

**MANUAL/AUTOMATIC - INFLATABLE  
PERSONAL FLOATATION DEVICE**

***marlin***  
**OWNERS MANUAL**

LEVEL 100/100N  
LEVEL 150/75N  
LEVEL 150/150N  
LEVEL 150/200N  
LEVEL 275/275N



Australian  
Standard  
SAI GLOBAL  
AS2227:2006



Australian  
Standard  
SAI GLOBAL  
AS4758.1:2008  
SMK40048  
SMK40031

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# GENERAL INFORMATION

## Approval Conditions

Level 100/100N, Level 150/75N, Level 150/150N, Level 150/200N and Level 275/275N Manual/Automatic and Manual/automatic with Yachting Harness Personal Flotation Devices (PFD) are accepted by Australian Marine Ports and Authorities for recreational boating and some commercial usage. The harness does not applied to Level 100/100N Manual/Automatic inflatable PFDs.

The Inflator will automatically inflate the PFD when submerged in water. To inflate the PFD manually you must pull the “Jerk to Inflate” tab or inflate orally with the oral tube. Inflatable PFDs are not recommended for water skiing or other high impact, high speed activities.

**WEAK OR NON SWIMMER SHOULD NOT USE THIS DEVICE UNLESS WORN INFLATED.**

**FAILURE TO FOLLOW THESE INSTRUCTIONS COULD RESULT IN INJURY OR DEATH**



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This inflatable PFD was designed to be more comfortable and less restrictive to wear than inherently buoyancy PFDs. When worn, used and serviced according to this owner's manual, This PFD can greatly increase your chances of survival in the water.

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 non functional oral tube.

Unless worn inflated, this PFD must be properly armed with a full CO2 cylinder. This PFD is "Manual/Automatic" and requires Cylinder, Bobbin or Cartridge and Indicator Clip to be in place to operate.

Australian Boating Regulations require in most states (Check with your local boating authority) for at least one PFD to be carried on board for the number of passengers that the vessel is legally able to carry.

## **Specifications**

### **Chest Size:**

Adult: 70cm to 170cm (28" to 67")

Child: 64cm to 102cm (25" to 40")

### **Weight Range:**

Child: 25-40kg

Adult: >40kg

### **Buoyancy (minimum): When fully inflated**

- Level 100/100N (22.4 lbs)  
Level 150/200N (45.0 lbs)
- Level 150/75N (17.0 lbs)  
Level 275/280N (63.0 lbs)
- Level 150/150N (33.7 lbs)

## Inflation System:

### Manual/Automatic Inflation Mechanism:

For model Atlantic and Explorer Jacket the Manual/Automatic Inflation Mechanism, pull tab and oral tube located on the left side. For all the other models, Manual/Automatic Inflation Mechanism and pull tab is located on your right side, and the oral tube located on your left side.

### Pull Tab:

The Jerk to inflate tab is used to manually activate the inflation Mechanism and inflate the PFD. For Atlantic and Explorer Jacket model, to manual inflate through pull tab, tear down The chest pocket first.

### CO<sub>2</sub> Cylinder:

24 grams for Level 100/100N

38 grams for Level 150/200N

24 grams for Level 150/75N

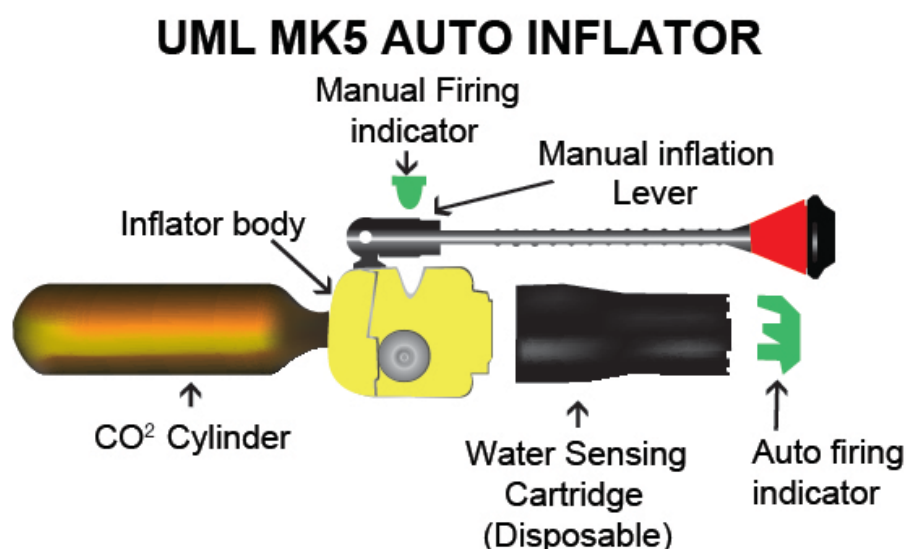
60 grams for Level 275/280N

33 grams for Level 150/150N

### Indicators:

For the PFD to be fully armed, a cylinder must be inserted into the mechanism and the cylinder seal indicator must be green.

### Manual/Automatic Inflator Parts List - UML:



## Manual/Automatic Inflator Parts List - HR

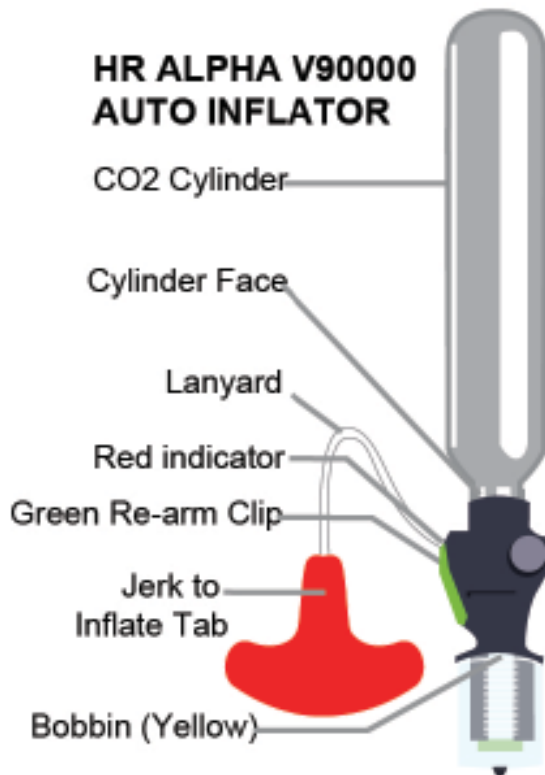
- CO2 Cylinder
- Green Re-arm Clip
- Cylinder Face
- Jerk to Inflate Tab
- Lanyard Bobbin (Yellow)
- Red Indicator

### Additional Notes on CO2 Cylinders

Failure to properly rearm the inflation mechanism prior to installing the CO2 Cylinder will result in premature activation of the cylinder.

CO2 Cylinders are only good for ONE (1) inflation and cannot be recharged.

CO2 Cylinders are made with a protective coating that may wear off after a period of use or exposure to the environment.



When this coating is worn off, the CO2 Cylinder may start to show some signs of rusting. If this occurs, replace the CO2 Cylinder. If a gram scale (such as postal scale) is available, it is recommended to weigh the Cylinder to verify that it meets the minimum weight imprinted on the cylinder.

## Other Use Guidelines

- Always wear your PFD when underway or making way unless you are inside the cabin. If you need to jump from any height, always fold arms over your chest to keep the PFD in place when entering the water.
- Avoid all unnecessary activities that will be abrasive to the device.
- Use extreme caution around sharp objects.
- Avoid unnecessary exposure to sunlight.
- CO<sub>2</sub> gas from the cylinder will permeate through the chamber fabric over time. If you are in the water for a long time, it may be necessary to top up the inflatable orally by blowing air through 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.
- Inflatable PFDs are not designed for a white water activities.
- For inflatable PFDs that have a manual/auto inflator, dropping the PFD into the water or exposing the inflation system to unnecessary water spray, will result in an inadvertent inflation.

## Why are PFDs Required Safety Equipment?

Drowning are the leading cause of fatalities involving recreational boating. A PFD provides floatation to help keep your head above water, help you stay face up in the water, and increase your chances of survival and rescue. Most adults only need an extra 31 to 53 Newtons (7 to 12 pounds) of floatation to keep their heads above water. The correct size PFD will properly support 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 that you will know what to do in an emergency.

## **Wear Your PFD**

In approximately 80% of all boating fatalities, the victims were not wearing a PFD. Most fatal accidents happen on calm sunny days. The 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.

## **This Device 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 remain in good condition.

1. Check the status of the inflator and make sure that the green re-arm clip is in place. Check before each outing.
2. Get into the habit of re-arming the inflation mechanism immediately after each CO2 inflation.
3. This PFDs requires re-arming with a new cylinder after each CO2 inflation. Always have re-arming kits available to service your inflatable PFDs.
4. Try your inflatable PFD on and adjust it until it fits comfortably in and out of the water.
5. Mark your PFD with your name if you are the only wearer.
6. Do not alter your PFD. If it doesn't fit properly, get one that does.
7. Your PFD is not intended for use as a fender or kneeling pad.
8. If your PFD is wet, allow it to dry thoroughly before storing it.
9. Do not dry your PFD in front of a radiator or other source of direct heat.
10. Do not dry clean.



## **Additional Information**

Remember - Safe Boating is No Accident! Keep this Owner's Manual in a convenient place on your boat. READ IT OFTEN! If you need more information about PFDs and safe recreational boating, contact your state boating authority.

### **Do Not Attach PFDs 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 D-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.

The exception is when a safety harness PFD is worn with tether of less than 2m (6.5 feet) incorporating quick release under load hardware. Refer to HARNESS USE INSTRUCTIONS on page 18. Buddy lines, when provided, are to be used by people adrift in the water to attach themselves to one another and aid in staying together. Buddy lines are not designed for lifting.

### **CO2 Permeation Loss**

CO2 gas will permeate the chamber fabric over time. Oral inflation may be necessary to maintain full buoyancy.

### **Freezing Temperatures**

Never use in below freezing temperatures. unless worn partially inflated. At or below 4°C (40°F) inflation time with CO2 gas will be longer. Wearing a partially inflated PFD in these conditions will provide some initial buoyancy while the PFD fully inflates.

**CAUTION:** Do not fully inflate orally and then inflate with the CO2 cylinder. CO2 inflation after oral inflation will damage the PFD to the point that it will not hold air or float.

## 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 chart below shows the effects of hypothermia.

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 15.6°C (60°F) you should consider using a coat or jacket style PFD as they cover more of the body than the vest or belt style PFDs.

HOW HYPOTHERMIA AFFECTS MOST ADULTS

Water Temperature		Exhaustion or Unconsciousness	Expected Time of Survival
°C	°F		
0.3	(32.5)	UNDER 15 Mins	UNDER 15 to 45 Mins
0.3 to 4	32.5 to 40	15 to 30 Mins	30 to 90 Mins
4 to 10	40 to 50	30 to 60 Mins	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

### Some Points To Remember About Hypothermia Protection

1. Always wear your PFD. Even if you become incapacitated due to hypothermia, the PFD will keep you afloat and greatly improve your chances of rescue.

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



# OPERATION OF YOUR PFD

## Instructions For Use

### Pre-donning Instructions:

Check the following before each use or outing:

1. INSPECT PFD FOR DAMAGE
2. BE SURE A CYLINDER IS INSERTED INTO THE MECHANISM AND GREEN RE-ARM CLIP IS SECURELY IN PLACE.

### Inspecting Your PFD For Damage:

Make sure that the PFD is free from rips, tears or punctures. This type of damage on the outside covering indicates that the inflatable chamber may have been exposed potentially damaging elements. If these defects expose the yellow inflatable chamber material, discontinue use of the PFD until you have the PFD inspected by an authorised repair facility. If these defects are noticed but the yellow inflatable Chamber material is not exposed, the inflatable chamber should be checked for leaks.

The inflatable chamber should also be checked for leaks at the beginning of each season and at least every two months during the boating season. The leak test procedure is described under USER'S INSPECTION.

## How To Inspect The Mechanism:

The mechanism for model Atlantic & Explorer Jacket is located on your left side under pocket flap, for all other models it is located on your right side under the protective cover.

Before inspecting mechanism remove the CO2 cylinder to prevent unnecessary discharge. Be sure the cocking lever is in a locked position. The CO2 cylinder contains the gas charge that will inflate mechanism is fired either automatically or manually. You must verify that the CO2 cylinder installed is of the correct size specification and has not been previously fired.

Check the Bobbin/Cartridge Cage assembly to be sure that the Bobbin/Cartridge is not cracked or otherwise damaged. To do this first remove the CO2 cylinder, lift the cocking lever and remove the Bobbin/Cartridge Cage. If the Bobbin/Cartridge in the Bobbin/Cartridge assembly is cracked, replace with a new Bobbin/Cartridge cage assembly, as shown in re-arming instructions.

Be sure that a cylinder is inserted into the mechanism. If a new Bobbin/Cartridge cage assembly is not available.

### **REMEMBER:**

**Your PFD is now in Manual mode and  
WILL NOT INFLATE AUTOMATICALLY.**

**It is your responsibility to let other  
users know this. NEED TO CHECK!**

## Donning Instructions

### STEP 1

Wear like a jacket, inserting arms between straps and fabric.

### STEP 2

For Model Explorer Jacket/vest zip up front, close waist buckle, adjust for firm fit. For Atlantic and Explorer Jacket jerk tab under pocket flap. For all other models, close front buckle, the jerk to inflate tab should be on your lower left side.



### STEP 3

Adjust waist strap through slider located on right side, until comfortable snug fit is obtained. Tuck free end of belt under waist strap. Place crotch strap if applicable between legs and clip into front buckle on waistbelt, adjust to ensure firm fit.



For Harness models, be sure that the bottom of the harness is at least 5cm above the lowest rib. After donning, locate the jerk to inflate tab for the mechanism. Make sure that you are comfortable locating the Jerk to inflate tab with either hand. Should an emergency develop, be prepared to use it! Always wear your PFD OVER, not under clothing. Wear as the most outer garment.



**CAUTION: Bulky clothing may affect the ability of this PFD to turn the wearer to a face-up position in the water. Practice closing hardware and adjusting straps before use or prior to in-water testing.**

## Inflated Donning Instructions

Inflatable PFDs can be very difficult to don when fully inflated. Depress Oral inflation Tube valve until the chamber is mostly deflated. Ensure the dust cap is correctly fitted to the oral tube. See DEFLATION INSTRUCTIONS. Don as described on Donning instructions and re-inflate orally as described below. Replace dust cap.

### Inflation Instructions

For additional information on testing and inflating your PFD see HOW TO TEST YOUR PFD USING MANUAL & ORAL INFLATOR.

#### **Manual Inflation:**

To inflate, grasp the Jerk to inflate tab and pull sharply downward. For model Atlantic and Explorer jacket to manual inflate, tear down the chest pocket first.

#### **Automatic Inflation:**

The automatic inflation mechanism will activate when the device is totally immersed in water. Depending upon temperature, the device will obtain full buoyancy within 5-10 seconds. It is recommended that the user regard the manual system as a backup and always be prepared to pull the jerk to inflate tab upon immersion.

#### **Oral Inflation:**

The oral tube is located on the wearer's left side. For Model Atlantic and Explorer Jacket, it is located on the wearer's right side under pocket flap. Grasp the oral tube and bring to mouth. Remove dust cap blow air through the oral tube until the inflatable chamber is firm. If the chamber becomes soft due to CO2 permeance, oral inflation will be necessary to maintain full buoyancy.

Whenever you orally inflate the PFD it is good practice to remove the CO2 cylinder prior to inflating. If you plan on going into the water after oral inflation, also remove the Bobbin/Cartridge cage so it may be reused when re-arming the PFD.

### **Cold Inflation**

Oral inflation may be required in addition to manual inflation if chamber is not firm due to cold temperature at or below 4°C (40°F). Inflation time using CO2 gas will be longer at these temperatures. Activation of automatic system may also be slower. Always be prepared to use the Manual Inflation System! See FREEZING TEMPERATURES.

### **Other Inflation Precaution:**

#### **CAUTION:**

- Do not fully inflate orally then manually or automatically inflate with the CO2 cylinder. This will damage the PFD to the point that it will not hold air or float.
- When armed in Automatic Mode, never orally inflate out of the water and then go into the water because the CO2 system will automatically inflate, which could damage the PFD.
- Never inflate this PFD with a Pump or Air Compressor.
- Permeation loss is greater when the device is inflated with CO2 than with air, and earlier replenishment by means of the oral inflation system will be necessary.

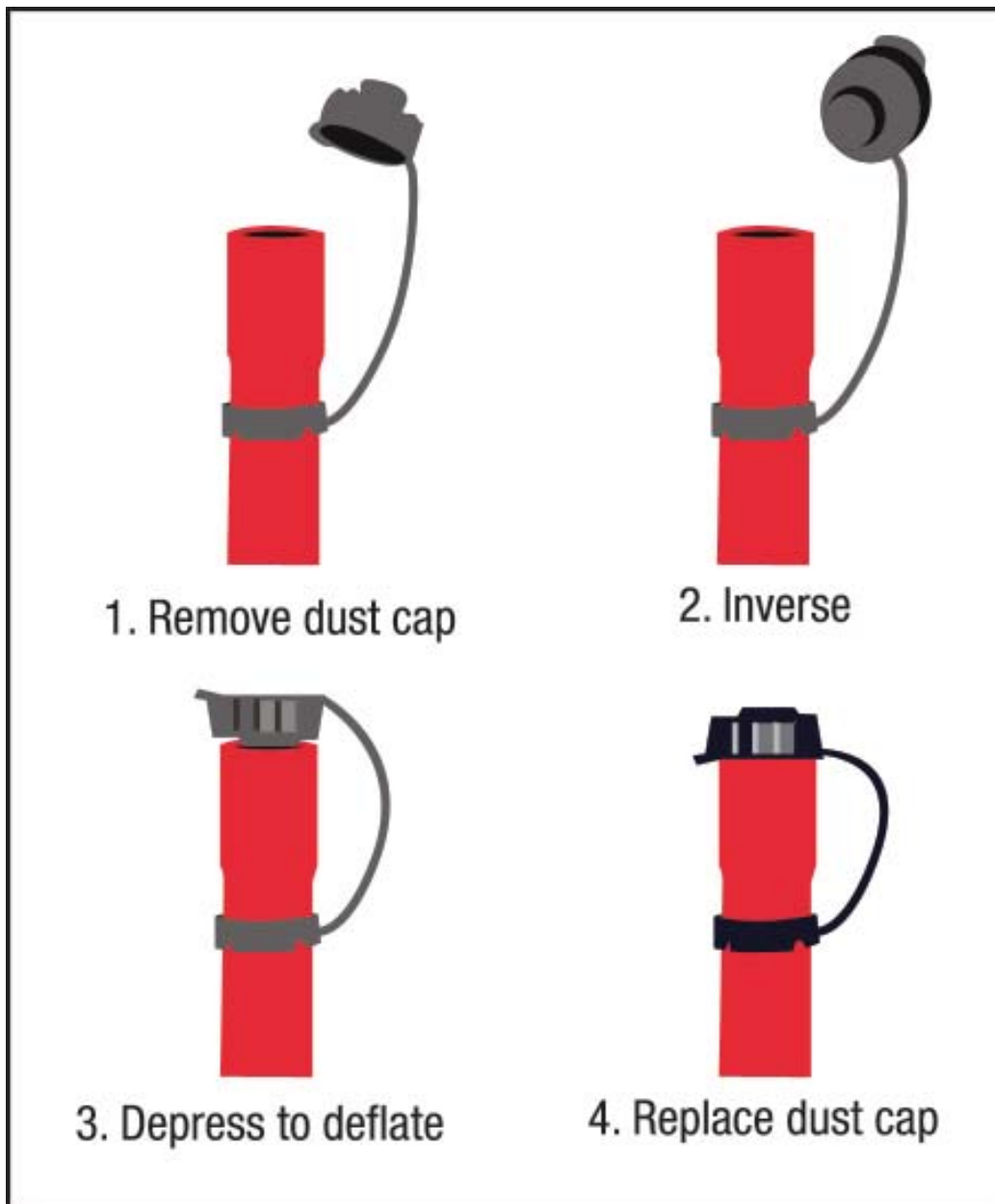
### **Deflation Instructions**

Depress Oral Valve (located inside end of Oral Tube) using the protective dust cap or tab provided by inserting into the end of Oral Tube, see photo at the right side. Gently compress air out of the inflatable chamber while depressing the Oral Valve. If for any reason the Oral Valve remains open, depress it several times. If it does not release, discontinue use of this PFD and take it to a certified repair station.



In an emergency situation, hold thumb over the valve if it will not close, or fold the oral tube in half and squeeze together. Refer page 31 to REPACKING INSTRUCTIONS.

DO NOT TWIST OR WRING INFLATABLE CHAMBER TO DEFLATE



## Harness Use Instructions

**FAILURE TO FOLLOW THESE INSTRUCTIONS  
COULD RESULT IN INJURY OR DEATH ALERT!  
THIS SAFETY HARNESS INFORMATION IS FOR  
MODEL MAYAH ONLY**

- Under no circumstances should the sailing harness be used in any climbing task or related activity. Failure to comply with this restriction in use may result in death or in injury.
- Always adjust harness snugly around your body. Failure to adjust properly may increase chance of injury.
- Only use a tether that is less than 2 metres long and incorporates quick release under load hardware.
- Load indicator shows no broken stitches on



**This harness certified to AS2227-2006**

- Refer to DONNING INFORMATION.
- The harness should be kept clean, dry and free from oil, grease, sand or grit. Wash in clean fresh water after use, dry and store in an area protected from the elements.
- The harness should be frequently inspected for deterioration.

- This harness is fitted with a load indicator. If the harness has received a severe load it may have activated indicator (broken single stitch) and both the harness and line which was attached at the time should be replaced.
- If it is intended to wear this harness in conjunction with a personal flotation device, users are advised to try them on together to ensure that one does not interfere with the function of the other and in particular that in use the line is not likely to foul the PFD.
- As lines can be supplied separately from the harness, ensure that the attachment devices on the line are compatible with the attachment point of the harness.

### **Harness Fit and Sizing Information**

Sailing Harness are designed to be worn at the chest area to ensure the least injury potential should the wearer be subject to sudden high shock loads.

**FIT:** This harness is to be used by wearers 165 cm (5 feet 5 inches) and taller. This restriction is intended to locate the bottom of the harness belt at least 5 cm (2 inches) above the bottom of the rib cage or higher. Please verify that you can achieve this fit with the PFD adjusted comfortably snug.

**DO NOT USE AS A SAILING HARNESS  
IF THE HARNESS**

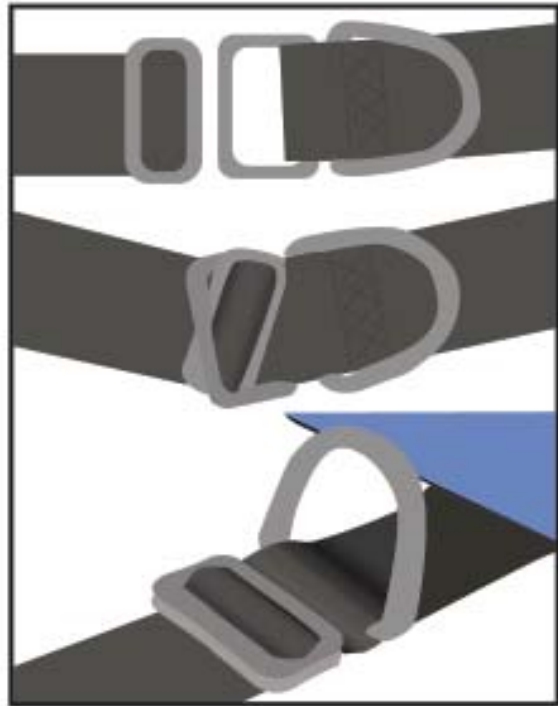
**WEBBING DROPS BELOW THE RIB CAGE.**

**SIZING:** Model MAYAH PFD fits chest size range of 70cm to 170cm (28" to 67" inches) for wearers 40kg and over.  
Always use D-Ring for securing to a quick release underloaded tether.

Ensure that the attachment point is strong and able to withstand a load of at least 12KN.

The D-ring instructions also apply to model EXP-1MAD

**NOTE:  
MODEL EXP-1MAD IS  
NOT A SAFETY HARNESS  
AND IS NOT CERTIFIED  
TO AS2227-2006**



### **FOR MODEL MAYAH ONLY Additional Harness Information**

- This harness designed and tested to meet the requirements for AS2227-2006 requirements for Sailing Harness.
- It is strongly recommended that first time users of Sailing Harness receive instructions from a reputable dealer, sailing school or otherwise experienced harness sailor.
- Always wear over all other clothing to allow for chamber expansion during inflation.
- A harness that is attached to an anchored tether could overpower floatation and take the wearer down the boat if not used with quick release under load hardware.

**Failure to follow these instructions rigorously could result in a non-functioning PFD causing INJURY OR DEATH.**

# CARE AND MAINTENANCE

## Is Your PFD in Good And Serviceable Condition?

Check your PFD between outings to be sure it's correctly armed; 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 Care and Maintenance Instructions.

## General Product Life Expectancy

The reliability and service life of this PFD depends greatly upon how it is used and cared for. Avoid storing PFD in direct sunlight. Sunlight contains ultraviolet radiation that weakens synthetic materials. Prolonged exposure to high temperatures and high humidity may shorten service life of this PFD. While it is known that these elements degrade the materials, every environment is unique so there is no sure way to estimate how long the PFD will last. It is for this reason that you must follow the care and cleaning instructions and perform the maintenance and service checks. This will assure that the PFD remains functional and will maximize the useful life of this PFD for five years.

## Users Inspection

The user should perform the following checks before each season, or before a long journey, or before each outing as recommended.

## **Physical Inspection of Cover and Straps:**

Examine outer shell fabric, seams, webbing attachments, buckles, slides etc. Fabric fading can indicate a loss of strength. Check for strength by pulling seams and attachments snugly. If device shows any signs of damage, return to a certified repair facility or replace the entire device.

## **Oral Inflation Leak Test:**

This test should be performed every two months and at the start of each season. Inflate buoyancy chamber using the oral inflation valve and leave to rest for 16 hours. When buoyancy chamber remains firm and full of air, there is no leakage and chamber is operational. If the chamber deflates during this leak test, immediately bring to a certified repair facility for repair. The device is no longer in operational condition.

## **Function Test of Oral Valve:**

With the PFD inflated, remove the dust protection 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 & reseal.

## **Automatic Inflation System:**

This test should be performed during years when the PFD is not inspected by a certified repair facility, and will expend your CO2 cylinder and bobbin/cartridge. So make sure you have a re-arm kit before conducting this test. With device packed as normal, immerse the device into a tub of water and see if it inflates. DRY, RE-ARM and REPACK.

# CARE AND CLEANING INSTRUCTION

## Drying:

- If the device is wet, place on a coat hanger to allow thorough drying.
- Do not place in direct sunlight to dry.
- Do not use any heat source.
- Ensure your PFD is thoroughly dry before storage to ensure prevention of damaging mould or fungal growth.

## Cleaning:

- Damp wipe only with mild detergent recommended for synthetic fabrics.
- Remove grease and oil immediately.
- After every use, rinse well with fresh water.
- Read instructions provided on the device.



**DO NOT MACHINE WASH  
DO NOT DRY CLEAN  
DO NOT MACHINE DRY  
DO NOT BLEACH  
DO NOT USE SOLVENT  
BASED CLEANERS.**

## Storage

- Store your bobbin cage/cartridge (Water Sensing Element) in a ventilated package, DO NOT store in a plastic bag unless completely dry. Storing wet may cause fungus growth on bladder. Store in clean, cool, dry area.
- Do not store bobbin cage/cartridge assemblies in high humidity or high temperatures over 37°C for an extended time.
- Do not store bobbin cage/cartridge assemblies for more than 18 months before use.

## **Repair**

If you have any question about the condition or integrity of this product call your local agent or distributor. A damaged device must be repaired by a certified repair facility or discarded.

## **Servicing**

Marlin strongly recommended that this device be inspected at least every 5 years from day of purchase by a certified repair facility or your nearest authorized service Centre & agents, visit our for more information and see page 42 SERVICE CENTRE & AGENTS.

## **Re-arming Kits**

Re-arming Kits comprising a fully charged CO2 Cylinder and green Re-arm clip are available from your PFD reseller, or certified Repair facility.

## **How and Why To Test Your PFD**

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
- It should inflate quickly and easily

### **Learn how it works by:**

- Activating the CO2 inflation system
- Re-arming the CO2 inflation system
- Inflating using the Oral Inflator tube



It is recommended that you purchase two Automatic Re-arming Kits. One to be used immediately in testing the automatic inflation system (See How Do You Test PFD Using The Automatic Inflator) and the other to carry on board as a spare.

Since you should replace the Bobbin/Cartridge cage assembly (Water Sensing Element) each year, it recommends you test the Automatic Inflation System in the water at the beginning of each boating season. By doing this, you demonstrate that the Automatic Inflation System is still working correctly and reduce the likelihood of premature inflation and its associated dangers.

### **Test your PFD using Manual/Automatic Inflator?**

- To test your inflatable PFD don your fully armed PFD correctly adjusted. You'll need a Re-arming Kit approved for your PFD. (This kit contains CO2 cylinder, green re-arm clip and yellow bobbin or black cartridge assembly that you'll need to use following this test).
- Get into shallow water, just deep enough that you can stand with your head above the surface. Once the Automatic
- Inflator is under water the PFD should automatically fully inflate within 5-10 seconds.
- 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 and the used bobbin cage/cartridge assembly
- (Automatic inflator element) from the PFD inflator. Deflate the PFD using the oral inflator.
- Let the PFD dry thoroughly.
- Use re-arming kit and re-pack PFD in accordance with manufacturer's instructions

## **Test Your PFD Using Manual Inflator?**

- To test your inflatable PFD don your fully armed PFD correctly adjusted. You'll need a re-arming kit approved for your PFD. (This kit contains a CO2 cylinder and bobbin cage/cartridge assembly that you'll need to use following this test.
- Activate the inflation system by jerking firmly downward on the pull tab. The PFDs should fully inflate within 5-10 seconds.
- 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 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 gas cylinder from the PFD inflator. Completely deflate the PFD using the oral inflator.
- Let the PFD dry thoroughly.
- Re-arm.
- Repack.

## **Test Your PFD Using Oral Inflator?**

- To test your inflatable PFD, you will not need any spare parts or re-arming kits
- Remove the CO2 cylinder and bobbin cage/cartridge assembly to prevent inadvertent activation of the inflation system, which could potentially damage the PFD.
- Put on the PFD.
- Get into shallow water, just deep enough that you can stand with your head above the surface.

- If you are weak swimmer or non swimmer, partially inflate the PFD 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.
- 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.
- Get out of the water and remove the PFD. Completely deflate the PFD using the oral inflator.
- Let the PFD dry thoroughly.
- Re-arm.
- Repack.

## **Re-arming Instructions**

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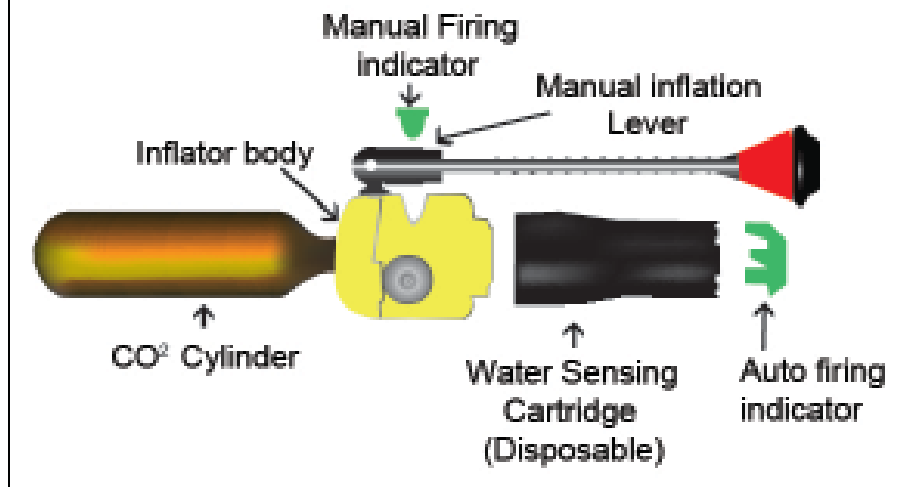
IT IS RECOMMENDED TO USE MARLIN AUSTRALIA RE-ARMING KITS.

Check which type of inflator your PFD is equipped with. See re-arming procedure.

### **FOR UML MK5 AUTO INFLATOR**

- Use re-arming kit No.UML MK5 with 24g gas cylinder for Level 100/100N and Level 150/75N PFD.
- Use re-arming kit No. UML MK5 with 33g gas cylinder for Level 150/150N PFD.
- Use re-arming kit No.UML MK5 with 38g gas cylinder for Level 150/200N.
- Use re-arming kit No.UML MK5 with 60g gas cylinder for Level 275/280N.

## UML MK5 AUTO INFLATOR



### After activation replace

- GAS CYLINDER
- CARTRIDGE
- GREEN FIRING INDICATOR (if missing)

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### WARNING:

**ENSURE THAT THE UNIT IS COMPLETELY DRY BEFORE REPLACING THE CARTRIDGE.**

**ENSURE THE NEW CARTRIDGE IS IN PLACE BEFORE REPLACING THE CYLINDER.**

### Re-arming Procedure:

1. Remove (unscrew) and dispose of the spent GAS CYLINDER.
2. Remove (unscrew) and dispose of the spent CARTRIDGE.
3. Check that the Inflation lever on the side of the valve body is in the up position and secured with the GREEN FIRING INDICATOR.
4. Screw on firmly the new CARTRIDGE.
5. Make sure the new GAS CYLINDER is of the same type and size. Screw the new GAS CYLINDER in firmly into place.

## FOR HALKEY ROBERTS AUTO INFLATOR

Use re-arming kit No. 2000MAJ with 24g gas cylinder for Level 150/75N PFD.

Use re-arming kit No. 2000MA with 24g gas cylinder for Level 100/100N

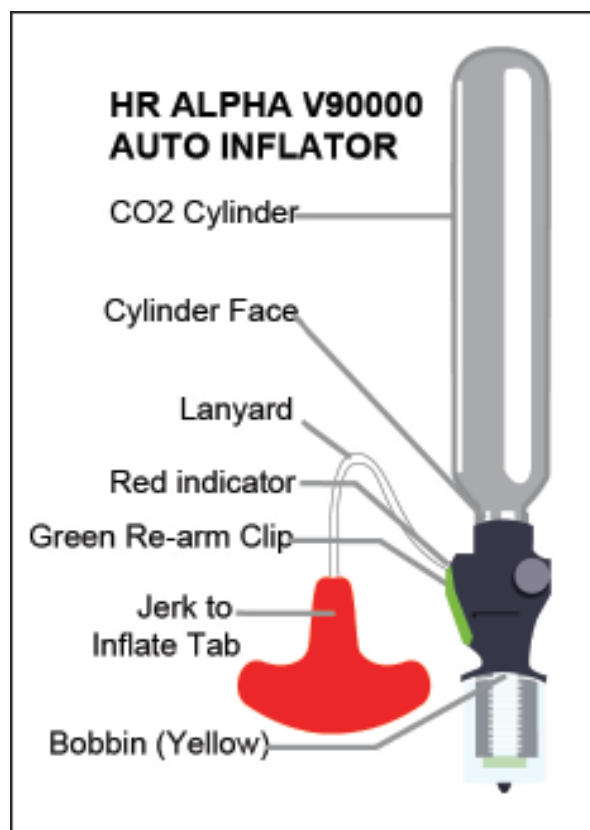
Use re-arming kit No. 2000MA with 33g gas cylinder for Level 150/150N PFD.

Use re-arming kit No. 2000MA with 38g gas cylinder for Level 150/200N.

Use re-arming kit No. 2000MA with 60g gas cylinder for Level 275/280N.

### After activation replace

- GAS CYLINDER
- YELLOW BOBBIN
- GREEN FIRING INDICATOR (if missing)



## **WARNING:**

**ENSURE THAT THE UNIT IS COMPLETELY DRY BEFORE REPLACING THE BOBBIN.**

**ENSURE THE NEW BOBBIN IS IN PLACE BEFORE REPLACING THE CYLINDER.**

### **Re-arming Procedure:**

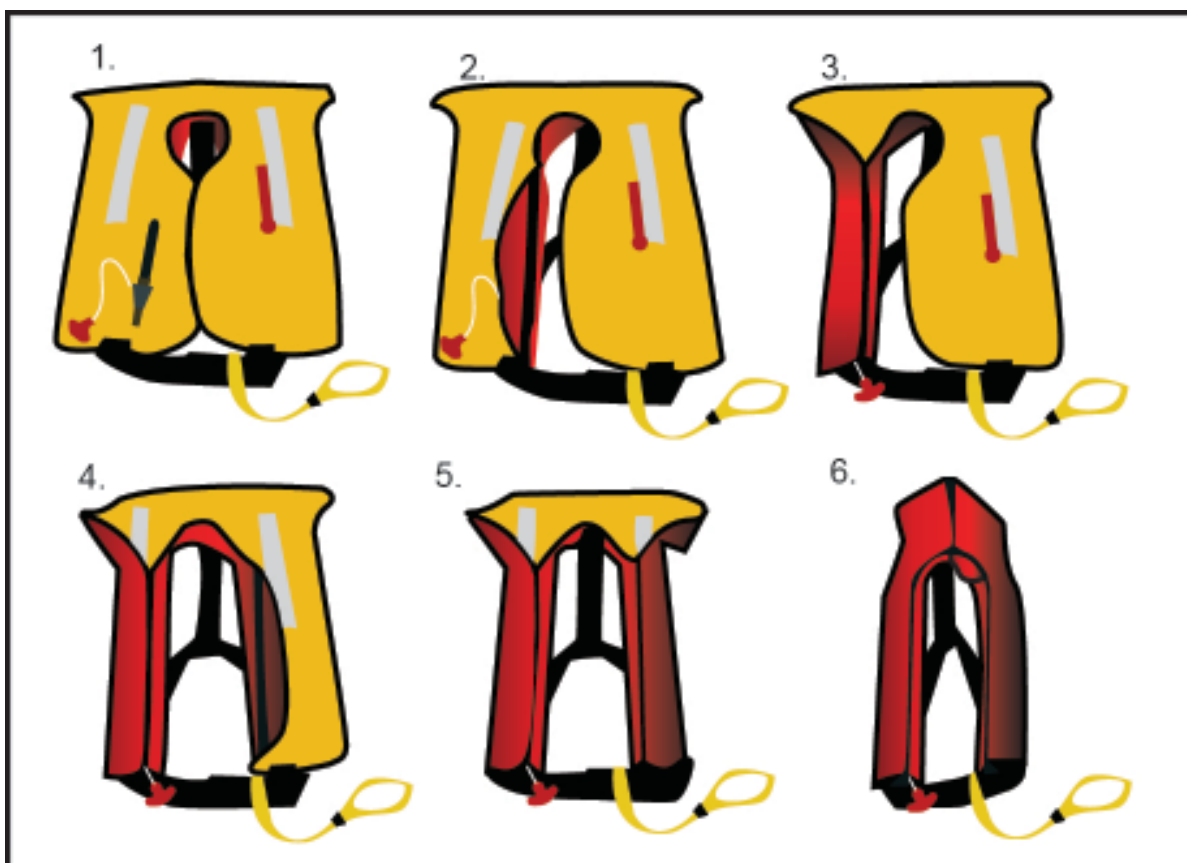
- Remove (unscrew) and dispose of the spent GAS CYLINDER.
- Remove (unscrew) the CLEAR END CAP, remove and dispose of the spent BOBBIN.
- Check that the Inflation lever on the side of the valve body is in the up position and secured with the GREEN FIRING INDICATOR.
- Insert a new BOBBIN WHITE SIDE DOWN.
- Screw the CLEAR END CAP back on firmly.
- Make sure the new GAS CYLINDER is of the same type and size. Screw the new GAS CYLINDER in firmly into place.

### **Repacking Instructions**

1. Lay device out flat with the yellow inflatable chamber up.
2. Fold left inside edge over as shown, exposing touch fastener strip.
3. Fold left outside edge over, securing touch fastener strips to touch fastener strips. Position jerk to inflate tab below bottom edge of PFD as shown ensuring jerk tab is hanging free.
4. Fold right inside edge over, exposing touch fastener strips.
5. Fold right outside edge over, securing touch fastener strips to touch fastener strips.

5. Fold right outside edge over, securing touch fastener strips to touch fastener strips.
6. Fold right topside over, securing touch fastener strips.
7. Fold left topside over, securing touch fastener strips.
8. Check to see that the jerk to inflate tab and lanyard is hanging free from the inflator.

Note: For model Explorer and Atlantic Jacket deflate the yellow inflatable chamber through oral tube under pocket flap. Lay jacket out flat and fold as a normal garment. (see DEFLATION INSTRUCTIONS)



## SELF SERVICE INSTRUCTIONS

It is recommended that an accredited service agent conducts a full inspection of your PFD every 5 years from day of purchase. Read/Print this owner's self-inspections manual in conjunction with Owner's Manual

1. Read the following instructions carefully. If you require any assistance regarding self-servicing of your inflatable PFD you are advised to contact one of our accredited service centres for advice.

The self-service instructions are for Marlin manufactured PFD's for recreational use only not for commercial. If PFD is used commercially, servicing should only be by an authorised accredited service centre every 12 months.

2. The green firing indicator located on the side of the CO2 inflation mechanism will be broken, ensure you have purchased green firing indicators before starting, as well as CO2 cylinders and automatic cartridge/bobbins.

Bobbin should not be older than 3 years - all these parts are available through Marlin retailers or authorised certified service centres.

3. Always use the Marlin self-inspection certificate to maintain a record of the inspection/service.

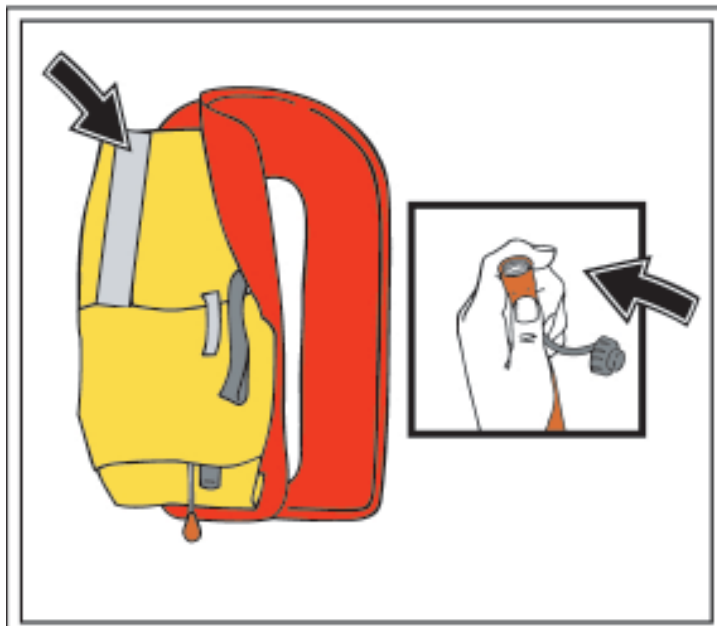
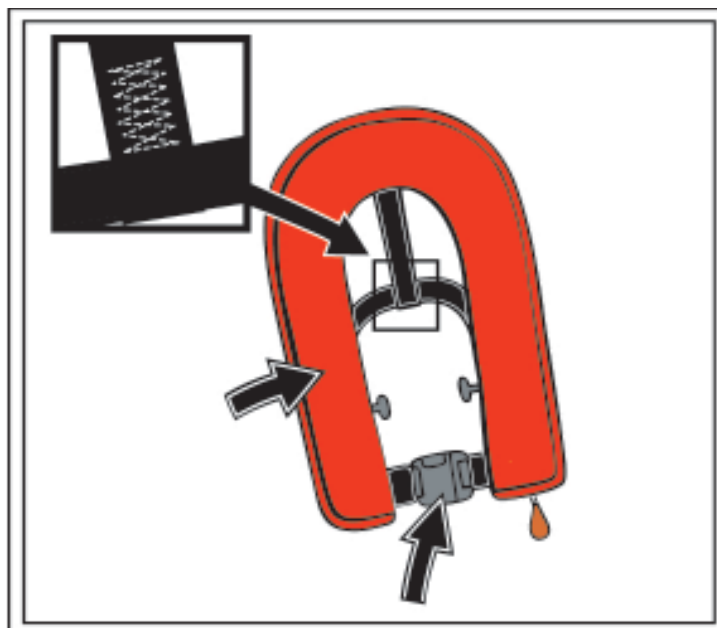


**WARNING:**

If a component fails any of the inspection steps or indeed the PFD fails to operate - the PFD must be replaced or the faulty component replaced before further use. In this circumstance the PFD must be sent to Marlin authorised accredited service centre for further tests to be conducted.

**WARNING:**

You must not repair any part of the PFD during inspection/service.



## **Inspection 1:**

### **1.1 General Visual Inspection**

- a. No wear or damage to the outer cover of the PFD
- b. Outer cover closure is not working (zipper if applicable or hook/loop)
- c. No damage to webbing straps
- d. Buckle operation is correct (open and close buckle)
- e. Load indicator thread is not broken if applicable

### **1.2 Open outer cover and check**

- a. Oral inflation tube has no damage.
- b. Whistle (Blow to check operation)
- c. Grab strap no visual damage
- d. Retro reflective tape is firmly attached and not damaged.

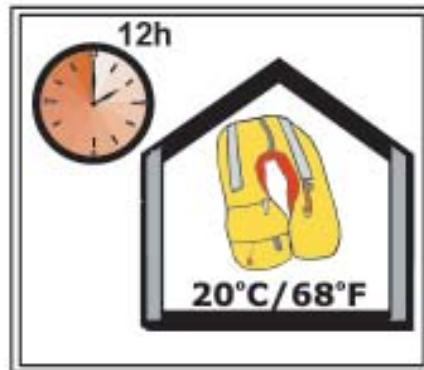
### **1.3 Models fitted with integral safety harness check that all harness components have no visible damage or excessive wear.**

- a. Check webbing
- b. Stainless steel buckles
- c. Stainless steel D-Ring
- d. Stitching
- e. Load indicator for broken stitch
- f. Grab strap
- g. Whistle attachment
- h. Crotch strap/Holding down strap

## **Inspection 2:**

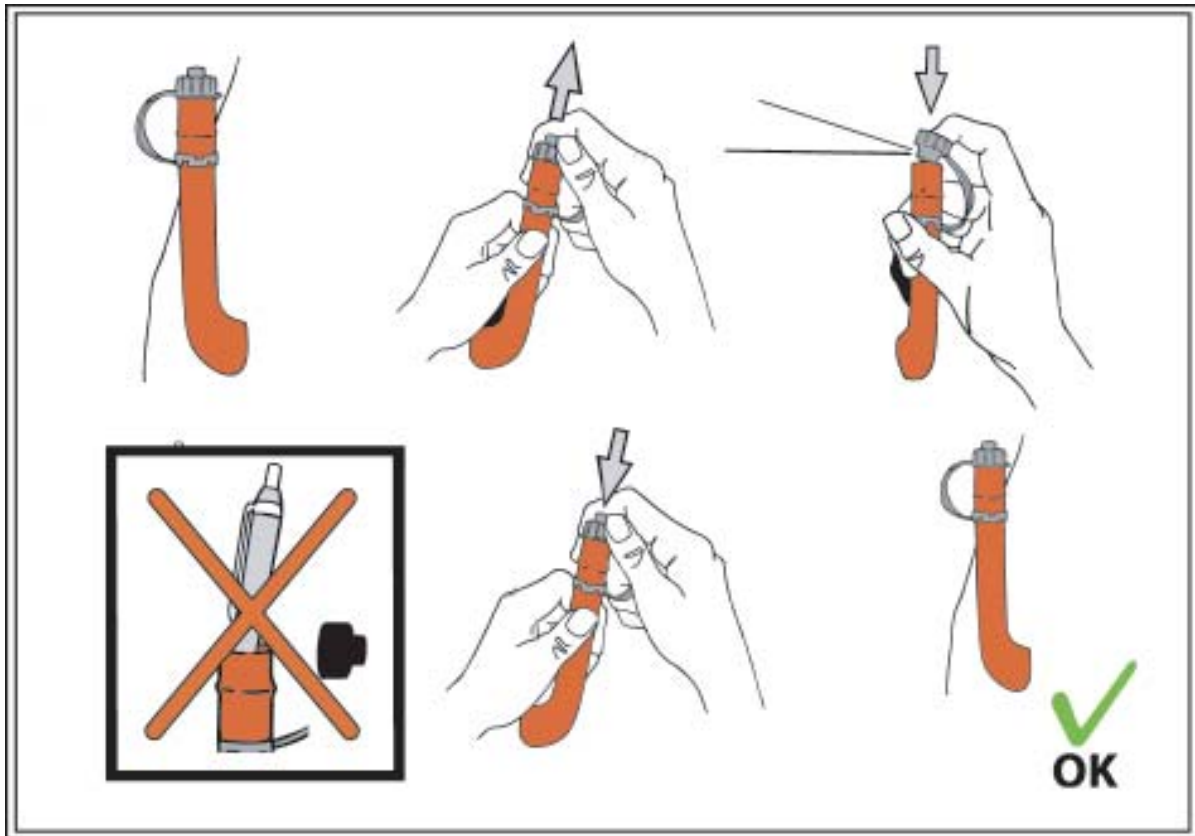
### **1.1 Inspection of the Bladder**

- a. Open cover and inspect bladder has no signs of excessive abrasion or wear. Pay extra attention to folds and area around inflation systems.
- b. Inflate bladder by using red oral tube. Leave the inflated PFD 12hrs in a room with stable temperature of around 20°C. If the temperature goes down overnight, this will affect pressure. Check there is no loss of pressure and no visible damage to the bladder.



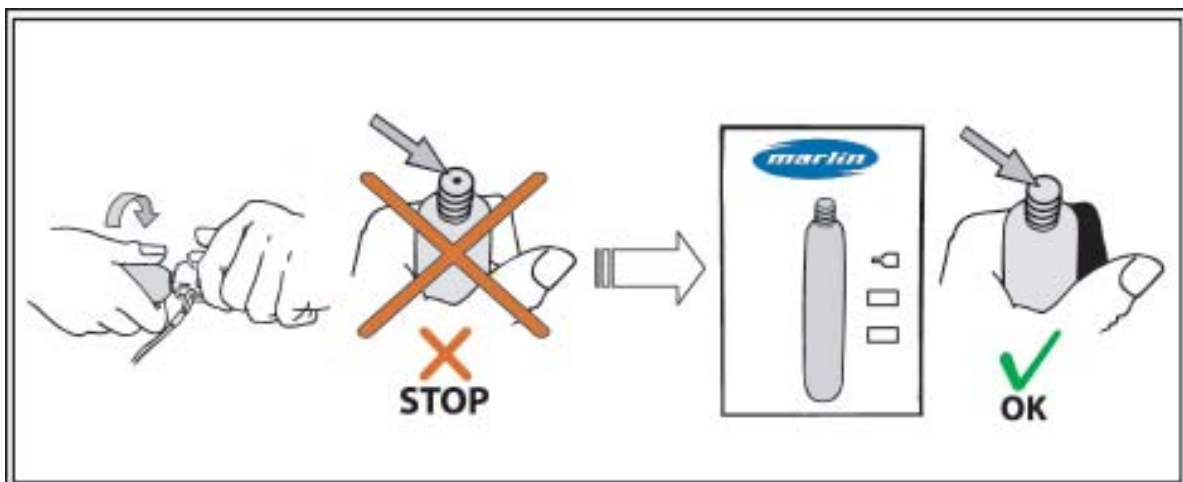
If the bladder is damaged or the pressure falls, the PFD must be replaced or sent to an accredited service station for further tests. Under no circumstances must you attempt to repair the PFD.

Inspection of oral tube and its valve. Check oral tube and inflation head operate correctly. Deflate the life jacket by inverting the cap and placing the tab onto the top of the oral tube. Press cap gently to expel air. When PFD is fully deflated replace cap to normal position. Do not put anything other than the inverted cap down the oral inflation tube to deflate as foreign objects may damage the inflation head



### Inspection 3:

Inspection of CO2 Cylinder. Check that correct type/size of CO2 cylinder is fitted to the inflation head (printed on the bladder near inflation head or the cylinder/inflation head protective cover). Remove the CO2 cylinder by unscrewing it counter clockwise and inspect thoroughly it should be intact with no rust or corrosion. Replace the cylinder if the end cap has been pierced, it is damaged or the cylinder exhibits signs of rust or corrosion.



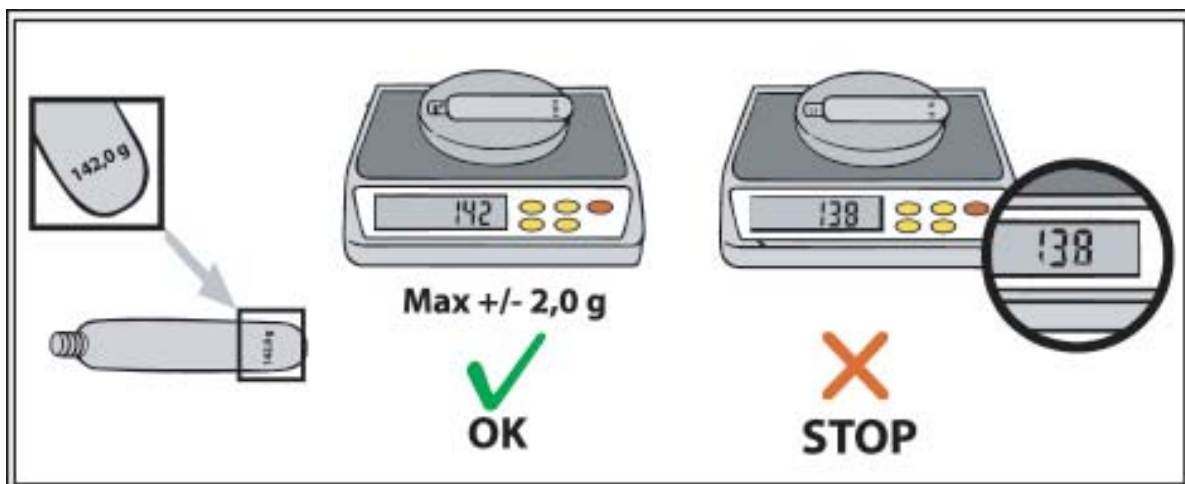
If the CO2 cylinder is serviceable check weight of the cylinder on a kitchen or postal scales to ensure that the weight of the cylinder corresponds to the minimum gross weight engraved on the cylinder, (GR.WT) +/- 2 g. If the weight is incorrect or the cylinder is in any way defective it must be replaced. (A replacement cylinder should also be checked in the same manner). Record engraved GR.WT. and actual weight of cylinder on your self inspection certificate.

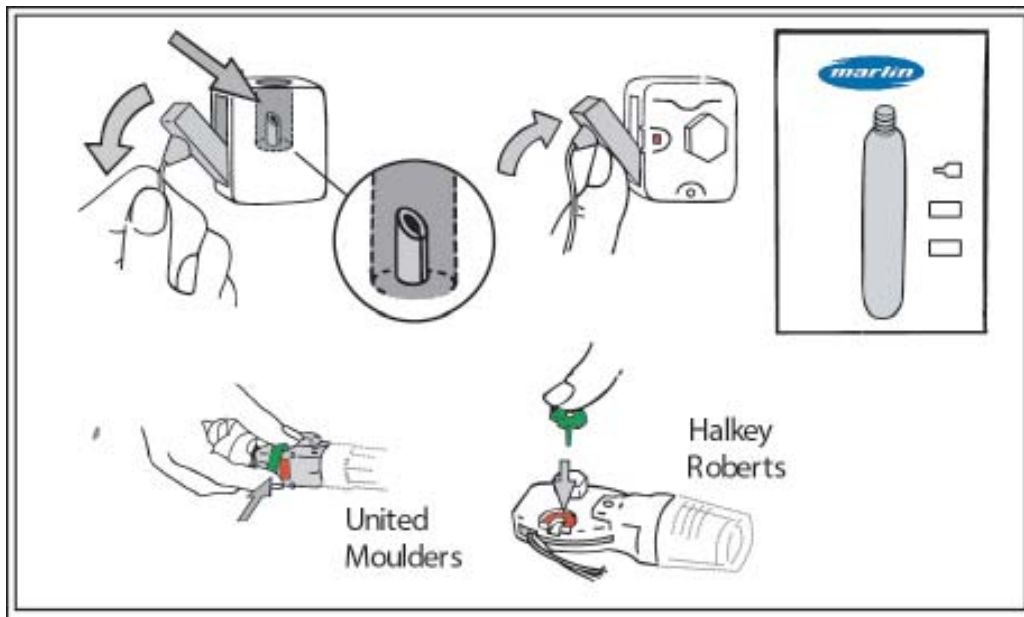
NB! Make sure that all scraped CO2 cylinders are disposed of at once.

#### Inspection 4:

With the cylinder removed, pull the manual lanyard sharply to ensure that the lever moves freely, and that the piercing cutter appears undamaged. If the lever moves freely and the piercing cutter appears undamaged, rearm the head by folding back the lever into the normal position and secure with a new green firing indicator clip if your green clip is missing or damaged.

If the head does not operate properly, or if you are concerned about the operation of the mechanism, you must send the PFD to an accredited service agent for inspection and further action.





### Inspection 5:

Inspection and rearming of automatic inflation heads (automatic models only) Cartridge or Bobbin (as applicable) must be replaced if it has been immersed in water, is past its expiry date or if the expiry date falls before PFD's next scheduled service.

a. For automatic models fitted with United Molders automatic inflation head with water sensing cartridge (Fig 1) UML cartridge has 3 year lifespan and is printed with an expiry date.

1. Unscrew the cartridge turn counter clockwise.
2. Check that the cartridge is clean and completely dry.
3. Record the expiry date printed on the cartridge on the inspection certificate and check that the green indicator is in place. Discard and replace cartridge if expiry date falls within next 12 months or green indicator at base of cartridge is not visible.
4. Rearm by screwing cartridge clockwise onto base of inflated head. Ensure thread is not obstructed and tighten firmly using light hand force only. Ensure that the green auto firing indicator (at base of cartridge) is present on any auto cartridge fitted to the inflator head.

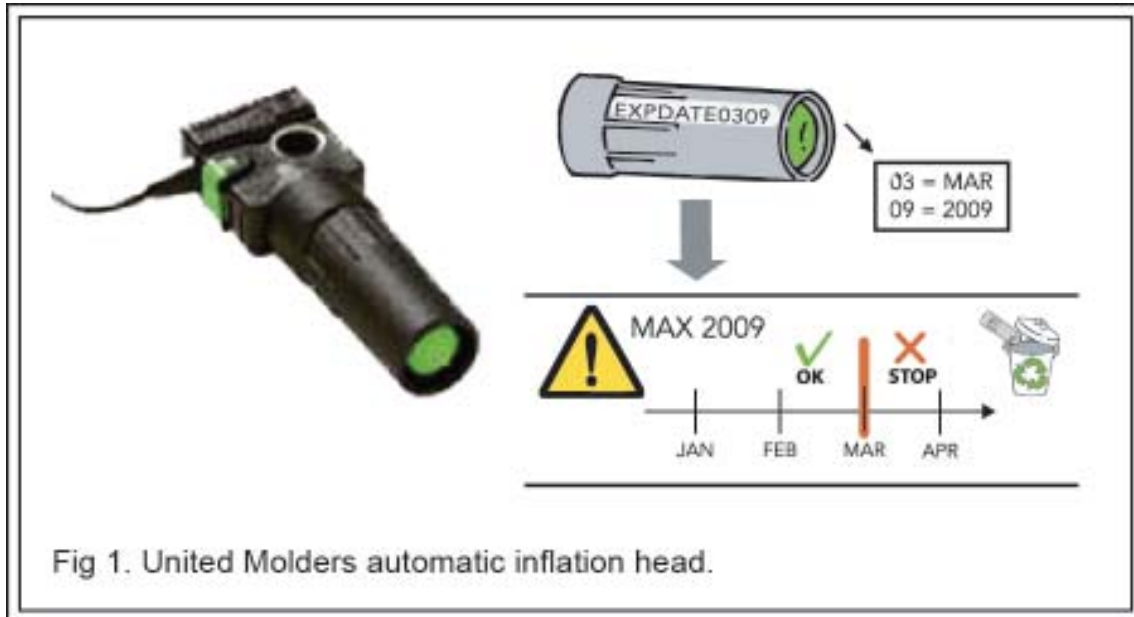


Fig 1. United Molders automatic inflation head.

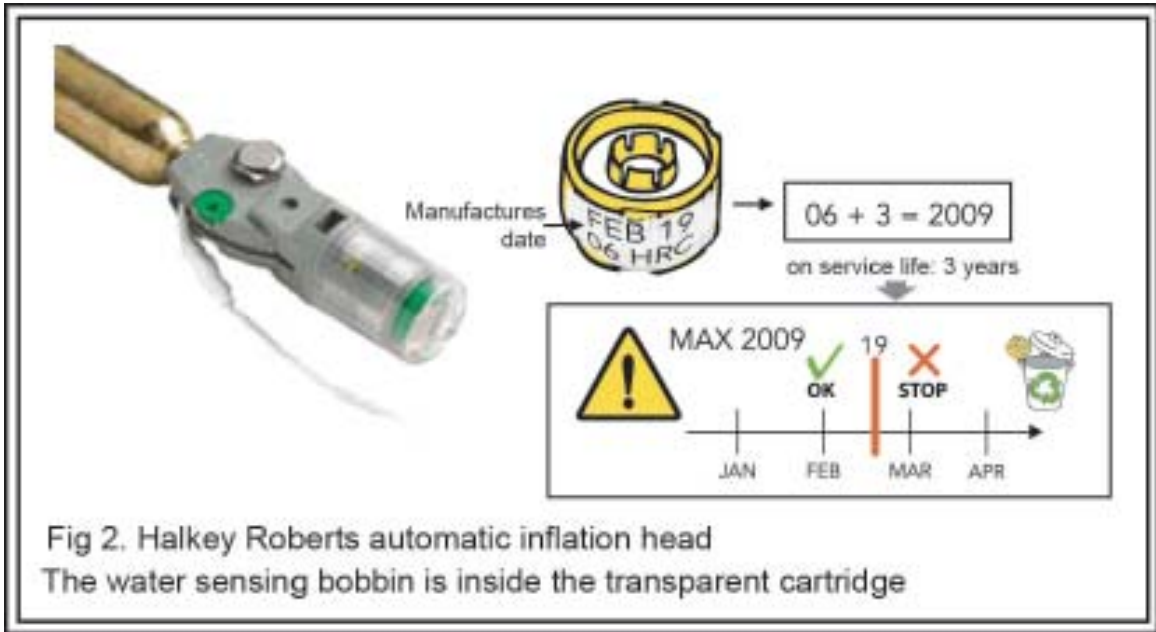
b. For automatic models fitted with Halkey Roberts automatic inflation head with transparent head and water sensing yellow bobbin (Fig 2.).

For Yellow Bobbin please note:

- Shelf life plus service life not to exceed 6 years
- Service life is 3 years from date bobbin is installed in inflator.
- Please check date on bobbin and replace if necessary

Procedure:

1. Check if green indicator is showing at the base of head. Remove the bobbin by unscrewing the transparent cartridge counter clockwise. Discard bobbin if has expired or green indicator at base of transparent head is not visible when armed. To rearm the Halkey Roberts automatic inflation head.
2. Fit the bobbin (the bobbin will only fit one way round).
3. Refit transparent cartridge by screwing it clockwise until hand tight.
4. Check that the green firing indicator is visible.



## Inspection 6:

### Refitting the CO2 Cylinder.

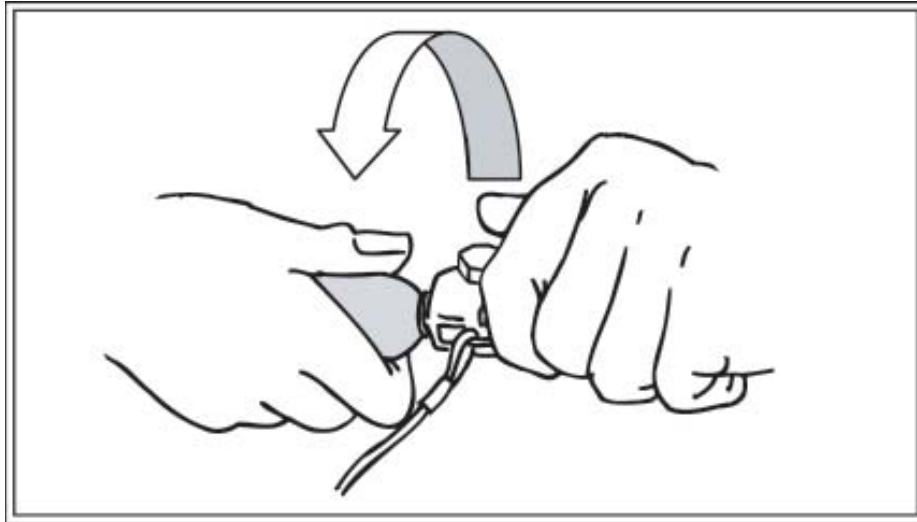
- Ensure that CO2 cylinder has passed inspection.
- Ensure that the inflator head has passed inspection and rearmed.
- Ensure that automatic cartridge has passed inspection and is rearmed.
- Hold the unit firmly and screw the CO2 cylinder clockwise into top of the inflator head. Hand tighten until firm.

DO NOT USE ANY TOOL OR UNDUE FORCE

### Warning:

When replacing with a new CO2 cylinder the new cylinder should be inspected as per Instruction 4. For the piercing cutter to work correctly both the CO2 cylinder and automatic cartridge (when fitted) must be firmly hand tightened onto inflation head.





### **Inspection 7:**

Record service inspection on your PFD. If the PFD has passed all applicable self inspection instructions described in Instructions 1 through 7, using permanent laundry marker Sign and date the Service Inspection label located on the inflation head side of the PFD bladder. Format for dating a self inspection should be SI-YY-MM (the prefix SI is to indicate self inspection) For example for a self inspection completed in August 2010 service schedule should show SI-10-08

### **Inspection 8:**

Repack PFD according to model instructions as described in your PFD owners manual. make sure the manual pull lanyard is not tangled and that the lanyard knob is hanging outside the PFD cover.

### **Inspection 9:**

Certify PFD inflatable Self Inspection Certificate. Sign self inspection certificate and record the date self inspection was completed. It is also recommended that the next inspection due date is noted in space provided and that the signed and dated certificate is placed in boat's safety equipment log for future reference.

## SERVICE CENTRES & AGENTS

### **NSW**

Bulbeck Marine  
33-43 Fern Street,  
Islington NSW 2296  
T: 02 4961 3011

Bulbeck Marine  
12 Ralph Black Drive,  
Wollongong NSW 2500  
T: 02 4226 6917

Marine Safetyworks  
110 Ingrid Road, Kareela  
NSW 2232  
T: 02 9576 6065  
M: 0402 294 490  
info@marinesafetyworks.  
com.au

Sussex Marine  
5 Flood Ave  
Sussex Inlet NSW 2540  
T: 02 4441 2791

Newcastle address  
Bulbeck Marine  
4 Channel Road,  
Mayfield West  
NSW 2304  
T: 02 4961 3011

Be Safe Marine  
12 23b-27 Pine Ave  
Brookvale 2100  
T: 0412 622 555

All Inflatable Boats  
162 Harbord Road,  
Brookvale, NSW 2100  
PH - 02 9905 7532  
Mob - 0408 973 981  
bob@allinflatableboats.  
com.au

Nowra Boats Pty Ltd  
ABN: 22168032755  
6/10 Central Ave, South  
Nowra NSW 2541  
Australia

Ph: 02 4422 1999  
Fax: 02 4422 3666  
info@nowrapowerboats.  
com.au

### **VIC**

Dive and Dive  
878 Springvale Road  
Braeside VIC 9135  
T: 03 9769 0145

Survival Offshore  
Systems  
Melbourne  
1/273 Williamstown  
Road Port Melbourne,  
Vic 3207  
T: 03 96465001

help@survival.com.au  
Survival Offshore  
Systems  
Gippsland

3/77 Rodgers Street  
Yarram, Vic 3971  
T: 03 51826880  
help@survival.com.au

### **QLD**

J & G LIFE JACKET  
SERVICING  
2/3 Corowa Court  
Mooloolaba Qld 4557  
Mob.0407 042 725  
MarineSafe Australia  
21 Rowland Street  
Slacks Creek QLD 4127

T: 07 3808 1988

### **ACT/**

**SOUTHERN NSW**  
ACT Inflatable Lifejacket  
Services

14 Chevalley Loop  
Gordon ACT 2906  
M: 0400 078770

### **SA**

PFD Servicing SA.  
Level 1/84 Hindley Street  
Adelaide SA 5000  
P: 0497 804 266  
P: 0418 222 759  
sa@pfdservicing.com.au

### **WA**


Fendercare Marine  
Australia  
23 Sparks Road  
Henderson  
Western Australia 6166  
Australia

T: 089 4129 999  
F: 086 4989 899  
Survival Offshore

Systems  
Perth 2/9 Adams Street  
O'Connor, WA 6163  
08 93141022  
perth@survival.com.au

Holdfast Offshore &  
Safety  
Cnr of Capo D'Orlando  
Drive & Mews Road  
Fremantle, 6160  
08-9331-1177





**IMPORTANT MESSAGE:  
CHECK THAT A CO2 BOTTLE IS  
FIRMLY SEWED INTO MECHANISM  
BEFORE DONNING.**

***marlin***

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RV - 28-01-16