

CHAPTER 5

LRU-23/P LIFERAFT ASSEMBLY

Section 5-1. Description

5-1. GENERAL.

5-2. The LRU-23/P Liferaft Assembly (figure 5-1) is intended for the use of aircrew personnel and is stowed in individual seat survival kits. The LRU-23/P is designed to accommodate one person and provide insulation against low sea and air temperatures. The LRU-23/P is manufactured by RFD Ltd (CAGE Z2110) and is supplied by Martin-Baker Ltd (CAGE U1604).

5-3. CONFIGURATION.

5-4. The three main components of the liferaft are flotation chamber, double layer floor, and double layer canopy. The components are constructed of dark blue single ply polyurethane coated nylon fabric and are assembled using radio frequency welding techniques. This type of fabric and construction reduces the weight and bulk of the liferaft which enhances its adaptability for use in seat survival kits.

5-5. FLOTATION CHAMBER. (Figure 5-2.) The flotation platform of the raft consists of two fabric panels joined to form the flotation chamber. The floor and canopy are welded to the chamber to complete the basic structure of the liferaft. Installed components of the chamber are:

1. CO₂ inflation assembly (CO₂ cylinder and inlet valve).
2. Oral (top-off) inflation tube.
3. Boarding handles (4).
4. Sea anchor patch and sea anchor stowage.
5. Stern loop patch.
6. Raft retaining lanyard stowage pocket.

7. CO₂ cylinder pocket.

8. Equipment stowage pocket.

9. Hook-and-pile fastener patches (6) (secures canopy in stowed position).

10. Ballast bags (2).

5-6. FLOOR. (Figure 5-2.) The floor consists of two panels of single ply nylon fabric uniformly separated and held together by regularly spaced circular spacers. When welded together along the edges, the joined panels become an air-containing floor. The floor is inflated orally via an oral inflation valve. Items which are attached to or form part of the floor assembly are:

1. Integral bailer.
2. Liferaft identification markings.
3. Floor oral inflation tube.
4. Floor loop patch.
5. Righting handle.

5-7. CANOPY AND HOOD. (Figure 5-1.) The canopy and hood are constructed of two layers of nylon fabric joined together by circular patches in a manner similar to the floor. The canopy and hood are inflated orally via an inflation tube and valve located near the right shoulder. An opening which extends from the hood down the front center of the canopy to the stern affords access to and egress from the liferaft when the canopy and hood are in position. The opening is secured by hook-and-pile fastener and a snap-fastener strap. In its stowed configuration, the canopy is folded and held in place by six hook-and-pile fasteners secured to the bottom of the flotation chamber. When the canopy is rolled back, the liferaft is immediately ready for boarding when inflated. The hood is equipped with a transparent visor which is secured in position by two hook-and-pile patches attached to the lower corners of the visor. These

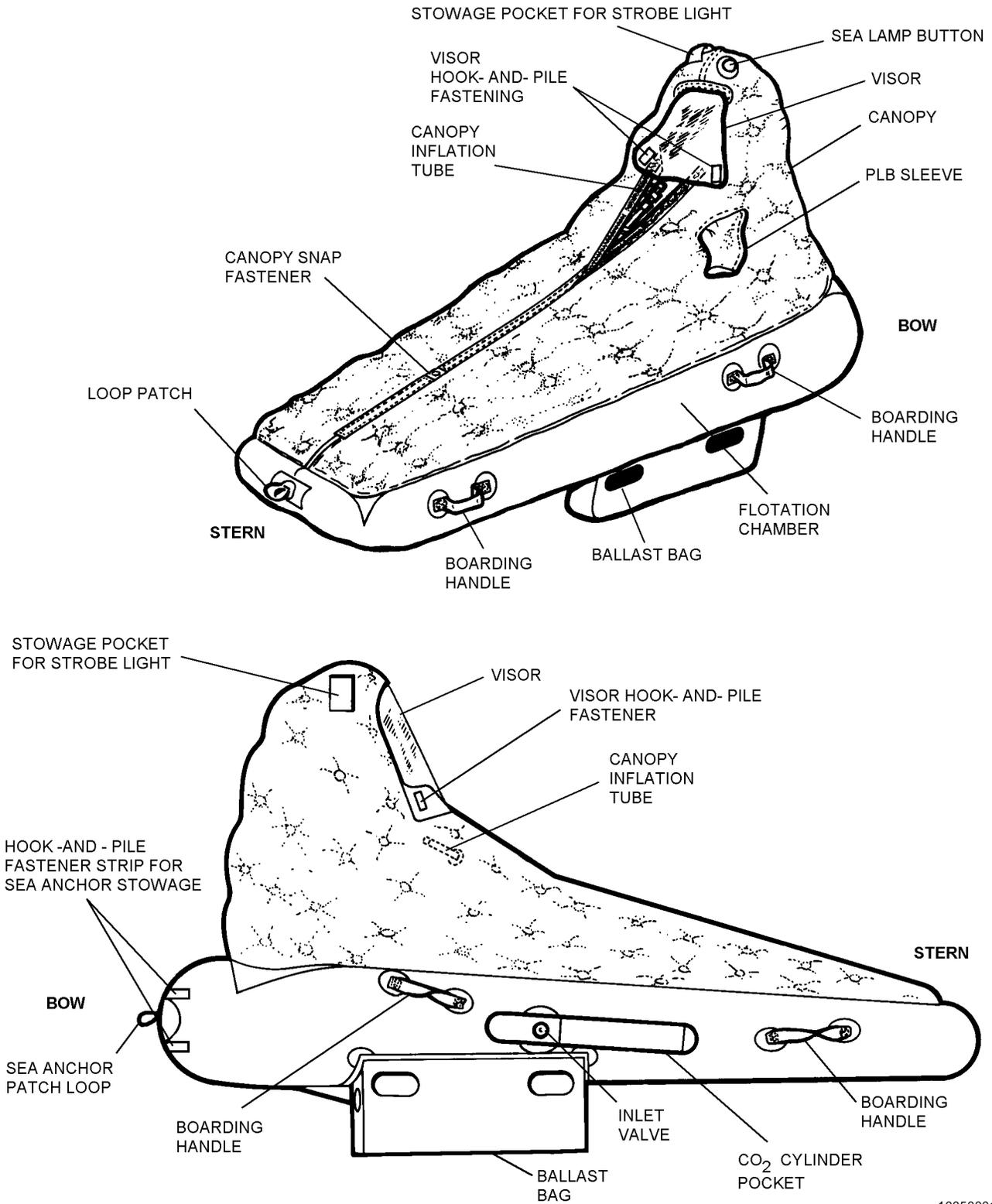


Figure 5-1. LRU-23/P Liferaft Assembly

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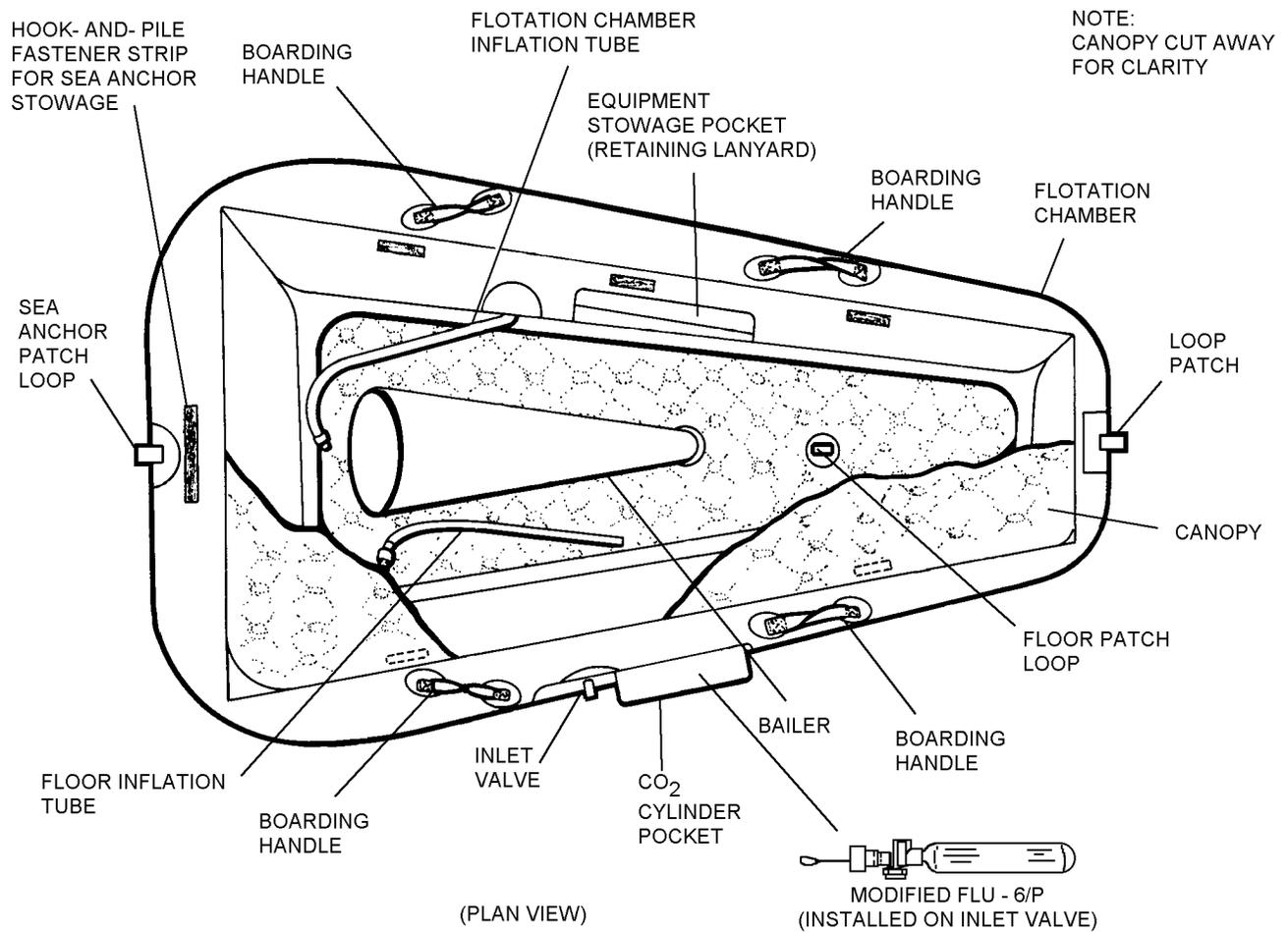


Figure 5-2. LRU-23/P Liferaft Assembly Components and Parts (Sheet 1 of 2)

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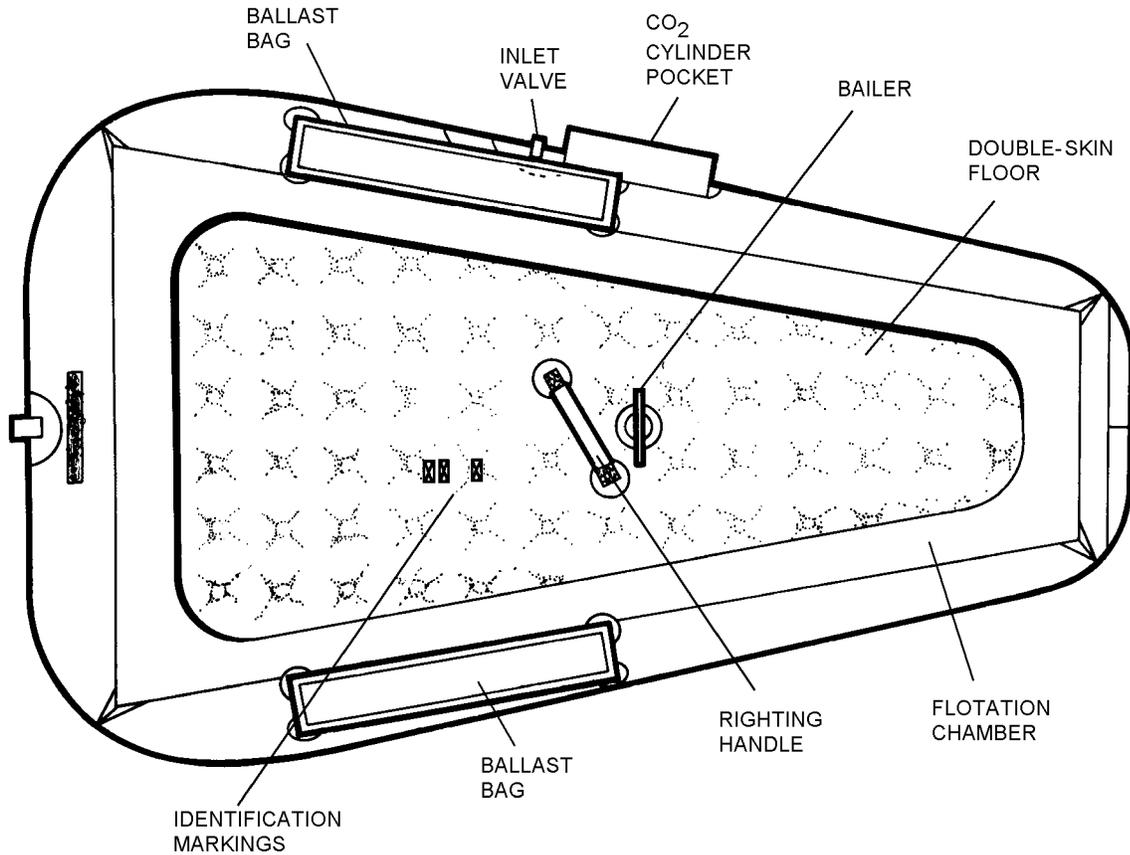


Figure 5-2. LRU-23/P Liferaft Assembly Components and Parts (Sheet 2)

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patches mate with two patches attached to the canopy hood at the neck. The following items are attached to or form a part of the canopy and hood assembly:

1. Sea lamp button.
2. Stowage pocket for strobe light.
3. Canopy inflation tube.

5-8. LIFERAFT AUXILIARY EQUIPMENT. Liferaft auxiliary equipment (stowed in equipment pocket) consists of:

1. Liferaft retaining lanyard.
2. Sea anchor attached to the sea anchor patch loop at the bow-end of the raft.

5-9. APPLICATION.

5-10. The LRU-23/P Liferaft Assembly is installed in seat survival kits used in F-14, F/A-18, and T-45 aircraft equipped with SJU-17(V)1/A through SJU-17(V)6/A ejection seats. Refer to NAVAIR 13-1-6.3-2 for details of application. ■

5-11. FUNCTION.

5-12. If survival kit deployment is manually actuated during parachute descent, the rucksack will fall away extracting the liferaft and dropline. When the liferaft reaches the end of free-fall, the initial line stretch snubbing action will actuate the liferaft's CO₂ inflation assembly. The rucksack containing the basic survival items will be suspended below the inflated liferaft and act as a sway stabilizer during descent.

5-13. On entering the water, the liferaft retaining lanyard is removed from its stowage pocket on the raft and attached to a D-ring on the survivor's life preserver. After removing survival radio, the seat kit lid is then released, the liferaft is boarded from the stern using boarding handles, and the rucksack is retrieved.

5-14. If the survival kit is retained until after water entry, actuation of the manual deployment handle on the seat kit will release the rucksack. The liferaft may then be inflated by manually pulling on the dropline attached to the raft CO₂ inflation assembly.

Section 5-2. Modifications

5-15. GENERAL.

5-16. There are no authorized modifications to the LRU-23/P Liferaft Assembly at this time. Common repairs and fabrications are listed in [table 5-1](#).

Table 5-1. LRU-23/P Common Repairs and Fabrications

Description of Repair or Fabrication	Paragraph Number
Determination of Repairability	5-51
Cementing Liferafts	5-52
Patching Liferafts	5-54
Recementing or Replacing Seam Tapes	5-55
Sea Anchor/Mooring Line Replacement	5-56
Fabrication of Anti-Chafing Disc	5-58
Modification of the FLU-6/P Inflation Valve	5-59
Replacement of Oral Inflation Valve	5-60
Repair and Reinforcement of Oral Inflation Tube Bonding Points	5-60A

Section 5-3. Maintenance

5-17. GENERAL.

5-18. This section contains instructions for disassembly, inspection, testing, repair, and assembly of the LRU-23/P Liferaft Assembly. All maintenance actions shall be recorded on appropriate maintenance records in accordance with OPNAVINST 4790.2 Series.

5-19. All maintenance shall be performed in a work area having a stable moderate temperature, ideally not less than 68°F (20°C). The area shall also be free of drafts and direct sunlight and have a smooth-top table free of snags, splinters, and rough surface. There shall be sufficient space to ensure inflated rafts are kept clear of heating equipment, rough surfaces, and other objects capable of causing damage to the raft.

5-20. INSPECTION.

5-21. All liferaft assemblies shall be subjected to the following inspections: Place-In-Service, Daily/Pre-Flight, Special, Phase/Isochronal Scheduled Inspection System and Acceptance Inspections.

5-21A. The Place-In-Service shall be performed on all new assemblies, or assemblies being returned from vendor repair or overhaul. The Aircraft Intermediate Maintenance Department performs this inspection.

5-21B. The Daily/Preflight inspection shall be performed on aircraft-installed liferafts in accordance with aircraft MRC requirements.

NOTE

Refer to NAVAIR 13-1-6.3-2, Seat Survival Kits, for inspection requirements for Seat Survival Kits.

5-22. All liferafts shall be subjected to the Calendar/Phase Inspection prior to placing in service or, if an aircraft inventory item, at the time of the aircraft Acceptance Inspection. Thereafter, the Calendar/Phase Inspection interval shall coincide with the aircraft inspection cycle in which they are installed. See applicable Planned Maintenance System (PMS) publications for specific intervals. In no case shall the interval exceed 735 days. Unless operational requirements demand otherwise, the liferaft Calendar/Phase

Inspection shall be performed by intermediate level of maintenance or above.

NOTE

A functional test and pull cable proof load test shall be performed prior to placing in service or during aircraft Acceptance Inspection, and each fourth inspection cycle thereafter. A leakage test shall be performed at each inspection cycle. If inspection indicates damage beyond capability of maintenance, complete applicable forms in accordance with OPNAVINST 4790.2 Series and forward entire assembly to supply. Refer to [paragraph 5-51](#) for determination of repairability.

5-23. QUALITY ASSURANCE. The procedures detailed present a logical sequence for proper inspection. Quality assurance steps are provided for critical operations. When a step is underlined, the Aircrew Survival Equipmentman shall perform the operation, then have performance verified by a Quality Assurance Representative (CDI, CDQAR, or QAR) prior to proceeding to the next operation. Work center supervisors are primarily responsible for quality assurance and in accordance with OPNAVINST 4790.2 Series may nominate experienced personnel in their work center to be screened and examined by the Quality Assurance Officer prior to their designation by the Commanding Officer as a Collateral Duty Inspector. In no case shall an Aircrew Survival Equipmentman perform his own quality assurance inspection. Procedures for quality assurance are listed following major operations.

5-24. ACCEPTANCE/CALENDAR/PHASE INSPECTION. The Acceptance/Calendar/Phase Inspection consists of the following major tasks (to be performed in the order listed):

1. Container/Case Inspection
2. Functional Test
3. Pull Cable Proof Load Test
4. Deflation
5. Visual

6. Liferaft Configuration
7. General Inspection
8. Markings Inspection
9. Inflation Assembly Inspection
10. Inspection of Inflation Assembly (Charged)
11. Inspection of Inflation Assembly (Discharged)
12. Cylinder Markings
13. Leakage
14. Records Updating
15. Repacking

5-25. CONTAINER/CASE INSPECTION. Refer to NAVAIR 13-1-6.3-2 for kit inspection procedures.

5-26. FUNCTIONAL TEST. Functionally test the LRU-23/P by inflating it using the CO₂ inflation assembly. This test will only test the inflation of the perimeter tube or chamber. The floor and canopy chambers can only be inflated orally (see [paragraph 5-37](#), Leak Test).

5-27. Flotation Chamber (Perimeter Tube). To functionally test the LRU-23/P, proceed as follows:



Ensure there is adequate area free of foreign objects before liferaft inflation.

1. Open liferaft carrying case and unfold liferaft.
2. Actuate the CO₂ inflation assembly.
3. Measure time of inflation; liferaft shall inflate to design shape without evidence of restriction in less than one minute.
4. Examine liferaft for obvious damage such as cuts, tears, ruptures seams, and damaged inflation assembly.

5. Determine cause if liferaft does not properly inflate. Remove inflation assembly, and inspect both inflation assembly valve and inflation stem for cleanliness and imbedded foreign matter.

6. If correction is made, repeat [steps 2 through 5](#).

7. Deflate liferaft in accordance with paragraph 5-28.

5-28. DEFLATION. To deflate the LRU-23/P liferaft, proceed as follows:

Support Equipment Required

Quantity	Description	Reference Number
1	Pump, Rotary Vacuum (or equivalent)	61E44688 (CAGE 80049)
As Required	Hose, 3/8 or 1/2 inch Diameter, Rubber	—

1. Attach one end of rubber hose to vacuum pump.
2. Unlock applicable oral inflation valve, hold in open position, and hold vacuum pump hose against end of inflation valve. When cell is collapsed, release oral inflation valve and screw lock closed.

NOTE

The vacuum pump hose should be held at an angle to the inflation valve or air will not properly evacuate the cell.

5-29. PULL CABLE PROOF LOAD TEST. To perform the proof load test, proceed as follows:

NOTE

Perform the Proof Load Test only after the functional test and prior to placing an inflation assembly in service.

1. Remove inflation valve plastic valve sleeve.
2. Remove pull cable from valve and apply a 50-pound pull force between cable ball and pull cable.

NAVAIR 13-1-6.1-1

3. Examine pull cable for broken strands of wire, deformed pull cable, and loose or cracked swage fittings. If any damage is found, the pull cable shall be discarded and replaced with a new cable. The new cable shall also be tested in accordance with [step 2](#).

4. If pull cable passes this test, reinstall in accordance with [paragraph 5-46](#).

5-30. VISUAL INSPECTION. To visually inspect the liferafts, proceed as follows:



Remove CO₂ cylinder prior to inflating liferaft with air.

1. Remove CO₂ cylinder from CO₂ cylinder sling.
2. Cap inflation valve inlet or install an empty CO₂ cylinder in inflation valve.

NOTE

If a suitable air source is not available, water pumped nitrogen (BB-N-411) may be substituted.

Prior to visually inspecting a liferaft assembly, the liferaft and inflatable floor, shall be inflated with air to 1.0 psig.

3. Inflate liferaft with air to 1.0 psig through oral inflation valve.

NOTE

Mark areas of obvious or suspected damage with tailors chalk. No other marking method shall be used. The entire liferaft shall be inspected.

4. Fabric components for:
 - a. Cuts, tears, holes, abrasions, discoloration, deterioration, chafing, and contamination.

NOTE

Particular attention shall be given to area around inflation valve inlet union.

- b. Biological contamination.
- c. Fabric deterioration and/or contamination.

NOTE

Fabric deterioration and contamination is not always easy to assess; look for following symptoms.

- (1) Discolored areas which do not disappear when washed with soapy water.
- (2) Sticky areas.
- (3) Hardened areas.
- (4) Abnormally shiny or flat areas.
- (5) Wrinkled or crazed areas.

d. Porous areas including oral inflation tubes which may exhibit porosity in the area where tubes are bent during packing process.

NOTE

Porous areas will not be visible but can be detected by brushing inflated areas with soapy water and watching for bubbles. Single bubbles indicate holes but numerous small bubbles usually indicate porous fabric. Porosity is usually caused by contact with oil, grease, solvent, a hot surface, or prolonged exposure to sunlight.

e. All welded seams for integrity including attachment points for oral inflation tubes.

f. Polyurethane coat wearing away or separating from fabric.

g. Attached parts and components (e.g loops, patches, and pockets) for security, deterioration, and damage.

h. Legibility of markings.

5. Metal and plastic components for:

- a. Visor for cleanliness and general condition.
- b. Integral bailer for integrity of reinforcing wire.
- c. Inflation valve inlet union for condition of threads.
- d. Incorrect function, leakage.
- e. Cracking, scoring, distortion, corrosion, and burrs.

f. Loose unions, and attaching parts.

6. Webbing, cording, and elastic for damage, fraying, deterioration, discoloration, and security of attachment.

7. Inspect oral inflation tubes for bonding weld separation and for presence of reinforcement patch.

a. If the oral inflation tube for the main flotation compartment is separating/leaking, no repair or reinforcement shall be attempted.

b. If the main flotation compartment oral inflation tube is not separating and no reinforcement patch is present refer to paragraph 5-60A for fabrication and bonding procedures for oral inflation tube reinforcement patch.

c. If the inflatable floor and canopy oral inflation tubes are separating repair may be attempted. Refer to paragraph 5-60A for repair and reinforcement procedures.

d. If the floor and canopy oral inflation tubes are not separating, and no reinforcement patch is present, proceed to paragraph 5-60A for fabrication and bonding procedures for oral inflation tube reinforcement patch.

5-31. DAMAGE ASSESSMENT. Liferaft with any of the following defects shall be removed from service and discarded.

NOTE

After liferafts have been used in salt water they shall be thoroughly washed in fresh water and air dried. Thereafter they may be used for training purposes only.

1. Damage to flotation chamber due to over-pressure.

2. Damage crossing or abutting a seam or welded dimple.

3. The total area of repair patches exceeds 25.5 square inches.

4. Contamination by oil, grease, alkali, or acid.

5. Oral inflation tube bonding weld separation on main flotation compartment. Canopy and floor oral inflation tube bonding weld separation after repair and reinforcement per paragraph 5-60A has failed.

6. Any oral inflation tube that demonstrates porosity.

5-32. MARKINGS INSPECTION. Restore faded markings. Correct any markings which do not agree with table 5-2. To change markings, proceed as follows:

Materials Required		
Quantity	Description	Reference Number
As Required	Ink, Marking, Laundry, Black	SPE-92 NIIN 00-161-4229
	-or-	
	Ink, Drawing, Waterproof, Yellow	A-A-59291 NIIN 00-634-6583

1. Paint over incorrect marking using waterproof ink (yellow or black as applicable).

2. Add correct marking as close as possible to specified location using waterproof ink.

5-33. INFLATION ASSEMBLY INSPECTION. Inspect the inflation assembly as required.

5-34. Inspection of Inflation Assembly (Charged). To inspect a charged inflation assembly, proceed as follows:



Gas under pressure Do not attempt to remove valve from cylinder.

Ensure that diffuser plugs (P/N 1614703-1, CAGE 99251, NIIN 01-077-1734) are installed in CO₂ cylinders.

1. Inspect cylinder for markings. Remark as required in accordance with paragraph 5-36.

WARNING

Damage to the slot that the sliplock is seated in may allow plastic cap and sleeve to unseat. If the sliplock is not seated properly on inflation valves which do not have spring clips installed, it may result in a malfunction of the liferaft inflation process.

1A. On inflation valves which do not have spring clips installed, verify the spring sliplock in the plastic cap and sleeve is properly seated in the slot on the inflation valve. Have technician loosen setscrew and gently move cap in an up and down motion to verify the sliplock is seated. Have technician align setscrew with the vertical groove on the inflation valve and retighten.

2. Examine inflation assembly for evidence of corrosion, wear, loose screws, and dents. If damage or extensive wear is found, replace valve, cylinder, housing, or pull cable. If pull cable is replaced perform pull cable proof load test in accordance with [paragraph 5-29](#).

WARNING

Excessive glue around the FLU-6/P valve cap/sleeve may result in a malfunction of the liferaft inflation process. Remove excessive glue, then continue inspection.

3. (MIL-V-81722 (FLU-6/P) Valve) Examine pull cable for broken strands and loose or defective swage joints. Inspect plastic parts for cracks and breaks. Ensure that valve cap is cemented to plastic valve sleeve, and plastic valve sleeve is permanently attached to metal valve sleeve. Use polychloroprene adhesive (NIIN 00-515-2246) only.

NOTE

To obtain the correct gross weight of the CO₂ cylinder, subtract weight of the diffuser plug from total weight indicated on scale.

4. Weight inflation assembly. If weight indicated on scale is not the same as the gross weight printed on the cylinder (with tolerance specified), or if no gross weight is printed on the cylinder, discharge the cylinder and recharge it in accordance with [paragraph 5-46](#).

5-35. Inspection of Inflation Assembly (Discharged). To inspect a discharged inflation assembly, proceed as follows:

1. Inspect cylinder markings. Re-mark as required in accordance with [paragraph 5-36](#).

WARNING

Damage to the slot that the sliplock is seated in may allow plastic cap and sleeve to unseat. If the sliplock is not seated properly on inflation valves which do not have spring clips installed, it may result in a malfunction of the liferaft inflation process.

2. Examine inflation assembly for evidence of corrosion, wear, loose screws, dents and any distortion to the lip of the slot that sliplock is seated in. If damaged or extensive wear is found, replace valve, cylinder, housing, or pull cable. If pull cable is replaced, perform pull cable proof load test in accordance with [paragraph 5-29](#).

3. (MIL-V-81722 Valve) Examine pull cable for broken strands and loose or defective swage joints. Inspect plastic parts for cracks and breaks. Ensure that valve cap is cemented to plastic valve sleeve, and plastic valve sleeve is permanently attached to metal valve sleeve. Use polychloroprene adhesive (NIIN 00-515-2246) only.

4. Recharge assembly in accordance with [paragraph 5-46](#).

5-36. Cylinder Markings. All CO₂ inflation cylinders shall be in black letters 1/4 inch high. Information shall include gross weight, tare weight, and weight of CO₂. Paint and stencil cylinder as required. Ensure that all markings are included as necessary.

5-37. LEAK TEST. To perform a leak test, proceed as follows:

5-38. Test Fixtures. As assembled, test fixtures are not stocked in the Supply System; test fixtures must be fabricated to meet the requirements of the schematic shown in [figure 5-3](#). A test fixture consisting of a three, way valve, pressure gage, and suitable adapters for the compartments being tested is shown in [Chapter 3](#).

5-39. Test Procedure. This test procedure for the LRU-23/P liferaft is used to test for leaks in the flotation chamber first, then simultaneous tests of floor chamber and canopy chamber. All inflation and deflation is through the oral inflation valve for each chamber. The CO₂ inflation assembly shall not be used in this test. To test liferafts for leakage, proceed as follows:

Table 5-2. LRU-23/P Liferaft Markings

Marking	Location	Letter Height
LIFERAFT TYPE PART NO. SERIAL NO. DATE MFR DATE PRFD DATE PIS	Centered on outside bottom of raft, top towards foot end.	1/2 inch
FLOOR & CANOPY TO ORALLY INFLATE UNSCREW KNURLED RING, PUSH VALVE MOUTHPIECE DOWN AND IMMEDIATELY BLOW THROUGH INLET.	In two places, on floor near floor inflation valve and on right inside wall near right side canopy inflation valve.	1/4 inch
BUOYANCY TO INCREASE PRESSURE, UNSCREW KNURLED RING, PUSH MOUTHPIECE DOWN AND IMMEDIATELY BLOW THROUGH INLET.	On left side wall near left side canopy inflation valve	1/4 inch
Note: Replacement markings shall be stamped or stenciled using waterproof black ink.		

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WARNING

The cylinder is charged with carbon dioxide gas through the FLU-6/P valve. Do not attempt to separate the valve and charged cylinder.

CAUTION

Ensure that area surrounding liferaft is clear of foreign objects and liferaft is not disturbed during leakage test.

If three-way valve is not used, measuring device valve must be closed when air-feed valves are open.

On liferaft, damage may occur to oral inflation valve if air supply pressure entering the liferaft exceeds ten (10) psi during this test.

NOTE

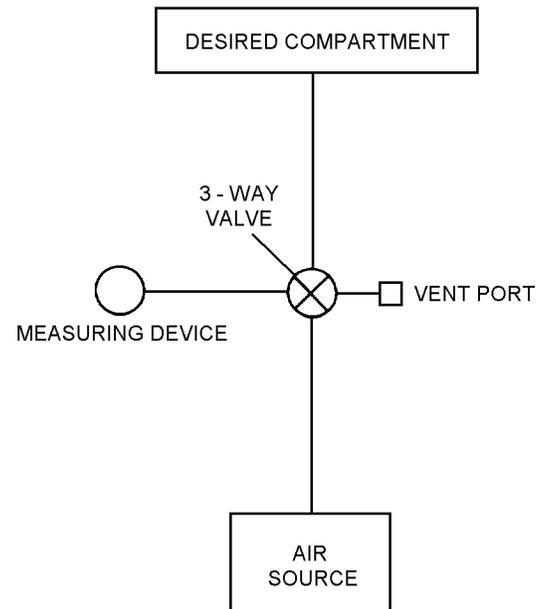
If a suitable air source is not available, water-pumped nitrogen (BB-N-411) may be substituted.

1. A charged inflation assembly must be removed from the liferaft before proceeding. An inflation assembly which has been discharged or a suitable coupling nut must be installed onto the inlet stem to prevent any leakage from the inflation inlet stem.

2. Unlock flotation chamber oral inflation valve and insert into 1/2-inch diameter rubber hose. Open valve to air supply and inflate liferaft. Alternately position valve at measuring device, vent and air supply until proper pressure of 2.0 psig is attained.

3. The air supply shall be securely shut off and after a minimum of 15 minutes, the pressure shall be readjusted, if necessary, to the leakage test pressure.

4. Disconnect air supply and check for leaks. Ensure that all valves are closed. Record time.



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Figure 5-3. Test Fixture Schematic

5. Record temperature and barometric pressure and allow raft to remain undisturbed for a minimum of 4 hours.

NOTE

If the raft has been stacked during the 4-hour inspection period remove from stacking and place in a horizontal position on the floor or table in the inspection area and take test pressure reading. In no event shall the pressure in the raft be determined with another raft stacked upon it.

6. After a minimum of 4 hours after completing [step 4](#), record test pressure. Test pressure shall not decrease to less than 1.6 psig for the flotation chamber, from a maximum test pressure of 2.0 psig.

NOTE

Steps 7 through 9 shall be performed only after leakage test readings have been recorded.

7. Record temperature and barometric pressure and correct test pressure for any changes in temperature and barometric pressure. Refer to [tables 5-3](#) and [5-4](#).

EXAMPLE

UNCORRECTED TEST READING 1.70 PSI

	TEMP.	BARO.
START	75° F	29.90 IN. Hg
END	70° F	29.70 IN. Hg
DIFFERENCE	- 5° F	-0.20
CORRECTION	+0.155	-0.098

TEMP. CORRECTION	+ 0.155
+ BARO. CORRECTION	- 0.098
CORRECTION	+ 0.057

UNCORRECTED READING	1.700 PSI
+ CORRECTION	+ 0.057
CORRECTED READING	1.757 PSI

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Step 7 - Para 5-39

Table 5-3. Temperature Conversion Chart

Temperature Difference (Degree F.)	Correction (psi)
1	0.031
2	0.062
3	0.093
4	0.124
5	0.155
6	0.186
7	0.217
8	0.248
9	0.279
10	0.310

Rise in temperature: subtract from gage reading.
Fall in temperature: add to gage reading.

8. If pressure of flotation chamber is below pressure limits of 1.6 to 2.0 psig, inflate to leakage test pressure and check for leaks, using a soap solution. Mark leaks, rinse with fresh water, and dry with a lint free cloth. Determine repairability in accordance with [paragraph 5-51](#).

9. Check operation of oral inflation valve by depressing stem. Air must escape. Release stem, and flow of air must stop. Apply soap solution to valve and check for leakage. Inspect valve for damage, excessive wear and corrosion.



Do not over-inflate. Use very low pressure compressed air source to inflate floor and canopy. Over inflation could easily damage both the floor and canopy.

10. Ensure flotation chamber is re-inflated to 2.0 psig before proceeding with leak tests for floor and canopy chambers.

11. Test floor chamber and canopy chamber at the same time. Unlock floor/canopy oral inflation valves, then slowly inflate floor/canopy until quilting effect is well defined but not to exceed 0.6 psig as indicated on pressure gage.

NOTE

Check to ensure check valve feature of each oral inflation valve is functioning properly.

12. Check operation of each oral inflation valve by depressing stem. Air must escape. Release stem, and flow of air must stop. Apply soap solution to valves and check for leakage. Inspect valves for damage, excessive wear, and corrosion. Reinflate floor/canopy but do not exceed 0.6 psig.

13. Allow 15 minutes for stabilization, then re-adjust pressures to 0.6 psig as necessary.

NOTE

The liferaft shall not be stacked during this 4-hour inspection period. The liferaft shall be placed in a horizontal position on table, bench or floor during this time, and as appropriate during inspection of the inflated canopy chamber and floor chamber. In no event shall inspection of the raft be made with another raft stacked upon it.

14. Leave floor and canopy inflated for 4 hours. After that period sufficient pressure should remain in both the floor and canopy chambers to keep the fabric layers separated and the canopy erect (pressure readings of the floor and canopy are not taken). Refer to determination of repairability, [paragraph 5-51](#).

Table 5-4. Barometric Pressure Conversion Chart

Press. Diff. (inHG)	Corr. (psi)								
0.01	0.005	0.16	0.078	0.31	0.152	0.46	0.225	0.61	0.299
0.02	0.010	0.17	0.083	0.32	0.157	0.47	0.230	0.62	0.304
0.03	0.015	0.18	0.088	0.33	0.162	0.48	0.235	0.63	0.309
0.04	0.020	0.19	0.093	0.34	0.167	0.49	0.240	0.64	0.314
0.05	0.025	0.20	0.098	0.35	0.172	0.50	0.245	0.65	0.319
0.06	0.030	0.21	0.103	0.36	0.176	0.51	0.250	0.66	0.323
0.07	0.035	0.22	0.108	0.37	0.181	0.52	0.254	0.67	0.328
0.08	0.040	0.23	0.113	0.38	0.186	0.53	0.260	0.68	0.333
0.09	0.045	0.24	0.118	0.39	0.191	0.54	0.265	0.69	0.338
0.10	0.049	0.25	0.123	0.40	0.196	0.55	0.270	0.70	0.343
0.11	0.054	0.26	0.127	0.41	0.201	0.56	0.275	0.71	0.348
0.12	0.060	0.27	0.132	0.42	0.206	0.57	0.279	0.72	0.353
0.13	0.064	0.28	0.137	0.43	0.211	0.58	0.284	0.73	0.358
0.14	0.069	0.29	0.142	0.44	0.216	0.59	0.289	0.74	0.363
0.15	0.073	0.30	0.147	0.45	0.221	0.60	0.294	0.75	0.368

Rise in pressure: add to gage reading.
Fall in pressure: subtract from gage reading.

15. Check floor/canopy for leaks by applying soap solution to surfaces and seams.

16. If there are leaks, determine reparability in accordance with [paragraph 5-51](#). If no leaks, proceed to step 17.

17. Deflate floor and canopy chambers in accordance with [paragraph 5-28](#).

18. Lock floor/canopy oral inflation valves.

19. Deflate flotation chamber in accordance with [paragraph 5-28](#).

20. Install anti-chafe disc.

21. Reinstall properly charged inflation assembly.

22. Tighten coupling nut to liferaft inlet valve to a torque value of 80 to 90 in-lb.

5-40. RECORDS UPDATING. Make necessary entries on appropriate form in accordance with OPNAV-INST 4790.2 Series.

5-41. CLEANING AND SERVICING.

5-42. Cleaning and servicing consists of cleaning the liferaft and containers and/or cases, replacing the safety disc and washer on inflation valves, recharging CO₂ cylinders and safety-wiring inflation valves.

NAVAIR 13-1-6.1-1

5-43. CLEANING OF LIFERAFTS. To clean life-rafts, proceed as follows:

Materials Required

Quantity	Description	Reference Number
As Required	Detergent, General Purpose	MIL-D-16791 NIIN 00-282-9699
As Required	Cloth, Lint-Free, Type II	MIL-C-85043 NIIN 00-044-9281
As Required	Talc, Technical	MIL-T-50036A NIIN 01-080-9589



Solvents are not to be used in the cleaning of liferafts.

1. Prepare solution of detergent (MIL-D-16791) consisting of 1/4 to 1/2 ounce of detergent per gallon of water.

2. Apply cleaning solution to soiled area with a spray or sponge.

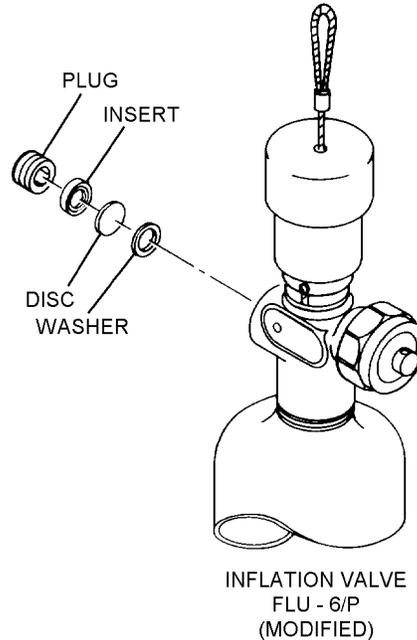
3. Allow solution to remain on the surface for several minutes, then agitate with a soft brush or rag.

4. Rinse surface thoroughly with water; wipe with a cloth or sponge. Repeat this application until surface is free from all solution.

5. Dry liferaft with a lint-free cloth and apply a light coating of talc.

5-44. CLEANING OF CONTAINERS AND/OR CASES. Clean in accordance with [paragraph 5-43](#).

5-45. REPLACEMENT OF SAFETY DISC AND WASHER ON INFLATION VALVES. (See [figure 5-4](#).) To replace safety disc and washer on inflation valve assemblies (MIL-V-81722)(FLU-6/P) proceed as follows:



10050004

Figure 5-4. Disassembly of Inflation Valve Safety Disc Assembly



Before performing any work on inflation valves, ensure that CO₂ inflation assemblies are completely discharged. Do not remove valve or valve safety disc plug from a charged CO₂ assembly.

Support Equipment Required

Quantity	Description	Reference Number
1	Wrench, Torque	—
1	Socket, 5/16 inch	—

Materials Required

Quantity	Description	Reference Number
1	Kit, Repair (Insert, Washer, Disc)	903684 (CAGE 33525) NIIN 00-703-7811
1	Hex Stock, 5/16 x 2 inch Length	—

1. Remove cylinder from liferaft.

2. Remove safety disc plug; insert safety disc and washer.
3. Place new washer into inflation valve safety disc orifice.
4. Place new safety disc into inflation valve safety disc orifice.
5. Replace insert and safety disc plug.

WARNING

When discharging partially charged or overcharged CO₂ cylinders, hold firmly in place with a suitable holding device (vice). Protect CO₂ cylinder from vice jaws with cloth or a suitable substitute. Position cylinders so escaping gas is not directed toward any personnel.

NOTE

While tightening the safety disc plug, align insert with plug.

NOTE

Charged inflation assemblies used as spare replacements shall be inspected in accordance with paragraph 5-34 prior to raft installation.

To perform the following filling procedures it is necessary to ensure that CO₂ cylinder is completely discharged.

6. Tighten safety plug to 15 to 17 ft-lb torque.

5-46. RECHARGING. To recharge the inflation assembly, proceed as follows (see figure 5-5):

1. Remove setscrew. Using small paper clip, raise spring slip-lock in slot on plastic sleeve. Remove plastic sleeve.

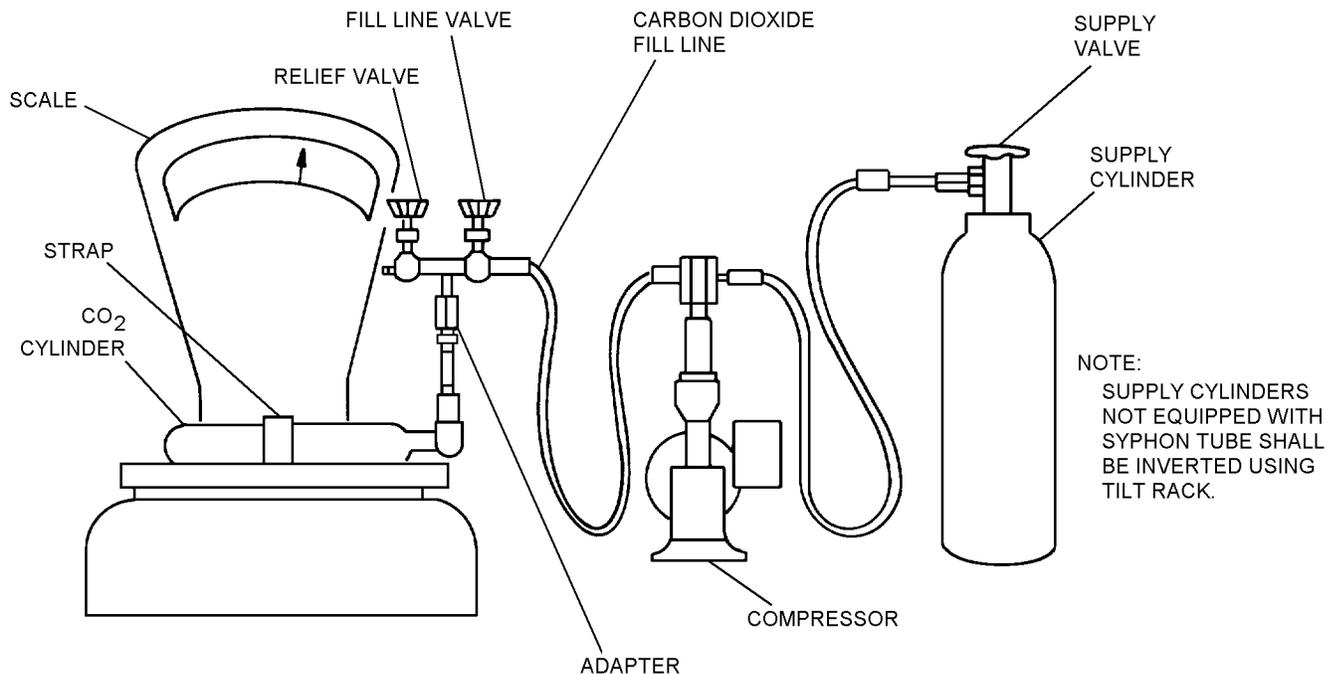


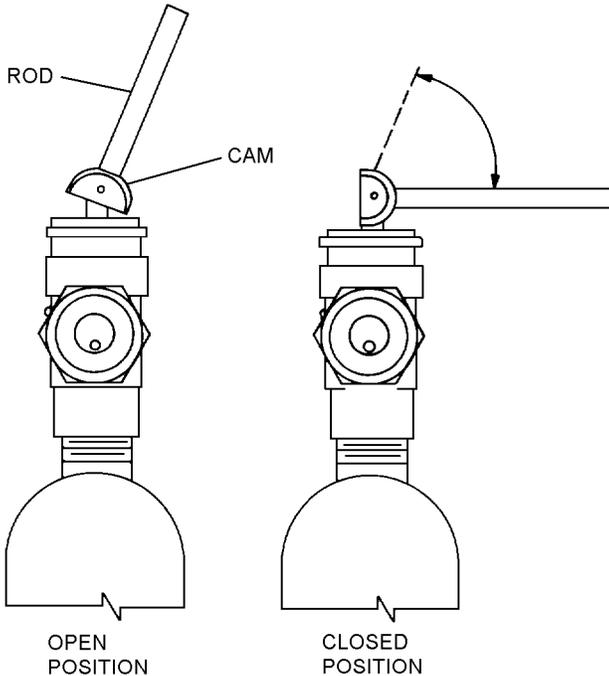
Figure 5-5. Recharging Schematic

10050005

NOTE

To facilitate cam rotation, insert 0.260 to 0.265-inch diameter rod into hole in cam.

2. Rotate cam 2 or 3 times to ensure proper operation. Remove diffuser plug, if installed.



Step 2 - Para 5-46

E0046006

3. Weigh and record tare weight (empty weight of cylinder, valve and cable assembly) of inflation assembly. Correct tare weight marking on cylinder if necessary.

NOTE

Supply cylinders not equipped with siphon tube must be inverted during transfer operation. Inverting cylinder allows the liquid to flow from the valve. Supply cylinders with siphon tube (straight pipe) extending from the valve to the bottom of the cylinder can be emptied in the upright position.

4. Install proper charging adapter on inflation assembly.

5. Secure inflation assembly to weighing pan.

6. Open supply cylinder valve, fill line valve and relief valve to purge fill line. Close fill line valve and relief valve.

NOTE

Ensure fill line is free from contact with any object along entire distance from compressor to charging adapter. If fill line does not hang free, accurate weight readings cannot be obtained.

7. Connect fill line to inflation assembly and zero scale.

8. Ensure inflation assembly valve is open.

9. Open fill line valve.

10. Allow carbon dioxide to cascade from supply cylinder into inflation assembly. If gross weight (tare weight plus weight of charge, 0.49 to 0.51 lbs) cannot be reached, start compressor and complete charging. Stop compressor upon reaching proper gross weight.

11. Close fill line valve.

12. Close inflation assembly valve. Open relief valve on fill line valve if applicable.

13. Disconnect fill line from inflation assembly. Remove charging adapter.

14. Measure gross weight of charged inflation assembly.

15. If gross weight of inflation assembly is greater than required, carefully bleed off excess from inflation assembly. If gross weight is less than required, reinstall charging adapter and repeat [steps 7 through 16](#).

16. Reinstall diffuser plug, if applicable.

NOTE

When other cylinders are to be recharged immediately, leave supply cylinder valve open.

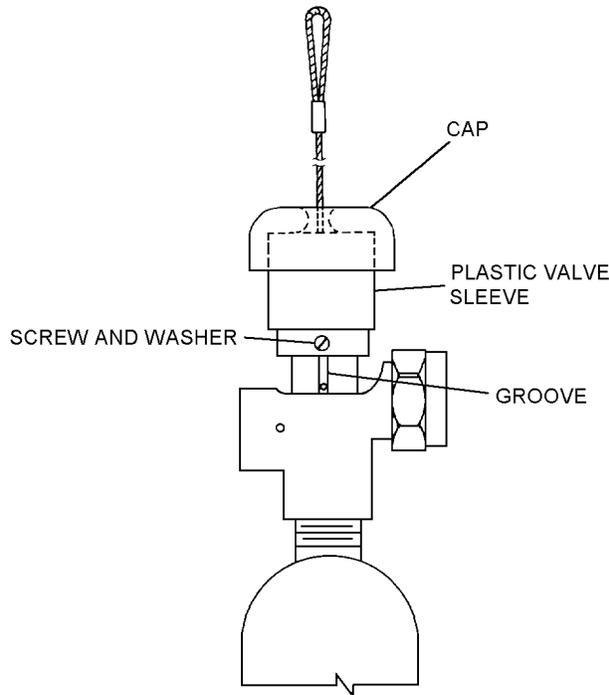
17. Close supply and bleed system pressure.

WARNING

Damage to the slot that the sliplock is seated in may allow plastic cap and sleeve to unseat. If the sliplock is not seated properly on inflation valves which do not have spring clips installed, it may result in a malfunction of the liferaft inflation process.

18. Place ball end of cable through sleeve and into hole in cam. Align screw hole in sleeve with groove

on valve and slide sleeve over cam and onto valve. Using a paper clip, raise spring sliplock in slot on sleeve and ensure sleeve is fully seated and raised. Install screw and washer. On inflation valves which do not have spring clips installed, verify the spring sliplock in the plastic cap and sleeve is properly seated in the slot on the inflation valve. Have technician loosen setscrew and gently move cap in an up and down motion to verify the sliplock is seated. Have technician align setscrew with the vertical groove on the inflation valve and retighten.



Step 18 - Para 5-46

E0046018

NOTE

Ensure valve cap is cemented to plastic sleeve. Use polychloroprene adhesive (NIIN 00-515-2246) only.

Valves received from supply without spring clip are to be considered RFI. Spring clip is no longer required.

The FLU-6/P inflation valve can be cocked on either of the two opposite flats on the cam head. When cocked on one of the flats after recharging, leakage may be possible because of a slightly asymmetrical cam head. After recharging the cylinder, submerge assembly in water, observe for bubbles from valve, the dry and store for 24 hours. After storage period check for

proper weight. If no leakage, return assembly to service after ensuring valve cam is fully seated on flat. If leakage has occurred, recharge, recock on opposite flat and perform the above text for leakage. If no leakage, return assembly to service. If leakage has occurred again, return valve to supply.

19. Immerse inflation assembly in water tank.

20. Check for leaks; then remove assembly from tank and dry with an air blast. Wipe assembly with a lint-free cloth.

NOTE

After storage period, inflation assembly should be checked for proper weight of charge, 0.49 to 0.51 lbs.

21. If required, re-mark tare weight, gross weight, charge weight on cylinder.

22. If inflation assembly is not to be installed, attach a red tag with the following instructions printed in ink: WARNING: WEIGH INFLATION ASSEMBLY BEFORE INSTALLING ON LIFERAFT. DO NOT INSTALL IMPROPERLY CHARGED CYLINDER.

5-47. REPAIR/REPLACEMENT.

5-48. This section contains instructions for the repair, replacement, modification or fabrication of various components or subassemblies of liferafts to ensure that appropriate items of equipment remain in Ready For Issue (RFI) status. Reference numbers for parts which are defective, corroded or worn and require replacement are included in the applicable paragraph of this section. Other replacement parts, such as carrying cases and personal survival equipment, are listed in the applicable table. All repairs shall be documented by making the necessary entries on appropriate form in accordance with OPNAVINST 4790.2 Series.

5-49. Replacement of easily removed assembly components such as CO₂ inflation valves and survival items are authorized in addition to repair and replacement procedures documented in this section. The liferaft shall be subjected to a functional test and leakage test each time CO₂ inflation valves are removed and replaced for any reason, and each time inflation valve gaskets are replaced.

5-50. Repair and replacement of liferaft and components shall be limited to the following:

NAVAIR 13-1-6.1-1

NOTE

Repair of the canopy visor is not authorized.

1. Patching holes, cuts, and tears in fabric components.

NOTE

The total area of patches shall not exceed 25.5 square inches, including area of existing patches.

A porous area shall be considered a single hole of similar dimensions.

2. Replacement of oral inflation valve on floor, canopy, and flotation chamber inflation tube assemblies.

3. Replacement of sea anchor.

4. Replacement of cordage, webbing, elastic, hook-and-pile fastener, and snap fasteners and eyelets.

5-51. DETERMINATION OF REPAIRABILITY. Liferafts shall be considered beyond repair for any of the following reasons:

1. Porous fabric areas on any inflatable area.
2. Split or open tube seams.
3. Leakage test failure resulting from other than cut, tear, or puncture.
4. Damaged, malfunctioning, excessively worn, or corroded inlet valve or oral inflation tube.
5. Extensively damaged floor.
6. Oral inflation tube separating from main flotation compartment or inlet valve stem separating from fabric on liferaft.
7. Deterioration of the fabric caused by oil, grease, or any other foreign substance.
8. Deterioration of the fabric caused by a heavy mildewed condition.
9. Rips, tears, abrasions or punctures in the pneumatic compartments which exceed 2 inches.

10. In the judgment of a competent inspector, requiring excessive repair.

5-52. CEMENTING LIFERAFTS. All cementing of liferafts shall be performed as follows:

Support Equipment Required

Quantity	Description	Reference Number
1	Roller, Wooden	GGG-R-00620 NIIN 00-243-9401

Materials Required

Quantity	Description	Reference Number
1	Disposable Brush	NIIN 00-514-2417
As Required	Toluene	TT-T-548 NIIN 00-281-2002
	-or-	
As Required	Methyl Ethyl Ketone, (MEK)	TT-M-261 NIIN 00-281-2762
As Required	Adhesive, Polyurethane	UR-1092 NIIN LH-000-1650
As Required	Talc, Technical	MIL-T-50036A NIIN 01-080-9589

WARNING

Do not use toluene or MEK near open flames, heat or electrical sparks. Avoid prolonged contact with skin or breathing of fumes. Use only in well-ventilated area.

CAUTION

Use only polyurethane adhesive and polyurethane-coated cloth on heat sealed polyurethane LRU-23/P liferaft assemblies.

NOTE

Toluene shall be the primary solvent used in the fabrication or repair of this assembly. MEK may be used if toluene is not available. Always use solvents sparingly and wipe up excess solvents; do not allow to dry by evaporation.

NOTE

Toluene or MEK must be applied vigorously to liferaft material over three years old in order to reactivate the material prior to cementing. Pigment from the material coloring staining a cloth rubbed over the treated surface will indicate the material has been reactivated. Cement shall be applied immediately after the surface has dried.

1. Clean both surfaces to be cemented with four applications of toluene or MEK. Apply toluene or MEK with back-and-forth strokes on the first and third applications, and one-way strokes on the second and fourth applications. Allow area to dry between applications.



The effective active period of adhesive mixtures composed of polyurethane and accelerator is eight (8) hours. Do not use mixture if older than eight hours.

2. Prepare only enough mixture for 8 hours. Dispose of any remaining mixture after that time.
3. Using a disposable brush, apply cement to completely cover surfaces to be cemented. Use long, one direction strokes and complete each surface before cement becomes tacky as the brush may pull tacky cement from the surface. Allow to dry for 10 minutes.
4. Apply a second coat of cement as in [step 3](#). Use brush strokes perpendicular to the original direction.
5. When second coat of cement has become tacky, place pieces together. If cemented area has a cut or tear, butt edges of damage before applying patch. Roll out bubbles with a wooden roller.
6. Allow cement to cure a minimum of 48 hours.
7. Dust area with talc (MIL-T-50036A).

■ 5-53. Deleted

5-54. Patching Liferrafts. Patching is the normal method of repair of fabric panels on both inflatable and non-inflatable liferaft parts.

Support Equipment Required

Quantity	Description	Reference Number
1	Roller, Wooden	GGG-R-00620 NIIN 00-243-9401

Materials Required

Quantity	Description	Reference Number
1	Cloth, Nylon, single ply, polyurethane coated, Type I	MIL-C-83489
1	Tailors Chalk	—
As Required	Toluene	TT-T-548 NIIN 00-251-2002

NOTE

Use of cloth from BCM raft/life preservers is authorized for repair, with the following exceptions: Inflatables condemned for contamination (oil, grease, etc.) and ALSS equipment involved in mishaps shall not be used for repairs.



Use only Polyurethane adhesives and polyurethane-coated cloth and patches on heat sealed polyurethane LRU-23/P liferaft assemblies

1. Repair small cuts, tears, abrasions, and holes by patching using polyurethane coated cloth of same color as article being repaired cut to appropriate size and shape ([figure 5-6](#)).
2. Patches shall extend not less than one inch beyond the perimeter of the damage. For example:

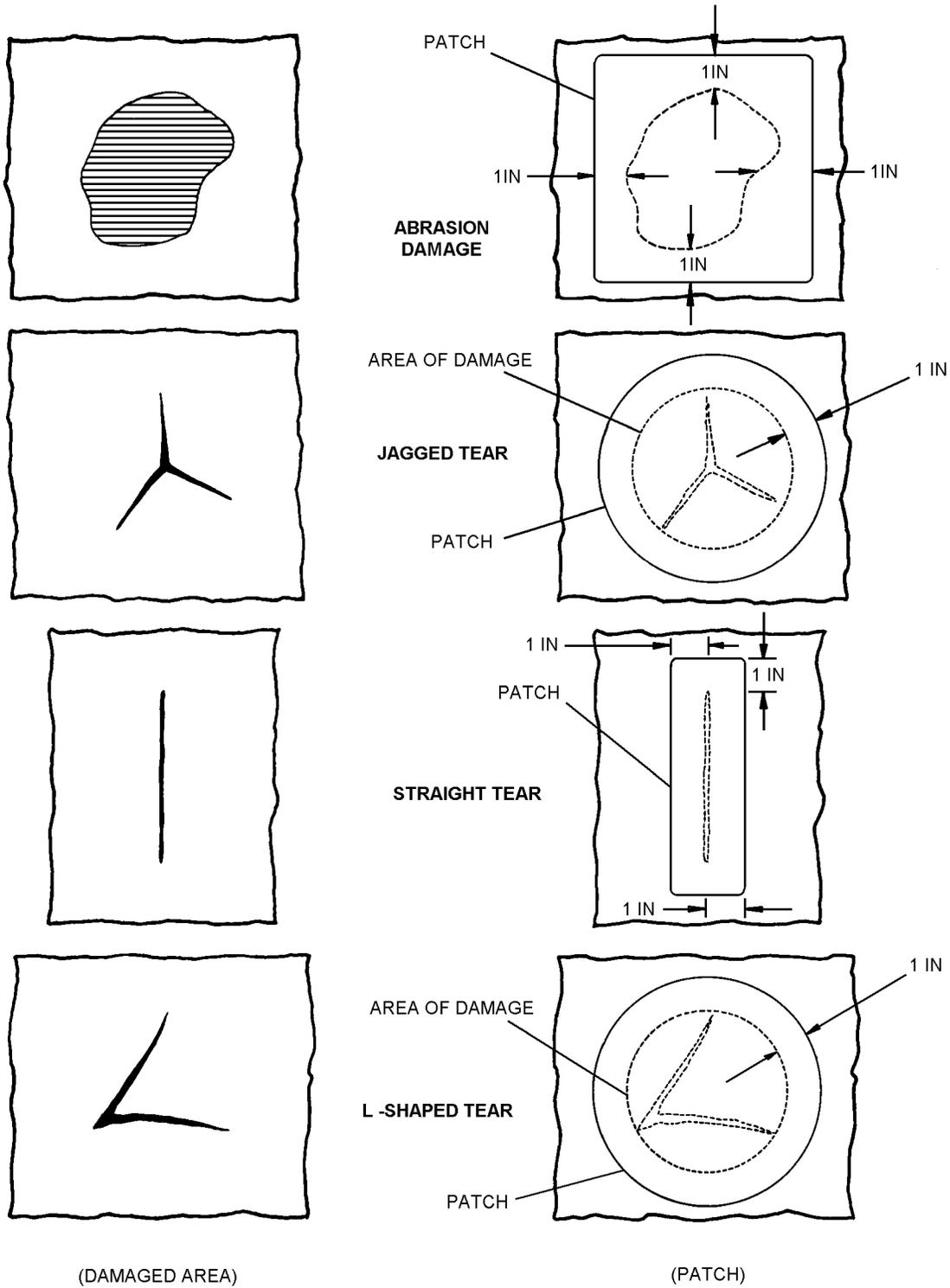


Figure 5-6. Patch Specifications

10050006

a. If diameter of hole is 1 inch, the diameter of the patch shall be 3 inches.

b. If a straight line tear is 1.5 inches long, the patch shall be 3.5 inches by 2 inches.

c. L-shaped cuts or tears shall be considered holes of a diameter equal to distance between ends of cut or tear.

3. Patches shall be circular or rectangular with rounded corners.

4. Patches shall not be placed closer than 0.5 inch to fabric spot welds when patching the inflatable floor or hood.

5. Whenever possible, patches shall be positioned with patch warp in line with panel warp.

6. Cement patch to damaged area in accordance with [paragraph 5-52](#).

NOTE

After repair there shall be no visible distortion when pressurized.

5-55. RECEMENTING OR REPLACING SEAM TAPES. This repair shall be performed only if a flotation tube does not leak, that is, if only the outer seam tape is loose, or if the seam does not seal a flotation tube. To recement or replace a seam tape, proceed as follows:

Materials Required

Quantity	Description	Reference Number
As Required	Toluene	TT-T-548 NIIN 00-281-2002
	-or-	
	Methyl Ethyl Ketone (MEK)	TT-M-261 NIIN 00-281-2762

NOTE

Seam separation in floors and seats may be repaired provided safety and flotation capabilities are not compromised. Exercise sound judgment in determining whether such repairs are within local capabilities.

All cementing shall be performed in accordance with [paragraph 5-52](#).

1. If tape is present and undamaged, recement tape to liferaft.

2. If tape is missing, measure and fit a replacement tape to area and cement in place. Overlap other seams a minimum of 1 inch.



Do not use toluene or MEK near open flame, heat, or electrical sparks. Avoid prolonged contact with skin or breathing of fumes. Use only in well-ventilated area.



Toluene shall be the primary solvent used in the fabrication or repair of this assembly. MEK may be used if toluene is not available. Always use solvents sparingly and wipe up excess solvents; do not allow to dry by evaporation.

3. If tape is damaged, peel damaged tape from liferaft. Apply toluene or MEK only as needed to loosen tape. Trim damaged tape and replace with new tape. Overlap other seam tape a minimum of 1 inch.

4. Perform leakage test.

5-56. SEA ANCHOR/MOORING LINE REPLACEMENT. Replacement of sea anchor is performed with the liferaft deflated. To replace worn or damaged sea anchor or mooring line, proceed as follows:

Materials Required

Quantity	Description	Reference Number
1	Sea Anchor	67A318H2-13
As Required	Cord, Nylon Type III	MIL-C-5040

NAVAIR 13-1-6.1-1

1. Sear both ends of a 16-foot length of MIL-C-5040 Type III nylon cord. Secure one end to sea anchor bridle, and other end to sea anchor mooring patch on liferaft with bowline knot followed by an overhand knot.

2. Route end of replacement sea anchor attachment line through patch loop on bow of liferaft and tie bowline knot. Tack with three turns of waxed, size E, nylon thread, single. Tie ends of thread with surgeon's knot followed by square knot

3. Lay sea anchor flat adjacent to bow of raft and fake attachment line into center of sea anchor. Roll sea anchor with attachment line enclosed.

4. Position rolled sea anchor between hook-and-pile fasteners on bow of raft. Crease liferaft at this point so fastener strips engage around sea anchor, securing sea anchor and attachment line.

5-57. INSPECTION RECORD PATCH.

NOTE

The 28th In-Service Management Panel meeting for Aviation Life Support Systems rescinded the requirement for the packer to sign the Inspection Record Patch on life-rafts. The requirement for all other record documentation remains unchanged. The reason for this change is that most Inspection Record Patches are unreadable, and the packer's and inspector's names, including the type of inspection (leak/functional), are documented on Aviation Crew Systems Records.

Figure 5-7. Deleted

5-58. FABRICATION OF ANTI-CHAFING DISC.

To fabricate the anti-chafing disc, proceed as follows:

Materials Required

Quantity	Description	Reference Number
6 x 12 inches	Cloth, Nylon Polyurethane coated	MIL-C-23070

1. Cut two 6-inch diameter discs from nylon life-raft cloth and cut a 1-inch diameter hole in center of each disc.

NOTE

Cement applications shall be performed in accordance with [paragraph 5-52](#).

5-22 Change 11

- Cement discs together and allow cement to dry.
- Place disc over inlet valve before installing inflation assembly.

5-59. MODIFICATION OF THE FLU-6/P TYPE INFLATION VALVE. To modify a MIL-V-81722 (FLU-6/P) inflation valve, proceed as follows:

Materials Required

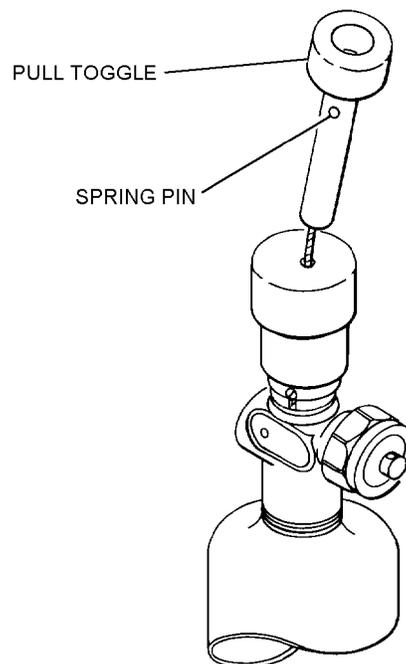
Quantity	Description	Reference Number
As Required	Ink, Black Waterproof	SPE-92 NIIN 00-161-4229

- Remove the liferaft, if stowed.
- Disconnect and remove the CO₂ inflation assembly (valve and cylinder) from the liferaft, if installed.

WARNING

Clamp the CO₂ inflation assembly in a suitable restraining device (vise) when removing the spring pin from the valve pull toggle.

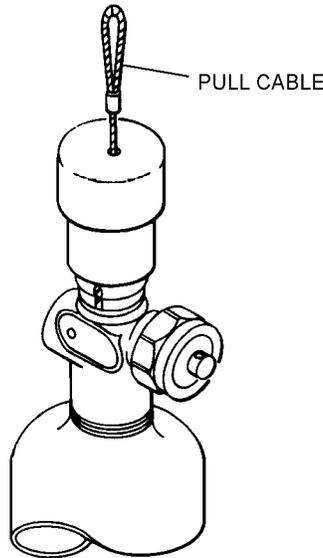
- Extract and scrap the spring pin from the pull toggle shaft.



Step 3 - Para 5-59

E0059003

4. Remove and scrap the pull toggle. Do not remove the valve pull cable.



Step 4 - Para 5-59

E0059004

5. Re-mark the new CO₂ inflation assembly tare and gross weights. New weights should be old weight minus 0.03 lb (weight of plastic pull toggle).

6. Install modified inflation assembly on liferaft.

NOTE

To preclude tension on the CO₂ valve pull cable, allow slack in the lanyard while packing raft.

7. Rerig and reinstall onto liferaft in accordance with NAVAIR 13-1-6.3-2.

5-60. REPLACEMENT OF ORAL INFLATION VALVE. To replace the oral inflation valve, proceed as follows:

NOTE

Replacement oral inflation valves can only be obtained through salvage of BCM'ed or surveyed inflatable survival equipment.

Materials Required

Quantity	Description	Reference Number
1	Valve, Oral Inflation	—
As Required	Cement, Polychloroprene	MIL-A-5540 NIIN 00-142-9913
As Required	Brush, Disposable	NIIN 00-514-2417
As Required	Toluene	TT-T-548 NIIN 00-281-2002
	-or-	
	Methyl Ethyl Ketone (MEK)	TT-M-261 NIIN 00-281-2762



Only toluene or MEK shall be used to clean oral inflation valve and tube. Only polychloroprene cement (MIL-T-5540, NIIN 00-142-9913) shall be used to cement oral inflation valve into oral inflation tube.

1. Carefully cut through metal clamp securing oral inflation valve to oral inflation tube and remove the metal band and oral inflation valve.

2. If the tip of the oral inflation tube was damaged during removal of valve, trim off damaged section.

3. Clean both surfaces to be cemented with toluene or MEK. Allow areas to dry.

4. Using a small disposable brush, carefully apply a small amount of polychloroprene cement to the surfaces of the tube and the valve which are to be cemented together.

5. Immediately place oral inflation valve into oral inflation tube. Oral inflation valve should be inserted up to valve shoulder. Inspect for proper application/cement.

6. Tightly wrap the cemented portion of the oral inflation tube with cord or wire and allow to cure for 48 hours before removing wrap.

7. Perform leakage test in accordance with [paragraph 5-37](#).



5-60A. REPAIR AND REINFORCEMENT OF ORAL INFLATION TUBE BONDING WELDS. To repair canopy and floor oral inflation tubes, and reinforce all oral inflation tubes proceed as follows:

NOTE

Repair of the main flotation compartment oral inflation tube bonding weld is not authorized.

Materials Required

Quantity	Description	Reference Number
As Required	Adhesive, Polyurethane	UR-1092 NIIN LH-000-1650
As Required	Cloth, Nylon, Polyurethane coated	MIL-C-83489
As Required	Brush, Disposable	NIIN 00-514-2417
As Required	Toluene	TT-T-548 NIIN 00-281-2002
	-or-	
	Methyl Ethyl Ketone (MEK)	TT-M-261 NIIN 00-281-2762

NOTE

Cementing for the following procedures shall be in accordance with [paragraph 5-52](#).

1. To reinforce the main flotation chamber oral inflation tube:

a. Cut two, three inch diameter patches. Cement two patches together with a polyurethane coated side cemented to a nylon side.

b. Mark and cut a center hole in patch, size to fit oral tube base, approximately 5/16-inch to 9/16-inch diameter. Center hole when cut should fit snugly around base of oral tube.

c. Using shears, cut from the outside perimeter to the center hole of the patch, this is to allow ease of placement around the oral inflation tube.

d. Clean both surfaces to be cemented. The reinforcement patch shall be positioned around the oral inflation tube with the polyurethane side up, the nylon side of the patch is cemented to the nylon material of the raft.

e. Cement the reinforcement patch around the oral inflation tube in accordance with [paragraph 5-52](#).

2. To repair/reinforce the floor and canopy compartment oral inflation tubes:

a. Cut two, three-inch diameter patches. Mark patches "T" and "B" for top and bottom. The bottom patch will be cemented to the raft material nylon side down, the top patch will be cemented to the bottom patch polyurethane side up.

b. Mark a center line from 12 to 6 and 3 to 9 o'clock positions on the polyurethane side of the bottom patch. Mark and cut a 5/16-inch diameter center hole.

c. Mark and cut a 1 and 1/4-inch diameter center hole in the top patch.

d. Cement nylon side of top patch to polyurethane side of bottom patch.

e. Extend center lines on bottom patch to outside perimeter of top patch. Locate one of the center lines on the outside perimeter of the patch. Cut the patch from the outside perimeter to the center hole of the bottom patch, this is for ease of placement around the oral inflation tube.

f. Locate the remaining three center lines on the bottom patch. Cut from the center hole of the bottom patch (5/16-inch diameter hole) on each line until it meets the top patch (about 3/4 inch). When completed there should be four corners which make up the bottom patch center hole.

g. Clean both surfaces to be cemented, including the first 3/4 inch of the oral inflation tube.

h. Cement the repair/reinforcement patch around the oral inflation tube in accordance with [paragraph 5-52](#). About 1/4 inch of each tab will be cemented to the base of the oral inflation tube.

i. Perform leakage test in accordance with [paragraph 5-37](#).

5-61. PACKING LRU-23/P LIFERAFT ASSEMBLY.

5-62. Refer to [paragraph 5-9](#) for applications. The LRU-23/P liferaft assembly shall be packed in accordance with NAVAIR 13-1-6.3-2.

Section 5-4. Illustrated Parts Breakdown (IPB)

5-63. GENERAL.

5-64. This section lists and illustrates the assemblies and detail parts associated of the LRU-23/P Liferaft.

5-65. The Illustrated Parts Breakdown should be used during maintenance when requisitioning and identifying parts.

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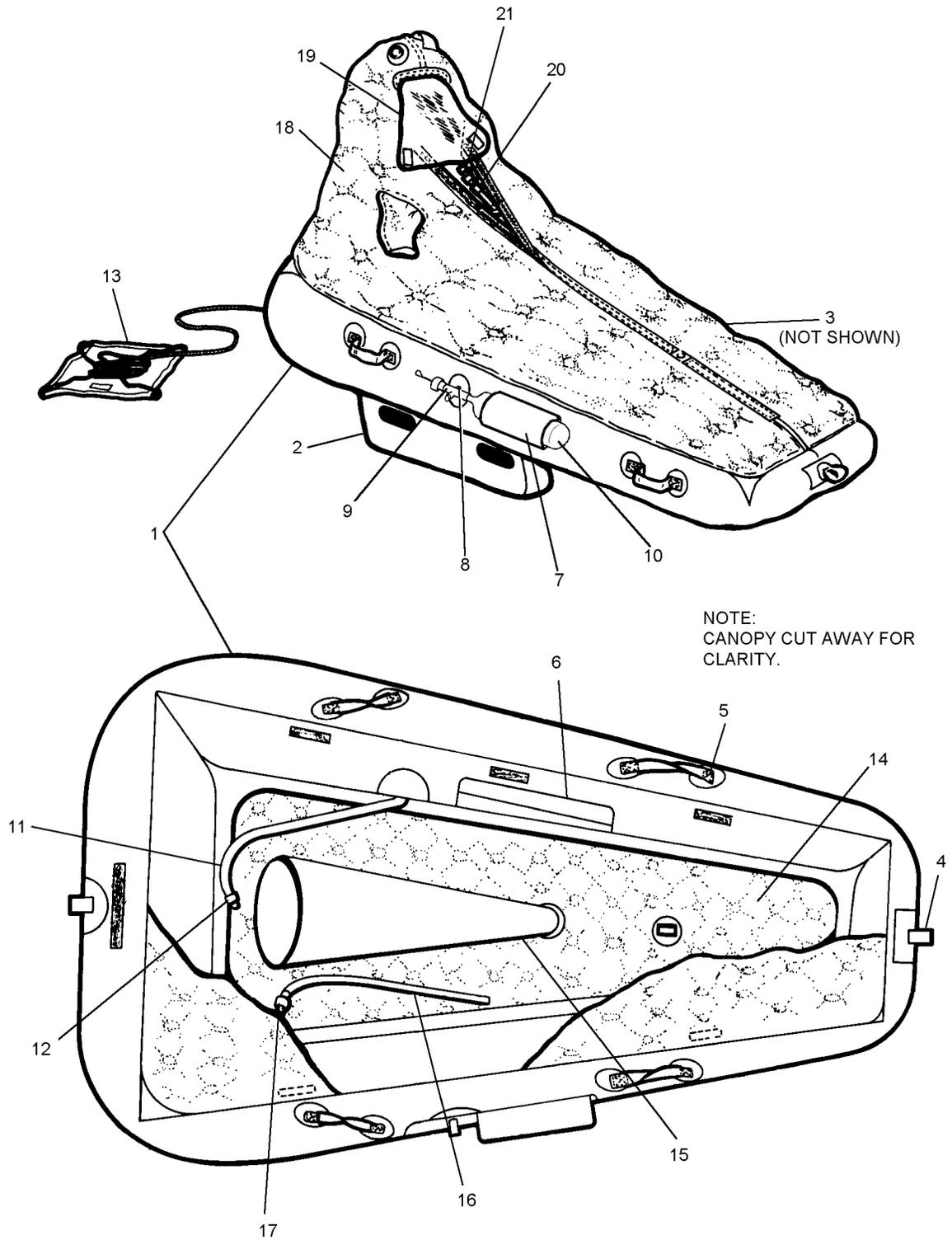


Figure 5-8. LRU-23/P Liferaft Assembly

10050008

NAVAIR 13-1-6.1-1

Figure and Index Number	Part Number	Description	Units Per Assembly	Usable On Code
		1 2 3 4 5 6 7		
5-8	MBEU142543	LRU-23/P LIFERAFT ASSEMBLY	REF	
-1	4015401	. LIFERAFT, LRU-23/P (Note 1)	1	
-2	4011401	. . BALLAST BAG, RH	1	
-3	4011701	. . BALLAST BAG, LH	1	
-4	4010901	. . PATCH, LOOP	1	
-5	4011101	. . HANDLE, BOARDING	1	
-6	4017501	. . POCKET, STOWAGE	1	
-7	4023801	. . POCKET, CYLINDER	1	
-8	4003601	. . VALVE, INLET	1	
-9	MIL-V-81722	. . FLU-6/P INFLATION VALVE	1	
-10	MS26545B2C0020	. . . CO ₂ CYLINDER	1	
	MS26545B4C0021	. . . CO ₂ CYLINDER	1	
-11	4035131	. . VALVE ASSY, INFLATION, FLOTATION ...	1	
-12	800-ROL	. . . VALVE, ORAL INFLATION	1	
-13	4014601	. . SEA ANCHOR	1	
	67A318H2-13	. . SEA ANCHOR (Note 2)	1	
-14	4010501	. . FLOOR	1	
-15	4011501	. . . BAILER	1	
-16	4035111	. . . VALVE ASSY, INFLATION, FLOOR	1	
-17	800-ROL	. . . VALVE, ORAL INFLATION	1	
-18	4011901	. . CANOPY ASSEMBLY	1	
-19	4011601	. . . VISOR	1	
-20	4035121	. . . VALVE ASSY, INFLATION, CANOPY	1	
-21	800-ROL VALVE, ORAL INFLATION	1	
<p>NOTE: 1. Stock number for liferaft assembly is 4220-99-352-4975. 2. Sea Anchor P/N 67A318H2-13 will replace Sea Anchor P/N 40146 thru attrition.</p>				

NUMERICAL INDEX

Part Number	Figure and Index Number	SM&R Code
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MIL-V-81722	5-8-9	PAOGG
MS26545B2C0020	5-8-10	PAOZZ
MS26545B4C0021	5-8-10	PAOGG
4003601	5-8-8	
4010501	5-8-14	
4010901	5-8-4	
4011101	5-8-5	
4011401	5-8-2	
4011501	5-8-15	
4011601	5-8-19	
4011701	5-8-3	
4011901	5-8-18	

Part Number	Figure and Index Number	SM&R Code
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4014601	5-8-13	PAGZZ
4015401	5-8-1	
4017501	5-8-6	
4023801	5-8-7	
4035111	5-8-16	
4035121	5-8-20	
4035131	5-8-11	
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