



Inflatable Personal Flotation Device (PFD) OWNER'S MANUAL

Model 61018

Manual Inflation Recreational: USCG Approved Type III PFD Uninspected Commercial Vessels: USCG Approved Type V

Model 61019

Manual Inflation with Automatic Backup Recreational: USCG Approved Type II PFD Uninspected Commercial Vessels: USCG Approved Type V

Model 61020

Manual Inflation with Safety Harness Recreational: USCG Approved Type V PFD with Type III Performance

Model 61021

Manual Inflation with Automatic Backup and Safety Harness Recreational: USCG Approved Type V PFD with Type II Performance

This manual contains important information. Read it!



Inflated

Keep this book and the sales receipt together in a safe place for future reference. Please record your PFD's model's information:

Lot Number: ______ Purchase Date: ______Retailer:

DO NOT REMOVE THIS PAMPHLET PRIOR TO SALE

Uninflated

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1.0 Approval Conditions and Carriage Requirements

<u>**Recreational**</u> - This inflatable Personal Flotation Device (PFD) is approved by the U.S. Coast Guard for use as follows:

Model 61018 Type III Personal Flotation Device (PFD). Model 61019 Type II Personal Flotation Device (PFD). Model 61020 Type V Personal Flotation Device (PFD) w/ Type III performance. Model 61021 Type V Personal Flotation Device (PFD) w/ Type II performance.

Models 61020 and 61021 inflatable PFDs are approved by the U.S. Coast Guard for use as a Type V Personal Flotation Device (PFD) with Type III and Type II performance respectively because the harness with them can cause injury if not properly used.

This inflatable was designed to be more comfortable and less restrictive to wear than inherently buoyant PFD's. It is not approved for water skiing or other high impact, high-speed activities. When worn, used, and serviced according to this owner's manual, this PFD can greatly increase your chances of survival in the water. Not recommended for non-swimmers or weak swimmers. Users of inflatable PFDs must be at least 16 years old.

Commercial - Models 61018 and 61019 are U.S. Coast Guard approved Type V inflatable Personal Flotation Devices (PFDs), **APPROVED ONLY WHEN WORN** for use on uninspected commercial vessels less than 40 feet in length not carrying passengers for hire as a substitute for a Type III PFD (Model 61018) or Type II PFD (Model 61019) 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 carriage requirement.
- The operator of an uninspected 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 Section 8.0.
- 3. The operator of an uninspected commercial vessel is responsible for providing each person onboard with the safety information required for use of this PFD. See Section 2.0 for information.
- 4. All inflatable PFDs in use aboard a commercial vessel must be the same manufacturer and model.

2.0 Note to Uninspected Commercial Vessel (UCV) Operators

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

Inflatable PFDs 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:

Basic Visual Examination - See Section 6.1.3, *Basic Visual Inspection for Damage.*

Inflation System and CO₂ Cylinder Check - See Section 6.1.1, Check for Green "OK" Service Indicator.

Donning Instructions - See Section 6.2, *Putting on Your PFD* (*Donning*).

Inflation Instructions - See Section 6.4, Inflating by Using the CO2 Inflator Mechanism.

Other Use Guidelines -

- 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. See Section 8.3, *Storage*.
- 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.
- 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 the Model 61019 PFD into the water, or exposing the inflation system to unnecessary water spray, will result in an inadvertent inflation.

3.0 About Your PFD

Your REVERE COMFORT MAX_{TM} inflatable personal floatation device (PFD) consists of one inflatable cell (bladder) and its inflation system. The fabric covering the cell has Velcro_® strips that maintain the PFD neatly folded. The PFD is worn about your neck and fastened about you with a belt strap. The PFD is designed to be lightweight and comfortable so it can normally be worn deflated while on your boat. The PFD provides no buoyancy unless it is inflated.

Models 61018 and 61020 are manually activated PFDs. Models 61019 and 61021 are manually activated PFD with automatic inflation backup. All models have a carbon dioxide (CO_2) cylinder and its activating mechanism, as well as an oral tube to blow air into the cell in the event of failure of the inflator mechanism. The primary method of inflating this model PFD is by pulling down hard on the yellow handle marked "JERK". Models 61019 and 61021 also have a replaceable, water-sensitive bobbin, which will cause a spring mechanism to inflate the PFD automatically after being immersed in water.

Should the need arise, activation of the PFD's CO_2 inflation mechanism punctures a self-contained carbon dioxide cylinder and discharges this harmless gas into the inflatable cell. The cell then inflates; breaking open the Velcro closure strips of the folded PFD to provide buoyancy. The oral inflation tube provided can be used for topping the PFD off by mouth. The inflation system can then be rearmed, a new CO_2 cylinder installed, and the PFD can be folded to be used again and again.

The PFD is also equipped with a whistle and retro-reflective tape panels. The whistle is secured to the device by a lanyard cord and clipped in place near the neck of the device for easy access.

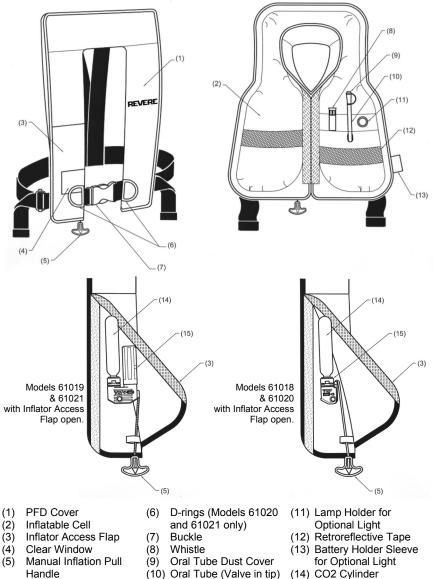
Lamp and battery pack holders are provided for installing an optional, water activated lifejacket light (REVERE Part No. 319-001). The light is activated when the battery plugs are removed and the battery pack is immersed in water. Normal battery life in the water is eight hours. Lifejacket lights are available from your REVERE retailer.

4.0 Personal Flotation Device Safety

- This Personal Flotation Device (PFD) does not provide any buoyancy unless inflated. You must inflate the PFD to float.
- Never inflate the PFD by mouth first and then pull the handle. Doing so may over inflate and damage the inflatable cell.
- ← Each CO₂ cylinder will only inflate the PFD once. The PFD must be rearmed with a new CO₂ cylinder after each use.
- Do not dry clean, iron or machine wash your PFD.
- Do not use the PFD in weather below freezing temperature (32°F / 0°C), unless partially inflated.
- Inflatable devices filled with carbon dioxide (CO₂) deflate faster than those filled with air. You will have to replenish the cell sooner and more often with oral tube.
- Do not use damaged PFDs. Discard them, or return to REVERE for repair.
- Do not use on personal watercraft, or for water skiing, knee boarding or similar uses.

5.0 Parts and Features

The REVERE COMFORT MAX_{TM} PFD is designed for adults weighing more than 80 lbs. (36 kg) with chest sizes between 30 inches (76 cm) and 52 inches (132 cm) in circumference. Only Models 61020 and 61021 are equipped with a safety harness that has a minimum user height requirement of 5 feet 5 inches (165 cm).



(15) Inflator Mechanism

Figure 1

6.0 Instructions for Use

6.1 Pre-Donning Inspection

Each time before you put on your PFD, follow the steps in Sections 6.1.1 through 6.1.3 to check the condition of your PFD.

6.1.1 Check for Green "OK" Service Indicator

Look through the clear plastic window on the front of the device to view the service indicator on the inflator. The indicator must be GREEN to show a properly armed mechanism. If the service indicator is RED, rearm the mechanism per the instructions in Section 8.4, *Rearming the CO*₂ *Inflator Mechanism*.

For Manual CO2 Inflator Mechanisms (Models 61018 and 61020 only), see Figure 2A.

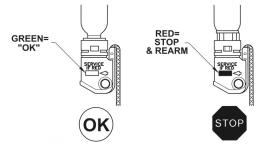


Figure 2A

For Manual with Automatic Back-up CO2 Inflator Mechanisms (Models 61019 and 61021 only), see Figure 2B.

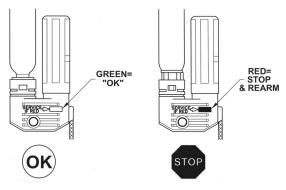


Figure 2B

6.1.2 Check Manual Pull Tab Access

Check that the yellow "JERK" tab is hanging below the bottom edge of the PFD.

6.1.3 Basic Visual Inspection for Damage

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 or replace the entire device.

WARNING: DO NOT USE DAMAGED PFD'S. DISCARD THEM, OR RETURN TO REVERE FOR REPAIR.

6.2 Putting on Your PFD (Donning)

Put the PFD on as if it were a vest. Refer to Figure 3. Buckle it at the front and tighten the waist strap on both sides. The yellow "JERK" handle for the inflation mechanism should protrude from the bottom edge of the wearer's right side of the folded PFD when worn. Check its location by hand and know where it is.

Step 1 Put on PFD as if it were a vest by inserting one arm, then....

Step 2inserting the other arm.

- <u>Step 3</u> Buckle it in front until you hear a click.
- <u>Step 4</u> Pull free ends of waist strap until snug; or if provided, move plastic belt keepers away from metal slide adjusters, pull strap between the belt keepers, and slide adjusters to tighten until snug.
- <u>Step 5</u> Tuck in excess ends of waist strap so that they do not hang down; or if provided, slide plastic belt keepers back to secure excess ends of waist straps.



6.3 Safety Harness

Models 61020 and 61021 only include an integral, built-in Off-Shore Racing Council (ORC) sailing type safety harness compliant to EN1095, Sec. 5.2 when uninflated . When used, the attachment hardware of a tether line is secured through <u>BOTH</u> D-rings on the front of the PFD.

PERMISSIBLE SAFE BODY SIZES FOR MODEL 61020 and 61021 INFLATABLE PFD WITH INTEGRAL SAFETY HARNESS:

- 1. Minimum height = 5 feet 5 inches (165 cm)
- 2. Permissible chest range = 30 inches to 52 inches (76 to 132 cm)
- RISKS: USE OF A SAFETY HARNESS TO PREVENT FALLS OVER-BOARD PRESENTS SEVERAL RISKS. Potential for personal injury as a result of fall arrest has not been assessed. Safety harnesses are designed to be worn at the chest area, to reduce injury potential due to shock loads. Thus, the harness belt must always be worn at least 2 inches (5 cm) above the lowest rib measured from the bottom of the harness belt and adjusted to a tight personal fit. In case of capsizing, or sinking, you may be taken down by the boat, resulting in death. DO NOT attach to boat unless being worn with tether of less than 6.5 feet (2 m) in length and with guick-release under-load hardware. READ SAFE-TY HARNESS SECTION OF OWNER'S MANUAL for intended use. ALERT! Under no circumstances should the safety harness be used for any climbing activity. U.S. COAST GUARD APPROV-AL DOES NOT APPLY TO THIS HARNESS.

WARNING: WOMEN SHOULD NOT WEAR THE PFD IN SUCH A WAY THAT THE HARNESS BELT IS BELOW THE BUST LINE, DUE TO THE UPWARD FORCE APPLIED TO THE HARNESS WHEN IT IS UNDER TENSION. KEEP THE BELT ABOVE THE BUST.

6.3.1 Using a Tether Line with the Safety Harness

Harness attached to anchored tether could overpower flotation and take the wearer down with the boat if not used with quick-release, under load hardware at the harness.

The tether line may be no longer than 6.5 feet (2 meters).

When securing a tether line to the D-rings, ensure that the tether's attachment hardware goes through both D-rings on the harness. Securing only one D-ring will not provide adequate strength. See Figure 4.



Figure 4

6.3.2 Safety Harness and Tether Line Care and Maintenance

Before each outing, inspect the harness and tether line for wear and damage. Check the harness for frayed webbing, loose stitches, and cracked D-rings. Check the tether for frayed webbing, loose stitches, or broken snap hooks. Do not use harness or tether line if damaged.

6.4 Inflating by Using the CO₂ Inflator Mechanism

To manually inflate the PFD instantly, pull sharply in a downward direction on the yellow handle marked "JERK" to discharge the CO₂ cylinder.

WARNING: INFLATABLE DEVICES DEFLATE GRADUALLY DUE TO PERMEATION LOSSES THROUGH THE MATERIAL OF THE CELL. THESE LOSSES ARE GREATER WHEN THE DEVICE IS INFLATED WITH CARBON DIOXIDE (CO₂) THAN WITH AIR. THEREFORE, EARLIER REPLENISHMENT BY MEANS OF THE ORAL INFLATION SYSTEM WILL BE NECESSARY

6.5 Inflating by Mouth (Oral Inflation)

To inflate the PFD orally, flip the replaceable black dust cap off from the top of the red oral tube and blow air into the oral tube (see Figure 5) until the PFD is firm. To make oral inflation easier, open the Velcro closures of the PFD and unfold. Practice this procedure a few times until you are confident how to orally inflate your PFD. Replace the dust cap on top of the oral tube when you are done.

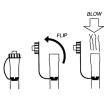


Figure 5

Occasionally, dust particles get trapped in the oral valve, causing it to leak slightly. Blowing into the valve and/ or tapping on the valve with a finger will usually clear the dust and stop the leak. Keep the dust cap in place at all times.

6.6 Deflating Your PFD

Remove the black dust cap from the top of the red oral tube. Twist the dust cap around and insert the small topside of the dust cap into the oral tube. Hold in place to keep the valve open (see Figure 6). At the same time, squeeze the PFD to force all the gas out through the oral valve until the PFD is fully evacuated and flat.

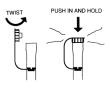


Figure 6

6.7 Use Below Freezing

When the PFD is used in weather below freezing temperature (32°F / 0°C), it should be partially inflated by mouth. At these lower temperatures, the inflation time is longer using only the CO₂ inflator mechanism. A partially inflated device will provide initial buoyancy while the PFD inflates.

Under cold weather conditions, CO₂ inflation may not be adequate. Additional oral inflation may be needed after inflation.

6.8 Special Consideration for Automatic Devices

(Models 61019 and 61021 only)

Premature automatic inflation creates several risks that you must address to avoid drowning. Much less common but also important are:

- 1) Double inflation (CO₂ inflation after full oral 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.

Premature inflation may occur in certain conditions, including when the device is subjected to: heavy splashing, high humidity, heavy fog, and heavy rain.

Care and attention should be taken to ensure that when the device is used in these types of conditions, auto-inflation does not occur prematurely.

If these PFDs should inflate prematurely, REVERE Rearming Kit 61027 is required to rearm the devices. Rearm according to the instructions in Section 8.4.2, *Rearming the Manual with Automatic Back-up Inflator* or according to the same instruction on the device.

6.9 Uninspected Commercial Vessel Use

This inflatable PFD is not approved for "Hot Work" such as welding or soldering. Care must be taken to avoid damage from heat, abrasion, and sharp objects.

7.0 Is Your PFD in Good and Serviceable Condition?

Check your PFD between outings to be sure that it is properly armed (see Section 6.1.2, *Check for Green "OK" Service Indicator*); that it is free of rips, tears or holes; that all seams are securely sewn; and that the fabric, straps and hardware are still strong. Inspect the inflatable portion of the PFD in accordance with Section 8.0, *Care and Maintenance Instructions*.

8.0 Care and Maintenance Instructions

8.1 Service Test Procedures

Service Test includes leakage test and visual inspection. Perform Service Test at the beginning of each boating season and before any long voyage.

8.1.1 Visual Inspection

Before each outing, open the Velcro closures and unfold the PFD. Check the PFD's cover and inflatable cell looking for rips, tears, holes or punctures that might indicate damage.

8.1.2 Leakage Test

Test the PFD's inflatable cell for leaks at the beginning of each season and at least once every two months afterwards. Inflate the PFD orally until the cell becomes firm. Refer to Section 6.4, *Inflating by Mouth (Oral Inflation)*. Allow the PFD to sit overnight for 16 hours and then check to see if the inflatable cell is still firm. A leaking PFD will have become soft and should not be used.

WARNING: DO NOT USE DAMAGED PFD'S. DISCARD THEM, OR RETURN TO REVERE FOR REPAIR.

8.2 Cleaning

Your PFD is made of materials designed to resist soiling and mildew. If cleaning is required, use mild hand soap and cool water. Rub gently. Do not scrub or use abrasive cleaners.

CAUTION: DO NOT DRY CLEAN, IRON OR MACHINE WASH YOUR PFD. DO NOT USE BLEACH.

8.3 Storage

Store your PFD in a cool, dry, well-ventilated place. A damp or wet PFD should be hung by its collar on a clothesline before storage. Do not store PFD where it can be exposed to chemicals. Do not leave your PFD in direct sunlight or in hot areas for long periods when your boat is not in use. Avoid storing the PFD inflated.

CAUTION: NEVER DRY YOUR PFD ON A HEATER, RADIATOR, OR WITH A DIRECT HEAT SOURCE.

8.4 Rearming the CO₂ Inflator Mechanism

Each time the CO_2 inflation mechanism on your PFD is actuated, the inflator must be rearmed (reset) and the empty CO_2 cylinder replaced. All the necessary parts are included in the rearming kits available from your local REVERE retailer.

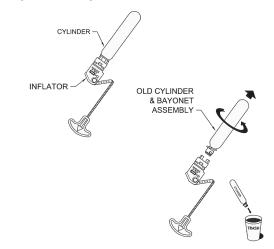
8.4.1 Rearming the Manual Inflator (Models 61018 and 61020 only)

Follow the Steps 1 thru 7 shown in Figures 7A and 7B.

Parts Required: One (1) REVERE Rearming Kit 61026. This kit contains a replacement cylinder and bayonet assembly.

Step 1

Open the inflator access flap on the front of the PFD so that the manual inflator and cylinder are visible.



Step 2

Remove the old cylinder & bayonet assembly by rotating the cylinder counterclockwise then pull out. **Discard the old assembly.**

NOTE: Rearming must follow the sequence below and on the next page.

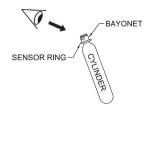
Step 3

Check the new cylinder & bayonet assembly to be sure the sensor ring is not broken, the Oring is in place, and the cylinder has not been pierced. Do not install assembly if not in proper condition. Refer to Figure 9.

NOTE: The inflator will not allow the installation of an assembly with broken sensor ring.

Step 4

Push and hold the manual lever in place against the inflator.







Step 5

Install a new cylinder & bayonet assembly by (A) engaging the tabs on the bayonet into the housing, pushing in firmly, then (B) turning clockwise 1/8 turn to a full stop.

Check the bayonet viewport. One of the black bayonet tabs will be entirely visible through the viewport. If a red or white indicator is displayed or the tab is not fully visible, the cylinder & bayonet assembly is not completely installed and needs to be turned clockwise further to a full stop.



WARNING: PFD WILL ONLY INFLATE IF THE CYLINDER & BAYONET ASSEMBLY IS TURNED TO A FULL STOP.

Step 6

Check to be sure the service indicator is GREEN.

Step 7

Close the front access flap so that the GREEN service indicator is visible through the clear window. Refer to Figure 2A.

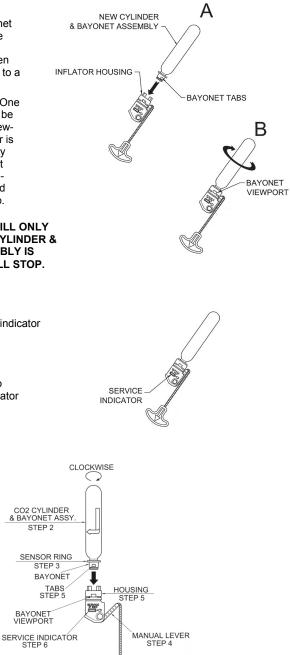


Figure 7B

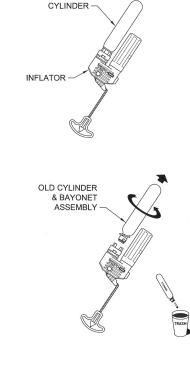
8.4.2 Rearming the Manual with Automatic Back-up Inflator (Models 61019 and 61021 only)

Follow the Steps 1 thru 12 shown in Figures 8A, 8B, 8C and 8D.

Parts Required: One (1) REVERE Rearming Kit 61027. This kit contains a replacement cylinder and bayonet assembly and a new bobbin.

Step 1

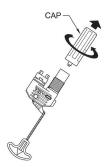
Open the inflator access flap on the front of the PFD so that the manual/auto back-up inflator and cylinder are visible.



Step 2

Remove the old cylinder & bayonet assembly by rotating the cylinder counterclockwise then pull out. **Discard the old assembly.**

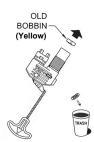
<u>Step 3</u> Remove cap by turning counterclockwise.



Step 4

Remove the old bobbin from the cap or inflator housing. **Discard old bobbin (yellow)**. Check housing to ensure it is clear and dry. Rinse with fresh water if necessary to remove dirt and salt. Allow to air dry thoroughly before continuing rearming procedure.

NOTE: The old bobbin (yellow) may remain in the housing or in the cap assembly when you remove the cap. The old bobbin must be removed prior to installing a new bobbin.



NOTE: Rearming must follow the sequence below and on the next two pages.

Step 5

Check the new bobbin. The new bobbin being installed must have been purchased within three (3) years. If purchase date is unknown, check date of manufacture marked on bobbin. Replace if the bobbin is over three (3) years old.



NOTE: For commercial use, the bobbin should be replaced every two (2) years.

NEW

BOBBIN

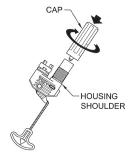
Step 6 IMPORTANT!

Install the new bobbin (yellow) into the inflator housing with white side facing up. Align the slots on the bobbin with the ridges inside the housing. The bobbin will slide in easily if installed correctly.

(Yellow) -INFLATOR HOUSING

Step 7

Install cap by screwing clockwise until it meets the housing shoulder. There should be no gap between the cap and the housing shoulder.





Step 8

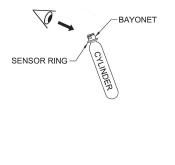
Check the new cylinder & bayonet assembly to be sure the sensor ring is not broken, the O-ring is in place, and the cylinder has not been pierced. Do not install assembly if not in proper condition. Refer to Figure 9.

IMPORTANT! INSTALL BOBBIN AND CAP BEFORE INSTALLING CYLINDER & BAYONET ASSEMBLY TO PREVENT DAMAGING SENSOR RING AND/OR PIERCING THE CO2 CYLINDER.

NOTE: The inflator will not allow the installation of assemblies with broken sensor rings.

Step 9

Push and hold the manual lever in place against the inflator.





Step 10

Install a new cylinder & bayonet assembly by (A) engaging the tabs on the bayonet into the housing, pushing in firmly, then (B) turning clockwise 1/8 turn to a full stop.

Check the bayonet viewport. One of the black bayonet tabs will be entirely visible through the viewport. If a red or white indicator is displayed or the tab is not fully visible, the cylinder & bayonet assembly is not completely installed and needs to be turned clockwise further to a full stop.



WARNING: PFD WILL ONLY INFLATE IF THE CYLINDER & BAYONET ASSEMBLY IS TURNED TO A FULL STOP.

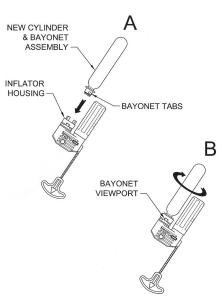


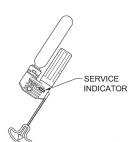
Figure 8C

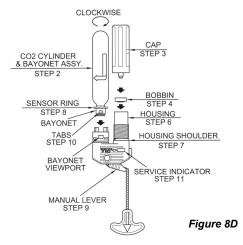
<u>Step 11</u>

Check to be sure the service indicator is GREEN.

Step 12

Close the front access flap on the PFD so that the GREEN service indicator is visible through the clear window. Refer to Figure 2B.





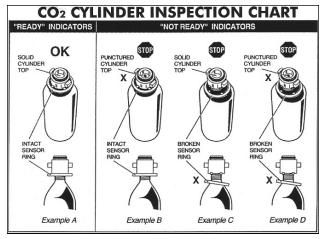


Figure 9

8.5 Refolding Your PFD

Deflate your PFD fully before refolding. Ensure all the air is out. Refer to Section 6.6, *Deflating Your PFD*, for instructions on deflating your PFD. Follow the steps in Figure 10 below.



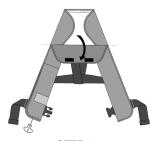
STEP 1 Lay the device out flat with the yellow fabric and red oral tube facing up. Ensure the neck panel is up as shown.



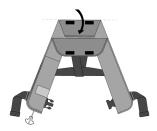
STEP 2 Fold the left and right outside edges over to expose the Velcro_ \circledast .



STEP 3 Fold the inside edges up and over. Align and secure the Velcro $_{\ensuremath{\circledast}}$ along the edges.



STEP 4 Temporarily fold the neck panel down at the neck line.



STEP 5 Fold the top outside edge down to expose the Velcro_®.



STEP 6

Fold the neck panel up and secure the Velcro_®. Check that the yellow "JERK" tab is hanging free and that the green status indicator on the inflator is visible through the clear window.

8.6 Professional Servicing

For the location of the nearest REVERE authorized service facility or to obtain full factory service, product literature, rearming kits, or customer assistance for your REVERE COMFORT MAX_{TM} PFD, please contact:

REVERE SURVIVAL INC. Vest Service Department 5323 Highway Ave. Jacksonville, Florida 32254 USA Tel. No.: 904-503-9733 sales@reveresurvival.com www.reveresurvival.com

9.0 Why are PFD's Required Safety Equipment?

Drownings are the leading cause of fatalities involving recreational boating. A PFD provides flotation to help keep your head above water, help you stay face up in the water, and increases your chances for survival and rescue. Most adults only need an extra 7 to 12 pounds of flotation to keep their heads above water. The proper size PFD will properly support the weight of the wearer.

Since this inflatable PFD does not have inherent buoyancy, it provides flotation only when inflated. Familiarize yourself with the use of this PFD so you know what to do in an emergency.

10.0 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 Section 8.4, *Rearming the CO2 Inflator Mechanism*.

11.0 Inspection and Maintenance Schedule for UCV Operators

Perform the inspections and test procedures at the intervals listed in the Maintenance Schedule table on the following page.

11.1 Before Each Use:

- Examine the service indicator through the window panel, ensuring it is green. If the indicator is red, the mechanism requires service. See rearming instructions in Section 8.4.
- 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, or replace the entire device.

11.2 Every Two (2) Months:

- 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, send it to a certified repair facility or replace the entire device.
- 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, send it to a certified repair facility, or replace the entire device.

CAUTION: To avoid accidental inflation of Model 61019, do not allow the water to contact the automatic inflator.

MAINTENANG	MAINTENANCE SCHEDULE FOR UCV OPERATORS	R UCV OPERATO	RS	
		FREQUENCY	ENCY	
PROCEDURE TO PERFORM	Before Each Outing (see Section 11.1)	Every 2 Months* (see Section 11.2)	After Each CO2 Inflation (see Section 11.3)	Annually* (see Section 11.4)
Check for Green "OK" Service Indicator.	~			
Check Manual Pull Tab Access.	>			
Perform Basic Visual Inspection for Damage.	>			
Recommended test Auto-Inflation.				
Inspect Auto-inflation Mechanism.			>	>
Test Oral Inflation Valve.		>		>
Leak check—16 hours		>		>
Clean.				>
Rearm the CO ₂ Inflator Mechanism.			>	>
Perform Thorough Visual Examination.		>		>
Record and Date Service Record on PFD.				>
*Perform these tests more often if exposed to potential damage or used in extreme conditions.	en if exposed to potential	damage or used in ext	reme conditions.	

"Perform these tests more often if exposed to potential damage or used in extreme conditions.

iii) Perform a thorough visual examination. Refer to Section 11.1(iv). Additionally, open the Velcro® closures and unfold the PFD. Check the PFD's cover and inflatable cell looking for rips, tears, holes or punctures that might indicate damage. Check that all seams and Velcro® fasteners are securely sewn. Tug firmly on all webbing straps to ensure that the fabric, straps and hardware are still strong.

Perform these tests more often if exposed to potential damage or used in extreme conditions.

11.3 After Each CO₂ Inflation:

 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.

For Model 61019 only, check the water sensing element (bobbin) to be sure that it is not cracked or otherwise damaged. To do this, first remove the CO_2 cylinder, and remove the bobbin from the housing. If the bobbin is cracked or damaged, replace with a new bobbin per Section 8.4.2, *Rearming the manual with Automatic Back-up Inflator.*

If a new bobbin is not available, the inflatable PFD can only be activated by Oral Inflation.

ii) Re-arm the Inflatable PFD. See Section 8.4, Rearming the CO_2 Inflator Mechanism.

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) Visually examine the Inflatable PFD. Refer to Section 11.2 (iii).
- ii) Perform the Oral Inflation Valve Test. Refer to Section 11.2 (ii).
- iii) Perform the Leak Test. Refer to Section 11.2 (i).
- iv) Inspect CO2 Auto-Inflation Mechanism. Refer to Section 11.3 (i).
- v) Re-arm the Inflatable PFD Replace CO2 Cylinder and Bobbin. See Section 8.4, *Rearming the CO₂ Inflator Mechanism.* For Model 61019 only, 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 date printed on the bobbin and replace if older than three (3) years.
- vi) Clean per Section 8.2, Cleaning.
- vii) Record as an "Annual" inspection in permanent ink on the Service Record Label. Repack the Inflatable PFD per Section 8.5, *Refolding Your PFD*.

12.0 How and Why Do You Test Your PFD?

WARNING: PRIOR TO INFLATING PFD WITH CO₂, BE SURE YOU HAVE THE REQUIRED REARMING KIT.

Inflate your PFD and try it out in the water to:

- Make sure it floats you:
 - . Comfortably (when worn properly).
 - Adequately for expected wave conditions (Body shapes/densities affect performance).
- Make sure it works:

• A flow of bubbles should not appear. (see Section 8.1.2, *Leakage Test*). • It should inflate quick and easily.

- Learn how it works by:
 - Activating the CO₂ inflation system.
 - Rearming the CO_2 inflation system.
 - . Using the oral inflator tube.

The U.S. Coast Guard recommends that you purchase two rearming kits. One to be used immediately in testing the inflation system (see Sections 12.1 and 12.2) and the other to carry onboard as a spare.

Since you should replace the bobbin (water sensing element) each year, the U.S. Coast Guard recommends you test the automatic inflation system in-thewater at the beginning of each boating season. By doing this, you demonstrate that the automatic inflation system is still working properly and reduce the likelihood of premature inflation and its associated dangers. The only check of the manual inflation system (with CO_2 cylinder removed) would be to determine that the lever arm and piercing pin move freely when moving the lever (attached to the pull tab) several times down and up.



Figure 11

12.1 How Do You Test Your PFD Using the Manual Inflator?

- 1. To test your inflatable PFD, you will need:
 - Your fully armed PFD, and
 - For Models 61018 and 61020: REVERE Rearming Kit Part No. 61026.
 - For Models 61019 and 61021: REVERE Rearming Kit Part No. 61027.
- 2. Put on the PFD.
- Actuate the inflation system by jerking firmly downward on the yellow pullhandle. 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.
- 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 CO₂ 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 instructions in Section 8!

12.2 How Do You Test Your PFD Using the Automatic Inflator? (Models 61019 and 61021 only)

- 1. To test your inflatable PFD, you will need:
 - Your fully armed PFD, and
 - REVERE Rearming Kit Part No. 61027.
- 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 underwater, the PFD should fully inflate automatically 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.
- Get out of the water and remove the PFD. Remove the used CO₂ cylinder & bayonet assembly and the used bobbin from the PFD inflator. Completely deflate the PFD using the oral inflator.
- 6. Let the PFD dry thoroughly. REARM AND REPACK the PFD in accordance with the instructions in Section 8!

12.3 How Do You Test Your PFD Using the Oral Inflator?

- 1. To test your inflatable PFD, you will not need any spare parts, or rearming kits.
- Remove the CO₂ cylinder & bayonet assembly, to prevent inadvertent activation of the manual inflation system, which could potentially damage the PFD. Inspect the cylinder & bayonet assembly to ensure it is unused (see Figure 9). For Models 61019 and 61021, unscrew and remove the cap and bobbin to prevent disintegration of the bobbin during water immersion.
- 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, either orally or manually. 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.
- 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 instructions in Section 8!

13.0 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.

14.0 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. The following chart shows the effects of hypothermia:

HOW HYPOTHERMIA AFFECTS MOST ADULTS			
Water Terr	perature	Exhaustion or	Expected Time of Survival
З°	°F	Unconsciousness	Expected Thile 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 $60^{\circ}F$ (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.
- Do not attempt to swim unless 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 method that require putting your head in water are not recommended. Keep your head out of the water. This will greatly lessen heat loss and increase your survival time.
- Use the standard H.E.L.P. position when wearing an inflatable PFD. Wrap your arms around your torso, under the PFD, and drawing the legs up to a seated position, because doing so will help you conserve body heat.



- Figure 10
- 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!
- 5. If there is more than one person in the water, huddling is recommended while waiting to be rescued. This action tends to reduce the rate of heat loss and thus increase the survival time.

15.0 Each of These Devices is Intended to Help You Save Your Own Life

For your PFD to function properly, follow these suggestions to verify that it fits, floats, and remains in good condition.

- 1. Check the inflation mechanism service indicators before each use.
- 2. Get in the habit of rearming the inflation mechanism right after each CO2 inflation.
- 3. Try your wearable PFD on and adjust it until it fits comfortably in and out of the water.
- 4. Mark your PFD with your name if you are the only wearer.
- 5. Do not alter your PFD. It doesn't fit properly get one that does. An altered device is no longer Coast Guard approved.
- 6. Your PFD is not intended for use as a fender or kneeling pad.
- 7. If your PFD is wet, allow it to dry thoroughly before storing it. Store it in a well-ventilated area.
- 8. Do not dry your PFD in front of a radiator or other source of direct heat.

16.0 Additional Information

If you need more information about PFDs and safe recreational boating, contact your state boating authority, U.S. Coast Guard Auxiliary, U.S. Power Squadron, Red Cross, or your nearest unit of the U.S. Coast Guard. To find out about the free boating courses in your area, call 1-800-336-BOAT (in VA, 1-800-245-BOAT) or see the USCG Boating Web Page at www.uscgboating.org.

16.1 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.

NOTE: Models 61020 and 61021 include an integral, built-in Off-Shore Racing Council (ORC) sailing type safety harness compliant to EN1095, Sec. 5.2 when uninflated . This harness should only be attached to the boat using a tether line with quick-release, under load hardware attached to both PFD D-rings. Refer to Section 6.3, Safety Harness.

17.0 Service Record and Inspection Log

Test this device at the beginning of each season and service annually refer to inspection and maintenance schedule in Section 11.0

USER NAME:	
------------	--

YEAR	DATE SERVICED	PERFORMED BY:
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

BOBBIN INSTALL DATE	INSTALLED BY:

NOTES

REVERE SURVIVAL INC.

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