Inflatable Lifejacket



# General Care and Maintenance



## **CLEANING & STORING YOUR LIFEJACKET**

It is important that the lifejacket is stored in a dry, well-ventilated space. If the lifejacket is wet or damp, and it is fitted with an automatic firing capsule, it is advisable to remove the capsule until the lifejacket is completely dry. Any dampness in the lifejacket may penetrate the capsule and eventually cause it to activate the lifejacket. It is advisable to hang the lifejacket to dry on a coat hanger until it is completely dry before stowing. To avoid inflation, do not submerge the lifejacket in water unless the lifejacket has been used or the capsule has been removed. Periodically rinse the lifejacket in fresh water, particularly if it has been in contact with salt water. Oil and similar marks should be removed by washing with warm soapy water. Never put your lifejacket in a washing machine, spin or tumble dryer. After washing always allow your lifejacket to dry naturally before stowing in a dry place.

## OTHER IMPORTANT INFORMATION

# Your lifejacket has been tested to meet a temperature range between -10°C and 40°C as required by BS EN ISO 12402.

When the temperature is well below freezing, your lifejacket may operate much slower than normal and at very low temperatures a fully discharged cylinder may not adequately inflate your lifejacket. In these temperatures the oral tube should be used for additional topping up if necessary.

This lifejacket is not a PFD until fully inflated. Full performance may not be achieved using certain clothing or other circumstances. Certain circumstances will alter performance, such as waves or the wearing of garments which provide additional buoyancy. The buoyancy provided by the jacket can be affected if heavy objects are carried in the pockets.

A whistle is located on the inside inflation chamber. Six long blasts repeated at intervals is the international distress signal.

## <u>Operating</u> <u>Range</u>



## **PRE-WEAR CHECK**

Every time you wear your inflatable lifejacket you should check the following:

#### 1. Check the CO2 cylinder Unscrew the CO2 cylinder anti

Unscrew the CO2 cylinder anti clockwise and make sure it is not pierced. Screw the unpierced CO2 cylinder back tightly by hand clockwise. A pierced CO2 cylinder is empty and must be replaced.

# 2. Check the safety indicators and cartridge/bobbin

Automatic version:

Check safety indicators. If either of the green indicators is missing and/ or the CO2 cylinder is pierced the lifejacket must be rearmed. Check that the cartridge/bobbin is in date. Manual version:

Check the safety indicator. If it is missing, the CO2 cylin-der is empty and must be replaced. Carefully follow the instructions enclosed with our rearming kits.

## 3. Check pull knob

Check that the manual inflation pull knob is accessible when donned.





United Moulders MK 5 automatic valve



United Moulders manual valve



Halkey **840** manual valve





United Moulders Pro sensor automatic valve



Halkey Alpha automatic valve



Hammar MA1 hydrostatic head

## Visual inspection

- 1. Ensure that there is no wear and tear or damage to the outer cover of the lifejacket.
- 2. Check all of the zippers or velcro to ensure they are in working order.
- Check the webbing for any fraying or damage. З.
- Open and close the buckles 3 times to ensure they are in 4. working order.

## Safety harness inspection (if your model includes a harness)

- 1. Inspect and check that all harness components have no visible signs of wear or damage.
  - Webbing. a.
  - D Ring. b.
  - Buckles. C.



## Inspection of internal components

- 1. Open the lifejacket cover. (zzipper version) a. Open the Velcro tab.

  - To avoid damaging your lifejacket zip, open the zip via b. the quick burst elements, holding the cover either side.
  - Once the zip has opened, insert your finger and slide it C. around the lifejacket. Undo the zip all the way around the outside of the lifejacket. The lifejacket cover should now be open and inflation chamber visible. Fully open the zip.
- 1. Open the lifejacket cover. (Velcro version)
  - a. Open the Velcro the entire way around the cover.
- Check the red oral inflation tube for any signs of wear or 2. damage. check Whistle for any signs of wear or damage
- Check for any indication of damage on the RED grab strap. З.
- Check all of the reflective tape is firmly attached and not 5. damaged in any way.







## Inspection of the bladder

- 1. Inspect the bladder for any signs of abrasion, wear or damage. Ensure that all seams and folds are inspected thoroughly.
- 2. Inflate the bladder using the red oral inflation tube. Once fully inflated hang the lifejacket on a coat hanger and leave inflated in a room with a stable temperature of approximately 20°C. The lifejacket needs to remain inflated for 12 hours to check for any leaks. If the temperature is reduced overnight, this can affect the pressure of the bladder. Once the jacket has been left for 12 hours, check for any leaks and visible signs of damage. **OR BY**





3. Bladder pressure test 4 hr 2 PSI (137.89 mbar) leakage test UNIT TO BE STORED ON A RACK FREE FROM DRAUGHTS AND DIRECT SUNLIGHT. TEST MUST BE INITIATED VIA AIR LINE THROUGH ORAL TUBE AT A RATE OF APROXIMATLEY 0.5 PSI (34.47)EVERY 60 seconds HOLD PRESSURE AT 2 PSI FOR 4HRS. MAXIMUM PRESSURE LOSS 0.1 PSI (6.89 mbar) \*

If the bladder is damaged or the pressure falls, the lifejacket must be replaced or sent to manufacturer. Under absolutely no circumstances are you to attempt to patch or repair your lifejacket.

\* All tests shall be carried out under stable conditions, as free as possible from draughts and direct sunlight.

The bladders shall be suspended or insulated from the floor and surrounding walls so accurate readings can be taken.

The Temperature differential shall be within plus or minus 3 degrees of the original reading or the test is to be repeated and void. For each degree centigrade fall or rise in temperature a reading of 0.005 PSI (.34 mbar) shall be added or subtracted to the recorded pressure respectively. All testing to be carried out using clean dry air

## **INSPECTION - STEP 5**

## Inspection of the mouth inflation tube and its valve

- 1. Fully inflate the lifejacket using the red oral inflation tube.
- 2. Submerge the red oral inflation tube (mouth end) in water and check for bubbles.
- 3. If bubbles appear, you will need to replace the jacket or send it to manufacturer.





INFLATION TUBE



## Inspection of the CO<sub>2</sub> cylinder

 Check that correct type/size of CO<sub>2</sub> cylinder is fitted to the operating mechanism (size is printed on the tyvec label). Remove the CO<sub>2</sub> cylinder by unscrewing it counter clockwise and inspect thoroughly. The cylinder should be fully intact with no rust or corrosion. Replace the cylinder if the end cap has been pierced, is damaged, or the cylinder exhibits signs of rust or corrosion. Please note that if you have an automatic inflation jacket you must remove the capsule before the cylinder.



2. If the CO<sub>2</sub> cylinder is in good working condition, check the weight of the cylinder on a set of kitchen scales to ensure that the weight of the cylinder corresponds to the minimum gross weight engraved into the cylinder, (GR.WT) +/- 2g. If the weight is incorrect or defective in any way it must be replaced. Any replacement cylinder should be checked using the same method. The engraved weight and the actual weight need to be recorded on your Care and Maintenance Certificate.

## Ensure that all used or damaged cylinders are disposed of immediately.



For lifejackets fitted with the HAMMAR MA1 inflator, please add 22.0 grams to the reading of the gross weight on the cylinder. This is to account for the black "body" which is glued onto the cylinder.

For example, if the gross weight of the cylinder is 246.3 grams, then add 22.0 grams = 268.3 grams. Therefore, when you check weigh the cylinder it must not weigh less than 268.3 grams (IN THIS EXAMPLE ONLY)

## **INSPECTION - STEP 7**

Checking / rearming the operating mechanism

FOR BELOW OPERATING HEADS SEE FOLLOWING 6 PAGES

UNITED MOULDERS: MK5, PRO SENSOR OR MIN MANUAL

HALKEY ROBERTS: ALPHA OR 840 MANUAL

HAMMAR MA1

# UNITED MOULDERS LTD

UML- 5 Automatic Inflator Re-arming Instructions

- Do not detach the inflator from the lifejacket.
- Before commencing the re-arming procedure ensure you have the correct re-arming kit with the correct size of CO<sup>2</sup> cylinder and that the lifejacket is dry.
- Keep away from fluids.
- Ensure the automatic cartridge in the
- re-arming kit is within its Replace By Date



lss 3

or

Step 1

Unscrew the automatic cartridge by turning it anti-clockwise and discard it in an environmentally friendly manner. Replace it with the new cartridge which will have the green indicator in place, by turning it clockwise. Tighten up hand tight.

UML





## Step 2

Remove the pierced CO cylinder by turning it anti-clockwise and discard it in an environmentally friendly manner.

Step 3

If the unit has been manually activated, push the lever back into its slot and clip the new manual indicator in place.



Step 4 Ensure the black CO<sub>2</sub> cylinder seal is fitted correctly.

Step 5 Ensure the  $CO_2$  Cylinder cap has not been pierced and then screw it clockwise into the UML-5 inflator. Tighten up, hand tight.



- Re-pack the lifejacket according to the lifejacket manufacturers instructions.
- When not in use, store the lifejacket in a cool, dry place out of direct sunlight.



### Step 1

Unscrew the automatic cartridge by turning it anti-clockwise and discard it in an environmentally friendly manner. Replace it with the new cartridge which will have a black cap, by turning it clockwise. Tighten up hand tight.



## Step 2

Remove the pierced CO<sup>2</sup> cylinder by turning it anti-clockwise and discard it in an environmentally friendly manner.

### Step 3

If the unit has been manually activated, push the lever back into its slot until it clicks into position.



## Step 4

Ensure the black CO<sup>2</sup> cylinder seal is fitted correctly.



#### Step 5

Ensure the CO<sup>2</sup> Cylinder cap has not been pierced and then screw it clockwise into the UML ProSensor inflator. Tighten up, hand tight. If the inflator has been assembled correctly, both indicator panels will be green.



Re-pack the lifejacket according to the lifejacket manufacturer's instructions.
When not in use, store the lifejacket in a cool, dry place out of direct sunlight.



Unscrew the automatic cartridge by turning it anti-clockwise and discard it in an environmentally friendly manner. Replace it with a new cartridge by turning it clockwise. Tighten up, hand tight.

## Step 2

Remove the pierced CO<sup>2</sup> cylinder by turning it anti-clockwise and discard it in an environmentally friendly manner.



• Re-pack the lifejacket according to the lifejacket manufacturers instructions.

• When not in use, store the lifejacket in a cool, dry place out of direct sunlight.



Step 2 Push the lever back into its slot and clip the new manual indicator in place.

Step 3 Ensure the black CO<sup>2</sup> cylinder seal is fitted correctly.



## Step 4

Ensure the CO<sup>2</sup> cylinder cap has not been pierced and then screw it clockwise into the UML Mini Manual. Tighten up, hand tight.

- Re-pack the lifejacket according to the lifejacket manufacturers instructions.
- When not in use, store the lifejacket in a cool, dry place out of direct sunlight.



#### **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 three (3) 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.

#### Halkey-Roberts Alpha Inflator<sup>®</sup> V90000 Service Instructions



V90000LABS2\_Rev.G

- Step 1: **Unscrew used CO<sub>2</sub> cylinder** in a counterclockwise direction and immediately discard. **Do not insert new cylinder at this time.** To avoid confusion later in the rearming process, we suggest you throw away the old CO<sub>2</sub> cylinder now.
- Step 2: **Close manual inflator arm** within inflator body and carefully insert a new green indicator tab so that it fully covers the red semi-circle on the body.
- Step 3: Look into threaded cylinder receiver and view the gasket. If worn, replace with Halkey-Roberts 849AM gasket for <sup>3</sup>/<sub>8</sub>" receiver or 849AML for <sup>1</sup>/<sub>2</sub>" receiver.
- Step 4: **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 5: Screw new cylinder in a clockwise direction firmly into the inflator. **Do not over-tighten**, but ensure the fit is tight.
- Step 6: Check the inflator arming indicator every boating trip. It will tell you if there is a need for service. Check the cylinder face regularly to ensure it is not punctured.

## Halkey-Roberts 840 Series Manual Inflator Rearm Instructions



C840REARM\_Rev.A



#### MAKING THE INFLATOR OPERATIONAL AFTER USE OR WHEN EXPIRED









#### **REMEMBER THE ANNUAL SERVICE OF YOUR LIFEJACKET**

All inflatable lifejackets need an annual service. Check the instructions from your lifejacket manufacturer.

Scan the QR code or visit www.cmhammar.com/inflator for instructions, films and support for the Hammar Hydrostatic Inflator.



#### **BEFORE YOU START REARMING**

Make sure you have a smooth, flat and dry work surface.

- Insert the opening key between the black locking ring and the yellow cap. Turn the key anticlockwise. The black locking ring will now turn anticlockwise.
- Hold the yellow cap with one hand and continue to turn the black locking ring anticlockwise with the other hand until it stops.
- Lift off the yellow cap. Remove the old inflator body and gas cylinder from inside the bladder and dispose of it in an environmentally friendly manner.
- 4. Check the rearming kit. Ensure that all the following four points are met before you continue.
- The single point indicator on the inflator cap is green. (
  )
- The indicator on the black body is green. (
  )
- The expiry date on the inflator cap is within limit.
- The size of the gas cylinder is correct.

Do not assemble any cap or body that does not meet these requirements.



- Insert the inflator body with the gas cylinder pointing upwards in the bladder. Let the sealing ring rest on the rounded sealing surface on the body.
- Position the replacement cap with the hydrostatic valve pointing to the right, 90° relative to the gas cylinder and put the cap in place on the body.
- Press firmly on the inflator cap and turn the black locking ring clockwise into the locked position.

#### FINAL CHECK

- Pull the cap to make sure it has locked on the inflator body properly.
- Check that the locking ring is properly locked and cannot be turned anticlockwise by hand.
- Inflate the lifejacket through the oral tube and check that it stays inflated at least over night.

#### PACKING

Before packing, deflate the lifejacket through the oral tube. Make sure that **all residual air** is pressed out from the bladder so that it can be folded properly according to the manufacturer's instruction. Make sure that the lifejacket is dry before packing.

## CONTROL OF EXPIRY DATES OF CARTRIDGES/ BOBBINS

United Moulders



#### United Moulders cartridge

On the cartridge is printed the expiry date. E.G. **0309**, this would denote replace by March 2009.

#### Halkey Roberts



#### Halkey Roberts bobbin

NB. The Bobbin has a lifespan of four years and is printed with the date of manufacture. There are two different formats for the dates. Example **0650**, which denotes year 2006 on the 50th day. Alternatively **Feb19 06HRC** which denotes the 19th of February 2006. In recreational use the bobbin must be replaced no later than the third year from its first use. For industrial use please refer to your agent or service station.

#### Deflation of an inflated lifejacket



## Fill out Care and Maintenance Certificate.

- 1. This document must be filled out in full and pass all of the conditions in order to be a compliant piece of lifesaving equipment.
  - a. If any elements fail, this lifejacket either needs to be replaced or sent to manufacturer
- 2. This document once successfully completed, must be kept with the lifejacket on board the vessel in case of any official inspections take place.
  - a. Inability to produce a copy of this completed and up to date inspection report could potentially result in legal ramifications.
- 3. Fill in the maintenance grid on the lifejacket with who inspected the lifejacket and the inspection date.

# **INSPECTION - STEP 9**

## DEFLATING YOUR LIFEJACKET

1. Reverse the valve cap (a) at the top of the inflation tube and hold it in the valve.

**WARNING:** Do NOT use anything other than the valve cap to deflate your lifejacket. Any other item used may cause damage to the valve.







- 2. Squeeze the lifejacket to expel the air inside.
- 3. Squeeze the lifejacket a second time expelling as much air as possible.
- 4. The lifejacket should now be completely deflated, and can be folded into the cover as before.
- 5. Replace the valve cap (b) back into the normal position on top of the Inflation tube.



# **INSPECTION - STEP 10**

REPACKNG YOUR LIFEJACKET



Figure 1



# Packing procedure



Figure 2



Figure 3







Figure 7



Figure 8



Figure 9







# Zipper/ Rits/ ReiBverschlusse closing



NB! Zipper sliders are always to be closed and at bottom of jacket

# Zipper/ Rits/ ReiBverschlusse closing





















NB! Zipper sliders are always to be closed and at bottom of jacket

Re dating your lifejacket

## 2 years from date leisure

1 year from date commerical





## **INSPECTION CERTIFICATE**



Inspection certificate for Lade / PPE 150N & 275N inflatable ISO & SOLAS lifejackets fitted with Halkey Roberts or united moulders automatic valves or Hammar Hydrostatic Valve.

Date:	Product Serial nr:		Customer:			
Type of valve:	Halkey Roberts	United Moulders	Hammar			
				]		
Type of Lifejacket : Previously Serviced:						
Technician:				Number:		
				PASSED	FAILED	
1.1 Inspected cover, straps and operation of buckles						
1.2 Inspected retro tape, lifting loop, operation of whistle and light if fitted						
1.2.1 Light (if fitted). Expiry Date:						
1.3 Examined Safety harness, all stitching's and buckles						
2.1 Inspected bladder for abrasion						
2.2 Bladder pressure test 4 hr 2 PSI (137.89 mbar) leakage test. Or 12hr touch test						
TEST MUST BE INITIATED VIA AIR LINE THROUGH ORAL TUBE AT A RATE OF						
4HRS. MAXIMUM PRESSURE LOSS 0.1 PSI (6.89 mbar) *						
3. Examined operation of inflation tube(s) and its valve(s)						
4. Checked CO2 cylinder(s) for signs of rust and corrosion						
Actual weight (	s): g	Engraved weight(s)	g			
5. Examined	5. Examined operation of manual valve and its piercing cutter					
5.1. Fitted new bobbin / cartridge or Hammar head if needed						
6. Refitted new, controlled CO2 cylinder, if applicable						
7. Stamped, signed and dated the lifejacket						
8. Repacked the lifejacket and examined the Velcro / Zipper closures						
9. Lifejacket fully serviced and approved						

I hereby certify that this lifejacket has been serviced in accordance with the Lade / PPE service programme.

\_\_\_\_\_

Place and Date: \_\_\_\_\_

Service Station:

Signature of technician:

Next Service due:

\* All tests shall be carried out under stable conditions, as free as possible from draughts and direct sunlight. The bladders shall be suspended or insulated from the floor and surrounding walls so accurate readings can be taken.

The Temperature differential shall be within plus or minus 3 degrees of the original reading or the test is to be repeated and void. For each degree centigrade fall or rise in temperature a reading of 0.005 PSI (.34 mbar) shall be added or subtracted to the recorded pressure respectively. All testing to be carried out using clean dry air

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## ANNUAL INSPECTION

Inflatable lifejackets demand regular inspections whether or not they have been used. Failure to carry out inspections may cause your lifejacket to malfunction. Follow the instructions below to perform a simplified annual inspection.

