

# FLOAT·TECH®

Wear it. Live with it.™

## OWNER'S MANUAL

Float-Tech® Recreational/Commercial  
Inflatable Personal Flotation Device (PFD)



Model Number(s):  
FT-HCA-R5-1,2,3,4,5,6,7

**DO NOT REMOVE PRIOR TO SALE**

**NOTE: DEVICE IS PACKED UNARMED and  
MUST BE ARMED IN ACCORDANCE WITH  
THIS MANUAL.**

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This is a Type V PFD because its inflation system is convertible between auto and manual operation. When armed in automatic mode, it substitutes as a Type III PFD and when armed in manual-only mode, substitutes as a Type III PFD. [This PFD is approved only when worn and used in accordance with the owner's manual.] USCG approved for use on recreational boats by persons at least 16 years of age. Also approved [only when worn] for use in lieu of a Type III PFD's under 46 CFR 160.064 on un-inspected commercial vessels less than 40 feet in length not carrying passengers for hire when used and serviced in accordance with the owner's manual. An owner's manual must be provided with this PFD. Not approved for use on personal water craft, for white water paddling, or for waterskiing, knee boarding, or similar towed uses. Not approved for "hot work". [To avoid death by drowning, read all the WARNINGS AND CAUTIONS located below before using this PFD.]

**NOTE: DEVICE IS PACKED UNARMED and MUST BE ARMED IN ACCORDANCE WITH THIS MANUAL.**

### **Approval Conditions and Carriage Requirements**

Conditional approvals are granted by the U.S. Coast Guard for PFDs that:

1. Do not meet all the requirements for approval under the Type I through IV categories but offer other significant safety features, or Have features or uses not found in Type I through Type IV PFDs that require special user knowledge.
2. The conditions let the user overcome design traits that would otherwise prevent approval.

### **Approved Only When Worn**

This PFD has the Approved Only When Worn condition on it's approval because if it is not worn whenever above deck and underway, it's less likely to be in working order and cannot be counted as a PFD to meet the carriage requirements on your boat.

This manual/automatic inflatable PFD requires more frequent checks than ones that have inherently buoyancy. Wearing this PFD will:

1. Ensure it gets the extra attention associated with use,
2. Ensures the user knows the advantages and disadvantages of the device, and
3. Increase safety enormously because you have it when needed.

Read the discussion under SPECIAL CONSIDERATION FOR THE MANUAL/AUTOMATIC INFLATOR ON THIS PFD and understand its implications on your safety.

### **Commercial Use**

Models FT-HCA-R5 are U.S. Coast Guard approved Type V inflatable PFD(s), approved **ONLY WHEN WORN** for use on un-inspected commercial vessels less than 40 feet in length not carrying passengers for hire as a substitute for a Type [specify type] PFD when used in accordance with this owner's manual.

Conditions for Type V Approval in Commercial Applications:

1. This PFD must be worn before getting underway and whenever above deck and not within an enclosed space to meet the carriage requirements.
2. The operator of an un-inspected commercial vessel is responsible for servicing and maintaining this PFD in good serviceable condition [see 46 CFR 25.25-11] in accordance with this owner's manual. For servicing information, see page 19.
3. The operator of an un-inspected commercial vessel is responsible for providing each person onboard with the safety information required for use of this PFD. See pages 17 through 21 for information.
4. All inflatable PFDs in use aboard a commercial vessel must be the same manufacturer and model.

**SERVICE AND INSPECTION RECORD**

**USER NAME:** \_\_\_\_\_

TEST THIS DEVICE AT THE BEGINNING OF EACH SEASON AND SERVICE ANNUALLY. REFER TO INSPECTION AND MAINTENANCE SCHEDULE PAGES 19-21.

DATE: \_\_\_\_\_ SERVICED BY: \_\_\_\_\_

COMMENTS: \_\_\_\_\_

DATE: \_\_\_\_\_ SERVICED BY: \_\_\_\_\_

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## I. Product Description

Float-Tech® is a unique product in that it consists of two overall components. The first component is the zip-in inflatable Personal Flotation Device (PFD), which is referred to as the “PFD” throughout the remainder of this manual. The second component is called the “Jacket” or “Jacket without sleeves” (since the user will have the ability to zip the sleeves off the Jacket).

The PFD has the inflatable life vest technology and devices that makes it a fully functioning personal flotation device while worn by itself or while zipped into specifically approved Jackets. The list of approved Jackets in which the Float-Tech® PFD is integrate-able is provided at the **USCG website** as well as [www.floattech.com](http://www.floattech.com), or by contacting the manufacturer. See contact information on page 23 of this manual.

REFER TO PAGE 5 & 6 FOR A DIAGRAM OF THESE TWO MAIN COMPONENTS

### SIZE CHART

<b>SIZES:</b>	<b><u>XS</u></b>	<b><u>S</u></b>	<b><u>M</u></b>	
<b>CHEST:</b>	30-32 in (76-81 cm)	34-36 in (86-91 cm)	38-40 in (97-102 cm)	
<b>SIZES:</b>	<b><u>L</u></b>	<b><u>XL</u></b>	<b><u>2XL</u></b>	<b><u>3XL</u></b>
<b>CHEST:</b>	42-44 in (107-112 cm)	46-48 in (117-122 cm)	50-52 in (127-132 cm)	54-56 in (137-142 cm)

## **II. Special Consideration for the manual/Automatic INFLATOR ON THIS PFD.**

Premature automatic inflation creates several risks that you must address to avoid drowning. The PFD might not be armed when needed, either knowingly or unknowingly. Much less common but also important are:

1. Double inflation could damage the PFD,
2. Inflation when stored in a tight space could damage the PFD, and
3. The PFD could inflate when you're in an awkward place or position.

Owners of this type of inflatable PFD must understand the unique characteristics of the product so that they can use them safely. You must learn how to properly arm the PFD.

Why: An improperly armed mechanism may not inflate the chamber.

This PFD will not provide buoyancy without being inflated. You must check the status of the mechanism and the CO2 cylinder before each outing. If the cylinder cap is punctured there will be no gas to inflate the PFD. Also, if the cylinder is deformed in any way, there may not be gas to inflate the PFD.

Why: This PFD will not float you unless it can be inflated.

Why: You usually cannot be sure that no one else inflated the PFD recently and did not replace the cylinder.

Why: Premature inflations that occur on a stored product may go unnoticed since the CO2 gas will permeate the chamber fabric within a few days, leaving a deflated chamber.

Why: U.S. Coast Guard studies have shown high percentages of un-serviceable inflatable PFDs with used cylinders in them when used by recreational boaters.

This PFD is designed to allow you to re-arm it in the "Manual Inflation Only" mode. Do not make any other alterations or modifications to the inflator mechanism.

Why: Altering the mechanism may result in the failure of the device to inflate and provide the necessary buoyancy to float you.

Why: Altering the PFD will void the U.S. Coast Guard approval.

Please read the entire owners manual for more details about the use and care of this Inflatable PFD.



## JACKET (with Inflatable Liner Attached)



1. LANYARD FOR MANUAL ACTIVATION (only visible when inflatable liner is attached)
2. ORAL INFLATION TUBE – ACCESSIBLE THROUGH VERTICAL CHEST ZIPPER
3. PULL DOWN WINDOW - ALLOWS VIEWABLE ACCESS TO ARMING CONDITIONS OF DEVICE
4. ADJUSTABLE SHOCK CORD
5. REFLECTIVE PIPING ACROSS SLEEVES AND CHEST
6. GUSSETED CHEST AND UNDERARM TO ALLOW FOR COMFORT DURING INFLATION OF PFD
7. TWO WAY ZIPPER, ALLOWS EASY ACCESS TO READJUST WAIST STRAP ON PFD
8. STOWABLE HOOD
9. ZIP ON/OFF SLEEVES FOR COMFORT DURING VARYING WEATHER CONDITIONS (NOT AVAILABLE ON ALL MODELS)
10. THREE ACCESSORY ATTACHEMENT POINTS FOR LIGHTS, WHISTLES, KEYS, ID TAGS, ETC.

### **DO NOT ATTACH PFD'S TO YOUR BOAT**

Each PFD has straps, hooks, buckles, or other means for securing the device in place on the wearer. Some PFDs also incorporate decorative dee rings or tabs. Such items are not to be used to attach the device to the boat. Attaching the device to the boat will not permit it to perform as intended.

## PERSONAL FLOTATION DEVICE (PFD)



- a. HALKEY-ROBERTS V90000 MANUAL/AUTO INFLATOR, CONVERTIBLE TO "MANUAL ONLY" WITH SPECIAL CONVERSION CAP
- b. ORAL INFLATION TUBE
- c. CHEST BUCKLE
- d. WAIST BUCKLE (ADJUSTABLE)
- e. ELASTIC POCKET FOR SPARE CO2 AND MANUAL CONVERSION CAP
- f. VISLON ZIPPER FOR ATTACHING AS A PFD TO THE JACKET

### III. Pre-donning Instructions

**Check the following before usage:**

- Inspect PFD for Damage
- Examine Inflation Mechanism status indicators
- Examine CO<sub>2</sub> Cartridge Face for puncture hole

#### 1. Inspecting your PFD for Damage

Inspect the PFD for rips, tears or punctures. The Inflatable Chamber and Liner should be inspected at the beginning of each boating season, and every two months during each season. Damage indicates that the Inflatable Chamber may not function properly to act as a Personal Flotation Device. If such defects are present, discontinue use of the PFD, and have the PFD inspected by an authorized repair facility (for authorized repair information, please contact the manufacturer. See contact information on page 23 of this manual). To perform the leak test procedure please refer to the section **User Inspection** (section V.A).

#### 2. Examine Inflation Mechanism Status Indicators

The status indicator check instructions are provided on the device inside a pocket near the inside of the left chest. The V90000 Automatic inflator used with Float-Tech<sup>®</sup> has two indicators: one for the Jerk to Inflate Actuating Lever and one for the Automatic Bobbin. The status Indicators will tell you if the mechanism is **ARMED** and ready for activation. In addition, the CO<sub>2</sub> Cartridge Face should be checked for a puncture hole.

The color of the Status Indicators have the following meanings:

**Green** = OK = Ready

**Red** = NOT READY = See 'Rearming Instructions'

IF ANY INDICATOR IS **RED**, IMMEDIATELY **REARM**

#### 3. Examine CO<sub>2</sub> Cylinder Face for puncture hole

You must verify that the CO<sub>2</sub> Cylinder installed is of correct size and has not been previously fired. *To examine the cylinder, unscrew it, Visually examine the flat surface on the threaded end.* If there is any visual damage on the flat surface the cylinder **MUST BE REPLACED**. If the cylinder is OK, you must properly screw it back into the mechanism.

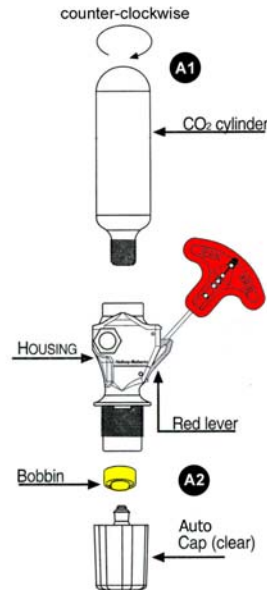
**CAUTION: DO NOT strike cylinder with sharp objects**

THE CO<sub>2</sub> CARTRIDGE MUST BE REARMED AFTER EACH USE.

Proper cylinder size includes both thread size and CO<sub>2</sub> gram weight. For this Model the CO<sub>2</sub> Cylinder is **24 Grams**, and **1/2 inch** thread as provided in **Leland Rearming Kit # V90000-84204Z** (Referenced Kit includes a 24 gram 1/2 inch thread CO<sub>2</sub> cylinder, bobbin, and green indicator clip).

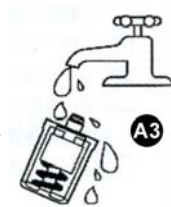
#### 4. V90000 Halkey-Roberts Auto Inflator Rearming Instructions

**Step A1. Unscrew** used CO<sub>2</sub> cylinder in a **counter-clockwise** direction and to avoid confusion later in the rearming process, **discard** the old CO<sub>2</sub> cylinder now. **Do not insert** unused or new cylinder at this time. It will discharge.

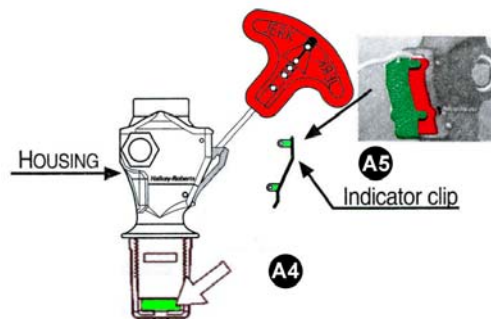


**Step A2. Unscrew** the clear cap on the bottom of the inflator in a **counter-clockwise** direction. **Remove** and **discard** the used plastic bobbin element.

**Step A3. Rinse** any white residue remaining in or on the cap and from the housing of the inflator. Shake dry or allow to air dry. (Fresh water rinse is desirable.)



**Step A4. Check** the date on the side of the bobbin to ensure that the bobbin is less than **3 years** old. **Insert** the fresh bobbin, lining up the slots on the bobbin with the ridges inside the housing. **Replace** clear cap inflator securely, but **do not over tighten**. (The indicator at the bottom of the cap will change from red to green when the bobbin is properly loaded. The inflator will not work in the automatic mode without the bobbin.)



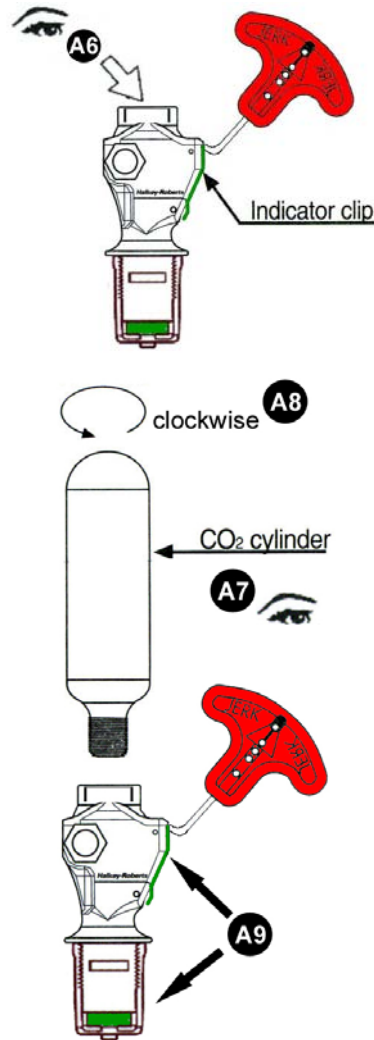
**Step A5.** If manual **lever** is not **locked** or the **green indicator clip** is missing, **close** the lever **within** the **inflator** body and carefully **insert** a new **green indicator clip** so that it fully **covers** the **red lever** on the body by aligning the arms on the clip with the slots in the inflator housing. Push firmly in the middle of the clip to snap into place.

**Step A6.** Look into the threaded cylinder. Receiver and **view** the gasket. **Replace** if **worn**. This is a 3/8-inch gasket.

**Step A7.** **Inspect** the face of the new **cylinder**. Be sure it is **smooth** and has **no holes or scratches**. There is a gross weight on the cylinder. If you have any question about cylinder integrity, weigh the cylinder on a small scale, such as a postage scale. **Compare** the **weight** printed on the cylinder to the actual weight. If they **do not match**, get **another** cylinder.

**Step A8.** **Screw** the new properly sized **cylinder** in a **clockwise** direction into the cylinder receiver firmly. **DO NOT OVER TIGHTEN**, but ensure the fit is snug.

**Caution: A9.** **Check cylinder face** and ensure that the arming indicators on your inflator are **green** before each boating trip. They will tell you if there is need for service.



**Leland Rearm Kit # V90000-84121Z** or approved equal. Re-Arming Kit includes a 24 gram CO<sub>2</sub> cylinder with 1/2 inch thread, bobbin, and a green indicator clip.

## 5. Conversion of V90000 Auto-Inflator to Manual Only Operation

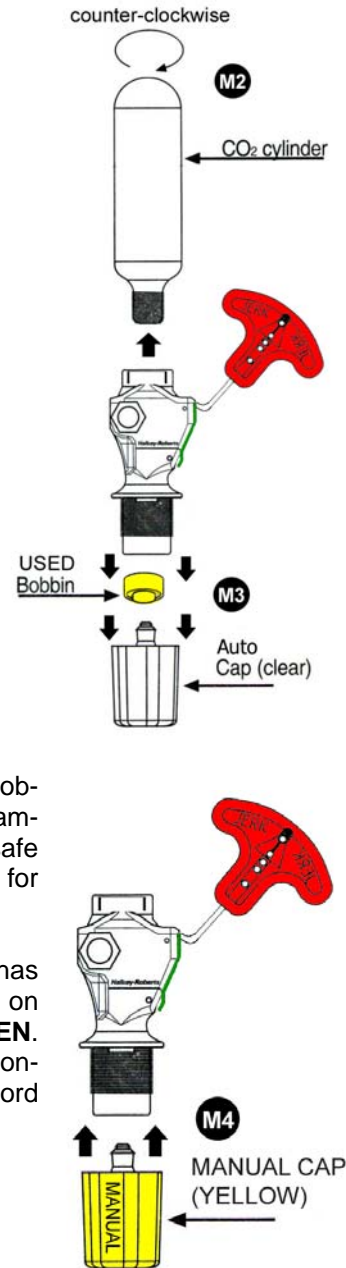
Remove the yellow manual cap and spare 24 gram CO<sub>2</sub> cylinder from its packaging.

**Step M1.** If the manual/auto unit has become wet and prematurely inflated, deflate the PFD (see page 16).

**Step M2.** **Unscrew CO<sub>2</sub> cylinder** in a **counterclockwise** direction and to avoid confusion later in the rearming process, **discard** the CO<sub>2</sub> cylinder if it has been previously used or damaged. If the CO<sub>2</sub> cylinder is unused place it aside until Step M6 below. **Do not insert** unused **cylinder** at this time. It will discharge.

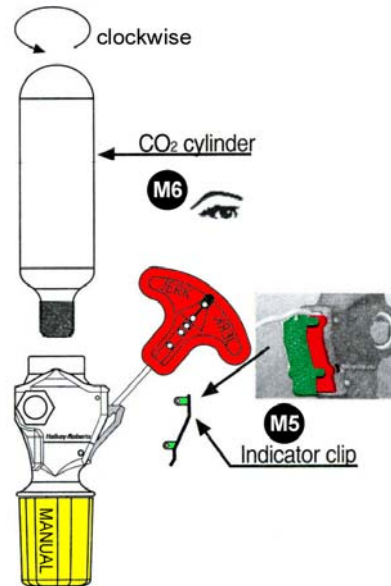
**Step M3.** **Unscrew the clear cap** on the bottom of the inflator housing in a **counterclockwise** direction and place-it in a safe location for future use. Remove and discard the plastic bobbin element, if used, damaged, or shows signs that it has gotten wet. If bobbin element is unused and undamaged, save the bobbin in a safe location (plastic zip-lock bag) for future use in the auto-inflator.

**Step M4.** **Screw on the yellow cap** (it has the words "MANUAL:" printed on side), **DO NOT OVER TIGHTEN.** The inflator has now been converted to manual-only, rip-cord activated CO<sub>2</sub> inflation.



**Step M5.** If manual lever is not **locked** or the **green** indicator **clip** is missing, **close** the lever **within** the **inflator** body and carefully **insert** a new **green** indicator **clip** so that it fully **covers** the **red** lever on the body by aligning the arms on the clip with the slots in the inflator housing. Push firmly in the middle of the clip to snap into place.

**Step M6.** Screw the unused or new 24 gram cylinder in a clockwise direction into the cylinder receiver firmly. **DO NOT OVER TIGHTEN**, but ensure the fit is snug.



**Leland Rearm Kit # V90000-84121Z** or approved equal. Re-Arming Kit includes a 24 gram CO<sub>2</sub> cylinder with 1/2 inch thread, bobbin (not used in manual armed condition), and a green indicator clip.

Note: The yellow manual cap does not contain a spring, and must be used to convert the inflator to manual-only operation. Attempting to use the clear cap without a bobbin would instantly puncture the CO<sub>2</sub> cylinder.

## 6. Attaching the Float-Tech® PFD to the Jacket

For attachment/removal of the PFD, follow these six steps:

**Step 1:** Check status of inflator and arm if required. Roll Velcro cover from right chest to left side and Velcro the cover in the depicted location. The viewable inflator cover is only to be used when the PFD is worn without the jacket.”



**Step 2:** Lay the jacket flat and open on flat surface.

**Step 3:** Lay the PFD such that oral tube is on the left chest. Unzip oral inflation zipper opening and place oral tube through opening over top of the elastic strap and then close zipper.



**Step 4:** Attach the PFD to inner jacket zipper and zip ½ of the full distance.

**Step 5:** Locate the clear viewing window on right chest of jacket, pull open the viewing panel and identify the overlap of the window. Place the end of the “Jerk to Inflate” lanyard tab through the slot. Next place the inflator end into the black elastic retaining pocket.



**Step 6:** Zip the PFD zipper the remaining distance and follow arming and examination steps shown previously. Ensure that “Jerk to Inflate” lanyard is visible after donning. Jacket should be stowed on a hanger or folded and placed in a dry area for storage.



## IV. Donning Instructions

### A. Wear Float-Tech® as a Jacket (PFD zipped into Jacket)

**Step 1:** Secure the front buckle(s) and adjust the lower buckle until comfortably snug fit. Jacket may be worn as zipped or unzipped, however, **both buckles need to be secured** while wearing the device. To loosen or tighten the PFD while the jacket is zipped, it is best to use bottom two-way jacket zipper to access the bottom PFD buckle strap for adjustment purposes.

**Step 2:** After donning, locate the **Jerk to Inflate** tab for the mechanism, it should protrude from the Jacket and be visible. Make sure that you are comfortable locating the **Jerk to Inflate** tab with either hand.

**Step 3:** Prior to donning always view inflator indicators to verify that the device is active. To view the inflator within the jacket, pull right upper pocket down vertically with either hand to view window. [Refer to Arming Instructions in this manual, page 8 for auto inflator arming instructions, and page 10 for converting auto inflator to manual inflator.]



Please note:

1. When the PFD is attached to the Jacket, the attached Velcro cover/window on the PFD must be rolled over into an open position as to expose the inflator. The inflator will then, be more accessible and viewable through the Jacket's viewing window when the PFD is zipped into the Jacket.
2. Always wear your Float-Tech® PFD in Float-Tech® approved apparel. Do not wear Float-Tech® under any clothing other than that indicated on the approved list. The **approved outerwear list** can be found on the **USCG Website** or **www.floattech.com**, or contact the manufacturer. (See contact information on page 23 of this manual)
3. To don while inflated (with PFD in Jacket) follow Step 1 above.

## B. Wear Float-Tech® as a stand alone PFD (no Jacket)

- Step 1:** Secure the front buckle(s) and adjust until comfortably snug fit. **Both buckles need be secured** while wearing the device.
- Step 2:** After donning, locate the **Jerk to Inflate** tab for the mechanism, it should protrude from the PFD and be visible. Make sure that you are comfortable locating the **Jerk to Inflate** tab with either hand.
- Step 3:** Prior to inflating always view indicator to verify that the device is active. View inflator through clear window in the PFD. [Refer to Arming Instructions in this manual, page 8 for auto inflator arming instructions, and page 10 for converting auto inflator to manual inflator.]



- Step 4:** When wearing the Float-Tech® PFD alone, secure the oral inflation tube to the PFD with Velcro loop. This will secure the oral inflation tube to the core and reduce wear on the oral tube.

**Please note:** To don the PFD alone (not in jacket) while inflated, follow Steps 1 and 4 in the this above section.

**CAUTION:** Bulky clothing may affect the ability of this PFD to turn the wearer to face-up position in water. The Float-Tech® PFD is designed to fit with the approved Jackets only. **DO NOT** wear the PFD under any other jacket or apparel. The approved outerwear list can be found on the **USCG Website** or [www.floattech.com](http://www.floattech.com), or contact the manufacturer directly. See contact information on page 23 of this manual.

## V. Inflation Instructions

### Auto Inflation:

If armed in auto mode, PFD will auto inflate upon submersion in water.

**Manual Inflation:** If armed in auto mode or manual mode the PFD can be inflated by grasping the **JERK TO INFLATE** tab and rapidly pull downward.

*CAUTION: Do not manually inflate after the chamber is ALREADY inflated. This may cause damage to the PFD.*



### Oral Inflation:

1. Unzip the zipper on the left chest side of the jacket.
2. Grasp the Red Oral Tube and bring to mouth.
3. Blow air into the Oral Tube until the PFD is firm.



**Note:** Oral inflation may be required if PFD is NOT firm due to cold temperatures at or below 40° F (4° C).

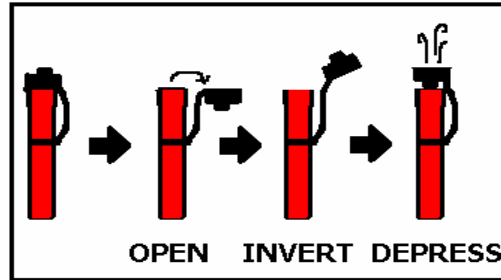
## VI. Abandon Ship Instructions

1. Inflate PFD manually as described in Section V (previous section).
2. Hold collar area, of the PFD if worn alone, or collar area of the Jacket if PFD is zipped into jacket. Then jump into water. (See diagram below).



## VII. Deflation Instruction

1. **LOCATE** INFLATION **CAP** on oral tube.
2. **OPEN** INFLATION **CAP**
3. **INVERT** **CAP**
4. **DEPRESS** INFLATION **CAP** INTO **TUBE**



5. **Assist in deflation by rolling** jacket and/or PFD tightly, starting from the **inflator side** of the lifejacket and **roll toward the oral tube**, Be sure to remove as much inflation medium as possible. **Deflation may be easier by removing the PFD from the jacket first.**
6. Upon deflating the bladder **replace the cap** onto the oral tube.
7. Reposition oral tube into Velcro loop if being worn as PFD alone or reposition oral tube into Jacket pocket and re-zip pocket. (Do not use Velcro loop when repositioning oral tube back into Jacket pocket).

**Caution:** All CO<sub>2</sub> or inflation medium must be removed from the PFD after inflation occurs to ensure that the PFD is not over inflated and damaged the next time the PFD is inflated.

## VIII. Care and Cleaning

REMOVE THE PFD BEFORE ALL CLEANINGS OF THE JACKET. **THE JACKET SHOULD BE CLEANED SEPARATELY FROM THE PFD.** Machine wash cold tumble dry on low or delicate the jacket only, not the PFD.

For the PFD:

- Do not Machine Wash
- Do not Machine Dry
- Do not Dry Clean
- Do not use SOLVENT based cleaners
- Do not Bleach

Drying: If the PFD or the jacket is wet, place both separately, the jacket and the PFD on coat hangers to allow for thorough drying. Do not use any heat source, or direct sunlight to dry.

Cleaning: For the PFD, rinse well with fresh (not salt) water, damp wipe with mild detergent. Any oil or grease should be removed.

The service life of this PFD depends upon how it is used and cared for. When not in use the PFD should be stored away from direct sunlight, high temperature, and high humidity. These elements will degrade the life of the materials. The PFD should be stored in a *clean, cool, dry area*.

## **IX. Inspection**

### **A. User Inspection**

Check your PFD between outings to ensure that the CO<sub>2</sub> Cartridge is properly armed; that it is free from rips tears or holes and that all seams are securely sewn; and all fabric, straps, buttons and zippers are still strong.

**LEAK TEST** – This test should be performed every two months and at the start of each boating season.

- Orally inflate the PFD and leave to rest for 12 hours.
- If the PFD remains full of air after 12 hours the chamber is *operational*.
- If the PFD deflates, the device is no longer operating. Please contact the manufacturer or certified inspector.

**ORAL VALVE** – Remove dust protection cap on the oral inflation tube.. With the PFD inflated, push down with tab on the cap to test valve. The Valve should depress easily and return to close position and reseal upon release.

**STRAPS AND LINER** – Inspection should be performed each outing. Examine fabric liner and inflation bladder in the PFD. Examine snaps, buckles, zippers, attachments, and seams for fading. Fading can indicate a loss of material strength. For **ANY** signs of damage, please contact the manufacturer or certified inspector..

### **B. Certified Inspection**

Float Tech Inc. recommends that the manufacturer or certified inspector inspect the PFD at least every 36 months. For a certified inspection, contact Float Tech Inc. for instructions (details available where product is purchased). For more details about certified inspections, information can be obtained by calling 1-518-266-0964.

## **X. Un-inspected Commercial Vessel Operator Information**

The operator of the vessel is required to provide the following User Information to each person on board during a safety orientation (*reference 46 CFR 26.03-1*).

Inflatable PFD's will not provide any buoyancy without being inflated. Follow these instructions to be sure your PFD is armed and donned correctly, and that you understand how to inflate the device.

- Before each voyage, users must complete a Basic Visual Examination – See Section III - Pre-Donning Instructions, beginning on page 7.
- Before each voyage, users must complete an Inflation System and CO2 Cylinder Check – Before each voyage users must inspect the arming condition of the device, refer to Section III - Pre-Donning Instructions, parts 2 and 3 beginning on page 7.
- Review the Donning Instructions in section IV on page 13 and 14. This device can be worn either as a stand alone vest or within Float-Tech approved outerwear. Become familiar with the versatility of this product.
- Review and understand how an convertible inflatable works and is activated. Review the Inflation Instructions in section V on page 16.

**- Other Use Guidelines –**

1. Always wear your PFD when underway unless you are inside a cabin. This is a requirement for commercial approval and is strongly advised for all users.
2. If you need to jump from any height, always fold arms over your chest to keep the PFD in place when entering the water.
3. Avoid all unnecessary activities that will be abrasive to the device.
4. Use extreme caution around sharp objects.
5. Avoid unnecessary exposure to the sunlight.
6. CO2 gas from cylinder will permeate through the chamber fabric over time. If you are in the water for a long time, it may be necessary to orally inflate the inflatable PFD until firm, by blowing air into the oral tube.
7. Inflatable PFDs are not designed for activities in which the wearer expects to encounter impact with the water at a high speed such as water skiing, riding personal watercraft, etc.
8. Inflatable PFDs are not designed for white water activities.
9. Dropping this PFD into the water, or exposing the inflation system to unnecessary water spray, will result in an inadvertent inflation. Store in a well ventilated area.

**XI. UNINSPECTED COMMERCIAL VESSEL USE**

This inflatable PFD is not approved for “hot work” and care must be taken to avoid damage from heat, abrasion, and sharp objects.

**XII. SERVICING INSTRUCTIONS FOR UCV OPERATORS**

Federal Regulations require Coast Guard approved personal flotation devices (PFDs) that are legibly marked with the U.S. Coast Guard approval number, are in good and serviceable condition, and are the correct size for each person on

board. It is the responsibility of the operator to be sure this PFD is in serviceable condition. To be considered serviceable, this PFD shall not exhibit deterioration that could diminish its performance, such as broken or deformed hardware, detached webbing, rotted structural components, air leaks or nonfunctional inflation tube. Unless worn inflated, this PFD must also be properly armed with a cylinder installed in the mechanism, a bobbin (water sensing element) installed, and service indicator showing Green. See pages 8-11 for arming instructions.

**XIII. INSPECTION AND MAINTENANCE SCHEDULE FOR UCV OPERATORS**

<b>MAINTENANCE SCHEDULE</b>				
Each Outing (see item 1)	Every 2 Months* (see item 2)	After Each CO2 Inflation (see item 3)	Annually* (see item 4)	
X				Check for Green status indicator
X				Check Manual Pull Tab Access
X				Basic Visual Damage Examination
				Recommended Test Auto-Inflation
		X	X	Inspect Auto-Inflation Mechanism
	X		X	Test Oral-Inflation
	X		X	Leak Check – 16 hours
			X	Clean
		X	X	Rearm – Replace CO2 and Bobbin
	X		X	Thorough Visual Examination
			X	Record and date Inspection Log on PFD

\*Perform more often if exposed to potential damage or used in extreme

conditions.

1. BEFORE EACH USE:

- i) Examine the service indicator through the window panel, ensuring it is green. If the indicator is red, the mechanism requires service. See re-arming instructions [refer to re-arming instructions page \_\_\_\_].
- ii) Ensure the manual pull-tab is accessible.
- iii) Ensure the oral-inflation dust cap is in the stowed position.
- iv) Visually examine the Inflatable PFD for damage or excessive abrasion, fading, wear, tear, or contamination. Particular attention must be paid to the seams, stitching, straps and webbing attachments, hardware (buckles and slides), etc. Check for strength by pulling seams and attachments snugly. Make sure that the PFD and inflation chamber is not twisted and is free from rips, tears, or punctures. If PFD shows any signs of damage, perform a Leak Test, or send it to a certified repair facility.

Float-Tech is uniquely designed to be fully serviceable. In the event of damage components of the device can be replaced and repaired without having to purchase and replace the entire device. For servicing information, please contact the Float Tech servicing department at 518-266-0964.

2. EVERY TWO (2) MONTHS:

- i) Leak Test: The inflatable PFD should be tested for general leakage by orally inflating the PFD until firm and let stand for 16 hours. A leaking inflatable PFD will not hold its firmness and should be replaced. If the chamber deflates during the leak test contact our service department at 518-266-0964 to have your product serviced.
- ii) Oral Inflation Valve Test: With the PFD inflated, remove the dust cap, and test the valve by pushing it down using the tab provided on the cap. The valve should depress easily, and when released it should automatically return to the closed position and reseal. Fully inflate the inflatable PFD using the oral inflator and hold the valve under water. If bubbles appear, deflate and re-inflate to test again. Should the leak persist, contact our service department at 518-266-0964 to have your product serviced.

**[CAUTION: To avoid accidental inflation, don't allow the water to contact the automatic inflator.]**

- iii) Perform a thorough visual examination. See Section IX - Inspection, on page 17.

Perform these tests more often if exposed to potential damage or used



in extreme conditions.

3. AFTER EACH CO2 INFLATION:
  - i) Inspect CO2 Auto-Inflation Mechanism. Before inspecting the mechanism, remove the CO2 cylinder to prevent unnecessary discharge. The CO2 cylinder contains the gas charge that will inflate the PFD when the inflation mechanism is operated either automatically or manually. Verify that the CO2 cylinder installed is the correct size (gram charge) and has not been previously used. Check the water sensing element (bobbin) to be sure that it is not cracked or otherwise damaged. To do this, first remove the CO2 cylinder, and remove the bobbin from the housing. If the bobbin is cracked or damaged, replace with a new bobbin [manufacturer may reference rearming instructions for how to replace bobbin.]  
**If a new bobbin is not available, the inflatable PFD can only be activated by Oral Inflation.**
  - ii) Re-arm the Inflatable PFD. Refer to Section III.4 and III.5 for arming instructions on pages 8-11.
4. ANNUALLY – Perform the following at the beginning of each boating season, after inflation, or whenever the integrity of the inflatable PFD is in doubt:
  - i) Complete a thorough visually examination of the Inflatable PFD per section IX - Inspection, on page 17.
  - ii) Perform the Oral Inflation Valve Test in section XIII.2.ii above.
  - iii) Perform the Leak Test in section XIII.2.i above.
  - iv) Inspect CO2 Auto-Inflation Mechanism, in section XIII.3.i above.
  - v) Re-arm the Inflatable PFD – Replace CO2 Cylinder and Bobbin. (See Section III.4 and III.5) Ensure the bobbin is valid. The PFD, or bobbin, must have been purchased within the last three (3) years. If the purchase date is unknown, check the manufacture date printed on the bobbin and replace if older than three (3) years.
  - vi) Clean: [Shall comply with Federal Trade Commission Rule 16 CFR 423. (Such as warning against dry cleaning)] Refer to Section VIII, Care & Cleaning Instructions, on page 16.\

- vii) Record as an "Annual" inspection in permanent ink on the Service Record Label on the PFD. Repack the Inflatable PFD per this owner's manual.

#### **XIV. Frequently Asked Questions**

Drownings are the leading cause of fatalities involving recreational boating. In approximately 80 percent of all boating fatalities, the victims were not wearing a PFD. A PFD provides flotation to help keep your head above water. Most adults only need an extra 7 to 12 pounds of flotation to keep their heads above water.

This inflatable PFD is much less bulky and more comfortable to wear than other PFD types. But since this inflatable PFD is not inherently buoyant, it provides flotation only when inflated. Familiarize yourself with the use of this PFD so you know what to do in an emergency. Get in a habit of wearing this PFD.

##### **A. How do you 'water test' your PFD?**

###### **1. Manual Inflator**

- 1) To test your inflatable PFD armed in manual mode, you will need:  
Your fully armed PFD, and rearming kit approved for your PFD. (Rearming Kit includes a 24 gram CO<sub>2</sub> cylinder with 1/2 inch thread and a green indicator clip, see pages 10-11).
- 2) Put on the PFD.
- 3) Actuate the inflation system by jerking firmly downward on the pull tab. The PFD should fully inflate within 5 seconds.
- 4) Get into shallow water, just deep enough that you can stand with your head above the surface.
- 5) See if the PFD will float you on your back or just slightly back of vertical. In a relaxed floating position, verify that your mouth is well above the water's surface. Note the effect of where you hold your legs on how you float.
- 6) Get out of the water and remove the PFD. Remove the used CO<sub>2</sub> cylinder from the PFD inflator. Completely deflate the PFD using the oral inflator.
- 7) Let the PFD dry thoroughly. REARM AND REPACK the PFD in accordance with the manufacturer's instructions! Refer to section 5, page 10 of this manual.

###### **2. Automatic Inflator**

- 1) To test your inflatable PFD armed in automatic mode, you will need:  
Your fully armed PFD, and rearming kit approved for your PFD. (Rearming Kit includes a 24 gram 1/2 inch thread CO<sub>2</sub> cylinder, bobbin, and green indicator clip, see page 8-9).
- 2) Put on the PFD.
- 3) Get into shallow water, just deep enough that you can stand with your head above the surface. Once the inflator is under water the PFD should automatically, fully inflate within 10 seconds.

- 4) See if the PFD will float you on your back or just slightly back of vertical. In a relaxed floating position, verify that your mouth is well above the water's surface. Note the effect of where you hold your legs on how you float.
- 5) Get out of the water and remove the PFD. Remove the used CO<sub>2</sub> cylinder and the used bobbin (automatic inflator element) from the PFD inflator. Deflate the PFD using the oral inflator.
- 6) Let the PFD dry thoroughly. REARM AND REPACK the PFD in accordance with the manufacturer's instructions! Refer to section 4, page 8 of this manual.

### **3. Oral Inflator (Armed in Manual Mode)**

- 1) To test your inflatable PFD armed in manual mode, you will not need any spare parts, or rearming kits. Refer to section 5, page 10 for arming instructions.
- 2) Remove the CO<sub>2</sub> cylinder, to prevent inadvertent activation of the manual inflation system which could potentially damage the PFD. Inspect the threaded end to confirm it is un-used.
- 3) Put on the PFD.
- 4) Get into shallow water, just deep enough that you can stand with your head above the surface.
- 5) If you are a weak swimmer or non-swimmer, inflate the PFD partially so that you are supported well enough to be able to complete inflation without touching bottom. Note this level of inflation because it is the minimum needed for you to safely use this inflatable PFD.
- 6) Fully inflate the PFD using the oral inflator.
- 7) See if the PFD will float you on your back or just slightly back of vertical. In a relaxed floating position, verify that your mouth is well above the water's surface. Note the effect of where you hold your legs on how you float.
- 8) Get out of the water and remove the PFD. Completely deflate the PFD using the oral inflator.
- 9) Let the PFD dry thoroughly. REARM AND REPACK the PFD in accordance with the manufacturer's instructions! See sections 4 and 5 pages 8-11 in this manual for arming instructions.

### **B. Where can I purchase a rearming Kit?**

Kits can be ordered directly from Float Tech Inc. by calling 1-518-266-0964 or going to [www.inflatablepfd.com](http://www.inflatablepfd.com). Rearming kits may also be obtained from retailers who carry our products. Rearming kits suggested are:

**Leland Rearming Kit # V90000-84204Z** for automatic rearming, (Referenced Kit includes a 24 gram 1/2 inch thread CO<sub>2</sub> cylinder, bobbin, and green indicator tab).

**Leland Rearming Kit # 840AMU-84204Z** for manual rearming, (Referenced Kit includes a 24 gram 1/2 inch thread CO<sub>2</sub> cylinder and green indicator tab).

Note: Many manufacturer's provide rearming kits and may provide one that works with this device. Consult your retailer for help.

**C. Where do I send my PFD for inspection and/or service?**

Refer to "Section B Certified Inspection" page 18 for details.

**D. Can I wear my Float-Tech® PFD with other Jackets?**

NO, the Float-Tech® PFD is designed to fit with the approved Jackets only. DO NOT wear the liner under any other jacket or apparel. Refer to our website [www.floattech.com](http://www.floattech.com) or contact us directly for a list of approved outer jackets for this device. Contact information is on page 23 of this manual.

**XV. Additional Information**

**A. WEAR YOUR PFD**

In approximately 80 percent of all boating fatalities, the victims were not wearing a PFD. Most fatal accidents happen on calm sunny days. This inflatable PFD is much more comfortable to wear than other PFD types. Get into the habit of wearing this PFD. Non-swimmers and children especially should wear a hybrid or non-inflatable PFD at all times when on or near the water.

**B. HYPOTHERMIA**

Prolonged exposure to cold water causes a condition known as hypothermia – a substantial loss of body heat which leads to exhaustion and unconsciousness. Most drowning victims first suffer from hypothermia.

**HOW HYPOTHERMIA AFFECTS MOST ADULTS**

The following chart shows the effects of hypothermia.

Water Temperature (°F)	Exhaustion or Unconsciousness	Expected Time of Survival
0.3 (32.5)	UNDER 15 MIN	UNDER 15 TO 45 MIN
0.3 to 4 (32.5 to 40)	15 TO 30 MIN	30 TO 90 MIN
4 to 10 (40 to 50)	30 TO 60 MIN	1 TO 3 HOURS
10 to 16 (50 to 60)	1 TO 2 HOURS	1 TO 6 HOURS
16 to 21 (60 to 70)	2 TO 7 HOURS	2 TO 40 HOURS
21 to 27 (70 to 80)	2 TO 12 HOURS	3 HOURS TO INDEFINITE
Over 27 (Over 80)	INDEFINITE	INDEFINITE

PFDs can increase survival time because they allow you to float without using energy treading water and because of their insulating properties. Naturally, the warmer the water, the less insulation you will require. When operating in cold waters [below 60°F (15.6°C)] you should consider using a coat or jacket style PFD or a Type V Thermal Protective PFD as they cover more of the body than

the vest or belt style PFDs.

Some Points to Remember About Hypothermia Protection:

1. Always wear your PFD. Even if you become incapacitated due to hypothermia, the PFD will keep you afloat and greatly improve your chances of rescue.
2. Do not attempt to swim unless it is to reach a nearby craft, fellow survivor, or a floating object on which you can lean or climb. Swimming increases the rate of body heat loss. In cold water, drown-proofing methods that require putting your head in the water are not recommended. Keep your head out of the water. This will greatly lessen heat loss and increase your survival time.
3. Use the standard H.E.L.P. position when wearing an inflatable PFD, drawing the legs up to a seated position, because doing so will help you conserve body heat.
4. Keep a positive attitude about your survival and rescue. This will improve your chances of extending your survival time until rescued. Your will-to-live does make a difference!



If you need more information about PFDs and safe recreational boating, contact your state boating authority, US Coast Guard, US Power Squadron, Red Cross, or your nearest Unit of the U.S. Coast Guard. . To find out about free boating courses in your area call 1-800-336-BOAT (in VA, 1-800-245-BOAT.)

If you have any questions about the initial arming, rearming, repacking please contact the manufacturer.

**Contact Information:**

Address:  
Float Tech Inc.  
216 River Street  
Troy, NY 12180

Phone: 518-266-0964  
Fax: 518-266-0318  
Website: [www.floattech.com](http://www.floattech.com)

If you have any additional questions or concerns please feel free to contact us through the information provided below.  
Boat Safe!

