USCG AUXILIARY AIR 7TH DISTRICT LIFE SUPPORT EQUIPMENT INSPECTION SYSTEM	Use this form to record each inspection. Retain records over the life of the vests. Transfer records with the vests when transferred or turned in to supply.

Facility Number	MAINTENANCE ACCOMPLISHED		MAINTENANCE DUE	
	DATE		DATE	
	MO	DAY	MO	DAY

AUXILIARY AVIATION SURVIVAL VEST WITH AVIATION LIFE PRESERVER SYSTEM (ALPS) AMTC-R 1128-BL ALPS	Sequential number of scheduled inspection * ☐

☐ ACCEPTANCE ☐ SCHEDULED ☐ UNSCHEDULED ☐ FUNCTIONAL

			YES	NO
VEST	S/N: _____	DOM: _____	EPIRB ___	___
	S/N: _____	DOM: _____	EPIRB ___	___
	S/N: _____	DOM: _____	EPIRB ___	___
	S/N: _____	DOM: _____	EPIRB ___	___

DISCREPANCIES FOUND: NO_____ Yes_____

MAN HOURS: __.__ (Report on ANSC 7029)

IF DISCREPANCIES ARE FOUND, REMARKS ARE REQUIRED

Inspector's Signature	Inspector's Printed Name	Inspector's Auxiliary ID

This form records inspections of critical, life saving equipment. This is not an accountability record. Quality assurance inspectors may audit these forms at any time. Forms will be audited during facility inspections. The person assigned responsibility for the equipment is encouraged to use other crew members to assist with the inspections.

* Record the sequential number of the scheduled inspection above. The ALPS bladder has a ten year service life. It is critical that the bladder be tested for reliability yet not overly tested to the extent that bladder life may be compromised to the detriment of aircrew safety. Every sixth scheduled leak check (six-month check/ three year check) must include a functional test of the inflation system. The purpose of recording the sequential number of inspections is to ensure the functional checks are performed during the service life as required.

Original Jul 2010

1 SURVIVAL VEST ASSEMBLY BUILD-UP (Fig 1 shows the built-up vest and survival equipment)

NOTE: Perform Item 1 to build up the equipment before performing the acceptance inspection in Item 2. Documentation is not required, therefore, a sign-off is not provided.

REFERENCES:

COMDTINST M13520.1 (Series), Aviation Life Support Systems Manual
MPC 000ACL.0

TOOLS/TEST EQUIPMENT:

NONE

EXPENDABLES:

Cord, Type I Nylon
Hook Tape, 1-inch
Pile Tape, 2-inch
Cylinder, CO2, 33 g

SURVIVAL EQUIPMENT:

Flare, Orion Pocket Rocket 4 Aerial Signal Kit (qty: 1)
Knife, Aerial Survival Knife (qty: 1)
Light, Strobe, FireFly (ACR) or Stearns (qty: 1)
Bladder, ALPS (Aerial Machine), P/N 18273 (qty: 1)
P-EPIRB, ACR AquaFix 406 IO (qty: 1 per aircraft facility)
Mirror, Signal, NSN 6850-00-105-1252 (qty: 1)
Survival Vest Collar, AMTC (qty: 1)
Whistle (Fox 40), NSN 8465-21-912-7031 (qty: 1)
Chemical Light Sticks, Green, NSN 6260001067484 (qty:4)

A. BUILD UP PROCEDURE: (See Fig 1.)

1. Attach a 2- x 2-inch piece of pile (loop) tape to upper right-hand side of bladder.
2. Attach collar to survival vest:

   a. Attach flotation collar to vest using straps affixed to back side of collar, making sure that snaps are routed under bands.

   b. Fasten the pull-the-dot snaps.

3. Check CO2 Cartridge and inflation assembly.

   a. Remove CO2 cartridge and check that the end seal is intact.

   b. Inflation valve lever must be stowed upright and green safety clip installed.

   c. Reinstall CO2 cartridge.

4. Attach survival equipment:

   a. Sear-cut six 36-inch lengths Type I nylon cord, gutted.

b. Attach one end of a 36-inch length of Type I cord to the Fox 40 signal whistle and signal mirror, using an overhand knot on the bitter end and a bowline (Fig 8).

c. Attach the other end of the Type I cord to the wearer's right front pocket using a an overhand knot on the bitter end and a bowline.

d. Attach Strobe light (FireFly or Stearns) as per steps 3.b. and 3.c. Tie into wearer's right front pocket.

e. Attach survival knife by strapping pouch onto left breast of vest, opening down. Lock knife blade. Attach one end of a 36-inch length of Type I cord to the knife. Attach the other end of the Type I cord to the knife pouch as per steps 3.b. and 3.c. Lead cord down the back of the knife blade and wrap excess around lower portion of knife. Insert the knife, strap-cutter end into the opening of pouch and slide up ensuring cord will not be cut by strap cutter on extraction. (See photo 3)

f. Attach rescue streamer and container of pen gun and flares as per steps 3.b. and 3.c. Tie into wearer's right center pocket.

g. Attach EPIRB as per steps 3.b. and 3.c. Tie into wearer's left center pocket.

NOTE: EPIRB is provided in one vest for each facility. The left center pocket on other vests assigned to the facility is delivered empty except for a tether. This pocket may be used to carry optional/personal items.

h. Wrap four chemical light sticks in a rubber band and ensure the expiration date on at least one light is visible. Attach 4 chemical light sticks as per steps 3.b. and 3.c. Tie into wearer's left front pocket.

5. Modify strobe light (FireFly or Stearns) with hook tape:

a. Modify strobe light with a 1 x 2-inch piece of hook tape IAW Chapter 4 of the Aviation Life Support Systems Manual COMDTINST M13520.1 (Series).

6. Post build up procedure:

a. Proceed with Item 2, Survival Vest Acceptance Inspection.

2. SURVIVAL VEST ACCEPTANCE INSPECTION

REFERENCES:

NONE

TOOLS/TEST EQUIPMENT:

NONE

EXPENDABLES:

NONE

A INSPECTION

NOTE: This inspection is required on original issue, when received from supply, or accepted from another unit for permanent custody.

1. Verify build-up was completed IAW procedures in Items 1, 2, 3, and 4 of the buildup procedure.

2. Record inspection/ maintenance action by completing the appropriate sign-off, adding pertinent remarks.

3. INSPECT VEST/TEST ALPS BLADDER FOR LEAKS

NOTE: This inspection is required each six months on assigned vests or when vests are accepted from another unit for permanent custody (Unscheduled), or when problems are suspected (Unscheduled).

REFERENCES:

COMDTINST M13520.1 (Series), Aviation Life Support Systems Manual
CGTO PG-85-00-310 Coast Guard Progressive Guide
ACR Product Support Manual Y1-03-0173 Rev. D (P-EPIRB)

TOOLS/TEST EQUIPMENT:

Bicycle air pump or other suitable source of low pressure air and plastic adapter to fit oral inflation valve.
Household vacuum with suitable adapter to fit oral inflation valve.

EXPENDABLES:

Battery, size AA, Alkaline or Lithium (as required)
Thread, small size, breakable by hand
Rubber seal for CO2 cartridge seat (PN 484-S)

A INSPECT VEST

1. Inspect survival vest:

a. Inspect vest pockets and casing for cuts, tears, seam separation, and loose stitching.

b. Inspect slide fastener (zipper) for proper operation and security.

c. Inspect hardware for security of attachment, corrosion, damage, wear, and ease of operation.

d. Inspect markings and serial number for legibility, restore as needed.

e. Ensure collar assembly is properly attached to the vest assembly.

f. Report need for repair of any discrepancies found.

NOTE: It may be possible for the Air Station to perform light repairs such as sewing, snap and buckle replacement, and to provide seals for the CO2 inflator valves. Report needs to the equipment manager for possible use and coordination of Air Station resources.

B INSPECT ALPS BLADDER, INFLATION MECHANISM AND TEST FOR LEAKS

NOTE: If a functional test is due, perform functional test prior to this leak test. (See Item 4, page 8)

1. Perform air bladder screening:

a. Lay out preserver in a clean area, free of foreign objects.

b. Remove CO2 cartridge.

c. Open bladder assembly from vest.

d. Unlock bladder's oral inflation valve.

e. Inspect preserver fabric for cuts, tears, punctures, abrasion, and deterioration.

f. Inspect preserver seams for security and adhesion.

g. Inspect oral inflation valve for cracks, security, and ease of operation.

h. Inspect preserver markings for legibility, restore as needed.

i. Check reflective tape and pile patch for security and proper location.

j. Report discrepancies to equipment manager.

2. Inspect inflation assemblies:

a. Inspect valve lever and lanyard for damage.

b. Inspect valve body edges for burrs.

c. Inspect valves for corrosion.

CAUTION: Ensure CO2 cartridge is removed before the next step.

d. Operate toggle three or four times (safety clip or thread will break). Ensure lever moves freely and ensure puncturing pin moves properly inside valve bodies. (Fig 4)

e. Inspect CO2 cartridge rubber seal. If seal appears compressed, brittle, or deteriorated, replace. Always replace seal after functional inspection.

f. Inspect the CO2 cartridge. Check that the cartridge is not used by visually verifying the threaded-end seal is intact.

3. Perform leakage test:

NOTE: Inflate bladder using suitable low-pressure bicycle air pump or other low pressure air source regulated to supply supplying 10 psi or less. If using a compressor, use a water separator to keep moist air from entering the bladder. Inflate to a firm pressure never to exceed 2 psi.

a. Open oral inflation valve and inflate the life preserver. Inflate to a firm pressure (Fig 2). Let bladder sit for two hours. Leakage should be insignificant. If leakage is noted, describe the leak and report to equipment manager. Leak may appear in the bladder (replace) or in the inflation valve (repair possible). Report the problem to equipment manager.

b. Use warm soapy water to clean bladder if necessary. Rinse with fresh water to remove salt. DO NOT dry clean.

c. If the bladder is wet, allow to air dry thoroughly before storage. Do not dry the unit in front of a radiator, fire, or other direct heat source.

CAUTION: Do not store inflated ALPS in direct sunlight. Doing so may cause the air bladder to over expand and burst.

d. Determine reparability and correct or report discrepancies IAW COMDTINST M13520.1 (Series).

e. Deflate through oral inflation valve. Apply pressure to bladder or devise an attachment to use a household vacuum to deflate.

4. Install CO2 cartridge:

a. Return valve lever to its up and armed position. (Fig 5)

b. Pass a length of thread through hole in inflation assembly body and through hole in lever.

c. Secure thread with a surgeon's knot followed by a square knot. (Fig 6, 8)

d. Screw CO2 cartridge in until it stops, and hand tighten ¼ turn.

5. Pack Bladder:

a. Lay vest out on a clean, flat surface. Remove as many wrinkles from bladder as possible.

b. Close the oral inflation valve (Fig 7).

c. Fold bladder per instruction sheet located under bladder, or Fig 9.

6. Secure the folded bladder in the collar.

C INSPECT SURVIVAL EQUIPMENT

1. Inspect survival knife:

a. Inspect survival knife for corrosion. Remove visible corrosion from knife and oil if needed.

b. Check lanyard security and install in equipment pocket. (Fig 3)

CAUTION: Ensure the tether will not be drawn into the strap cutter when the knife is drawn from the pocket.

2. Inspect signal mirror:

a. Inspect mirror for cracks and legible instructions. Replace as necessary.

b. Inspect protective cover on mirror. Replace torn cover with electrical tape.

c. Check lanyard security and install in equipment pocket.

3. Inspect strobe light:

a. Inspect lens for cracks or discoloration. If any, replace the strobe.

b. Inspect strobe case for cracks. If any, replace strobe.

c. Unscrew the battery lid. Replace the batteries annually.

d. Inspect for presence of moisture inside battery compartment.

e. Inspect O-ring gasket for condition.

f. Install new batteries annually.

g. Replace the battery lid and tighten screw to compress O-ring gasket. Do not over compress gasket.

h. Operate the switch to check for correct operation; flash rate should be 60 ± 10 flashes per minute.

i. Check lanyard security and install in equipment pocket.

NOTE: The location light attached to the bladder has a five year battery life. These lights will not be replaced when batteries expire.

4. Inspect whistle:

a. Inspect whistle for operation and condition.

b. Blow whistle normally (regular exhalation); then with forced exhalation. If whistle fails to emit a highly audible sound, replace it.

c. Check lanyard security and install in equipment pocket.

NOTE: The whistle attached to the bladder may be retained as a backup. These whistles will not be replaced when no longer serviceable.

5. Inspect Rescue Streamer:

    a. Inspect streamer for overall condition. Do not unroll.

6. Inspect Pocket Rocket signal flare kit:

WARNING

DENTED, DAMAGED, OR CORRODED PYROTECHNICS SHALL NOT BE USED. DENTS OR OTHER IMPERFECTIONS MIGHT RESULT IN VIOLENT ACTION OF THE SIGNAL WHEN FIRED.

    a. Check expiration date on cartridges and replace if they will expire before the next scheduled six-month inspection.

    b. Inspect cartridges for overall condition and for damaged primers.

    c. Inspect launcher for overall condition and no corrosion.

    d. Stow launcher (unlocked) in container with flare cartridges.

    e. Check lanyard security and install in equipment pocket. Lanyard is attached to both rescue streamer and pocket rocket container.

7. Inspect ACR EPIRB:

    a. Perform the Built in Self Test once per month. It is not necessary to record this monthly test.

    NOTE: If the EPIRB flashes an initial Red LED at the beginning of the Self Test, this indicates that the electronic witness has been broken and has used more than 1 hour of battery life. If this occurs, the battery needs to be replaced.

    b. Inspect EPIRB for condition.

    c. Check registration expiration.

    d. Check the battery expiration. Unit must be returned to your equipment manager for replacement of battery.

    e. Check lanyard security and install in equipment pocket.

8. Inspect Chemical light sticks:

    a. Check condition and integrity of wrapping.

    b. Check expiration date and obtain replacements if they will expire before the next scheduled inspection.

    c. Check lanyard security and install in equipment pocket.

9. Record inspection/ maintenance action by completing the appropriate sign-off, adding pertinent remarks.

4. FUNCTIONAL TEST ALPS BLADDER

NOTE: The functional test puts the inflator to use to determine whether it operates properly. *The functional test* is performed at intervals that coincide with every sixth scheduled leak test inspection or every 36 months.

A FUNCTIONAL TEST

CAUTION: Ensure that area is free of foreign objects.

1. Actuate inflation assembly.
2. Bladder shall fully inflate to designed shape without evidence of restriction in less than 30 seconds.
3. If any discrepancies are found, contact equipment manager for corrective action.
4. Remove all CO2 from both compartments.
5. Inspect inflation lanyard.
    a. Examine lanyard for frays, ruptures, thin spots, split casing, and security of knots.
6. Replace CO2 cartridge rubber seal as follows:
    a. Using a paper clip, remove old rubber seal from inflation assembly.
    b. Replace with new rubber seal, P/N 484-S.
7. Perform Item 3, Inspect Vest/Test ALPS Bladder for Leaks.
8. Record functional test by completing appropriate sign-off, adding pertinent remarks.

5. CARE AND STORAGE OF THE SURVIVAL VEST

Store in a well ventilated area. Avoid over inflation and exposure to chemicals. Do not store in direct sunlight. Do not store in damp areas.

It is desired that vests be stored on non-metallic coat hangers when not in operational use.

Figure 1. Overall View, Survival Vest in standardized loading configuration

1. Right Pocket: Signal mirror, strobe light, and whistle. Strobe light tethered separately. Mirror and whistle tethered together.
2. Right Center Pocket: Rescue Streamer, Pocket Rocket. Both are tethered together.
3. Left Center Pocket: P-EPIRB.
4. Upper left Breast Pocket: Survival knife (pull down to withdraw).
5. Left Pocket: Four Chemical lights, banded together.
6. *NOTE: One vest of the complement issued to a facility will contain the EPIRB. The left center pocket on other vests is empty and available to carry personal items. Do not shift any of the issued survival equipment to this pocket.*

Figure 2. Inflated Vest (showing strobe in deployed position)

Figure 3. Tethered Survival Knife

Figure 4. Inflation Lever Open (Actuated)

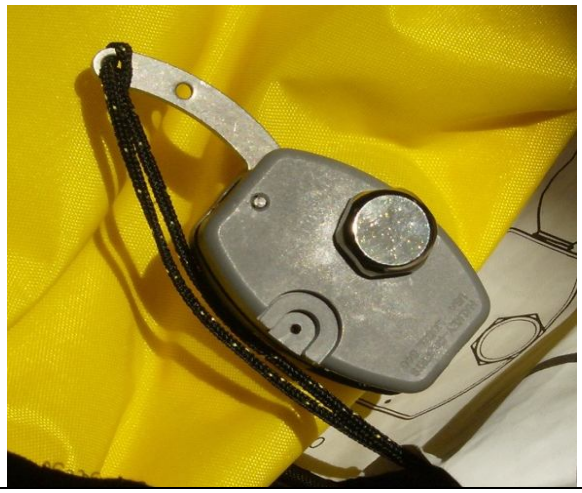

Figure 5. Inflation Lever Stowed (Armed)

Figure 6. Inflation Valve with Thread

Figure 7. Oral Inflation Valve Thumb Screw

Open

Closed

Figure 8. Typical Knots

Bowline: A knot formed by making a small overhand loop a desired distance from the end of the line. The end of the cord or line is passed through the loop from the underside of the main part of the line and back through the small loop. When this knot is drawn tight, it will not slip but still can be untied easily.	
Tether tied to survival equipment with a bowline and overhand knot at the bitter end	
Surgeon's Knot: The surgeon's knot is similar to the square knot, except that the first overhand tie is wrapped around the cord or line twice.	
Safety retaining thread tied with a surgeon's knot on the bladder inflator. In practice the first part of the knot is drawn tight before tying the second part. Follow up with a square knot.	

Figure 9. Folding the Bladder

Ensure inflation handle is properly snapped to bladder collar with three snaps.

Lay the bladder out on a table. Evacuate all air or gas from the bladder. Position the reflective tape and oral inflation tube facing up. Close the oral inflation valve thumb screw (Fig 7).

Fold the bottom of the left and right lobes of the inflatable bladder on top and just above the hook-and-pile tape that runs horizontally at the bottom of the bladder cover.
Clip the whistle to the top of the left fold.

Figure 9. Folding the Bladder (continued)

Tuck the folded bladder material under outside vertical hook-and-pile tape.

Fold both lower inner lobes in 1/3rd towards center of each lobe. Mate 1” hook and pile tape on bottom.

Fold left side outer lobe towards center mating hook-and-pile tape at three locations.

Figure 9. Folding the Bladder (continued)

	Fold right side same as left and mate hook-and-pile-tape accordingly
	Mate hook-and-pile tape in upper corners of the flotation system
	Fold top of cover down and mate hook-and-pile tape at neck portion of flotation system. This will also mate the hook-and-pile tape at top corners. (Shown in black hook-and-pile tape in the picture above.