

**THIS CARD IS MAINTAINED TO PROVIDE PROCEDURAL  
TEXT ONLY AND IS NOT REPORTED TO ACMS**

CEINUM RA-KB00-021

**1 MD 0450V22 INFLATABLE PFD INSP/ACCPT**

REFERENCES:

MPC [KB0096.0](#)

MPC [KB0107.0](#)

TOOLS/TEST EQUIPMENT:

NONE

EXPENDABLES:

Rope, Fibrous (Type I Nylon Cord), P/N: MIL-C-5040, CAGE: 81349, NIIN: 002402154

CONSUMABLES:

Marker, Tube Type (Permanent), P/N: 7520-00-973-1059, CAGE: 83421, NIIN: 009731059 (Or equivalent)

**A INSPECT PFD**

1. Apply locally generated serial number under the right front pocket flap using permanent marker, P/N: 7520-00-973-1059, (Refer to [Figure 1](#)).
2. Inspect PFD, (Refer to Step [2 A](#)).
3. Leak test PFD, (Refer to Step [2 B](#)).

**B ATTACH SURVIVAL EQUIPMENT AND PYROTECHNICS**

1. Inspect the following attached survival equipment and pyrotechnics, (Refer to MPC [KB0107.0](#) and MPC [KB0096.0](#)):
  - a. Signal whistle.
  - b. Strobe light.
  - c. Personal Locator Beacon (PLB).
  - d. Signal mirror.
  - e. MK-79 personal distress kit.
  - f. MK-124 smoke and illumination signal.
  - g. Survival knife.

Distribution Statement D: Distribution authorized to the DHS/CG/DoD and their contractors Administrative/Operational use, 08/11/14. Other requests shall be referred to the appropriate asset product line.

WARNING: This document contains technical data whose export is restricted by the Arms Export-Control Act (Title 22, U.S.C., Sec 2751, et. seq.) or the Export Administration Act of 1979, as amended, Title 50, U.S.C. App 2401 et. seq. Violations of these export laws are subject to severe criminal penalties. Disseminate in accordance with provisions of DoD Directive 5230.25.

DESTRUCTION NOTICE: For classified documents, follow the procedures in DoD 5200.22-M, National Industrial Security Program Operating Manual, Section 5-705 or DoD 5200.1-R, Information Security Program Regulation, Chapter VI, Section 7. For unclassified, limited documents, destroy by any method that will prevent disclosure of contents or reconstruction of the document.



2. Attach the following equipment to the webbing loop inside the corresponding PFD pocket using a sear cut, 42 inch length of Type I nylon cord, P/N: MIL-C-5040, secured with a bowline and overhand knot on each end, (Refer to [Figure 2](#)):

*NOTE: Finished length of line from knot to knot for each item below shall be 36 inches or greater.*

- a. Signal whistle, (right front pocket).

*NOTE: Sirius LED Strobe lights are furnished with a manufacturer installed 42 inch lanyard. The manufacturer installed lanyard is acceptable for use until no longer serviceable.*

- b. Strobe light, (upper right chest pocket).

- (1) Replace lanyard using a sear cut, 42 inch length of Type I nylon cord secured with a bowline and overhand knot on each end, (If required).

- c. PLB, (left side pocket).
- d. MK-79 personal distress kit, (right side pocket).
- e. Signal mirror, (right front pocket).

3. Attach survival knife sheath to the webbing strap located in the survival knife pocket, (Refer to [Figure 2](#)).

*NOTE: Finished length of line from knot to knot shall be 36 inches or greater.*

4. Attach survival knife to the webbing strap located in the survival knife pocket using a sear cut 42 inch length of Type I nylon cord.

- a. Place survival knife into sheath.

5. Attach one MK-124 smoke and illumination signal to the PFD.

- a. Attach a retention harness to the MK-124 using a sear cut, 72 inch length of Type I nylon cord with two surgeon's knots, (Refer to [Figure 3](#), [Figure 4](#), and [Figure 5](#)).

*NOTE: Finished length of line from knot to knot shall be 36 inches or greater.*

- b. Attach the opposite end of the lanyard to the webbing loop inside the right side pocket using a bowline with an overhand knot.

6. Document any discrepancies in the MD0450v22 Maintenance Log.



**2 SEMI-ANNUAL MD 0450V22 INFLATABLE PFD INSPECT/LEAK TEST**

REFERENCES:

MPC [KB0096.0](#)  
MPC [KB0107.0](#)

TOOLS/TEST EQUIPMENT:

NONE

EXPENDABLES:

MD 0450v22 PFD, P/N: MD 0450-22, CAGE: 1CJ91, NIIN: 01HS21441 (If required)

CONSUMABLES:

Leak Test Compound, P/N: MIL-PRF-25567E, CAGE: 81349, NIN: 006211820 (Or equivalent)

**A INSPECT PFD**

**WARNING**

**VARIOUS STEPS IN THIS PROCEDURE EMPLOY ITEMS ON THE HAZARDOUS MATERIALS LIST. BEFORE EXECUTING THIS MPC, REFER TO THE APPLICABLE MSDS/SDS FOR FULL SAFETY AND HANDLING PROCEDURES.**

1. Check PFD over its entire surface for the following:
  - a. Cuts.
  - b. Tears.
  - c. Seam separation.
  - d. Loose stitching.
2. Check the attached D-ring for the following:
  - a. Corrosion.
  - b. Damage.
  - c. Security of attachment.
3. Inspect the waist/chest buckles for proper operation.
4. Inspect required PFD markings for legibility.
5. Remove PFD from service if any of the above discrepancies are found.

*NOTE: For tears in the rear mesh less than 1 inch in diameter or 3 inches long, a local tailor may be utilized for repairs. Repairs are to be made using nylon upholstery thread the same color as the mesh and must not detract from the neat appearance and proper function of the gear.*

- a. Send PFD to repair facility, if repair cost does not exceed the replacement cost.
  - b. Replace PFD, P/N: MD 0450-22, if repair cost exceeds the replace cost.
6. Inspect legibility of the unit serial number marking located under the right front pocket flap.
  - a. Restore serial number marking, (If required).



7. Inspect inflator assembly for the following, (Refer to [Figure 6](#)):
  - a. Damage.
  - b. Lanyard fraying.
  - c. Expiration.
  - d. Green indicator light.
8. Replace inflator assembly if any of the above items are noted, (Refer to [Item 3](#)).

## **B LEAK TEST PFD**

1. Manually inflate PFD.
  - a. Release the Velcro tabs located at the bottom of the left and right panel covers.
  - b. Open the right front panel cover of the PFD.
  - c. Inflate PFD until firm through the oral inflation tube.

### **WARNING**

**AVOID EYE CONTACT, INHALATION, AND PROLONGED SKIN CONTACT WITH LEAK TEST COMPOUND. USE IN A WELL VENTILATED AREA. FAILURE TO COMPLY MAY RESULT IN PERSONAL INJURY.**

2. Apply leak test compound, P/N: MIL-PRF-25567E, to the oral inflation tube and the CO2 inflation valve.

### **CAUTION**

**DO NOT SUBMERGE THE PFD IN WATER TO CHECK FOR LEAKS.**

*NOTE: If leaks are present, the leaking area will begin bubbling or foaming within 5 seconds and continues for about 2 minutes. Inspect inflated PFD for signs of leakage.*

- a. Check inflator assembly for proper installation, if leaks are found at the CO2 inflation valve, (Refer to [Figure 7](#)).
- b. Send PFD to repair facility, if leaks are found at any other location provided the repair cost does not exceed the replace cost.
- c. Replace PFD, if the repair cost exceeds the replacement cost.

*NOTE: The PFD must be set aside, undisturbed, for 2 hours before proceeding on to [Step 2 B 3](#).*

3. Inspect inflated PFD for signs of deflation or pressure loss after 2 hours.
  - a. Remove PFD from service, if it shows loss of pressure.
    - (1) Send PFD to repair facility, if leaks are found at any other location provided the repair cost does not exceed the replace cost.
    - (2) Replace PFD, if the repair cost exceeds the replacement cost.
4. Deflate PFD by inverting the oral tube dust cap.

### **CAUTION**

**TO PREVENT DAMAGE TO THE PFD, DO NOT WRING OR TWIST IT WHILE DEFLATING.**

5. Gently squeeze the inflated bladder until all air is expelled.



6. Pack the PFD.
  - a. Pack right lobe, (Refer to [Figure 8](#)).
    - (1) Open both front panel covers.
    - (2) Adjust waist and chest buckles to their full length.
    - (3) Shift the left lobe on the waist belt so that the right lobe is able to be fully extended for folding.

**CAUTION**

**WHILE FOLDING, POSITION LOBES SO THAT THEY DO NOT COVER THE INFLATION ASSEMBLY.**

- (4) Fold PFD lobe at fold points.
- b. Secure two-step zippers, (Refer to [Figure 9](#)).
  - (1) Locate the right zipper tail on the right PFD lobe.
  - (2) Reset the zipper by pulling it towards the Velcro tab.

**CAUTION**

**DO NOT CATCH THE INFLATABLE CELL IN THE ZIPPER WHILE CLOSING.**

- (3) Close the zipper by pulling the slider in the opposite direction to the end of the zipper.
  - (4) Secure the Velcro tab to prevent the zipper from reopening.
  - (5) Locate the left zipper tail on the right PFD lobe.
  - (6) Reset the zipper by pulling it toward the Velcro tab.

**CAUTION**

**DO NOT CATCH THE INFLATABLE CELL IN THE ZIPPER WHILE CLOSING.**

- (7) Close the zipper by pulling the slider in the opposite direction to the end of the zipper.
  - (8) Secure the Velcro tab to prevent the zipper from reopening.
  - (9) Tuck in zipper tails after closing.

- c. Pack left PFD lobe by repeating Steps [2 B 6.a.](#) through [2 B 6.b.\(9\)](#) for the left lobe.

**C INSPECT SURVIVAL EQUIPMENT AND PYROTECHNICS**

1. Inspect the following attached survival equipment and pyrotechnics, (Refer to MPC [KB0107.0](#) and [KB0096.0](#)):
  - a. Signal whistle.
  - b. Strobe light.
  - c. PLB.
  - d. Signal mirror.
  - e. MK-79 personal distress kit.
  - f. MK-124 smoke and illumination signal.
  - g. Survival knife.
2. Verify survival equipment is attached in the correct location, (Refer to Step [1 B](#)).



3. Inspect lanyards attaching all survival equipment to the PFD for the following:
  - a. Cuts or frays.

*NOTE: Finished length of line from knot to knot shall be 36 inches or greater.*
  - b. Correct length.
  - c. Security of lanyard attachment to equipment and PFD.
4. Replace or re-tie lanyards as required, (Refer to Step 1 B).
5. Store, segregate, or dispose of hazardous materials IAW all applicable local, state, and federal regulations.
6. Document any discrepancies in the MD 0450v22 Maintenance Log.



**3 5 YEAR MD 0450V22 INFLATOR ASSEMBLY REPLACE**

REFERENCES:

NONE

TOOLS/TEST EQUIPMENT:

NONE

EXPENDABLES:

Re-arm Kit, P/N: MA7218 22, CAGE: 1CJ91, NIIN: N/A

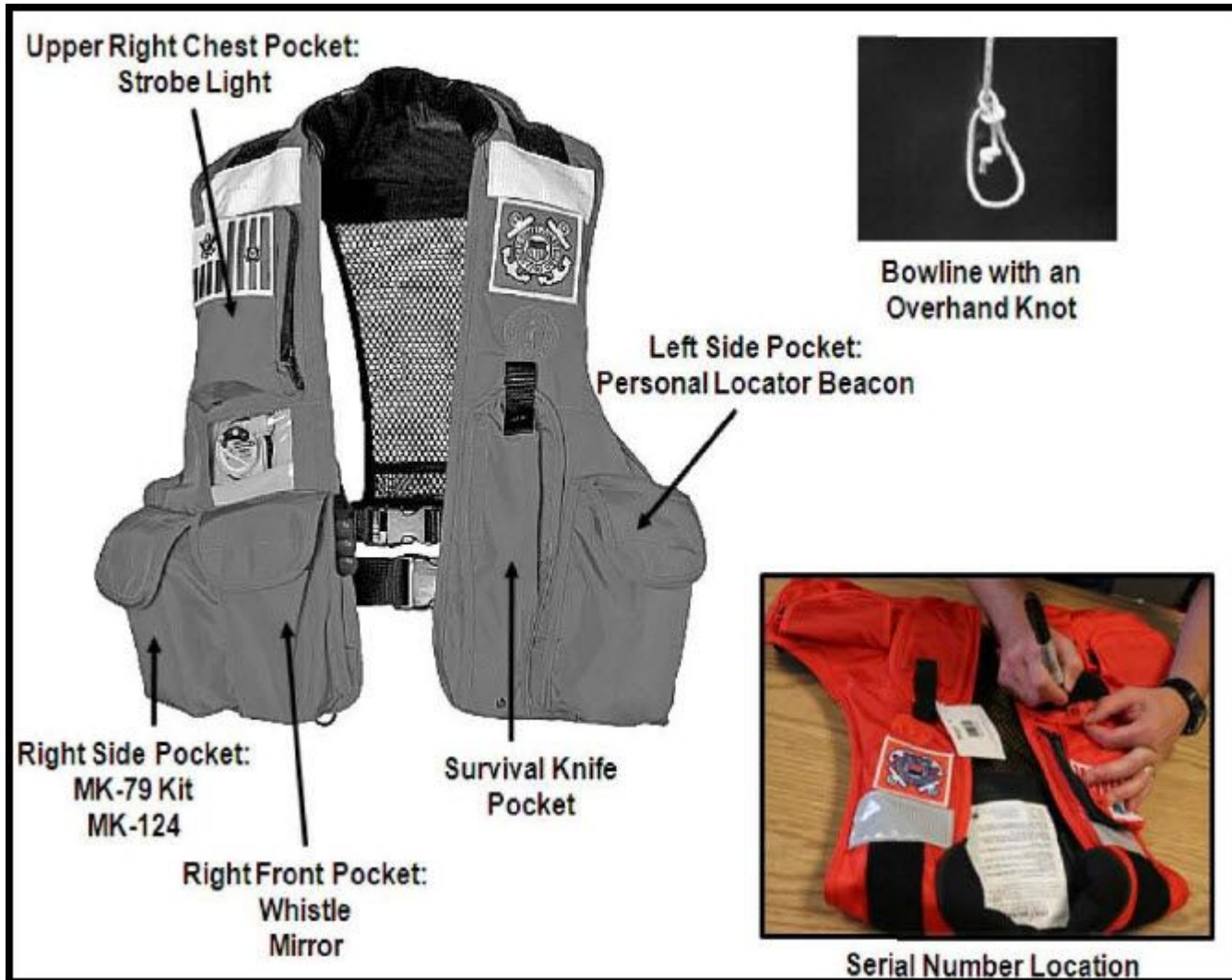
CONSUMABLES:

NONE

**A REPLACE**

1. Lay out the PFD in a clean area, free of obstructions.
2. Remove inflator assembly, (Refer to [Figure 10](#)).
  - a. Hold the CO2 cylinder through the PFD fabric cover with one hand.
  - b. Insert the metal key from the re-arm kit between the black locking ring and the labeled yellow cap.
  - c. Turn key counterclockwise.
  - d. Turn the black locking ring counterclockwise.
  - e. Lift off the inflator cap.
  - f. Squeeze the PFD sealing ring to elongate for CO2 cylinder removal.
  - g. Remove the CO2 cylinder through the sealing ring.
3. Install new inflator assembly using the re-arm kit, P/N: MA7218 22, (Refer to [Figure 7](#)).
  - a. Insert new CO2 cylinder pointing upwards into the PFD.
  - b. Hold the CO2 cylinder through the PFD fabric.
  - c. Position cap with water inlet valve to the right.
  - d. Press the cap firmly onto the CO2 cylinder sealing ring.
  - e. Turn the black locking ring clockwise, while pressing on the cap, into the locked position.
  - f. Pull on the cap to ensure it has locked onto the inflator body.
    - (1) Snap the beaded manual inflation lanyard in place.
4. Perform PFD leak test, (Refer to [Step 2 B](#)).
5. Document any discrepancies in the MD 0450v22 Maintenance Log.



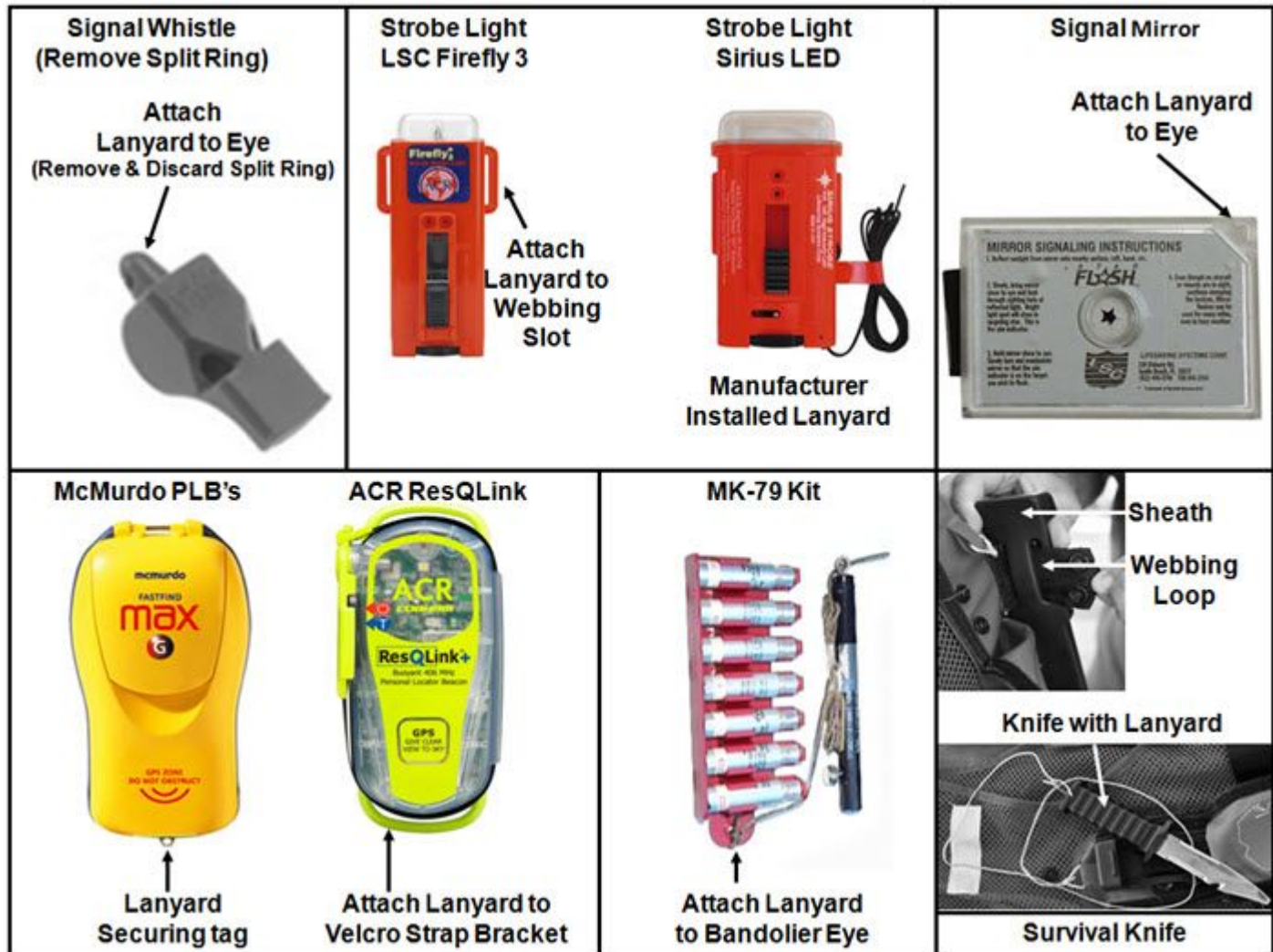


**MD 0450V22 INFLATABLE PFD**

**Figure 1**







**SURVIVAL EQUIPMENT**

**Figure 2**



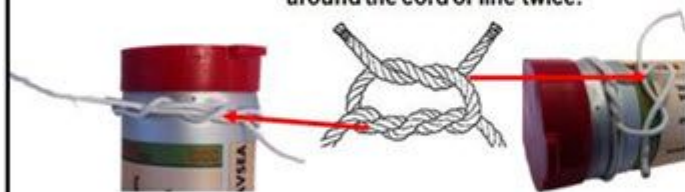
1. Sear cut a piece of Type 1 Nylon cord to facilitate the retention harness tying process.  
(Cut approx. 72" long)

2. Wrap two turns of cord around the day end of the signal flare.  
(Leave approx. 2" of bitter end)



3. Tie with a 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.



4. Tighten the Surgeon's knot, keeping it flat and even.



5. With the approx. 2" of bitter end, Tie an overhand knot to secure the Surgeon's. Sear cut this to prevent fraying

Overhand  
knot



6. Tighten down the overhand knot.



**MK-124 RETENTION HARNESS STEPS 1-6**

**Figure 3**



7. Route the remaining cord along the length of the signal to the opposite end.



8. Between the two raised beads of the night end, wrap two turns of cord around the signal.



9. Wrap the working end around both loops twice.



10. Take the bitter end and go under the line that stretched across the signal.



### MK-124 RETENTION HARNESS STEPS 7-10

Figure 4



11. With the working end, go through the loop that was just created, making an overhand knot.



12. Pull tightly



13. Tie an overhand knot to secure the first knot.



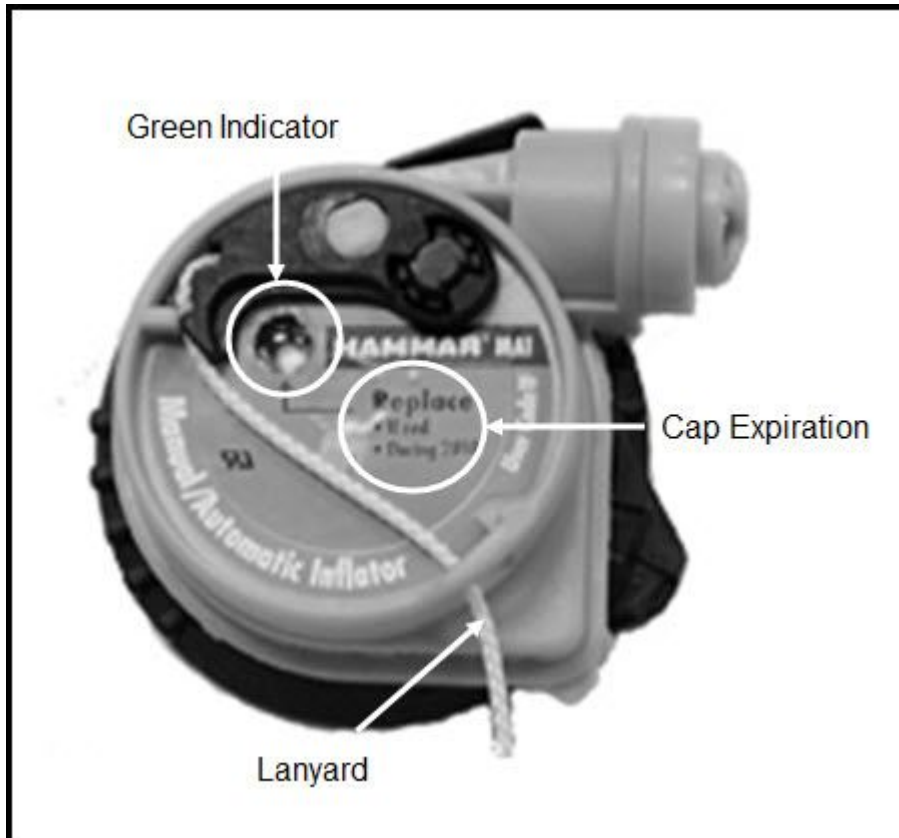
14. Tighten down the overhand knot and secure signal to vest.



**MK-124 RETENTION HARNESS STEPS 11-14**

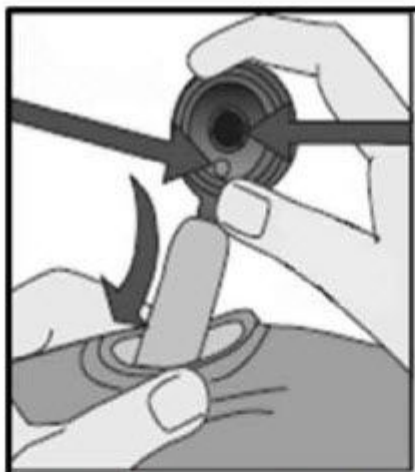
**Figure 5**



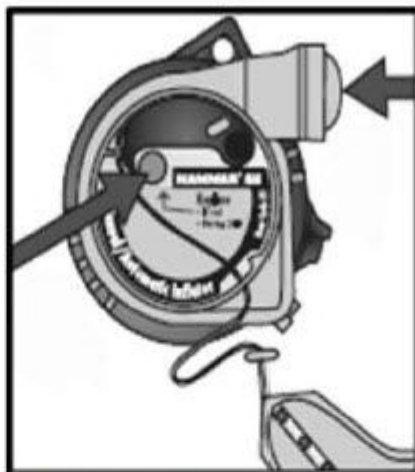


**INFLATOR ASSEMBLY**  
**Figure 6**





1. Check new inflator body for green indicator, then insert with cylinder point upwards into the PFD.



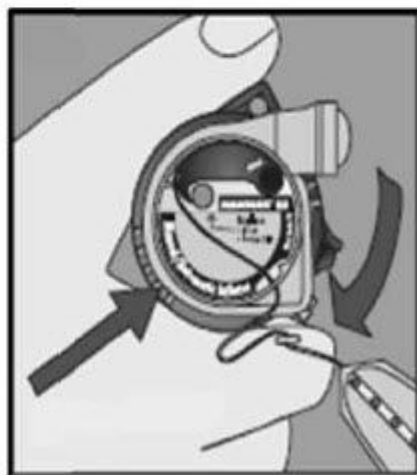
2. Check replacement cap for expiration date and green indicator.



3. Hold cylinder through fabric, position cap with inlet valve to the right.



4. Press cap firmly onto the inflator body and sealing ring.

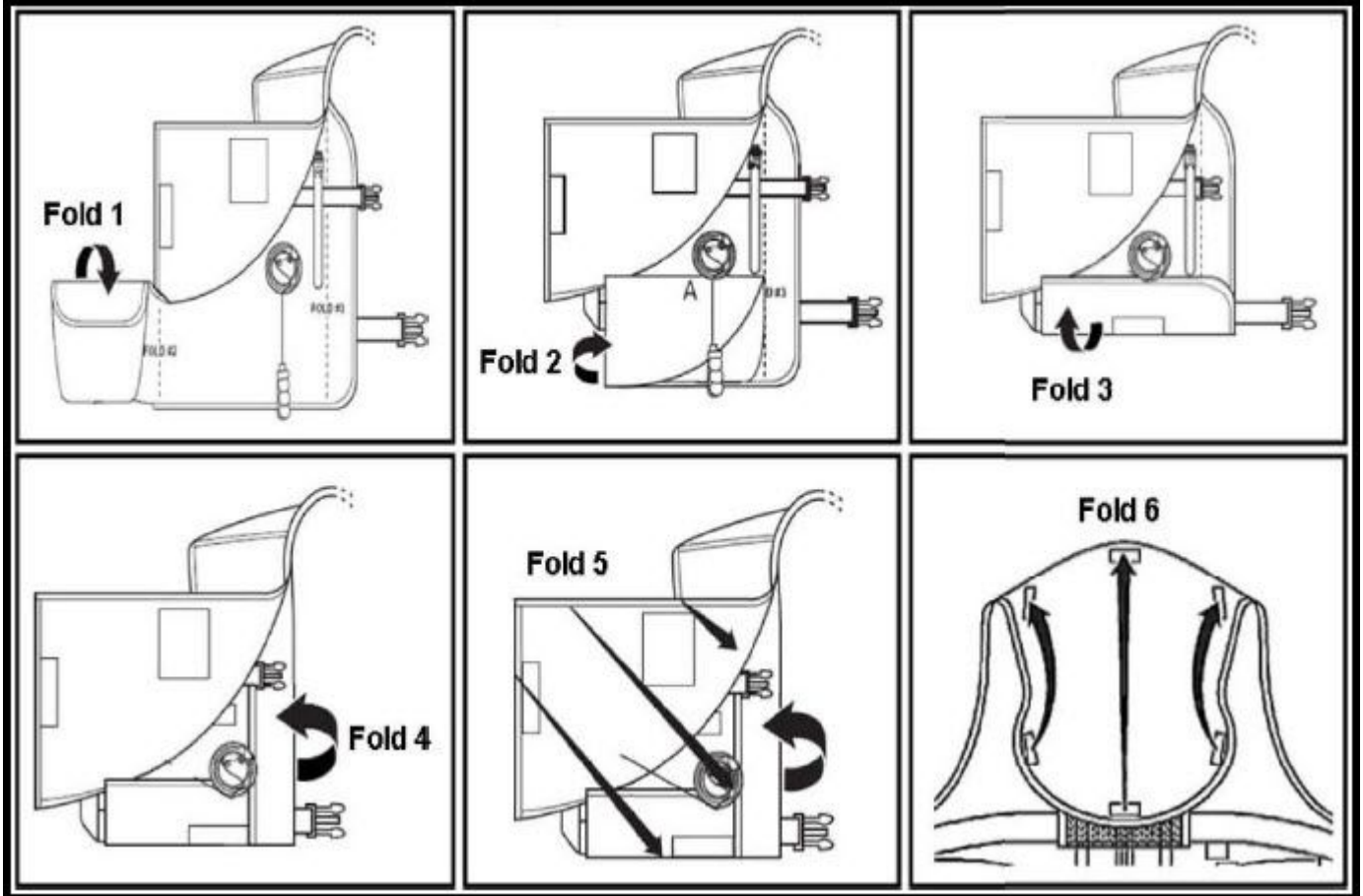


5. While pressing firmly, turn black locking ring clockwise into the locked position.

### INFLATOR CAP AND BODY INSTALLATION

Figure 7

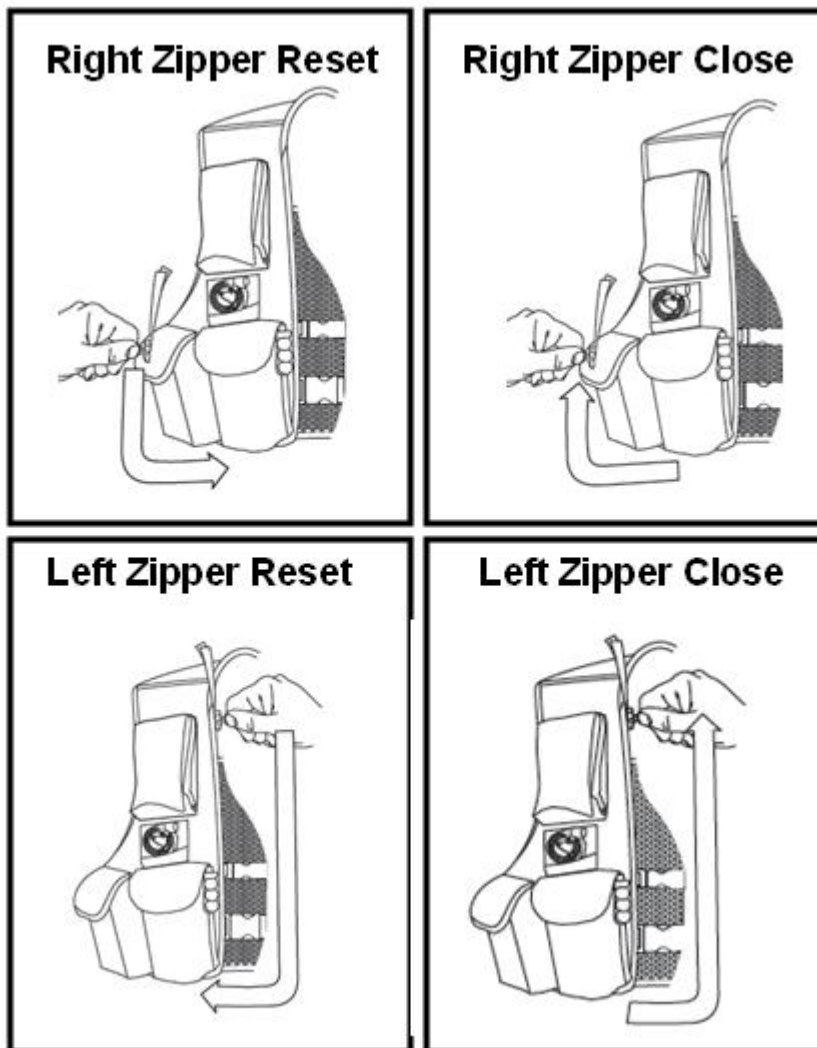




**REPACKING FOLDING PROCEDURE**

**Figure 8**





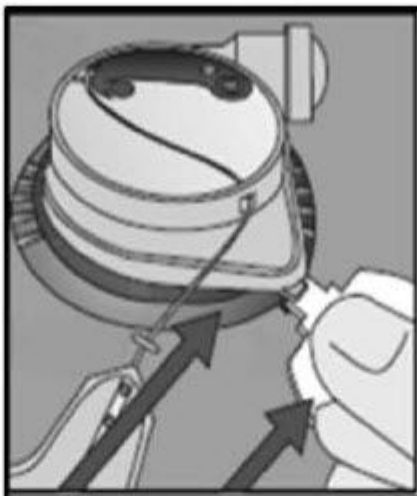
**TWO-STEP ZIPPER**  
**Figure 9**







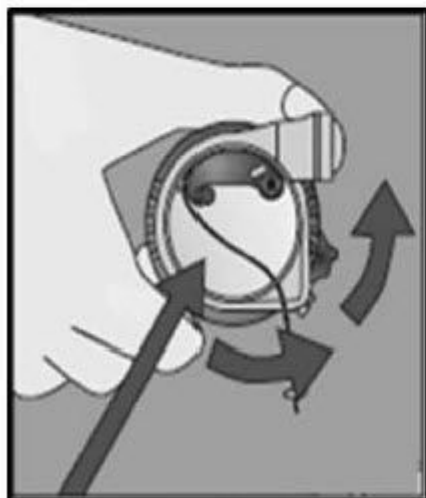
1. Hold the CO2 cylinder with one hand through the fabric.



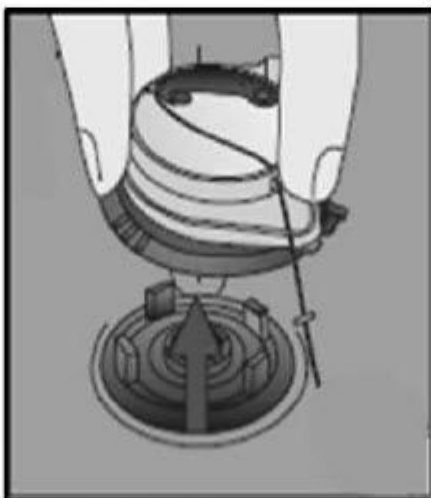
2. Insert metal key from the re-arm kit



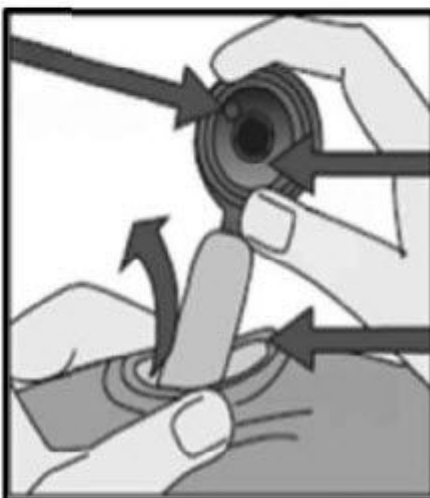
3. Turn key counter-clockwise



4. Turn black locking ring counter-clockwise



5. Lift off cap.



6. Squeeze the sealing ring to elongate and remove the inflator body.

### INFLATOR CAP AND BODY REMOVAL

Figure 10

