Operational and Emergency Procedures

Vessel Name:

_____

Owner/Authorized Representative/Designated Person:

_____

Master

_____

Crew members:

_____

_____

_____

_____

COMITÉ PERMANENT
sur la sécurité des bateaux
de pêche du Québec

Table of Contents

Safety Policy

Goal:

This policy aims to help staff fulfill their roles in maximizing safety, efficiency and pollution prevention while performing their duties on board the _____ fishing vessel.

Policy:

Staff members will receive instructions for performing their tasks and be given familiarization training prior to their first voyage. They will also receive additional training and safety awareness sessions as part of the regular training exercises. This training will be provided by the master and recorded in the vessel's records.

The staff will act professionally and treat others with respect.

The vessel and its equipment shall meet or exceed the regulatory requirements. This performance shall be maintained through the periodic reviews scheduled according to these procedures.

Staff members shall take the necessary steps to solve any problems they identify. If they cannot solve the problem, they must immediately notify their superior, who shall notify their superior until the owner is notified.

The master is responsible for safely steering the ship. The master is solely responsible for deciding whether the ship can sail safely.

To prevent a trip from being delayed or cancelled, the master must notify the owner of any actions that must be taken; the owner is responsible for ensuring the vessel is seaworthy.

Signature: _____

_____

Date: _____

Operational Procedure

Verification to be done before departure

Purpose:

- Conduct verification to maximize voyage safety

Responsibilities:

- The master is responsible for ensuring that this procedure is followed

Step	Verification to be performed
1	Check the weather forecasts. Verify that the current conditions match the forecasts
2	Check the travel plan and make sure you have the required maps and publications
3	Check the routes used for the voyage
4	Check the fuel level and make sure there is a reserve in case of difficulties
5	Check engine oil and coolant levels for the main engine and generators
6	Check for oil and water leaks in the engine compartment and bilge
7	Check and test that the bilge pumps are operating properly
8	Check that the drain plugs are properly in place and tight
9	Visually inspect the life rafts and their fasteners
10	Check that the fire extinguishers and other fire-fighting equipment are in place
11	Check that the first aid kit, necessary tools and spare parts are available
12	Check the battery charger
13	Check the compass and navigation instruments
14	Turn on the VHF radio and make sure that it is working properly
15	Turn on the navigation lights and make sure that they are working properly
16	Make sure that there is an adequate amount of life-saving equipment for the number of people taking part in the voyage

Refuelling

Purpose:

- To limit the risks of pollution and explosion

Responsibility:

- At all times, the master is responsible for refuelling their vessel. They must make sure that this procedure is applied at all times

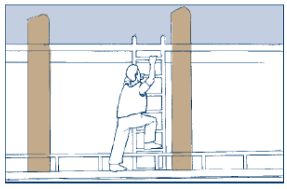
Step	Verification to be performed
1	Securely moor the boat
2	Make sure a fire extinguisher designed for oil fires is nearby
3	Turn off the engine
4	Have anyone who is not involved in refuelling leave the vessel
5	Extinguish any cigarettes, stoves, heaters or other open flames
6	Turn off any exposed lights
7	Close the hatches, doors and portholes
8	Do not use electrical switches
9	Ground the fuel nozzle and filler pipe
10	Pollution control equipment must be ready for use
11	Place a discharge bucket under the vents
12	Make sure that air is escaping from the vents while the tank is filling
13	Know how much fuel can be put in the tank

COMITÉ PERMANENT sur la sécurité des bateaux de pêche du Québec

Daily working procedure

Bording and exiting the boat

Risks	Means of prevention
Falling, being crushed between two boats or between the boat and the dock, drowning	• Never jump when going from the boat to the dock, from the dock to the boat, or from one boat to another. • Use the gangway or ladder instead.



General measures

- Never leave the boat until it is moored at the dock or **moored alongside** another boat.
- Appropriate means of access shall be made available to workers to allow them to board or exit the boat safely.
- Means of access and their surroundings shall be properly lit (see Chapter 15).
- Snow, ice, grease or any other substance that could cause a person to slip or fall shall be removed from access ways.
- Avoid walking under a cargo that is suspended in the air.

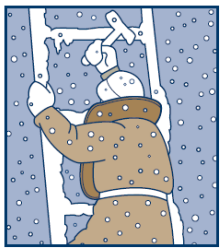
Work and moving about on board

Risks	Means of prevention
Slipping	• **Alleyways**, **gangways**, traffic areas on the deck and stairs shall be: - in good condition and kept clear; - maintained to avoid becoming slippery.
Falls	• All openings entailing a fall hazard shall be covered or protected by guardrails or other means of protection on all exposed sides.
Falling overboard	• The **bulwark** or the guardrails shall be of standard height, namely between 900 mm and 1200 mm. • Crew members shall wear a safety harness attached to a lifeline.

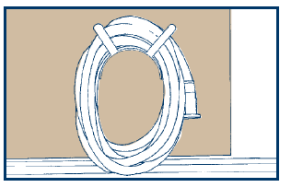
Moving on board

- Traffic areas shall have non-skid surfaces under both dry and wet weather conditions (fiberglass with a non-skid surface, metal grates with rubber.
- There shall be no running on deck.
- Any oil spill or spill involving another substance, which could cause a person to slip, shall be cleaned up immediately.

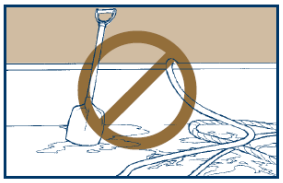
- Any snow, ice or frost that has accumulated shall be removed from work areas and passage ways.



- Keep decks clear, all ropes shall be coiled down and securely fastened, and hoses shall be rolled on a reel to prevent fall hazards.



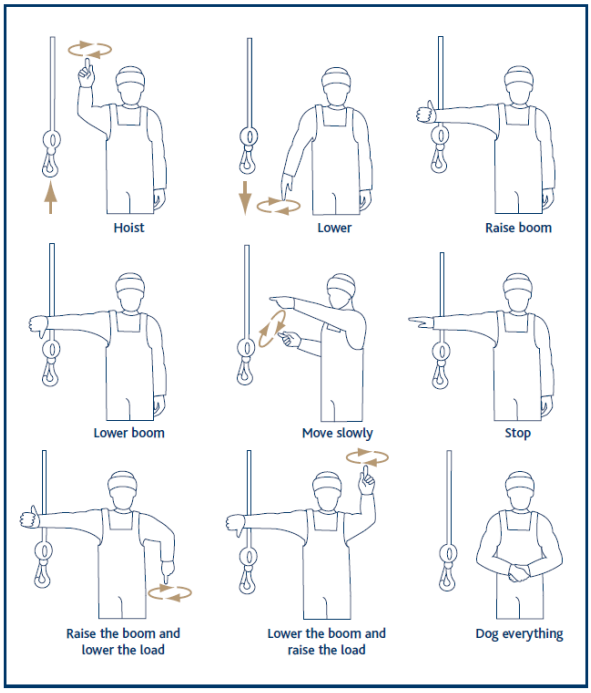
- Any element that could represent an obstacle on deck or at head height shall be identified with brightly coloured paint.



IMPORTANT NOTE: Fishing alone is prohibited.

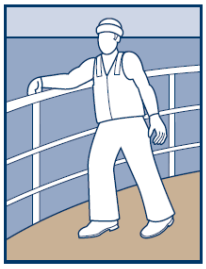
Working with a winch

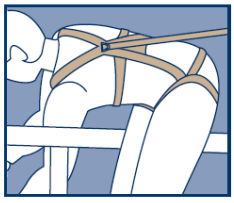
- The winch control in the wheelhouse shall have a corresponding auxiliary control located on the deck, from where there is a good view of the winches and the men at work.
- An opening can be made on the main deck behind the wheelhouse in order to have a view of the rear deck.
- Using an interphone between the deck and the wheelhouse can improve verbal communication.
- Using hand signals that everyone understands will ensure an efficient transmission of information.
- A signalman should take part in the operations when the winchman does not have good visibility.



Working on deck

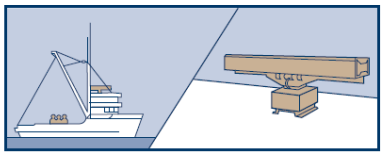
- Sitting on the **bulwark** or on the guardrails is strictly prohibited.
- During bad weather, lifelines shall be installed at the appropriate locations on deck.
- No crew member shall be on deck during bad weather unless it is absolutely necessary for his safety or that of the boat.
- Anyone who must go on deck during bad weather shall wear a harness attached to a lifeline or a fixed anchor point.
- Crew members working on deck should wear clothing made out of reflective material.





Working aloft

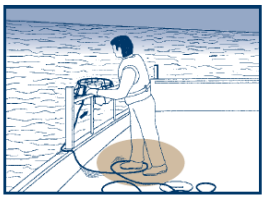
- A crew member shall wear a safety harness when working aloft.
- The crinoline ladder is recommended for working on the gantry. The crossbeam should be equipped with a guardrail and a handrail.
- The radar shall be turned off when a crew member is working aloft to avoid exposure to radiation or being struck by the radar equipment.



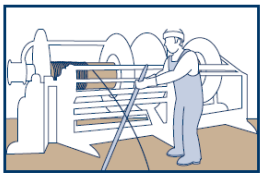
Ropes and tackle

Risks	Means of prevention
Pinch point and being drawn in	• Use appropriate ropes, blocks and winches.

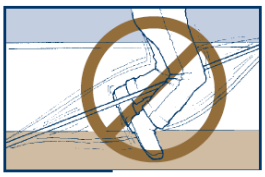
- Be careful to never put your foot in the bight of a rope or a cable.



- Use a tool to guide a wire. Never guide wire with your hands or feet.



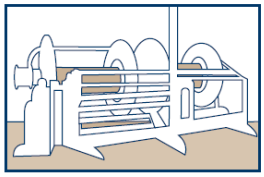
- Crew members must not stand on a tensed rope or cable, step over it or use it as a handrail or guardrail.



- All ropes and cables shall be made from good quality material, be of sturdy manufacture and have a resistance level appropriate to the use for which they are intended.
- Always wear heavy gloves when handling wire cables.

- Steel cables shall be rolled on a reel when not in use.
- All **pins**, axles, rope grooves, plates, bushings, nuts and bolts should be inspected regularly for signs of wear.
- Blocks should be regularly inspected, lubricated and maintained.

- All moving parts, drive belts and gears which are accessible shall be equipped with protective devices.



Handling and storage

Risks	Means of prevention
Lower lumbar lesions	• Use safe lifting methods. • Use hoisting appliances.
Falls	• Keep passage ways clear and dry to avoid slip hazards. • Have well defined storage spaces.
Collision injuries	• Avoid moving cargo when the sea is agitated.
Loss of vessel stability	• Respect the boat's cargo load limits. • Respect the safety rules for navigating in bad weather.

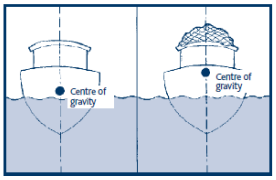
Manual handling

- The employer shall make sure that crew members have taken training on safe lifting and carrying techniques for loads of more than 10 kg. He shall also make sure that they apply these techniques.

Storage

- No materials, objects or goods shall be stored or placed in a manner that may result in one of the following consequences:
  - obstructing or encroaching on corridors, passage ways or exits;
  - impeding the safe operation of the materials handling equipment;
  - obstructing access to electrical equipment and distribution panels;
  - obstructing access to or the use and operation of firefighting equipment;
  - interfering with the operation of fixed fire protection equipment;
  - obstructing or impeding the smooth operation of ports;
  - constituting a hazard for the safety or health of employees.

- Keep the centre of gravity of the boat as low as possible.
- Tools and equipment (including hatches) shall be stored and well stowed.

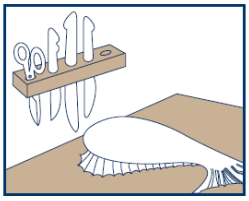


Loading and unloading the boat

- All materials, goods and things shall be stored and placed in such a manner that the maximum safe load-carrying capacity of the deck or other support structures is not exceeded.
- Keep away from cargo that is suspended or in movement.
- Cargo shall be stored in holds and other designated places.
- Loading and unloading zones shall have proper lighting (see Chapter 15).

Sorting and eviscerating of catches

- Work should be organized in such a way as to allow crew members to take regular breaks. A system for having crew members take turns performing various tasks should also be implemented.
- The height of the sorting tables shall be adapted to the height of workers so that they do not have to bend over.
- Knives shall be sharpened regularly and shall be put away when not in use.
- Crew members who use eviscerating machines must have received appropriate training.



Storage of catches

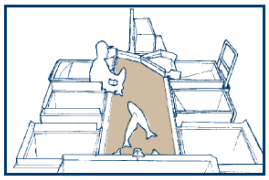
- Catches shall be stored in the hold as soon as possible to keep the work space clear and to maintain the vessel's stability.
- Once the catches having been stored, the decks that serve as work and traffic areas shall be carefully cleaned.

Handling of catches

Risks	Means of prevention
Musculoskeletal problems	• Adapt the work stations. • Use mechanical aids. • Lighten loads. • Take breaks. • Take turns performing tasks. • Stop working when the boat lacks sufficient stability.

Receiving of catches

- Work stations shall be arranged in such a way as to reduce accident risks for the crew:
  - Make sure that work tables are adapted to the height of workers.
  - Arrange catches in such a way that members do not have to bend or stretch their upper limbs and trunk.
  - Adapt work stations to the type of fishing.
- Vertical separations of box nets must not inhibit access to work areas located along the **bulwark**.

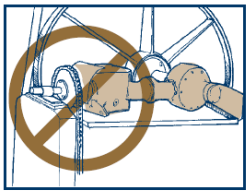


Tools, machinery and gear

Risks	Means of prevention
Getting caught in or being drawn into fishing gear	• Protect danger zones. • Stay clear of the line of pull of a cable.
Collision injuries	• Train workers and adopt safe work methods. • Do not stand under a suspended load or in a place where a suspended object may swing. • Keep traffic areas clear and dry to prevent slipping.

Protective devices on machinery (*Regulation respecting occupational health and safety*, [ROHS], Division XXI)

- Belts and other moving parts that can cause injury must be equipped with a safety device (ROHS, section 182).
- When a protective device is installed on a machine, it prevents the use or operation of the machine unless the protective device is properly in place.



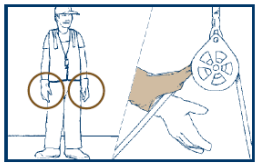
- When a material handling apparatus is used under circumstances in which the operator risks being struck by a falling object or by a load in motion, the employer shall equip the apparatus with a protective device whose design, construction and resistance will prevent, under all foreseeable circumstances, the object or the load from penetrating the space occupied by the operator.

Hand tools

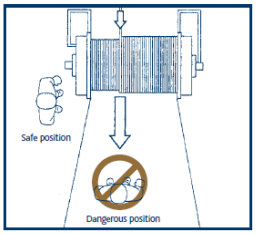
- Tools shall be handled carefully and only used for the purpose for which they were designed.
- Damaged or dangerous tools must not be used.
- Tools that are not in use shall be stored on a rack, in a box or in a tool locker.

Workshop and workbench machines (fixed location)

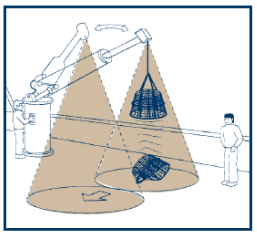
- No person shall use a workshop machine unless he has the proper authorization and has received the necessary training.
- Loose-fitting clothing must not be worn when working with a machine.
- Machines that are in operation shall never be left unattended; they shall always be turned off when not in use.



Winches and hoisting apparatuses



- A worker must never stand in the line of pull of a cable.
- Winches and hoisting apparatuses shall be equipped with a brake system.
- If the winches and hoisting apparatuses are not equipped with a fail-safe lever, the winchman shall remain at the operating controls at all times.
- Hoisting apparatuses shall be properly stowed away to prevent them from moving when the vessel is at sea.
- Loads that are being raised or lowered must never pass over or remain suspended over workers.
- Winchmen shall have good visibility. When such is not the case, a signalman must be posted at a place from where he can see the work area, while being in full view of the winchman.
- Before crew members leave the work area, loads shall be lowered to the deck, winches shall be stopped and the power supply shall be switched off.
- Cargo booms shall be equipped with chains between the mast and the boom and between the boom and the upper block.

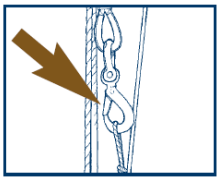


Use of slings

- To be safe, **slings** shall be of sufficient length. In addition, they must be sufficiently tight to prevent the load or a portion thereof from coming unhooked.
- Loads shall be raised or lowered uniformly, without surges or sudden jerks.

Hooks and shackles

- Hooks used to lift loads as well as those attached to **slings** shall be equipped with a **safety clip**, except where these hooks are specifically designed for the safe lifting of certain loads (ROHS, section 255.8).
- **Shackle** screw pins shall be greased well at all times.



Machine room

Risks	Means of prevention
Asphyxiation	• Make lines air-tight. • Ventilate the room or wear a respiratory protection device.
Leak of pressurized fluids	• Wear individual protection equipment. • Check the condition of lines and see to their maintenance.
Fire Burns	• Check the state of the engine and electrical cables regularly and see to their maintenance. • Do not smoke. • Put oily rags in a non-flammable container. • Insulate hot parts by means of a jacket made of open-work fabric.
Overly high noise level	• Install noise reduction enclosures.

General measures

- In the machine room, all work shall be done by qualified persons.
- All machines shall be locked out before removing protective guards for maintenance and repair.
- The machine room shall be sound-proofed.
- A machine's moving parts shall be equipped with protectors or other permanent safety devices such as railings or enclosures.

- When repair or maintenance work is being done on a machine, the protectors or other permanent safety devices shall not be removed until the machine has stopped. The machine may only be turned back on when the protectors and other permanent safety devices have been put back in place.
- Valves, collectors and accessories shall be attached in such a way as to prevent vibrations and risks of breaking.
- All work areas shall be properly lit.
- Hearing protection shall be worn.
- It is important to ventilate the machine room and other enclosed areas properly.
- A water level detector shall be installed in the hold and in the engine room, and be connected to an alarm system.
- Following a repair or maintenance work, all spare parts, replaced parts and tools should be inspected, inventoried and stored in a safe place.

Internal combustion engines

- Internal combustion engines and air compressors shall be maintained in good working order and inspected regularly according to the manufacturer's instructions.
- No ignition source (for example a portable electric flashlight or an open flame) must be brought near an open engine crankcase until such time as it has cooled off and all of the gases have been removed by the ventilation system.
- The origin of a fuel leak shall be pinpointed as quickly as possible and the flow stopped. Fuel must not be allowed to accumulate in the bilges.
- Motor and transmission oil levels shall be checked regularly.

Propulsion system

- The machine shall be stopped before crew members carry out, on elements of the propulsion system or by using these elements, any work that might entail a danger:
  - the control lever or starting system shall be locked out;
  - the turning gear or an appropriate brake shall be activated;
  - a warning shall be placed on the starting system.

Hydraulic systems

- Appropriate equipment and containers shall be used when working on systems that contain oil and, in particular, boiling oil, to avoid burns and risks of fire.
- Individual protection equipment shall be worn to avoid being injured by pressurized fluids when repairs are being done on hydraulic systems.

Electricity

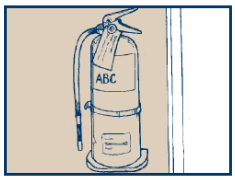
Risks	Means of prevention
Electrocution	• Use compliant electrical equipment and accessories.
Fire	• Have a compliant electrical system.

- Any defect in the equipment, electrical system and electrical conductors shall be reported to the person in charge immediately.
- Every control device shall be so designed and located as to permit quick and safe operation at all times.
- The path of access to every electrical switch, control device or meter shall be free from obstruction.
- Control switches for all electrically operated machinery shall be clearly marked to indicate the switch positions.
- The distribution and switching systems shall always be protected against water infiltration, whether associated with run-off or splashing.
- Circuits shall have fuse-type or switch-type circuit-breakers making it possible to limit the current to the rated characteristics of the wiring or the system.
- Switches and circuit-breakers shall be lockable.

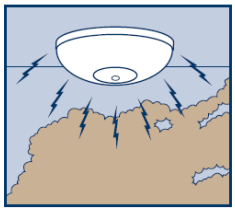
Fire

Risks	Means of prevention
Burns Asphyxiation Shipwreck	• Install heat and smoke detectors. • Establish a fire control plan.

- A fire control plan (see Appendix I) shall be established. It shall specify the location of extinguishers, fire hoses, survival gear, the first-aid kit and emergency exits. A crew member shall be designated as person in charge of emergency measures.



- Smoke detectors shall be installed in the crew's **living quarters** and heat detectors shall be installed in the machine room. Heat and smoke detector batteries shall be replaced once a year.
- A heat detector, connected to an alarm system, shall be installed above the kitchen or near the smoke pipe. Engine exhaust lines and the smoke pipe shall be covered with a metal or perforated fire stop.



- To permit the exhaust of inflammable gases, the fan of the machine room shall be turned on at least five minutes before the boat starts up.

Hazardous materials

Risks	Means of prevention
Poisoning, explosion	• Limit to a minimum the presence of hazardous materials on board.
Exposure to radiation from radar and radio antennas	• Stay away from radio and radar antennas when in operation.

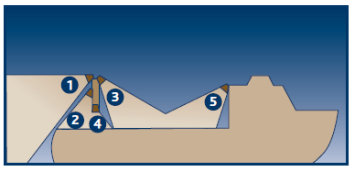
- No person shall use a hazardous substance for any purpose in a workplace where it is reasonably practicable to substitute therefor a substance that is not a hazardous substance or one entailing fewer risks.
- Every container for a hazardous substance that is used in a workplace shall be so designed and constructed that it protects the employees from any safety or health hazard created by the hazardous substance.
- A ventilation system shall be used to control the concentration of an airborne hazardous substance.
- Batteries shall be securely attached and well maintained. They shall be stored in well-ventilated areas affording easy access.
- A carbon monoxide detector shall be installed in the **living quarters** and in the machine room.
- A propane detector shall be installed in those places where this fuel is used.
- No person shall be near radio or radar antennas when they are in operation.

Controlling the risks associated with hazardous materials entails respecting the rules related to the Workplace Hazardous Materials Information System (WHMIS). Some of these rules, which come from the *Regulation respecting information on controlled products* (RICP), are described in the following paragraphs.

- No employer may allow the use, handling or storage of a controlled product in a workplace unless the product carries a label and a material safety data sheet which meet the requirements of the *Act respecting occupational health and safety* and the *Regulation respecting information on controlled products* and unless the worker has received the training and information required to carry out safely the work entrusted to him (AOHS, section 62.1).
- Where a hazardous substance is stored, handled or used in a workplace, signs shall be posted in conspicuous locations warning every person granted access to the workplace of the presence of the hazardous substance and of all precautions to be taken to prevent or reduce any health hazard.
- A hazardous material container which is stored, handled or used on board a vessel shall bear a label which clearly discloses the name of the substance and its hazardous properties (WHMIS).
- Where a controlled product is received from a supplier and an employer places the controlled product on a ship in a container, other than the container in which it was received from the supplier, the employer shall apply to the container a supplier label or a workplace label that discloses the appropriate information.
- The information sheet of a hazardous material which is stored, handled or used on board a vessel shall be put at the disposal of employees in their workplace.

Lighting

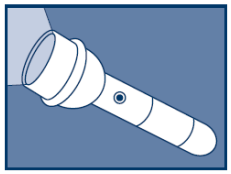
Risks	Means of prevention
Falls	• Provide adequate lighting.



1. Searchlight lighting up the sea at the back of the vessel
2. Searchlights lighting up the back of the fishing deck
3. Searchlights lighting up the centre-back of the fishing deck
4. Local lighting of the door station
5. Searchlights lighting up the centre-front of the fishing deck

- Defective lighting equipment shall be repaired as soon as possible.
- Searchlights shall be arranged in such a way as to not dazzle fishermen, the winchman or the crew members assigned to the wheelhouse.
- To avoid glare, it is preferable to install several medium power searchlights rather than two or three very powerful searchlights.
- The wheelhouse shall be kept in darkness at night to permit the correct reading of radar and sonic depth finder monitors and to be able to distinguish the navigational lights of vessels in the sector.
- A low intensity red light may be installed near the floor to permit safe traffic in the wheelhouse.

- The minimum lighting shall be 250 lux for the entire deck and 400 lux for work stations requiring greater manual dexterity or entailing a greater risk of accidents (**mending of nets**, **baiting**, sorting and evisceration of catches, winch operations, trawl door station, etc.).
- Work stations at the tween deck require a lighting of 250 lux.
- The lighting of stairways and ladders and that of **alleyways** shall be 50 lux.
- In the galley and relaxation areas, lighting shall be 250 lux.
- The sea shall be illuminated on the side on which the fishing gear is deployed or hauled in to be able to monitor the operations properly.
- Provision shall be made for the use of portable lighting equipment, notably flashlights, in the event of a power failure. This equipment shall be inspected regularly and replaced if necessary.



Galley and storage of foodstuffs

- All cuts, even minor, shall be reported immediately to the first-aid officer and treated to prevent any risk of infection.
- All crew members working in the galley or in another place where food is handled should be informed of the appropriate safety and hygiene measures.
- An air exhaust system should be located above cooking appliances. The hoods and filters of these systems shall be cleaned frequently and the greasy deposits, eliminated.
- Stoves shall be attached securely to prevent them from moving.
- Stove fuel tanks shall be equipped with a shutoff valve and shall not be located directly above the stoves.
- Stoves shall be equipped with rails and topped with an anti-skid surface to prevent pots and pans from moving and accidental spills of their content on a crew member.
- A fire extinguisher shall be in the galley, near the entrance if possible.

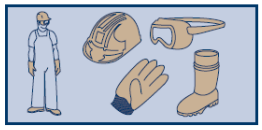
Rescue equipment

Rescue equipment (life raft, VHF-ASN radio, radio-direction beacon (RLS), lifejacket, etc.) shall be accessible and shall meet Transport Canada requirements.

Individual protection equipment

Risks	Means of prevention
Being struck by an object Rubbing, friction, abrasion, pressure Clothing caught in gear Fall to a lower level Fall at the same level Fall overboard Exposure to caustic, harmful, allergenic substances Exposure to ultraviolet rays Noise	• Wear protection equipment when these hazards cannot be eliminated at the source.

General measures



- The employer shall evaluate the risks to which his workers could be exposed and provide them with the necessary individual protection equipment if the hazard cannot be controlled at the source.
- The employer shall make sure that workers use individual protection equipment when this precaution can prevent possible injuries or reduce the seriousness thereof.
- Individual protection equipment shall be supplied by the employer. He shall make sure that such equipment is in good condition and well maintained.
- The employer shall provide raincoats of a colour that contrasts with the work environment. Fluorescent orange is recommended.
- The employer shall not allow his workers to work bare-chested. Long-sleeved clothing should be favoured.

- The wearing of a lifejacket is mandatory for every person working over the water if no other safety measure can provide effective protection (ROHS, section 355).

Protective headwear

- Where a head injury hazard is present in a workplace, protective headwear shall be used. During cold weather, a winter liner may be inserted into the helmet.

Eye and face protection

- When there is a risk of injuries to the eyes, the face, the ears or the front of the neck in the workplace, the employer shall provide an eye or face protector that complies with the applicable standards (glasses, face protection).
- For all hot work or work requiring the use of a welding or similar process, the wearing of a welder's helmet is mandatory and safety rules shall be followed.

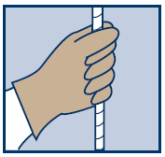
Hearing protection

- All crew members exposed to high noise levels shall use hearing protection.

Protecting hands

- The wearing of jewelry, such as rings and chains, is prohibited for workers on deck.

- Workers who handle steel cables, ropes or rigging or objects or substances that can cause hand injuries shall wear appropriate gloves.



Protective footwear

- On board, workers can sustain foot injuries in several ways: by slipping on a wet surface, as the result of a heavy object falling, etc.
- The employer shall provide individual protection equipment adapted to these situations.
- The wearing of sandals shall be prohibited during work.

Respiratory protection

- Impurities and other contaminants in the air shall be eliminated at the source.
- When it is not possible to eliminate impurities in the air at the source, the employer shall provide free of charge to workers the respiratory protection equipment stipulated in the *Guide des appareils de protection respiratoire utilisés au Québec* and make sure that workers wear this equipment (ROHS, section 45).
- The equipment shall be chosen, adjusted, used and maintained in accordance with the standard entitled Selection, Use and Care of Respirators, CSA Z94.4-93 (ROHS, section 45).

COMITÉ PERMANENT sur la sécurité des bateaux de pêche du Québec

Flood Prevention

Subject: **Adequacy of Single Cross-bar Type Hatch Covers**

Introduction

Investigations into the loss of three vessels, most recently the commercial fishing trawler, *Hope Bay* on 26 February 2004, raised uncertainties about the performance of single cross bar type hatch covers that fit flush with the deck. The purpose of this Ship Safety Bulletin is to caution operators of vessels, fitted with this type of hatch, of problems associated with its incorrect operation and lack of maintenance, which may lead to leakage and major down flooding.

Description

The hatch opening is oval in shape with a flush fitting hatch cover of either steel or aluminium. The hatch is correctly secured by tightening the single cross bar located on the underside of the cover such that it lands on two bearing pieces welded on the underside of the hatch seat. The two bearing pieces are 180 degrees apart on the short or minor axis of the oval opening. Operation of the hatch cover occurs by way of a central threaded spindle, which can be activated from the topside of the hatch.

The oval shaped hatch opening has a cast semi-circular groove around the perimeter. A tubular neoprene O-ring is fitted within the groove to provide a seal between the hatch cover and the hatch seat. A fibre washer seals the spindle.

Hazards

Assessment by the Transportation Safety Board of the design, operation and maintenance of the hatch cover and seating indicated that the hatch is susceptible to failure resulting in leakage and, in extreme cases, down flooding leading to the loss of stability and the loss of the vessel.

Operation of Hatch

When the operator is securing the hatch from the topside, it is not possible to confirm that the cross bar (on the underside) is correctly seated on the two bearing pieces. *See photographs 1 through 4- attached.* Consequently, failure to correctly fasten the hatch means the hatch is either not secured at all or only partially secured. In either instance the cover may be dislodged allowing leakage and/or down flooding.

In addition, the short lever arm of the handle makes it difficult to apply sufficient torque to tighten the hatch cover. In conjunction with the tubular nature of the O-ring, this creates a situation where the cross bar can lose its initial tension. However, caution should be taken not to over tighten, as damage to the cover and/or centre pin could occur. Furthermore, short cross bar stops, an excessive length of the spindle and too much clearance between the spindle head and cover could allow the cross bar to slip past the stops leaving the operator unaware that the hatch is not adequately secured.

Design of Hatch

The design of the cover and the cross bar does not allow uniform distribution of the tightening force and positive closure along the major or longer axis of the hatch cover. Under the influence of an applied load to a portion of the hatch cover, the cross bar could act as a fulcrum causing the opposite end of the cover to lift off the O-ring.

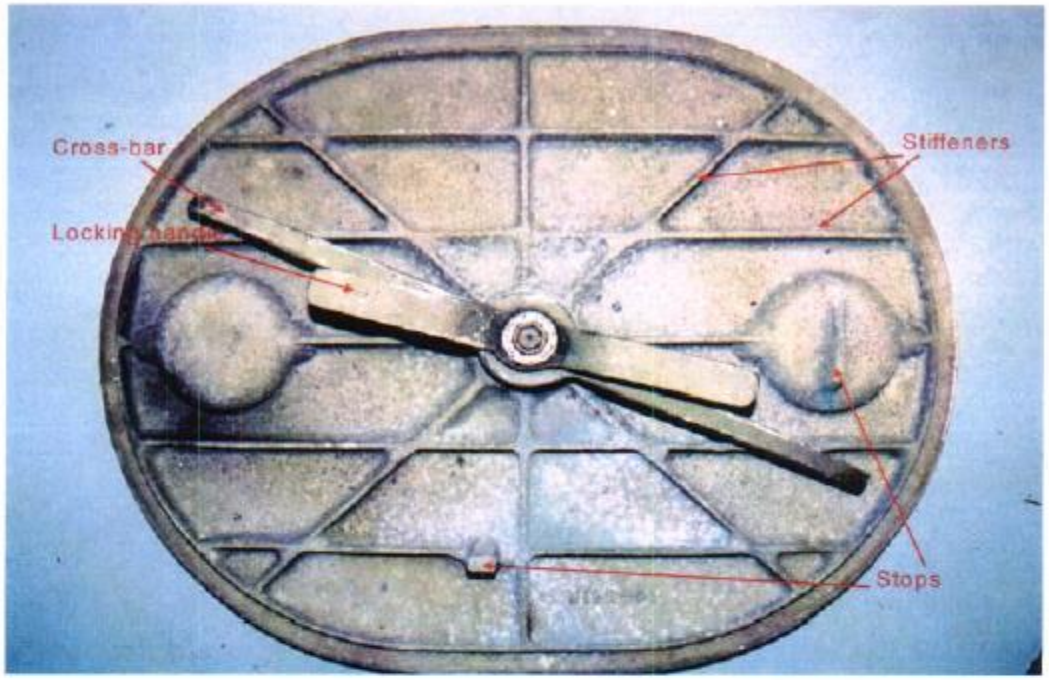
Also, when a load is applied uniformly across the upper surface of the cover, the weight may further compress the O-ring allowing the initial cross bar force on the bearing pieces to relax which could subsequently allow the cross bar to "walk" such that when the applied uniform load is removed, the hatch cover would not be properly secured. It should also be noted that the aluminium cover has a tendency to warp under excessive uneven loads again causing the watertight seal to be broken.

Additionally, a left hand thread of the operating spindle, clockwise-to-open, is counter-intuitive and may result in the incorrect operation of the hatch at moments of urgency.

Conclusion

Owners of vessels fitted with this type of hatch are strongly encouraged:

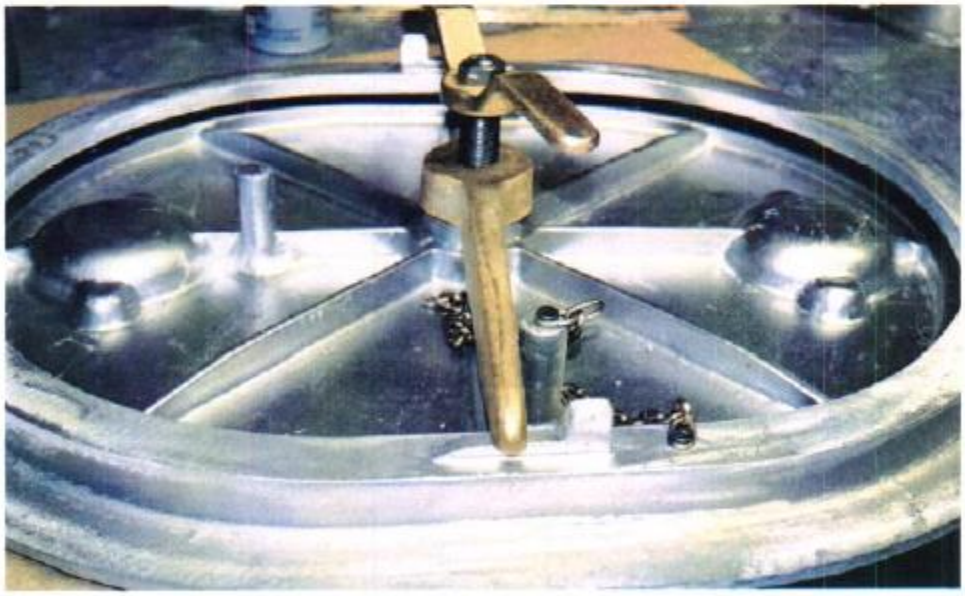
a) to inspect the hatches for material defects;
b) to contact the manufacturer for any operation and maintenance instructions and conduct the recommended maintenance;
c) to insure that their operation will maintain watertight integrity in all conditions of operation; and
d) to demonstrate to all crew members the correct operation of the hatch and to point out potential problems with its operation and maintenance.



Photograph 1 *– View of underside of manhole cover assembly.*

Photograph 2 *– The cross bar is about 12mm above the 'higher' stop. It can now rotate behind the stops and the operator will be unaware that this has happened.*

Photograph 3 – *The cross bar was tightened by the operator from his position on deck and outside the compartment. He was completely unaware that it had come to rest on top of the wedge piece.*



Photograph 4 – *Position of 'stop' does not allow cross bar to sit over flat part of wedge piece.*

COMITÉ PERMANENT sur la sécurité des bateaux de pêche du Québec

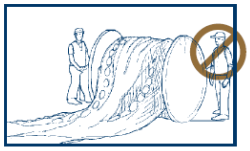
Safety Procedure for Specific Catch Methods

Trawling and dredging

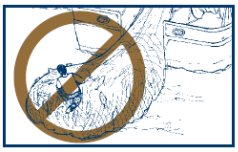
Risks	Means of prevention
Being drawn in by the gear, the warps or the drum Being hit or crushed by the cable, the gear or the **codend** of the trawl net Being struck by the gypsy Being drawn in by the net drum Swinging of a load Falling overboard	• Cease activities if the sea is agitated. • Raise the trawl or the dragnet frequently. • Lay out the deck safely. • Install protective guards on moving parts. • Train workers. • Adjust the height of the railing.

Deploying and heaving in the trawl or the dredge

- Crew members shall stay clear of the winch and the **trawl** until the latter is in the water or until the **codend** of the trawl net is on board, on the deck.
- When crew members secure the **trawl doors** to the **davits** or unhook them, they must stay clear of pinch points.

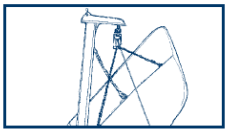


- Crew members must stay clear of trawl doors during their adjustment.
- Crew members must never stand in front of the net drum while it is turning.
- No one must go on to the **codend** while it is still in the water.

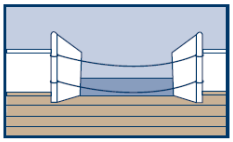


Securing the area and equipment

- Crew members who work at the stern and who are not protected by a railing must wear a safety harness attached to a lifeline.
- Never stand in the line of pull of the cable.
- Never stand near the **warps** when the **trawl** is being put out or towed in.
- Never have the warps pass over the deck surface, through the box net or in maneuvering areas.
- A second winch control shall be installed at the back of the vessel or steps shall be taken to make sure that the winchman can see the crew members clearly.
- **Trawl doors** shall be immobilized and held in place by attaching them to the **davits** or to part of the vessel structure when the doors are not in use.



- Stern ramps shall be roped off or guarded when not used for trawling.



Receiving of catches

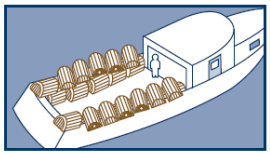
- No crew member shall stand directly under the **codend** when it is full.
- Boxes for shrimp and for fish shall be secured to prevent them from sliding.
- The trawler shall be equipped with sorting tables.

Trap fishing

Risks	Means of prevention
• Falling from heights, at the same level or overboard • Loss of vessel stability, capsizing • Getting caught in or being drawn in by shifting traps shifting on the deck • Getting caught in or being drawn into fishing gear • Excessive effort • Musculoskeletal disorders • Fingers being bitten by prey	• Install railings alongside the loading area. • Limit the height of piles of traps. • Store ropes, **buoy ropes**, etc. • Deploy traps or store them in a predetermined order. • Install lighting devices. • Follow work steps. • Use hoisting equipment. • Work in teams. • Clear and clean the deck. • Train crew members. • Be attentive to the task at hand. • Wear work gloves.

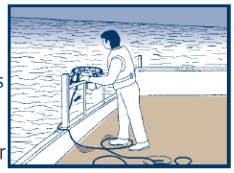
Bringing traps on board from the wharf

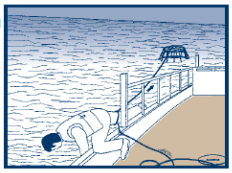
- Traps shall be stored safely away from walkways and shall be well secured.
- The vessel's stability must not be compromised by the trap loading method or by the number of traps loaded.



Deployment and hauling in of traps

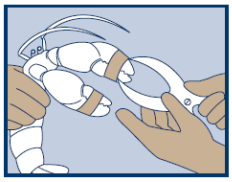
- The equipment used shall not obstruct the work area.
- Beware of bights.
- Crew members shall always have a sharp knife on hand.
- Hoisting devices such as articulated booms shall have hydraulic cylinders fitted with retention valves.
- No crew member shall stand directly under a cage raised by an articulated boom.
- The worker operating the articulated boom shall have good visibility of the crew and shall remain at the controls at all times to stop the articulated boom in the event of an emergency.
- The worker must never leave the controls of the articulated boom when a load is suspended in the air.
- Adequate storage space shall be provided for **buoy ropes**.





Removing catches from traps

- Crab fishing vessels shall be equipped with sorting tables and hoisting devices for cages.
- Crew members shall always wear gloves when handling catches.

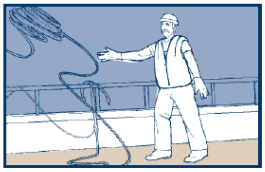


Longlining

Risks	Means of prevention
Being drawn in by anchors or snoods Being drawn in by a hoisting apparatus	• Respect navigation safety rules. • Train and drill crew members.
Being crushed between a line hauler and a cable Injuries caused by hooks Injuries caused by catches	• Arrange workstations well. • Have lighting adapted to the work. • Keep the deck well organized. • Place catches in the holds as they are brought aboard.

Casting and hauling in longlines

- The speed of the equipment must be adjusted to prevent crew members from being caught by hooks or other equipment.
- An equipment control station must be located on deck near the work area.
- At each workstation, workers shall have access to a knife capable of cutting the longline in case a worker is drawn in.
- Workers must stay clear when the anchor and the buoy lines are being cast.
- During rough sea conditions, crew members must stay behind the railing or wear a safety harness attached to a lifeline.



Gillnetting

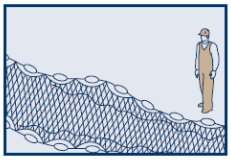
Risks	Means of prevention
• Loss of vessel stability, capsizing • Getting caught by or being drawn into fishing gear • Musculoskeletal problems • Chilblains	• Respect navigation safety rules. • Arrange the workstation ergonomically. • Wear appropriate clothing that is adjusted. • Make sure that there is a proper railing. • Plan for frequent rest periods, out of the cold.

Bringing nets on board from the wharf

- Nets must never be stored on top of the wheelhouse.

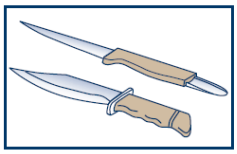
Casting and hauling in of nets

- Gloves must be worn to protect hands when the nets are being cast.
- Workers must stay away from the net when it is being cast.
- Work areas on the deck and pontoons must be arranged in such a way as to prevent workers from coming into contact with moving parts such as drums and rollers.



Handling of catches

- Workers shall have hoisting systems to lift big fish on board.
- All hooks shall be removed from catches before they are stored.
- A sharp knife shall be provided at each workstation.



Emergency Procedures

Person Overboard

Purpose:

- To maintain sight of the person overboard while manoeuvring
- To safely recover the person as quickly as possible

Responsibility:

- Spotter: To continually keep the individual who has fallen overboard in sight and assist them
- Master: To safely bring the vessel closer to the person who has fallen overboard as quickly as the situation allows

Step	Person Overboard
1	Anyone who sees an individual fall overboard must loudly shout “MAN OVERBOARD” while pointing in the individual’s direction
2	The spotters must continue to point in the direction of the person who has fallen overboard until the vessel is close enough to recover them It is essential that the spotters do not take their eyes off the person who has fallen overboard
3	Throw a buoy or any other object that may float toward the person who has fallen overboard
4	Sound three long blasts with the sound signalling device
5	Keep the stern and propeller away from the person who has fallen overboard by turning toward the side that they fell
6	Sound the general alarm
7	Perform the most appropriate recovery manoeuvre for a person overboard according to the situation
8	Alert authorities and other vessels in the vicinity

Fire Fighting

Purpose:

- To prevent a fire from spreading and extinguish it while preparing to abandon ship

Responsibility:

- Master: To manoeuvre the vessel, notify the authorities and make decisions as the situation changes
- Crew: To assess, contain and fight the fire

Step	Elements
1	The individual who sees the fire must shout, “FIRE IN THE + LOCATION.” The other crew members that hear this shout shall grab a fire extinguisher and go to the location of the fire
2	If the ship is in port, call the local fire department
3	Sound the alarm
4	Gather the crew and make sure every crew member is present
5	Determine the extent of the fire
6	If the fire is in the engine room, prepare to stop the engines and then close the fuel supply valves
7	Determine • the type of fire • the type of equipment needed to put it out • the appropriate method for fighting the fire • a method for preventing the fire from spreading
8	Close or turn off • the vents • the fire doors • the watertight doors • the lights in the fire’s location
9	Turn on all of the deck lights
10	Notify the authorities using the VHF radio

Flooding

Purpose:

- To control flooding and take the necessary steps to stop it

Responsibility:

- To control flooding and bring the vessel to a safe location

Step	Elements
1	Sound the vessel's general alarm
2	Start the pump in the flooded compartment
3	Use all available equipment to attempt to stop water from coming in
4	If the master determines that the waterway cannot be stopped, confine the area where the water is coming in by closing all of the access and watertight door
5	Turn off any source of electricity in this compartment
6	Check the vessel's stability and prepare the equipment necessary for abandoning the vessel
7	Notify the authorities using the VHF radio as soon as possible

Abandoning Ship

Purpose:

- Effectively prepare to and abandon ship

Responsibility:

- The master is responsible for giving the evacuation order and ensuring that this procedure is followed

Step	Elements
1	Sound the alarm
2	Make sure that everyone is at the muster station
3	Notify the authorities that you are going to abandon the vessel
4	The master must verbally instruct the crew to prepare to abandon the vessel
5	The crew must put on their life jackets or immersion suits
6	Prepare the life raft
7	Bring the EPIRB
8	Upon the master's verbal order, abandon the vessel and board the life raft

Pollution Response

Purpose:

- To confine the pollutant so that it does not spill into the water

Responsibility:

- Limit the amount of pollutant that spills into the sea

Step	Elements
1	Respond as quickly as possible to contain the spilled pollutant
2	Sound the alarm
3	Find the source of the pollution and eliminate it
4	Spread absorbent material over the pollutant
5	Notify the authorities if any of the pollutant goes overboard
6	Recover all of the pollutant
7	Appropriately dispose of the contaminated material

Grounding

Purpose:

- To avoid any subsequent damage or pollution

Responsibility:

- To assess and limit the collateral damage

Step	Elements
1	Stop the engines
2	Sound the alarm
3	Close all of the watertight doors
4	Notify the authorities
5	Display the day signal or corresponding lights
6	Turn on deck lights
7	Check the vessel's surroundings for any pollution or damage to the hull
8	Investigate each of the tanks
9	Examine the vessel's perimeter
10	Inspect the interior of the compartments, if possible
11	Determine the nature of the bottom
12	Determine where the water is deeper
13	Establish a salvage plan

Vessel Familiarization

This document is a list of rescue and fire fighting items and important points to note on board. When boarding a new employee and at the beginning of every season, the master must make sure that each person embarking on the vessel for a voyage receives a vessel familiarization. This is for the safety of everyone on board and their ability to act in an emergency.

Date	Elements	Initials
	Muster list reading and explanation	
	An individual's position on the muster list	
	The muster station location	
	The location and operation of flares	
	The location of the first aid kit	
	The location and testing of personal flotation devices	
	The location and testing of immersion suits	
	The location and operation of life rafts	
	The location and operation of the person overboard recovery system	
	The EPIRB location and explanation	
	The location of the manual fuel shutoff valves	
	The location and operation of ventilation ducts	
	The location of the vessel's seawater suction valves	
	The location and operation of the fire pump	
	The location of fire extinguishers	
	The location and operation of the fixed fire extinguishing system	
	The location and operation of emergency exits	
	The explanation of the main engine and emergency stop	
	The explanation of the alarm signals	
	Familiarization with the crew's quarters	
	Familiarization with the wheelhouse	
	Familiarization with the engine room	
	Additional questions?	

Representative's signature		Date	
Employee's signature		Date	

COMITÉ PERMANENT
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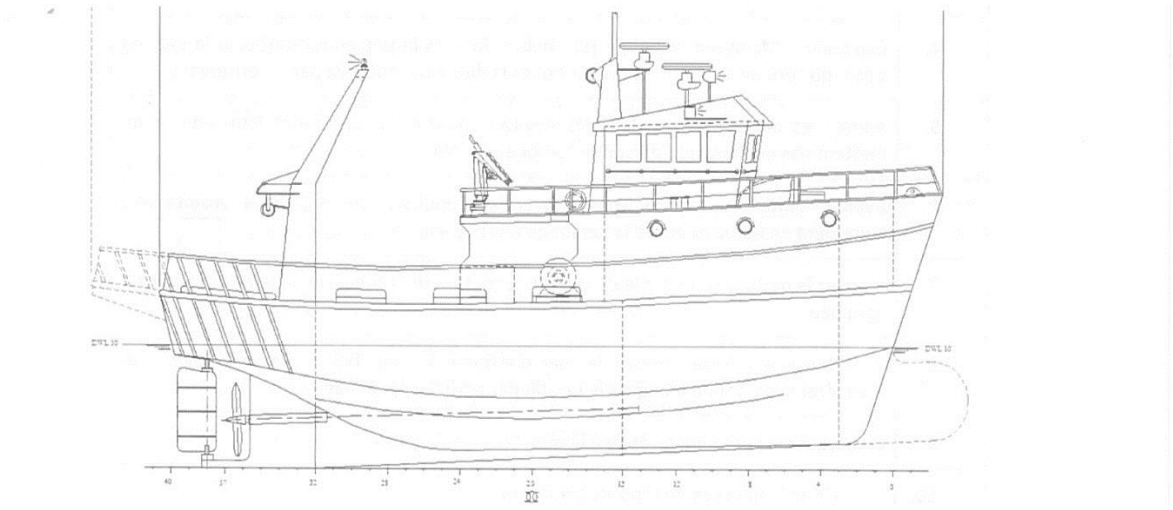
Vessel Emergency Equipment

Indicate the location of the emergency equipment on the vessel

1. Life raft
2. Hydrostatic release
3. Immersion suit
4. Life jackets
5. Radio beacon
6. Flares
7. Emergency shutdown
8. Buoy with rope
9. Buoy with light
10. First aid kit
11. Fire extinguishers
12. Ladder and means of recovering a person overboard
13. _____
14. _____



Muster List

General Emergency Information

a) Emergency drills must be carried out according to the on-board rules
b) At the sound of the general alarm, all personnel must go to their assigned muster station with their life jacket
c) All emergency signals must be transmitted by means of the ship's whistle
d) The staff must begin their position's emergency duties until they are relieved
e) The person in charge of the muster station must count the staff and inform the master
f) Each individual is assigned one or more duties according to their skills and the situation
g) The vessel shall only be abandoned upon the verbal command of the master, or if they are unable to perform their duties, their chief mate.
h) During each drill, the life raft, EPIRB, and emergency equipment must be checked

Warning Signals

General alarm …….7 short and one long whistle blasts

Abandoning ship ……6 brief whistle blasts

The Vessel's Muster Station

_____

Functions:

Fire	
Master	• Lead the emergency operation via the chief mate • Send radio communications • Efficiently navigate the ship
Chief Mate	• Lead the fire-fighting team. • Prepare the fire-fighting equipment • Start the fixed fire extinguishing system
Mechanic	• Prepare the fire pump • Close the ventilation hatches • Close the fuel valves • Carry out the cooling
Fisher's Helper	• Bring a fire extinguisher • Fight the fire
Fisher's Helper	• Help as instructed

Emergency	
Master	• Lead the emergency operation via the chief mate • Send radio communications • Efficiently navigate the ship
Chief Mate	• Lead the emergency team as the situation requires • Analyze the seriousness of the emergency • Find the source of the emergency • Quickly establish an action plan and inform the master
Mechanic	• Prepare the pumps • Assist the chief mate as the situation requires
Fisher's Helper	• Prepare the life raft
Fisher's Helper	• Help as instructed

Abandoning Ship	
Master	• Lead the emergency operation via the chief mate • Send radio communications • Efficiently navigate the ship • Clearly order the ship to be abandoned • Bring the flares
Chief Mate	• Make sure that everyone has their life jacket and/or immersion suit • Bring the EPIRB • Secure the life raft to the vessel • Release the life raft
Mechanic	• Detach the life raft • Put the life raft in the water • Inflate the life raft
Fisher's Helper	• Bring the first aid kit and survival equipment • Put the life raft in the water
Fisher's Helper	• Help as instructed

Emergency Drill

Date:	Time:
Participant:	
Drill type:	
Drill description:	
Observations:	

Perform Effective Drills

1. **To obtain the desired results following the drill**

   The crew must have already read the procedures concerning the drill that will be performed.

2. **Know the duties you wish to communicate**

   Each crew member will read the muster list so that they understand it in its entirety.

3. **Have confidence that drills will improve the crew's safety**

   Discuss various situations that may or may have happened with the crew. Then, encourage your crew to truly believe in these drills.

4. **Follow-up on the drill and perform an equipment check**

   Document the drill and each equipment check

5. **Discuss the drill with your crew members**

   On the drill follow-up sheet, please note the crew members' observations and make any necessary improvements.

6. **Be a good example and listen to your crew**

   Explain, perform the drills, educate and correct. Listen to each comment. Congratulate your crew and try to use a positive approach with them. This will help you improve your emergency response skills.

COMITÉ PERMANENT
sur la sécurité des bateaux de pêche du Québec

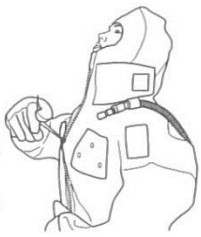
Immersion Suit

DONNING INSTRUCTIONS
COMMENT ENFILER LA COMBINAISON

1
Don the suit as you would a pair of coveralls.
Enfilez la combinaison comme vous le feriez pour tout genre de combinaison.

2
Secure ankle straps. Pull hood over head.
Attachez les courroies de cheville. Ramenez le capuchon sur la tête.

3
Hood on, tip head back. Pull up zipper by toggle.
Le capuchon en place, penchez la tête vers l'arrière. Remontez la fermeture à glissière en tirant sur le cabillot.



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

MISE EN GARDE
En raison de la flottabilité de la combinaison, il peut y avoir un risque de se retrouver pris au piège dans un compartiment immergé.

4 JUMP INSTRUCTION
INSTRUCTION DE SAUT

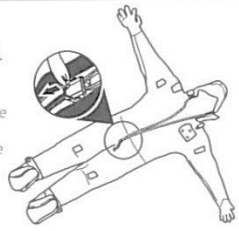
Hold nose; hold arm against body with the other arm.
Pincez le nez; gardez le bras près du corps en serrant avec l'autre bras.

5 OPERATION
FONCTIONNEMENT

Inflate head support by depressing inflation tube cap and blowing into the mouthpiece.
Gonflez l'appui-tête en pressant sur le capuchon du tube de gonflage et en soufflant dans l'embout.

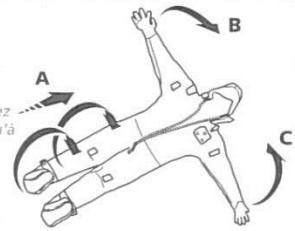
FOLDING INSTRUCTIONS
INSTRUCTIONS DE PLIAGE

1
Lay the suit out flat. Unzip front zipper.
Déposez la combinaison sur une surface plate. Baissez la fermeture à glissière avant.

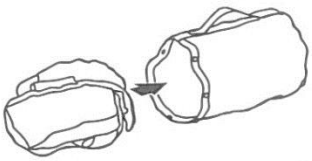


2
A
Roll feet upwards towards the waist.
À partir des pieds, remontez les jambes en roulant jusqu'à la taille.

B & C
Fold arms across the front and roll the whole suit up.
Croisez les manches sur la poitrine et roulez toute la combinaison.



3
Insert rolled suit into bag. Take care to prevent tight bends or folds in the open zipper.
Insérez la combinaison roulée dans la sac. Évitez de faire des plis trop serrés de la fermeture à glissière ouverte.



CAUTION
Suit may not fit some individuals near high or low end of size range. Try on suit wearing garments you typically wear on the vessel.

MISE EN GARDE
Il se peut que la combinaison d'immersion ne convienne pas à certaines personnes dont la taille n'est pas tout à fait dans la gamme des tailles offerte. Il est recommandé d'essayer la combinaison avec les vêtements que vous portez habituellement à bord du bateau.

Rigid Life Raft

1.1.1 LAUNCHING: IN THE WATER BOARDING

WARNING!

Do not launch the liferaft from the vessel with persons on board as serious injuries on impact may occur.

DO NOT CUT THE PAINTER LINE!

OVATEK 4

- Free the raft from the yellow web tiedown strap by pulling the stainless steel wire attached to the snap shackle on top of the hydrostatic release.
- Slightly lift the raft from its cradle.
- Throw the raft overboard while making sure that ballast pockets are free from obstacles.
- Be sure no one is in the way of the liferaft when launching it.

OVATEK 7

Free the raft from the yellow web tiedown strap by pulling the stainless steel wire attached to the snap shackle on top of the hydrostatic release.
If necessary orientate the raft on its craddle and push it overboard.
Be sure no one is in the way of the liferaft when launching it.

1.1.2 LAUNCHING: BOARDING ON VESSEL'S DECK.

- Wait until everybody is on board.
- CUT THE PAINTER LINE! A buoyant knife is placed inside the raft near the front hatch.
- When the water reaches the raft, release the tiedown strap by pulling on the stainless steel wire located in the raft at the rear vent.

Rigid Life Raft

1.2 BOARDING.

1.2.1 BOARDING ON VESSEL'S DECK. (FIG. 1)

Open stern hatch by pulling handle on the hatch. The hatch will open outward and downward. To board, pull down the ladder fixed to the hatch. Enter the liferaft head first. The first person to board should sit at the bow. Each additional person should sit alternating side to side.

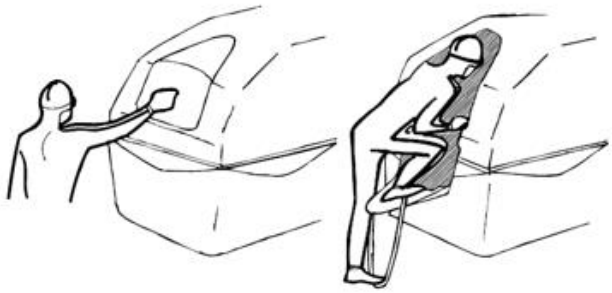


Fig. 1: Opening the hatch and boarding on the vessel's deck

After the liferaft is launched and still tied to the vessel, the crew should regroup around it and hold on the lifeline to help maintain stability for the first person to board. Open stern hatch by pulling the handle. The hatch will open outward and downward. To board, pull down the ladder and climb in head first by grabbing the interior grab strap. Each additional person should sit alternating side to side.

1.2.2 BOARDING IN THE WATER. (FIG. 2)

After the liferaft is launched and still tied to the vessel, the crew should regroup around it and hold on the lifeline to help maintain stability for the first person to board. Open stern hatch by pulling the handle. The hatch will open outward and downward. To board, pull down the ladder and climb in head first by grabbing the interior grab strap. Each additional person should sit alternating side to side.

COMITÉ PERMANENT
sur la sécurité des bateaux
de pêche du Québec

Inflatable Life Raft

If you have an inflatable life raft, be sure it is installed properly.

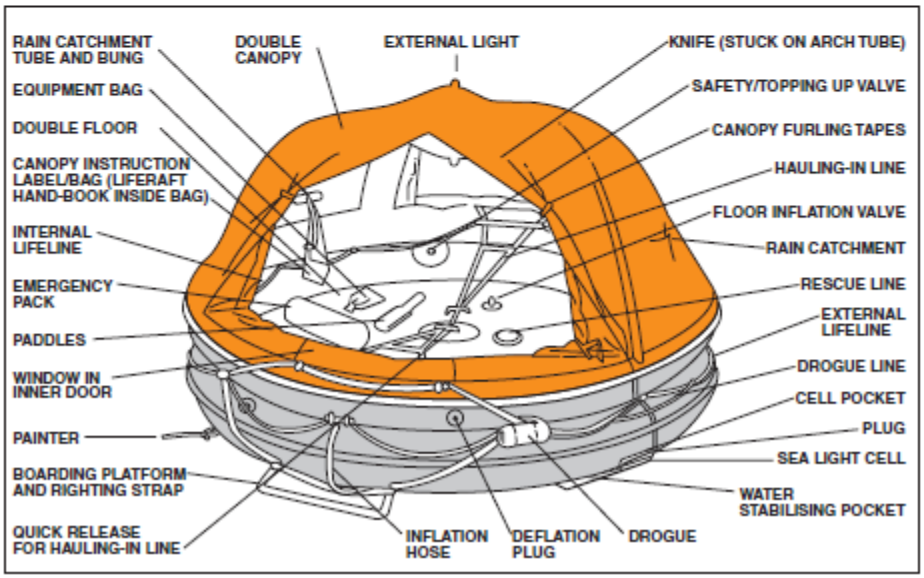
1) Install the raft where it can be easily launched, but where it will float clear if the ship sinks before launching.

2) Do not install the raft vertically. The gas cylinder inside will fall to the bottom and chafe the fabric. Install it in a cradle or shaped bed, secured with a senhouse slip and weak link or a hydrostatic release.

3) The painter must be secured to a strong point on the vessel.

4) The raft should not be exposed to paint, exhaust smoke, sparks, heavy seas or spray.

5) Have the liferaft inspected and repacked and the hydrostatic release tested according to the recommendations and requirements of the manufacturer.



Inflatable Life Raft

Make sure that everyone on board knows how to launch the raft properly.

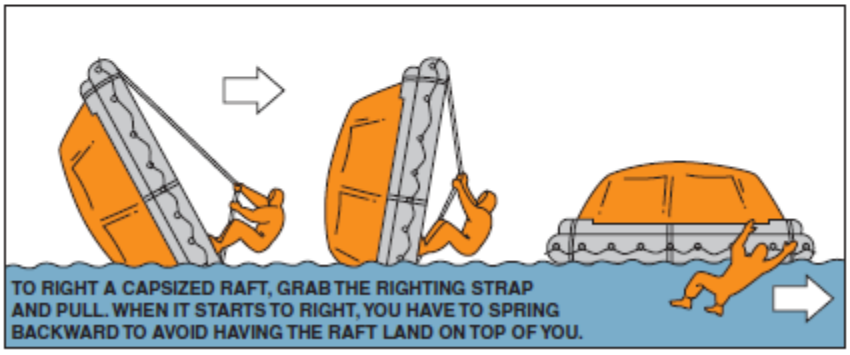
1) Check to ensure that the launching area is clear of people and obstructions.

2) Two people should grasp the container at the ends, and toss it over the lee side of the vessel.

3) After launching, pull the painter until it is fully withdrawn and the raft inflates.

4) If the raft over inflates, you will hear the sound of air escaping.

5) If the raft inflates upside down, it must be made upright before boarding.



Hydrostatic Release

GB H20 MOUNTING INSTRUCTION

HAMMAR®

H20 MOUNTING INSTRUCTION

The Hammar H20 hydrostatic release unit is designed for liferafts from 6 up to 150 persons. The Hammar H20 release unit consists of a double looped white rope sling, a release mechanism and a Red Weak Link™ (breaking strength 2,2 ± 0,4 kN). For smaller liferafts (from 4 persons and outside SOLAS regulation) we recommend Hammar H20 Small Rafts model with a special weak link, identified by the green lower thimble (breaking strength 1,2 ± 0,4 kN). For liferafts smaller than 4 persons, please contact the liferaft manufacturer.

The white strong rope of Hammar H20 is secured to the deck or liferaft cradle and attached to the liferaft lashing with a manual release hook. If the ship sinks, the water pressure will, within 4 metres, activate the sharp knife which cuts the white strong rope and the liferaft will float free. As the ship sinks, the liferaft painter line will be stretched and the liferaft starts to inflate. The Red Weak Link™ breaks and survivors can board the floating liferaft. The Hammar H20 needs no annual service, maintenance or spare parts, but **MUST BE REPLACED AFTER 2 YEARS FROM MONTH OF INSTALLATION ONBOARD.**

INSTRUCTIONS FOR MARKING

Markings must be done solely by a manufacturer of liferafts or an authorised liferaft service station. The expiry date is 2 years from month of installation onboard. The release unit is labelled with a marking for year and month. Use a knife and carefully scratch away the appropriate square for month and year of expiry two years ahead. A hydrostatic release unit, which is not properly marked with its date of expiry, is not approved. Each Hammar H20 release unit has its own individual serial number.

INSTALLATION

Check the unit for proper marking of expiry date 2 years from month of installation onboard. PLEASE NOTE THAT THE UNIT HAS TO BE CORRECTLY MARKED TO BE APPROVED BY THE MARINE AUTHORITIES.

1. Attach the Hammar H20 with a shackle to a strong point on the deck or on the cradle.
2. Attach the liferaft lashing with a manual release hook to the upper yellow thimble and firmly secure the liferaft.
3. Fit a shackle to the Red Weak Link™ connector and connect the painter line to the shackle.

The Hammar H20 is now correctly installed and will be in service for two years.

MANUAL RELEASE

In order to launch the liferaft manually, release the sliphook and throw the liferaft overboard. The liferaft is now attached to the vessel by the painter line via the Red Weak Link™ connector. Pull the painter line and inflate the liferaft so the survivors can board.

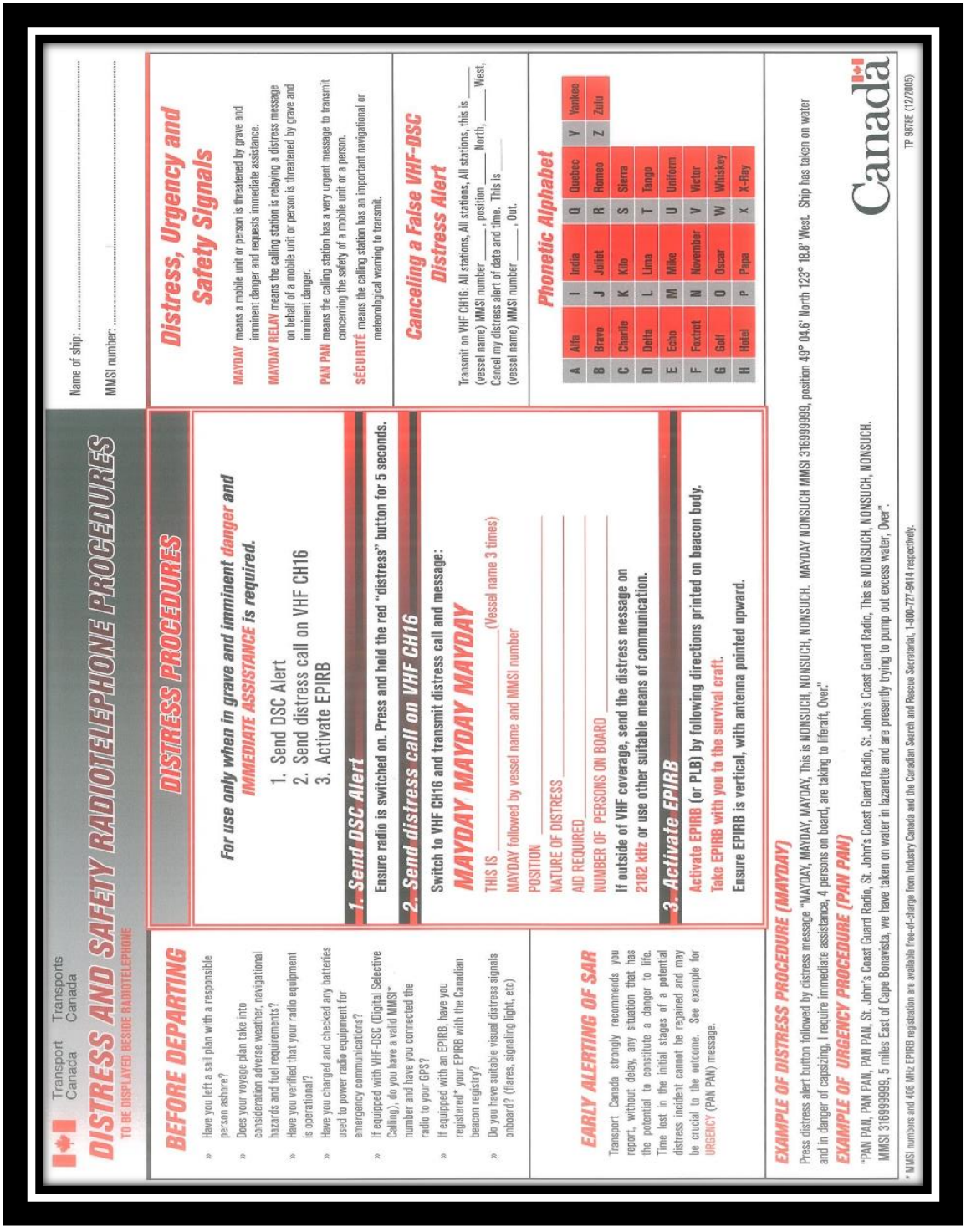
"Easy release" – Manual release hook

In order to launch the liferaft manually, release the manual release hook and throw the liferaft overboard. The liferaft is now attached to the vessel by the painter line via the Red Weak Link™ connector. Pull the painter line and inflate the liferaft so the survivors can board.

APPROVALS

The Hammar H20 hydrostatic release units are approved all over the world, fulfil the requirements of the SOLAS 74 Convention, IMO Res. MSC 97(73)8.1/8.6 (2000 HSC Code), IMO Res. MSC. 48(66), IMO Res. MSC.81(70), IMO MSC/Circ.811, approved to EU Directive 96/98 EC on Marine Equipment and has a Nato stock number. Release depth 1,5 – 4,0 metres according to IMO/SOLAS regulations. The required certificates can be downloaded from our website: www.cmhammar.com

Distress Call



Transport Canada / Transports Canada

DISTRESS AND SAFETY RADIOTELEPHONE PROCEDURES

TO BE DISPLAYED BESIDE RADIOTELEPHONE

Name of ship: .....

MMSI number: .....

BEFORE DEPARTING

- Have you left a sail plan with a responsible person ashore?
- Does your voyage plan take into consideration adverse weather, navigational hazards and fuel requirements?
- Have you verified that your radio equipment is operational?
- Have you charged and checked any batteries used to power radio equipment for emergency communications?
- If equipped with VHF-DSC (Digital Selective Calling), do you have a valid MMSI* number and have you connected the radio to your GPS?
- If equipped with an EPIRB, have you registered* your EPIRB with the Canadian beacon registry*?
- Do you have suitable visual distress signals onboard? (flares, signaling light, etc)

EARLY ALERTING OF SAR

Transport Canada strongly recommends you report, without delay, any situation that has the potential to constitute a danger to life. Time lost in the initial stages of a potential distress incident cannot be regained and may be crucial to the outcome. See example for URGENCY (PAN PAN) message.

DISTRESS PROCEDURES

For use only when in grave and imminent danger and IMMEDIATE ASSISTANCE is required.

1. Send DSC Alert
2. Send distress call on VHF CH16
3. Activate EPIRB

1. Send DSC Alert

Ensure radio is switched on. Press and hold the red "distress" button for 5 seconds.

2. Send distress call on VHF CH16

Switch to VHF CH16 and transmit distress call and message:

MAYDAY MAYDAY MAYDAY

THIS IS _____(Vessel name 3 times)

MAYDAY followed by vessel name and MMSI number

POSITION _____

NATURE OF DISTRESS _____

AID REQUIRED _____

NUMBER OF PERSONS ON BOARD _____

If outside of VHF coverage, send the distress message on 2182 kHz or use other suitable means of communication.

3. Activate EPIRB

Activate EPIRB (or PLB) by following directions printed on beacon body.

Take EPIRB with you to the survival craft.

Ensure EPIRB is vertical, with antenna pointed upward.

EXAMPLE OF DISTRESS PROCEDURE (MAYDAY)

Press distress alert button followed by distress message "MAYDAY, MAYDAY, MAYDAY, This is NONSUCH, NONSUCH, NONSUCH. MAYDAY NONSUCH MMSI 316999999, position 49° 04.6' North 123° 18.8' West. Ship has taken on water and in danger of capsizing, I require immediate assistance, 4 persons on board, are taking to liferaft. Over."

EXAMPLE OF URGENCY PROCEDURE (PAN PAN)

"PAN PAN, PAN PAN, PAN PAN, St. John's Coast Guard Radio, St. John's Coast Guard Radio, This is NONSUCH, NONSUCH, NONSUCH. MMSI 316999999, 5 miles East of Cape Bonavista, we have taken on water in lazarette and are presently trying to pump out excess water, Over.".

* MMSI numbers and 406 MHz EPIRB registration are available free-of-charge from Industry Canada and the Canadian Search and Rescue Secretariat, 1-800-727-9414 respectively.

Distress, Urgency and Safety Signals

MAYDAY means a mobile unit or person is threatened by grave and imminent danger and requests immediate assistance.

MAYDAY RELAY means the calling station is relaying a distress message on behalf of a mobile unit or person is threatened by grave and imminent danger.

PAN PAN means the calling station has a very urgent message to transmit concerning the safety of a mobile unit or a person.

SÉCURITÉ means the calling station has an important navigational or meteorological warning to transmit.

Canceling a False VHF-DSC Distress Alert

Transmit on VHF CH16: All stations, All stations, All stations, this is _____ (vessel name) MMSI number _____, position _____ North, _____ West, Cancel my distress alert of date and time. This is _____ (vessel name) MMSI number _____, Out.

Phonetic Alphabet

A	Alfa	I	India	Q	Quebec	Y	Yankee
B	Bravo	J	Juliet	R	Romeo	Z	Zulu
C	Charlie	K	Kilo	S	Sierra		
D	Delta	L	Lima	T	Tango		
E	Echo	M	Mike	U	Uniform		
F	Foxtrot	N	November	V	Victor		
G	Golf	O	Oscar	W	Whiskey		
H	Hotel	P	Papa	X	X-Ray		

Canada

TP 9979E (12/2005)

COMITÉ PERMANENT
sur la sécurité des bateaux
de pêche du Québec

Icing

Recommendations concerning ice formation on fishing vessels

The ice accumulation caused by icing adversely affects the ship's seaworthiness and may compromise the safety of your crew for the following reasons :

1. It increases the ship's weight and draft; it reduces the freeboard and reserve buoyancy;
2. It rises the centre of gravity, which decreases the GM and therefore, the stability;
3. It changes the ship's trim;
4. If the ice is not uniformly distributed, it gives a constant list to the ship;

SAFETY MEASURES IN CASE OF ICE FORMATION

- All the means of combating ice formation must be ready for use.
- All emergency and life-saving appliances must be ready for use.
- Stop all the fishing operations.
- All gears and supplies should be firmly lashed as low as possible.
- Reduce speed and place the ship wind on the stern.
- Lower and fasten the boom.
- Securely close all openings.
- Keep all freeing ports operative in order to allow free drainage of the water from the deck.
- Ensure that each crew member working on the deck wears a safety line securely attached to the guardrail.
- Remove the ice covering large surfaces starting with the upper structures.
- Keep all lifeboats and life rafts, doors, antennas, navigation lights, stays and shrouds free of ice.
- Beware of ice accumulation in fish tubs.
- Radio communications with shore and other vessels must be maintained.

Advice

Take all possible measures to bring the vessel away from the dangerous area and navigate toward more sheltered waters. Ice formation will reduce when navigating wind on the stern. It is preferable, where practicable, to get back to a port.

COMITÉ PERMANENT
sur la sécurité des bateaux
de pêche du Québec

Distress Signals

Standard Marine Distress Signals

Search and Rescue/Canadian Coast Guard

Radio
Radiotelephone
Call: "Mayday!"
Give: name and position
Use: 156.8 MHz-Ch16
2182 kHz;
or use alarm signal.
VHF-DSC

406 MHz
Emergency position
indicating radiobeacon
EPIRB

Code Flags
N
over
C

Distress Cloth

Ball
over or
under
Square

Sound Signals
Continuous:
Foghorn, bell,
whistle.
1-minute intervals:
Gun or any
explosive

Flares
Type A:
Parachute
rocket

Type B:
Multi-star
rocket

Type C:
Hand-held

Type D:
Buoyant or
hand-held
orange smoke

Flashlight

Arm Signal
Do not use near
helicopter
(different meaning)

Flame on Vessel
as from burning tar,
oil in barrel, etc.

Dye Marker

COMITÉ PERMANENT
sur la sécurité des bateaux de pêche du Québec

Important Contact Information

- Environmental Emergencies
  1-866-283-2333

- Coast Guard Marine Radio Station
  VHF Channel 16 or Cell: *16

- Commission des normes, de l'équité, de la santé et de la sécurité au travail
  1-866-302-2778 (CSST)

- Transport Canada, Marine Safety and Security
  - Rimouski: 1-800-427-4417
  - Gaspé: 1-418-368-2444
  - Iles-de-la-Madeleine: 1-418-986-3785
  - Sept-Îles: 1-877-303-3435

- Transportation Safety Board
  1-800-387-3557

- Securitas TSB (Confidential Safety Report)
  1-800-567-6865

- Fisheries and Oceans Canada, Québec Region
  1-418-648-2239

- Bureau d'accréditation des pêcheurs et aides pêcheurs du Québec
  1-418-385-4000

- Canadian Council of Professional Fish Harvesters
  1-613-235-3474

Comité permanent sur la sécurité des bateaux de pêche du Québec

Training and Familiarization Register

Date	Crew member	Operational procedure	Emergency procedure	Familiarization

Emergency Drill Register

Drill performed	Date	Date	Date	Date	Date	Drill sheet
Abandoning ship						
Fire-fighting						
Person overboard						
Flooding						
Launching a life raft						
Putting on an immersion suit and life jacket						
Distress call						
Grounding						
Pollution						

Maintenance Schedule

Maintenance Schedule

Hull	
Regularly examine the methods for preventing water from entering the vessel to ensure their effectiveness • Check that the fastening devices – doors, hatches, portholes, etc. – close easily and completely. Check for warping and that the joints allow for a hermetic seal. Lubricate the mechanisms as needed. • Check that water cannot enter the vessel by spraying water directly onto the fastening devices.	Monthly At least annually
• Inspect and redo, as needed – the anti-fouling bottom paint/topside cleaning/waxing	End of season
• Inspect all through-hull fittings, their valves and accessories for leaks	Every week
• Check that these valves function properly	Week 1
• Check all above-deck watertight and through-deck fittings, including cleats, stanchion mounts, hatches, portholes, doors, antenna mounts and the hull to deck seal.	Week 2
• Check the cabin interior for water or stains which could indicate a leak or damaged material.	Week 3

Machinery	
• Change main engine and auxiliary generator oil and filter according to the manufacturer's recommended hours of operation or once a year, whichever comes first.	Enter the manufacturer's recommended interval, e.g., "Every 300 hours"
• Check fluid levels – lubricating oils, water, engine coolant	Every day
• Check engines for oil or fuel leaks.	
• Have gasoline engines tuned up annually and replace electrical parts such as spark plugs, as needed.	
• Regularly inspect and tighten all hoses and drive belts. Replace these parts when they become worn or cracked.	
• Inspect the starter and alternator.	
• Check that the high bilge water alarms and pumps turn on when activated.	Every week
• Taking care not to pollute, check that the bilge pumping system and bilge pumps remove water from the bilge.	
• Properly maintain the painted surfaces and apply a thin coat of oil every year to reduce corrosion.	
• Inspect and maintain the transmissions and outdrive units according to the manufacturer's recommendations.	Enter the manufacturer's recommended intervals
• Check the pressure of the outdrive units.	
• Check the transmission fluids and oil for water.	
• Replace the transmission fluids and oil.	Enter the manufacturer's recommended intervals and the next date due
• Grease the universal joints, gimbal bearing, propeller shafts and couplings.	
• Check and replace the watertight seals and the hydraulic seals on the stern tube, if needed.	
• Check and replace the sacrificial zinc anodes on the shafts, propellers, tabs and other underwater equipment and the engine-mounted zinc parts on the inside of the exhaust elbows or risers and on the end caps of heat exchangers to protect them against corrosion.	
• Clean and maintain the outdrive unit.	
• Check that the steering system has a full range of motion and that the mechanisms can move easily without being loose.	Annually or as recommended by the manufacturer
• Check the condition of the anchor and its rope, cable or chain.	At the beginning of the season

Electrical System	
• Check that all circuits are operating properly	
• Inspect all exposed wiring, fuse/circuit breaker panels and electrical equipment. The wire insulation must be intact, and the contacts must be clean and safe.	
• Replace defective parts.	
• Properly secure all loose wiring.	
• Inspect and test batteries. Batteries must be placed in the approved battery boxes or trays that are securely fastened.	
Security Systems	
• Inspect life jackets for deterioration.	At the beginning of the season
• Have the life raft serviced at a maintenance station accredited by the manufacturer.	As required by regulation – enter the date
• Check the expiration date for the hydrostatic release unit.	At the beginning of the season
• Check the contents of the first aid kit and refill it, if necessary.	Monthly
• Check the smoke and fire detectors (replace batteries as needed)	At the beginning of the season
• Have the fire extinguishers inspected by a technician.	At the recommended intervals – see the documentation and enter the next due date and interval
• Check the EPIRB battery.	At the beginning of the season

Other Systems	
• Regularly inspect and maintain the fuel tank, filter, fittings and hoses. Make sure that there is no rust, dust (suspended foam) or water in the tanks.	
• Drain and chlorinate the freshwater system.	
• Check the tightness of all the hoses and connections for the freshwater system. Repair or replace them as needed.	
• Clean and lubricate the mechanical components of all of the systems as needed for proper operation. These systems include the hydraulic trim systems, pneumatic circuits, anchoring system, bilge system and sanitation system.	
• Check the safety equipment: life jackets, flares, fire extinguishers, life rafts, life buoys, bilge pump, oars, anchors, navigation lights, etc.	
• Check the radio equipment, antennas, batteries and backup systems.	
• Inspect and clean the covers and upholstery.	
• Replace any obsolete or damaged equipment.	

Emergency Equipment Maintenance

Description	Model	Issued	Validity	Date of verification
Life raft			1 year	
Hydrostatic life raft release			2 years	
Hydrostatic beacon release			2 years	
EPIRB battery			5 years	
Immersion or thermal suit			1 year	
Immersion suit light			4 years	
Flares			4 years	
Flare guns			4 years	
Buoy with light			4 years	
Buoy with rope			N/A	
Battery flashlight			1 year	
Fire extinguisher			1 year	
Fixed fire extinguishing system			1 year	
Fire hose			N/A	

Maintenance of Various Equipment

Equipment	Maintenance type/changed part	Completed by	Date

COMITÉ PERMANENT
sur la sécurité des bateaux de pêche du Québec

Main Engine Maintenance

Maintenance/changed part	Number of hours	Completed by	Date

Auxiliary Maintenance

Maintenance/changed part	Number of hours	Completed by	Date