

Donning Immersion Suits and Personal Flotation Devices

Personal Flotation Devices (PFDs)

No other piece of lifesaving equipment has saved more lives at sea than the personal flotation device, your lifejacket. They are designed to keep you floating face up and should do two things for the survivor: **KEEP YOUR MOUTH AND NOSE ABOVE THE SURFACE AND MAKE YOU CLEARLY VISIBLE TO RESCUERS.** Without flotation in extremely cold water, your ability to tread water or swim is measured in minutes. If you are unconscious or injured, survival time is even less.

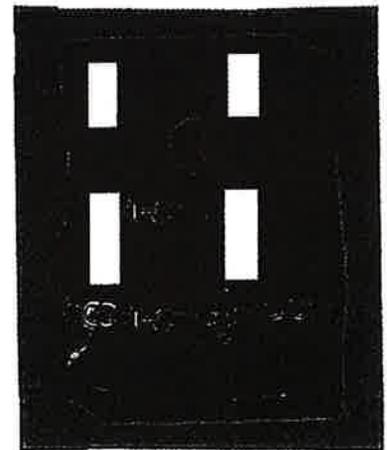
There are five types of PFDs that are approved by the U.S. Coast Guard. Selecting a PFD for certain waters has been made easier by classifying them into five different types.

Type I (Offshore Life Jackets)

A Type I has the greatest required buoyancy, 22 lbs, and is designed to turn most unconscious persons in the water from a face down position to a vertical and slightly backwards position. This is known as a **POSITIVE RIGHTING MOMENT.**

This type of PFD is suitable for all waters, especially in waters where rescue may be delayed. Reflective tape is distributed on the front and back for added visibility. A whistle is required. It is reversible for ease of donning and available in two sizes - Adult (90 lbs or more) and Child (less than 90 lbs).

Anything less than Type I in open water is inadequate.



Type II

This PFD is designed for the recreational boater when rescue can be expected in a short period of time and water conditions are relatively calm. It has no less than 15.5 lbs of buoyancy.

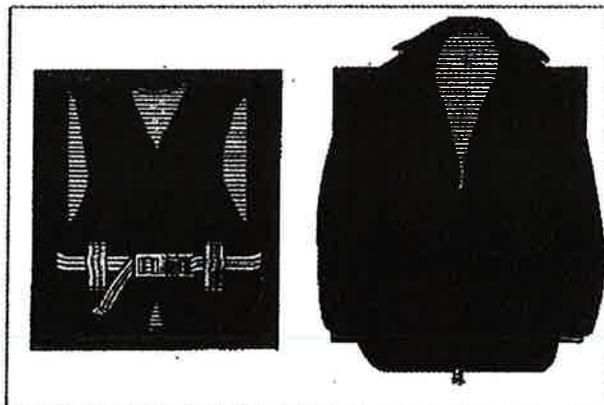
It is also designed to turn the wearer from a face down to a vertical or slightly backward position but not as pronounced as the TYPE I.



Type III

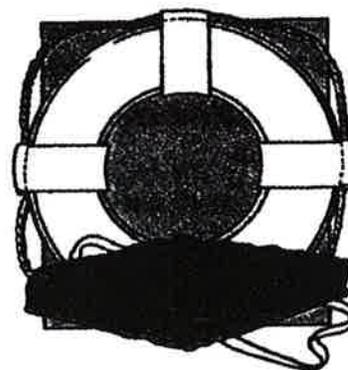
This PFD is designed for the active outdoorsman, with comfort in mind. The TYPE III will maintain the wearer in the position that they assume in the water. Common users are hunters, recreational fisherman, water skiers and canoeist. They are NOT DESIGNED to turn the wearer from a face down position.

Type III includes float coats and vests, which provide flotation and small amounts of hypothermia protection. They have no less than 15.5 lbs of buoyancy.



Type IV

This type of PFD is designed to be THROWN to and grasped by a person in the water. It is designed NOT TO BE WORN! Ring buoys and boat cushions are the most common in the marine industry. They have a minimum of 16.5 lbs of buoyancy.



Type V

This type of PFD is designed to meet a specific need or activity on or over the water. These can be work vests, float suits and immersion suits. They are not designed to turn the wearer from a face down position. They have no less than 15.5 lbs of buoyancy.

Helpful PFD Suggestions

- Try on your PFD and adjust it until it fits comfortably in and out of the water.
- Mark your PFD with your name if you are the only wearer or need a specific size. Always mark it with the name of your boat.
- Do not alter it. If it doesn't fit properly, get one that does. An altered PFD is no longer Coast Guard approved.
- Dry a wet PFD thoroughly before stowage. Store it in a well-ventilated area.
- Do not dry your PFD in front of a radiator or other source of direct heat.
- Make sure there are at least 31 square inches of retro-reflective tape on the PFD to increase your visibility.
- Accessories such as strobes and whistles can be attached to your PFD in a location that will not interfere with your work on deck.

Immersion Suits

Coast Guard approved immersion suits are required for each crew on vessels operating on all U.S. coastal waters above 32 degrees N latitude.

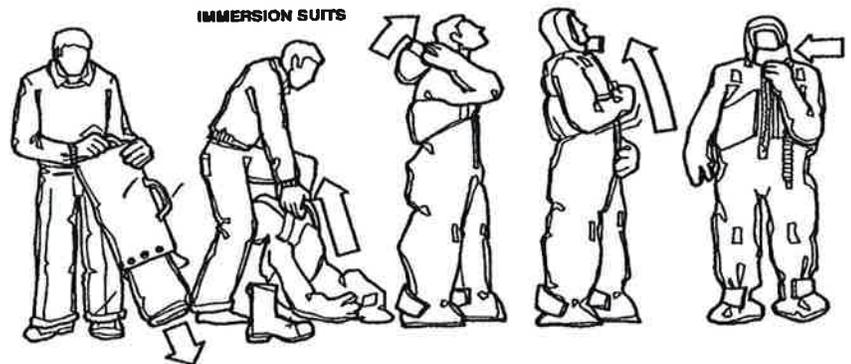
There are many different varieties of immersion suits on the market. Some suits are just big overalls; others have boots, detachable gloves, leg zippers and other features. An immersion suit should be equipped with a whistle; an attached light is required on oceangoing vessels of any size.

It should have an inflatable pillow to keep your head and neck out of the water for better thermal protection and to help eliminate the strain of holding your head up.

Make sure the suit fits you properly; there have been cases of people drowning in suits that were too large for them. The suit should form a tight seal around your face. Mark the suit with your name and the vessel's name with a waterproof marker.

Quick and Safe Donning Procedures

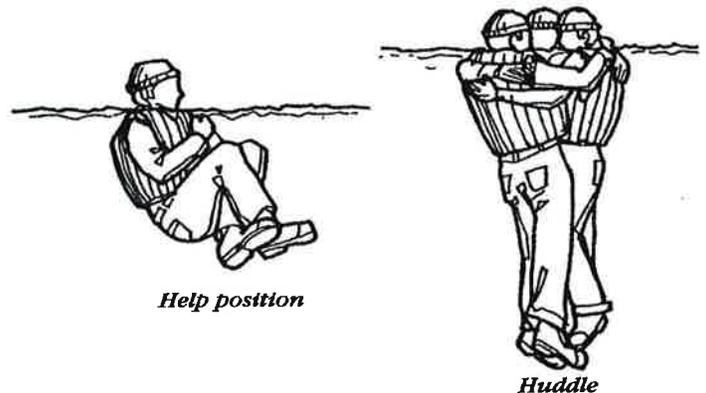
- A sharp jerk on the carrying case will eject the suit.
- Lay the suit out flat to make sure no parts are folded.
- Remove your boots, but leave plenty of warm clothes on.
- Step into legs of suit while in a stable position; if need be, do this in a sitting position or leaning against a support. Put one foot in at a time. With both feet in, pull the suit up to the waist and adjust feet securely.
- Put one arm in at a time and pull the suit up over the shoulders. Squat down a bit to assist yourself in getting the head gear on.
- To avoid problems in zipping the suit, arch your back to remove wrinkles in the fabric. If you have a beard, turn your head to one side, so that facial hair is not caught.
- Secure face flap to reduce incoming water.



Once the suit is completely on, squat down and release some of the air trapped in the suit by lifting a piece of the suit off the face with one hand. Secure the Velcro straps around the feet to make the suit a bit more tailored. Once this is complete, the suit is ready for water entry.

Entering the Water

- Enter the water, protecting your head with one arm and step out to the side.
- Avoid facing the water and jumping forward. A slip is more likely to cause a head injury.
- If possible, avoid submerging your head by gently entering the water to prevent seawater from entering the suit through the face opening.



- Be sure the suit is fully zipped and that all closures are snug. Leave the external bladder deflated until you are in the water.
- Protect your head with one arm, check the area below and jump with feet together.

Stowage and Maintenance

Immersion suits should be stowed in a very accessible, dry place. Aboard fishing vessels, there is a debate whether that means in each crewman's bunk or in the wheelhouse. If you put it in your bunk, you know where it is, but you may not be able to reach it in an emergency. Wheelhouse storage would normally be best, but there may not be adequate space. It is a decision you must make based on the configuration of your boat.

Whatever you decide as a location for all survival gear, especially the immersion suits, know the location and make sure you can reach your suit in a hurry, allowing free access from the working platform.

Immersion suit bags should have sizes marked allowing crew to select the proper suit for them. Zippers and the general condition of materials should be inspected during scheduled monthly emergency drills. PFD's, which are not encased, should be stowed out of direct sunlight to prevent against fabric deterioration and should also be checked during emergency drills.



PFD Maintenance

The following care instructions are provided to help you maintain the condition of your program issued personal flotation device (PFD). It is your responsibility to perform visual inspections of the buoyancy cells and inflation system at least once each quarter and report any maintenance issues to your program manager. Program staff will inspect all safety equipment prior to issuance and will use an authorized Mustang Service Station for all bladder or inflation system repairs.

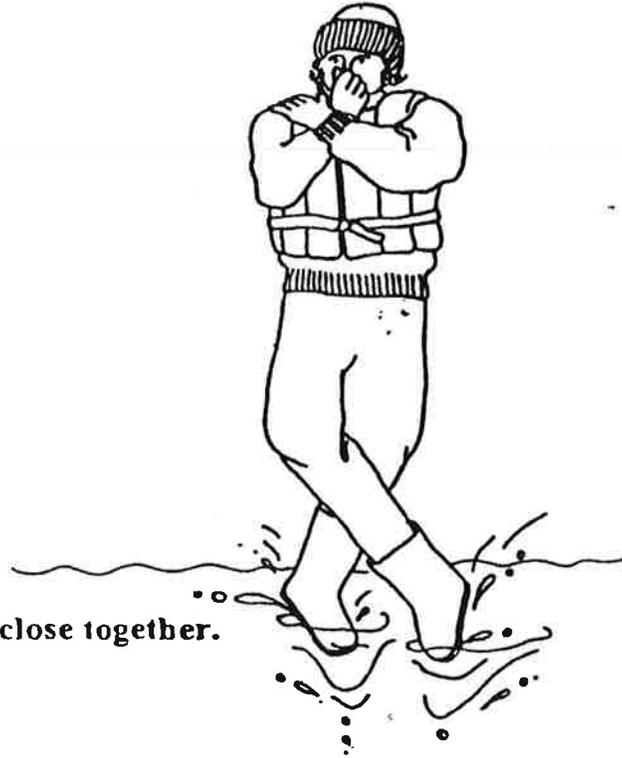
- ✓ Visually examine your PFD for damage or excessive abrasion, wear, tear or to bladder or fabric covering. If in doubt, return it to program for replacement. Test battery on PFD strobe and request replacement if expired.
- ✓ Check the oral inflation valve, fully inflate PFD and hold valve under water. If bubbles appear, deflate and inflate again. Should the leak persist, return to program for replacement.
- ✓ Test for general leaks by orally inflating your PFD until firm and let stand overnight. A leaking PFD will not hold its firmness and should be replaced.
- ✓ Inspect the CO₂ cylinder, if punctured, request a replacement PFD. Apply a pre-wash stainremover to grease or blood and wash with regular detergent. Rinse with fresh water and hang dry. DO NOT USE BLEACH.
- ✓ Repack PFD as outlined in previous instructions and illustrations.
- ✓ Store in warm, dry location.

The following actions should be taken to reduce accidental inflation of your PFD.

- Frequently check the manual lever to ensure it is up in the ready position and the status indicator is green.
- Check status indicator frequently. Request replacement if red and/or year expired.

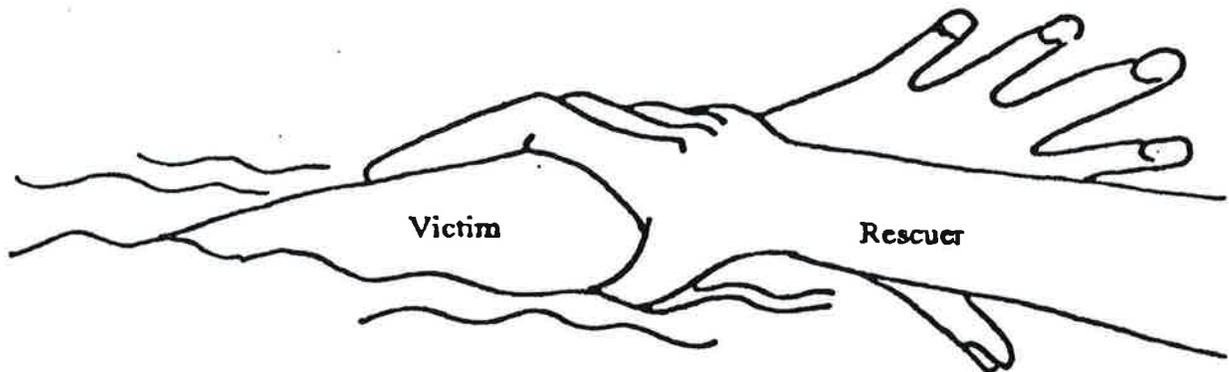
*All PFD's will be marked with the Program and/or number (e.g. POP111). If there is any issue with your PFD, report it to the Safety Coordinator or Program coordinator immediately so it can be replaced. DO NOT ATTEMPT TO FIX A PFD YOURSELF.

JUMPING WITH PFD



Feet should be close together.

CORRECT HAND POSITION FOR RESCUE



CARE & MAINTENANCE OF IMMERSION SUITS

Your immersion suit's life span—or your own, if you find yourself in the water—depends greatly on how you care for and maintain your immersion suit. Your immersion suit is only as good as your care of it. Here are some points that should be checked whenever you inspect your suit (at least once a month).

Zipper:

Inspect closely for missing teeth and signs of corrosion. Lubricate teeth on the outside and inside of zipper with product recommended by the manufacturer. Do not use oil-based greases. Scrub zipper with a tooth brush to remove build up of residues. Run zipper up and down to check for smoothness.

Inflation Hose & Bladder:

Pull gently on tube to make sure the tip of tube or its attachment point on the bladder do not separate. Use plastic wire ties at these points if not present. Leave the silver knurled knob below mouth piece in the down position, ready for use (see figure 1). Once a year remove bladder, inflate overnight or soak under water to check for leaks. Make sure to reattach to suit when dry!

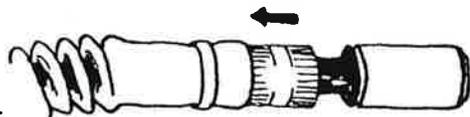


Figure 1.

Material:

Inspect closely for small holes, tears and compression wrinkles in suit. If dirty or used in pool or salt water, rinse thoroughly inside and out with fresh water. Turn suit completely inside out to dry in a well ventilated space. Do not dry in direct sun. One or two days later it will be ready to dry on the outside. If dirt or oil is present, wash with a mild soap and rinse. Do not dry clean.

Markings:

All immersion suits are required to be marked with the owner's name, vessel's name or the name of the person to whom the suit is assigned. (BEWARE—Paint may damage the material.)

Practice:

Don your suit. How long does it take? How well does your suit fit? With foul-weather gear on can it still be zipped up?

Stowage:

Leave the zipper open, but zipped up one-inch up from the bottom. Roll the suit legs up first, followed by hood and finally place arms over and place in bag (see figures 2 and 3). Make sure the neoprene flapper valve in foot



Figure 2.

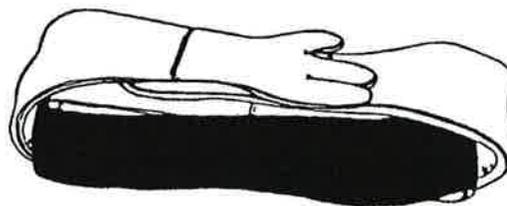


Figure 3.

is not creased. Otherwise, follow the manufacturers stowage recommendation. Lubricate snaps on bag. Store suits in their bags, not against each other without bags. Do not place heavy weights on bag as suit material will compress and may puncture or weaken. Place in an accessible location so it can be retrieved quickly in an emergency. Plastic bags kept with suit can be worn over shoes/boots to make donning quicker. For long term, off-season stowage, hang the suit in a dry place on a thick, padded hanger (like one designed for a dive suit—do not use wire hangers).

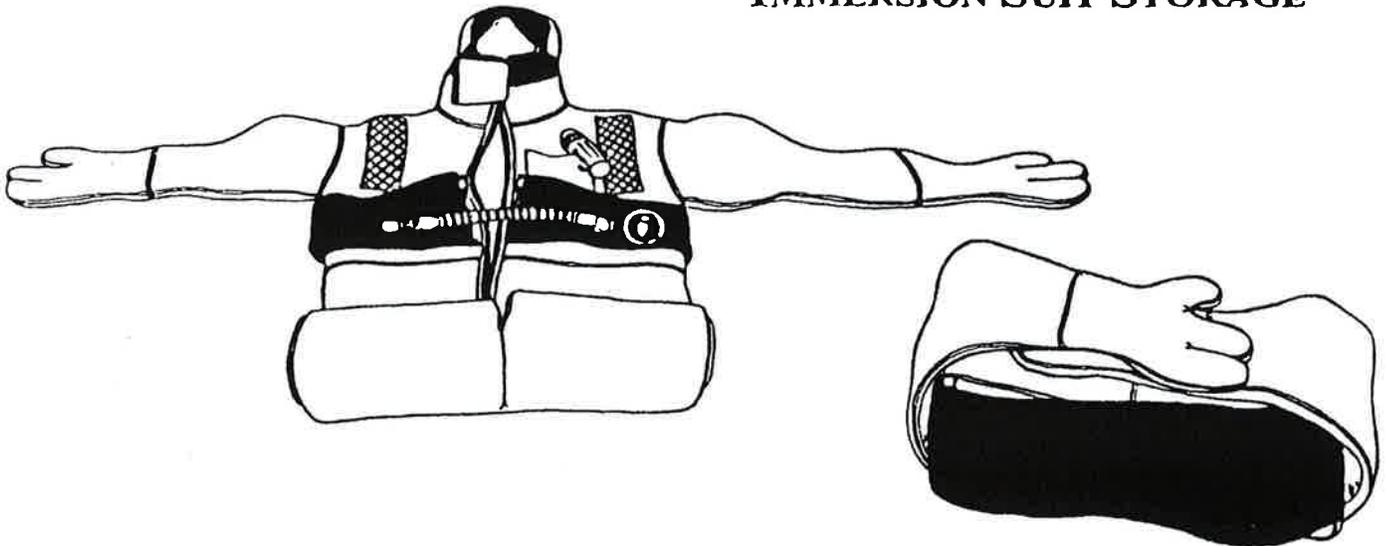
Accessories:

Suit should have 31 square inches of retro-reflective tape visible above the water in any stable position (as req'd by the F/V Safety Act), a zipper tab for ease in gripping with suit gloves on, a whistle, and USCG approved light. Additional recommendations include a personal survival kit, hand-held VHF radio, and personal EPIRB.

JUMPING IN AN IMMERSION SUIT



IMMERSION SUIT STORAGE





Owner's Manual

MD3183 Inflatable PFD

Hydrostatic Inflation Model - Manual with Automatic Backup

Recreational: USCG Approved Type II

Uninspected Commercial Vessels: USCG Approved Type V

MD3184 Inflatable PFD

Hydrostatic Inflation Model - Manual with Automatic Backup
with Harness

Recreational: USCG Approved Type V

DO NOT REMOVE PRIOR TO SALE



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APPROVAL CONDITIONS AND CARRIAGE REQUIREMENTS

Recreational - Approved for recreational use by the U.S. Coast Guard (USCG) as a Type II (Model MD3183), or Type V (Model MD3184) Personal Flotation Device (PFD). Neither are approved for water skiing or other high impact, high-speed activities. Model MD3184 has Type II performance but is approved as a Type V PFD because it has a built-in sailing harness that can cause injury if not properly used. A separate section titled "SAILING HARNESS" (p. 16) discusses requirements and features on the MD3184 only. USCG approval does not apply to the sailing harness because some of the risks associated with its use have not been evaluated.

Commercial - Model MD3183 is a U.S. Coast Guard approved Type V inflatable PFD, approved **ONLY WHEN WORN** for use on uninspected commercial vessels less than 40 feet in length not carrying passengers for hire as a substitute for a Type II PFD when used in accordance with this owner's manual.

NOTE: MD3184 is not USCG approved for Uninspected Commercial Vessels.

Conditions for Type V Approval in commercial applications:

1. The MD3183 must be worn before getting underway and whenever above deck and not within an enclosed space to meet the carriage requirement.
2. The operator of an uninspected commercial vessel is responsible for servicing and maintaining the MD3183 in good serviceable condition in accordance with this owner's manual. See Care and Maintenance Instructions (p. 17) for servicing information.
3. The operator of an uninspected commercial vessel is responsible for providing each person onboard with the safety information required for use of the MD3183. See page 2 for information.

General - When fully inflated, this Inflatable PFD will provide Type II in-water performance. This Inflatable PFD will turn most wearers from a face down to a face up position and provide support suitable for offshore conditions. See page 9 for re-arming instructions.

Inflatable PFDs are not approved for water skiing or other high-speed

activities. This Inflatable PFD was designed to be more comfortable and less restrictive to wear than inherently buoyant PFDs. When worn, used and serviced according to this owner's manual, this PFD can greatly increase your chances of survival in the water. **Not recommended for non-swimmers or weak swimmers.** Users of inflatable PFDs must be at least 16 years old.

NOTE TO UNINSPECTED COMMERCIAL VESSEL OPERATORS

The operator of the vessel is required to provide the following user information to each person on board.

Inflatable PFDs will not provide any buoyancy without being inflated. Follow these instructions to be sure your PFD is armed and donned correctly, and that you understand how to inflate the device.

Basic visual inspection for readiness, see p. 4

Inflation system status check, see p. 4

Donning, see p. 5

Inflation, see p. 6

WHY ARE PFDs REQUIRED SAFETY EQUIPMENT?

Drownings are the leading cause of fatalities involving recreational and commercial vessels. A PFD provides flotation to help keep your head above water, help you to stay face up in the water, and increase your chances for survival and rescue. Most adults only need an extra 7 to 12 kg (15.4 to 26.4 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 Inflatable PFD so you know what to do in an emergency.

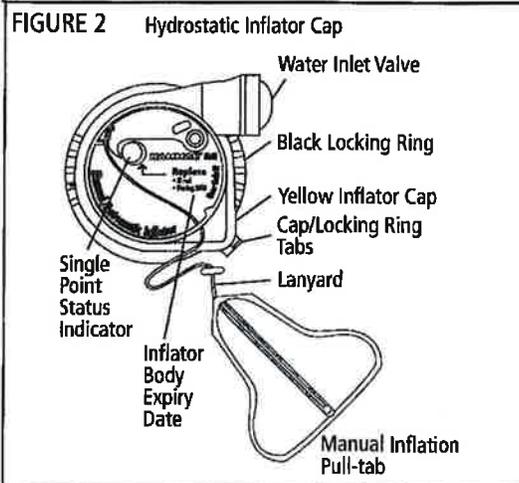
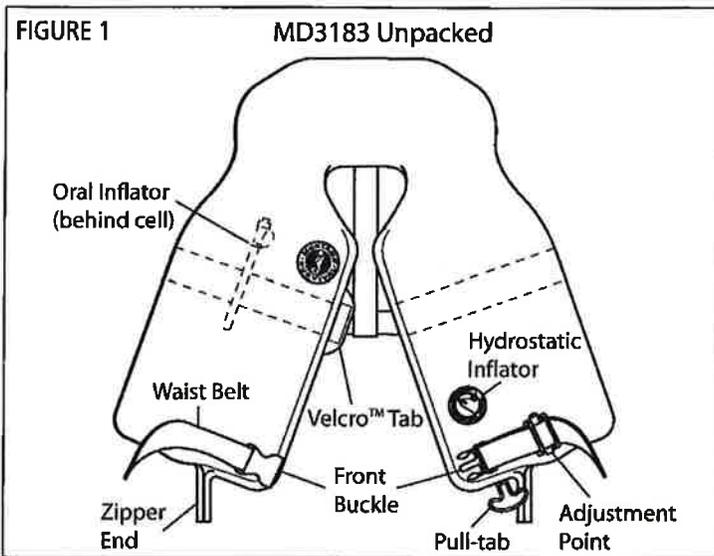
WHAT IS AN INFLATABLE PFD?

While traditional PFDs are inherently buoyant, inflatable PFDs, rely entirely on inflation for buoyancy. Uninflated, the Inflatable PFD is a

comfortable slim collar that can be inflated at any time with a 33-gram CO₂ gas cylinder. The Inflatable PFD is designed to offer maximum mobility with minimum bulk. The Inflatable PFD can be inflated either automatically by water immersion, manually by jerking a pull-tab, or orally by mouth. It is recommended that you familiarize yourself with the procedures outlined in INSTRUCTIONS FOR USE (p. 3).

INSTRUCTIONS FOR USE

This manual supplies instructional, maintenance and safety information for both models (MD3183, MD3184). The model number is listed on the underside label.



Uninspected Commercial Vessel Use

This Inflatable PFD is not approved for "hot work" and care must be taken to avoid damage from abrasion and sharp objects.

Component Inspection Instructions

- 1) Examine the single point status indicator through the window panel (Fig. 1). Ensure the indicator is green. If the indicator is red, the mechanism has been fired or is incorrectly fitted (see Re-arming Your PFD, p. 9).

NOTE: The single point status indicator must be green before proceeding.

- 2) Undo the zipper on the wearer's left side, exposing the oral inflator.
- 3) Ensure the oral-inflation dust cap is in the stowed position (Fig. 6).
- 4) Ensure the single point status indicator is green and the pull-tab lanyard is hanging on the outside; secure the zippers on the Inflatable PFD (see Repacking, p.13).
- 5) Ensure the current date is not past the date on the inflator. If it is, replace the inflator (see Re-arming Your PFD, p. 9).

Readiness Checklist

Check your Inflatable PFD and ensure all of the checkpoints listed below are true before use.

- Single point status indicator is green (Fig. 1 and 2).
- Ensure the current date is not past the date on the inflator. If it is, replace the inflator (see Re-arming Your PFD, p. 9).
- All zippers, Velcro™ and waist buckle are securely fastened.
- Oral-inflation dust cap is in the stowed position (Fig. 7).
- Inflatable PFD is not twisted.
- Ensure the inflation pull-tab is hanging on the outside (Fig. 30).
- No rips, tears, excessive abrasion or holes; all seams are securely sewn; and the cover, straps and hardware are still strong.

Your Inflatable PFD is ready for use if all applicable boxes are checked.

NOTE: Contact your Mustang Dealer if you have any concerns

about the readiness of your Inflatable PFD.

Sizing and Fit

This PFD provides a minimum of 33.7 lbs of buoyancy when inflated and is designed for wearers over 16 years of age, with a chest range of 30-52 inches (76-132 cm) weighing over 80 pounds (36 kg).

Donning Instructions

It is important that the Inflatable PFD is properly adjusted to fit the person wearing it. An incorrect fit or improper fastening of attachments could impede its effectiveness.

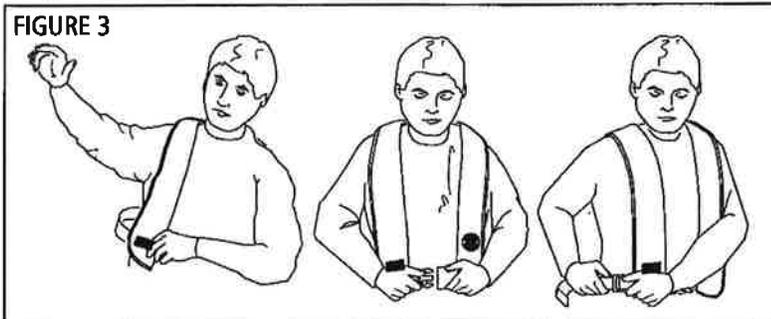
- 1) All belts and straps are already threaded correctly and only need to be adjusted for fit.

For the non-harness model MD3183, the belt should fit below your rib cage adjusted to a tight personal fit.

For the harness model MD3184, the bottom of the belt must always be worn at least 2 inches (5 cm) above the lowest rib and adjusted to a tight personal fit.

- 2) Put the Inflatable PFD on just like a jacket (Fig. 3) and fasten the front buckle. Adjust the waist belt using the side buckle on the belt and secure the belt's loose end in the belt loop.

WARNING: Do not wear Inflatable PFDs under clothing as the inflation could be restricted or you could be injured.

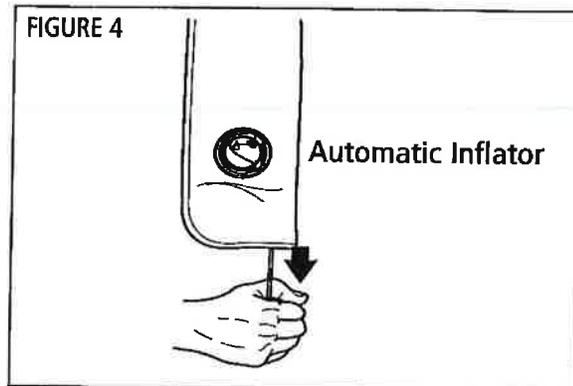


Inflating Your Inflatable PFD

It is recommended that the following procedures be followed to inflate your Inflatable PFD:

1) Manual Inflation

Activate the inflation system by jerking firmly downward on the pull-tab (Fig. 4). The Inflatable PFD should fully inflate within 5 seconds.



2) Automatic Backup Inflation

When the inflator is lowered more than about 4 inches in the water, then the hydrostatic valve opens and lets the water meet the water sensitive element that in turn releases a stainless steel coil spring. The spring then drives a needle into the end of the gas cylinder, which is now punctured so that the gas instantly fills the life jacket. Total buoyancy is normally reached within 4 – 5 seconds.

Information

When inflated, the carbon dioxide (CO₂ gas) used to inflate the PFD will slowly escape through the fabric over time. A slight reduction of pressure will be observed after several hours of inflation. Topping up by oral inflation may be required in the event of very prolonged immersion.

IMPORTANT: See Special Considerations for Inflatable Devices

3) Oral Inflation

Properly armed and inspected Inflatable PFDs will inflate when manually or automatically activated. However, you can fully inflate the Inflatable PFD by mouth (Fig. 5) should inflation not occur, or if you are in a non-emergency situation.

- i. To orally inflate the Inflatable PFD, first ensure that each of the zippers (2) are completely opened.