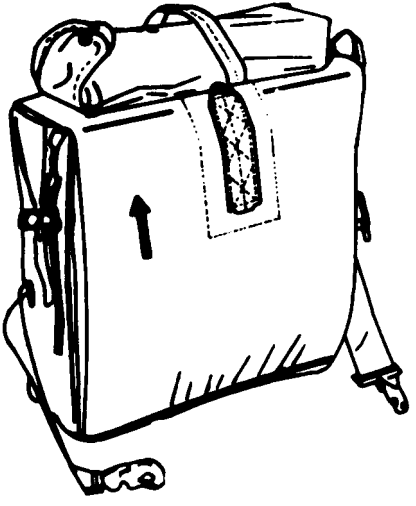
TM 55-1680-350-10

TECHNICAL MANUAL



OPERATOR'S MANUAL
SURVIVAL KIT, OVERWATER
INDIVIDUAL
(NSN 1680-00-973-1863)

"Approved for public release; distribution is unlimited."

HEADQUARTERS, DEPARTMENT OF THE ARMY
2 SEPTEMBER 1986

WARNING

Insure survival kit is secured to your person of parachute harness to prevent loss of kit.

Keep all flight clothing, crewmember's helmet and sunglasses for protection from adverse environmental conditions.

Crewmember's helmet shall be worn during helicopter rescue hoisting operations.

When righting an inverted liftraft, the procedure shall be done from the carbon dioxide side of the raft.

The life preserver shall be worn and inflated at all times while in the life raft.

Do not ignite both ends of an illumination signal at the same time.

Use extreme care when using the illumination signal.

Never drink untreated seawater.

Trioxane fuel contains metaformaldehyde, which is highly toxic. Wash hands after handling.

TECHNICAL MANUAL

N0. 55-1680-350-10

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 2 SEPTEMBER 1986

OPERATOR'S MANUAL

SURVIVAL KIT, OVERWATER, INDIVIDUAL
(NSN 1680-00-973-1863)

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes, or if you know of a way to improve the procedures, please let us know. Mail your letter or DA Form 2028 (Recommended Changes to Publications) direct to Commander, US Army Aviation Systems Command, ATTN: AMSAV-MPSD, 4300 Goodfellow Blvd., St. Louis, Mo., 63120-1798. A reply will be furnished to you.

***This manual supersedes TM 55-8465-214-10 2 August 1971**

CHAPTER 1
INTRODUCTION

Section I. GENERAL

1-1. Scope and Purpose 1-1.

This manual is for your use, as an aircraft crewmember or passenger, you are required to operate and apply the components of the individual, overwater, survival kit in a survival situation. The survival kit is designed for use on all US Army aircraft, except the OV-1 (Mohawk) aircraft. The purpose of this publication is to provide you with a description of the kit contents and brief instructions on the use of each item.

1-2. Reporting of Equipment Publications Improvements 1-2.

Report of errors, omissions, and recommendations for improving this publication by the individual user is encouraged. Reports should be submitted DA Form 2028 (Recommended Changes to Publications) and forwarded direct to

Commanding General, US Army Aviation Systems Command, ATTN: AMSAV-MPSD, 4300 Goodfellow Blvd., St. Louis, No., 63120 1798.

Section II. DESCRIPTION AND DATA

1-3. Description 1-3.

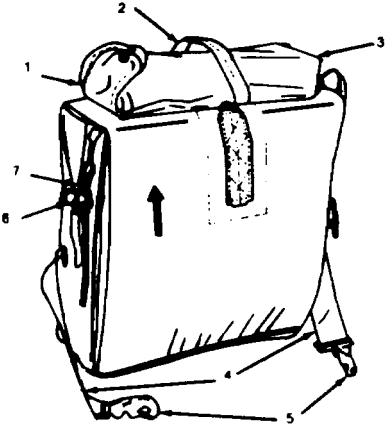
The Individual, overwater, survival kit (fig 1-1) consists of a cotton/nylon duck outer case which Is equipped with a web carrying handle (2), an outside stowage pocket (3) with closing flap (1), two adjustable parachute attaching straps (4) with snap fasteners (5), and a slide fastener (zipper) (7), with a retaining snap (6) which Is used to contain the kit Inner case with kit survival components and as a means of activating the life raft inflation system. The survival components are exposed when the slide fastener (zipper) on the kit inner case is opened. Upon opening of the kit inner case, the kit packing fiat is located on top of the survival components. This list provides you with the location and identification of each survival component.

NOTE

In an emergency bailout, the survival kit may be attached to either a back. type or chest-type personnel pare. chute harness.

1-4. Tabulated Data 1-4.

Weight..... 29 pounds
Height.....5 1/2 inches
Width.....15 inches
Length .....19 inches



1 Pocket closing flap
2 Carrying handle
3 Stowage pocket
4 Parachute attaching strap
5 Snap fastener
6 Retaining snap
7 Slide fastener

Figure 1-1. The individual, overwater, survival kit packed

CHAPTER 2

OPERATING INSTRUCTIONS

Section I. GENERAL

2-1. Kit Assembly 2-1.

The survival components of the individual, overwater, survival kit including the raft are assembled within the kit as shown in Fig. 2-1. Either the LRU-17/P (fig. 2-2) or LRU-16/P (fig. 2-3) life raft is used.

2-2. Initial Survival Procedures 2-2.

After entry has been made into the water, either by parachute or crash landing, the following survival procedures should be initiated.

WARNING

Insure the overwater survival kit is secured to either your person or the parachute harness , if applicable, at all times to prevent loss of the survival kit components.

WARNING

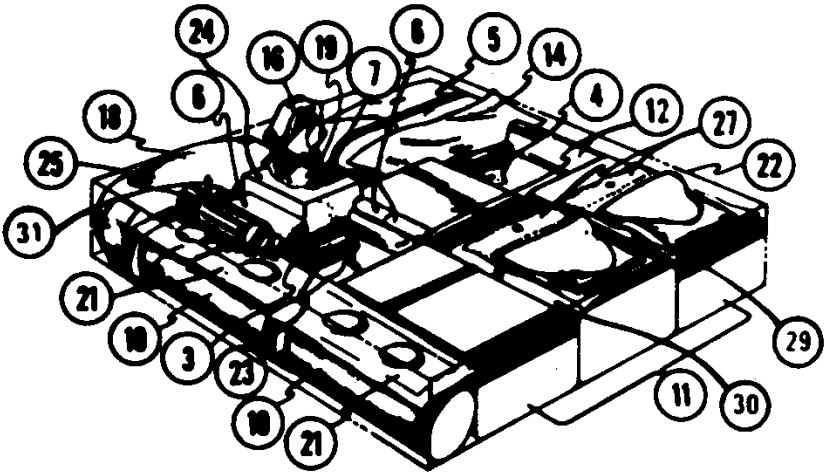
For protection against environmental condition, insure you keep all flight clothing and equipment which includes the aircraft crewmember's helmet and sunglasses.

WARNING

It available, the aircraft crewmember's helmet shall be worn with the visor locking In the unlocked position and the visor extended down over the face to prevent head injuries during holding operations used In rescue helicopter pickup.

a. Inflating and Boarding the Life Raft.

(1) If water entry was by parachute, disconnect parachute, then inflate life raft. This is to prevent entanglement in the parachute canopy suspension lines. If water entry was by aircraft, insure that you are away from the aircraft before Inflating life raft. This will keep the raft from being damaged by sharp parts of the aircraft.



BOTTOM LAYER (INNER - CASE ARRANGEMENT)

Figure 2-1. The individual, overwater, survival kit assembly (Sheet 1 of 4)

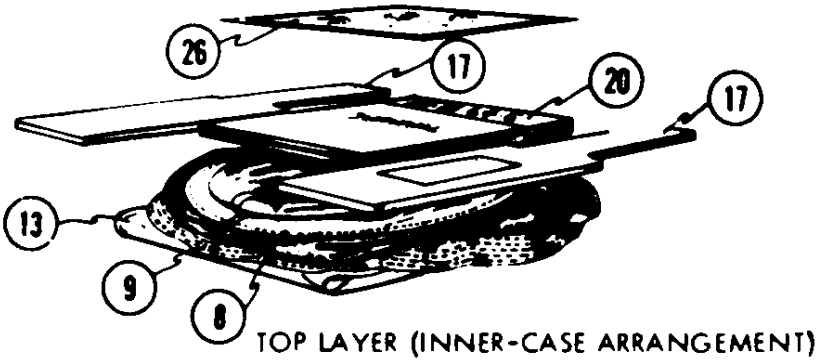
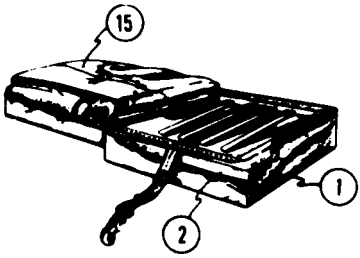
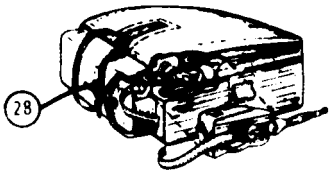


Figure 2-1. The individual, overwater, survival kit assembly (Sheet 2 of 4)



COMPLETE ASSEMBLY



COMPLETE ASSEMBLY
(SHOWING RAFT INFLATION SYSTEM)

Figure 2-1. The individual, overwater, survival kit assembly (Sheet 3 of 4)

1 Outer case
2 Inner case
3 Fishing tackle kit
4 Pocket knife
5 First aid kit
6 Wood matches
7 Sunburn-preventive preparation
8 Hat and mosquito net
9 Reversible sun hat
10 Smoke and illumination signal
11 Seawater desalter kit
12 Food packets
13 Water storage bag
14 Plastic spoon
15 Inflatable life raft
16 Boat bailer
17 Boat paddles
18 Inflatable craft repair kit
19 Cellulose sponge
20 Survival manual
21 Trioxane compressed fuel
22 Frying pan
23 Signaling mirror
24 Magnetic compass
25 Waterproof matchbox
26 Packing list
27 Fluorescein sea marker
28 Operator's manual
29 Fire starter
30 Saw, Hand, finger grip
31 Blanket, Combat casualty

Figure 2-1. The Individual, overwater, survival kit assembly (Sheet 4 of 4)

(2) Activate the life raft inflation system by grasping the slide fastener (zipper) release lanyard located on the side of the survival kit outer case (fig. 1-1) and pulling the slide fastener straight up until the slide is disengaged from the fastener. Continue the upward pull on the lanyard until an audible hissing noise is heard which indicates the carbon dioxide cylinder on the raft inflation system has been activated and inflation of the life raft inflation cells has begun. While becoming inflated, the life raft will open the kit outer case fastener (zipper) and deploy outside of the case.

(3) If the life raft inflation system fails to function, remove the life raft from the outer case and orally inflate the life raft as follows in (5)-(6)

(4) Locate and grasp the oral inflation tube. Unlock the tube locking unit by rotating the nut clockwise to the fullest extent away from the mouthpiece (fig. 2 4).

(5) Push the inflation tube mouthpiece in with your mouth and simultaneously blow into the tube. Continue this oral inflation method until the sides of the raft are firm.

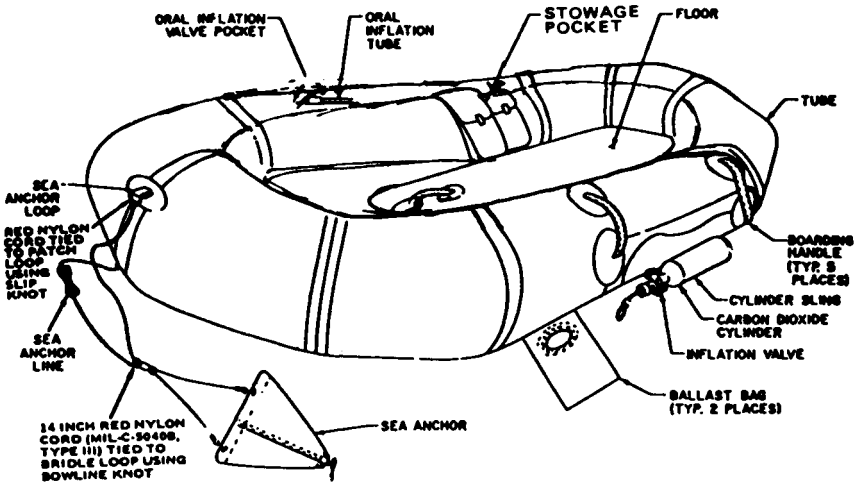


Figure 2-2. LRU-17/P Life Raft Assembly, Parts Nomenclature.

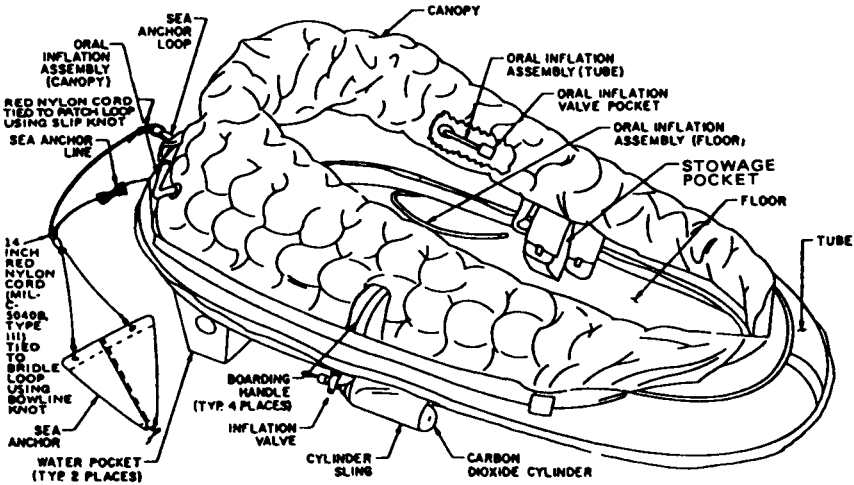


Figure 2-3. LRU-16/P Life Raft Assembly, Parts Nomenclature.

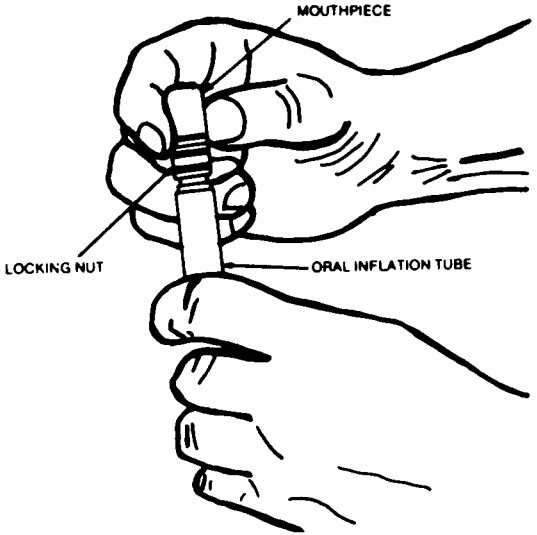


Figure 2-4. The life raft oral inflation tube.

(6) After oral inflation of a life raft has been completed, insure the oral inflation tube locking nut is rotated counterclockwise to a point at which the nut is snug against the mouthpiece which will prevent the raft from being inadvertently deflated. Stow the oral inflation tube in the adjacent oral inflation tube stowage pocket (fig. 2-5).

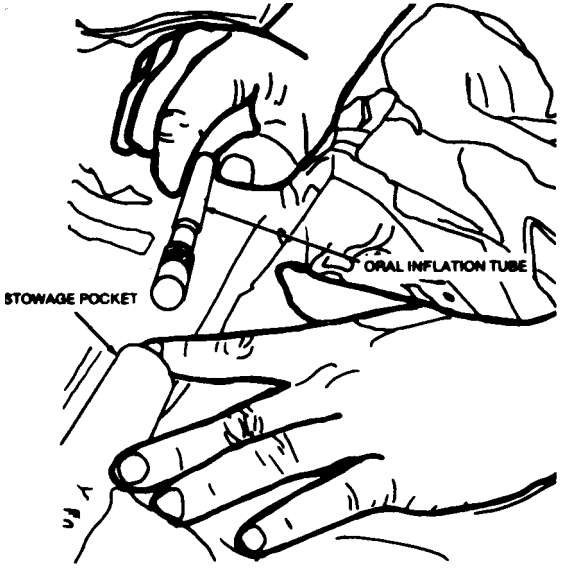


Figure 2-5. Stowing the oral inflation tuba in the stowage pocket.

WARNING

When righting an inverted life raft, insure the procedure is performed born the car bon dioxide cylinder side of the raft to avoid being struck by the cylinder during the righting process.

(7) Board the inflated life raft as quickly as possible with the least amount of effort using one of the following recommended raft boarding mesh. oafs:

NOTE

It the raft becomes inverted or capsizes, note the wind direction, position yourself downwind on the carbon dioxide cylinder side of the raft, reach across the raft bottom to the opposite side of the raft and grasp the boarding handle. Turn the raft over by sliding back into the water while simultaneously pulling on the raft boar ding handle.

The raft should always be boarded from the small end.

(a) Release one side d the kit from the parachute harness, It applicable. and place the bottom of your life over the small end of the raft. Elevate your feat and with your hands grasping the boarding handles on the raft sides, pull yourself into the raft.

(b) Place the bottom of your life preserver over the small end of the raft and push down on the raft end until you can place one knee into the raft. Gripping the raft boarding handles, pull yourself into the raft.

(c) Turn your back to the small end of the raft and pull the raft under your buttocks. Gripping the raft sides, push yourself into the raft.

b. Life Raft Survival Instructions.

WARNING

The life preserver shall b kept inflated and will not be removed for any reason when aboard a life raft.

(1) After you have boarded the life raft, put out the raft sea anchor to minimize the drift of the raft. In addition the sea anchor will stabilize the raft and orient the raft into the waves to prevent the raft from capsizing

(2) If applicable and necessary, prepare to remove the parachute harness by insuring the survival kit and the life raft are secured to your person and not the harness .

NOTE

It is recommended that the parachute harness not he removed unless it is necessary, as the harness may be useful during rescue operations.

(3) Partially deflate one cell of the life pre server and pull it inside of the harness. Slip out of that side of the harness which contains the partially deflated life preserver cell. Reinflate the deflated cell orally using the cell oral inflation tube.

(4) Repeat the procedure in (3) to remove the opposite side of the harness. Do not discard the parachute harness. as it may be of further use.

(5) Check the inflated pressure in the life raft and. if required. increase the inflation pressure using the oral inflation tube and the procedures in paragraph 2-2a.

(6) Cover yourself with the spray shield installed on the fife raft as protection against saltwater spray. hot sunrays or cold.

(7) Pull the survival kit aboard the raft. Open

the kit inner case, check the packing list, and ascertain which items are required for immediate use. It is recommended that priority be given to considering the use of the signaling devices and secure these items within the stowage pocket (3, fig. 1-1) on top of the outer case. This will allow you immediate accessibility to the signal equipment when required. Further, remove the signaling mirror and slip the minor retaining cord ever your head to your neck. Unzip the top of your flying suit or jacket and slip the mirror inside the clothing to prevent the minor from dangling out and being broken.

Section II. OPERATING P ROCEDURES

2-3. General 2-3.

This section provides instruction on the operation and use of all the components contained in the individual, overwater, survival kit (fig. 2-1).

2 4. Smoke and Illuminations 2 4.

The smoke and illumination signal (10, fig. 2-1) is a hand-actuated combination day or night distress signal. One end of the signal device contains orange smoke for daytime use and the opposite

end (flare end) contains a pyrotechnic composition for illumination during nighttime use. The illumination end of the signal can be identified by a series of embossed projections located 1/4 inch below the end cap. The average burning time of the illumination signal is 18 seconds and when used at night as recommended, it can be seen at a distance of two to three miles from an altitude of 3000 feet. To activate the smoke and illumination signal, proceed as follows:

WARNING

Do not attempt to ignite both ends of a signal at the same time.

a. Remove paper or plastic cap from either the smoke or illumination end of the signal, as applicable.

b. Grasp the signal firmly with one hand and hold the signal close to the chest in a horizontal position with each end of the signal pointed away from the body.

c. Insert the index finger of your tree hand into the pull ring which shall break the soldered end of the cap free. If the soldered cap does not release, bring the pull ring down 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.

WARNING

Use extreme care when wing the signal as an illumination device as hot, molten residue dripping the burning signal can cause serious burns on the body or bum holes in the life raft.

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.

d. Make a steady, straight, horizontal pull until the pull ring and tab separate from the signal. Continue pulling upwards until a full arm s length is reached and point the activated signal end upward at a 45° angle until the signal has burned out.

NOTE

Do not discard a smoke and illumination signal until both ends of the device have been used. The smoke end of the signal device will bum in an illumination manner providing that once the smoke end has been activated, an open flame is placed against the smoking end.

2-5. First Aid Kit 2-5.

The aviator s camouflaged first aid kit (5. fig. 2-1) contains medical items necessary for applying first aid and instructions on the use of each medical item. Instructions for first aid treatment of injuries are specified in the survival manual (AFM 64-5 or FM 21-76)

2-6. Pocket Knife 2-6.

The pocket knife (4, fig. 2-1) is furnished for use as an aid in the cleaning of fish or small game and for light-duty cutting such as small branches for game traps, shelter, or fire building materials.

2-7. Fishing Tackle Kit 2-7.

The fishing tackle kit (3, fig. 2-1) is equipped with hooks, line, and artificial lures for catching fish. Instructions for use of this kit are furnished with the kit. Supplemental fishing instructions are provided in the survival manual (AFM 64-5 or FM 21 -76).

2-8. Wood Matches 2-8.

CAUTION

It matches are used while afloat in the life raft, insure you use extreme care to prevent damage to the life raft or the life preserver.

The individual, overwater. survival kit is equipped with one box of non-safety wood matches (6. fig. 2-1). The matches are to be used on land as a fire starter when you are in need of warmth, when cooking rations, or to produce smoke signals for attracting rescue parties. Upon opening a container of matches. insure the container contents are transferred to the waterproof matchbox for further protection from moisture or damage.

2-9. Sunburn-preventive Preparation 2-9.

The sunburn preventive preparation (7. fig. 2-1) is a lotion type preparation contained in a plastic bottle. This preparation is for application to the exposed areas of the face. neck, or other parts of the body to prevent or treat sun and windburn.

2-10. Hat and Mosquito Net 2-10.

The hat and mosquito net (8, fig. 2-1) is a combination net and hat unit used to protect your face and neck from insects. The net is equipped with a drawstring to allow the net to be drawn snug around the neck and tied. To keep the netting away from the face when the drawstring is to be drawn snug, place a small, flexible branch inside the net and bend it in a circle around your head. The branch will then lift the net away from the exposed skin of the face and neck.

2-11. Reversible Sun Hat 2-11.

The reversible sun hat (9. fig. 2-1) is furnished to protect the eyes and neck from exposure to the sun. The hat can also be used for signaling or camouflage. When being worn. the brim of the hat should be pulled down to achieve the maximum benefits of head coverage.

2-12. Seawater Desalter Kit 2-12.

WARNING

Never drink untreated seawater.

The MK-2 seawater desalter kit (11, fig. 2-1) provides a means of converting salt water to suitable drinking water. There are three desalter kits in the overwater survival kit, each of which consists of a metal container with eight packs of chemicals, a plastic water processing bag, and tape which is used for mending holes in the plastic bag. To desalt one bag of water, proceed as follows:

NOTE

Additional instructions on the use of a kit are furnished on the sides of each metal container.

a. Fill the bag with salt water to the heavy line located near the 16-ounce mark on the bag.

b. Remove a pack of chemicals from the one container and reclose the container. Further remove the outer wrapper from the pack of chemicals and place the chemical pack into the bag of water. Insure the valve on the plastic bag bottom is closed.

NOTE

One pack of chemicals is capable of purifying 16 ounces of water

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

d. Allow the bag of water to stand a few minutes which will permit the chemical to disintegrate. If necessary, gently knead the chemical until it has completely dissolved.

e. Gently agitate the bag of water for 60 minutes before attempting to drink the water.

f. To drink the desalted water, unscrew the valve at the bottom of the bag without squeezing the bag. put the valve in your mouth, and gently squeeze the bag or suck on the valve.

NOTE

The first few drops of newly desalted water may taste very salty and should not be swallowed. However, a small amount of salt is left in the desalted water intentionally to compensate for perspiration losses.

g. After drinking. close the bag valve to conserve the remaining water.

h. When the water contents of the bag have been completely used, rinse the desalting chemical from the bag with seawater. The bag is then ready for repeating the desalting process.

i. Should the plastic bag develop a puncture or a tear, carefully dry the affected area and then apply a patch to the area using the furnished mending tape.

2-13. Survival Food Packet 2-13.

The individual, overwater, survival kit contains three survival food packets (12, fig. 2-1) which are to be used if no other food source is available. The food in each packet is in concentrated form and should only be consumed with water to prevent personal dehydration.

2-14. Water Storage Bag 2-14.

CAUTION

When exposed to cold temperatures, the water bag will become hard and rigid. Exercise care when removing the bag from the survival kit and do not attempt to unfold the bag until it has been warmed, which may be accomplished by placing the bag next to your body.

CAUTION

Do not store water in the water storage bag in below freezing temperatures.

The water storage bag (13, fig. 2-1) is a soft, pliable, plastic bag which may be used for storing water accumulated from rainfall or some other water source.

2-15. Plastic Spoon 2-15.

The plastic spoon (14, fig. 2-1) is provided for use as a utensil when cooking or eating survival rations. If used in cooking, insure the spoon is not placed near open flame or hot metal. After use, clean and dry the spoon and store it in the original wrapper.

2-16. Boat Bailer 2-16.

The boat bailer (16, fig. 2-1) is a 6-inch-diameter rubberized, cup-shaped device which is used to remove seawater that may spill into your raft. The bailer is equipped with a retaining lanyard which allows the bailer to be secured to the raft.

NOTE

Insure the inside bottom of the life raft is kept as dry as possible to prevent chafed skin, cuts, or sores from becoming infected by the salt water.

2-17. Boat Paddles 2-17.

The individual. overwater. survival kit is equipped with two wooden boat paddles (17 fig. 2-1, which are 14 inches long by 3 1/4 inches wide and provide a means of moving and steering the life raft when afloat. Each paddle has a webbing loop attached on one end and one side of the paddle is coated with reflective material The webbing loop is slipped over the hand to prevent loss of the paddle during use. The reflective material will reflect light flashes from the sun or night search lights and these flashes. which can be seen for a long distance. may alert rescue parties in your area.

2-18. Inflatable Craft Repair Kit 2-18.

The inflatable craft repair kit (18 fig 2 1) is used to plug a hole which may develop in the raft The kit consists of two oblong-shaped plates with a retaining lanyard. Procedures for using the kit are as follows:

a. Loop the retaining lanyard around your wrist to prevent loss of the plates.

b. Dip the plate. which has a threaded screw located in the center. into the seawater. This plate is considered the bottom plate of the plus.

c. Insert the bottom plate through the hole in the raft and allow the threaded screw to protrude up out of the hole. If the original hole is too small to accept the plate. carefully enlarge the hole to a point at which the plate can be inserted.

d. Pull the bottom plate against the inner fabric surface and slide the top plate over the threaded screw and push the top plate down against the outer fabric surface to form the hole plug

e. Adjust the plug to cover the hole entirely and while holding it in place. screw the furnished wing nut onto the screw and secure the nut firmly place against the plug top plate.

2-19. Sponge 2 - 19.

The cellulose sponge (19 fig. 2-1) may be used for removing excess seawater from the life raft or to

gather drinking water from the formation of early morning dew on the life raft or from the leaves of trees and plants it on land. In addition, bits of the sponge may be used as fish bait provided the sponge bits have been dipped in animal blood prior to baiting the fish hook.

2-20. Survival Manual 2-20.

The survival manual (AFM 64-5 or FM 21-76) (20, fig. 2-1) is included in the survival kit to provide instructions on survival under all climatic and environmental conditions. Reference the survival manual for all survival methods and practices.

2-21. Trioxne Compressed Fuel 2-21.

WARNING

Trioxane fuel contains metaformaldehyde, which Is highly toxic. Ingestion constitutes a medical emergency. Wash hands immediately after handling opened or leaking packages.

The trioxane compressed fuel (21, fig 2-1) is in a block form with each block individually wrapped and contained in a paper box which furnishes detailed instruction on use of the fuel. The fuel may be used on land for heating food or as a firestarting aid when trying to burn green or wet wood and other hard-to-burn fuel items.

2-22. Frying Pan 2-22.

The frying pan (22. fig. 2-1) is a lightweight aluminum device which may be used on land for cooking. melting snow and ice for drinking water. as a wash basin for personal hygiene or when on water for collecting rainwater Holes are drilled in the side panels of the pan to provide a means of inserting a wire or small branch for use when lifting the pan when it is hot.

2-23. Signaling Mirror 2-23.

The signaling mirror (23. fig. 2-1) is a glass signaling instrument equipped with a retaining cord on one corner and a see-through sighting device in the center of the glass When used in daytime and with good visibility, a mirror flash can be seen at a distance of 30 miles at an altitude of 10,000 feet.

Though less effective, and with possible shorter range, mirror flashes can also be seen on cloudy days with limited visibility. Procedures for using the mirror are as follows:

a. Hold the mirror in a manner which will allow the sunlight to reflect on a nearby surface such as the hand or other close object.

b. Bring the mirror up to eye level and using one eye, look through the sighting device until an intense bright spot is located. This is the aim indicator.

c. Hold the mirror close to the eye and slowly turn it until the bright spot is on the target (fig. 2-6).

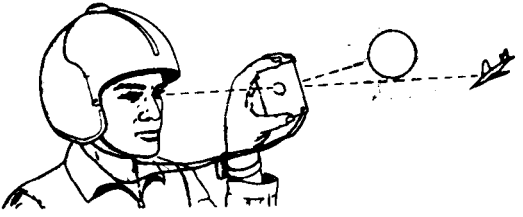


Figure 2-6. Using the signaling mirror.

2-24. Magnetic Compress 2-24

CAUTION

When not being used, the magnetic compass must be stored in an position to prevent unnecessary wear on the compass pivot and jewel.

The type MC-1 pocket magnetic compass (24, fig. 2-1), is a very important aid in ascertaining your direction of travel. The compass is equipped with a transparent plastic top, a long line for determining the directional course reading, and two lanyard attaching rings located on the bottom of the compass case for use in attaching a retaining lanyard. To use the compass, hold tile compass erect in a manner which places the lubber line parallel to your line-of-sight, or in the tore and aft position to your line-of-travel. Your course heading may then be read on the top or the side of the compass dial under the forward end of the lubber line.

NOTE

The arrow on the compass dial always points to magnetic "NORTH".

NOTE

Items which contain Iron or steel, and other types of compasses may cause the MC-1 magnetic compass to give incorrect readings.

2-25. Waterproof Matchbox 2-25.

CAUTION

Matches should be put In plastic water proof container with the match heads down. Do not try to overfill the container.

The matchbox (25, fig. 2-1) is a plastic waterproof container with a screw-type cap which has a striker plate on the inside. When the matchbox is tilled with matches, the striker plate should be covered with scrap paper to prevent the matches belay inadvertently ignited when removing or installing the cap on the box.

2-26. Fluorescein Sea Marker 2-26.

The fluorescein sea marker (27, fig. 2-1) is a sodium salt-type dye which is for use in making a yellow-green color of the seawater surrounding your raft to attract rescue aircraft. The marker dye is contained in a small, waterproof fabric packet and there are two packets provided in the individual, overwater, survival kit. Each packet is equipped with a retaining tape for securing the dye packet to your person. During clear weather and calm seas, the sea marker is visible for about 1 hour at an altitude of 3,000 feet, and a distance of 3 to 5 miles. However, rough seas will dissipate the sea marker very quickly and visibility from any altitude or distance shall be limited. To use the sea marker, pull the marked "pack-opening" tab on the outside of the packet and disperse the packet contents in the water alongside your raft. For rapid dispersion of sea marker, apply vigorous agitation to the packet in the water.

NOTE

To conserve the sea marker, do not release the packet contents until you are sure that a rescue aircraft is in your immediate area.

NOTE

It you are on land, the sea marker can be used in rivers, streams, or lakes to attract rescue attention.

2-27. Fire Starter 2-27.

The Fire Starter (29, fig. 21) is a magnesium bar with a sparking insert located on one side Use a knife or other hard surface to scrape shavings off the magnesium side Make a pile of magnesium shavings in the center of a nest of tinder With a knife or other hard metal object. strike the sparking insert side of the her with a downward motion to create sparks which should be directed onto the pile of magnesium shavings. For tire building and maintaining various types of cooking and heating fires, follow the instructions in the survival manual (AFM 64-5 or FM 21-76) If the magnesium bar is inadvertently dropped into the fire, it will not explode or flare up

2-28. Saw, Hand, Finger Grip 2-28

CAUTION

Do not exert heavy pressure or put the blade in a bind. This may cause the blade to bend or break.

The saw (30, fig. 2-1) has a wire saw blade with two finger grip rings for using and has finger screws to adjust the saw blade. When using the saw, keep the blade taut by pulling on one arm as the other arm pulls the blade for cutting. Then reverse the arm action. Use short strokes. If the blade breaks, unscrew the finger grip on the shortest piece and insert the longest piece In the slot. Tighten the thumb screw and continue sawing.

2-29. Blanket, Combat Casualty. 2-29.

CAUTION

In cold/freezing weather do not put blanket next to body . It will cause you to sweat and possibly freeze.

The blanket (31, fig. 2-1) is a versatile piece of survival gear having a multiplicity of uses in an emergency situation, some of which are:

• A protective ground cloth for sleeping and sitting. (Protects from wetness and dampness; some Insulation Is given If folded several times.)

- A shelter. (Is waterproof and protects from rain, snow, tog as well as sun. Can be spread over a framework constructed from natural materials. Is a fair windbreak it supported by framework.)

- A water collector. (Used in conjunction with a depression dug into the soil; depression is lined with blanket as waterproof water collector.)

- A signal panel. (Ground to air emergency signal.)

- A waterproof cover for injured. (Provides protection from becoming wet.)

- A protective cover for equipment.

- A heat conductor. (Used in conjunction with an open fire; blanket is supported on framework, and individual positions himself between the fire and the reflective surface of the blanket.)

APPENDIX A

REFERENCES

TM 10-1670-1	Survival Uses of the Parachute
TM 10-1670-213-10	Operator's Manual for Parachute Personnel, Types: 28-Foot-Diameter Back, 28-Foot-Diameter Chest, and NB_8 Back
AFM 64-5	Search and Rescue Survival
FM 21-76	Survival, Evasion and Escape
DA Pam 738-751	Functional Users Manual for the Army Maintenance Management System-Aviation (TAMMS-A)

By Order of the Secretary of the Army

JOHN H. WICKHAM, JR.
General, United States Army
Chief of Staff

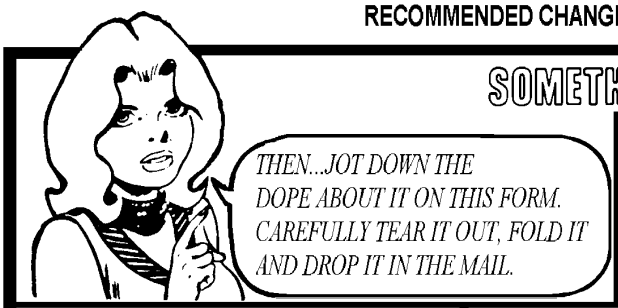
Official:

R. L. DILWORTH
Brigadier General, United States Army
The Adjutant General

DISTRIBUTION:

To be distributed ID accordance with DA Form 12-31, -10 and CL requirements for all Fixed and Rotary Wing Aircraft.

RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS



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.

THE METRIC SYSTEM AND EQUIVALENTS

'NEAR MEASURE

. Centimeter = 10 Millimeters = 0.01 Meters = 0.3937 Inches
1 Meter = 100 Centimeters = 1000 Millimeters = 39.37 Inches
1 Kilometer = 1000 Meters = 0.621 Miles

'VEIGHTS

Gram = 0.001 Kilograms = 1000 Milligrams = 0.035 Ounces
1 Kilogram = 1000 Grams = 2.2 lb.
1 Metric Ton = 1000 Kilograms = 1 Megagram = 1.1 Short Tons

LIQUID MEASURE

1 Milliliter = 0.001 Liters = 0.0338 Fluid Ounces
1 Liter = 1000 Milliliters = 33.82 Fluid Ounces

SQUARE MEASURE

1 Sq. Centimeter = 100 Sq. Millimeters = 0.155 Sq. Inches
1 Sq. Meter = 10,000 Sq. Centimeters = 10.76 Sq. Feet
1 Sq. Kilometer = 1,000,000 Sq. Meters = 0.386 Sq. Miles

CUBIC MEASURE

1 Cu. Centimeter = 1000 Cu. Millimeters = 0.06 Cu. Inches
1 Cu. Meter = 1,000,000 Cu. Centimeters = 35.31 Cu. Feet

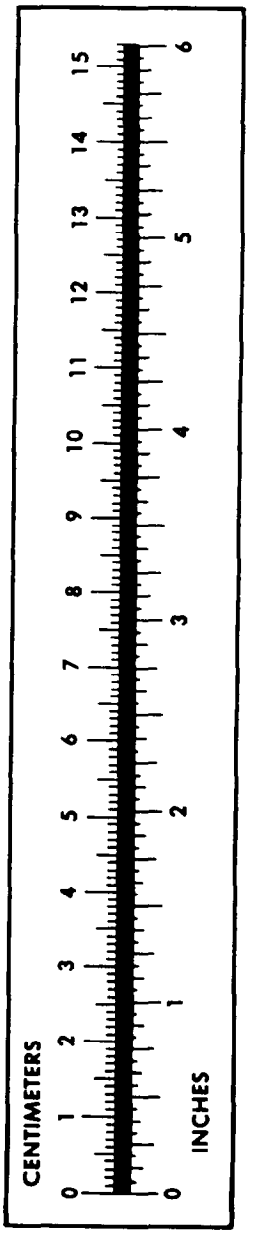
TEMPERATURE

5/9(°F - 32) = °C
212° Fahrenheit is evuivalent to 100° Celsius
90° Fahrenheit is equivalent to 32.2° Celsius
32° Fahrenheit is equivalent to 0° Celsius
9/5C° + 32 =°F

APPROXIMATE CONVERSION FACTORS

TO CHANGE	TO	MULTIPLY BY
Inches	Centimeters	2.540
Feet	Meters	0.305
Yards	Meters	0.914
Miles	Kilometers	1.609
Square Inches	Square Centimeters	6.451
Square Feet	Square Meters	0.093
Square Yards	Square Meters	0.836
Square Miles	Square Kilometers	2.590
Acres	Square Hectometers	0.405
Cubic Feet	Cubic Meters	0.028
Cubic Yards	Cubic Meters	0.765
Fluid Ounces	Milliliters	29.573
ıts	Liters	0.473
arts	Liters	0.946
allons	Liters	3.785
Ounces	Grams	28.349
Pounds	Kilograms	0.454
Short Tons	Metric Tons	0.907
Pound-Feet	Newton-Meters	1.356
Pounds per Square Inch	Kilopascals	6.895
Miles per Gallon	Kilometers per Liter	0.425
Miles per Hour	Kilometers per Hour	1.609

TO CHANGE	TO	MULTIPLY BY
Centimeters	Inches	0.394
Meters	Feet	3.280
Meters	Yards	1.094
Kilometers	Miles	0.621
Square Centimeters	Square Inches	0.155
Square Meters	Square Feet	10.764
Square Meters	Square Yards	1.196
Square Kilometers	Square Miles	0.386
Square Hectometers	Acres	2.471
Cubic Meters	Cubic Feet	35.315
Cubic Meters	Cubic Yards	1.308
Milliliters	Fluid Ounces	0.034
Liters	Pints	2.113
Liters	Quarts	1.057
'ers	Gallons	0.264
.ms	Ounces	0.035
.ograms	Pounds	2.205
Metric Tons	Short Tons	1.102
Newton-Meters	Pounds-Feet	0.738
Kilopascals	Pounds per Square Inch	0.145
'lometers per Liter	Miles per Gallon	2.354
›meters per Hour	Miles per Hour	0.621



PIN: 060425-000

This fine document...

Was brought to you by me:

Liberated Manuals -- free army and government manuals

Why do I do it? I am tired of sleazy CD-ROM sellers, who take publicly available information, slap “watermarks” and other junk on it, and sell it. Those masters of search engine manipulation make sure that their sites that sell free information, come up first in search engines. They did not create it... They did not even scan it... Why should they get your money? Why are not letting you give those free manuals to your friends?

I am setting this document FREE. This document was made by the US Government and is NOT protected by Copyright. Feel free to share, republish, sell and so on.

I am not asking you for donations, fees or handouts. If you can, please provide a link to liberatedmanuals.com, so that free manuals come up first in search engines:

<A HREF=http://www.liberatedmanuals.com/>Free Military and Government Manuals</A>

- Sincerely
  Igor Chudov
  http://igor.chudov.com/
- Chicago Machinery Movers