View C), insert through loop and into the pole pocket underneath the bottom edge of the tent, Add the extra pole section, taking care to insert through netting loop, arch the pole and insert other end into pole pocket below netting sipper (View D). Repeat procedure for the foot end with three (3) section pole.

(e) To enter the tent, unzip the netting about half way, allowing room to enter from the head end. Completely close netting by zipping from the inside

(3) To use the tent as a two person shelter. (See Figure 2-7). proceed as follows:

(a) Unzip sides and ends of both tents and tie off hood openings for storm proofing.

(b) Lay (spread) bottom tent with the outside facing the ground with ail tie loops removed (View A).

(c) Lay the second tent on top of the bottom with the outside facing the sky (View B). Hood openings must face the same direction

(d) Zip both sides and ends together (View C).

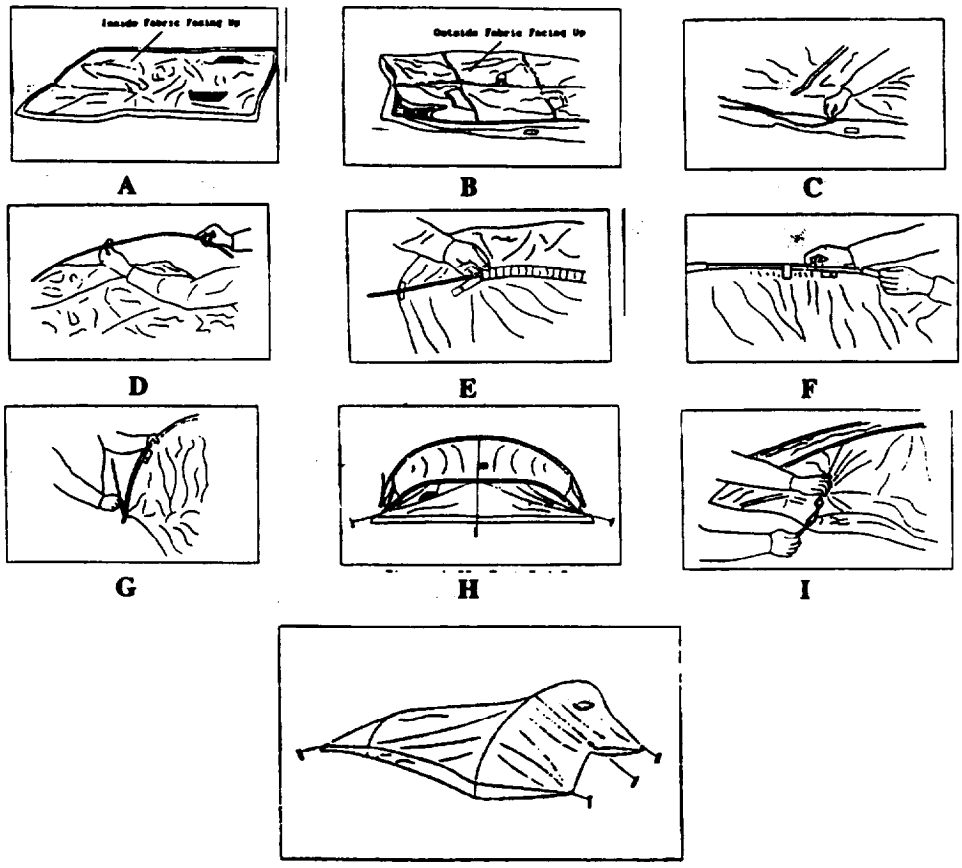


Figure 2-7. Tent Two-Person Shelter

(e) Attach two tie loops (doubled end-to-end) to the foot end tie loops of the top tent. Repeat this procedure for the head end. Attach one doubled tie loop to each corner and centerline of the top tent.

(f) Join both sets of the five (5) section pole assemblies for the head end of the tent (View D). Slide the joined poles through the first pole sleeve (View E), the small webbing loop, and the second pole sleeve (View F). Repeat procedure for the foot end with the three (3) section pole assemblies.

(g) Insert one end of the joined pole assembly into the bottom (floor) pole pocket on one side just below the zipper (View G). On the other side, fold back the Last section of the joined pole assembly before inserting both ends into the pole pocket below the zipper (View H). Repeat this procedure for the other pole assembly.

(h) Using the double ended tie down loops (View I), stake each comer and centerline (seam) down with one peg positioned at about 30° degree angle. Three tent pegs will be required for each end.

NOTE

During cold weather operation use the 12" tent pin.

(4) To use the tent as a sleeping cover (See Figure 2-8), proceed as follows:

(a) Remove the tent from the carrying bag, shake the tent, and spread the tent on the ground with the vents facing upward.

(b) Tie off the hood opening for storm proofing, by pulling the hood draw cord in tightly. Fold the hood opening down and wrap the cord tightly around the fold. Secure with an easy to untie knot.

(c) To use the tent as a simple sleeping cover, zipper the foot and head end closed. Unzip the tent side and head end about half way. After you are in the sleeping cover, the side sipper and head end may be closed as needed, being sure to leave an opening for ventilation. This will provide limited protection from the elements.

(d) To use the tent as a sleeping bag cover, unzip the tent side and ends, place sleeping bag in the tent. Close the zippers at foot end and side half way. After you are in the sleeping bag, the side and head end zippers may be closed as needed, being sure to leave an opening for ventilation.

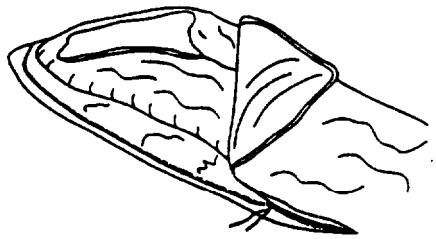


Figure 2-8. Tent Sleeping Cover

NOTE

There are also four optional multi-purpose liners that can be used as a sleeping bag in temperature ranges plus 40° F to minus 20°F, or worn as a liner when the tent is used as a coat.

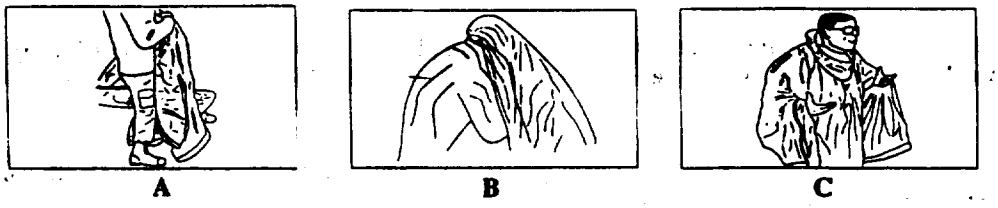
(5) To use tent as a Sit Shelter (See Figure 2-9). proceed as follows:

(a) Remove the tent from the carrying bag, shake the tent out.

(b) Unzip the head and foot ends of the tent, Starting at the foot end close the zipper to the first Velcro patch or near your belt line with foot end touching the ground.

(c) With the zipped side facing you and the foot end toward the ground, hold the tent near the hood opening and step into the zipped portion with both feet, (View A).

(d) Put your head through-the hood opening (View B) and flip the unzipped portion of the tent over your shoulders to form a cape (View C).



(e) To complete the sit tent, the hood visor may he tied back with the hook-and-loop fastener at the crown.

Figure 2-9. Tent Sit Shelter

(6) To use the tent as a Long Coat (See Figure 2-10), proceed as follows:

(a) Remove the tent from the carrying bag, shake tent.

(b) Unzip the head and foot ends of the tent. Starting at the foot end close the zipper to the first Velcro patch or near your belt line with foot end touching the ground

(c) With the zipped side facing you and the foot end toward the ground, hold the tent near the hood opening and step into the zipped portion with both feet.

(d) Put your head through the hood opening and flip the unzipped portion of the tent over your shoulders to form a cape.

(e) From both the left and right draw cord sleeve pocket, reach in and pull out the draw cord ends. The left draw cord end has a Cinch hook attached, the tight does not (View A).

(f) Place the Cinch hook loop between the thumb and index finger on the left hand. To form the waist of the garment, pull the draw cord from the tight end, so that the tent draws snugly to your waist and Cinch it (View B).

(g) Form sleeves by connecting the Velcro patches around the wrist on each arm (View C).

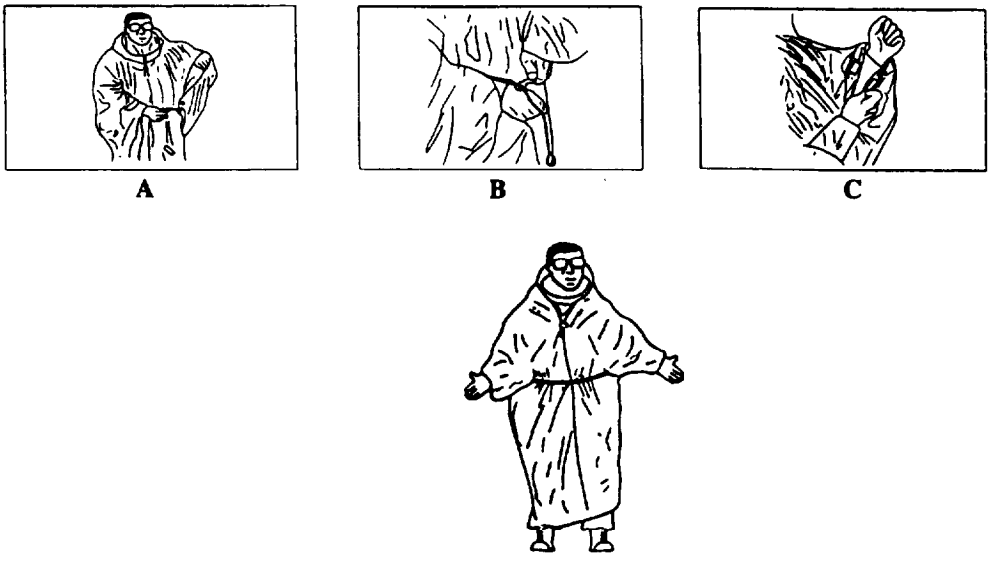


Figure 2-10. Tent, Great Coat

(h) Tuck the extra fabric to the back and smooth it across the front

(I) Check the length of the long coat and if too long, pull up excess fabric under the waist cord. The elastic waist cord will keep the fabric in place.

(J) Push extra fabric from the right sleeve to the rear. Smooth the fabric on the chest area by pressing extra fabric to the rear. The Great Coat should look like Figure 2-10. Ensure the fabric is evenly distributed to the back. Check hem length. The tent unlike the poncho, protects all around Properly positioned, the front and back should be even with the ground and if not, adjust the zipper slide which Is located above the draw cord. If not properly adjusted, it will leave a space on your back open to the elements.

(7) To use the tent as a short coat (See Figure 2-11), proceed as follows:

(a) Remove the tent from the carrying bag, shake tent.

(b) Unzip the head and foot ends of the tent. Starting at the foot end close the zipper to the first Velcro patch or near your belt line with foot end touching the ground.

(c) With the zipped side facing you and the foot end toward the ground, hold the tent near the hood opening and step into the zipped portion with both feet.

(d) Put your head through the hood opening and flip the unzipped portion of the tent over your shoulders to form a cape.

(e) With both arms inside, reach down and grab the bottom hem (View A). Pull the bottom hem inside and up so that the draw cord sleeve is at your waist. The draw cord ends are now at the back.

(f) Reach into both ends of the draw cord sleeve and pull out ends of the draw cord. Cross the draw cord ends behind your back and pull them snug around to the front of the waist (View B).

(g) Bring the cords around each side and cinch the cord across your waist. Smooth the fabric to the back for a neater appearance. If more protection is desired, utilize the hook and pile tape (two per sleeve) to enclose sleeve openings.

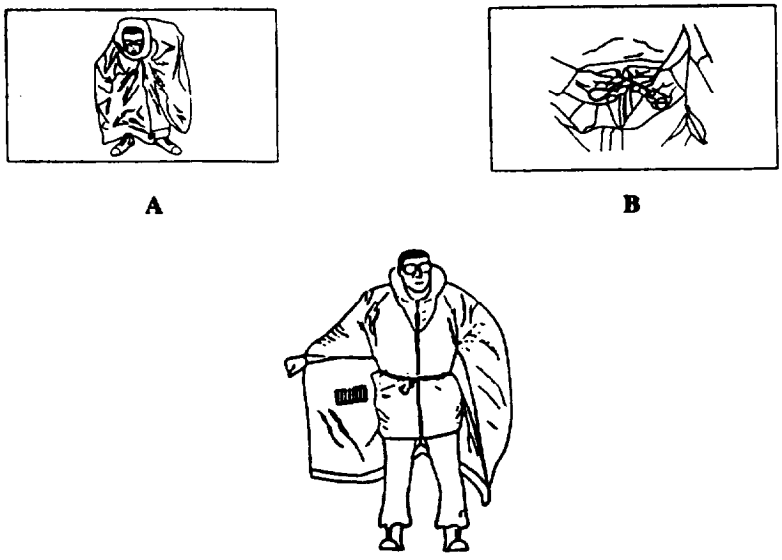


Figure 2-11. Tent Short Coat

(8) To install the Multi-Purpose sleeping (liner) bag into the tent to wear as an insulated poncho (see figure 2-11A), proceed as follows:

(a) Remove the tent from the carrying bag, shake out. Unzip the side, head and foot ends of the tent. Spread tent on ground with outside fabric facing ground.

(b) Unzip Multi-Purpose liner bag and place on top of tent with the outside fabric facing the tent and the head end of the liner bag facing the head end of the tent (View A).

(c) Zip both sides of the liner bag to both sides of the tent (View B).

(d) Grasping both sides of the hood opening, put your head through the hood opening of the tent/liner bag and flip remainder of tent/liner bag over your shoulders so as to form a poncho (View C).

(e) A shock cord can be used as an optional belt for the insulated poncho.

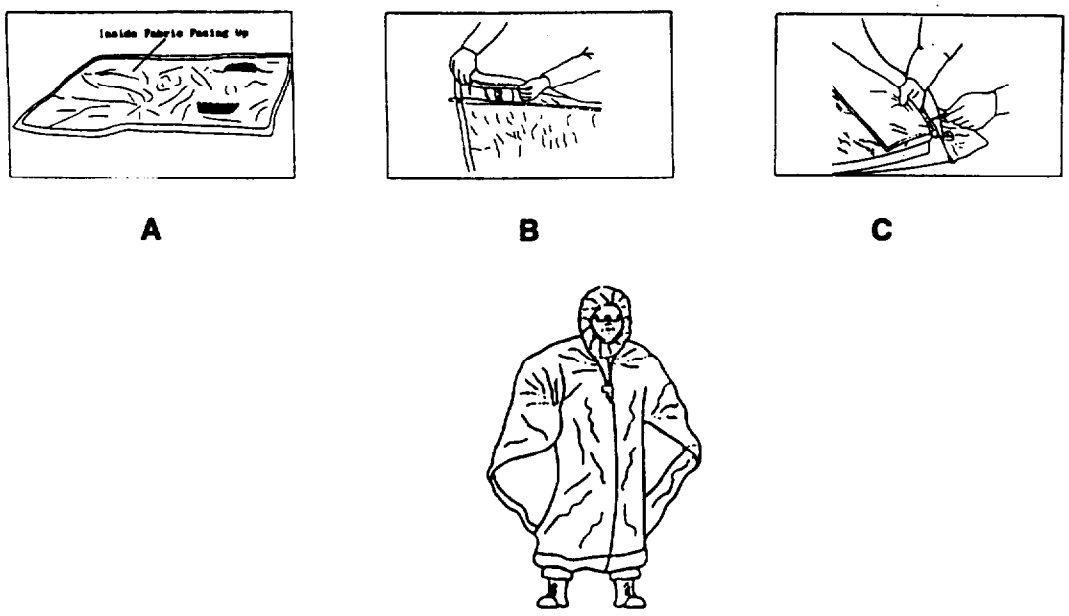


Figure 2-11A Poncho with Liner/Bag

(9) The tent can also be used for the following:

CAUTION

Respect the tent. Use only for basic purpose. Do not over Strain. Remember, immediate rescue is not guaranteed.

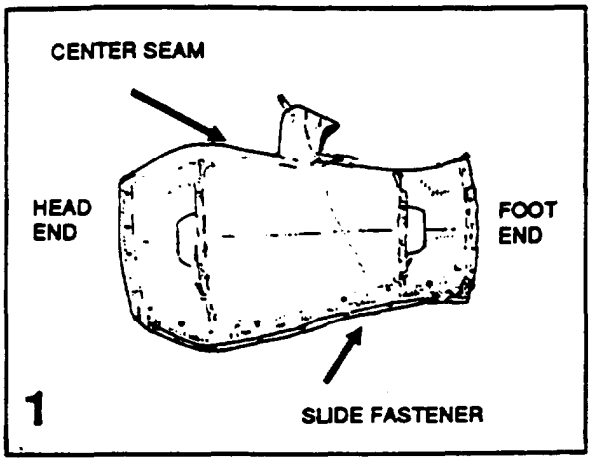
(a) Emergency Litter - zip and connect the hook and pile tape. Use lines to run through the tie down loops to secure two poles on two cross members together. Remove all sharp projections from the poles to avoid tearing the fabric.

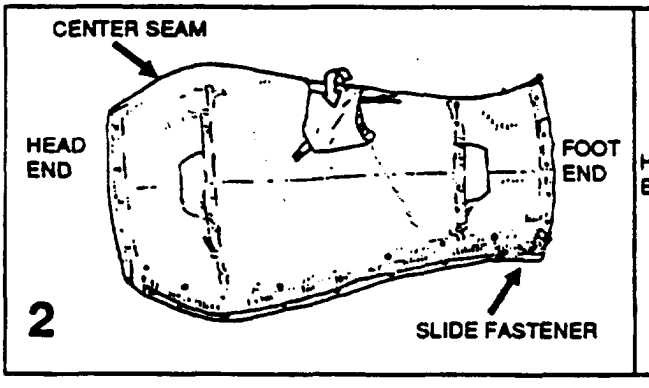
(b) Lean To - the tie down loops make anchor points when positioned near tall saplings. This can also be an excellent wind break. Tent poles can help tension the fabric.

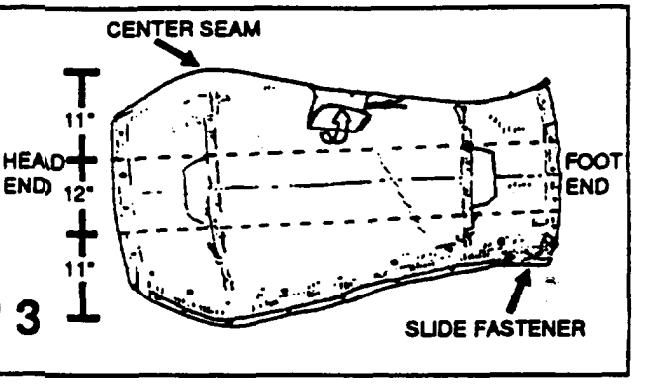
(c) Vee Top - tie a line from two trees at the desired height. Lay the tent over the line and anchor the sides with the tent pegs or brush. Tent pole section can be used if vertical ties are not available. This can also be used as a sun shade.

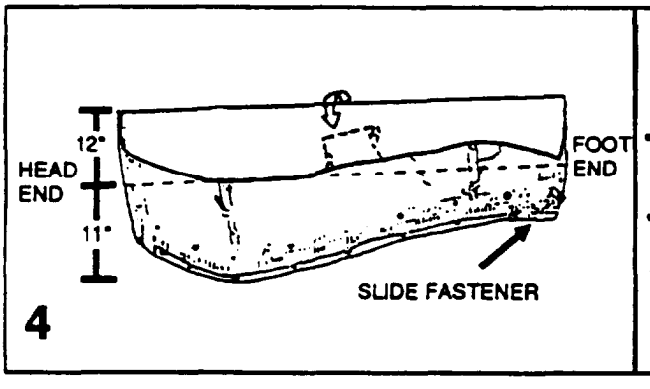
(10) To fold the tent, follow the steps listed below:

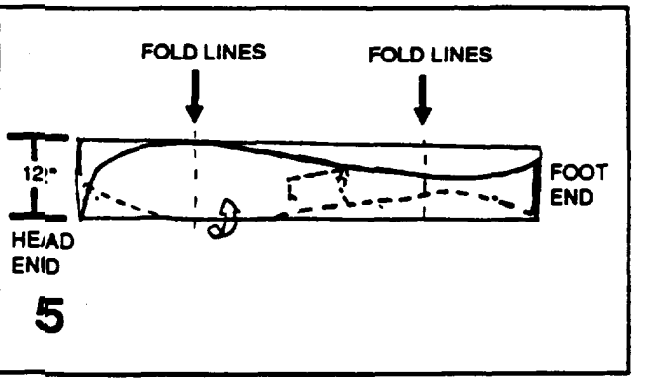
Step 1. Lay the tent out as shown and zip the slide fastener.
Step 2. Fold over the hood.
Step 3. Fold half the hood back over.
Step 4. Fold over the top one-third of the tent.
Step 5. Fold over the bottom one-third of tent.
Step 6. Fold the tent in half by folding 1/4 of each end into the middle of the.
Step 7. Place poles and pins in the pole bag.
Step 8. Place the tent pole bag in the middle of the tent and fold the tent half, covering the pole bag.
Step 9. With the pole bag in the center, roll up the tent.
Step 10. Place tent in carrier.
Step 11. Place screen packet on top of tent in carrier.

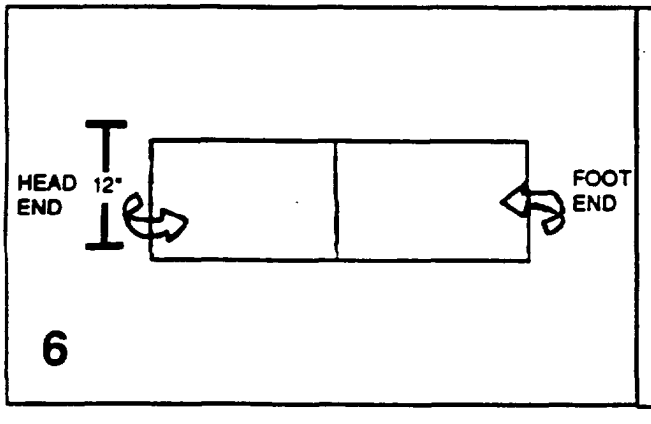


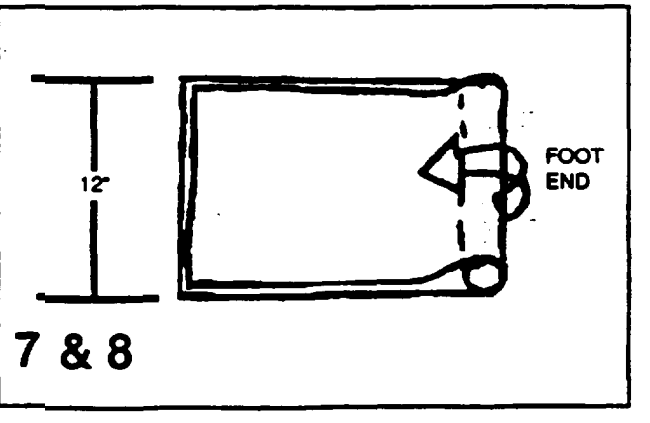












e. Survival Food Packets. These rations are to be used only if no other food source is available. see Figure 2-12.

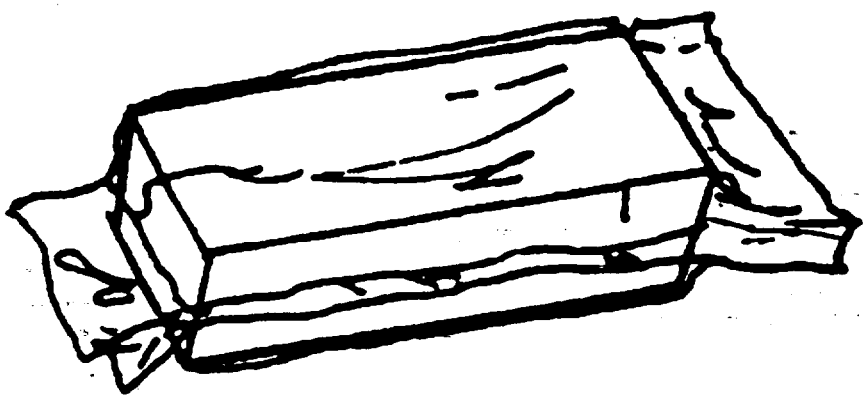


Figure 2-12. Survival Food Packets

f. Smoke and Illumination Signal Flare. Instructions are printed on the outside of the flare for its use. The ORANGE end is for daylight use. The daylight end produces an ORANGE smoke. During daylight, the orange smoke can be seen at a distance of two to three miles (3 to 5 km) at an altitude of 3,000 feet. The RED end is for night use. The red end has three raised dots on the cap and dots or bumps on the ridge just below the edge of the end cap. The night flare produces a bright illuminating RED smoke. During darkness, the illuminating night flare can be seen at a distance of two to three miles (3 to 5 km) from an altitude of 3,000 feet. The average burning time of the flare is 18 seconds at See Figure 2-13.

WARNING

DO NOT attempt to ignite both ends at the same time. Serious burns may result.

Use extreme care when using the signal as an illuminating device. Hot, molten residue spews from the burning signal which can cause serious burns on the body.

NOTE

DO NOT discard a signal flare that has been used only on one end. The opposite end is still usable. The smoke end can also be used as an illuminating flare by placing an open flame to the smoking end after it has been activated.

To activate either the smoke or the illuminating signal, proceed as follows

(1) Remove the end cap (1, Figure 2-13) from either end of the flare. - RED for night use or ORANGE for daytime use.

(2) Grasp the signal firmly with one hand. Hold the signal close to the chest in a horizontal position with the active end of the signal pointed AWAY from the body.

CAUTION

When exerting pull on the pull ring DO NOT use a twisting motion as the pull tab may tear off, resulting in a defective signal.

(3) Insert the index finger of the free hand into the pull ring (2, Figure 2-13), which frees the soldered end of the cap. Pull the cap. If the cap does not release, bring the pull ring over the rim of the can and press down with the heel of your hand, using the ring as a lever to break the seal.

(4) Make a steady, straight, horizontal pull until the pull ring and tab separate from the signal end, (3). The signal will activate when the tab separates from the signal. Continue raising until a full arm's length is reached. Point the activated signal end upward, at a 45-degree angle until the signal has burned out.

(5) For additional operating instructions refer to TM 9-1370-206-10.

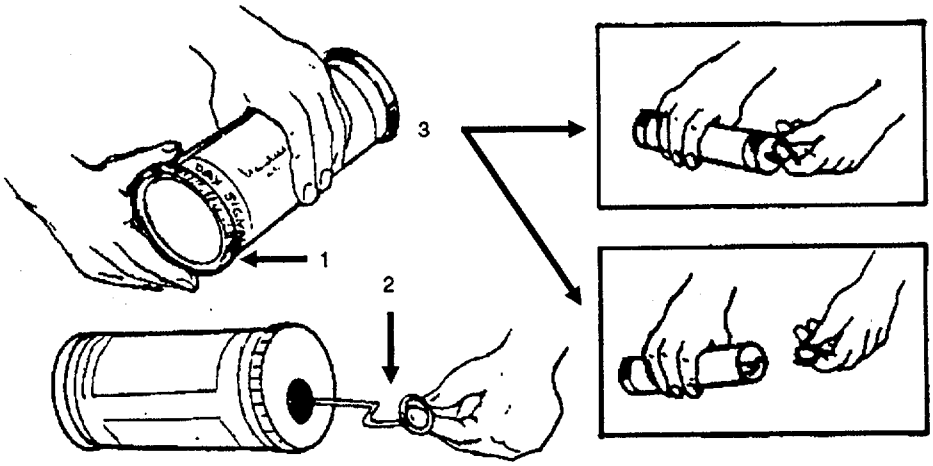


Figure 2-13. Smoke and Illumination Signal Flare

g. Fire Starter Magnesium. The fire starter is a bar of magnesium with a sparking insert wedged into one side and a key chain in one comer.

WARNING |

To avoid a flare-up and possible burns, DO NOT soak tinder with gasoline or attempt to ignite gasoline.

NOTE

To prevent shavings from blowing away and to simplify ignition, place magnesium shavings in a piece of petrolatum gauze from the aircraft first aid kit or in a depression in the ground.

To start a fire, proceed as follows:

(1) Shave the narrow side (opposite the sparking insert) of the fire starter (1, Figure 2-14) with the knife held perpendicular to the starter. Chips will not produce fire.

(2) After accumulating magnesium shavings over an area about the size of a quarter, place the shavings next to tinder (paper, cloth, small twigs, or bark).

(3) Support edge of the fire starter on the ground within 1 inch (2.5 cm) of the magnesium shavings at approximately a 45-degree angle. Scrape the entire length of the sparking insert (2, Figure 2-14) rapidly, holding the knife blade perpendicular to the sparking insert. This action will generate sparks; cause the magnesium shavings to ignite; and create a white, hot flame.

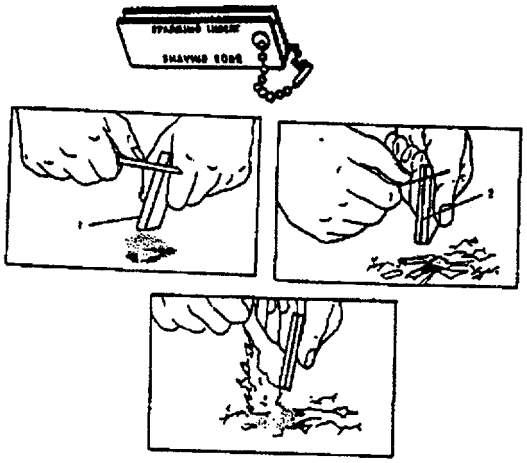


Figure 2-14. Fire Starter, Magnesium

h. Fire Starter, Spark Lite. The Spark Lite fire starter (See Figure 2-15) comes in a plastic box containing a sparking device, treated cotton tinder, extra flints and instructions.

(1) Assemble tinder and other fire-building material (see your survival manual).
(2) Fluff the end of the treated cotton wad.
(3) Using the thumb and forefinger with the sparking device, spin the sparking wheel toward the thumb.
(4) Keep making sparks until the treated cotton swab ignites.
(5) Place the burning wad into the tinder nest and proceed to make a fire.

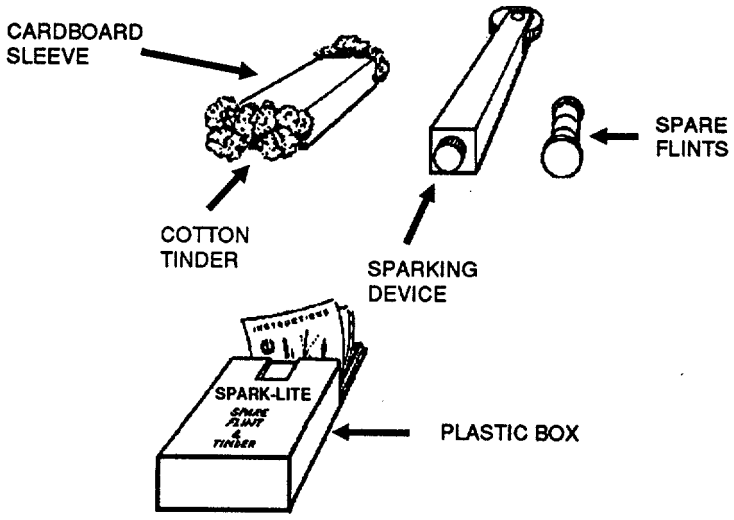


Figure 2-15. Fire Starter, Spark Lite

i. Mechanical Reverse Osmosis Device (MROD-06) The MROD-06 (See Figure 2-16) is used to purify water for drinking. It is a manually operated desalination system which can produce approximately 6 gallons of drinkable water per day from seawater, brackish marsh water, river, stream, or lake water. A semipermeable membrane inside the unit acts as a molecular filter. When sea water is pressurized to 800 psi (by pumping the handle) and forced against the membrane, only the water molecules can pass through: salt molecules are unable to pass, and they flow out of the system.

WARNING

In a cold environment, when the MROD-06 is used to purify water, it must not be allowed to freeze. Freezing causes the membrane (that purifies the water) to fracture, become useless, and contaminate the water output.

CAUTION

Avoid sucking oil, gasoline, or highly abrasive (sandy) water into the MROD-06. Petroleum based products can harm the membrane. The MROD-06 can also be damaged by large particles in gritty feedwater under high pressure.

If water is drawn from a bucket or another container, dump the water after drawing out about 10 percent of it or split the reject and intake hoses so that the non-usable water can be dumped away from the source water. Continued return of non-usable water to a limited source increases its salt (or bad water) content: you must then pump increasingly harder while the product water flow rate decreases. The safety relief valve will eventually release.

NOTE

The MROD-06 completely filters only 10 percent of the total water intake. Use a steady pumping action and DO NOT pump too quickly. Rapid pumping forces the in-flow water to bypass the filter and exit the over-pressure relief port.

The MROD-06 is NOT recommended for use at temperatures of 32 degrees Fahrenheit or below.

If the supply water is very cold or its salt concentration is high, water may squirt from the relief valve. This is normal. Slow down the pumping rate.

READ the warning and cautions before operating.

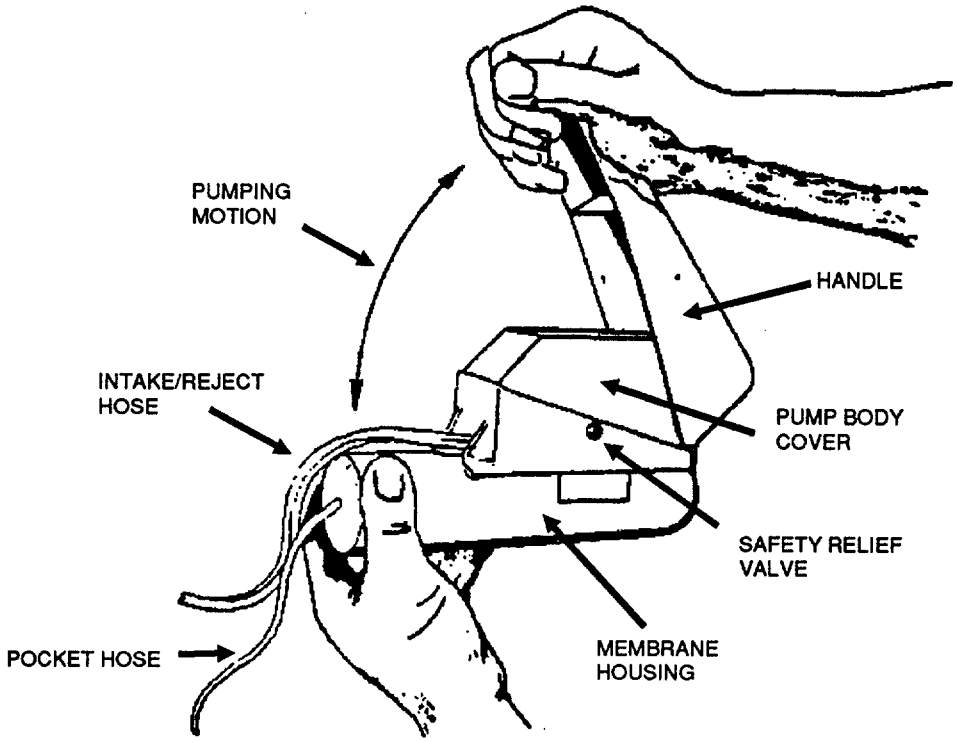
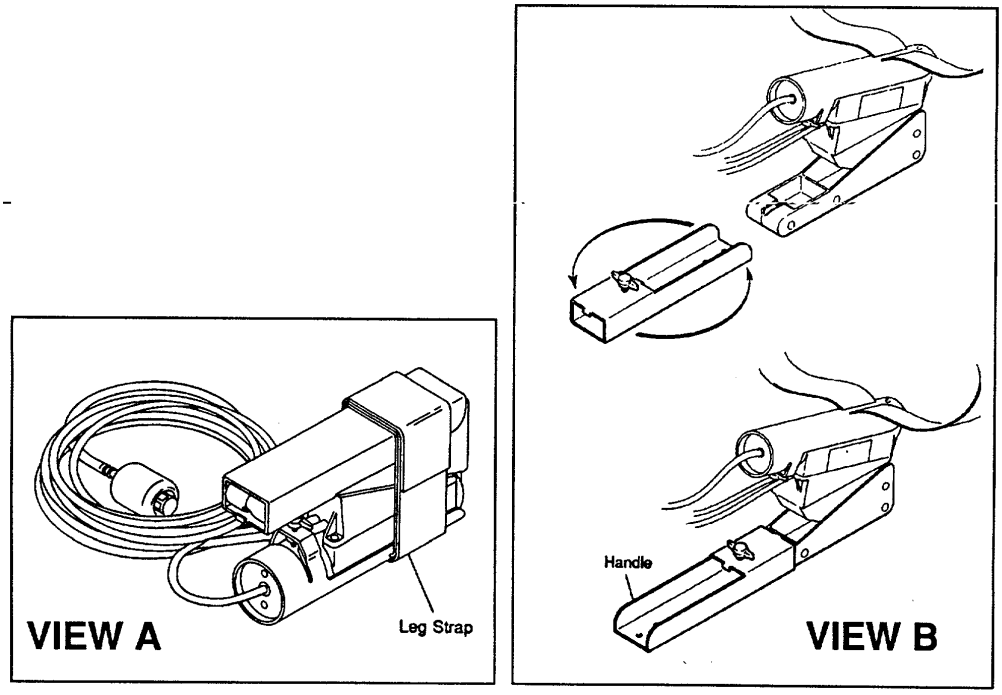


Figure 2-16. Mechanical Reverse Osmosis Device (MROD-06)

To operate, proceed as follows:

(1) Remove the protective wrapping, unwind the hoses, and unwrap the leg strap (View A). The weighted prefilter is on the end of the intake/reject line. Pull it out of its niche inside the handle.

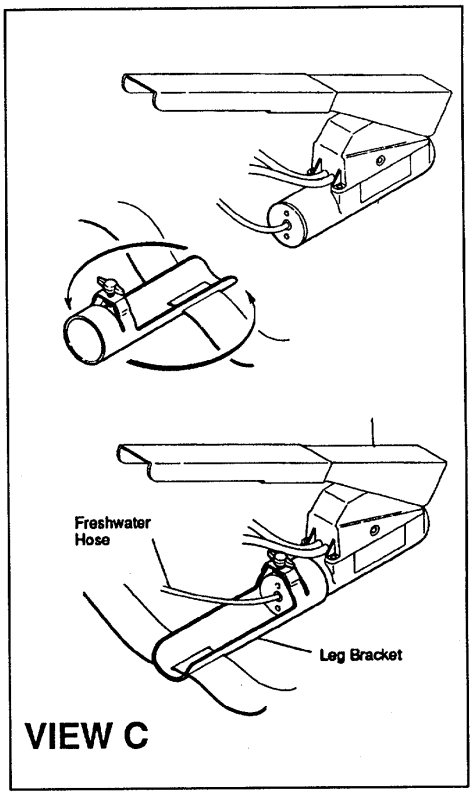
(2) Loosen the handle screw. Turn the handle end-for-end, and retighten the screw (View B).



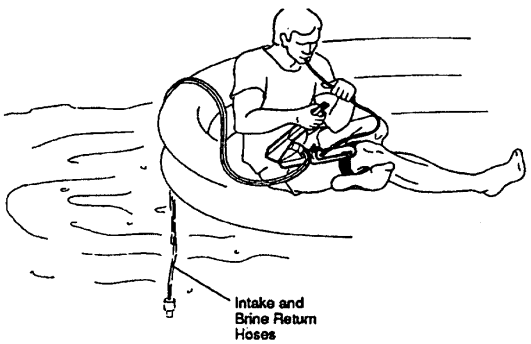
(3) Loosen the leg bracket screw. Turn the leg bracket end-for-end, thread the freshwater hose back through it, and retighten the screw (View C).
(4) Wrap the strap around your leg (refer to View D for this and remaining steps).
(5) Remove and save caps from hoses.
(6) Drop the intake hose (with weighted filter) and brine return hose into your water source. To keep air out of the hoses, be sure the filter is completely submerged.
(7) Hold the separate (smaller) product hose in one hand, away from your mouth, and begin pumping. Pump in a relaxed and steady manner, lifting the handle all the way up and pushing it all the way down. A rate of about 40 strokes per minute is best.
(8) The first water produced will contain biocide or salt. This is normal: just discard this initial supply of water. Two to three minutes of pumping should clear any saltiness or biocide.
(9) When the water is cleared, place the freshwater hose directly into your mouth or a suitable container and continue pumping.

NOTE

If you stop pumping temporarily, the water will taste slightly salty for a few minutes when your resume.



VIEW C



VIEW D

j. Survival Manual. FM 21-76 and AFM 64-5 (See Figure 2-17) are the two survival manuals authorized for use with Army survival kits. These manuals provide survival instructions under all climatic and environmental conditions. Refer to the manual for detailed survival methods and practices.

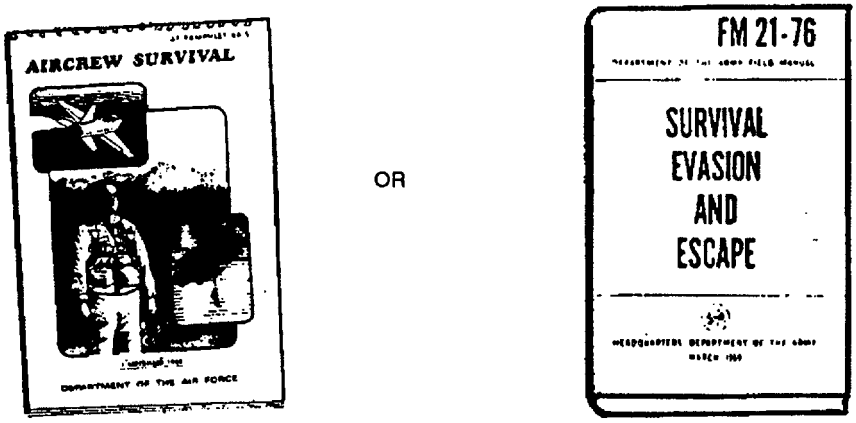


Figure 2-17. Survival Manuals

k. Matches with Container. The non-safety matches are contained in a plastic waterproof container (See Figure 2-18). These matches are used to start fires for cooking, heating and signaling.

NOTE
Do not over tighten lid.

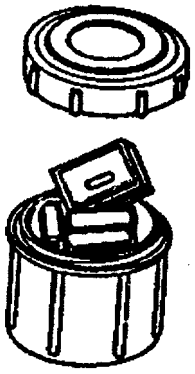


Figure 2-18. Matches with Container

l. Stove, Pocket. The pocket stove (See Figure 2-19) comes with 6 packets of trioxane fuel tablets. By using the canteen cup with the pocket stove, water can be heated and rations cooked. The trioxane fuel bars are a limited source of heat.

WARNING
DO NOT use gasoline in the pocket stove.

Compressed trioxane fuel contains metaformaldehyde. This chemical is poisonous and could cause serious intestinal problems. Avoid skin contact, inhalation of fumes, and ingestion. Wash hands after using and before consuming food to avoid the possible ingestion of trioxane. If trioxane fuel is ingested do not induce vomiting. Drink milk, eat bread or any high protein food, and seek medical attention immediately.

Use the following procedures (see Figure 2-19):

(1) Remove the top stove cover. Pull the grill supports (1) up into a full vertical position.

(2) Place the grill over supports, ensuring grill (2) is locked in place.

(3) Remove trioxane fuel tablet from foil packet (3) and insert on bottom of stove.

WARNING
The trioxane fuel bar lights instantly and the flame is not very visible during daylight hours (in very bright light the flame is nearly invisible). DO NOT touch the tablet once it has been ignited as severe bums may result.

(4) Light tablet by touching directly with match or lighter (4).

(5) To use windbreaker (stove cover) (5), set the cover on its side and lock in place.

(6) The stove is now ready for cooking.

CAUTION
Stove metal becomes hot during use. Place stove on a nonflammable surface during use and let cool after use before disassembly.

CAUTION
Inspect corners of stove for proper seal prior to filling with aircraft fuel.

(7) Alternate Fuels: Sticks and twigs or aircraft fuel. When using A/C fuel, line or wrap the outside of the stove with aluminum foil. Fill the stove with dirt. Take A/C fuel and moisten the dirt. **DO NOT FLOOD THE STOVE WITH A/C FUEL**.

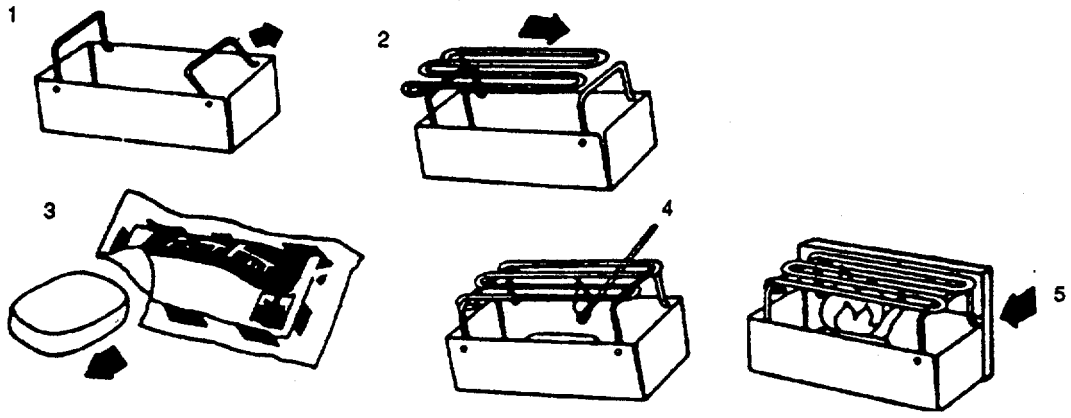


Figure 2-19. Stove, Pocket

m. Fuel Siphon. The fuel siphon (See Figure 2-20) is used to recover fuel from the aircraft fuel cells when the fuel sumps are inaccessible.

WARNING

Be especially careful while obtaining fuel from the aircraft fuel cells. DO NOT spill or splash fuel on the body or clothing. Clean the spill immediately.

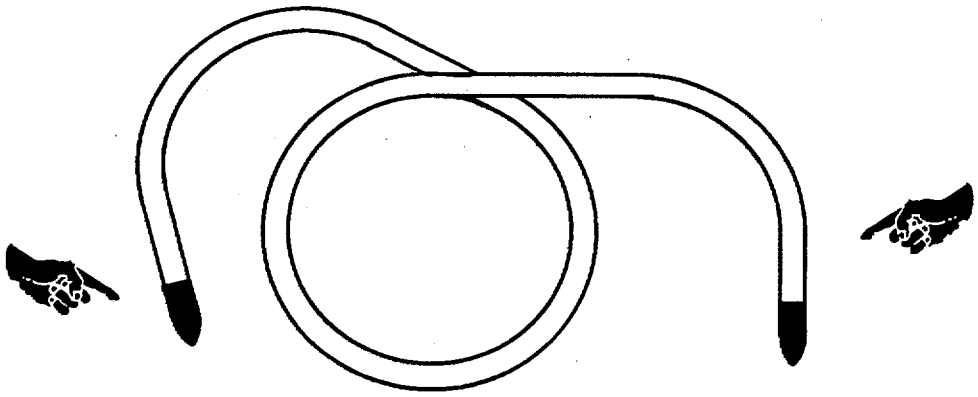


Figure 2-20. Fuel Siphon

A 6 ft. length of hose may be in your survival kit. To use the hose proceed as follows:

Hose Operation:

(1) Open the fuel tank cap.

(2) Inset the hose all the way to the bottom of the fuel cell.

(3) Cap the hose with your thumb.

(4) Pull the hose out of the tank. and slowly release the fuel in order to soak the dirt in the pocket stove with it. Do not spill fuel in the area in which the stove will be lit or used.

(5) Replace the fuel tank cap.

n. Deleted.

Figure 2-21. Deleted

o. Distress Marker SDU-5/E Light (Strobe Light). The distress marker light (See Figure 2-22) is a battery powered, high intensity sequenced light (strobe light). The light can be seen for 5 miles (8 km) at night and will operate for 9 continuous hours or 18 intermittent hours on the same battery. It has 3 spare batteries.

To operate the light, proceed as follows:

(1) Make certain the battery is screwed in tightly.

(2) Push the PUSH ON/OFF rubber switch housing in until a "click" is heard, then release. The light will begin flashing (50-60 times per minute) within a few seconds.

NOTE

Optimum operating temperature is 70 degrees F. (20 degrees C). Lower temperatures will result in lower flash rates.

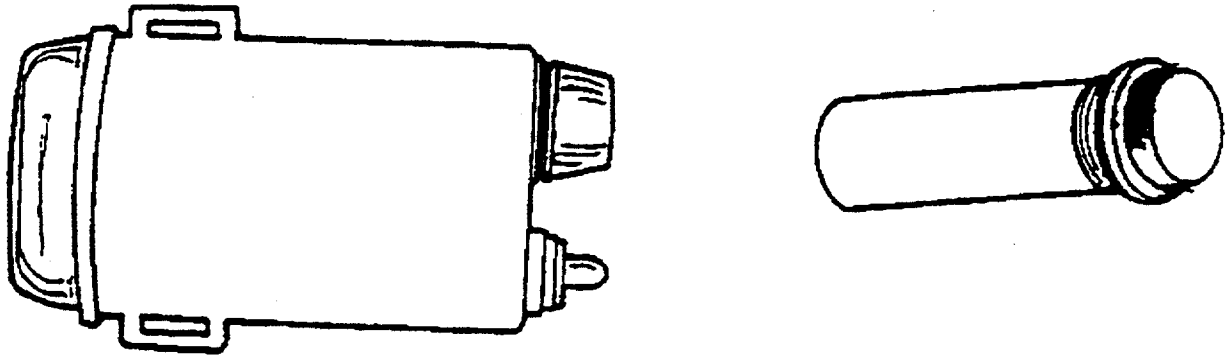


Figure 2-22. Distress Light Signal

2.5.2 AMSS Optional Components.

The following items are the optional components of the AMSS:

a. Blanket, Combat Casualty. The combat casualty blanket (See Figure 2-23) is used to provide both warmth and protection from the elements and as a signaling panel to aid in rescue.

The combat casualty blanket may be used as a windbreaker, sunshade, poncho, or position indicator for rescue missions. In excessively windy conditions, the combat casualty blanket can be tied in position with tape or nylon cord. It can also be used on all life rafts.

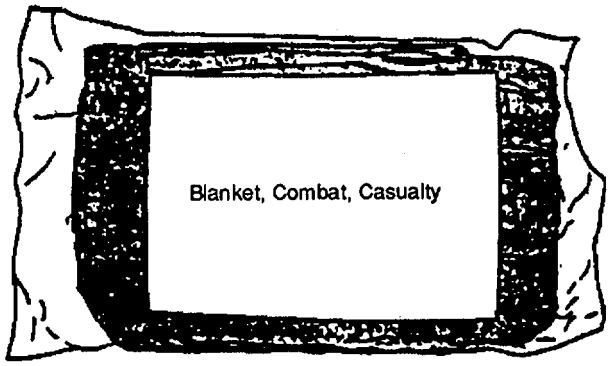


Figure 2-23. Combat Casualty Blanket

b. Whistle. The plastic ball whistle (See Figure 2-24) is a signaling device used for attracting the attention of rescue personnel. The whistle is intended for use by downed air crewmembers seeking attention of rescue personnel or to gather members of the crew and passengers together.

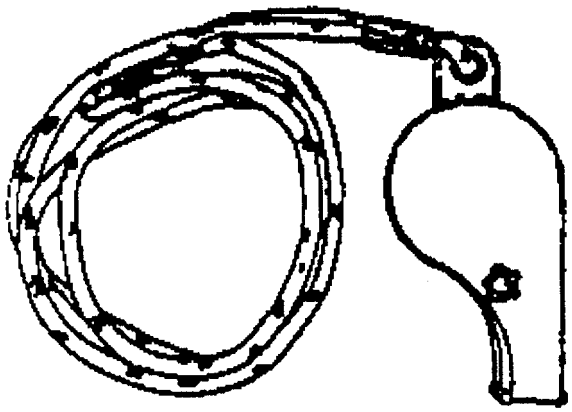


Figure 2-24. Whistle

c. Signaling Mirror. The signaling mirror (See View A, Figure 2-25) is a glass signaling instrument equipped with a retaining cord on one corner and a transparent sighting circle in the center of the mirror. Instructions are printed on the back. When used in the day time and with good visibility, a mirror can be seen at a distance of 3 miles (5 km) at an altitude of 10,000 feet (3,050 meters). Though less effective and with shorter range, mirror flashes can also be seen on cloudy days or in limited visibility.

Procedures are as follows:

(1) Hold mirror to enable the sunlight to reflect on a nearby surface such as the hand or other close object.

(2) While bringing the mirror toward your eye, look through the sighting circle (on the black side with printed instructions) until an intense, bright spot is located. This is the aim point.

(3) Hold the mirror close to the eye and slowly turn it until the bright spot is on the target. Refer to Figure 2-25, View B.

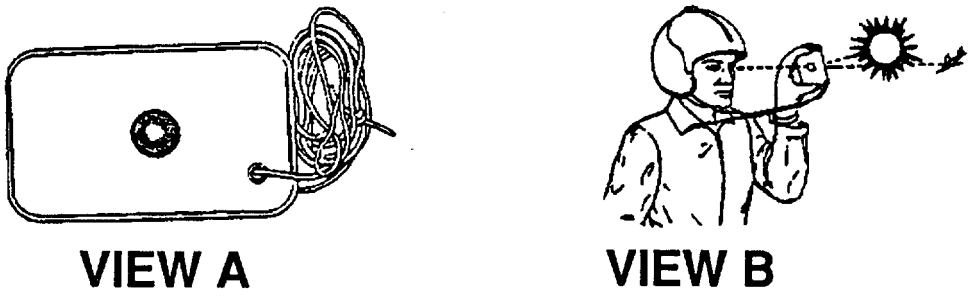


Figure 2-25. Signaling Mirror

d. Drinking Water Storage Bag. The water storage bag (See Figure 2-26) is constructed of plastic and has a capacity of 5 quarts of water. The bag comes complete with a buckle, snap fastener, and carrying strap for easy attachment to personnel or equipment.

WARNING

In an Nuclear, Biological, and Chemical (NBC) environment DO NOT use water or attempt to drink from the water storage bag. DESTROY the bag and contents, it CANNOT be decontaminated.

CAUTION

When using the water storage bag in freezing or near freezing temperatures the plastic bag will break. To prevent the bag from breaking, warm the plastic bag BEFORE opening it.

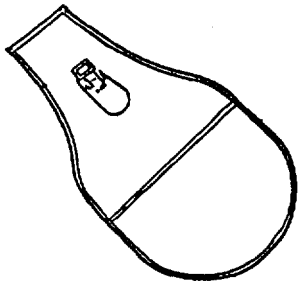


Figure 2-26. Drinking Water Storage Bag

e. Solar Still. The solar still (See Figure 2-27) is a five-foot-square piece of plastic and a three-foot-long piece of surgical tubing. The proper use of these items can make potable drinking water. Refer to the survival manual for complete instructions.

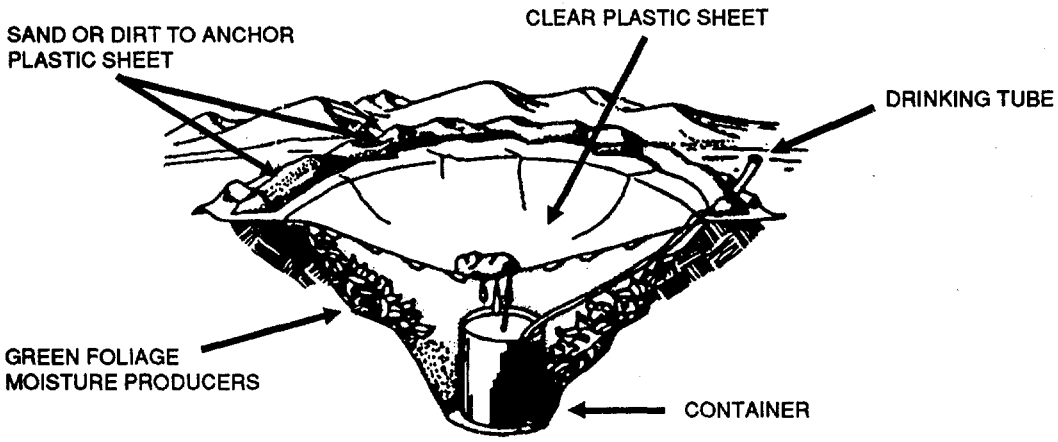


Figure 2-27. Solar Still

f. First Aid Kit. The first aid kit (See Figure 2-28) contains medical items necessary for applying first aid and instructions for treating injuries sustained in crash or post-crash or survival conditions. More first aid instructions are located in the survival manual.

Figure 2-28. First Aid Kit

g. Non-electrical wire. The wire (See Figure 2-29) is normally 20 feet long and is used to make snares to capture small game. More instructions for use are found in the survival manual.

Figure 2-29. Non-Electrical Wire

h. Insect Repellent/Sunburn Preventative. Apply insect repellent/ sunburn preventative (See Figure 2-30) to the exposed areas of the face, neck, or other parts of the body to protect against insects and prevent or treat sun and wind bums. It may also be used to help start fires.

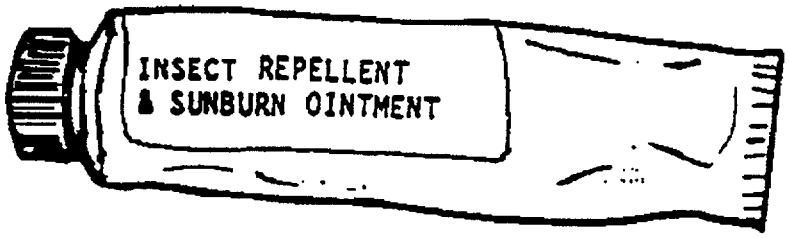


Figure 2-30. Insect Repellent/Sunburn Preventative

i. Canteen Cup. The canteen cup (See Figure 2-31) can be used for drinking and may be used with the pocket stove for heating water and cooking. During survival conditions, the canteen cup may be put to many other uses.

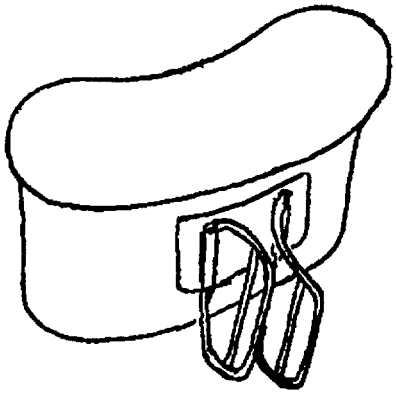


Figure 2-31. Canteen Cup

j. Insect Headnet - the insect headnet is used to keep insects away from the neck, face and head. See Fgure2-32.

To use proceed as follows:

CAUTION
Keep repellent off the elastic as repellent will ruin the elastic.

DO NOT use a headnet that has been treated with insect repellent as a water machine.

NOTE
The headnet can be used as a minnow bucket when fishing, or as a water machine during winter by filling it with snow and letting the heat melt the snow. Catch the water in a container.

(1) Place the headnet on your bare head so that the elastic head band (1, Figure 2-32) rests comfortably on the upper part of your head. Then put your hat or helmet over the head net. This is the preferred method of wearing the insect headnet. Using this method allows you to take the hat or helmet off while the

headnet keeps the insects off your neck, face and head. The headnet may also be stretched over your helmet so that it grips close to the bottom edge of the visor housing.

(2) Pull your collar underneath the headnet and tie the draw string (2, Figure 2-32) into a knot so that it is about 8 inches (20 cm) below your chin, placing the headnet slightly below the collar.

(3) Check that the back of the headnet is well below the collar. Hook the elastic loops (3) tightly over the breast pocket buttons.

(4) To remove the headnet quickly, grasp the back of it where it rests over the collar (4) and pull forward.

(5) To avoid being bitten by dangerous insects, rub insect repellent in the headnet.

(a) Put a small amount of insect repellent into the palm of one hand.

(b) Rub hands together to spread the repellent.

(c) Rub the netting in between the hands until all the netting has been covered evenly. DO NOT saturate the netting.

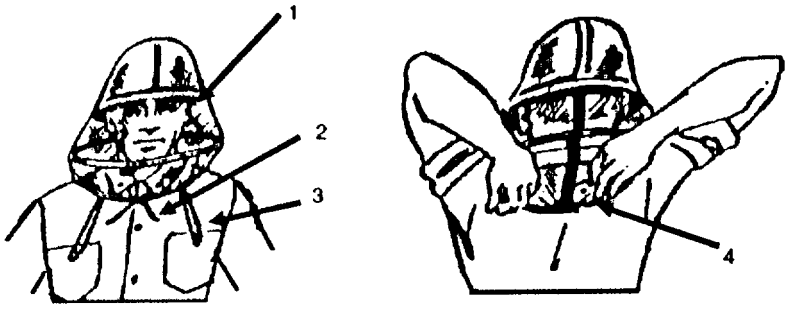


Figure 2-32. Insect Headnet

k. Compressed Trioxane Fuel. Each block of trioxane fuel (See Figure 2-33) is sealed in aluminum foil and packaged in a box that contains instructions on fuel bar use.

WARNING

Compressed trioxane fuel contains metaformaldehyde. This chemical is poisonous and could cause serious intestinal problems. Avoid skin contact, inhalation of fumes, and ingestion. Wash hands after using and before consuming food to avoid the possible ingestion of trioxane. If trioxane fuel is ingested do not induce vomiting. Drink milk, eat bread or any high protein food, and seek medical attention immediately.

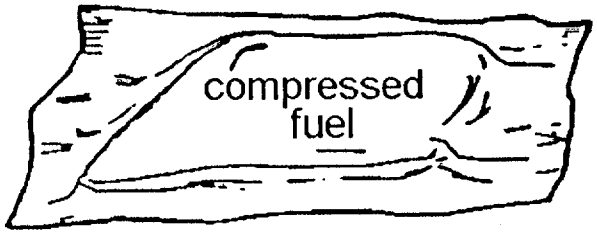


Figure 2-33. Compressed Trioxane Fuel

l. Multi-Purpose Net. the multi-purpose net may be used in streams, lakes, or oceans as a fishing gill net. One method on land is to set the net (See Figure 2-34, View B) at right angles to the shore, using logs as floats and rocks to anchor the bottom of the net. It may also be used as a food cache, a snare for small game, or a hammock or litter when folded in half.

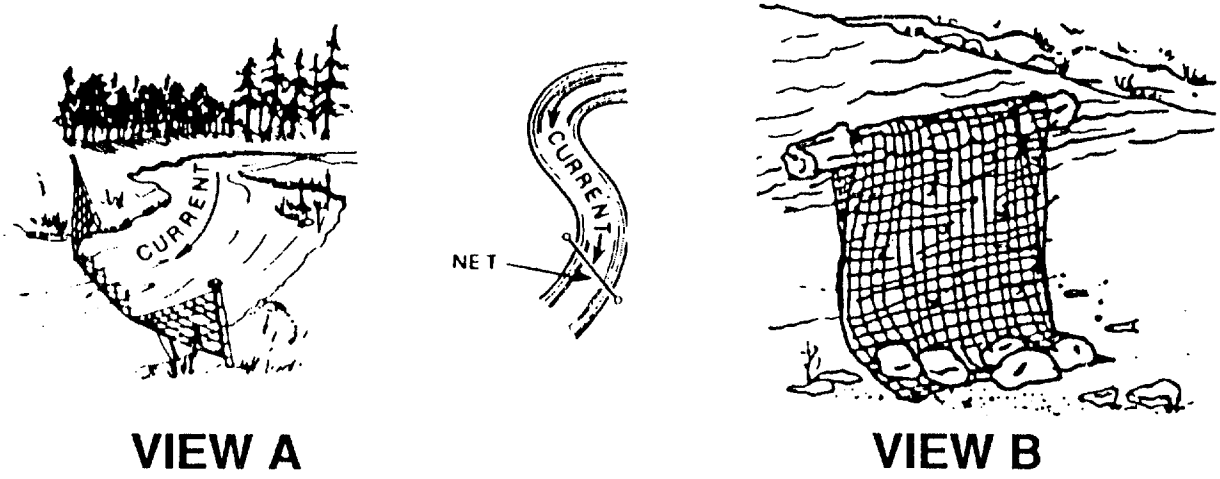


Figure 2-34. Multi-Purpose Net

m. Sunglasses. The sunglasses (See Figure 2-35) are used to protect against extreme sun glare which could cause temporary blindness. (i.e., snow blindness).

WARNING

DO NOT use sunglasses for direct viewing of die sun. Eye damage will result.

CAUTION

To guard against scratching the lenses, protect them against dirt and avoid cleaning them with gasoline or boiling-hot water.

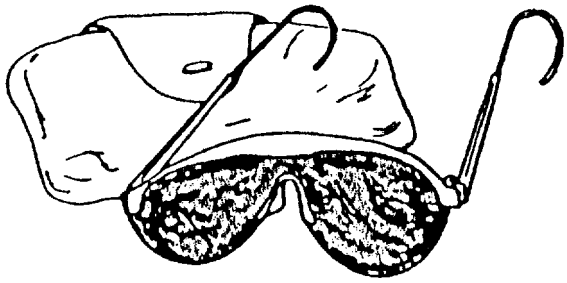


Figure 2-35. Sunglasses

n. Pocket Knife. The pocket knife (See Figure 2-36) is used as an aid in cleaning fish or small game and for light cutting, such as shelter material and twigs for game traps.

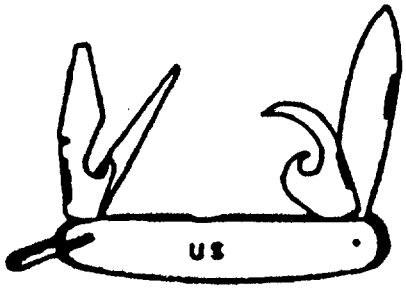


Figure 2-36. Pocket Knife

o. Spoon. The plastic spoon (See Figure 2-37) is used as a utensil when cooking or eating rations.

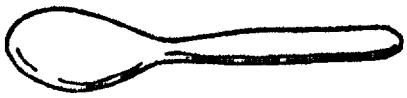


Figure 2-37. Spoon

p. Nylon Cord. The nylon cord (See Figure 2-38) is 30 feet (9.1 meters) long and has a breaking strength of 100 pounds. The primary function of the nylon cord is to tie and secure items together. Refer to the survival manual for further instructions on the various uses for nylon cord.

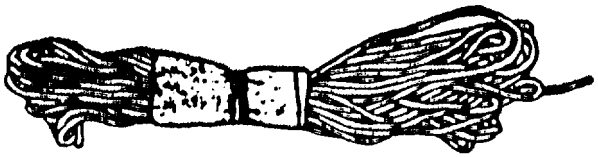


Figure 2-38. Nylon Cord

q. Lensatic Compass. The lensatic magnetic compass (See Figure 2-39) is a very important aid in determining your direction. The compass is equipped with a transparent, plastic top, a luminous line (lubber line) for determining directional course reading, and a lanyard attaching ring located on the compass case that secures the case when not in use.

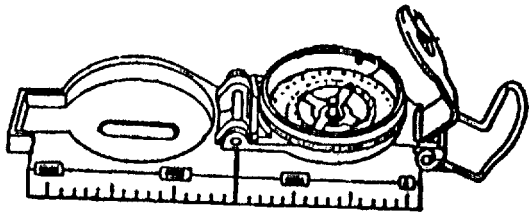


Figure 2-39. Lensatic Compass

r. Hat, Reversible Sun Protection. The reversible sun hat (See Figure 2-40) can be used for signaling (orange/yellow side) or camouflage (olive green side). Wear the hat with the brim pulled down for maximum benefits of head coverage.

Figure 2-40. Hat, Reversible, Sun Protection

s. Sleeping Bag. The sleeping bag (See Figure 2-41) comes compressed and vacuum packed. After removing the sleeping bug from its packaging, shake and fluff the bag. Increased fluffing provides greater warmth. Keep the sleeping bag clean and dry. After use, turn the bag inside out to allow condensation to dry out.

Figure 2-41. Sleeping Bag

t. Candles. The candles (See Figure 2-42) may be used to provide limited warmth and lighting at night. Each candle is capable of burning for approximately eight hours.

WARNING

To prevent carbon monoxide poisoning provide good ventilation when burning candles.

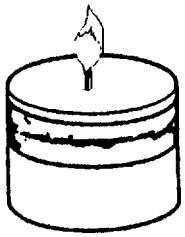


Figure 2-42. Candle

u. Dust/Snow Goggles. The dust/snow goggles (See Figure 2-43) are provided to protect the eyes against possible blindness from sunlight reflecting off snow or desert sand.

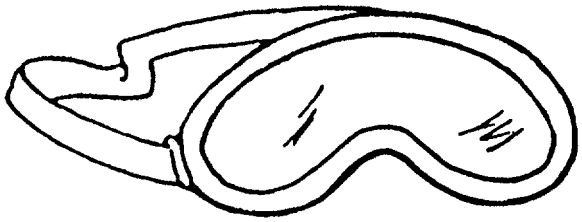


Figure 2-43. Dust/Snow Goggles

v. Multi-Purpose Survival Tool. The multi-purpose survival tool (See Figure 2-44) has an ax head (1), hollow handle (2), shovel (3), carrying case (4), hammer head (5), and saw blade (6). The carrying case (4) may be attached to a belt for convenience.

WARNING

Be careful when using any of the attachment. Wear the flight helmet with the VISOR DOWN to protect the eyes against any flying debris.

CAUTION

When using the saw, if the saw blade binds in the wood, DO NOT force the blade to work, it may break.

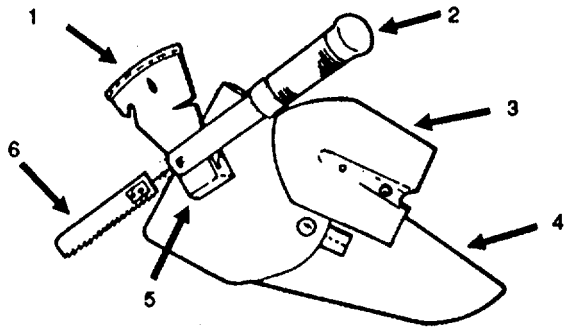
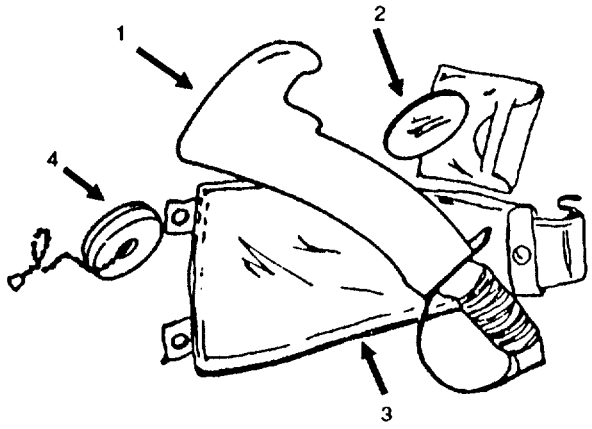


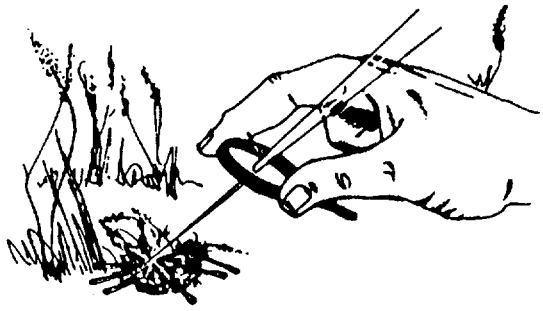
Figure 2-44. Multi-Purpose Survival Tool

w. Tool Kit, Survival. The tool kit survival (See Figure 2-45) contains a heavy, short machete with a sharp blade (1), a burning lens (magnifying lens) (2), carrying case (3), and a sharpening stone (4) and a thong located in the inside pocket of the case.

WARNING

The blade is very sharp and can cause wounds if not handled with care. When using the short machete as a hatchet wear the flight helmet with the VISOR DOWN to prevent debris from causing facial damage.





FIRE MAKING - LENS METHOD

Figure 2-45. Tool Kit, Survival

x. Saw, Hand, Finger Grip, Survival. This saw (See Figure 2-46) is a wire saw with thumb-screw ring grips. Should the wire break, the thumb-screws allow the broken wire to be reattached to the grip rings for continued use.

To use the saw, pull the wire saw blade through the small branch in a left-right-left-right pulling motion until the small branch has been sawed through.

CAUTION

The finger-saw will not stand extreme pulling pressures. Be very careful with the sawing motion. Do not bind the blade.

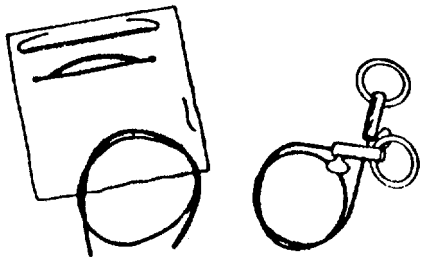


Figure 2-46. Saw, Hand, Finger Grip, Survival

y. Poncho. The poncho (See Figure 2-47) can be used as a weather over-garment, as a limited shelter, or as a hammock. The instructions are printed on the inside hem of the poncho.

Figure 2-47. Poncho

z. Tarpaulin. The tarpaulin (See Figure 2-48) has several uses. It can be used as a shelter, as a signal panel (instructions for air rescue signals are printed on the yellow surface of the panel), to gather rain water, or as a stretcher litter.

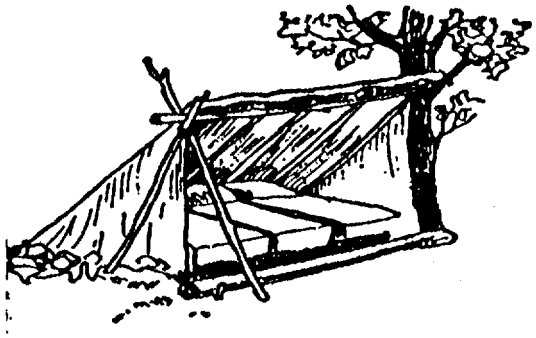


Figure 2-48. Tarpaulin

aa. Frying Pan. The frying pan (See Figure 249) is used for melting snow to make water or for cooking. The frying pan currently used is from the Individual Survival Kit Hot/Cold/Over-Water and forms the hard back part of these kits.

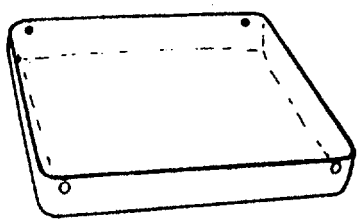


Figure 2-49. Frying Pan

ab. Sewing Kit. The sewing kit (See Figure 2-50) is used to repair torn clothing, or to perform first aid or suturing, as a last resort.

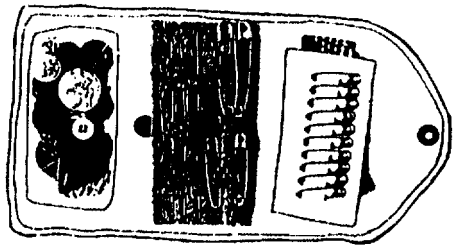
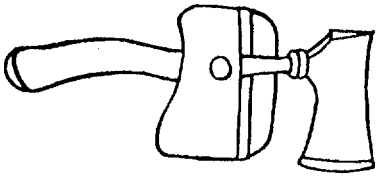


Figure 2-50. Sewing Kit

ac. Ax, Camp with Carrier. The ax (See Figure 2-51) is used for heavier wood cutting chores in combination with a saw.

WARNING

Wear the helmet with the visor down to protect the eyes from flying chips. Also be aware of where the hands, feet and other people are when chopping wood to prevent serious injuries.



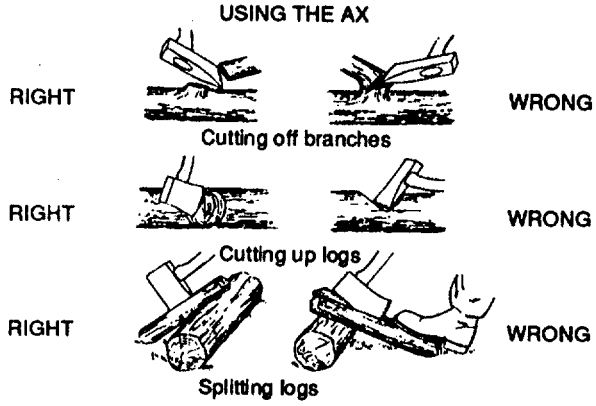


Figure 2-51. Ax, Camp with Carrier

ad. Camouflage Stick. The camouflage stick (Figure 2-52) is used to camouflage exposed skin by breaking shiny reflections of the skin and darkening skin tones. Follow instructions on the container.

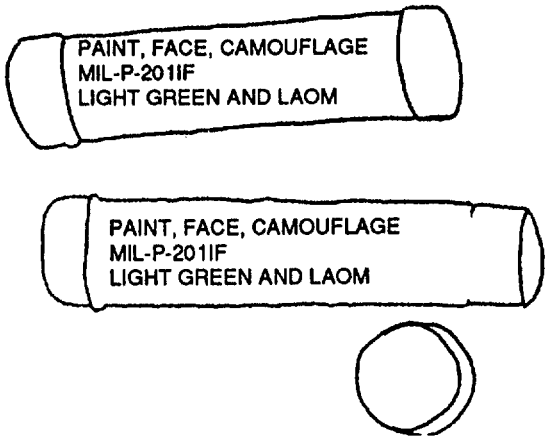


Figure 2-52. Camouflage Stick

ae. Parachute Cloth. Parachute cloth (See Figure 2-53) has many uses. It can be used as a head cover, for carrying objects, as a tumpline, to protect food supplies, to provide shelter, and many other uses.

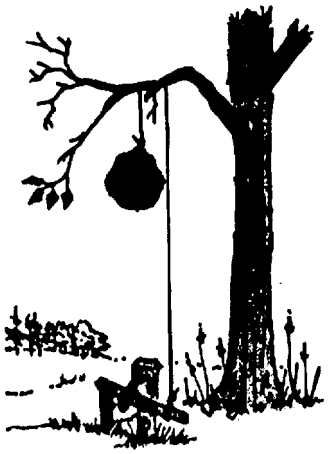


Figure 2-53. Parachute Cloth

af. Cover, Individual, Camouflage Net. This net (See Figure 2-54) comes in woodland, desert, and snow patterns. Use it as a personal camouflage covering by matching the pattern to the surrounding environment in an escape and evasion situation.

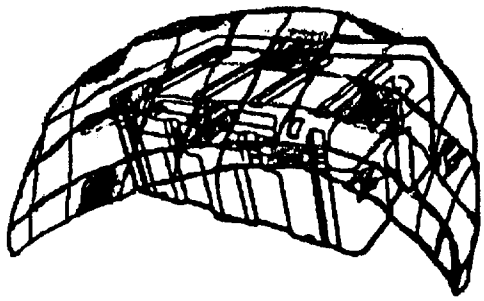


Figure 2-54. Cover, Individual, Camouflage Net

ag. Entrenching Tool. The entrenching tool (See Figure 2-55) has many uses, i.e., to dig holes and to cut small trees and bush roots. To use, unfold the handle and short handle length and turn the securing housing to the right. The entrenching tool can be used with the blade at a 45-degree angle to the handle by not straightening the blade out. Secure the tool in position by twisting the securing housing to the left until tight

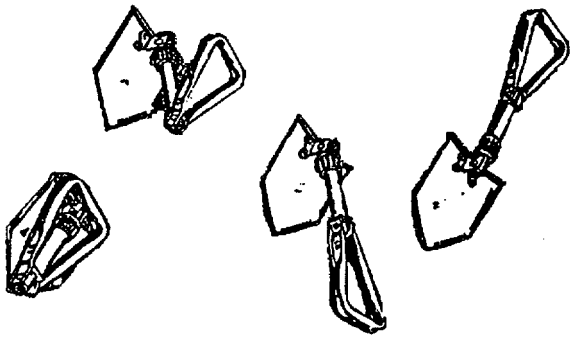


Figure 2-55. Entrenching Tool

ah. Aluminum Foil. A piece of aluminum foil (See Figure 2-56) is enclosed with the pocket stove. When using aircraft fuel in the stove, fold the foil into the stove or wrap the outside of the stove, being careful not to tear the foil, and making certain that the foil covers the corner joints of the stove. Do this prior to filling the stove with soil and then aircraft fuel. If this is not done, fuel will run from the stove causing a fire hazard. Excess foil has many uses in a survival situation, (i.e., signaling, reflecting fire heat).

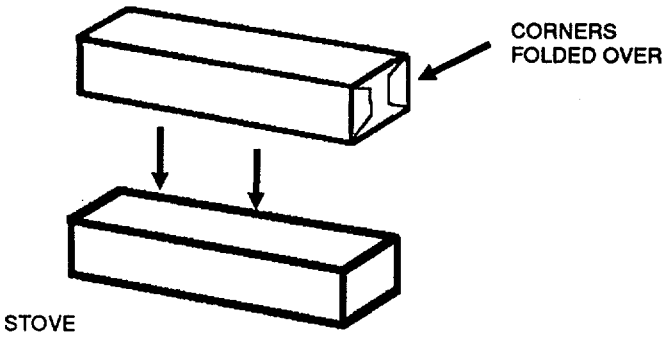


Figure 2-56. Aluminum Foil

ai. Mess Kit Knife, Fork and Spoon. The mess kit knife, fork and spoon (See Figure 2-57) may be included in your survival kit.

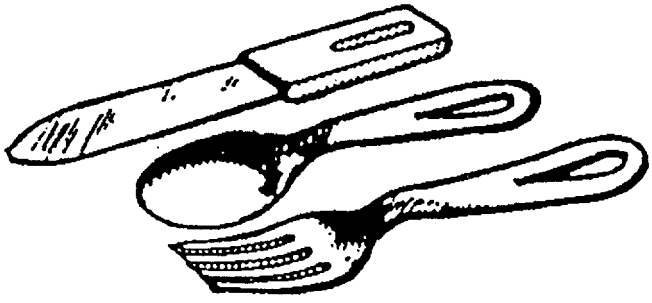


Figure 2-57. Mess Kit, Knife, Fork, and Spoon

aj. Speedhook, Snare. The speedhook, snare (See Figure 2-58) is used to snare fish and animals.

Bait the hook first. To set the speedhook, bring spring arms together (1) until you can put latch hook (2) into bottom of split ring (3). Latch hook. (See View A).

To set tension you must bend latch hook inward to tighten, or outward to loosen (See Diagram B). Inward would be used in rushing water or when speedhook trips prematurely. Outward would be used for ice fishing or catching very small fish (Outward requires less force to trip). To replace line on latch, knot must be tied against latch loop and must go through safety snap swivel (See Diagram A).

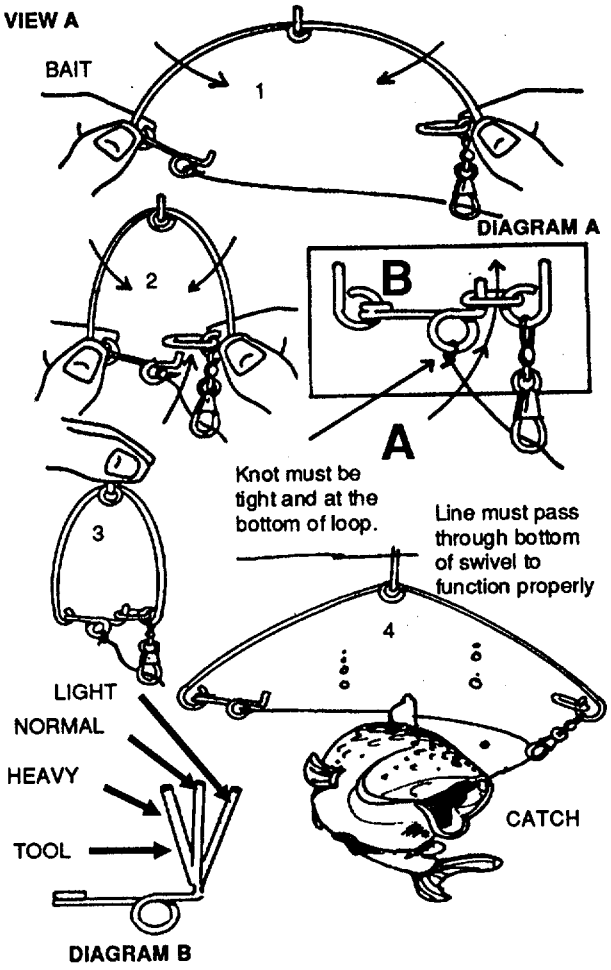
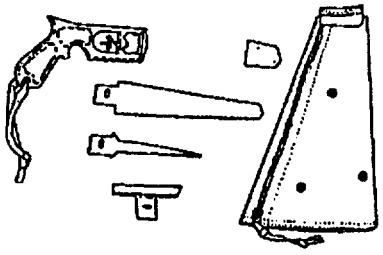


Figure 2-58. Speedhook, Snare

ak. Ice Saw-Knife. The ice saw-knife (See Figure 2-59) is a combination tool for use in extreme cold weather survival conditions, when the water and ground has frozen solid. It is to be used to cut ice and small (2-4 inch diameter) trees or brush to be used as shelters.



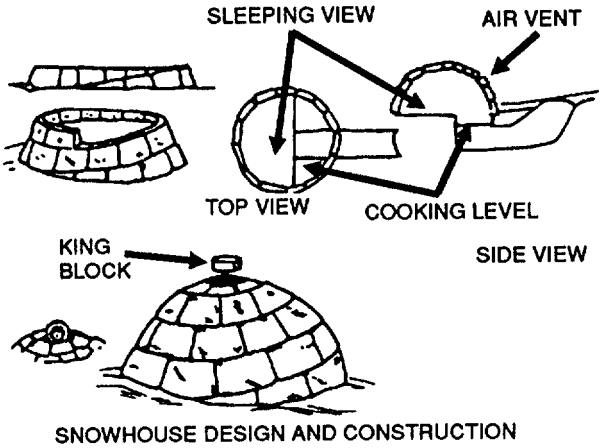


Figure 2-59. Ice Saw-Knife

al. Knife, Hunting, with Sheath. The hunting knife (See Figure 2-60) is used in survival conditions for skinning game, self-defense, and for heavier cutting chores that the pocket knife cannot handle.

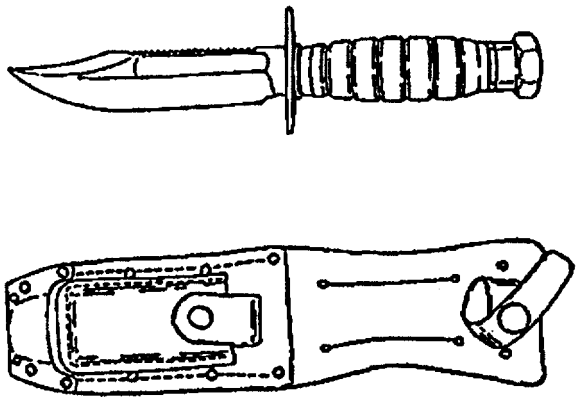


Figure 2-60. Knife, Hunting, with Sheath

am. Knife, Saw, Shovel Assembly. The assembly (See Figure 2-61) is used in survival conditions for sawing wood, skinning game, self-defense, and making survival shelters from the materials at hand, including snow and ice.

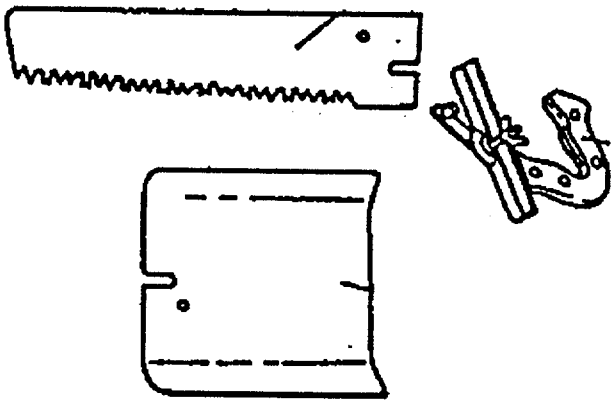


Figure 2-61. Knife, Saw, Shovel Assembly

an. Snap link. The snap link (See Figure 2-62) is used with the AH-1 TOW tube survival kit, and may be included in the survival equipment. It can be used to connect equipment bags together, as a rope pull through, and for other functions.

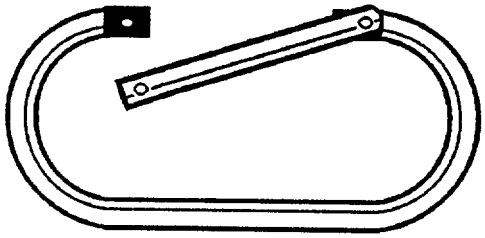


Figure 2-62. Snap Link

ao. Machete, with Sheath. The machete (See Figure 243) is used for cutting underbrush, trail marking and general survival conditions.

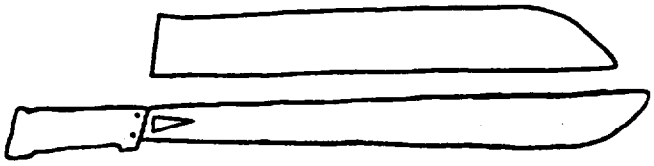


Figure 2-63. Machete, with Sheath

ap. Panel Marker. The marker panel (See Figure 244) is used to signal aircraft and rescue parties.

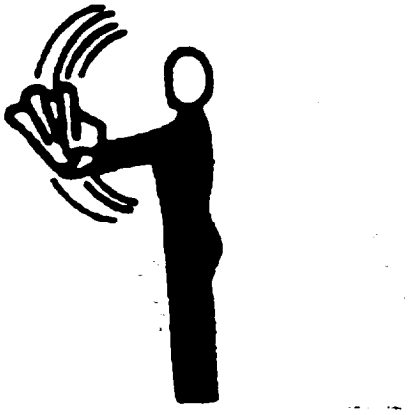


Figure 2-64. Panel Marker

aq. Saw, Aviation Survival Emergency. The survival chain saw (See Figure 2-65) is used to cut trees up to 18 inches in diameter. It can be used by either one or two people and is made of flexible, hardened steel that cuts on three sides of a branch or log. Insert a twig into the attachment rings to make a hand grip. This hand grip will make sawing easier than with using the rings as a finger grip.

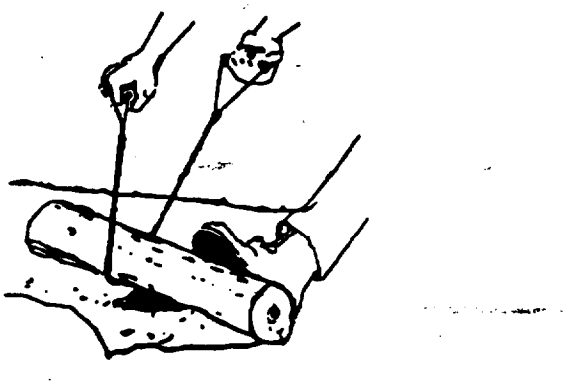


Figure 2-65. Saw,Aviation Survival,Emergency

ar. Sharpener, General Purpose. The general-purpose sharpener (See Figure 2-66) is used to sharpen knife blades or sharpen a piece of aircraft skin to make a knife.

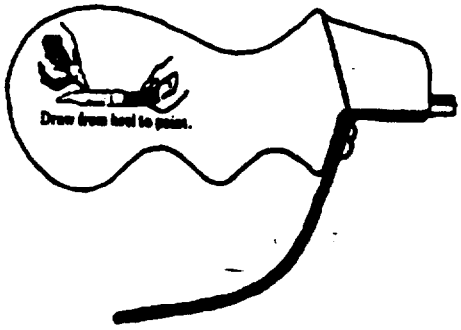


Figure 2-66. Sharpener, General Purpose

as. Stone, Sharpening. Figure 2-67 illustrates the sharpening used to keep the knife edges sharp. When using the sharpening stone stroke the knife blade against the stone in a continuous motion. Keep the stone wet to remove the fine steel shavings formed by the sharpening process.

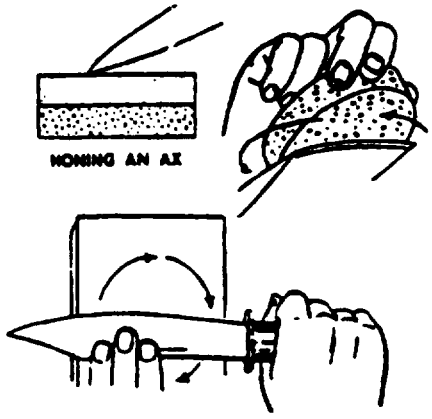


Figure 2-67. Stone,Sharpening

at. The Optional Liner/Bag (See Figure 2-68) can be used to line the tent or as a sleeping bag.

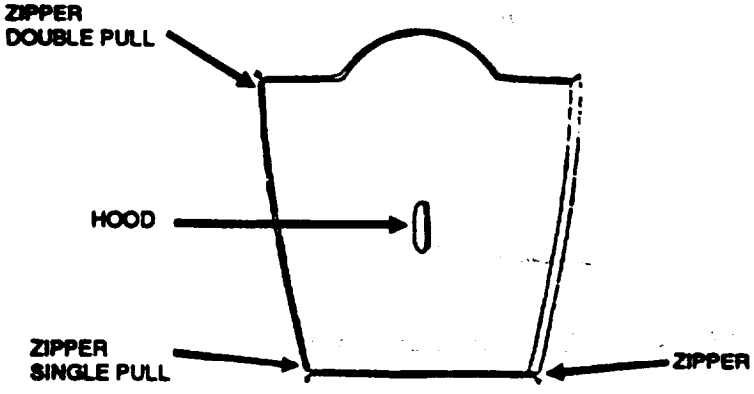


Figure 2-68. Tent Liner/Sleeping Bag

au. Snow Shoes, Bear Paws. The snow shoes (See Figure 2-69) are used to travel across snoes.

av. Deleted.

BEAR PAW

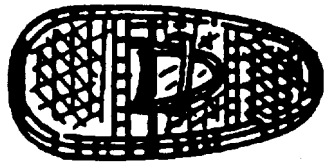


Figure 2-69. Snow Shoes, Bear Paw.

Figure 2-70. DELETED.

aw. LRU-18/U Flotation Kit. The LRU-18/U flotation kit (See Figure 2-71) consists of a LRU-18 one-person life raft in a container.

NOTE

Ensure that you are at least 20 feet from the aircraft BEFORE activating the inflation device. This will prevent sharp objects on the aircraft from puncturing the raft.

Operating instructions are in TM 1-4220-250-12&P, Operator's and Aviation Unit Maintenance (AVUM) Manual, LRU-18/U.

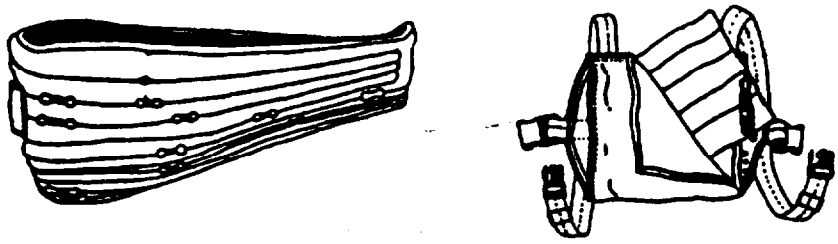


Figure 2-71. LRU-18/U Flotation Unit

ax. Life Raft, Inflatable, LRU-17/P.

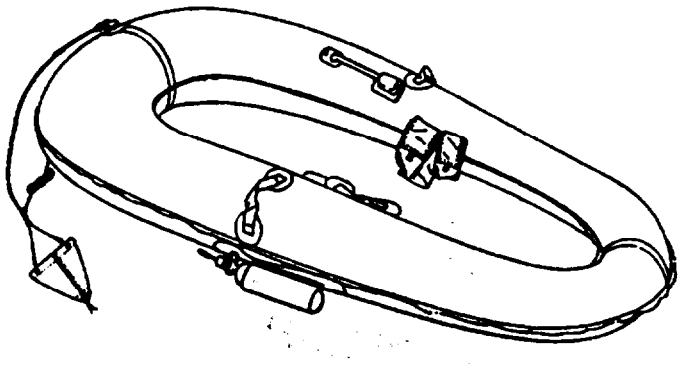


Figure 2-72. LRU-17/P Life Raft Inflatable

ay. LRU-1/P Multi-place Life Raft.

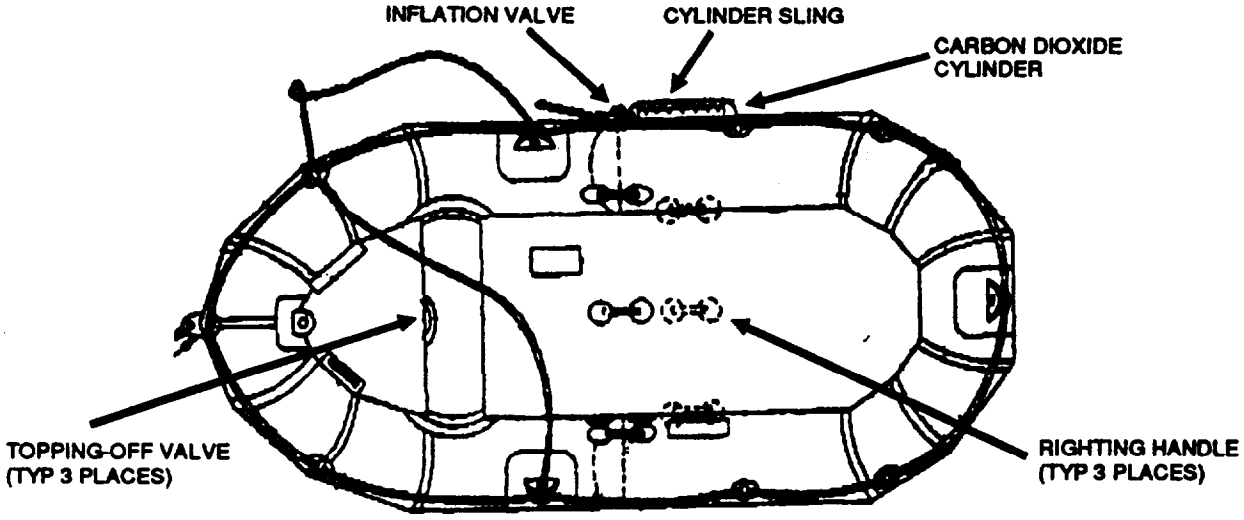


Figure 2-73. LRU-1/P Multi-Place Life Raft

az. LRU-10/P Under Arm Flotation Device.

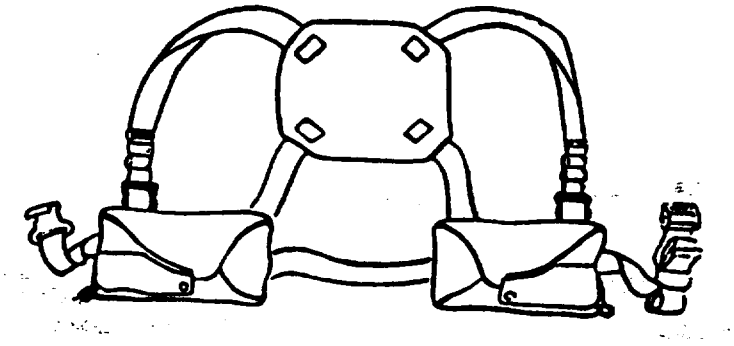


Figure 2-74. LRU-10/P Under Arm Flotation Kit

ba. Dye Marker. The fluorescein dye marker (See Figure 2-75) consists of a yellow, vinyl, resin-coated pouch with an attaching tape. The fluorescein dye is a powder and is contained inside the pouch. To use the dye marker, pull the tab on the top of the pouch and dunk it in the water. The water will turn a fluorescent green which will spread on the surface. The color will last about 20 to 30 minutes. In rough seas, the dye will dissipate at a faster rate. It is visible for 10 miles at 10,000 feet, producing a good size target for rescue aircraft.

NOTE
Use the dye only during daylight.

To conserve the dye marker, DO NOT release the packet contents until you are certain that a rescue aircraft is known to be in the immediate area. If on land, the dye marker may be used in rivers, streams, or lakes to attract rescue attention.

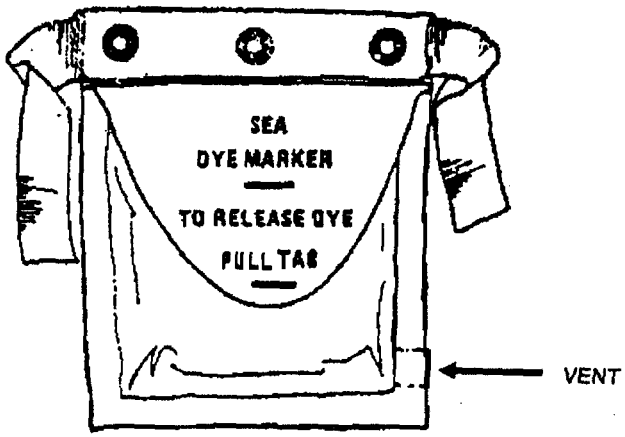


Figure 2-75. Dye Marker

bb. Desalter Kit. The sea water desalter kit (See Figure 2-76) converts salt water to suitable drinking water. The kit consists of a metal or plastic outer container, eight chemical packets, a plastic processing bag, and a tape used to mend holes in the plastic bag.

WARNING
Never drink salt water, body fluids of fish, or urine. The high salt content of these liquids can cause severe sickness or death if consumed in sufficient quantities.

To desalt one bag of water, proceed as follows:

(1) Ensure the valve on the plastic bag is closed.

(2) Fill the bag with salt water to the dark line located near the 16-ounce mark on the bag.

(3) Remove one pack of chemicals from the container and close the container. Remove the outer wrapper from the chemical pack and place the chemical pack into the bag of water.

(4) Fold the top of the plastic bag down tightly and roll the folded top toward the fastener. Secure the fastener to make a watertight seal in the bag top.

(5) Allow the bag of water to stand to permit the chemical to disintegrate. If necessary, gently knead the chemical until it dissolves completely.

(6) Gently agitate the bag of water for 60 minutes before attempting to drink the water.

(7) To drink the water, unscrew the valve at the bottom of the bag without squeezing the bag, put the valve in the mouth, and gently squeeze or suck on the valve. Spit out the first few drops if too salty.

NOTE

A small amount of salt is left in the desalted water intentionally to compensate for perspiration losses.

(8) After drinking, close the bag valve to conserve the remainder of the water.

(9) After the desalted water has been used up, rinse the desalting chemical from the bag with seawater. The bag is then ready for repeating the desalting process.

(10) If the plastic bag develops a puncture or tear, carefully dry the affected area and apply a patch to the area using the furnished mending tape.

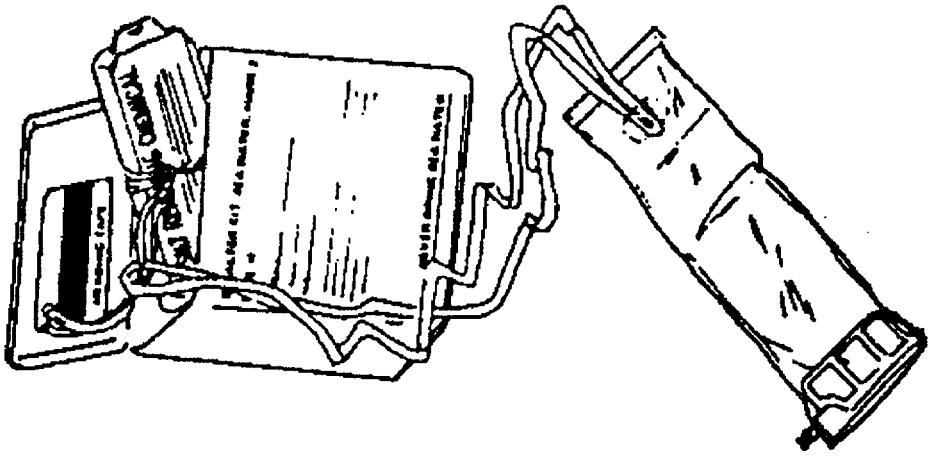


Figure 2-76. Desalter Kit

bc. Pump, Inflation, Life Raft. The inflation pump (See Figure 2-77) is used on multi-place life rafts to inflate the buoyancy cells.

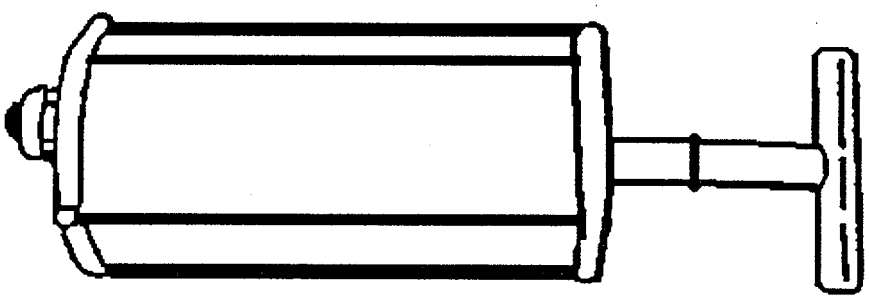


Figure 2-77. Pump, Inflation, Life Raft

bd. Repair Kit, Inflatable Life Raft. Insert one of the clam shells inside the damaged bladder, slide the other clam shell over the outside, sandwiching the life raft fabric between the two clam shells (See Figure 2-78) and tighten the thumb screw down snugly. Inflate the damaged cell.

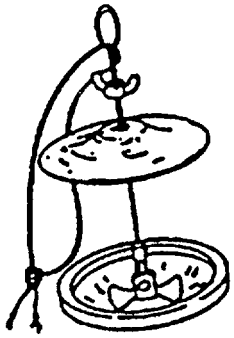


Figure 2-78. Repair Kit, Inflatable

be. Boat Bailer. The boat bailer (See Figure 2-79) is a 6 inch (15 cm) diameter rubber pail that is used to bail water from life rafts. Secure the bailer to the life raft with the attached lanyard.

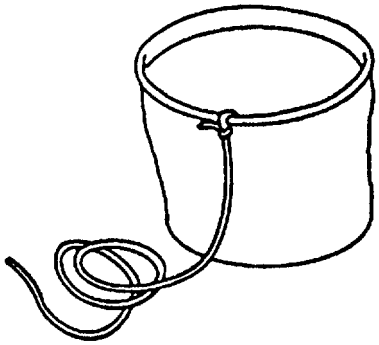


Figure 2-79. Boat Bailer

bf. Paddle, Boat. The boat paddles (See Figure 2-80) are used in multi-place life rafts. On one side of the paddle is reflective tape for signaling.

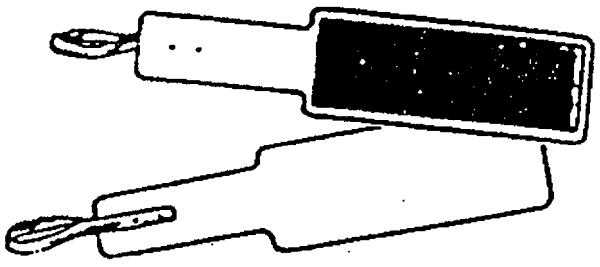


Figure 2-80. Paddle, Boat

bg. Sponge, Cellulose. The cellulose sponge (See Figure 2-81) is used in life rafts to absorb water or catch rain water.

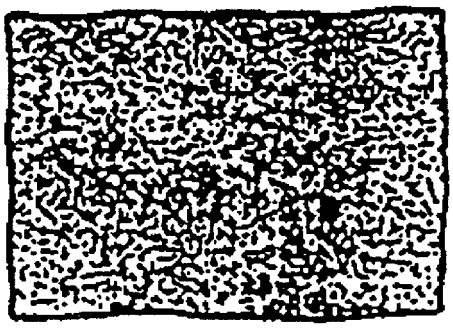


Figure 2-81. Sponge, Cellulose

bh. Towel, Terry Cloth. The terry cloth towel (See Figure 2-82) is used in life rafts to absorb water inside the raft or to keep the direct sun off the head. To cool, moisten towel and place on the head.

Figure 2-82. Towel, Terry Cloth

bi. Fishing Tackle Kit. The fishing tackle kit (See Figure 2-83) contains hooks, line, lures, swivels, sail maker's needles, and two strips of cloth that can be used as lures for catching fish. Fishing instructions, printed on water-proof paper, are provided with this kit. Supplemental instructions are provided in the survival manual.

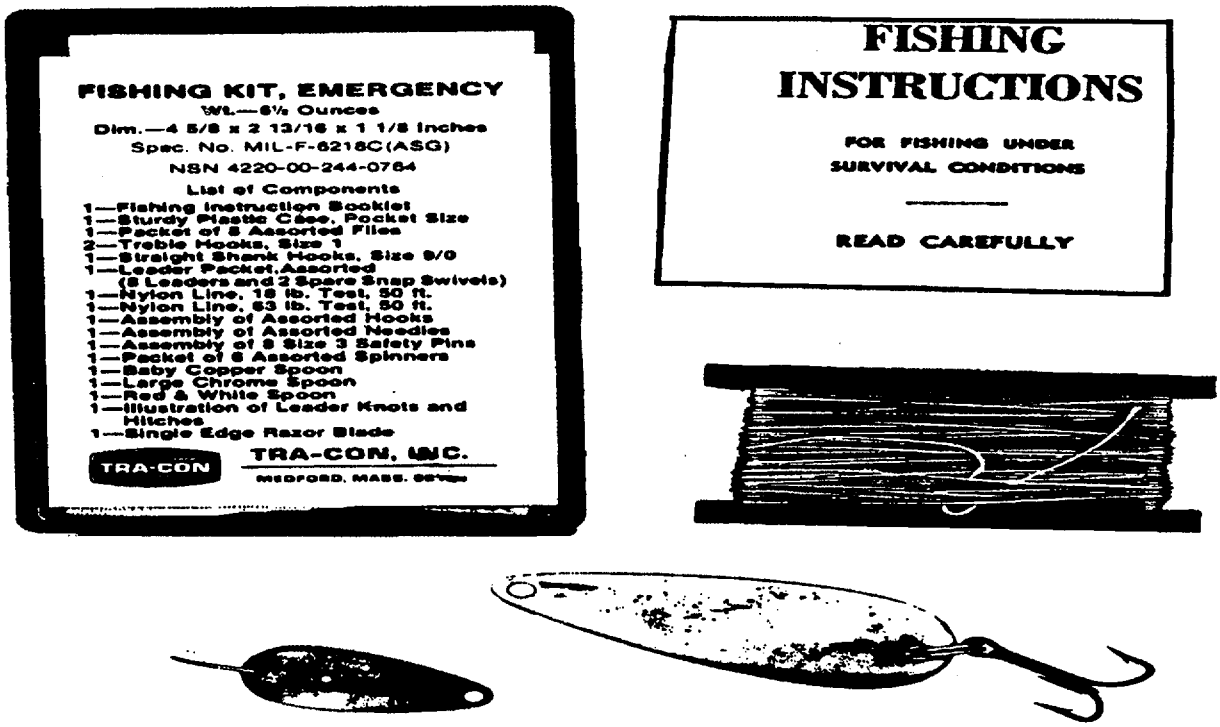


Figure 2-83. Fishing Tackle Kit

bj. Knife, Pocket, Leatherman Tool. The tool (See Figure 2-84) is a multi-purpose tool that contains a three-inch knife blade, an awl, slot screwdriver, cross-slot screwdriver and pliers that fold and store compactly within itself.

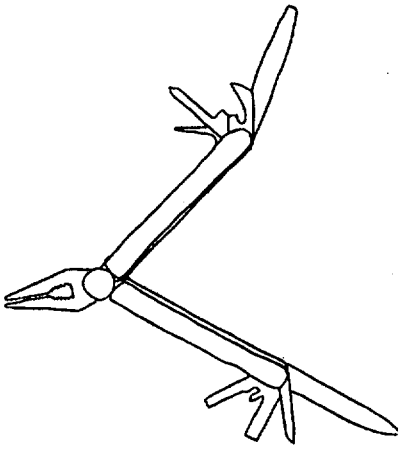


Figure 2-84. Knife, Pocket, Leatherman Tool

SECTION IV. OPERATION UNDER UNUSUAL CONDITIONS

2.6 GENERAL.

This section provides instructions on operation and use under unusual conditions.

CAUTION

DO NOT TRAVEL ALONE, Always travel in pairs. Use the "buddy" system to prevent the loss of one of the traveling members or to provide help in the event of injury.

a. Sand storms. During a sand storm, the head should be protected with the sun hat provided. Cover the mouth and nose with a piece of cloth and protect the eyes. If travel is necessary, mark the direction of travel.

b. Extreme cold, snow storms, and "white-outs." DO NOT TRAVEL in extreme cold, snow storm, or during a "white-out" "White-out" occurs when the sky is overcast and the ground is covered with snow, making it impossible to judge the nature of terrain. Using the shelter and other components of the AMSS, make camp and wait until the weather becomes more favorable for traveling.

c. Nuclear, Biological, and Chemical (NBC) Contamination.

WARNING

To prevent ingestion of biological, chemical agents, or radioactive fallout, do not consume any food or water if there is any doubt that it is safe.

NOTE

All AMSS components are vacuum-heat sealed and placed in containers (hard kits), making them impervious to chemical and biological agents. Rations and water will be safe to consume as long as the hard containers are intact. Remember the canteen can be used while in an NBC environment. The outside of the hard containers must be decontaminated prior to use. Under NBC conditions, DO NOT OPEN the hard containers until reaching an uncontaminated area. Proceed with decontamination procedures prior to opening the container.

If NBC attack is known or suspected, or if the M-9 chemical contamination detector on the outside of the hard containers changes from green to another color, mask and proceed with NBC protection procedures, and seek shelter.

CHAPTER 3

MAINTENANCE INSTRUCTIONS

3.1 MAINTENANCE INSTRUCTIONS.

There are no Maintenance Instructions for the User/Operator of this equipment. Maintenance instructions are contained in TM 1-1680-354-23&P.

APPENDIX A

REFERENCES

A.1 SCOPE.

This appendix lists all forms and publications that are referenced in this manual and are required by the user to operate and maintain the AMSS.

A.2 ARMY REGULATIONS (ARs).

Aviation: General Provisions. Resource Management.	Training, Standardization, and AR 95-3

A.3 DEPARTMENT OF THE ARMY (DA) FORMS.

Recommended Changes to Publications and Blank Forms	DA Form 2028
Recommended Changed to Equipment Technical Manuals	DA Form 2028-2
Equipment Inspection and Maintenance Worksheet	DA Form 2404

A.4 DEPARTMENT OF THE ARMY PAMPHLET (DA PAM).

Army Maintenance Management System	DA PAM 738-750

A.5 FIELD MANUALS (FMs).

First Aid for Soldiers	FM 21-11
Army Survival Manual	FM 21-76

A.6 STANDARD FORMS (SFs).

Quality Deficiency Report (Category II)	SF 368

A.7 TECHNICAL BULLETINS (TBs).

Handling, Storage and Disposal of Army Aircraft Components Containing Radioactive Material.	TB 43-0108

A.8 TECHNICAL MANUALS (TMs).

General Aircraft Maintenance Manual	TM 1-1500-204-23-1
Aircraft Modular Survival System	TM 1-1680-354-23&P
Operators and Aviation Unit Maintenance Manual (AVUM) (Including Repair Parts and Special Tools Kit) For Life Raft and Container Assembly: Inflatable, One-Man, VEE Bottom (SRU-37/P)	TM 1-4220-250-12&P
Procedures for the Destruction of Life Support Equipment to Prevent Enemy Use	TM 750-244-1-2

A.9 AIR FORCE MANUALS (AFMs).

Search and Rescue/Survival	AFM 64-5

APPENDIX B
COMPONENTS OF END ITEMS (COEI) AND BASIC ISSUE ITEMS (BII)

B.1 COMPONENTS OF END ITEMS AND BASIC ISSUE.

Not applicable to this Manual. Refer to TMl-1680-354-23&P, Appendix C.

APPENDIX C

ADDITIONAL AUTHORIZATION LIST (AAL)

C.1 ADDITIONAL AUTHORIZATION LIST.

Not applicable to this Manual. Refer to TM1-1680-354-23&P, Appendix C.

APPENDIX D

EXPENDABLE AND DURABLE ITEMS LIST

D.1 EXPENDABLE AND DURABLE ITEMS LIST.

There are no expendable or durable items authorized for the operation or maintenance of the AMSS.

INDEX

SUBJECT **PAGE**

INDEX

INDEX

SUBJECT **PAGE**

M

N

O

Q

R

S

INDEX

* U.S. GOVERNMENT PRINTING OFFICE: 1996-406-421/53239

By Order of the Secretary of the Army:

GORDON R. SULLIVAN
General, United States Army
Chief of Staff

Official:

MILTON H. HAMILTON
Administrative Assistant to the
Secretary of the Army
04671

DISTRIBUTION:

To be distributed in accordance with DA Form 12-31-E, block no. 3355, requirements for TM 1-1680-354-10.

*U.S. GOVERNMENT PRINTING OFFICE: 1993 - 755-028/80310

RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS

THEN...JOT DOWN THE DOPE ABOUT IT ON THIS FORM. CAREFULLY TEAR IT OUT, FOLD IT AND DROP IT IN THE MAIL.

SOMETHING WRONG WITH PUBLICATION

FROM: (PRINT YOUR UNIT'S COMPLETE ADDRESS)

DATE SENT

PUBLICATION NUMBER	PUBLICATION DATE	PUBLICATION TITLE

BE EXACT PIN-POINT WHERE IT IS

PAGE NO.	PARA-GRAPH	FIGURE NO.	TABLE NO.

IN THIS SPACE, TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT.

PRINTED NAME, GRADE OR TITLE AND TELEPHONE NUMBER	SIGN HERE

DA FORM 1 JUL 79 2028-2

PREVIOUS EDITIONS ARE OBSOLETE.

P.S.--IF YOUR OUTFIT WANTS TO KNOW ABOUT YOUR RECOMMENDATION MAKE A CARBON COPY OF THIS AND GIVE IT TO YOUR HEADQUARTERS.

REVERSE OF DA FORM 2028-2 Reverse of DRSTS-M Overprint 2, 1 Nov 80

TEAR ALONG PERFORATED LINE

FILL IN YOUR UNITS ADDRESS

FOLD BACK

DEPARTMENT OF THE ARMY

OFFICIAL BUSINESS

COMMANDER
U.S. ARMY AVIATION AND TROOP COMMAND
ATTN: AMSAT-I-MP
4300 GOODFELLOW BOULEVARD
ST. LOUIS, MO 63120-1798

TEAR ALONG PERFORATED LINE

RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS

SOMETHING WRONG WITH THIS PUBLICATION?

FROM (PRINT YOUR UNIT'S COMPLETE ADDRESS)
CDR, 1st Br, 65th ADA
ATTN: SP4 J. Brown
Key West, FL 33040

DATE SENT
10 Jun 79

PUBLICATION NUMBER	PUBLICATION DATE	PUBLICATION TITLE
TM 9-1430-550-34-1	7 Sep 72 .	Unit of Radar Set AN/MPQ-50 Tested at the HFC

BE EXACT PIN-POINT WHERE IT IS

PAGE NO	PARA-GRAPH	FIGURE NO	TABLE NO
9-19		9-5	
21-2	step 1C	21-2	

IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:

"B" Ready Relay K11 is shown with two #9 contacts. That contact which is wired to pin 8 of relay K16 should be changed to contact #10.

Reads: Multimeter B indicates 600 K ohms to 9000 K ohms.

Change to read: Multimeter B indicates 600 K ohms minimum.

Reason: Circuit being checked could measure infinity. Multimeter can read above 9000 K ohms and still be correct.

SAMPLE

PRINTED NAME GRADE OR TITLE AND TELEPHONE NUMBER
SP4 J.T. Brown, Jr.

SIGN HERE
SP4 James Brown, Jr.

DA FORM 2 JUL 79 2028-2

REPLACES DA FORM 2028-2 1 APR 78 WHICH WILL BE USED UNTIL EXHAUSTED
AMSAV M Overprint 1, 1 Mar 81

P.S.—IF YOUR OUTFIT WANTS TO KNOW ABOUT YOUR RECOMMENDATION MAKE A CARBON COPY OF THIS AND GIVE IT TO YOUR HEADQUARTERS

REVERSE OF DA FORM 2028-2 Reverse of DRSTS-M Overprint 2, 1 Nov 80

TEAR ALONG PERFORATED LINE

FILL IN YOUR UNITS ADDRESS

FOLD BACK

DEPARTMENT OF THE ARMY

OFFICIAL BUSINESS

COMMANDER
U.S. ARMY AVIATION AND TROOP COMMAND
ATTN: AMSAT-I-MP
4300 GOODFELLOW BOULEVARD
ST. LOUIS, MO 63120-1798

RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS

SOMETHING WRONG WITH THIS PUBLICATION?

FROM (PRINT YOUR UNIT'S COMPLETE ADDRESS)

DATE SENT

PUBLICATION NUMBER	PUBLICATION DATE	PUBLICATION TITLE
TM 1-1680-354-10	15 JULY 1993	OPERATOR'S MANUAL AIRCRAFT MODULAR SURVIVAL SYSTEM

BE EXACT PIN-POINT WHERE IT IS

PAGE NO	PARAGRAPH	FIGURE NO	TABLE NO

IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:

PRINTED NAME GRADE OR TITLE AND TELEPHONE NUMBER

SIGN HERE

DA FORM 1 JUL 79 2028-2

PREVIOUS EDITIONS ARE OBSOLETE

P.S.--IF YOUR OUTFIT WANTS TO KNOW ABOUT YOUR RECOMMENDATION MAKE A CARBON COPY OF THIS AND GIVE IT TO YOUR HEADQUARTERS

REVERSE OF DA FORM 2028-2 Reverse of DRSTS-M Overprint 2, 1 Nov 80

TEAR ALONG PERFORATED LINE

FILL IN YOUR UNITS ADDRESS

FOLD BACK

DEPARTMENT OF THE ARMY

OFFICIAL BUSINESS

COMMANDER
U.S. ARMY AVIATION AND TROOP COMMAND
ATTN: AMSAT-I-MP
4300 GOODFELLOW BOULEVARD
ST. LOUIS, MO 63120-1798

RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS

SOMETHING WRONG WITH THIS PUBLICATION?

FROM (PRINT YOUR UNIT'S COMPLETE ADDRESS)

DATE SENT

PUBLICATION NUMBER	PUBLICATION DATE	PUBLICATION TITLE
TM 1-1680-354-10	15 JULY 1993	OPERATOR'S MANUAL AIRCRAFT MODULAR SURVIVAL SYSTEM

BE EXACT PIN-POINT WHERE IT IS

PAGE NO	PARAGRAPH	FIGURE NO	TABLE NO

IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:

PRINTED NAME GRADE OR TITLE AND TELEPHONE NUMBER

SIGN HERE

DA FORM 1 JUL 79 2028-2

PREVIOUS EDITIONS ARE OBSOLETE

P.S.--IF YOUR OUTFIT WANTS TO KNOW ABOUT YOUR RECOMMENDATION MAKE A CARBON COPY OF THIS AND GIVE IT TO YOUR HEADQUARTERS

REVERSE OF DA FORM 2028-2 Reverse of DRSTS-M Overprint 2, 1 Nov 80

TEAR ALONG PERFORATED LINE

FILL IN YOUR UNITS ADDRESS

FOLD BACK

DEPARTMENT OF THE ARMY

OFFICIAL BUSINESS

COMMANDER
U.S. ARMY AVIATION AND TROOP COMMAND
ATTN: AMSAT-I-MP
4300 GOODFELLOW BOULEVARD
ST. LOUIS, MO 63120-1798

RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS

SOMETHING WRONG WITH THIS PUBLICATION?

FROM (PRINT YOUR UNIT'S COMPLETE ADDRESS)

DATE SENT

PUBLICATION NUMBER	PUBLICATION DATE	PUBLICATION TITLE
TM 1-1680-354-10	15 JULY 1993	OPERATOR'S MANUAL AIRCRAFT MODULAR SURVIVAL SYSTEM

BE EXACT PIN-POINT WHERE IT IS

PAGE NO	PARAGRAPH	FIGURE NO	TABLE NO

IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:

PRINTED NAME GRADE OR TITLE AND TELEPHONE NUMBER

SIGN HERE

DA FORM 1 JUL 79 2028-2

PREVIOUS EDITIONS ARE OBSOLETE

P.S.--IF YOUR OUTFIT WANTS TO KNOW ABOUT YOUR RECOMMENDATION MAKE A CARBON COPY OF THIS AND GIVE IT TO YOUR HEADQUARTERS

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 = 32.8 feet
1 hectometer = 10 dekameters = 328.08 feet
1 kilometer = 10 hectometers = 3,280.8 feet

Weights

1 centigram = 10 milligrams = .15 grain
1 decigram = 10 centigrams = 1.54 grains
1 gram = 10 decigram = .035 ounce
1 decagram = 10 grams = .35 ounce
1 hectogram = 10 decagrams = 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

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

Square Measure

1 sq. centimeter = 100 sq. millimeters = .155 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 cu. feet

Approximate Conversion Factors

To change	*To*	*Multiply by*	*To change*	*To*	*Multiply by*
inches	centimeters	2.540	ounce-inches	Newton-meters	.007062
feet	meters	.305	centimeters	inches	.394
yards	meters	.914	meters	feet	3.280
miles	kilometers	1.609	meters	yards	1.094
square inches	square centimeters	6.451	kilometers	miles	.621
square feet	square meters	.093	square centimeters	square inches	.155
square yards	square meters	.836	square meters	square feet	10.764
square miles	square kilometers	2.590	square meters	square yards	1.196
acres	square hectometers	.405	square kilometers	square miles	.386
cubic feet	cubic meters	.028	square hectometers	acres	2.471
cubic yards	cubic meters	.765	cubic meters	cubic feet	35.315
fluid ounces	milliliters	29,573	cubic meters	cubic yards	1.308
pints	liters	.473	milliliters	fluid ounces	.034
quarts	liters	.946	liters	pints	2.113
gallons	liters	3.785	liters	quarts	1.057
ounces	grams	28.349	liters	gallons	.264
pounds	kilograms	.454	grams	ounces	.035
short tons	metric tons	.907	kilograms	pounds	2.205
pound-feet	Newton-meters	1.356	metric tons	short tons	1.102
pound-inches	Newton-meters	.11296			

Temperature (Exact)

°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C

PIN: 071485-000