

A large, light gray graphic of a ship's steering wheel is centered in the background of the page. It has a thick outer ring and several spokes with rounded ends.

SOLAS LIFE JACKET

OWNER'S GUIDE

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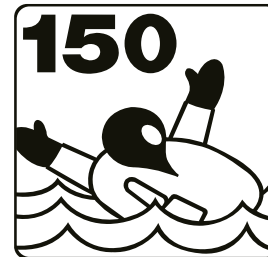
www.ndiver-rescue.com

NORTHERN DIVER

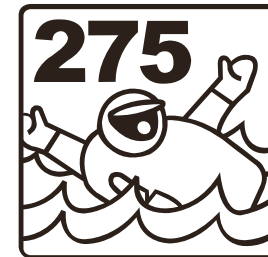
SRE

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

- LS5000 Inflatable lifejacket 150N without harness
- LS5100 Inflatable lifejacket 150N with harness, (webbing D-ring)
- LS5200 Inflatable lifejacket 150N with harness, (S.S D-ring)
- LS6000 Inflatable lifejacket 275N without harness
- LS6100 Inflatable lifejacket 275N with harness,(webbing D-ring)
- LS6200 Inflatable lifejacket 275N with harness, (S.S D-ring)



150N
Notified body:0098
☼0098 / ___
EN ISO 12401:2009
CE 0082
APAVE SUD EUROPE SAS
CS60193 -13322 MARSEILLE
CEDEX 16
NO. :0082



275N
Notified body:0098
☼0098 / ___
EN ISO 12401:2009
CE 0082
APAVE SUD EUROPE SAS
CS60193 -13322 MARSEILLE
CEDEX 16
NO. :0082



DO NOT REMOVE PRIOR TO SALE

WARNING!

This PFD will not float you without inflation. Each CO2 inflator body will only inflate the PFD once. You must rearm this PFD after each use of the CO2.

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Rinse in fresh water, particularly if used in salt water. If oil, dirt or debris are evident wash in soapy water. Do not dry in excessive or direct heat. The harness should be worn as high on the chest as possible, but in all cases, at least 2 inches (5 cm) above the lowest rib measured from the bottom of the belt and should not be used if it does not fit in this manner. Adjust the harness through slide located on right side until comfortable snug fit is obtained. Tuck free end of belt under waist. Failure to adjust the harness properly could result in injury.

Warning: Use of a sailing harness to prevent falls overboard presents several risks. In case of capsizing or sinking, the boat may take you down. As such, ensure that any tether used has quick-release under-load hardware, This harness has not been designed for all arrest, lifting or climbing and should not be relied upon in any of these instances.

17. 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 Leon Sports Ltd AUTHORIZED REPAIR FACILITY AT LEAST EVERY TWO YEARS.

Warning: It is unsafe to wear this harness loose. The harness shall be worn tightly in order to be effective.

VISUAL CHECK, CARE & MAINTENANCE

Perform regular visual checks on all parts of the harness: metal buckles, webbings and seams. You should not see any crack or tear. In the event of an anomaly, contact with authorized repair facility.

Ensure the automatic firing cartridge is within the expiry date printed on the cartridge. If the item is out of date, DO NOT USE! Please discard & replace immediately. Check the light (if fitted) is within the expiry date printed in on the light. If the item is out of date, DO NOT USE! Please discard & replace immediately. Check the Co2 cylinder for any visual damage or corrosion. If signs of damage or corrosion is found DO NOT USE! Please discard & replace immediately.

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

1. SPECIFICATIONS:

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

This lifejacket is used for coastal or offshore navigation.

Chest size: 30-52 inches (76 to132 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 water, light clothing		100
Swimmers only, sheltered waters, help at hand, limited protection against drowning, not a lifejacket	Buoyancy aid	50

4. Remove the water sensors from water and dry it , the light could be turned off but not be turned on again.

5. The life of this lifejacket light is 5 years from date of manufacture. The expiry date of light is shown on the label affixed to the product. On expiry the light should be removed by moving clip carefully and the new light should be fixed again

16. IMPORTANT SAFETY HARNESS INFORMATION

Models LS5100,LS5200 are designed with deck safety harness.

Models LS6100,LS6200 are designed with deck safety harness.

Your lifejacket harness have been done EC type examination for EN 12401

Warning: The deck safety harness and safety line are intended to prevent the user falling overboard, they do not provide protection against falls from a height.

Warning: The deck safety harness and safety line may transmit very large forces . Only attach to strong hooking points or jack-lines.

15. IMPORTANT LIFEJACKET LIGHT INFORMATION

Your lifejacket is equipped with lifejacket light, it is activated automatically when the water sensor is immersed in water. And only water sensor contact at water, the light can be turned on or off by pressing switch on main body.

CARE AND MAINTENANCE

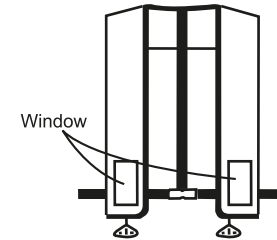
Your lifejacket light is maintenance free, but the following checks should be made annually:

1. In the storing period, do not contact water sensors with hands and ensure the water sensors are dry all the time.
2. Inspect light for signs of damage or corrosion.
3. Test the light by immersing it in water, the light must flash. And manually pressing switch on main body, the light could be turned off or changed function to off.

2. INSTRUCTIONS FOR USE:

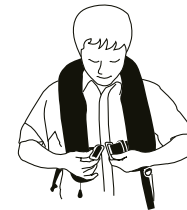
Where and how to Check Inflation System Status Indicators:

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



2.1 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 and right side.

STEP 3: Adjust the harness through slide located on right side until comfortably snug fit is obtained.
Tuck free end of belt under waist.



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.

Note: A whistle is attached to the life jacket, it can 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 are 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 diapers which provide buoyancy when using the lifejacket.
- 6). The recommended temperature range on use is 5 to 40 °C

14. DO NOT ATTACH PFD'S TO YOUR BOAT

Each PFD has straps, hooks, buckles, or other means for securing the device in place on the 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.

13. 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. An altered device is no longer Coast Guard approved.
- 6) Your PFD is not intended for use as a fender or kneeling pad.

2.2 Inflation and Deflation

2.2.1 Inflation

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

Oral Inflation: Two oral inflation tubes are located on the wear's both side of the cover. 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.

2.2.2 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.

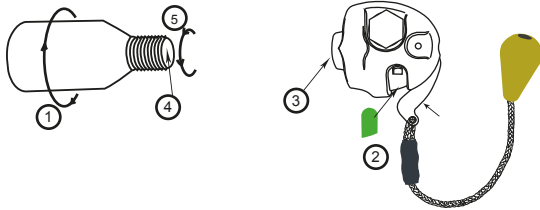
2.3 SERVICE INSTRUCTIONS:

Note: Rearming must follow the sequence below.

UML MANUAL INFLATOR

The charge of the CO2 cylinder for 150N life jacket is 33 gram.

The charge of the CO2 cylinder for 275N life jacket is 60 gram.



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.

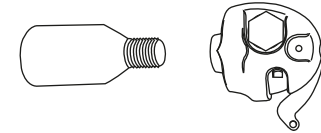


H.E.L.P POSITION

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 60 °F (15.6°)] 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:

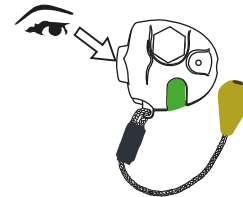
- 1) Always wear your inflatable PFD. Even if you become incapacitated due to hypothermia, the Inflatable PFD will keep you afloat and greatly improve your chances of rescue.
- 2) Do not attempt to swim unless it is to reach a nearby craft, fellow survivor, or a floating object on which you can lean or climb. Swimming increases the rate of body heat loss. In cold 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 HELP. position when wearing an Inflatable PFD, drawing the legs up to a second position, because doing so will help you conserve body heat.

STEP 1: Unscrew used CO2 cylinder in a counterclockwise direction and immediately discard. Do not insert new cylinder at this time.



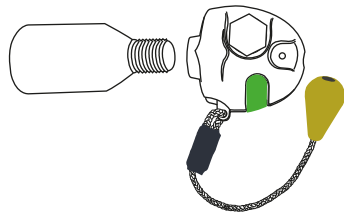
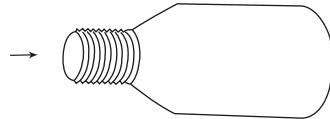
To avoid confusion later in the rearming process, we suggest you throw away the old CO2 cylinder now.

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.

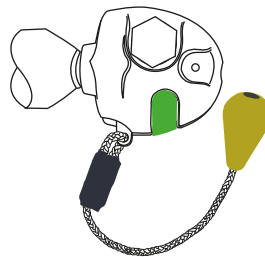


STEP 3: Look into threaded cylinder receiver and view the gasket. If worn, contact Leonsports Repair Facility.

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, weight 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. 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.

12. 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.

How hypothermia affects most adults

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

- 7) See if the PFD will float you on your back or just slightly back of vertical. In a relaxed floating position, verify that your mouth is well above the water's surface. Note the effect of where you hold your legs on how you float.
- 8) Get out of the water and remove the PFD. Completely deflate the PFD using the oral inflator.
- 9) Let the PFD dry thoroughly. See Cleaning and Stowage of your PFD. Re-arm and Repack the PFD in accordance with this manual.

11. WEAR YOUR PFD

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

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

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

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

STEP 2: Remove gas CO2 cylinder by firmly rotating cylinder counterclockwise. Discard cylinder.

STEP 3: Remove cap by turning counterclockwise. Discard cap.

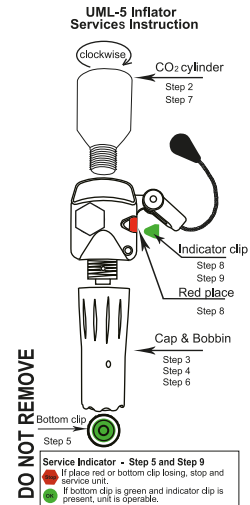
STEP 4: Check the date on the bobbin in the rearm kit. The date should not be over three years from today's date.

STEP 5: Check cap bottom to be sure it is green.

STEP 6: (IMPORTANT)

Install cap by screwing clockwise until it meets the inflator body Shoulder.(No gap)

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



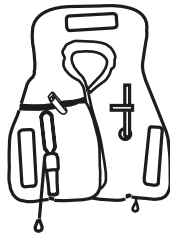
STEP 8: Place indicator clip over red lever by aligning the arms on the clip with the slots in the inflator. Push firmly in the middle of the clip to snap in place.

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

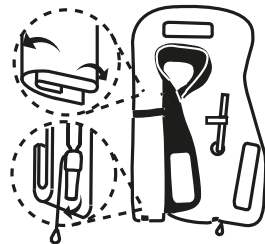
2.4 RE-FOLDING AND RE-PACKING INSTRUCTIONS

Note: completely deflate and rearm the PFD –carefully read the entire repacking instructions to repack

STEP 1: Lay flat the device



STEP 2: Fold the left lobe over and mate velcro strip



10. 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 cap and bobbin. Otherwise the bobbin 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) If you are a weak swimmer or non-swimmer, inflate the PFD partially so that you are support well enough to be able to complete inflation without touching bottom. Note this level of inflation because it is the minimum need for you so safely use this inflatable PFD.
- 6) Fully inflate the PFD using the oral inflator.

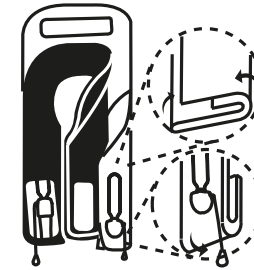
PFD should fully inflate within five seconds.

- 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 back of vertical. In a relaxed floating position, verify that your mouth is well above the water's surface. Note the effect of where you hold your legs on how you float.
- 6) Get out of the water and remove the PFD. Remove the used CO2 cylinder/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.

STEP 3: Fold the lifting loop
Over and mate velcro strip

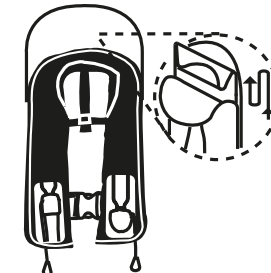


STEP 4: Fold the right lobe
Over and mate velcro strip



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

STEP 5: Fold the top lobe
over and mate velcro strip



STEP 6: Make sure the cylinder and inflators can be seen from the windows (if windows equipped)



3. PRECAUTIONS FOR USE IN FREEZING TEMPERATURES

The gas in a CO2 cartridge expands in hot weather and contracts in cold weather.

At -30 degrees F (-33 degrees C) the bladder fill is 87% of the volume created at 70 degrees F (22 degrees C).

Under freezing conditions the CO2 fills more slowly and achieves less buoyancy. This can be compensated by partly 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.

- 4) See if the PFD will float you on your back or just slightly back of vertical. In a relaxed floating position, verify that your mouth is well above the water's surface. Note the effect of where you hold your legs on how you float.
- 5) Get out of the water and remove the PFD. Remove the used CO2 cylinder/bayonet assembly and the used bobbin 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.

9. 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

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 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.

8. 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. 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 trips, 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.

5. CARE AND MAINTENANCE INSTRUCTIONS

- 1) 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.
- 2) Every year: Test the PFD for general leakage by orally inflating your inflatable lifejacket until firm and let stand overnight.
- 3) Cleaning and Storing Your Inflatable PFD

DO NOT CLEAN PFD, UNLESS IT IS REAL DIRTY THAT PROHIBIT YOU FROM WEARING IT.

Before cleaning your Inflatable lifejacket , remove the CO2 gas cylinder/bayonet assembly, cap and bobbin (keep the bobbin dry):

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

Remove heavy stains, from jacket only 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, use a heater or tumble dry to quicken the process.

Hang to dry on a plastic coat hanger. Always store your Inflatable lifejacket in a dry place out of direct sunlight. Refer to Re-arming instructions for bobbin replacement.

6. 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. The proper size PFD will properly support the weight of the wearer.

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

7. 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 CO₂inflation system
- Re-arming the CO₂inflation system
- Using the oral inflator tube

To check the manual inflation system (with CO₂ cylinder/bayonet assembly removed); determine that the CO₂cylinder 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.