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## IMPERIAL IMMERSION SUIT INSPECTION GUIDELINES

Your Imperial immersion suit is manufactured to strict compliance standards. This does not excuse the importance of at least quarterly inspections. The following are suggested visual points to consider. Imperial recommends Service Station inspections at two years, four years, and every one-year thereafter from the date of manufacture. Failure to adhere to manufacturer's guidelines may lead to injury or death on part of the end user. At ten years of age, the suit **must** be inspected by a recognized Imperial Service Station on an annual basis or replaced.

- Examine for rips, tears, and punctures to suit
- Ensure zipper for ease in closure. Wax front and back of zipper with bee's or paraffin wax. Examine for obstructions in slider. Ensure all zipper teeth are in place. If zipper fails to close, return to manufacturer immediately.
- Ensure black high rider ring is in place. Check by inflating and submerging in water or let stand 24 hours to detect leaks.
- Ensure retroreflective tape is in place. Requirements call for 31 sq. inches on front and back. Replace where necessary.
- Ensure two-tone whistle is attached to suit.
- Ensure PFD light is attached and power source is USCG approved. Power source must be replaced on or before manufacturer's expiration date.
- Check toe valves for proper operation. Submerge foot of suit in water for one minute placing a hand under toe valve and feel for leaks. If leaks are detected, contact manufacturer immediately.
- Ensure suit is stenciled with USCG approval number & owner's or vessel's name.
- Do not dry clean or use solvents or cleaners on suit. Suit may be washed by hand with mild detergent and rinsed with fresh water. Ensure suit is thoroughly air dried before storage.
- To store, lay on flat surface with zipper in open position one inch from bottom and roll up to chest feet first. Fold arms over ends and hood folded over arms. Place into appropriate sized bag.
- When able, store flat or hang on broad hanger.

***"Imperial Suits Me Best"***

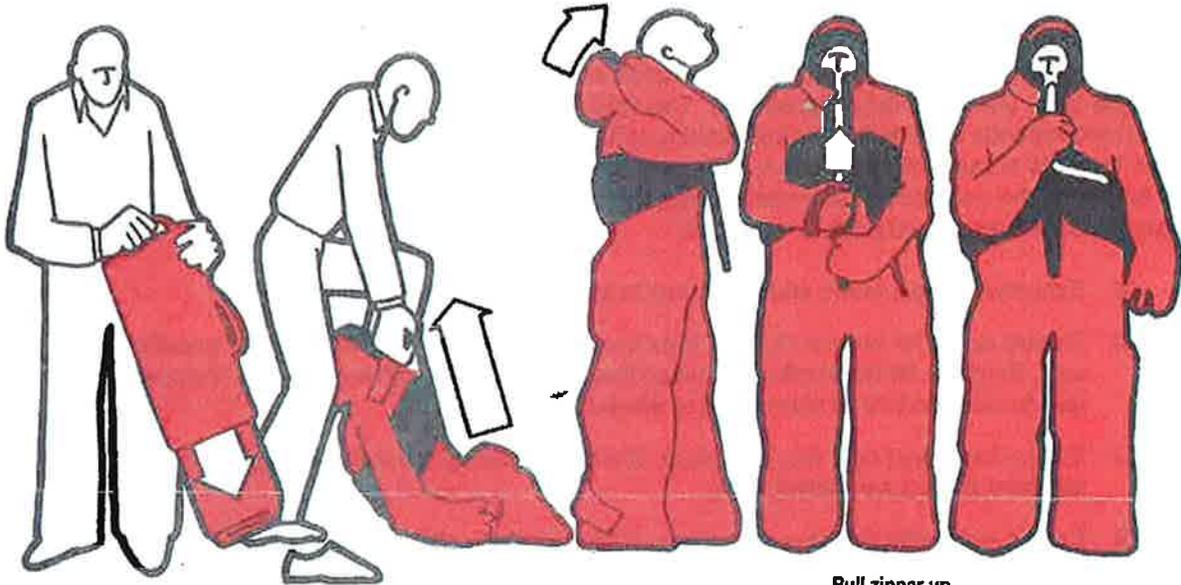
# IMMERSION SUIT

COMPLIES WITH S.O.L.A.S. 74/83

USCG Approval Nos.

ADULT - 160.171/2/0, JUMBO - 160.171/3/0, CHILD - 160.171/4/0, INTERMEDIATE - 160.171/21/0

## DONNING INSTRUCTIONS



**1.** If time permits, remove shoes

**2.** Insert Legs and tighten ankle straps

**3.** Put non-dominant arm in, then the hood, then the other arm in.

**4.** Pull zipper up taking care that clothing is not caught in zipper. Fasten flap.

**5.** Inflate ring after entry into water

### Care and Maintenance

*Do not dry clean - buoyant material is closed cell neoprene*

1. After use rinse with cool or luke warm fresh water
2. Allow to drip dry
3. Lubricate zipper with bees wax
4. Glue tears with neoprene contact cement
5. Store with zipper in open position
6. Lay suit flat and roll from feet to head, cross arms, return bag
7. Store in cool, dry area
8. See reverse side for full inspection guidelines



### WARNING!

There is a risk of entrapment in a submerged compartment due to the buoyancy of the suit.



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### RELAX!

This suit will float you and protect you from the cold; whether it's full of water or not. Even if the suit gets torn, it will NOT lose its flotation qualities. If necessary, you can put on the suit in the water (with help) but it is not recommended.

THIS VESSEL IS EQUIPPED WITH \_\_\_\_\_ IMMERSION SUITS, LOCATED IN \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Printed in USA

# Making a Voice Radio Distress Call and Using Visual Distress Signals

## Location Aids for the Mariner

The key to being rescued quickly is to let people know where you can be found. By using the four detection factors: light, color, sound and movement, you will gain attention.

Your most powerful distress tool is your radio. In the event of an emergency, it is extremely important to establish radio communication immediately with the Coast Guard or another vessel.

**DO NOT WAIT UNTIL THE SITUATION IS OUT OF CONTROL.** At that point, there may be no power to the radio or it may be too late for rescue units to respond.

Having and using marine radios is an integral part of fishing and a valuable aid in an emergency. It is also a privilege granted by the agency that issues the licenses — the Federal Communications Commission (FCC). Emergency marine radio calls are made on VHF channel 16 (156.8 MHz) or SSB 2182 kHz.

## Emergency Calls

There are three internationally recognized radio signals used for marine emergencies. MAYDAY, PAN-PAN, and SECURITY. All three have priority over other radio traffic.

MAYDAY calls also have priority over all other emergency signals. They are to be used only when a vessel or life is threatened by grave and imminent danger and a request is made for immediate assistance.

If you hear a MAYDAY call and it is not answered, you must answer it and log the details of the call. When you can be reasonably sure you will not interfere with other distress-related communications, advise the vessel in distress what assistance you can offer.

**MAYDAY RELAY:** All vessels that are required to have radios are required to relay Maydays that are heard but go unanswered.

To relay an unanswered Mayday, make sure your radio is on and you transmit on channel 16 VHF. Then state:

1. Mayday relay, Mayday relay, Mayday relay.
2. YOUR vessel's name and call sign.
3. Name and call sign of vessel in distress.
4. Location of vessel in distress.
5. Nature of problem with vessel in distress.
6. Degree of assistance needed.
7. Listen for acknowledgement.
8. Transmit additional requested information.

PAN-PAN (pronounced pahn-pahn) calls are for very urgent messages concerning the safety of a boat or persons. Examples include urgent storm warnings by an authorized station and/or loss of steering or power in a shipping lane. To transmit a PAN-PAN message, make sure your radio is on and you transmit on channel 16 VHF. Then state:

1. PAN-PAN, PAN-PAN, PAN-PAN all stations.
2. Your vessel name and call sign three times.

3. Nature of urgent message.
4. Position (latitude and longitude and LORAN are preferred).
5. Total number of people on board.
6. Vessel description (length, color, type, etc.).

SECURITY (pronounced say-cure-i-tay) calls are the lowest priority emergency calls and are used to alert vessel operators to turn to another station to receive a safety message. SECURITY warns nearby vessels of a possible hazard.

## **Emergency Position-indicating Radio Beacons (EPIRBs)**

Vessels that are operating beyond the “three-mile line” and are greater than 36’ in length are required to have an FCC type Coast Guard accepted Category 1 406 MHz EPIRB (float free). Vessels less than 36’ in length beyond the “three mile line” are required to have a Category 2 406 MHz EPIRB.

Drills are to include demonstration of proper use including arming. If you have an EPIRB, turn it on as soon as possible and leave it on. A continuous transmission provides the best hope for rescue. The lanyard attached to the unit should be fastened to the raft or to an individual in the water. Most EPIRB’s operate best when floating with the ANTENNA VERTICAL.

## **Visual Distress Signals**

A visual distress signal is anything that makes you BIGGER, BRIGHTER OR DIFFERENT. By yourself, you are a small target; anything you do to make yourself more visible will help rescuers find you.

Visual distress signals are included in the emergency equipment pack aboard your life raft. They include both pyrotechnics and devices such as flashlights, portable strobe lights, mirrors and distress flags. All have advantages and disadvantages and all are of value only if they are used effectively.

**READ THE INSTRUCTIONS** — Whatever the signals, always carefully read and follow the affixed instructions. The signals are very powerful and can cause injury and even worse if not treated with respect.

## **Types of and Use of Visual Distress Signals**

### **Parachute Flare**

Contained in a plastic canister, the parachute flare produces a bright red flare suspended by a parachute. This flare is activated when you have reason to believe that a rescue craft is in your area. To activate:

- Hold flare vertically, rocket end up.
- Remove the top and bottom caps, holding flare firmly.
- Remove the safety pin from bottom. This allows the firing trigger to be lowered into the ready-to launch position.
- Aim slightly downwind and squeeze the trigger up into the canister. **BE READY FOR A KICK, AS THE ROCKET WILL GO TO 1000’.**
- The flare will burn for 30-60 seconds. Under ideal conditions the flare is visible up to 30 miles.

### **Pistol Launch Flares**

To use this type of flare, load the cartridge into the barrel of the pistol. Aim downwind and pull the trigger. This will activate the signal. It will reach an altitude of 30-50 feet and burn for 8-12 seconds.

### **Hand-Held Flares**

The hand-held flare is designed to produce a bright red distress signal when activated. There are two types.

One type has an arrow on the handle and an arrow on the metal flare. To activate:

- Pull the handle down and rotate until the two arrows line up.
- Apply upward force to the handle to activate.
- DO NOT hold onto the flare itself as it becomes very hot.
- If it does not activate after the initial striking, attempt another strike. If it still does not activate, throw it in the water.
- Activate downwind.

The other style of hand held flare requires:

- Lift up on the tape that goes the length of the flare. By doing this, the top side (striker) is exposed.
- To remove the cap, twist it. Hold it out and away from the raft.
- Strike the topside of the cap on the flare end.
- Be careful of the "slag" that will drip, it is extremely hot and dangerous to human skin contact.

### **Strobe Light**

The strobe light is a compact, high-intensity light that is capable of operating continuously for 12 hours. It is activated by a "push-on / push-off" button located at the base of the unit.

### **Signaling Mirror**

The signal mirror is one of the best daytime signals available. Aim the mirror into the sun locating the beam on your hand or a nearby surface. Look through the aiming hole in the center of the mirror at the beam. A bright dot should appear. Place the dot toward the rescue craft. Survivors should practice with mirrors constantly since the reflected light signal could possibly be seen by rescue craft out of the victim's sight or hearing range.

### **Sea Dye**

Sea dye marker consists of a chemical which, when immersed in water, produces a bright greenish-yellow color that is highly visible. To use the dye marker, open the container and swirl it around in the water. Drift about 20 yards and lower the dye back into the water and create another slick. Continue to do this and you will create a trail for rescue craft to follow. The duration of the sea dye will vary from 20 minutes in rough seas to 2 hours in calm sea. Keep the container outside of your survival craft, as the dye will spill inside the raft creating a mess.

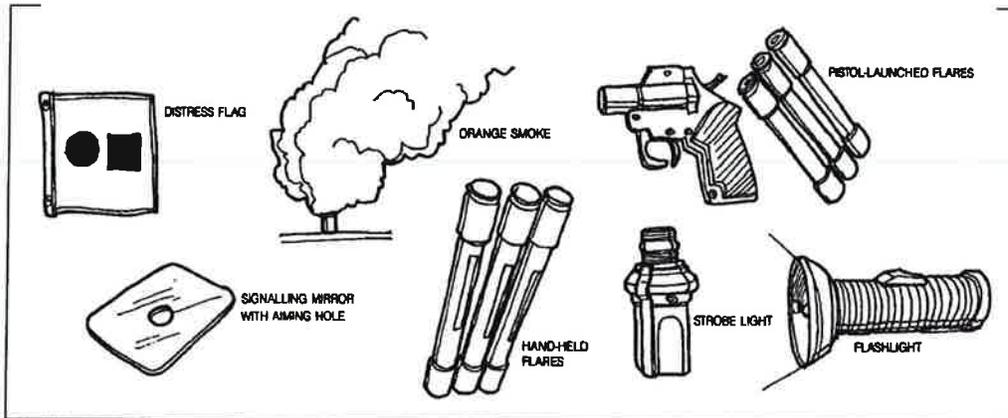
### **Floating Smoke Signal**

Best seen during the day, the floating orange smoke signal is contained in a waterproof canister.

To operate:

- Remove plastic cover.
- Locate activating cord and pull firmly.

- Throw it into the water immediately.
- Within 3-4 seconds, a popping sound will occur and the smoke will be visible. The activation time is 3 minutes.
- Activate downwind, as the smoke will be very pungent.



### Stowage and Maintenance

Store pyrotechnics in a cool, dry, readily accessible place. Each crewmember on board should know where visual distress signals are stowed. One crewmember should be assigned to bring the signals in an emergency. It is advisable to store a pair of gloves along with pyrotechnics.

Pyrotechnics have an expiration date and need replacement once expired to ensure proper functioning.

Never aim pyrotechnics directly at rescue craft. This does not encourage good relations with the rescue team members.

### Points to Remember

- Hold flare downwind.
- Read instructions PRIOR to rescue arriving on scene.
- Use them wisely — They are limited in quantity.
- Many flares are packed in plastic bags for waterproofing.

## **Distress Communications Form**

**Instructions:** Complete this form now (except for items 7-10) and post near your radio or radiotelephone.

**Speak SLOWLY - CLEARLY - CALMLY**

1. Make sure your radio or radiotelephone is on.
2. Select 156.8 MHz (channel 16 VHF) or 2182 KHz.
3. Press microphone button and say "MAYDAY, MAYDAY, MAYDAY!!"
4. Say: "THIS IS \_\_\_(your boat name)\_\_\_, \_\_\_(your boat name)\_\_\_, \_\_\_(your call sign)\_\_\_, OVER"
5. Release this microphone button briefly and listen for acknowledgement. If no one answers, repeat steps 3 & 4. If there is acknowledgement, or if the Coast Guard or another vessel responds:
6. Say: "MAYDAY" \_\_\_\_\_(your boat name)\_\_\_\_\_.
7. DESCRIBE YOUR POSITION in lat/long coordinates, LORAN-C coordinates or range and bearing from a known point.
8. STATE THE NATURE OF YOUR DISTRESS.
9. GIVE NUMBER OF PERSONS ABOARD AND THE NATURE OF ANY INJURIES.
10. ESTIMATE THE PRESENT SEAWORTHINESS OF YOUR BOAT.
11. BRIEFLY DESCRIBE YOUR BOAT, length \_\_\_\_\_, color \_\_\_\_\_, hull type \_\_\_\_\_, trim \_\_\_\_\_, masts \_\_\_\_\_, power \_\_\_\_\_, any additional distinguishing features \_\_\_\_\_.
12. Say: "I WILL BE LISTENING ON CHANNEL 16 / 2182" (cross out channel that does not apply).
13. End message by saying "THIS IS \_\_\_\_\_(your boat name and call sign)\_\_\_\_\_, OVER."
14. If your situation permits, stand by the radio to await further communication with the Coast Guard or another vessel.

## Emergency Instructions

F/V \_\_\_\_\_

### General Instructions

1. All crew members and passengers are responsible for knowing their assigned emergency duties and stations.
2. All crew members are responsible for knowing the location of the ship's lifesaving and emergency equipment.
3. All crew members and passengers shall participate in all emergency drills and training sessions.
4. Newly reported personnel should report to \_\_\_\_\_ for safety emergency or orientation.
5. If you are in doubt as to any of your responsibilities as specified in this bill, ASK THE CAPTAIN for clarification.

## Emergency Signals

### Fire and Emergency Signal (\_\_\_\_\_)

The Fire and Emergency Signal shall be a continuous blast on the ships whistle with the same signal sounded simultaneously on the General Alarm for a period of not less than 10 seconds.

### Man Overboard Signal (\_\_\_\_)

The Man Overboard Signal shall be 3 Long Blasts of the ship's whistle with the same signal sounded simultaneously on the General Alarm, with the signal to be sounded a minimum of four times.

### Abandon Ship Signal (\*\*\*\*\* \_\_\_\_\_)

The Abandon Ship Signal shall be at least seven (7) short blasts followed by one (1) long blast on the ships whistle, with the same signal sounded simultaneously on the General Alarm.

|                |            |  |             |
|----------------|------------|--|-------------|
| Radio Call     | Frequency: | High Site:   | DF Bearing: |
| Type of Comms: |            | Original <input type="checkbox"/> Relay <input type="checkbox"/> Call Back Number: |             |
| Time:          | Date:      | UCN:   | OUC:        |

**-- Initial SAR Check Sheet --**

**ELECTRONIC FORM**

|  |   |           |             |
|--|---|-----------|-------------|
| <b>1. Position</b>   | <i>Type of Position:</i> <input type="checkbox"/> Lat/Long<br><input type="checkbox"/> Loran Lines<br><input type="checkbox"/> Geographic Reference |           |             |
| How determined?  |   |           |             |
| <b>2. Number of Persons On Board</b>   | Adults:   | Children: | Total: 0.00 |
| <b>3. Nature of Distress (Any Medical Conditions?)</b>   |   |           |             |
| <b>4. Description of Vessel</b> Name: _____ Length _____ Doc/Reg: _____<br>Anchored?.....Make: _____ Color: _____      |   |           |             |
| <b>5. Have all persons on board the vessel put on Personal Flotation Devices / adequate number of PFD's available?</b> |   |           |             |

**\*\* ADVISE REPORTING SOURCE OF INTENDED ACTIONS AT THIS TIME \*\***

|   |   |
|---|---|
| <b>6. Determine Initial Severity / Emergency Phase</b>  |   |
| <input type="checkbox"/> Distress<br><input type="checkbox"/> Dispatch Resources / Activate SAR Alarm<br><input type="checkbox"/> Advise reporting source of Coast Guard's Actions<br><input type="checkbox"/> Issue Urgent Marine Information Broadcast (UMIB)<br><input type="checkbox"/> Brief Sector / District<br><input type="checkbox"/> Provide emergency instructions to vessel in distress<br><input type="checkbox"/> Complete additional check-sheets as situation dictates<br><input type="checkbox"/> Refer to CG Addendum/Sector Mobile & D8 OPLAN | <input type="checkbox"/> Uncertainty <input type="checkbox"/> Alert<br><p align="center"><i>Additional information is needed<br/>Complete one or more of the following:</i></p> <input type="checkbox"/> Supplemental Check-sheet<br><input type="checkbox"/> Overdue Check-sheet<br><input type="checkbox"/> Flare Sighting Check-sheet<br><input type="checkbox"/> MEDEVAC/MEDICO Check-sheet<br><input type="checkbox"/> Grounding Check-sheet |

| Persons in the Water |              |  |
|----------------------|--------------|--|
| Number:              | Description: | <input type="checkbox"/> PFD - type/color: |
| Time:                |              | <input type="checkbox"/> Exposure Suit     |
| Confirmed?           |              | <input type="checkbox"/> Light             |

**\*\* Complete all of the above before shifting frequency; Complete below before hanging up phone \*\***

| Reporting Source                          |               |
|---|---------------|
| Name:                                     |               |
| Vessel Name:                              |               |
| <b>Call back number (with area code):</b> |               |
| cell phone _____                          | _____         |
| radio / call sign: _____                  | / MMSI: _____ |
| Address:                                  |               |

| On Scene Weather |      |        |            |
|------------------|------|--------|------------|
| Wind             | Seas | Swells | Visibility |
| Weather Type     |      |        |            |

## VHF Marine Radio Channels

The chart below contains a partial listing of channels boaters should be familiar with:

| Channel                            | Type of Message and Use   |
|------------------------------------|---|
| 06                                 | Intership Safety: Used for ship-to-ship safety messages and search messages and ships and aircraft of the Coast Guard.  |
| 09                                 | Boater Calling: FCC has established this channel as a supplementary calling channel for recreational boaters in order to relieve congestion on VHF Channel 16.  |
| 13, 67                             | Navigation Safety (Also known as the Bridge-to-Bridge channel): Ships greater than 20 meters in length maintain a listening watch on this channel in US waters. This channel is available to all ships. Messages must be about ship navigation (i.e. passing or meeting other ships). You must keep your messages short. Your power output must not be more than one watt. This is also the main working channel at most locks and drawbridges. Channel 67 is for lower Mississippi River only. |
| 16                                 | International Distress, Safety and Calling: Use this channel to get the attention of another station (calling) or in emergencies. Ships required to carry a radio maintain a listening watch on this channel. USCG and most coast stations also maintain a listening watch on this channel.   |
| 21A, 23A, 83A                      | U.S. Coast Guard only   |
| 22A                                | Coast Guard Liaison and Maritime Safety Information Broadcasts: Announcements of urgent marine information broadcasts and storm warnings on Channel 16.   |
| 24, 25, 26, 27, 28, 84, 85, 85, 87 | Public Correspondence (Marine Operator): Use these channels to call the marine operator at a public station. By contacting a public coast station, you can make and receive calls from telephones on shore. Except for dis-tress calls, public stations usually charge for this service.  |
| 70                                 | Digital Selective Calling: Use this channel for distress and safety calling and for general purpose calling using only digital selective calling (DSC) techniques.<br><br>Note: The U.S. Coast Guard will not be equipped to respond to DSC distress calls on Channel 70 until 2006—use Channel 16.   |

# ACR AQUAFIX P-EPIRB

## SECTION 4 - OPERATION

### 4.1 General

The AquaFix™ 406 GPS P-EPIRB models are designed to be manually deployed and activated. It is only to be activated when all other means of self-rescue have been exhausted. Activation of the P-EPIRB tells Search and Rescue who you are, where you are, and that you are facing a life threatening situation.

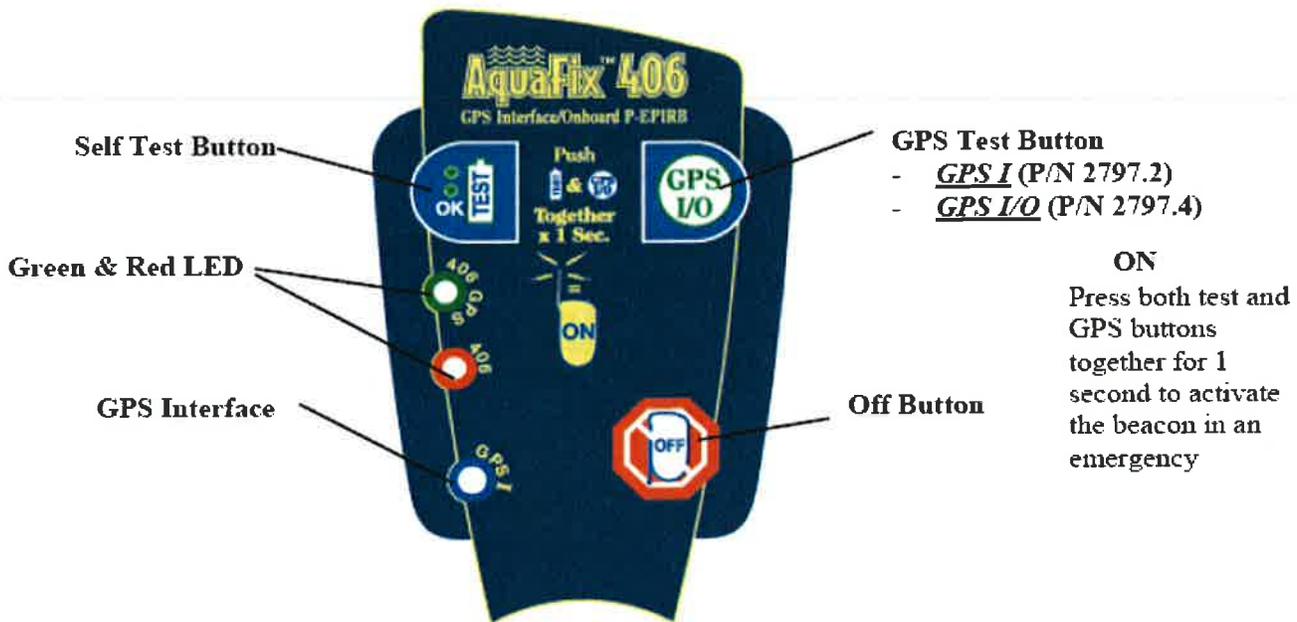


Figure 1. Key Pad Functions  
(P/N 2797.4 shown)

### 4.2 AquaFix™ 406 GPS P-EPIRB Emergency Activation

#### 4.2.1 Activation

To activate your P-EPIRB in an emergency situation, unfasten the antenna from the case or holster and move it into the upright position (See figure 2). Lift the holster cover revealing the P-EPIRB keypad (see figure 3). Depress the “self-test” and “GPS I” or “GPS I/O” buttons simultaneously for at least 1/2 second and less than 5 seconds (see figure 4). Your P-EPIRB is now activated. While transmitting your emergency signal, the red LED will flash once every 2 seconds alerting you that your P-EPIRB is activated. If GPS data is present in the P-EPIRB via the GPS I or GPS O the red LED will turn off and the green LED will take over flashing once every 2 seconds.

#### 4.2.2 Activation with GPS I (P/N 2797.2 and P/N 2797.4)

The AquaFix™ 406 GPS I and GPS I/O are equipped with a GPS Interface. Prior to activating your P-EPIRB you can download your GPS LAT/LON into the P-EPIRB using an external GPS receiver and the GPS Interface cable provided with the P-EPIRB. Once your external GPS has acquired good global positioning data, press the GPS test button for at least ½ second and no longer than 5 seconds and your GPS data will download into the P-EPIRB (for full instructions see Section 4.7.2). Once you activate your P-EPIRB, your GPS coordinates are included in the distress signal.

## Care and Maintenance of 406 EPIRBs

Since August 1991, commercial fishing vessels with galley and berthing spaces that operate beyond three miles from shore, have been required to have category 1, 406 MHz Emergency Position Indicating Radio Beacons (EPIRBs).

Category 1, 406 EPIRBs, though much more expensive than the old Class A EPIRBs, provide superior reliability, signal strength, location accuracy and provide much more detailed information to search and rescue agencies. There are several steps to take to ensure your EPIRB will work when you need it.

### Registration

Send in the EPIRB registration and identification card! It asks questions about you and your vessel that will aid search and rescue agencies in finding you in an emergency. It will also allow them to contact you without sending out an expensive search should your call be a false alarm.

### Instructions

Read the instructions for mounting and operation of your EPIRB carefully! EPIRBs do not come shipped in the ON position. It is important to learn the correct switch position for arming the EPIRB after it is installed.

### Location

Mount your EPIRB in a location that will allow it to float free if the boat should sink and where icing will be minimal. Avoid locating it under an overhang or anywhere it could get hung up.

### Test

Test your EPIRB once per month. 406 EPIRBs have an electronic self-check. Make sure that you follow the testing procedures in your manual. Test in the first five minutes of any hour. All EPIRB tests should be noted in your log book.

### Check for Damage

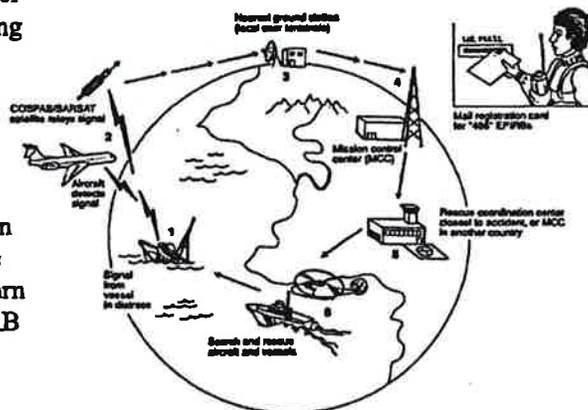
Check your EPIRB during rough sea conditions to make sure it has not been activated or damaged.

### Show and Tell

Show all crewmembers and passengers on your vessel how the EPIRB operates before you get underway. This should be a part of your drills and instructions.

### Maintenance Schedule

Although your EPIRB battery may be good for two to five years, many of the hydrostatic releases mechanisms need to be replaced every two years. Check the maintenance schedule on the release for your EPIRB.





## Recovering an Individual from the Water

### Man in the Water

#### Rule #1 – Don't be the man in the water!!

No one ever plans on falling overboard. A person who unexpectedly finds himself in the water is a person with fear . . . even if they are good swimmers. The fall itself is bound to invite a certain amount of shock and panic.

Upon initial entry into the water, the respiratory system (breathing) will experience a gasping response (short, shallow and irregular breath rate). Another life-threatening reaction that may occur within seconds of entering the water is heart attack. This is of particular importance for out-of-shape people who fear the water. More often than not, these victims are not wearing a PFD.

Injuries during the fall could render even good swimmers helpless. A successful man-overboard rescue is highly dependent on how well the potential rescuers respond and upon how well the victim can assist. The following are guidelines in the event you are a VICTIM or RESCUER.

### Man Overboard

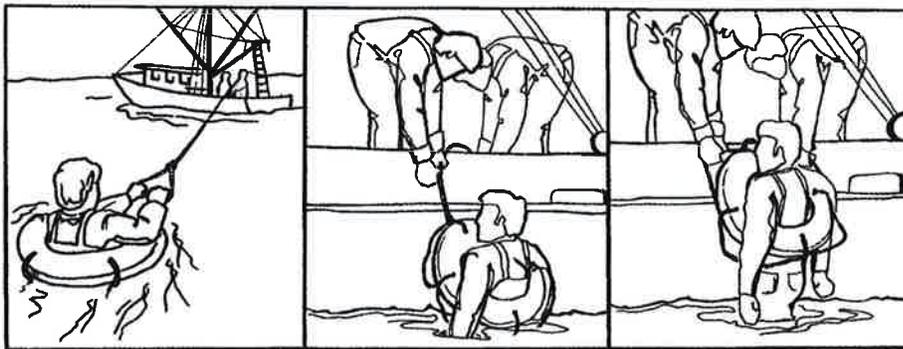
The success of recovering a person overboard depends on a few factors:

- Ability of victim to alert someone of the fall.
- Ability of rescuer to return to victim.
- Available rescue equipment.
- Drills and procedures practiced prior to incident.
- Temperature of water and time of incident (day vs. night).

### If You Are the Victim

#### Things to Consider:

- Am I wearing a PFD?
- Can I swim back to where I fell?
- Did someone see me fall?
- How can I attract attention?
- Will I be able to assist during rescue?



*Ring buoys provide flotation and permit the victim to be hauled aboard by hand or with a hoisting tackle. A bowline or lifesling can be used if the person is too large to use a ring buoy effectively. Any debris or floatable trash thrown near the victim will help mark his position for pick up. Strobe lights, "day-glow" markers or smoke pots attached to a ring buoy will mark the victim's position.*

### **Actions to Take:**

- While the fall is taking place, scream to alert others. (Choice of words left to your discretion.) “Help!”, “Man overboard!” or a crew member’s name is useful.
- Once in the water, surface and assess your situation (Where am I? Who saw or heard me fall? Am I wearing a PFD?)
- Get control of your breathing.
- Remain as calm as possible; realize the chances of survival are in your favor and remember your crew likes you....hopefully.
- Begin to draw attention to your location using sound or movement:
  - Waving your arms.
  - Blowing a whistle.
  - Kicking your feet, creating a splash.
  - Splashing water with your hands.
- Do not swim if nothing is in sight.
- Utilize your survival skills learned in training (warm water vs. cold water).
- Once spotted, notify rescuer of any injuries or other people in the water.

### **If You Are the Rescuer**

- Sound alarm “MAN OVERBOARD” and give location, i.e. port side, 10 o’clock, NW.
- Mark the location where the person fell in by throwing some type of flotation and mark, fix position on plotter.
- Maintain 100 percent visibility on the victim.
- Communicate with other crew members and captain.
- Once alongside, throw the victim a ring buoy, rope or line.
- Use available equipment to bring victim back on board.
- If water entry/rescue swimmer is required:
  - Wear a PFD/Immersion suit and take one for the victim.
  - Attach a safety line to the crewmember.
  - Toss the PFD to the victim while swimmer stays out of arm’s reach.
  - Once victim has settled down, tow to safety. Talk to the victim to reassure them.

### **Recovery**

In recent years a lot has been written about the problems of recovering fishermen who have either fallen or been washed overboard. There is a variety of man overboard systems that are adoptable for most vessels and circumstances.

For fishing vessels without a dedicated rescue system the following options should be considered:

- A technique of circling a person in the water while towing a lifebuoy on a line is an effective way of making contact, particularly in heavy weather.

- A conscious person in the water can be recovered using a rigid ladder, scrambling net or any device that can be climbed.
- A lifting strap passed around the back and under the arms of a person in the water, attached to a suitable recovery rope, can prove valuable. Using a mechanical lifting device can assist recovery on board.
- An inflatable dingy or life raft provides another option for recovery. Your life raft can be inflated to get people out of oil/gas saturated water and heavy seas.
- A PARBUCKLE can be improvised using ropes or a net in order to recover a person from the water.
- **REMEMBER** — a rescuer should only enter the water as a last resort. Don't compromise your own safety.

### **Safety Tip**

This safety tip concerns swimming fully clothed in cold water. Most people who accidentally find themselves in the water are fully clothed or without a lifejacket and suddenly recognize certain discomforts. Many good swimmers have not survived short distance swims due to improper techniques used when swimming fully clothed.

The key to swimming fully clothed is to use UNDERWATER MOVEMENTS with your hands and feet. Personal judgment is required concerning the removal of shoes or boots. Some boots will fill with water or become water soaked and restrict movement. Others may assist in your situation by providing environmental protection and floatation. Just remember swimming fully clothed requires strokes without lifting your arms out of the water.

The swimmer should use a BREAST STROKE, MODIFIED SIDESTROKE or an ELEMENTARY BACKSTROKE. You are not trying out for the Olympic team, just trying to get back to where you fell.

### **Man-overboard Recovery Methods**

There are a number of man-overboard recovery methods. The most commonly used are:

1. *One-turn or Anderson*: fastest but requires the most skillful shiphandling.
2. *Williamson turn* for night or low visibility: turns you around and sends you down your previous track.
3. *Racetrack*: for the fastest recovery when you are proceeding at high speed in clear weather.
4. *Y-backing*: for ships with large turning circles and lots of backing power, proceeding at slow speeds.

Large ships often use a small boat to recover a man from the water. Smaller vessels will use the boat-recovery method as well when the sea is very rough or there is little chance of getting the man close alongside. Swimmers with PFDs or immersion suits and tending lines should be ready to go into the water.

No matter which recovery method is used, the same basic principles and methods apply. Swing the stern away from the person with full rudder. If possible, stop the shaft before the person reaches the screw. Always assign someone to do nothing but keep the man in the water in sight.

The following are step-by-step explanations of the four most common recovery methods.

## **Rescuer Responsibilities**

- Sound Alarm “MAN OVERBOARD”
- Throw a Flotation Device in Water
- Post a Lookout
- Turn Vessel Around
- Position Vessel for Retrieval
- Use Available Rescue Equipment
- Provide Medical Attention
- Rescue Swimmer

## **Victim Responsibilities**

- Yell for Help / Whistle
- Assess Your Situation
- Control Your Breathing / Remain Calm
- Draw Attention to Yourself
- Stay Still — Do Not Swim
- Utilize Survival Skills
- Notify Rescuers of Any Injuries or Other People in the Water

## **Cold Water Near-Drowning Survival Factors**

- Water Temperature
- Cleanliness of Water
- Time Submerged
- Age of Victim
- Quality of Treatment
- Other Injuries

## Abandoning the Vessel

### Decision to Abandon

Only the captain should give the command to abandon the ship, and only when the ship is in such distress that the lives of the people on board are endangered. Abandoning ship signifies the end of attempts to save the vessel. It means that the raft has become the best shelter, if you have one.



*Establish radio contact as soon as you recognize that an emergency exists. Update the log frequently to ensure that the man on watch can quickly report the vessel's position.*

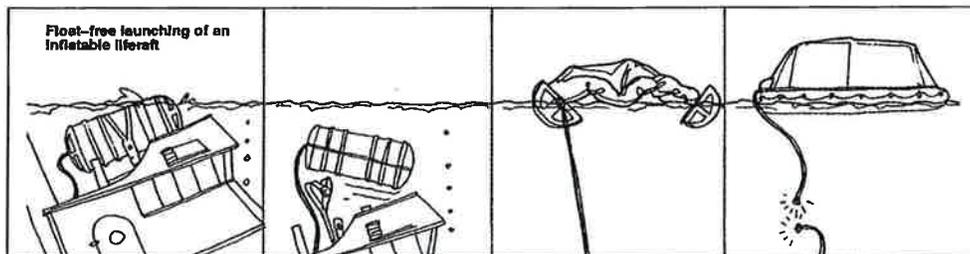
You must sound the alarm and alert the crew in plenty of time to enable them to get to their emergency stations and prepare the survival gear. It is much better to have to re-stow the survival gear after a close call than to wish you had assembled it sooner.

When the alarm sounds, each crewmember must report to his station immediately and begin his assigned survival duties.

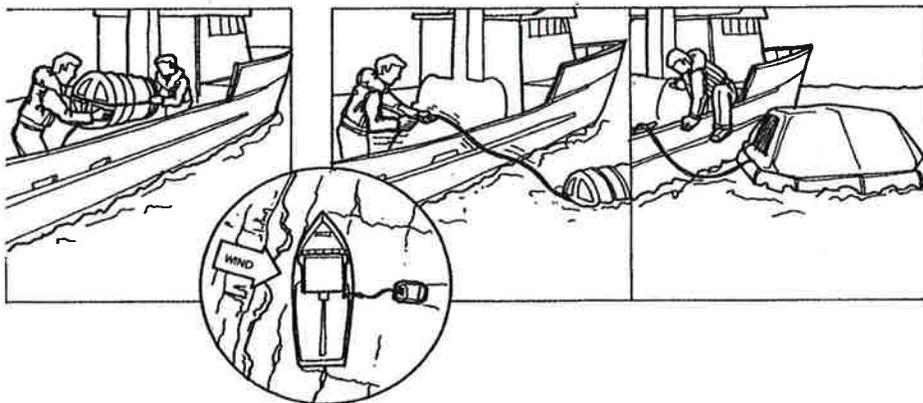
Where events do not allow for a well-organized abandonment, use whatever time is available to:

- Send a distress message.
- Muster all persons on board.
- Prepare the life raft for launching.
- Put a flotation device on.

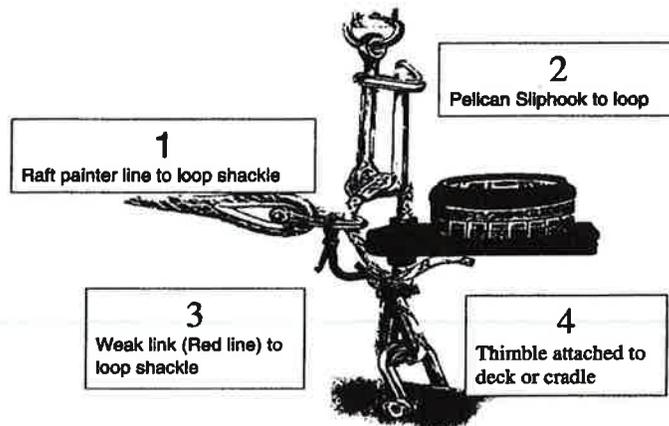
While it is a fatal mistake to wait too long to give the order for abandonment, it is just as dangerous to abandon the ship too soon.



*At a depth of approximately 3 meters, the hydrostatic release is activated and the liferaft starts to float to the surface. As the vessel sinks, the painter pays out to full length and activates the CO<sub>2</sub> cylinder to inflate the liferaft. The painter must be pulled out manually to its full length to activate the inflation mechanism if the water depth is less than the length of the painter. Swim to the raft, place your feet on the cannister and pull until the raft inflates. If the vessel continues to sink, the painter or a weak link parts and the liferaft floats free.*



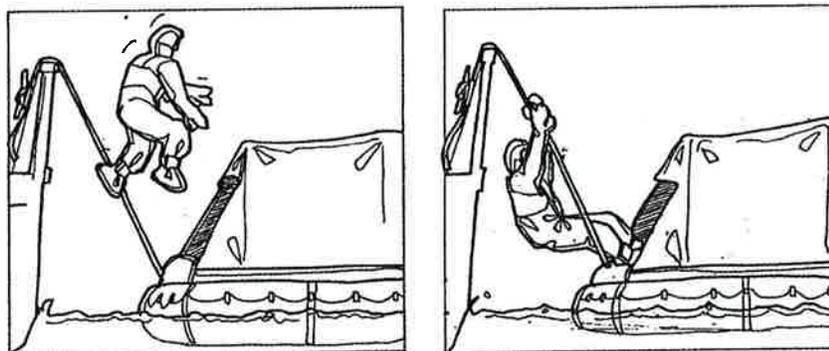
*The raft should be launched from the lee side (left). There may be as much as 100 feet of painter in the cannister and pulling the painter out to its full length (center) will inflate the raft. Be sure the painter is firmly secured to the vessel (right) before launching and inflating the raft.*



*Disposable hydrostatic release installation*

### Boarding the Liferaft

Wait for the raft to inflate before boarding. If you board too soon you may interfere with the raft's inflation. Your raft will probably over-inflate and you will hear the sound of air escaping through pressure relief valves. This does not mean that the raft is defective. The sound should stop in a few moments.



*If possible, board the raft without getting wet. You can jump directly into the canopy opening (left) or lower yourself with a ladder, net or line (right).*

The best way to board your life raft is to jump directly into the canopy opening from your vessel, remaining DRY. You will not go through the floor.

Jump feet first into the canopy opening with your hands landing on the top of the canopy. Once in, move away from the opening so other crewmen can board.

If you must enter the water, chose a safe place to leave the vessel. Enter where you can use the painter line to guide you to the raft. If you are not in contact with the painter line, you may be swept beyond the raft.

Beware of hazards below you. Do not jump into people, objects or surface debris. Jump from the lowest suitable point to minimize impact with the water. Consider using a ladder, net or line to lower yourself to a safe point of entry.



*If you must enter the water wearing a PFD, cross your arms securely over your chest and block off your nose and mouth. Always enter the water feet first, with your feet together.*

## Entry from a Height

Once the decision is made to abandon the vessel, the following procedures should be utilized.

- Get down as close to the water as possible and secure your PFD / Immersion Suit.
- Look down to see if your landing area is clear.
- Look straight ahead and stand tall.
- Latch on with one hand on face to protect mouth and nose from inrushing water. The free hand is placed across the chest and grabs onto the elbow or shoulder and squeeze down on the PFD.
- Step off as you were walking down a set of stairs. Cross your ankles or keep feet close together.
- Assist others and move to a safe area. Swim on your back.



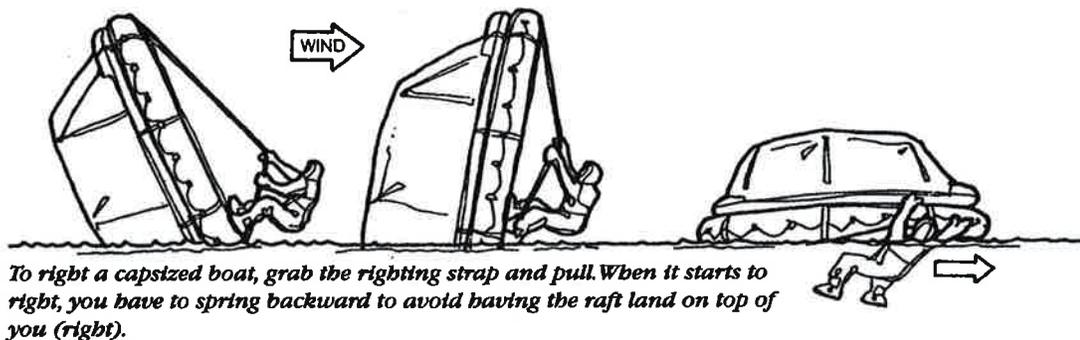
*If entering the water in an immersion suit, protect your head with one arm and jump to the side. If you jump facing forward (right), a slip is more likely to cause a head injury.*

## Righting a Capsized Liferaft

If your liferaft inflates upside down or is blown over during inflation, **DON'T PANIC**. One person can easily right a capsized craft. Swim to the side marked "RIGHT HERE." If there is no marking, go to the side with the CO<sub>2</sub> cylinder. Maneuver the cylinder side of the raft so that it is downwind, then reach up and grab the righting strap. Start pulling yourself up onto the raft. It will help to kick your feet out as if you were swimming on top.

This will be difficult as you will have on a flotation device. **GET AGGRESSIVE!**

Once on top facing into the wind, stand on the very edge where the CO<sub>2</sub> cylinder is located. Holding onto the righting strap, lean back with all your weight and pull on the strap. Once the canopy is clear of the water, the raft will begin to follow. If the raft lands on top of you, relax. The bottom (floor) of the raft is soft and flexible and your head will form an air pocket.



*To right a capsized boat, grab the righting strap and pull. When it starts to right, you have to spring backward to avoid having the raft land on top of you (right).*

Stay face up under the raft. Catch a breath of air and pull yourself out from underneath. If you try to swim out face down, your PFD or immersion suit could get hung up and make it difficult for you to get free.