

**Report Date:** 30 Apr 2012

**Summary Report for Individual Task  
551-8ST-1019  
Maintain Water Survival Equipment  
Status: Approved**

---

DISTRIBUTION RESTRICTION: Approved for public release; distribution is unlimited.

DESTRUCTION NOTICE: None

**Condition:** Given a Personal Flotation Device (PFD), anti-exposure coveralls, immersion suit, personnel marking light, signal whistle, ring buoys, floating distress marker, distress signal, inflatable life raft, emergency escape breathing device (EEBD), and stokes litter and any of these given scenarios: " Routine scheduled maintenance IAW AR 56-9 Table 2-1 Test, Drills, and Inspection ( TDI) " After actual use or being exposed or saturated in salt water " New equipment being installed Special Conditions (if any): Results of all safety inspections must be recorded in the vessel logbook.

**Standard:** The Soldier inspects the following equipment for availability and serviceability: " Personal Flotation Device " Anti-exposure coveralls " Immersion suit " Personnel marking light " Signal whistle " Ring buoy " Floating distress markers " Distress signals " Release lifesaving equipment " EEBD " Stokes litter and associated equipment

**Special Condition:** None

**Special Standards:** None

**Special Equipment:**

**MOPP:**

**Task Statements**

**Cue:** None

**DANGER**

None

**WARNING**

None

**CAUTION**

None

**Remarks:** None

**Notes:** None

## Performance Steps

### 1. Maintain PFDs (Figure 551-8ST-1019\_01).

Note: Perform a monthly maintenance inspection of the PFDs.



Figure 551-8ST-1019\_01

- a. Inspect the PFD for tears, rips, and missing webbing, tapes, and hardware.
- b. Inspect and test the whistles and distress signal lights.  
Note: Do NOT activate the chemical light. Check for the expiration date.
- c. Inspect the reflective tape/material for cracking, peeling, and discoloration.
- d. Check back of suit for proper stenciling of vessel's name or number (i.e., USAV LSV-2).
- e. Tug sharply on all steps and ties to check for rotted fabric or broken stitching
- f. Replace as necessary.

Note: Before placing the PFD into service, perform and record in the logbook monthly inspection as described in above paragraph.

- g. Inspect the personnel marking light (refer to paragraph IV).
- h. Inspect the signal whistle (refer to paragraph V).

### 2. Maintain anti-exposure coveralls (Figure 551-8ST-1019\_02).

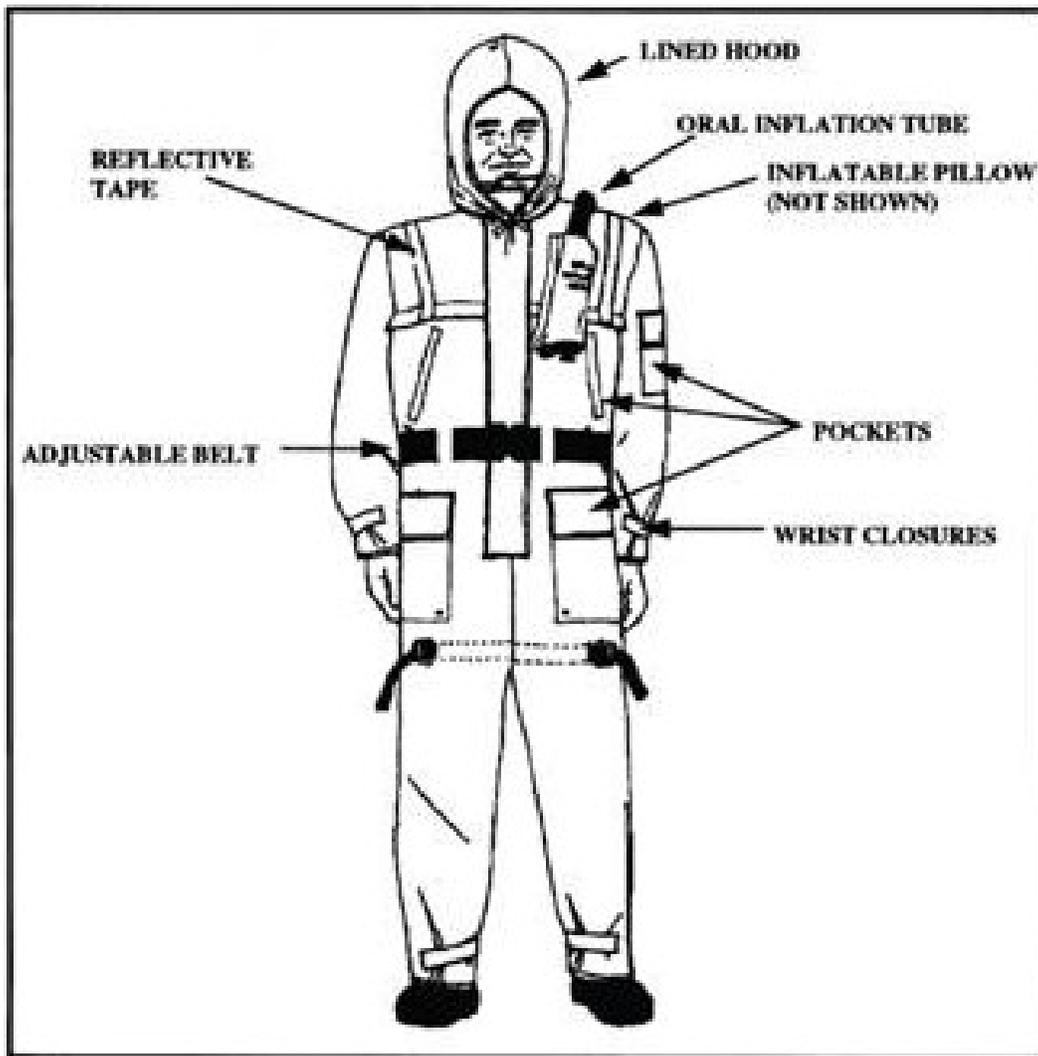


Figure 551-8ST-1019\_02

a. Clean the anti-exposure coveralls.

(1) Wash the coveralls in a shower with mild soap when they have been submerged or exposed to salt water or salt spray.

## CAUTION

- " Do NOT attempt to dry anti-exposure coveralls in a clothes dryer.
- " Do NOT wring the coveralls. To dry coveralls, hang on a wooden hanger in a cool, dry, well-ventilated area.
- " Do NOT dry in direct sunlight.
- " Do not use thinners, solvents, or similar agents for cleaning coveralls that have been exposed to paint, paint removers, acids, solvents, gasoline, or any substance containing acetones.

(2) Units may machine wash excessively soiled coveralls using mild soap and the gentle cycle. The water temperature should not exceed 105 degrees F.

b. Perform a monthly inspection of anti-exposure coveralls.

- (1) Inspect zipper to ensure it moves freely. Lubricate with wax or paraffin.
- (2) Lay out the suit and check for obvious damage.
- (3) Work entry zipper up and down to check for ease of operation. Rubbing a bar of soap or paraffin (NO oil or grease) over the edges of the zipper will ease operation.
- (4) Check the buoyancy chamber and inflation tube for obvious damage.
- (5) Inflate the buoyancy chamber and check for leaks.
- (6) Deflate the chamber and stow in chamber casing.
- (7) Check back of suit for proper stenciling of the vessel's name or number, i.e., USAV LSV-2.
- (8) Inspect the personnel marking light (refer to paragraph IV).
- (9) Inspect the signal whistle (refer to paragraph V).

3. Maintain immersion suits (Figure 551-8ST-1019\_03).

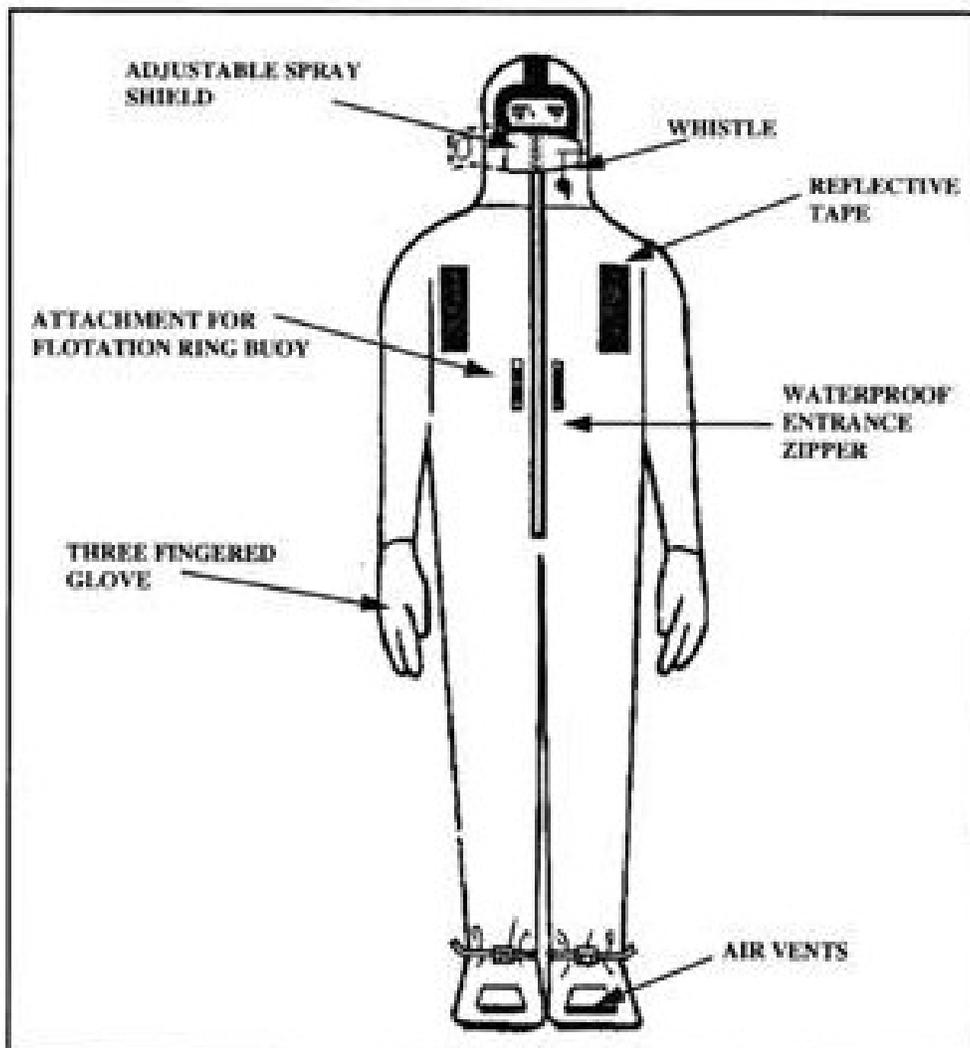


Figure 551-8ST-1019\_03

a. Clean immersion suits.

(1) Wash suits under a shower with a mild soap when they have been submerged or exposed to salt water spray.

**CAUTION**

" In NO situation shall thinners, solvents, or any similar agents be used to clean suits that have been exposed to paint, paint removers, acids, solvents, gasoline, or any substance containing acetones.

" Do NOT wring out immersion suits.

" Do NOT place immersion suits in a dryer or dry in direct sunlight.

" Ensure the suit is dry prior to replacing in storage case.

(2) Hang the suit on a wooden hanger in a cool, dry, well-ventilated area to dry

b. Inspect immersion suits.

(1) Inspect immersion suits before placing them into service and then perform a monthly maintenance inspection thereafter.

(2) Areas to inspect:

(a) Stowage bag: Check the condition of the snaps on the bag for ease of operation.

(b) Suit: Lay out on a flat, clean surface and check for obvious damage.

(c) Zipper: Work zipper up and down to check for ease of operation. If zipper is excessively rough, wipe with a soft, clean, lint-free cloth and lubricate with the wax lubricant found in the suit breast pocket.

Note: The teeth that actually secure the waterproof zipper are the small teeth on the inside of the zipper. A little corrosion on these teeth can block the slider or damage the teeth so the zipper does not operate. If a closed zipper can be separated when probed with a (dull) knife, the zipper needs to be replaced

(d) Inflatable collar: Check collar for obvious damage.

Note: Periodically inflate and allow it to stand overnight. If the collar does not stay firmly inflated overnight, it should be repaired or replaced. Inspect lock screw on inflatable collar inflation tube to check that it is in the unlocked position.

(e) Check back of suit for proper stenciling of vessel's name or number (i.e., USAV LSV-2).

(f) Check whistle and distress marker for serviceability.

(g) Personnel marking light (refer to paragraph IV)

(h) Signal whistle (refer to paragraph V)

## CAUTION

Repairs should be made only with neoprene (contact) cement. Other cements may contain solvents that weaken the material.

### c. Repair immersion suits.

#### (1) Repair separated seams, rips, and tears.

(a) Trim jagged edges with scissors until new rubber shows.

(b) Remove old cement.

(c) Thoroughly dry material.

(d) Apply neoprene cement IAW manufactures instructions.

(e) Apply four coats of cement along entire surface of material to be repaired.

(f) Allow each coat to dry between each application.

(g) When the last coat becomes tacky, align edges. Apply firm and even pressure when pressing edges together. Hold edges together for three or four minutes.

(h) Allow at least one hour for cement to set before using repaired item.

#### (2) Repair holes.

(a) When entire areas are missing, trim edges of area to convenient configuration.

(b) Cut a replacement piece conforming to size and shape of prepared area.

#### (3) Repair corroded zippers.

(a) Scrub with a toothbrush, using fresh water.

(b) Rub a bar of soap or paraffin wax (NO oil or grease) over the edges of the zipper to act as a lubricant and retard corrosion.

### 4. Maintain personnel marking lights (PML) (Figure 551-8ST-1019\_04).

Note: Perform a monthly maintenance inspection.



Figure 551-8ST-1019\_04

- a. Inspect sealing band on protective sleeve for security.
  - b. Check expiration date stamped on sealing band. Replace PML prior to manufacturer's expiration date.
  - c. Examine safety-pin-type clip for deformity. If pen is deformed, replace the PML.
  - d. Check that the safety pin is in the closed position.
  - e. Discard expended or out of date PML IAW unit HAZMAT / Environmental SOP
5. Maintain signal whistles (Figure 551-8ST-1019\_05).  
Note: Perform a monthly maintenance inspection.

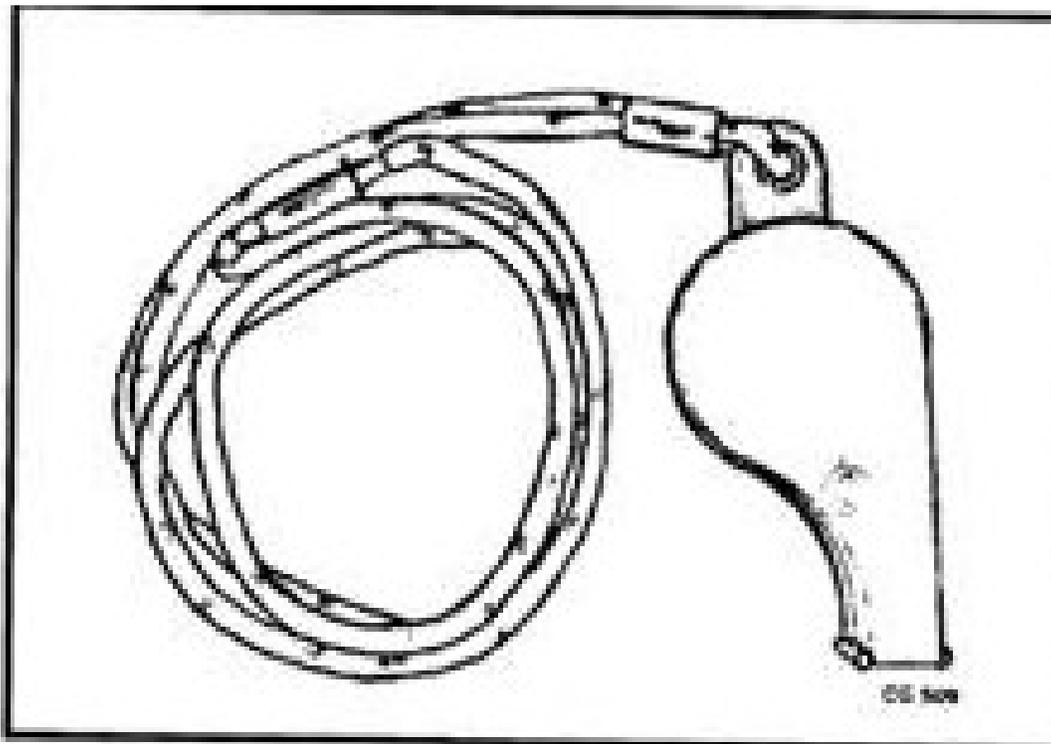


Figure 551-8ST-1019\_05 (whistle)

a. Check that the side discs of whistle are neither loose nor missing. Check whistle for cracks and damaged ball. Replace damaged or defective whistles.

b. Blow whistle normally (regular exhalation), then with forced exhalation. Replace the whistle if it fails to emit a highly audible sound.

6. Maintain ring buoys (Figure 551-8ST-1019\_06).

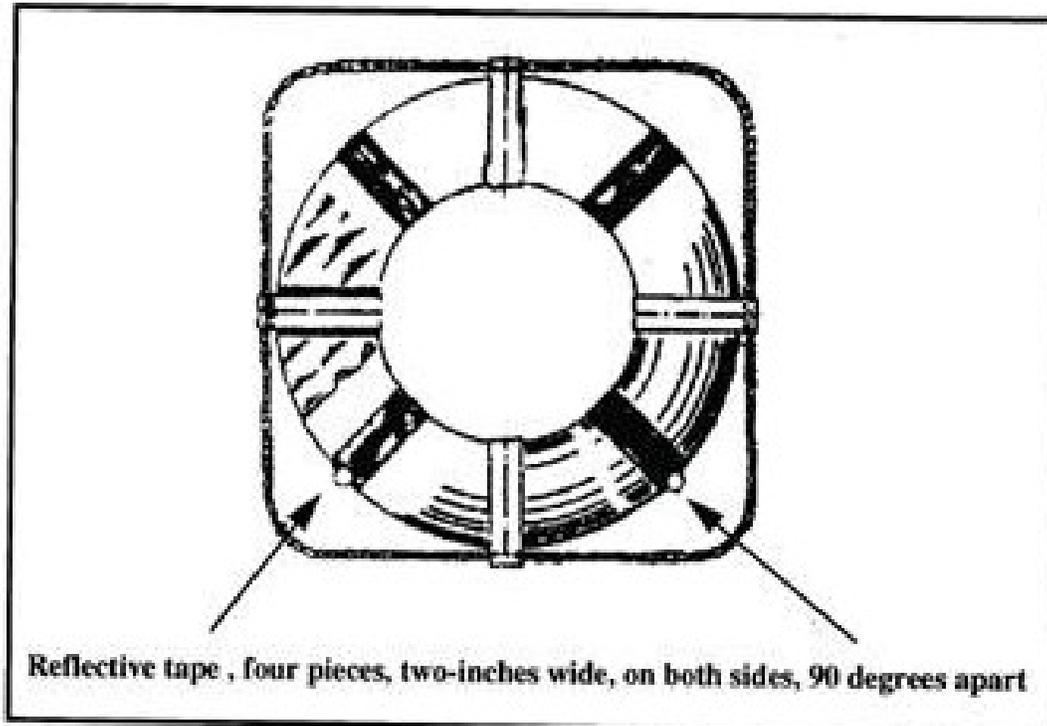


Figure 551-8ST-1019\_06 (ring buoy)

a. Inspect condition of lifeline, replace as required.

b. Inspect ring buoy for general condition of inherently buoyant material, such as holes, cracks, rips, and so forth.

7. Maintain floating distress markers (Figure 551-8ST-1019\_07).

Note: Inspect floating distress markers before placing into use and then perform a routine maintenance inspection every six months thereafter.

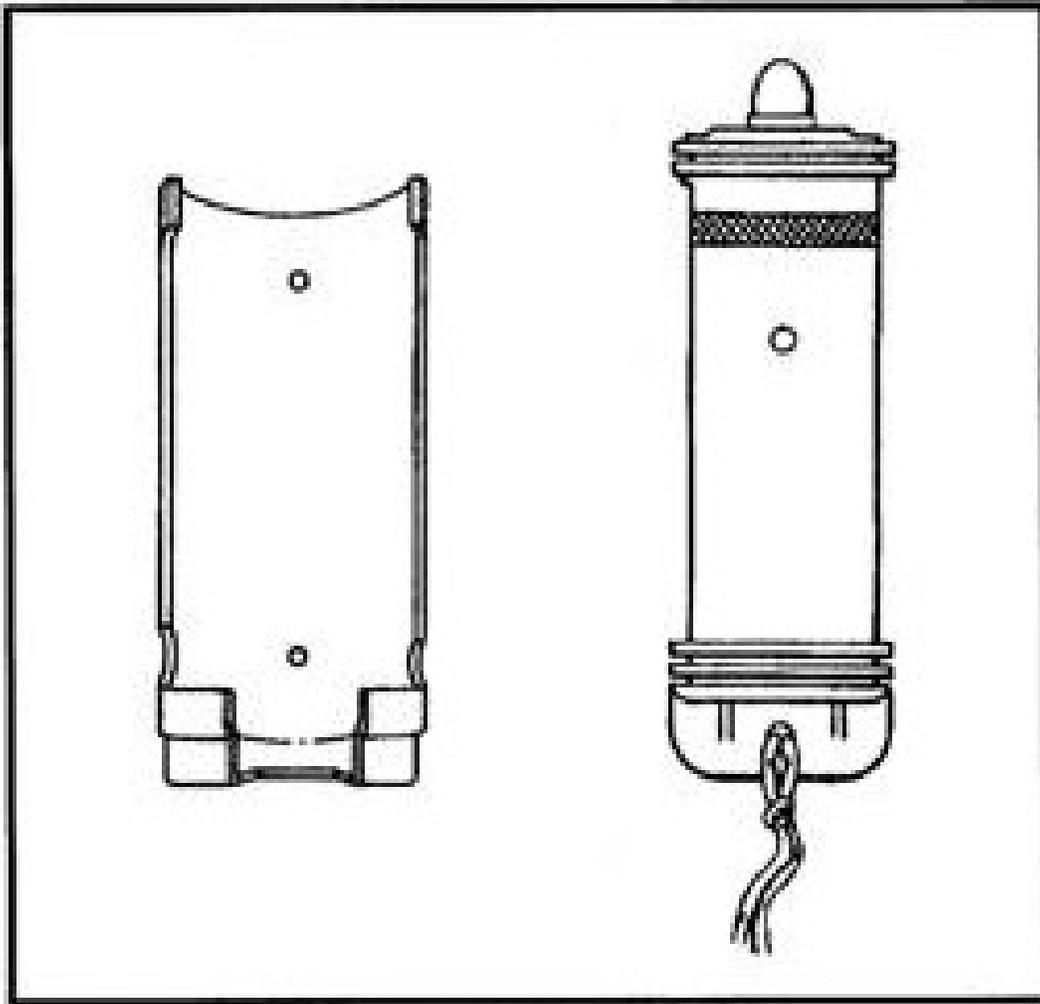


Figure 551-8ST-1019\_07 (floating distress markers)

- a. Remove light from bracket, ensuring its easy removal.
- b. Remove the battery from the light.
- c. Inspect lens and case for interior condensation and cracks.
- d. Check that marker is stenciled with vessel's name or number (i.e., USAV LCU 2010).
- e. Inspect condition and security of lanyard and halyard snap hook.

(1) Lanyard is 12' of ¼" yellow or orange polypropylene line attached to the ring buoy.

(2) The lanyard is connected to the distress marker by an eye splice and connected to the life ring by a brass halyard snap hook eye spliced into the end of the lanyard.

(3) Replace as necessary.

- f. Inspect battery compartment for corrosion or signs of battery leakage. - Clean and dry all contacts.
- g. Clean exterior of light using a mild soap and water solution and a soft cloth.
- h. Thoroughly dry exterior of light.

- i. Replace any cracked or broken gaskets.
- j. Install a new battery.
- k. Test the light by inverting it (lens up). The light should come on and flash at a rate of 60 +/- 10 flashes per minute.
- l. Test internal switch by turning light upside down (lens down); light should extinguish. If light does not flash or extinguish, replace light.

(1) Mark date of inspection and replacement of battery on outside of light using stencil, marking pen, or plastic tape.

(2) Check that the date of inspection is documented under Test, Drill and Inspections (TDI's) in the vessel's Official Deck Log Book.

## CAUTION

Do not keep the lamp in a lighted position more than necessary since the operating life will be reduced.

NOTE: Wet batteries, internal corrosion, and lack of water tightness are major reasons for failure of floating lights.

(3) Replace light in bracket with lens down.

8. Maintain distress signals (Figure 551-8ST-1019\_08).

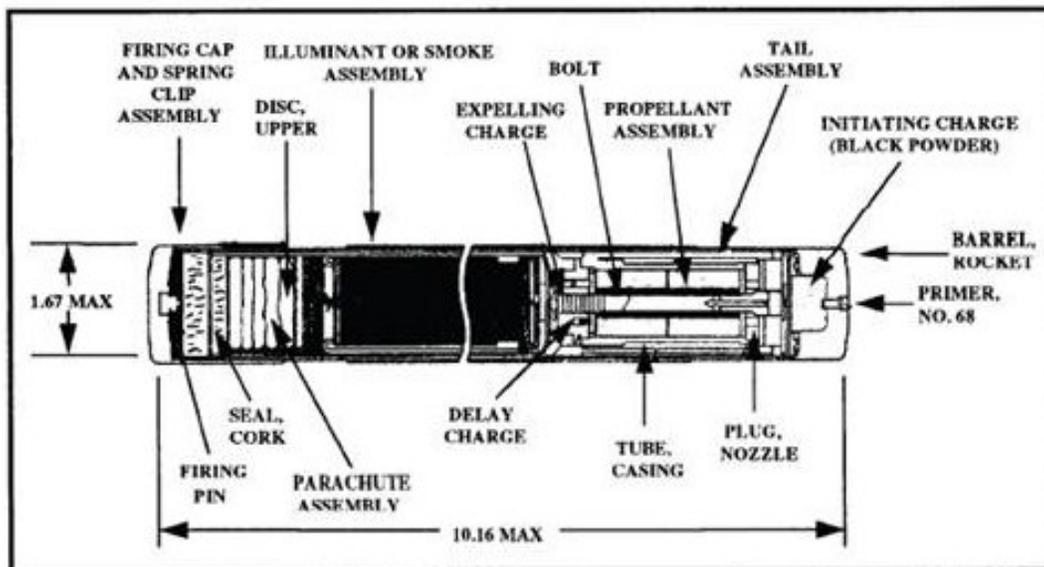


Figure 551-8ST-1019\_08

- a. Perform an annual maintenance inspection.
- b. Check the following:
  - (1) Expiration date (if applicable)

(2) Corrosion, dents, swelling or punctures

(3) Missing safety pins and caps

(4) Chemical odors

Note: Turn in defective or damaged pyrotechnics to the nearest Army supply facility.

9. Maintain release lifesaving equipment (Figure 551-8ST-1019\_09)

Note: Perform an annual maintenance inspection.



Figure 551-8ST-1019\_09 (release)

a. Inspect Diaphragm Type Hydrostatic Release Device Jaw Engagement Orientation.

b. Check that both jaws of hydrostatic release are fully engaged. Full engagement is when inner surfaces of two jaws are in contact with larger diameter of plunger shaft.

c. Inspect hydrostatic release device orientation to check that diaphragm housing and shorter arm are connected to deck and not retaining harness.

d. Check that the hydrostatic release device is installed with the plunger facing inboard (towards traffic) and check that the release pin is installed to avoid inadvertent release.

- e. Inspect Diaphragm Type Hydrostatic Release Device.
- f. Inspect parts of diaphragm type release device(s).
- g. External surfaces (static ports) for paint or lubricant clogging. Paint or lubricant on external surfaces may clog static ports and prevent release device from operating.
- h. Connect linkage for corrosion, cracks, distortion and burrs
- i. Push button for clogging or distortions.
- j. Check that the safety pin remains attached.
- k. Safety pin for corrosion or missing parts.
- l. Diaphragm halves mounting bolts for loose or missing bolts or nuts
- m. Inspect device for damage, distortion, corrosion or missing parts. Replace corroded, damaged or missing components or the entire unit as necessary.

## WARNING

Do NOT mix real and training units together in the same space. Training units have light blue cases and real units have orange cases. Training units are NOT safe to use in a toxic environment.

Perform an annual maintenance inspection.

10. Maintain emergency escape breathing device (EEBD). (Figure 551-ST-1019\_10)



OCENCO Model 20.2 EEBD



Scott EEBD

Figure 551-ST-1019\_10

- a. Check EEBD for any indications of high force impact.
- b. Check manufacturer's date. Units expire 15 years after manufacture date.
- c. Check that the unit does NOT have any of the following:
  - (1) Case cracks

- (2) Burns
- (3) Deformities
- (4) Excessively worn parts
- (5) Damaged latch or cover band
- (6) Bent gauge
- (7) Broken indicator needle
- (8) Dirt, debris, or moisture visible through the gauge window
- (9) Broken belt loops
- (10) Missing tamper indicating ball

d. Remove the unit from service if any of the above are observed or if the pressure gauge is out of the green zone.

11. Maintain stokes litter (Figure 551-8ST-1019\_11 and Figure 551-8ST-1019\_12).

Note: Inspect stokes litters and associated equipment after each use but not less than once every three months.

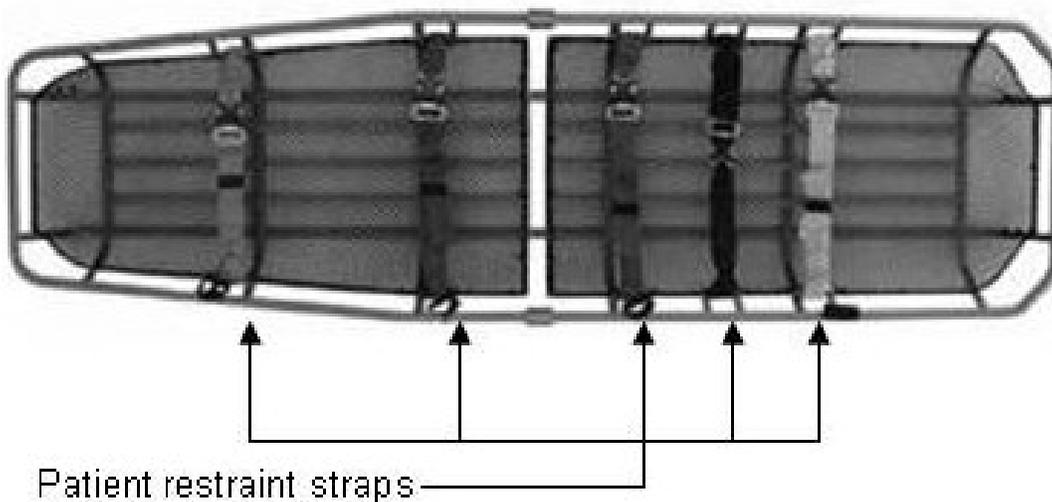


Figure 551-8ST-1019\_11 (Stokes litter with patient restraining straps)

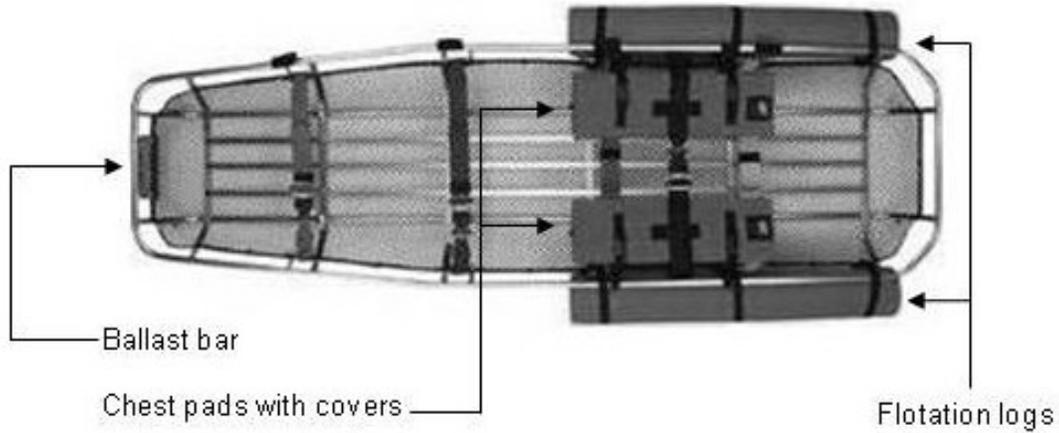


Figure 551-8ST-1019\_12 (Stokes litter completely assembled without lifting slings or tag lines)

a. Litter should be stenciled on the back board with vessel's name or number (i.e., USAV LT-804).

b. Inspect the following parts:

(1) Litter: Inspect litter for cracked welds, cracked tubes, rust, pinholes, security and condition of wire mesh, and evidence of wear on the sling attachment points.

(2) Restraint straps: Inspect for security, condition, and quantity (minimum of four per litter).

(3) Flotation equipment:

(a) Check that the flotation tubes are properly installed IAW manufacturer's instructions.

(b) After use in salt water, flotation equipment shall be rinsed in fresh water and dried before storage.

(c) Flotation equipment shall be thoroughly inspected for wear, rotting, mildew, mold, tears, cuts, broken stitches, and frayed fabric.

(d) Hoisting sling: The hoisting sling shall be inspected for corrosion, fraying, or deterioration. The hoisting requires test loaded certification every 6 months.

(e) Tending lines: Inspect manila tending lines for condition and security. Lines that are frayed or show signs of weathering or rot shall be replaced.

c. Repair the equipment.

(1) Weld repairs for steel litters are permitted using heliarc method only. After a weld repair, litter shall be proof tested.

Note: Knowledge the Soldier must have:

K-1: Perform a proof test. To proof test litter, perform the following steps:

(a) Distribute 400 pounds evenly in the litter and hoist clear of the deck.

(b) With litter suspended, inspect litter and sling for deformities.

(c) Inspect sling for even load distribution at all attachment points.

(2) Replace hoisting slings that show signs of corrosion, fraying, or deterioration.

## WARNING

" No weld repairs shall be attempted on aluminum or titanium litters.

" Aluminum litters shall be marked "NOT TO BE USED FOR HOISTING OR HIGH-LINE OPERATIONS."

" Aluminum litters are limited to removal of surface corrosion and application of primer to rework areas.

(3) After each use in salt water, remove flotation collar and chest pad from the litter, rinse in fresh water, and dry before reinstallation.

(Asterisks indicates a leader performance step.)

**Evaluation Preparation:** Ensure that all information, references and equipment required to perform the task are available. Use the FM and the evaluation guide to score the soldier's performance. Brief the soldier. Tell the soldier what he is required to do IAW the task conditions and standards.

PERFORMANCE MEASURES	GO	NO-GO	N/A
1. Inspect the Type 1 PDF?			
2. Clean and inspect the anti-exposure coveralls using the proper procedures?			
3. Clean, inspect, and repair the immersion unit using the proper procedures?			
4. Inspect personnel marking light?			
5. Inspect the signal whistle?			
6. Inspect the ring buoy?			
7. Inspect the floating distress markers?			
8. Inspect the distress signals?			
9. Inspect release lifesaving equipment?			
10. Inspect EEBD?			
11. Inspect and repair the stokes litter and associated equipment?			

### Supporting Reference(s):

Step Number	Reference ID	Reference Name	Required	Primary
	AR 56-9	Watercraft	Yes	No
	FM 55-502	Army Watercraft Safety (superseded by FM 4-01.502)	Yes	No
	TM 55-1905-223-10	OPERATORS MANUAL FOR LANDING CRAFT, UTILITY (LCU 2000 CLASS) (NSN 1905-01-154-1191) (REPRINTED W/BASIC INCL C1-9)	Yes	No

**Environment:** Environmental protection is not just the law but the right thing to do. It is a continual process and starts with deliberate planning. Always be alert to ways to protect our environment during training and missions. In doing so, you will contribute to the sustainment of our training resources while protecting people and the environment from harmful effects. Refer to FM 3-34.5 Environmental Considerations and GTA 05-08-002 ENVIRONMENTAL-RELATED RISK ASSESSMENT.

**Safety:** In a training environment, leaders must perform a risk assessment in accordance with FM 5-19, Composite Risk Management. Leaders will complete a DA Form 7566 COMPOSITE RISK MANAGEMENT WORKSHEET during the planning and completion of each task and sub-task by assessing mission, enemy, terrain and weather, troops and support available-time available and civil considerations, (METT-TC). Note: During MOPP training, leaders must ensure personnel are monitored for potential heat injury. Local policies and procedures must be followed during times of increased heat category in order to avoid heat related injury. Consider the MOPP work/rest cycles and water replacement guidelines

IAW FM 3-11.4, NBC Protection, FM 3-11.5, CBRN Decontamination. In a training environment, leaders must perform a risk assessment in accordance with FM 5-19, Composite Risk Management. Leaders will complete a DA Form 7566 COMPOSITE RISK MANAGEMENT WORKSHEET during the planning and completion of each task and sub-task by assessing mission, enemy, terrain and weather, troops and support available-time available and civil considerations, (METT-TC). Note: During MOPP training, leaders must ensure personnel are monitored for potential heat injury. Local policies and procedures must be followed during times of increased heat category in order to avoid heat related injury. Consider the MOPP work/rest cycles and water replacement guidelines IAW FM 3-11.4, NBC Protection, FM 3-11.5, CBRN Decontamination.

**Prerequisite Individual Tasks :**

<b>Task Number</b>	<b>Title</b>	<b>Proponent</b>	<b>Status</b>
052-204-1108	Inspect Safety Equipment	052 - Engineer (Individual)	Approved

**Supporting Individual Tasks :** None

**Supported Individual Tasks :** None

**Supported Collective Tasks :** None