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MARITIME SURVIVAL SYSTEM (MSS) FLOTATION ASSEMBLY OPERATOR'S MANUAL

MSS Assembly, PEC-2000



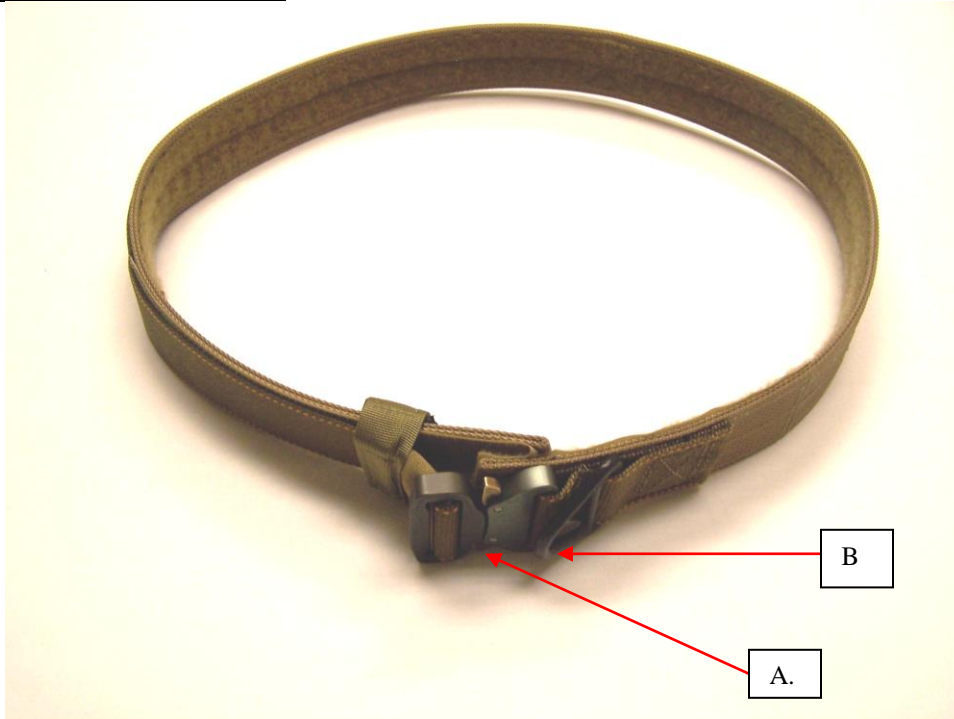
APRIL 2007

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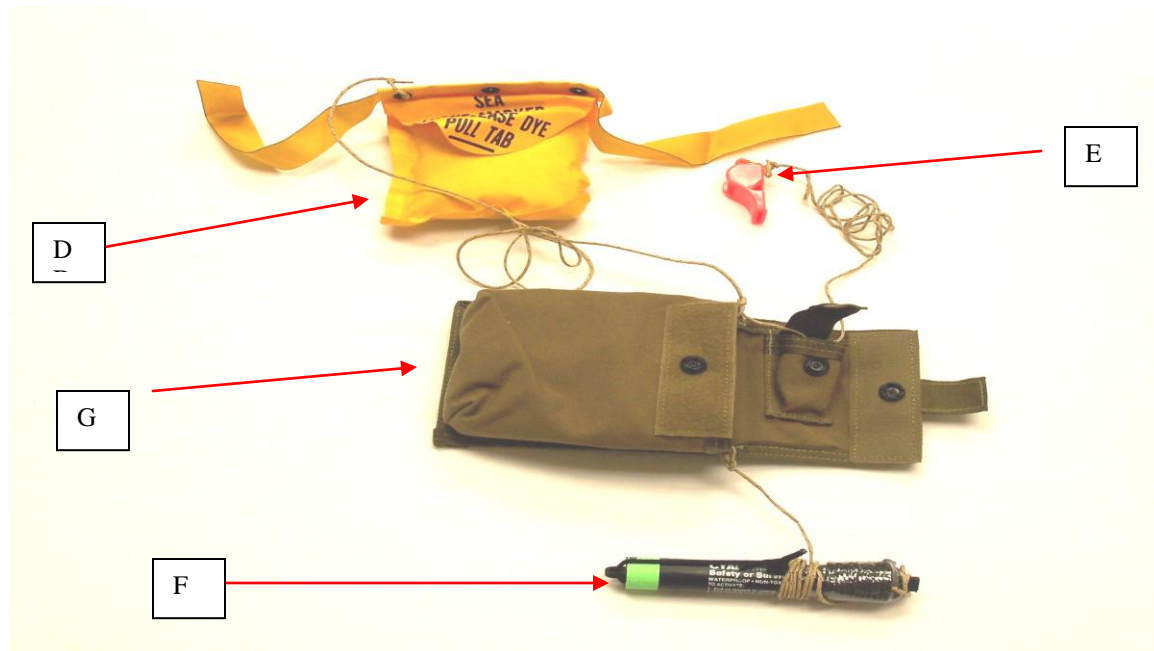
1.0 Inspection Procedures



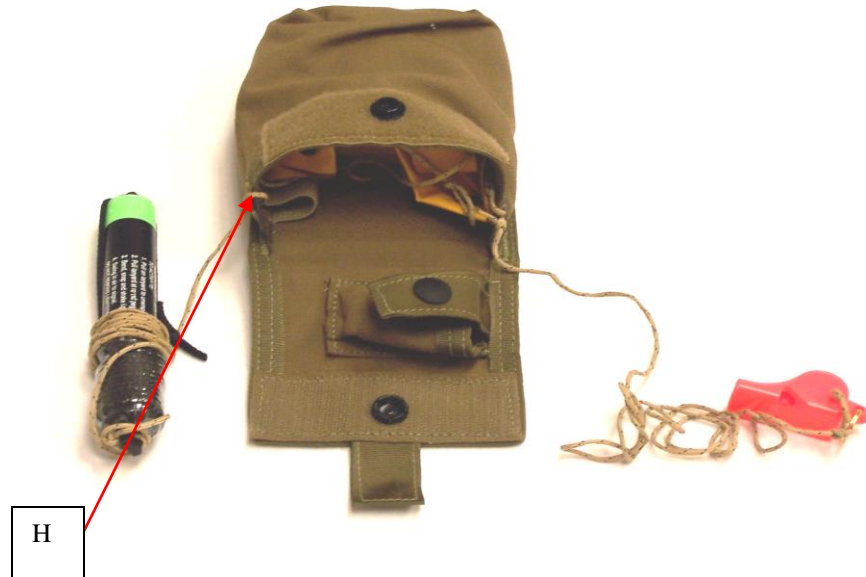
- (A) Function check the Cobra Safety buckle to ensure it opens and closes as designed and is free of corrosion and/or fractures
- (B) Inspect the Emergency V-ring attachment for fractures and corrosion and ensure it's properly attached to the MSS belt
- Inspect the MSS belt for signs of fraying, tears or abnormal wear and tear (Replace as necessary)



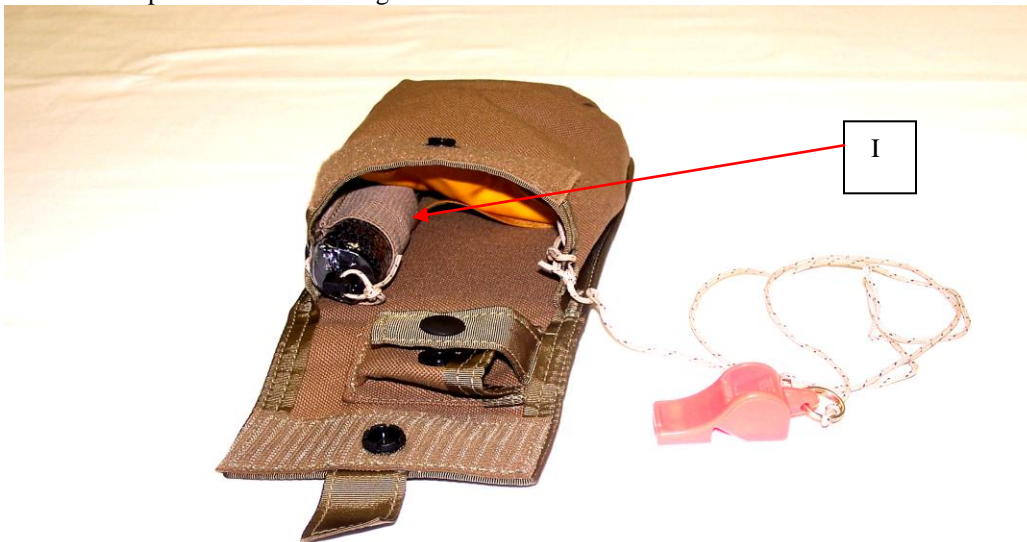
- **** (C)** For proper orientation, the Emergency V-ring attachment will be located on the left side of the MSS belt.



- (D) Inspect Sea Dye Marker package for unacceptable wear and tear and replace as needed
- Ensure Sea Dye Marker package is properly attached to the MSS Signal Pouch with approved lanyard
- (E) Function test Emergency whistle and replace as needed
- Ensure Emergency whistle is properly attached to the MSS Signal Pouch with approved lanyard
- (F) Inspect the Cyalume Safety/Survival Light for signs of tampering and/or damage and ensure it's expiration date is current (located on green tab)
- Ensure the Cyalume Safety/Survival Light is properly attached to the MSS Assembly
- (G) Inspect the MSS Assembly for unacceptable wear and tear and fraying. Replace as needed



- (H) Continuously wrap lanyard around the Sea Dye Marker package and place in the large pocket of the MSS Signal Pouch



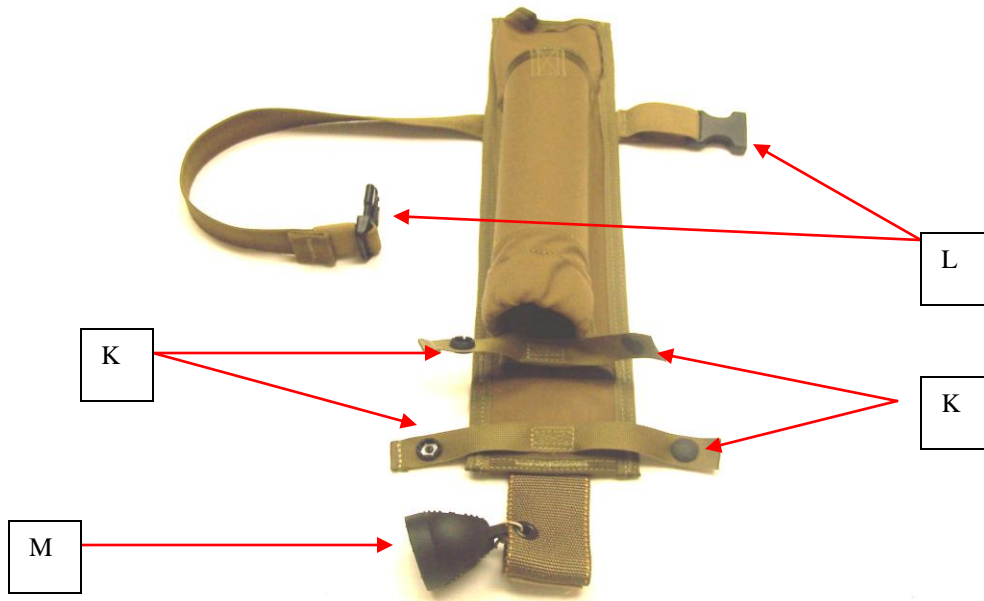
- (I) Continuously wrap lanyard around the Cyalume Safety/Survival Light and place into the elastic retaining strap of the MSS Signal Pouch



- (J) Continuously wrap lanyard around the Emergency whistle and place into the small pocket located on the top flap and secure with snap closure.



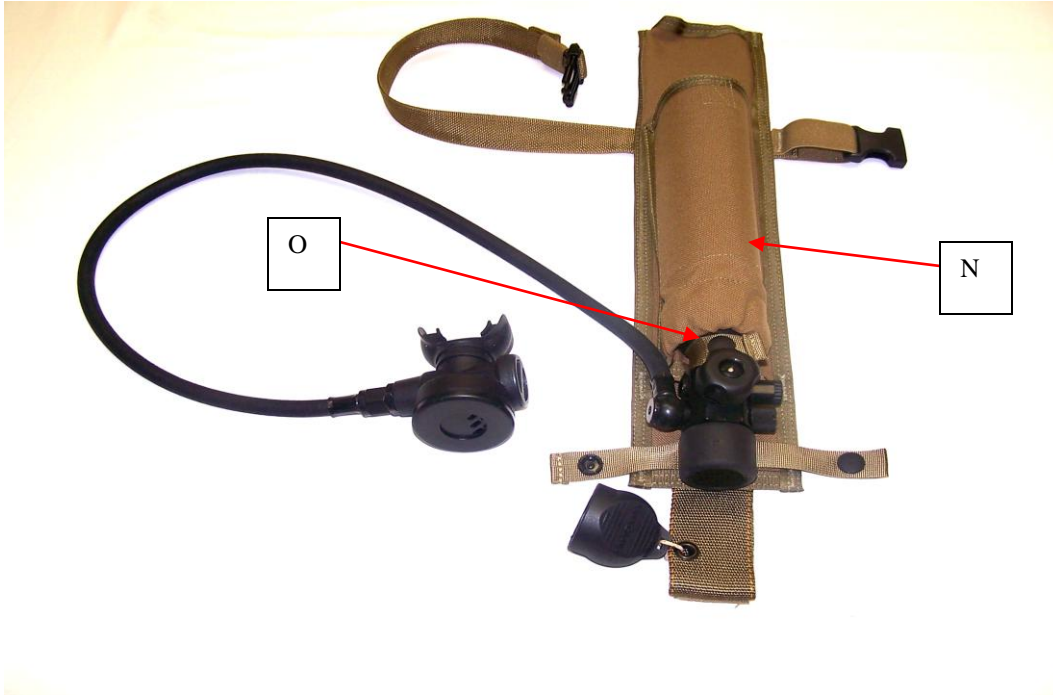
- Secure the top flap of the MSS Signal Pouch utilizing the hook and loop and snap closure.



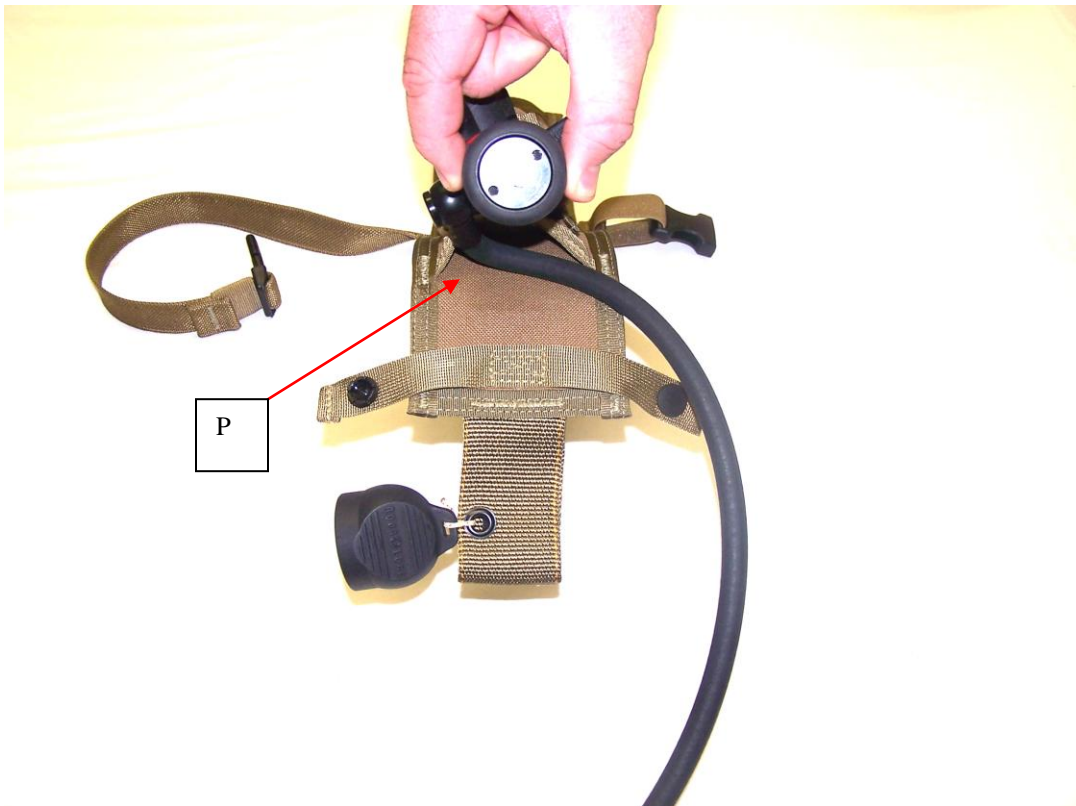
- Inspect the MSS SEA/LV2 Holster for unacceptable wear and tear and fraying, replace as needed.
- Function check all (K) snap connectors and inspect the (L) side-release buckle connector.
- Ensure the (M) LV2 mouth piece holder is securely fastened to the MSS SEA/LV2 Holster grommet via approved lanyard.



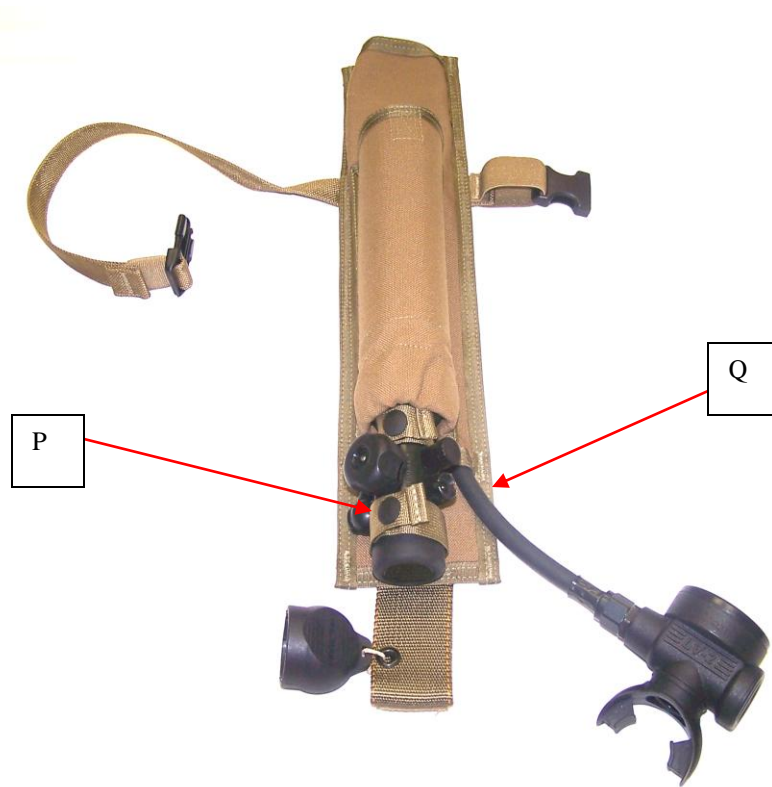
- Inspect the LV2 in accordance with the Manufacturer's required checks.



- Place LV2 in (N) large pouch of MSS SEA/LV2 Holster and secure (O) snap connector around the neck of bottle.



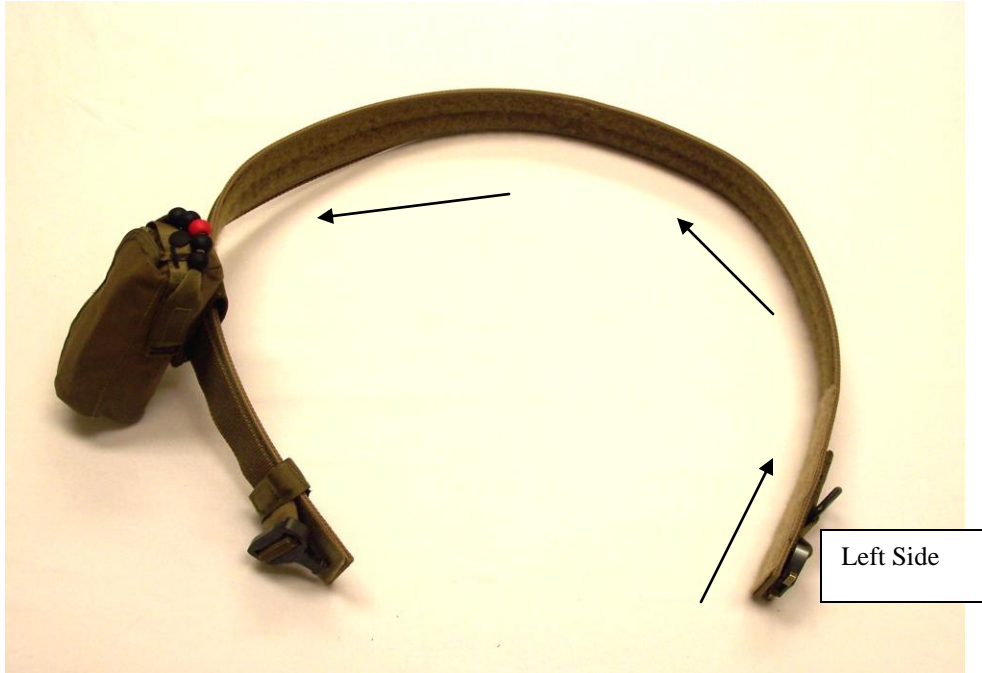
- (P) Locate the LV2 hose pouch in between LV2 bottle pouch (Large pouch) and the MSS SEA/LV2 Holster frame.



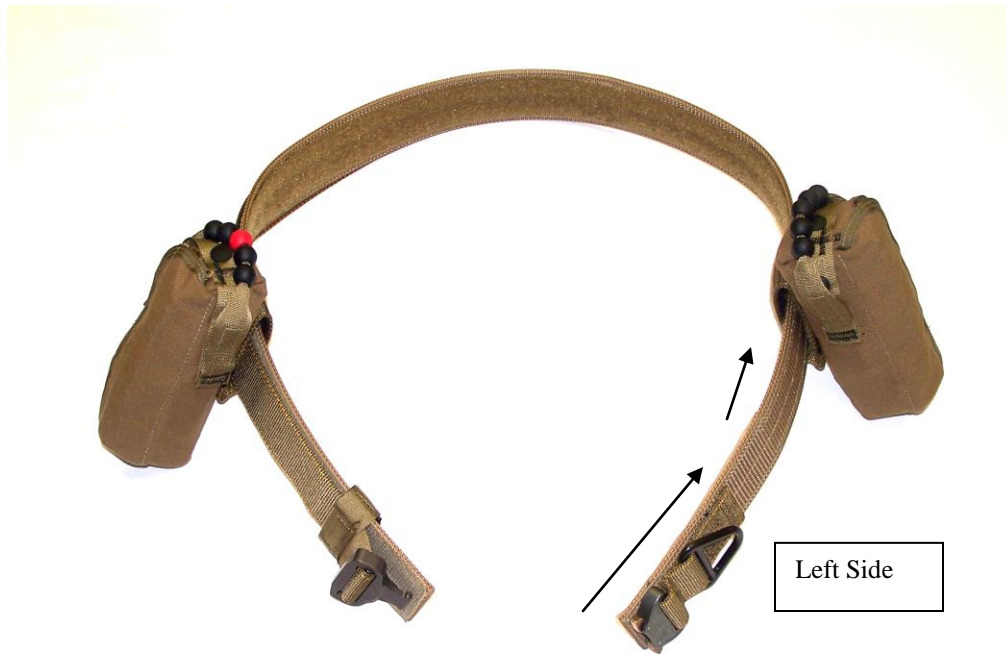
- Feed the LV2 hose into the LV2 hose pouch.
- Secure the (P) 2nd snap connector around the top of the LV2 bottle. Ensure the (Q) hose is free and clear of all snap connectors.



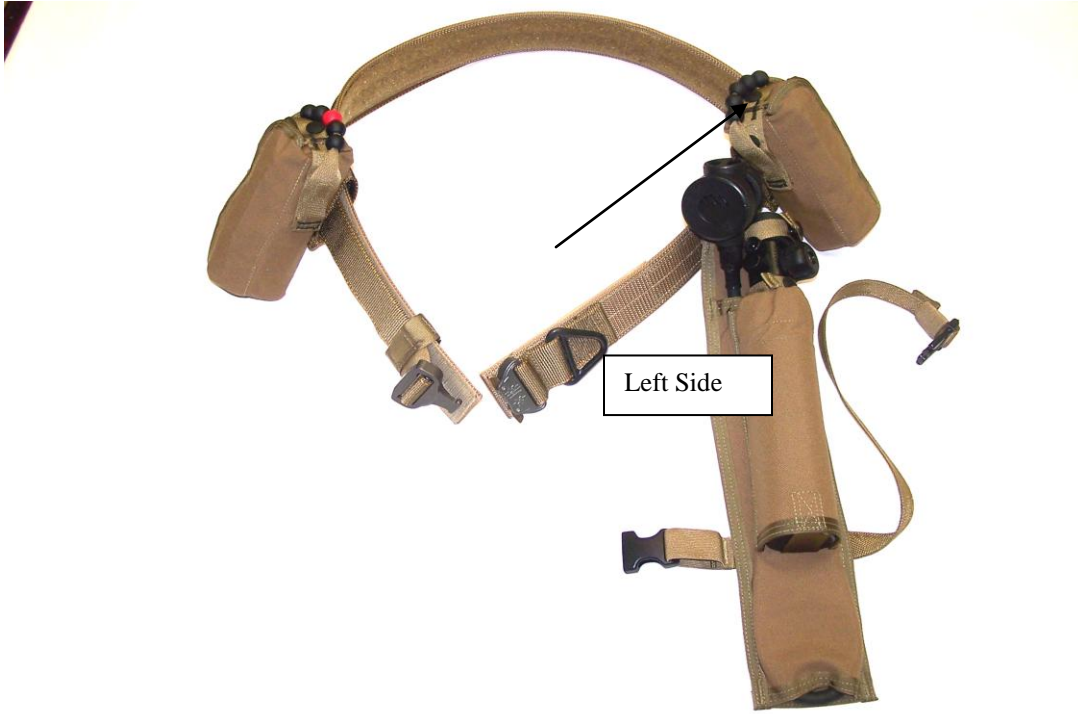
- Secure the (R) LV2 Mouth piece into the LV2 mouth piece holder.



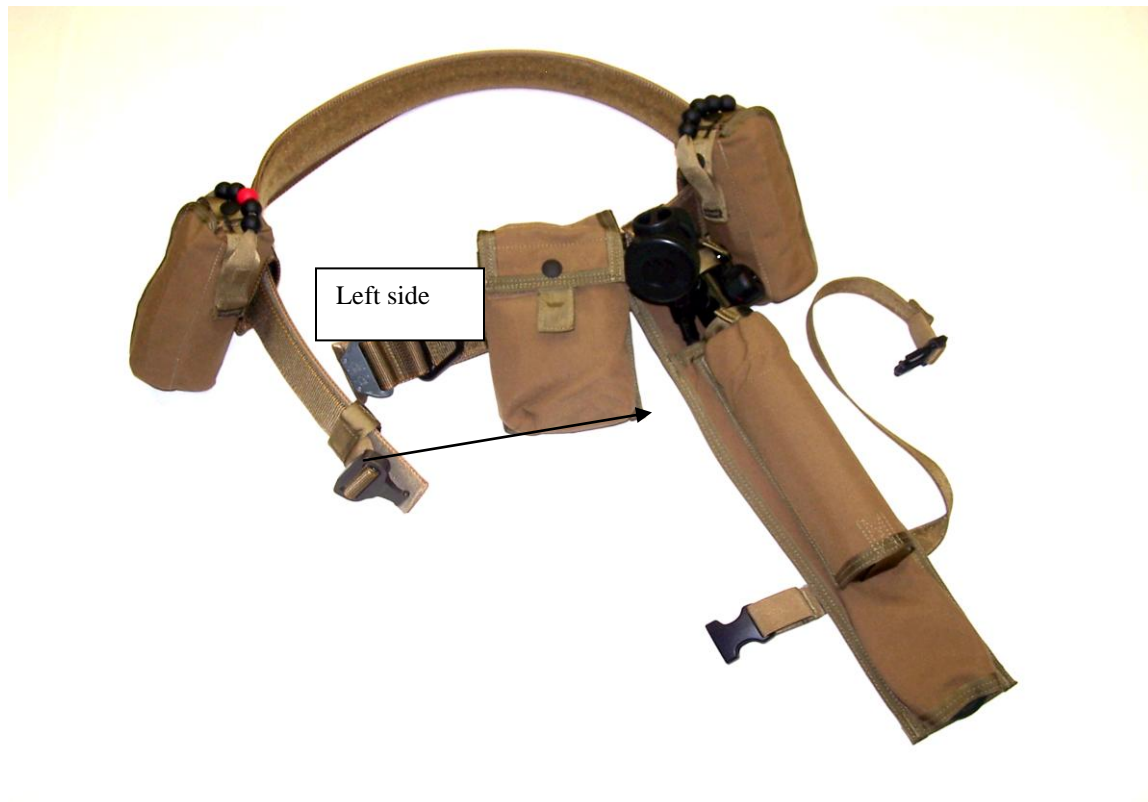
- Locate the Left side of the MSS belt (Emergency V-ring side) and slide on the Right MSS TFSS-8202 (Red bead) to its proper position.



- Slide on the Left MSS TFSS-8202 to its proper position.



- Slide on the MSS SEA/LV2 Holster (LV2 w/ LV2 holster) until it meets the left MSS TFSS-8202



- Slide on the MSS Signal Pouch until it meets the MSS SEA/LV2 Holster.



Front view



Back view

Complete MSS Assembly

2.0 Activation Procedures



- Locate the (A) SEA/LV2 mouth piece and separate from the (B) LV2 mouth piece holder.



- ****Place the LV2 mouthpiece in mouth and draw supplemental air as needed****



- Locate the Cobra buckle with both hands.
- Trace the belt back until both MSS TFSS-8202 Units are located and identify both beaded handles.
- (C) Loop thumbs through beaded handles of both MSS TFSS-8202 Units and form a fist.



- Punch both fists forward until elbows are locked.
- Then, lift both fists up to neck level.
- If bladder activation has not occurred, continue lifting handles.



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- Once both bladders are fully inflated, discard (D) both beaded handles.
- Discard or cut away MTV/OTV if needed or as required.



- Connect back side-release buckle and adjust as needed.



- Connect the front side-release buckle connector and adjust as necessary.

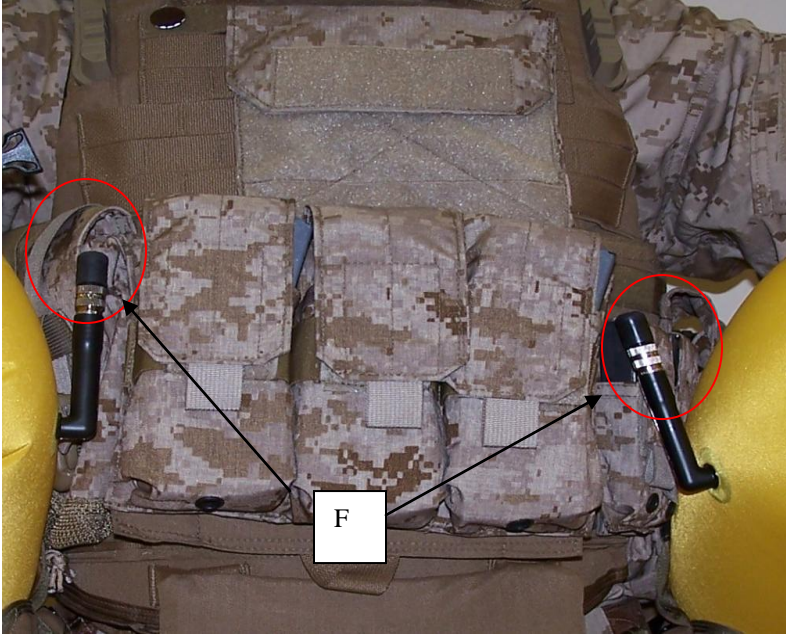


- (E) Locate the MSS Signal Pouch and use enclosed items as needed.

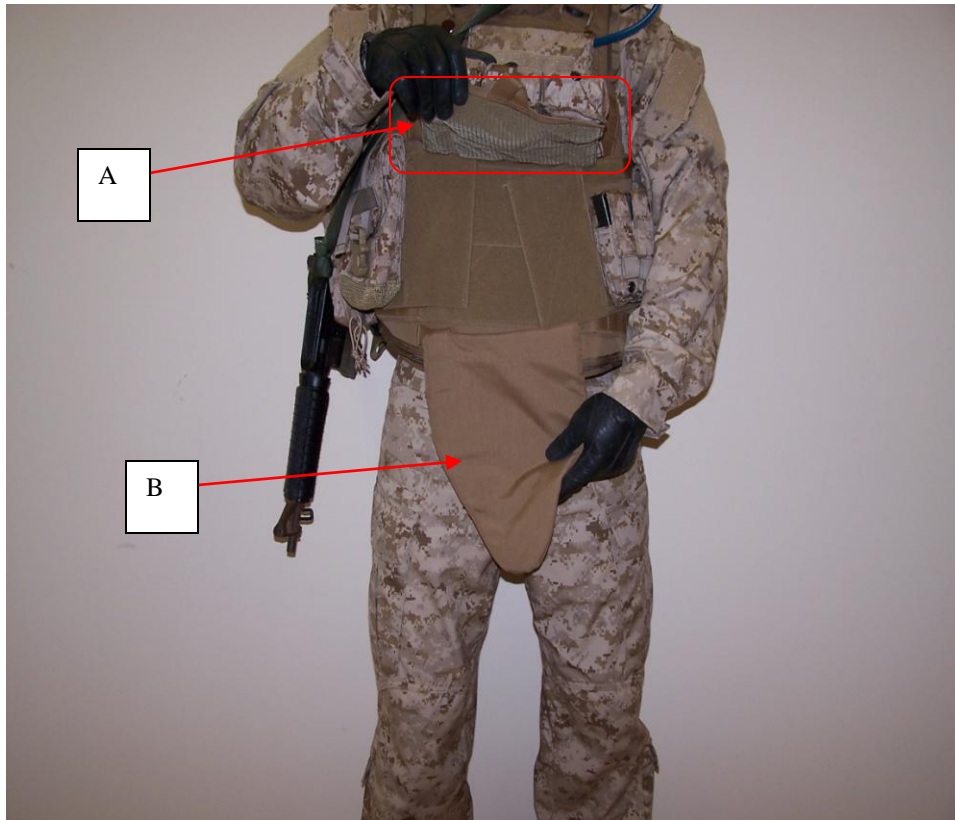


- The option is available to connect side-release buckle with other individuals to form a swimmer pool.

- ****Swimmer pools are highly recommended for countering the possibility of survivors becoming separated; in addition, they create a bigger signature for rescue parties to identify**.**



- In the event that automatic inflation fails, oral inflation tubes (F) are located on the inside of each MSS TFSS-8202 bladder.



- (A) Lift the front flap of the MTV/OTV.
- (B) If applicable, locate and grab the Groin protector flap of the MTV/OTV.



- (C) Rotate Groin protector flap to the upright position.



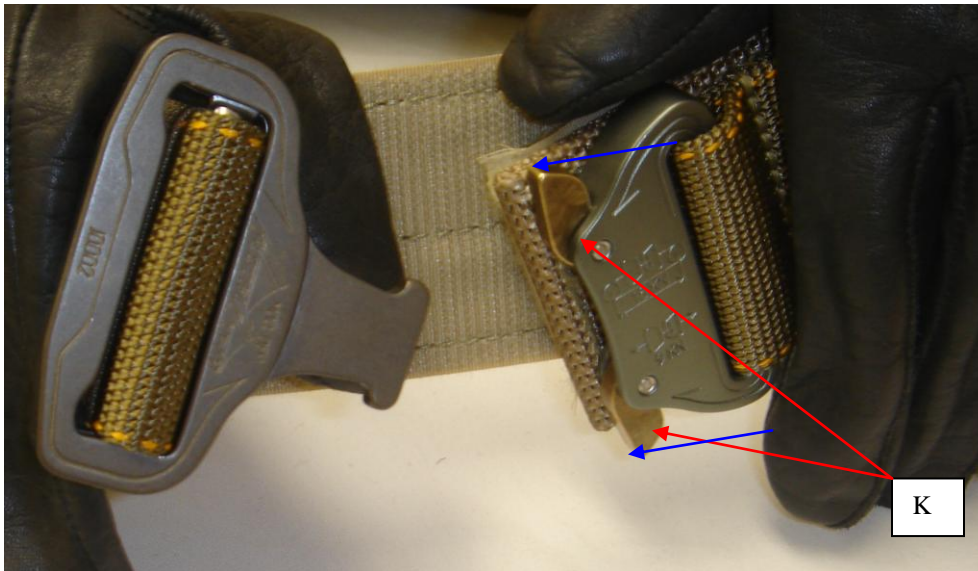
- (D) Drop the front flap of the MTV/OTV allowing it to properly secure the MTV/OTV groin protector in the upright position.



- Locate and acquire the MSS Assembly.



- Orientate the MSS Assembly in the up right position. Ensure the MSS TFSS-8202 (Left), MSS SEA/LV2 Holster, LV2 bottle and MSS Signal Pouch are all located on the left side of the MSS Belt.



- Grab the Cobra buckle and disconnect by depressing the two levers located on the (K) female end of the buckle (left side of belt). [Blue arrows signify release direction of levers.]



- Fully open the MSS Belt as depicted in the photo above.



- Place MSS Belt and MSS Assembly around waste.
- Ensure (L) that the MSS Belt is routed under, and not around the weapon.



- Fold the right side (rigid portion only) of the belt around the waist.
- Allow the (**) adjustable end of the right side of the belt to be free and hang down.



- Overlap the left side (D-ring side) of the MSS Belt over the right side until hook and loop are securely matted.



- Locate the adjustable end on the right side of the TFSS Safety buckle.
- Ensure that the adjustable end is routed under and not around the weapon.



- (M) Connect the Cobra buckle and ensure it is in the fully locked position.



- Tighten the adjustable end by pulling on it until all the slack is removed and the belt is securely fastened.



- Roll the excess nylon on the adjustable end towards the Cobra Buckle.



- Once the excess nylon has been properly rolled, locate the two hook and loop fasteners.



- Connect the two hook and loop fasteners until they properly secure all excess nylon.



- Slide the elastic retaining strap towards the excess rolled nylon.



- Adjust the MSS TFSS-8202 (Right – identified by the red bead) and ensure it is located on the right hip.
- Adjust the MSS TFSS-8202 (Left) and ensure it is located on the left hip.
- Adjust the MSS SEA/LV2 Holster and MSS Signal Pouch as needed.



- Locate and acquire the MSS SEA/LV2 Holster.



- Locate the side-release buckle and disconnect.

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- Route MSS SEA/LV2 Holster leg strap around leg.
- ****Notice. MSS SEA/LV2 holster leg strap is removable and, if desired, may be donned without it. ****



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- Connect side-release buckle and adjust as needed.



- Once MSS is fully in place, return the MTV/OTV Groin protector flap (if applicable) back to its original position.



- If preferred, rotate weapon to the front position.



- **Left leg holster:** Ensure the MSS SEA/LV2 Holster is placed in front of the left leg holster.
All other procedures remain the same

PART. 2: Doffing of the MSS Assembly with the MTV/OTV.

- (A) If desired, stow weapon/rifle to either the rear or side position.



- (B) Disconnect the side-release buckle on the leg strap of MSS SEA/LV2 Holster.
- Disconnect the Cobra buckle.



- Remove MSS Assembly from around waist.

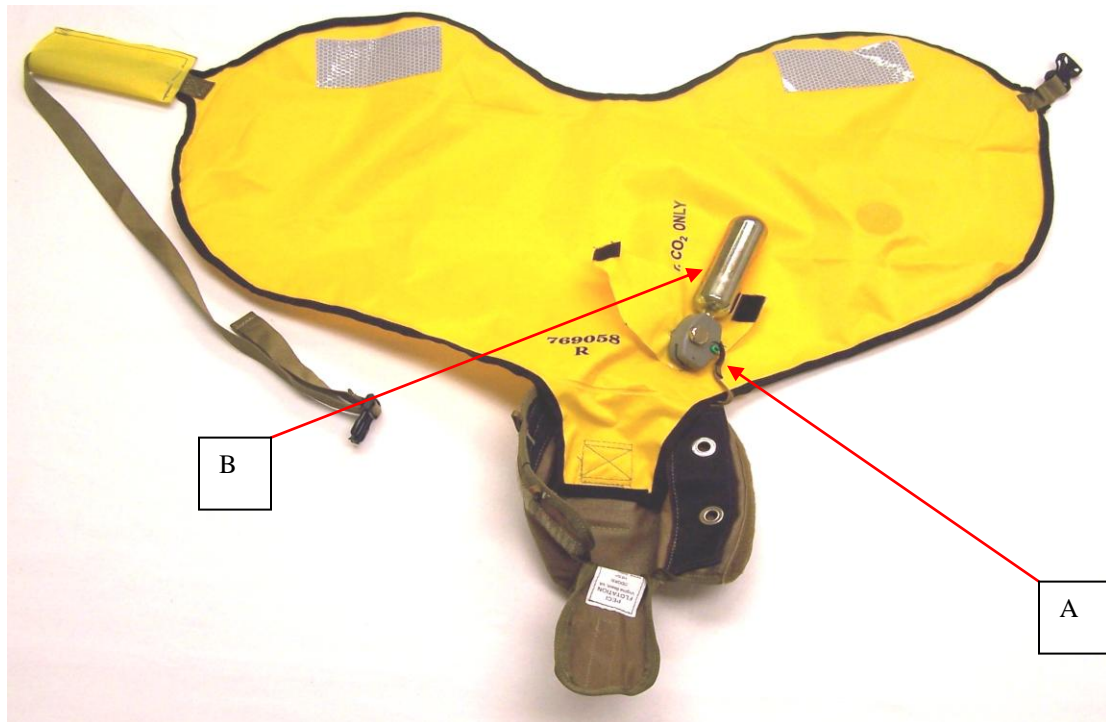


- If applicable, reconnect the Cobra buckle on the MSS Belt.
- If applicable, reconnect the side-release buckle on the leg strap of the MSS SEA/LV2 Holster.



- Discard the MSS assembly.
- If applicable, rotate rifle/weapon to the front position.

4.0 Packing Procedures (Right Unit)



- Ensure that all air/CO2 is removed from bladder.
- Check CO2 bottle for proper gram weight.
- (A)Ensure activation valve handle is properly seated and (B) screw bottle into valve until finger tight.



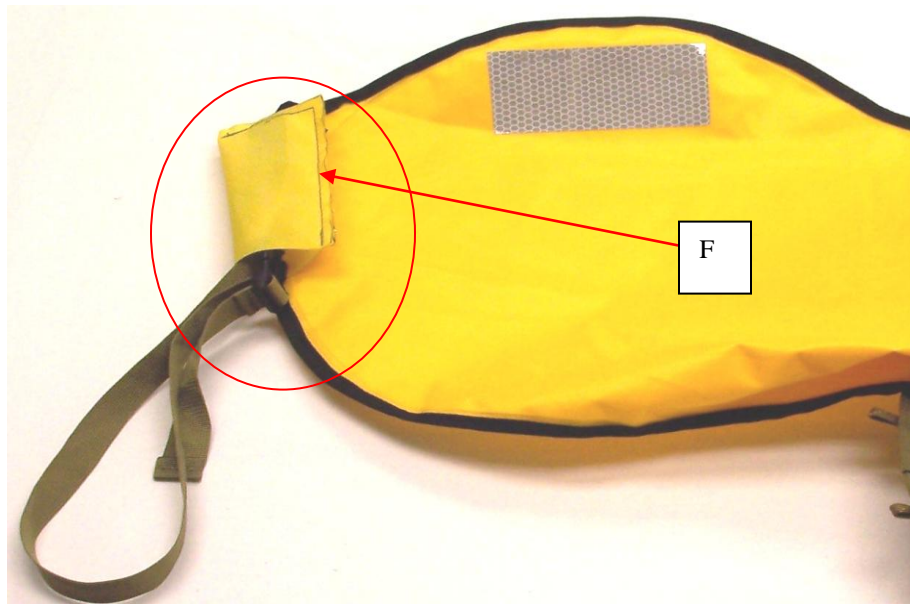
- ****Ensure the neural nut of the oral inflation tube is in the upright (closed) position**.**



- **(C) Secure actuator protective flap by using hook and loop fastener attachments.**



- (D) Rotate bottle back 180 degrees into container
- (E) Ensure the male end side-release buckle is extended to the first of two nylon stoppers.



- Insert the male end side-release buckle inside the (F) protective sleeve.



- Ensure the male end of the side-release buckle is fully seated until it meets the top (sewn end) of the protective sleeve.

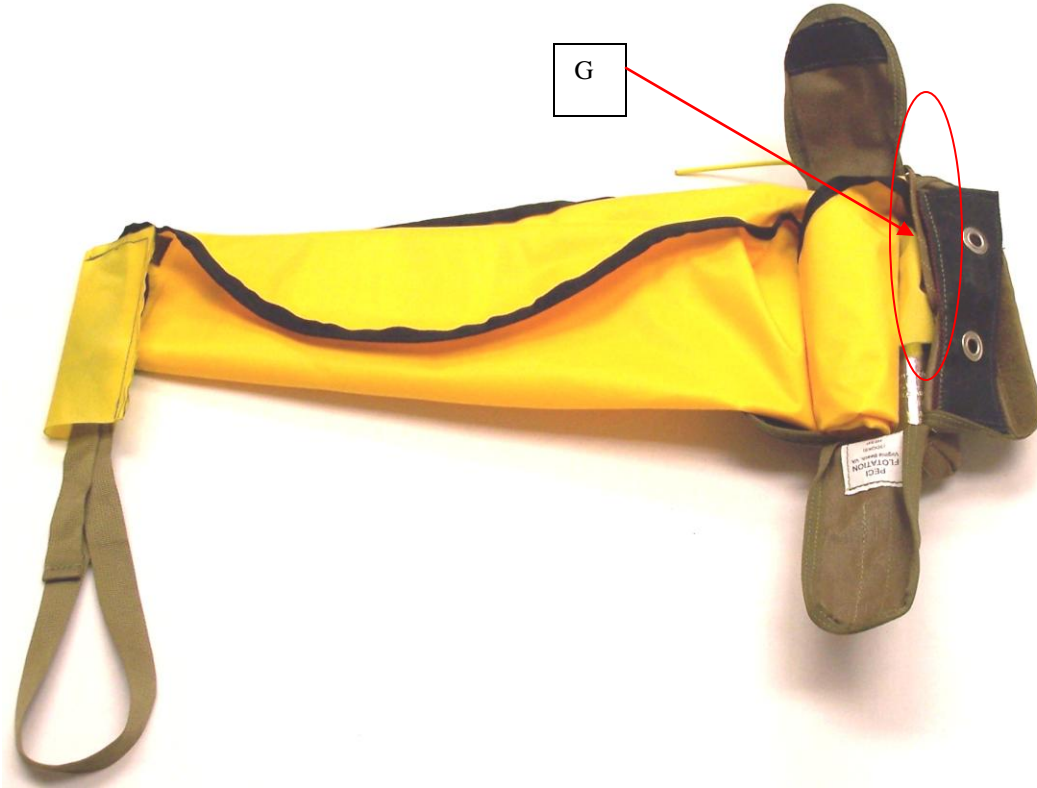


Fold bladder in half and fold the wing tips to equal the width of the packing container.

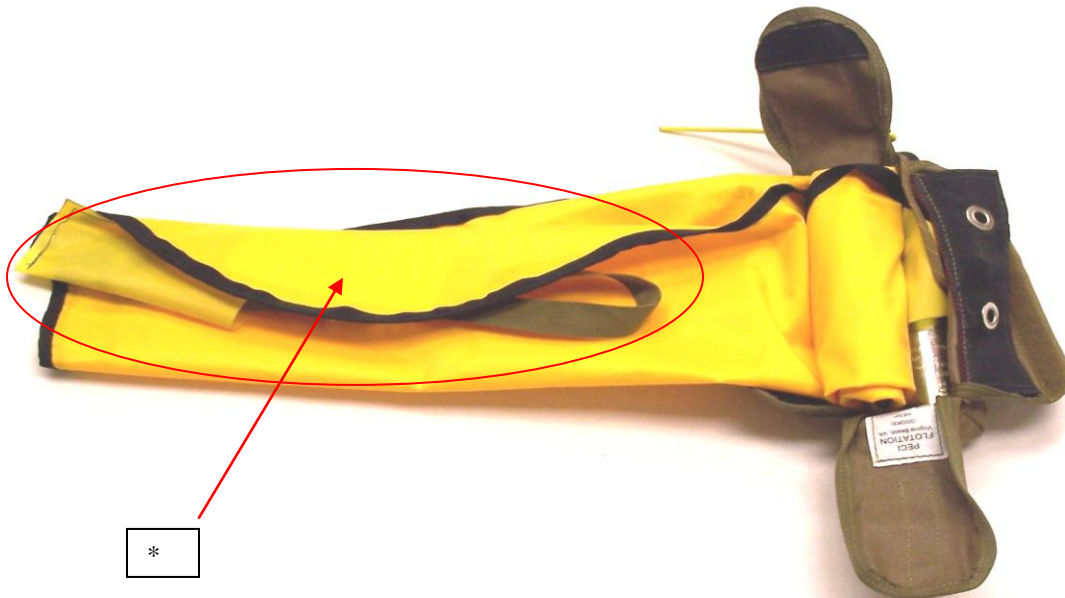
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- Tightly roll oral inflation end to center and insert into container aside bottle.



- (G)Ensure activation handle is free and clear and routed out of the container on the same side as actuator.



- Rotate the protective sleeve and the remaining nylon webbing directly under the (*) top flap of the bladder.



- S-fold opposite side, evenly across entire package.
- Insert folded portion atop opposite side and bottle.
- Prior to last S-fold, ensure the male end side-release buckle is still fully seated in the protective sleeve.



- Pull bottom flap up over bladder assembly and lay (H) excess inflator firing cord along side of and ensure it is free and clear. Tuck shorter flap down, engaging hook and bladder assembly. Loop fastener material.



- Thread packing cord through upper and lower tan closing loops.



- Thread ends of packing cord through upper and lower grommets.



- (I) Pull upper tan closing loop partially through the upper metal grommet, and insert closing pin.



- Pull lower tan closing loop partially through the lower metal grommet, and insert closing pin. Insert excess pin into (J) small pocket at the bottom of the flap.



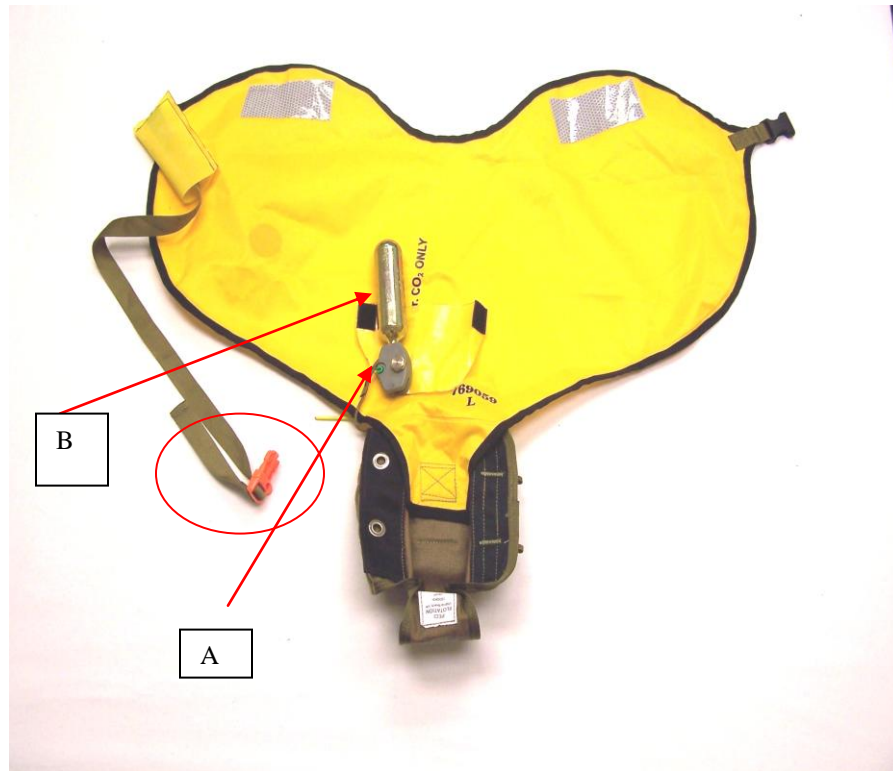
- Close pin protective cover and mate hook and loop. Ensure all three snaps are snapped and mate hook and loop on the handle to the container.



**Red bead denotes right side unit

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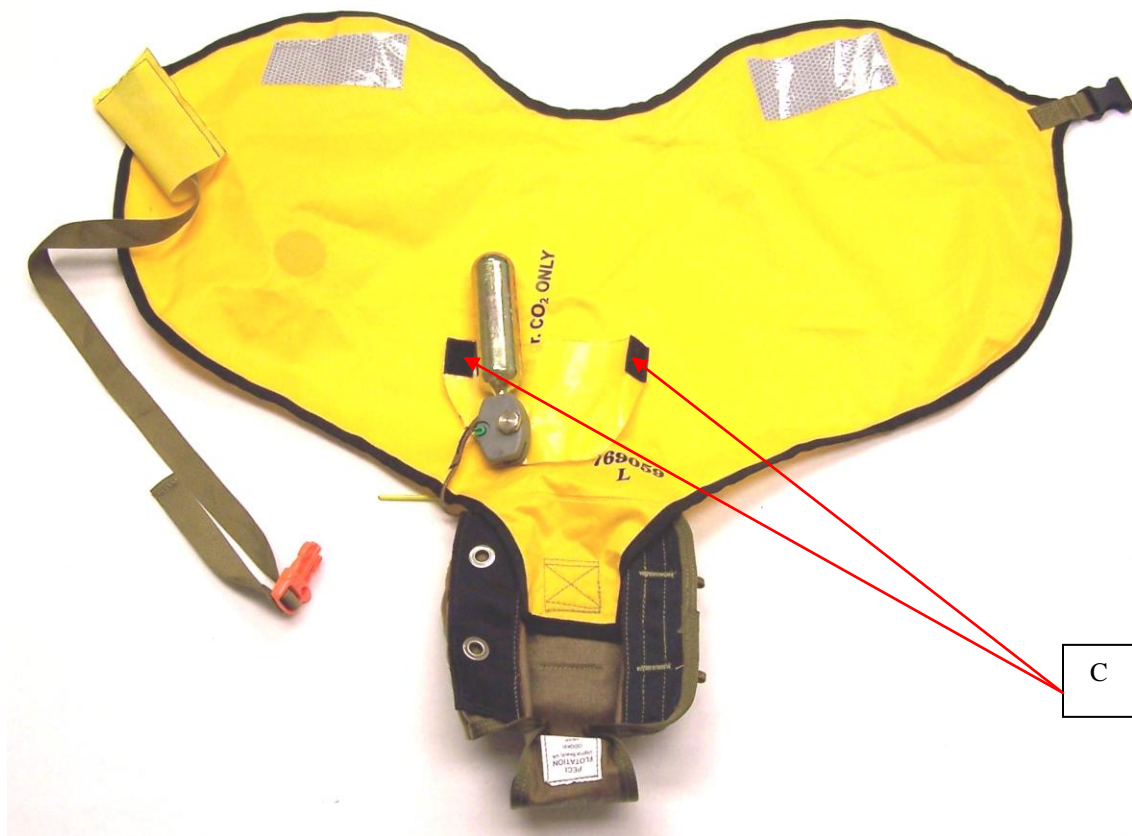
5.0 Packing Procedures (Left Unit)



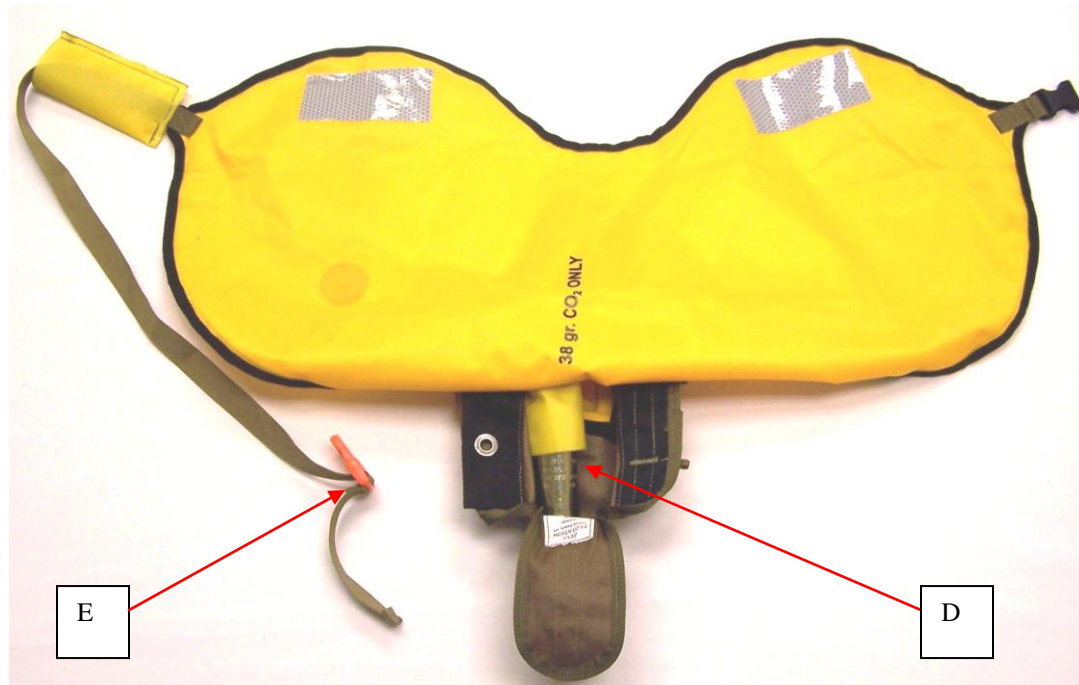
- Ensure that all air/CO2 is removed from bladder.
- Check CO2 bottle for proper gram weight.
- (A) Ensure activation valve handle is properly seated and (B) screw bottle into valve until finger tight.
- Function check whistle located on the orange side-release buckle (male end).



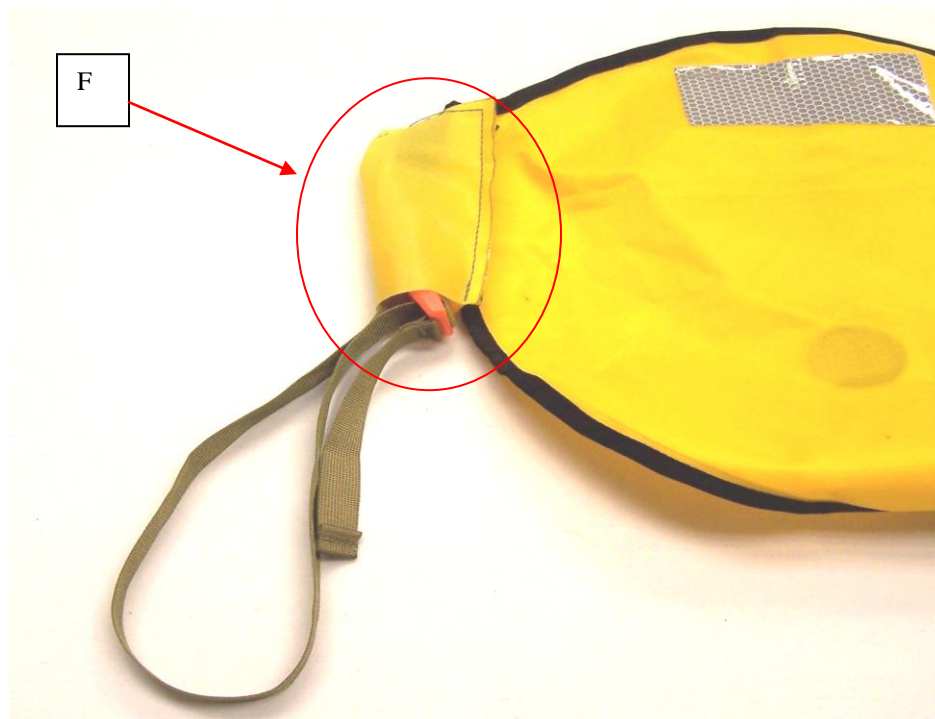
- ****Ensure the neural nut of the oral inflation tube is in the upright (closed) position**.**



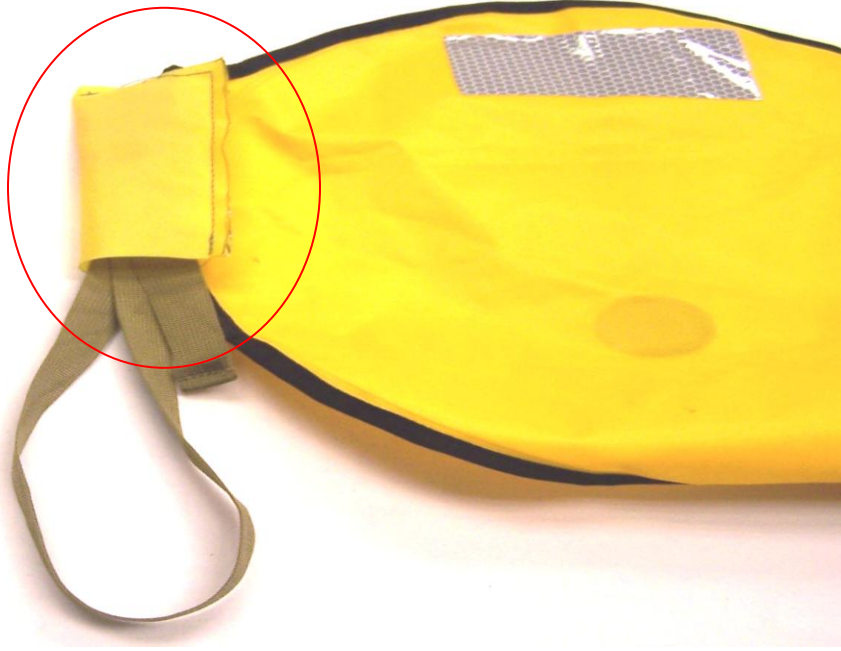
- **(C) Secure actuator protective flap by using hook and loop fastener attachments.**



- (D) Rotate bottle back 180 degrees into container.
- (E) Ensure the male end side-release buckle is extended to the first of two nylon stoppers.



- Insert the male end side-release buckle inside the (F) protective sleeve.



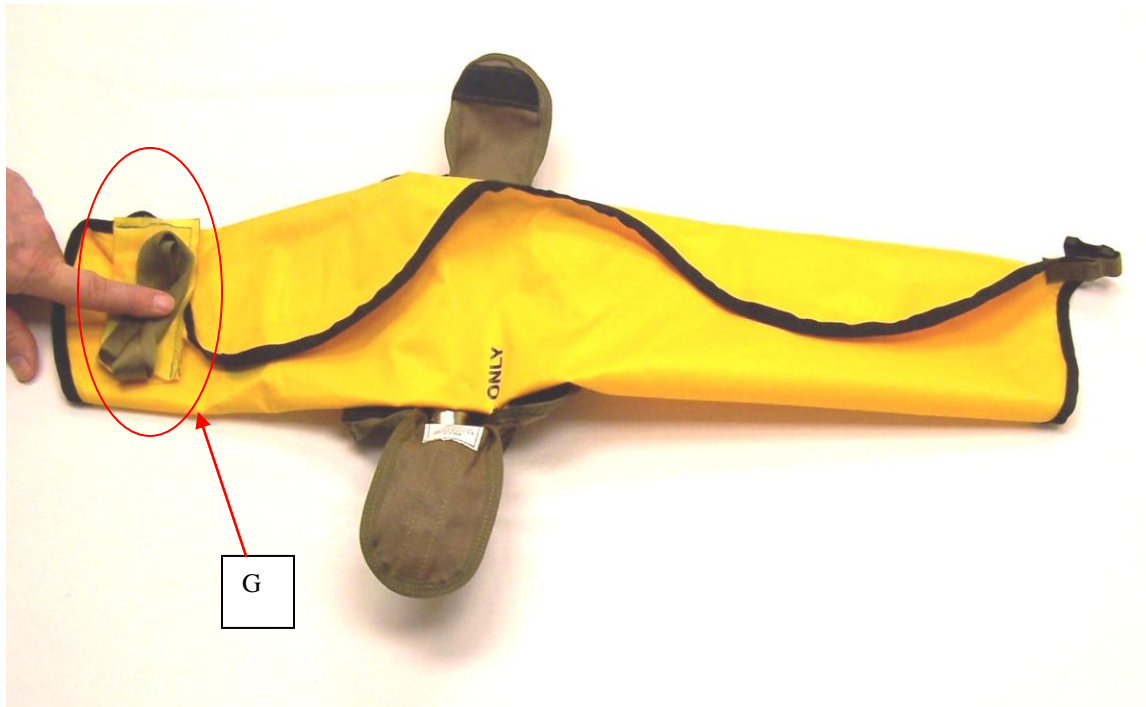
- Ensure the male end of the side-release buckle is fully seated until it meets the top (sewn end) of the protective sleeve.



- Fold bladder in half and fold the wing tips to equal the width of the packing container.



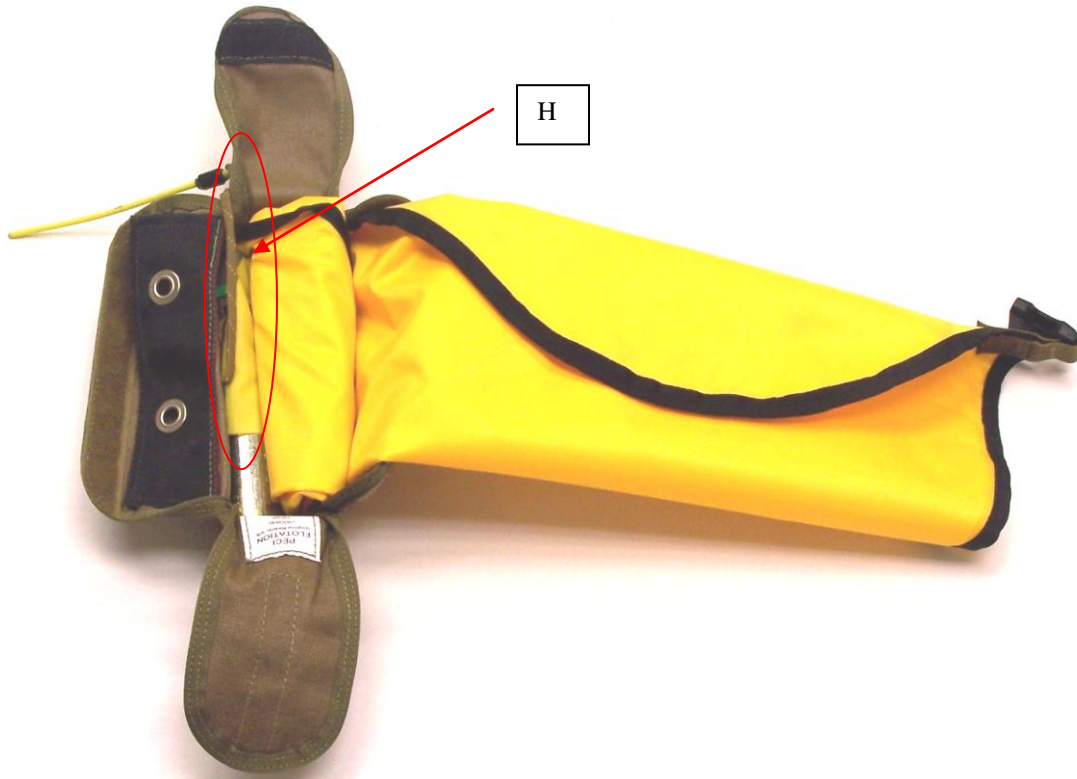
- Place the protective sleeve onto the bladder (orientated as depicted in the above photo).



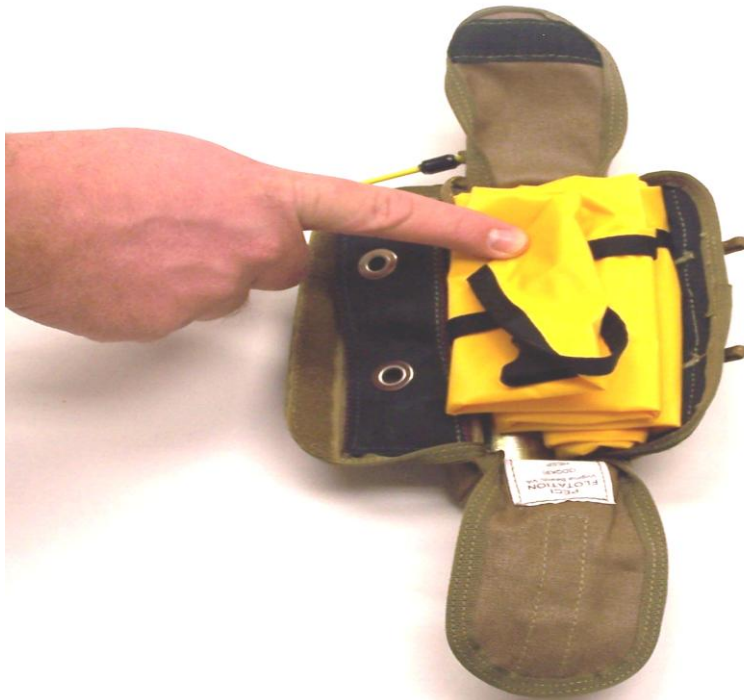
- (G) Fold the remaining nylon webbing onto the protective sleeve.
- Ensure orange male end side-release buckle is still secure in the protective sleeve.



- Tightly roll oral inflation end to center and insert into container aside bottle.



- (H)Ensure activation handle is free and clear and routed out of the container on the same side as actuator.



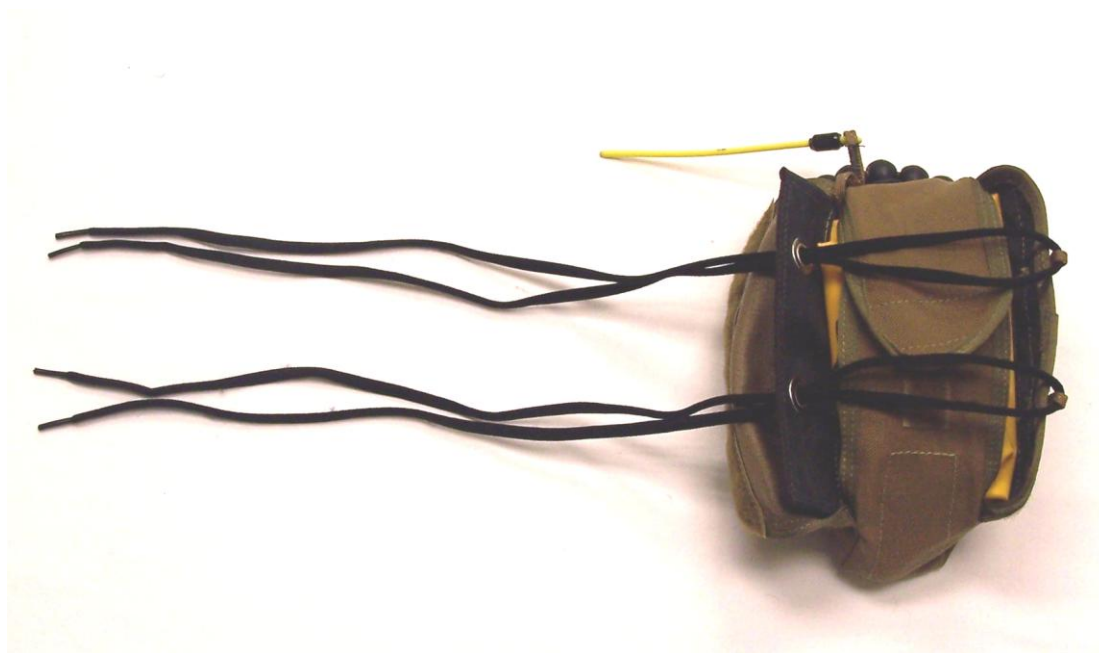
- S-fold opposite side, evenly across entire package.
- Insert folded portion atop opposite side and bottle.



- Pull bottom flap up over bladder assembly and lay (I) excess inflator firing cord along side of and ensure it is free and clear. Tuck shorter flap down, engaging hook and bladder assembly. Loop fastener material.



- Thread packing cord through upper and lower tan closing loops.

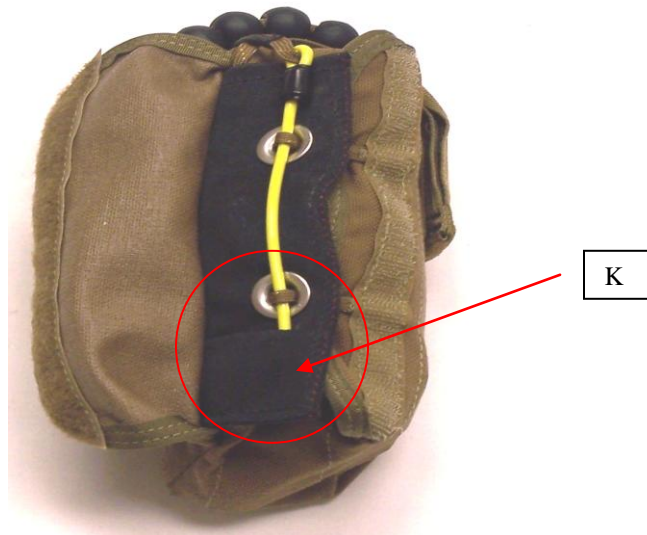


- Thread ends of packing cord through upper and lower grommets.



- (J) Pull upper tan closing loop partially through the upper metal grommet, and insert closing pin.

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- Pull lower tan closing loop partially through the lower metal grommet, and insert closing pin. Insert excess pin into (K) small pocket at the bottom of the flap.



- Close pin protective cover and mate hook and loop. Ensure all three snaps are snapped and mate hook and loop on the handle to the container.



MSS TFSS-8202 Left Unit

6.0 Maintenance Procedures

Part 2: Maintenance procedures.

1. After each use (where the unit has been saturated with salt water or chlorine) rinse entire unit in fresh water.
2. Orally inflate bladders and allow unit to completely air dry.
3. Apply a small amount of silicone lubricant to all valves and Cobra buckle.
4. Conduct a function check of the Cobra buckle.
5. Inspect all side-release buckles and replace as required.
6. Inspect all snap connectors for damage and replace as required.
7. Inspect all items contained in the MSS Signal pouch for damage. Replace as required.
8. Visually inspect bladders for any damage. Replace unit as required.
9. Repack unit in accordance with packing procedures and users' unit protocol.
10. Inspect all material for signs of damage, fraying and unacceptable wear and tear. Replace as required.
11. Perform maintenance and inspection of the SEA/LV2 bottle in accordance with the Manufacture required checks.

Part 3: Semi-annual Inspections.

1. Conduct maintenance procedures 3 – 11.
2. Orally inflate and allow the unit to sit inflated for 24 hours.
3. Visual inspect bladders for any damage. Replace unit if damaged.
4. Inspect all valves to insure they are in good working order.

Part 4: Initial issue.

1. Upon initial issue of MSS, the user is recommended to conduct a semiannual inspection and report any damage to the cognizant authorities.