



(A Member of the Protective Engineering Concepts, Inc. Group)

*“The Leaders in Tactical Flotation”*

*October 2015*



***Personal Flotation Collar  
(PFC-1)***

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The following symbols are used throughout this manual:



**WARNINGS** indicate a procedure or situation that may result in serious injury or death if instructions are not followed correctly.



**CAUTIONS** indicate any situation or technique that will result in potential damage to the product, or render the product unsafe if instructions are not followed correctly.

**NOTES** are used to emphasize important points, tips, and reminders.

### Change Record

Change No.	Date	Title or Description	Made By
001	27 Oct 2015	New photo front page, change date	TP
002	27 Oct 2015	Add CO2 picture. Page 10	TP
003	27 Oct 2015	Add light instructions. Page 11	TP
004	27 Oct 2015	Add light packing. Page 12	TP
005	27 Oct 2015	New photo. Page 20	TP

## 1. Introduction

**NOTE:** Orientation references the wearer's right and left

The procedures outlined within this manual are to be performed only by personnel who have received Factory Authorized training through a PECI Service & Repair Seminar. If you do not completely understand all of the procedures outlined in this manual, contact PECI to speak directly with a Technical Advisor before proceeding any further.

The PFC-1 Flotation Collar is a flotation device designed to support personal stranded in water. The collar is attached to the user's carrier. It provides a minimum of 60 pounds of flotation buoyancy and is designed to keep the user's head above the water for an extended period of time.

The PFC-1 is packed in a low profile casing made of fire resistant materials that are designed to open when the dual-chambered bladder inflates. A single-pull beaded handle is located on each side, when manually pulled, activates a 55-gram CO<sub>2</sub> gas cartridge for inflation. The left side is equipped with an auto-inflate device which will activate within five (5) seconds when submerged in water (salt or fresh). There is also a manual handle for **the left side which should be used as the primary means of inflating the collar**. The right side has a manual inflator which should be used as a back up in the event the left side auto inflator or handle does not work. Two oral inflation tubes allow the user to manually increase, decrease, or maintain the air pressure in the bladder chambers. These oral tubes have a 2.5 PSI relief valve which will relieve any pressure greater than 2.5 PSI. This could happen if the right handle is pulled and the left side is manually actuated also or inflates with the auto-inflation device.

**NOTE:** The capacity of the CO<sub>2</sub> cartridges is 55 grams with a minimum weight of 233.8 grams.



### WARNING

THE LEFT SIDE IS EQUIPPED WITH AN AUTO-INFLATION DEVICE, THEREFORE THE LEFT ACTIVATION HANDLE SHOULD BE USED AS THE **PRIMARY** ACTIVATION HANDLE.

PULLING BOTH HANDLES OR RIGHT HANDLE FIRST MAY CAUSE A FAILURE IN ONE OR BOTH BLADDERS BY ADDING TOO MUCH CO<sub>2</sub>.

Your PFC-1 Flotation Collar is an important piece of survival equipment. Proper care and maintenance will ensure your vest will accomplish the level of safety performance it is designed for. It is important that you become familiar with these instructions to safely use this flotation collar.

Since the PFC-1 is equipped with an auto-inflator on the left side, the left activation handle should be used as the primary means of inflating the collar.

The recommended service life is seven (7) years from date of manufacture. After five (5) years of use (placed in service) PECI recommends replacement of the device.



## **WARNING**

KEEP YOUR FLOTATION COLLAR IN USABLE CONDITION. IMPROPER WEAR MAY RESULT IN DAMAGE TO THE COLLAR. DO NOT WEAR ANY GARMENT OR PIECE OF EQUIPMENT OVER THE COLLAR. IMPROPER USE OR NEGLIGENT CARE OF THIS EQUIPMENT CAN CAUSE SERIOUS INJURY OR DEATH.

## **2. Features**

1. Minimum Buoyancy: 60 lbs. buoyancy
2. Inflation
  - a. Left side equipped with an activation handle and auto-inflator
  - b. Right side equipped activation handle and manual inflator
3. Oral Inflation: Left and right oral inflation tubes with 2.5 psi relief valves
4. CO2 Cylinders: Left and right CO2 gas cylinders
5. Corrosion Resistance: All parts shall be corrosion resistant in fresh and salt water
6. Rot Resistance: All fabric, webbing, and binding shall be rot resistant
7. Fire Resistant Casing
8. Maximum Weight per Unit: 3.4 lbs. (1.54 kg)
9. Zipper Closure System

### 3. Visual Inspection

It is the responsibility of the person using the PFC-1 to perform the visual inspection. Perform a visual inspection prior to each use and at intervals not to exceed 30 days. If damage is found during an inspection, the flotation assembly must be grounded until repaired.

3.1 Inspect the outside of the case for:

- Cuts, tears, and abrasion damage
- Open seams and loose or broken stitching
- Contamination damage

3.2 Ensure that each beaded inflation handle is attached with three (3) snaps fastened.

3.3 Ensure that the entire length of the slide fastener is closed and there are no missing teeth.



**CAUTION** DO NOT OPEN THE FLOTATION COLLAR SLIDE FASTENER FOR ROUTINE INSPECTION

3.4 Squeeze the lobes approximately half way up to ensure CO2 bottles are present.

3.5 Ensure the collar is properly attached to the carrier.



**WARNING**

TWO 55 GRAM, 1/2" THREAD CO2 BOTTLES, MUST BE PRESENT AND PROPERLY ATTACHED TO THE INFLATOR. IMPROPER CO2 BOTTLE OR ABSENCE OF CO2 CYLINDER CAN CAUSE SERIOUS INJURY OR DEATH.

### 4. Maintenance

Maintenance of the PFC-1 consists of cleaning, service, and minor repair. The person's responsibility for maintenance is limited to inspecting the outside components of the device. If the device needs to be cleaned, only mild soap and water should be used. The device should then be hung to dry in a warm, dry place out of direct sunlight.

### 5. Storage

Store your PFC-1 on a shelf away from direct sunlight in a dry, well ventilated place. Do not store your device near sources of heat such as a radiator, or in a warm, humid environment where mold or mildew can contaminate the device.



**CAUTION**

STORAGE AND CARE OF PFC-1 IS EXTREMELY IMPORTANT

## 6. Annual/Water Use Inspection

An annual inspection should be performed annually or when exposed to water to ensure the PFC-1 will perform when needed. It is the responsibility of qualified personnel to perform and log this inspection. The inspection can also be performed at the manufacturer. If damage is found during an inspection, the device must be grounded until repaired. Repairs are limited to replacement of snaps and inflator replacement. All other repairs must be completed at the manufacturer. A functional test should be performed every third year. If a functional test is required, skip to section 7.

**NOTE:** If PFC-1 has been submerged in water, the unit must be thoroughly cleaned and rinsed with fresh water. Hang the unit in a warm dry place out of direct sunlight.

6.1 Remove the flotation collar assembly from the vest and harness.

6.2 Lay the flotation collar flat on the table with the underside down. Spread the outer case open and completely lay out the bladder.

6.3 Perform leak test by connecting a single source of pressurized air to one bladder chamber and the bladder shall be inflated to 2.0 +/- 0.1 PSI using the oral inflation tube.

6.4 After a minimum of one (1) hour, check pressure. Should not lose more than .4 PSI.



### CAUTION

IF PRESSURE DROPS MORE THAN .4 PSI, COMPLETELY SUBMERGE THE FLOTATION COLLAR IN WATER TO DETERMINE WHERE LEAKAGE IS OCCURRING. IF LEAKAGE OCCURS AROUND INFLATOR, REPLACE INFLATOR GASKETS AND PERFORM LEAK TEST AGAIN. IF NO DETERMINATION CAN BE MADE OR BLADDER IS LEAKING, RETURN TO MANUFACTURER FOR REPAIR.

6.5 Remove trapped air by unlocking oral tube valve and depressing them. A small electric vacuum pump used with the bladder evacuation hose adapter may be used to aid in removal of the trapped air.

**NOTE:** It is important that all the trapped air be removed to aid in the repack of the bladder assembly and to provide for a compact and low profile collar.

6.6 Lock the oral inflation tube in the closed and locked position.

6.7 Repeat steps 6.3 to 6.6 for the other side of bladder.

6.8 Visually inspect the case front and back, inflatable bladder, handle, attachment straps, snaps and components of the flotation collar.

6.9 Remove CO2 cylinders and weigh. If functional is performed, discard and replace.

6.10 Proceed to section 8 for packing

## 7. Functional Inspection

A functional inspection should be performed every third year to ensure the flotation collar will perform when needed. It is the responsibility of the ALSE shop to perform and log this inspection. The inspection can also be performed at the manufacturer. If damage is found during an inspection, the vest must be grounded until repaired. Repairs are limited to replacement of snaps and inflator replacement, All other repairs must be completed at the manufacture. Functional inspection is as follows:

7.1 A functional can be performed with an individual wearing the vest with PFC-1 attached or on a table.

7.2 Pull either handle of the PFC-1 away from the bladder to inflate the flotation collar.

**NOTE:** The PFC-1 should inflate fully within 10 seconds.

7.3 Adjust pressure to 2.0 +/- 0.1 PSI. Perform leakage test. Bladder should not loose more than .4 PSI in one (1) hour.



### CAUTION

IF PRESSURE DROPS MORE THAN .4 PSI, COMPLETELY SUBMERGE THE FLOTATION COLLAR IN WATER TO DETERMINE WHERE LEAKAGE IS OCCURRING. IF LEAKAGE OCCURS AROUND INFLATOR, REPLACE INFLATOR GASKETS AND PERFORM LEAK TEST AGAIN. IF NO DETERMINATION CAN BE MADE OR BLADDER IS LEAKING, RETURN TO MANUFACTURER FOR REPAIR.

7.4 Remove the flotation collar from the vest if applicable.

7.5 Remove trapped air by unlocking oral tube valve and depressing them. A small electric vacuum pump used with the bladder evacuation hose adapter may be used to aid in removal of the trapped air.

7.6 Proceed to section 8 for packing



## 8. PFC-1 Repack Instructions

### 8.1 Preparation

Repack the PFC-1 on a large flat surface big enough to accommodate the bladders when they are spread flat with no air in them.

**NOTE:** Orientation references the wearer's right and left

The required equipment/tools are:

- Replacement CO<sub>2</sub> cylinders, 55 gram, 1/2" thread (if needed)
- Auto-Inflator Green safety clip 1 each (if needed)
- Manual Inflator Green safety clip 1 each (if needed)
- Four (4) clamps with soft rubber or plastic inserts to hold the bladder while packing.

8.1.1 Deflate the bladder by unlocking both oral tube valves. Depress the valves to release the pressure. While keeping the valves pressed in, gently compress the bladder with your hands and arms. This will force the air through the oral tubes.

8.1.2 Remove the flotation collar assembly from the vest and harness.

8.1.3 Lay the flotation collar flat on the table with the underside down. Ensure that the closing zipper is fully disengaged. Spread the case open and completely lay out the bladder.

8.1.4 Remove CO<sub>2</sub> cylinders. Discard spent or punctured CO<sub>2</sub> cylinders.

8.1.5 Visually inspect the case, inflatable bladder, and components of the flotation collar. Replace damaged bladder and/or components as necessary.

8.1.6 Place the actuator levers in the up-and-armed position. Install a green safety clip on both of the actuators.



8.1.6 Installing green safety clips

8.1.7 Install two new CO<sub>2</sub> cylinders (55 gram, Min Weight 233.8 grams). Hand tighten the cylinders (avoid over tightening).



8.1.7 Install CO2

8.1.8 Close protective covers over CO2 and snap. Both sides.



8.1.8 Close CO2 cover

8.1.9 Lock the oral inflation tubes in the closed and locked position.



8.1.9 Lock oral tubes

8.1.10 Install light on velcro patch on bladder lobe.

8.1.10.1 Measure down the container from inside the yoke 3 inches (7.62 cm). Mark container. Put another mark 2 inches (5.08 cm) and mark again.

8.1.10.2 Measure down the light wire (from the light) 14 inches. (35.56 cm).

8.1.10.3 Tack the wire to the container seam with two (2) turns 5 or 6 cord waxed or equivalent. Tie off with surgeons knot followed by a square knot.

**NOTE:** Wire should move freely within tacking.

**NOTE:** Test light as per manufacturers instructions



**CAUTION**

DO NOT PIERCE WIRE WITH NEEDLE

8.1.11 Set light to manual or auto as per SOP's



**CAUTION**

SETTING LIGHT TO MANUAL WILL DISABLE THE AUTO FUNCTION

8.1.12 Position the ends of the release handles in pockets and close snaps. Both sides

8.1.13 Ensure MOLLE strap routes from bladder through slot in bottom of case. Both sides



8.1.10 Attach light



8.1.12 Attach handles



8.1.13 MOLLE strap routing

## 8.2 Folding the Bladder

### 8.2.1

Lay the bladder out flat on the table. Position the actuators and the oral tubes facing up.



8.2.1 Lay out bladder

**NOTE:** Small plastic spring clamps will aid in maintaining the folds as you work on different areas of the bladder.

### 8.2.2

Ensure both activation lanyards are free and route from inflator through grommets. Fold Fastex buckles back on the bladder.



8.2.2 Free and clear and fold fastex



## WARNING

ENSURE ACTIVATION LANYARDS GO DIRECTLY TO THE HANDLES AND NOT WRAPPED AROUND THE CO2 CYLINDER, INFLATOR OR FASTEX BUCKLE



8.2.3 Fold over the left lobe of the inflatable bladder towards the center of the assembly along a vertical line extending the length of the bladder, then fold back forming a “S” fold.



8.2.4 Continue to fold the remainder of the left lobe onto itself in accordion fashion. When completed, there will be a total of two (2) “S” type folds that are 3 inches (7.62 cm) wide as measured along the left extension. Clamp the folds to hold them in place.



8.2.5 Repeat steps for right side.

**NOTE:** The Fastex buckles should be positioned under the first fold

**NOTE:** Ensure both activation lanyards are free and route from inflator to grommets

**NOTE:** Light wire should run length of case free and clear



8.2.6 Install the slide fastener on the left-inner zipper cord



8.2.6 Start zipper

8.2.7 Perform a 3 inch (7.62 cm) fold under so bottom edge of bladder is flush with casing.



8.2.7 Bottom fold

8.2.8 Continue to tuck the bladder, remove lower left clamp and close the case with the zipper just past the break-away portion.



8.2.8 Start left side

8.2.9 Fold velcro flap over “break-away” portion of the zipper and mate Velcro



8.2.9 Break-away flap

8.2.10 Continue to tuck the bladder, remove upper left clamp and close the case with the zipper to the corner as shown.



8.2.10 Zip left side



8.2.11 Fold the top of the bladder next. From the top of the right extension, fold the bladder over and along a 45° angle from the horizontal.



8.2.12 Repeat the previous step for the opposite side (top left lobe)



8.2.13 Fold the top of the bladder under and along a horizontal line approximately 3" from the top of the neckline.



8.2.14 Continue to tuck the bladder, remove upper left clamp and close the case with the zipper to the other corner as shown.

8.2.15 Close the right side, tucking in the bladder, remove the upper right clamp, past the right "break-away" portion.



8.2.15 Close right side

8.2.16 Fold Velcro flap over "break-away" portion of the zipper and mate Velcro



8.2.16 Break-away flap



8.2.17 Remove lower right clamp and zip to corner.



8.2.17 Remove clamp

8.2.18 Perform fold (like opposite side) so bladder fits into case and finish zipping.



8.2.18 Finish zipping

8.2.19 Snap zipper to casing in bottom right corner.



8.2.19 Zipper snap

8.2.20 Tuck zipper portion into container on right lower corner.



8.2.20 Zipper tuck

## 9. Service Life

The recommended service life is seven (7) years from date of manufacture. After five (5) years of use (placed in service) PECI recommends replacement of the device.

## Appendix A. PFC-1 Collar Nomenclature

### FRONT

Zipper  
break-away

Zipper  
Break-away

Manual  
Activation  
Handle

Auto-Inflate  
Activation  
Handle



Zipper closure snap

Zipper tucked into container

Upper MOLLE  
Attachment

Upper MOLLE  
Attachment

### BACK

ID  
Window

MOLLE Strap  
(Extends from  
bottom of collar)

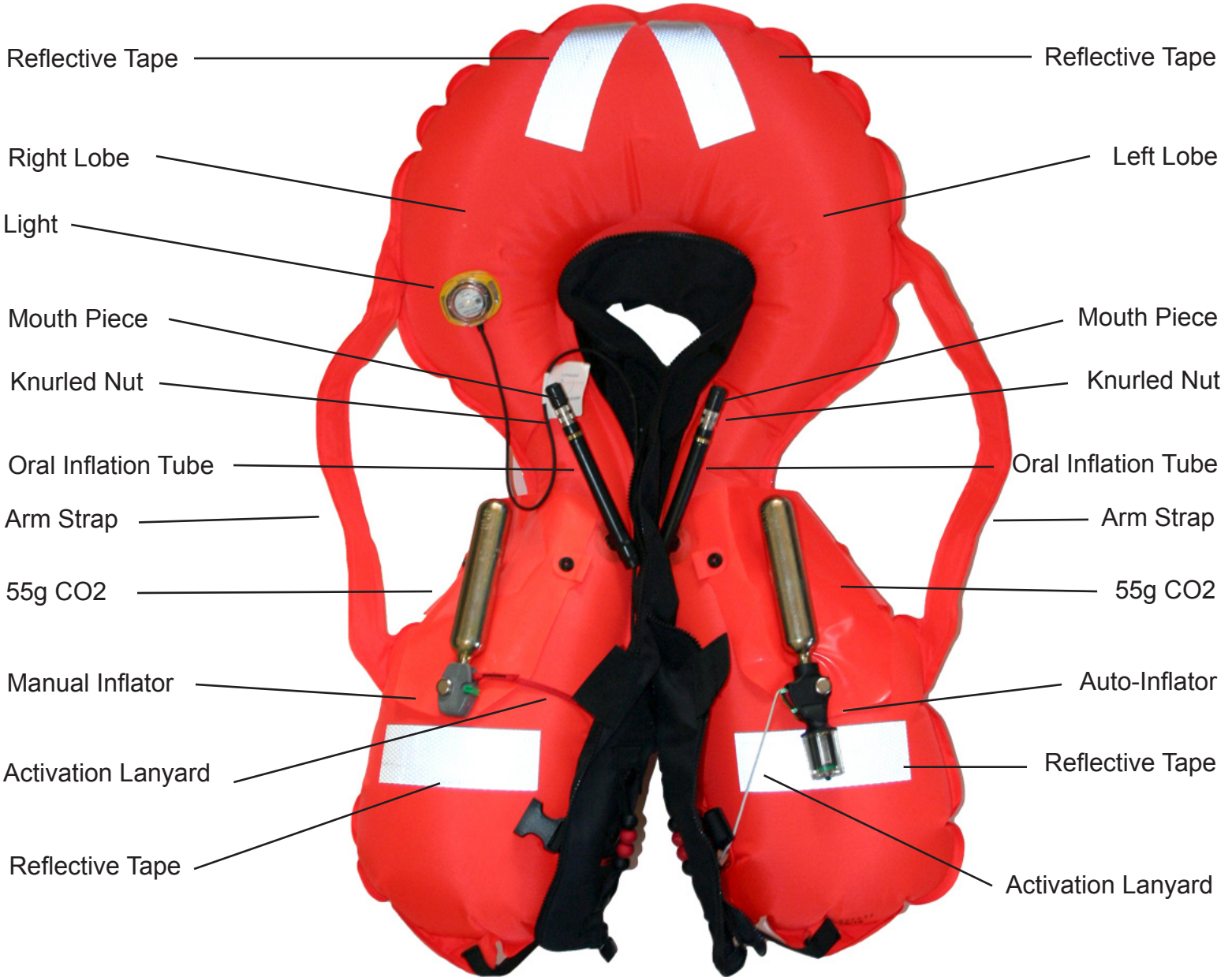
MOLLE Strap  
(Extends from  
bottom of collar)



**Appendix B. PFC-1 Bladder Nomenclature**

**RIGHT  
SIDE**

**LEFT  
SIDE**



## Appendix C. PFC-1 Parts List

<b>PFC-1 Parts List</b>	
<b>Item</b>	<b>Part Number</b>
Reflective Tape	PECIF-RRT2
CO2 Cartridge, 55 Gram, 1/2" Thread (1 ea)	PECIF-CO2-55
<b>Manual Inflator</b>	
Top Gasket	PECIF-BLA-005
Bottom Gasket	PECIF-BLA-006
Inflator Gasket (1/2" )	PECIF-13227
Green Safety Clip	PECIF-8452AMA
Shredder Valve	PECIF-BLA-007
Cap Nut	PECIF-BLA-003
<b>Auto-Inflator</b>	
Auto Bobbin (1 ea)	PECIF-707100B
Auto Green Indicator Clip	PECIF-V707100-1
Auto Manifold O-Ring	PECIF-V90113
Auto Manual Cap	PECIF-BLA-040
Schrader Valve	PECIF-BLA-007
Cap Nut	PECIF-BLA-003

# Appendix D. Manual Inflator Drawing

DRAWING NO.	REV	Customer Drawing			Revision History		
<b>C840AMUX</b>	<b>E</b>	MANIFOLD GASKET, NEOPR.80 DURO	MANIFOLD PIERCE PIN, ST'L STEEL	DESCRIPTION (ECO)	DATE	APPROVED	
		BODY - WIRED PAT PRINT 30% GLASS FILLED POLY- ESTER	GROOVE PIN, ST'L STEEL	ADD QTY Z FOR TOP GASKET ECN	6/11/09	L.F.	
		HOT STAMP (SEE NOTE 2)	MANIFOLD PIERCING LEVER, ST'L STEEL	MOVE HOT STAMP LOCATION AS NOTED. ECN.5114	2/16/12	L.F.	

**NOTES:**

1. SUFFIX "X" INDICATES THREAD:  
NO SUFFIX - 3/8" TH'D  
L - 1/2' TH'D
2. MM MONTH  
DD DAY  
YY YEAR
3. TOP & BOTTOM GASKETS PACKED SEPARATELY.
4. CRITICAL DIMENSIONS ARE CIRCLED AND SUBJECT TO INSPECTION.
5. DIMENSIONS IN PARENTHESES ARE FOR REFERENCE ONLY.
6. ALL DIMENSIONS ARE IN INCHES WITH THE NOMINAL DIMENSION IN METRIC BELOW.

DRAWN BY	L.F.	DATE	01-15-97	DATE	01-15-97
APPROVED BY	J.W.				
MATERIAL					
FINISH					
UNLESS OTHERWISE SPECIFIED:		THIRD ANGLE PROJECTION			
DIMENSIONS ARE IN INCHES					
ALL DIMENSIONS UNLESS OTHERWISE SPECIFIED		ARE TO BE PLACED TO TWO PLACE DECIMAL			
THREE PLACE DECIMAL		UNLESS OTHERWISE SPECIFIED			

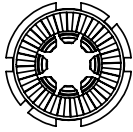
  

<b>Hailey-Roberts</b>	<b>INFLATOR, UL RECOGNIZED</b>	DRAWING NO. <b>C840AMUX</b>	REV <b>E</b>
TITLE <b>INFLATOR, UL RECOGNIZED</b>		DO NOT SCALE DRAWING	
(WITHOUT LANYARD & TAB)		SCALE 1:1	SHEET 1 OF 1

## Appendix E. Bobbin Information

# HALKEY | ROBERTS®

## V80040 Super Bobbin



Cat. No.: V80040

### Instructions for Use

#### V80040 Super Bobbin for Manufacturers and Service Stations

- ⚠ Cautions:**
- Carefully follow the directions below to maintain the bobbin integrity.
  - Intended for use in Halkey-Roberts Corp. products only.

#### Safely Handling:

1. The white pill material is a pharmaceutical grade Microcrystalline Cellulose, typically used as the filler in medicine tablets, ill. 1. The pill formulation is considered proprietary.
2. The MSDS for the yellow bobbin is provided under separate cover.

#### Operation:

1. The V80040 Bobbin Assembly is designed to disintegrate when exposed to water. This allows the firing mechanism to puncture the CO<sub>2</sub> cylinder and fill the inflatable chamber.
2. To insure consistent service from your manual/automatic inflator the bobbin should be changed at regular Halkey-Roberts recommended intervals or replace bobbin more frequently in extreme conditions, i.e. high temperature and high humidity.
3. Install V80040 Bobbin Assembly with the white pill facing the cap of the inflator, ill 1. The Bobbin Assembly will slide in easily if installed correctly.
4. Shelf life plus service life not to exceed six (6) years from Date Code, ill 2. Replace (Discard) bobbin within a maximum of six (6) years from Date Code.

#### Shelf life:

1. See tables below, use Date Code printed on side, ill. 2.
2. Bobbin must be stored in a cool dry environment. ( 65 °F to 85 °F , 19 °C to 29 °C; Maximum 60 %RH)
3. Service life begins when bobbin is removed from a cool dry environment or when bobbin is installed in an inflator, which ever comes first.

Recreational use:	<u>Shelf Life (years)</u>	<u>Service Life (years)</u>
V86000 Pro -1F® Inflator	three (3)	three (3)
V85000 Mark IV	three (3)	three (3)
V90000 Alpha Inflator®	three (3)	three (3)

Commercial use:	<u>Shelf Life (years)</u>	<u>Service Life (years)</u>
V86000 Pro -1F® Inflator	four (4)	two (2)
V85000 Mark IV	five (5)	one (1)
V90000 Alpha Inflator®	five (5)	one (1)

illustration 1

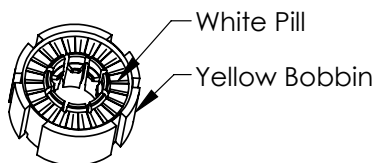
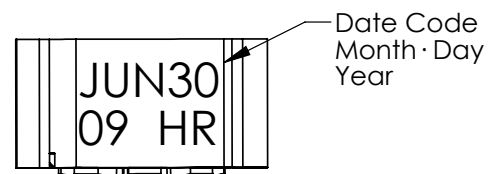


illustration 2



US Patent 7,572,161 and Foreign Patents Pending or Issued.

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Made in the USA


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IFU-V80040-B Rev. A

## Appendix F. Auto-Inflator Technical Data Sheet

HALKEY | ROBERTS

ALPHA SERIES INFLATOR

### ALPHA SERIES INFLATOR

<p style="text-align: center;"><b>GENERAL CHARACTERISTICS</b></p> <ul style="list-style-type: none"> <li>• Designed for use on life vests where automatic (immersion) back up is desirable</li> <li>• Easy and inexpensive to rearm – requires only a CO<sub>2</sub> cylinder and a bobbin</li> <li>• Improved splash resistance</li> <li>• Improved humidity resistance</li> <li>• Unit body design for increased strength</li> <li>• Left or right side mounting</li> <li>• Uses the super bobbin</li> <li>• Manifold O-rings assembled on unit</li> <li>• Higher flow over previous model for quicker vest inflation</li> <li>• Exceeds all UL, CEN, and ISO standards</li> <li>• UL recognized as a USCG Code 6 device</li> <li>• Meets UL 1191 1F humidity standard – highest in the industry</li> </ul>	 <p style="text-align: center;"><b>V90000 ALPHA INFLATOR</b></p>
<p style="text-align: center;"><b>PERFORMANCE CHARACTERISTICS</b></p> <ul style="list-style-type: none"> <li>• Operating temperatures: 0°C. – 70°C</li> <li>• Corrosion resistance (720 hours of salt spray)</li> <li>• UV protection – 300 hours of accelerated weathering</li> <li>• Tested for 100 inflations</li> </ul>	
<p style="text-align: center;"><b>QUALITY CRITERIA</b></p> <ul style="list-style-type: none"> <li>• 100% inspected for leak and functionality</li> <li>• ISO 9001-2000</li> </ul>	<p style="text-align: center;"><b>ALPHA SERVICE PART NUMBERS</b></p> <p>V90113 – Manifold O-Ring (2)  V87403L – ½" Threaded Gasket  V90124 – Indicator Clip  V80040 – Bobbin</p>
<p style="text-align: center;"><b>MATERIALS</b></p> <ul style="list-style-type: none"> <li>• Glass reinforced nylons</li> <li>• All metal components – stainless steel for the marine environment</li> </ul>	<p style="text-align: center;"><b>PACKAGING AND SHIPPING</b></p> <ul style="list-style-type: none"> <li>• Minimum shipping – one box</li> <li>• 100 units per box</li> <li>• Box size – 12" x 10" x 8"</li> <li>• Weight – 16 pounds</li> </ul>



# Appendix G. Auto-Inflator Drawing

<b>DRAWING NO.</b> CV90000XN135	<b>REV</b> B	<b>Customer Drawing</b>		<b>Revision History</b>	
		<b>REV</b>	<b>DESCRIPTION (ECO)</b>	<b>DATE</b>	<b>APPROVED</b>
		A	NEW DRAWING ECN 3989	5/12/09	A.K.
		B	UPDATE NOTES, ADD CORD LENGTH & DIMS ECN 4189	9/29/09	AK

<b>TOOLING:</b>	<b>PART NO.</b>	<b>IFU:</b>
----	----	IFU -V80040B

**NOTES:**

- INDICATOR CLIP AND LABELS PACKED SEPERATELY.
- FIRST SUFFIX "X" INDICATES THREAD TYPE:  
S - 3/8"
- CRITICAL DIMENSIONS ARE CIRCLED AND SUBJECT TO INSPECTION.
- DIMENSIONS IN PARENTHESES ARE FOR REFERENCE ONLY.
- ALL DIMENSIONS ARE IN INCHES WITH THE NOMINAL DIMENSION IN METRIC BELOW.

<b>DRAWN BY</b> DMC	<b>DATE</b> 5/12/09	<b>REV</b> B
<b>APPROVED BY</b> A.K		
<b>MATERIAL</b>		
<b>FINISH</b>		
<b>UNLESS OTHERWISE SPECIFIED:</b>		<b>THIRD ANGLE PROJECTION</b>
DIMENSIONS ARE IN INCHES		
TOLERANCES:		
ANGULAR: ± 1° HOLE: ± 0.01 THREE PLACE DECIMAL: ± 0.05		
<b>MOULDED PARTS:</b> GATES, PARTING LINES, AND FLASH PER QUALITY CRITERIA		
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<b>Halkey-Roberts</b>		<b>ALPHA INFLATOR</b>
<b>SIZE</b> A		<b>DRAWING NO.</b> CV90000XN135
<b>SCALE</b> 1:1		<b>SHEET</b> 1 OF 1
<b>DO NOT SCALE DRAWING</b>		

## Appendix H. Auto-Inflator Rearm Instructions

### DISASSEMBLY (see figure)

Step 1: Unpack or open the life vest so that the manual / automatic inflator is visible.

Step 2: Remove gas CO<sub>2</sub> cylinder by firmly rotating cylinder counterclockwise. **Discard cylinder.**

Step 3: Remove clear cap by turning counterclockwise.

Step 4: Remove bobbin from cap or housing unit. **Discard bobbin** (yellow). Check the housing to be sure it is clear and dry.

Note: The bobbin (yellow) body may remain in the housing or in the cap assembly when you remove the cap. The bobbin body must be removed prior to assembly.

### REARMING

**Note: Rearming must follow the sequence below.**

Step 5: Check the date on the bobbin in the rearm kit. The date should not be over four (4) years from today's date.

Step 6: **IMPORTANT!** Bobbin (yellow) must be installed into the **HOUSING** (\*\*see figure), white side down facing away from the inflator towards the cap (clear), aligning the slots on the bobbin with the ridges inside the threaded housing. The bobbin will slide in easily if installed correctly.

Step 7: Install cap by screwing clockwise until it meets the housing shoulder.

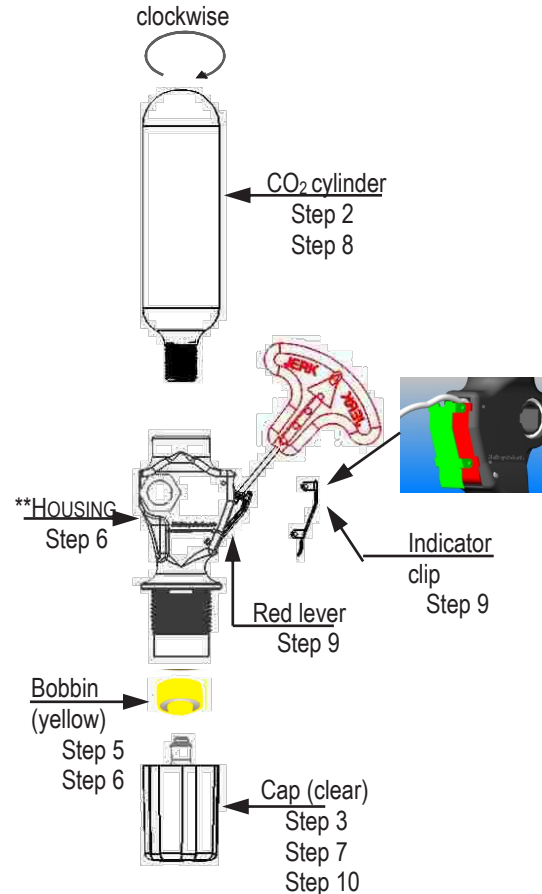
**Note: No gap.**

Step 8: Install cylinder by rotating clockwise into inflator until cylinder is secured firmly in inflator.

Step 9: Place indicator clip over red lever by aligning the arms on the clip with the slots in the inflator. Push firmly in the middle of the clip to snap in place.

Step 10: Check to be sure service indicator is green and green indicator clip is firmly attached.

### ALPHA V90000 INFLATOR SERVICE INSTRUCTIONS



#### Service Indicator – Step 10



If red, stop and service unit.



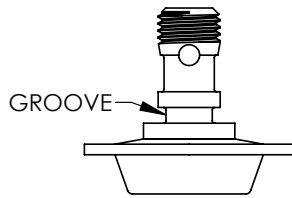
If green and clip is present, unit is operable.

HRC Rev D 11-2006

## Appendix I. Inflator Assembly Instructions

**HALKEY | ROBERTS®**

**830011001 Brass Manifold**



**Instructions for Use**  
**830011001 Brass Manifold for**  
**Manufacturers and Service Stations**

Cat. No.: 830011001, 830010101, 830013001, 830014001,  
 830AOE, 830AOEU, 833AOI, 8491AM, 8492AM, 830AOISC, 831AOISCLN

**Cautions:**

- To prevent valve damage, Follow proper torque settings.
- Carefully follow the directions below to maintain the valve integrity.

**Installation 840 Inflator (ill. 1):**

1. Install valve core (P/N 832AO) in manifold and torque to 1.5 - 2 in-lb., with a calibrated torque wrench.
2. Install bottom gasket (P/N 8492AM) on manifold until it is retained in groove. \* Note always use new gaskets when installing inflator.
3. Install 840 inflator on manifold, aligning flats.
4. Install top gasket (P/N 8491AM) on manifold.
5. Screw cap on manifold.
6. Retain ( secure ) inflator and torque Cap to 24 - 30 in-lb., with a calibrated torque wrench.

**Installation Alpha Inflator® (ill. 2):**

1. Install valve core (P/N 832AO) in manifold and torque to 1.5 - 2 in-lb., with a calibrated torque wrench.
2. Check inflator to make sure o-rings are installed on both sides.
3. Install Alpha Inflator® on manifold, aligning flats.
4. Screw cap on manifold.
5. Retain ( Secure ) Inflator and torque cap to 24 - 30 in-lb. with a calibrated torque wrench.

illustration 1

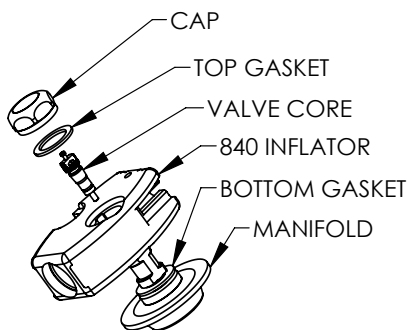
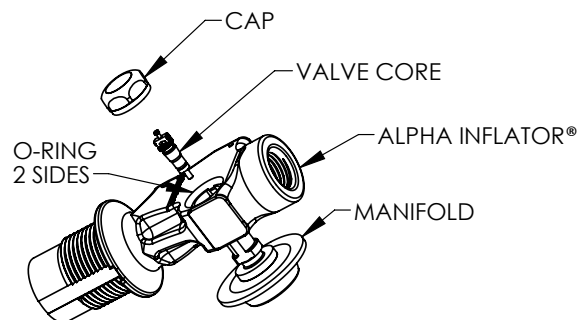


illustration 2



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