



NORTHERN DIVER

SPECIALIST RESCUE EQUIPMENT



LIFE JACKET MANUAL

WARNING



Read owner's manual and the label, located under the right side of the cover bag, thoroughly before using this product. If you do not completely understand these instructions, do not use this lifejacket.

150N Manual and Automatic
Life Jacket : ISO EN 12402-3



275N Automatic
Life Jacket : ISO EN 12402-2



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SPECIFICATIONS

This harness is suitable for an adult wearer of more than 50 kg. (If your PFD is equipped with harness).

This lifejacket is used for coastal or offshore navigation.
Chest size: 30-52 inches (76 to 132 cm).

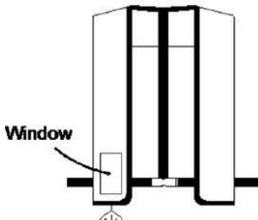
Age Limitation: 16 years of age and older

Exiting types of personal flotation devices and their application		
Application	Level of performance	
Offshore, extreme conditions, special protective clothing, heavy equipment	Lifejacket	275
Offshore, foul weather clothing		150
Sheltered waters, light clothing		100
Swimmers only, sheltered waters, help at hand, limited protection against drowning, not a lifejacket.	Buoyancy aid	50

INSTRUCTIONS FOR USE

1. Where and how to check Inflation System Status Indicators:

Check Inflation System Status Indicators through the window panel. Ensure the Inflation System Status Indicator is green. If the Inflation System Status Indicator is red, the mechanism has been fired or incorrectly fitted.



2. Donning Instructions: **DON LIKE A VEST**

STEP 1.

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



STEP 2.

Close the front buckle, manual pull lanyard should be visible on your lower right side.



STEP 3.

Adjust the harness through slide located on right side until comfortably close fit is obtained.
Tuck free end of belt under waist.



Note: *A whistle is attached to the life jacket, it will be used if you fall into the water, to be easily located.*

NOTE:



1. It is not a PFD until fully inflated.
2. Train yourself in the use of the device, do not use as a cushion.
3. The gas cylinders and dangerous goods, they must be kept away from children and not misused.
4. Full performance may not be achieved using waterproof clothing or in other circumstances.
5. Do not apply nappies which provide buoyancy when using the lifejacket.
6. The recommended temperature range on use is 2 to 40°C

Inflation and Deflation

INFLATION

Automatic inflation PFD: The PFD will inflate when fully immersed in water. Automatic/Manual PFDs can be manually inflated by grasping the manual inflation pull tab and pulling sharply downward.

Manual inflation PFD: The PFD is manually inflated by grasping the manual inflation pull tab and pulling sharply downward.

Oral Inflation: The oral inflation tube is located inside the cover on the wearer's left side. To inflate orally, access the inflation tube by opening the top portion of the cover, remove the dust cap, and blow air into the tube until the inflatable is firm.

Note: *Do not fully inflate the PFD orally and then inflate with CO2 cylinder as chamber could incur damage.*

DEFLATION:

The deflation tab is located on top of the dust cap. Turn the dust cap upside down and insert the deflation mechanism into the oral tube. Hold the deflation mechanism in place with your finger and gently squeeze all the air out of the PFD. If the PFD has inflated while being worn, it may be necessary to partially deflate the PFD in order to remove it.

To remove all air, roll the PFD into a ball and squeeze while operating the deflation mechanism. The PFD will be difficult to fold and re-pack properly if not completely deflated.

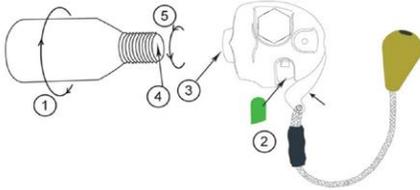
PRACTICE wearing and adjusting your inflatable PFD in the water in order to be prepared for an emergency!

Practice wearing and inflating your PFD using different types of clothing. Wade into the water and manually inflate or allow your PFD to inflate automatically. Practice until you have complete confidence in the performance of your PFD.

QUICK GUIDE: RE-ARMING INSTRUCTIONS

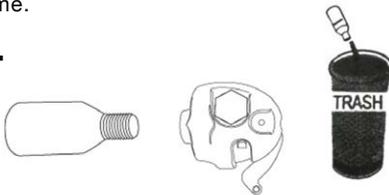
UML MANUAL INFLATOR

The charge of the CO2 cylinder for your jacket is 33g or 60g



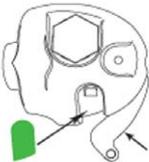
Step 1. Unscrew used CO2 cylinder in an anticlockwise direction. To avoid confusion later, we suggest discarding the old cylinder now in an environmentally friendly manner. Do not insert new cylinder at this time.

1.



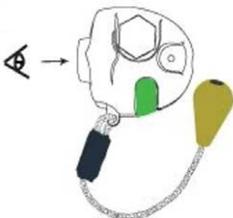
Step 2. Close manual inflator arm within inflator body and carefully insert a new green indicator tab so that it fully covers the red semi-circle on the body.

2.



Step 3. Look into threaded cylinder receiver and view the gasket. If worn, contact Northern Diver Repair Facility.

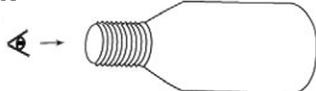
3.



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 questions about cylinder integrity, weigh the cylinder on a small scale, such as a postage scale.

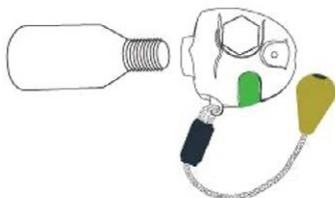
Compare the weight printed on the cylinder to the actual weight. If they do not match within 5g, get another cylinder

4.



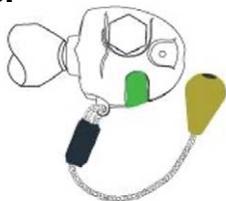
Step 5. Screw new cylinder in a clockwise direction firmly into the inflator. Do not over-tighten, but ensure the fit is tight

5.



Step 6. Check the inflator arming indicator every boating trip. The indicator and cylinder tightness tell you if there is a need for service. Check the cylinder face regularly to ensure it is not punctured. Be sure cylinder is screwed in tight.

6.



QUICK GUIDE: RE-ARMING INSTRUCTIONS

UML AUTOMATIC/MANUAL INFLATOR (MK5) DISASSEMBLY (see figure)

1. Unpack or open the lifejacket so that the manual/automatic inflator is visible.

2. Remove gas CO2 cylinder by firmly rotating cylinder anticlockwise. Discard cylinder in an environmentally friendly manner.

3. Remove cap by turning anticlockwise. Discard automatic firing cartridge.

4. Check the date on the automatic firing cartridge in the rearm kit.

5. Check the bottom of that automatic firing cartridge bottom is green.

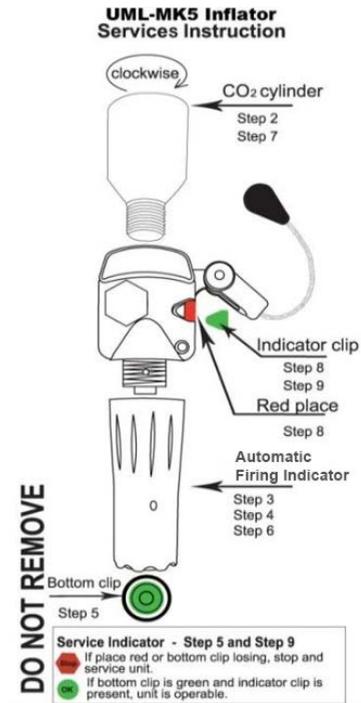
6. IMPORTANT

Install automatic firing cartridge by screwing clockwise until it meets the inflator body shoulder (no gap).

7. Install cylinder by rotating clockwise into inflator until cylinder is secured firmly in inflator.

8. 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.

9. Check to be sure service indicator is green and green indicator clip is firmly attached.



RE-FOLDING AND RE-PACKING INSTRUCTIONS

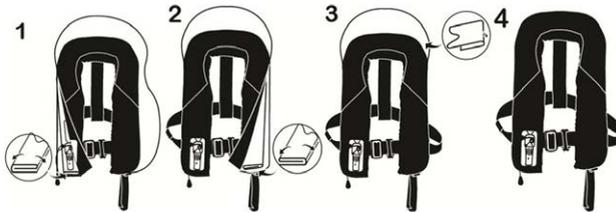
S TYPE PFD

Step 1. Lay the device flat, fold the left lobe over and mate velcro strip.

Step 2. Fold the right lobe over and mate velcro strip

Step 3. Fold the top lobe over and mate velcro strip

Step 4. Examine velcro strips



Examine all strips, buckle and jerk to inflate tab to ensure that they are free from snag.

PRECAUTIONS FOR USE IN FREEZING TEMPERATURES

The gas in a CO₂ cartridge expands in hot weather and contracts in cold weather. At -33°C (-30°F) the bladder fill is 87% of the volume created at 22°C (70°F).

Under freezing conditions, the CO₂ fills more slowly and achieves less buoyancy. This can be compensated by partially inflating the PFD with one or two breaths of air through the oral tube.

Caution: Do not fully inflate by blowing in the oral tube and then inflate with the CO₂ cylinder. Repeated CO₂ inflation after oral inflation may damage the PFD.

IS YOUR PFD IN GOOD AND SERVICEABLE CONDITION?

Check your PFD between outings to be sure that it is properly armed; that it is free of 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 the Care and Maintenance Instructions below.

CARE AND MAINTENANCE INSTRUCTIONS

Each Use: Examine the service indicator through the window panel, ensuring it is green. If the service indicator is red, the mechanism has been fired or is incorrectly fitted.

Cleaning and Storing Your Inflatable PFD

Before cleaning your inflatable life jacket, remove the CO2 gas cylinder/bayonet assembly and automatic firing cartridge (keep it dry):

Hand wash or sponge down in warm, soapy water and rinse with clean water.

Remove heavy stains from jacket by using pre-wash stain remover. Hand wash in warm water using regular liquid or powdered detergents. Do not use bleach or fabric softener. **DO NOT** dry-clean, iron or use a heater or tumble dry to quicken the process.

Hang to dry on a plastic coat hanger. Always store your inflatable life jacket in a dry place out of direct sunlight. Refer to re-arming instructions for automatic firing cartridge replacement.

WHY ARE PFDS REQUIRED SAFETY EQUIPMENT?

Drowning is the leading cause of fatalities involving recreational boating. A PFD provides flotation to help keep your head above water, help you to stay face-up in the water, and increases your chances for survival and rescue. Most adults only need an extra 7 to 12 pounds of flotation to keep their heads above water.

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

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:

- Activating the CO2 inflation system
- Re-arming the CO2 inflation system
- Using the oral inflator tube

To check the manual inflation system (with CO2 cylinder/bayonet assembly removed); determine that the CO2 cylinder piercing pin moves freely when pushing up on the lever arm by pushing down on the pins and releasing the pins followed by the lever arm. Repeat this several times to check the manual inflation system.

We recommend that you purchase two automatic re-arming kits.

One kit is to be used immediately in testing the automatic inflation system (see HOW DO YOU TEST YOUR PFD USING THE AUTOMATIC INFLATOR?) and the other to carry on board as a spare.

We recommend 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 properly and reduce the likelihood of premature inflation and its associated dangers.

HOW DO YOU TEST YOUR PFD USING THE AUTOMATIC INFLATOR?

1. To test your inflatable PFD, you will need your fully armed PFD, and re-arming kit approved for your PFD.
2. Put on the PFD.
3. Get into shallow water, just deep enough that you can stand with your head above the surface. Once the inflator is underwater the PFD should fully inflate automatically within 10 seconds.
4. See if the PFD will float you on your back or just slightly less than vertical. In a relaxed floating position, verify that your mouth is well above the water's surface. Note the effect of where you hold your legs on how you float.
5. Get out of the water and remove the PFD. Remove the used CO2 cylinder/bayonet assembly and the used automatic firing cartridge from the PFD inflator. Deflate the PFD by depressing the oral inflator valve.
6. Let the PFD dry thoroughly. Keep the cap off the inflator while drying. Re-arm and repack the PFD in accordance with this manual.

HOW DO YOU TEST YOUR PFD USING THE MANUAL INFLATOR?

1. To test your inflatable PFD, you will need your fully armed PFD, and re-arming kit approved for your PFD.
2. Put on the PFD.
3. Actuate the inflation system by jerking firmly downward on the pull tab. The PFD should fully inflate within five seconds.
4. Get into shallow water, just deep enough that you can stand with your head above the surface.
5. See if the PFD will float you on your back or just slightly lower than vertical. In a relaxed floating position, verify that your mouth is well above the water's surface. Note the effect of where you hold your legs on how you float.
6. Get out of the water and remove the PFD. Remove the used CO2 cylinder/bayonet assembly from the PFD inflator. Completely deflate the PFD using the oral inflator.
7. Let the PFD dry thoroughly. See 'Cleaning and Storing' of your PFD. Re-arm and repack the PFD in accordance with this manual.

HOW DO YOU TEST YOUR PFD USING THE ORAL INFLATOR?

1. To test your inflatable PFD, you will not need any spare parts, or re-arming kits.
2. Remove the CO2 cylinder/bayonet assembly, to prevent inadvertent activation of the manual inflation system, which could potentially damage the PFD. Unscrew and remove the automatic firing cartridge. Otherwise, the cartridge will disintegrate during water immersion.
3. Put on the PFD
4. Get into shallow water, just deep enough that you can stand with your head above the surface.
5. Fully inflate the PFD using the oral inflator.
6. 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.
7. Get out of the water and remove the PFD. Completely deflate the PFD using the oral inflator.
8. Let the PFD dry thoroughly. See 'Cleaning and Stowage' of your PFD. Re-arm and repack the PFD in accordance with this manual.

WEAR YOUR PFD

In approximately 80 percent of all boating fatalities, the victims were not wearing a PFD. Most fatal accidents happen on calm sunny days. This inflatable PFD is much more comfortable to wear than other PFD types. Get into the habit of wearing this PFD.

Non-swimmers and children especially should wear a hybrid or non-inflatable PFD at all times when in or near the water.

HYPOTHERMIA

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

How hypothermia affects most adults

Water Temperature °C (°F)	Exhaustion or Unconsciousness	Expected Time of Survival
0.3 (32.5)	Under 15 minutes	Under 15-45 minutes
0.3-4 (32.5-40)	15-30 minutes	30-90 minutes
4-10 (40-50)	30-60 minutes	1-3 hours
10-16 (50-60)	1-2 hours	1-6 hours
16-21 (60-70)	2-7 hours	2-40 hours
21-27 (70-80)	2-12 hours	3 hours. to Indefinite
Over 27 (over 80)	Indefinite	Indefinite

WEAR YOUR PFD

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, less insulation you will require.

When operating in cold waters [below 15.6oC (60oF)] you should consider using a coat or jacket style PFD or thermal protective PFD as they cover more of the body than the lifejacket or belt style PFDs. Some points to remember about hypothermia protection:

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

H.E.L.P POSITION



EACH OF THESE DEVICES IS INTENDED TO HELP YOU SAVE YOUR OWN LIFE

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

1. Check the inflation mechanism status indicator before each use.
2. Get into the habit of re-arming the inflation mechanism immediately after each CO2 inflation (be sure the inflator is dry before re-arming).
3. Try your wearable PFD on and adjust it until it fits comfortably in and out of the water.
4. Mark your PFD with your name if you are the only wearer.
5. Do not alter your PFD. If it doesn't fit properly, get one that does.
6. Your PFD is not intended for use as a fender or kneeling pad.
7. If your PFD is wet, allow it to dry thoroughly before storing it. Store it in a well-ventilated area.
8. Do not dry your PFD in front of a radiator or other source of direct heat.

DO NOT ATTACH PFDs TO YOUR BOAT

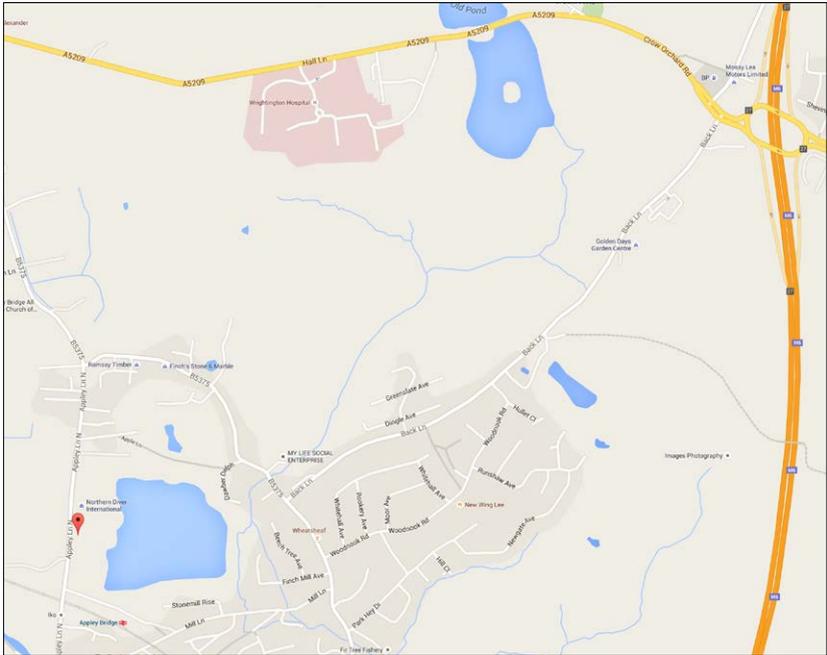
Each PFD has straps, hooks, buckles, or other means for securing the device in place on the water. Some PFDs also incorporate decorative d-ring or tabs. Such items are not to be used to attach the device to the boat. Attaching the device to the boat will not permit it to perform as intended.

USE IDENTIFICATION AND SERVICE RECORD

TEST THIS DEVICE AT THE BEGINNING OF EACH SEASON AND PRIOR TO A LENGTHY SEA VOYAGE. WE RECOMMEND THIS DEVICE BE SERVICED BY NORTHERN DIVER'S AUTHORISED REPAIR FACILITY AT LEAST EVERY TWO YEARS.

MODEL:		
DATE:	SERIAL NUMBER:	
OWNER'S NAME:		
SERVICE NAME	NEXT SERVICE DATE	AUTHORIZED FACILITY STAMP

FIND US



We are happy to answer any questions you may have.

We are located in Appley Bridge, Lancashire, UK - only 5 mins from the M6 motorway (J27). Manchester & Liverpool international airports are only 40 mins away. Wigan North Western rail station is 2 hrs & 3 mins from London Euston.

We are more than happy to collect clients and return them after their visit.

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Find Us Online.

View our extensive product range

www.ndiver-rescue.com



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