

# ACEBOATER.COM

## Course Manual

To obtain your Pleasure Craft  
Operator Card



Canada  
Canada

Accredited by Transport Canada



## Who needs the card?

Since September 2009, the *Competency of Operators of Pleasure Craft Regulations* requires operators of motorized pleasure craft to have their proof of competency on board at all times.

This regulation applies, regardless of age, boat length or engine power, and whether powered by gas or electricity. The Pleasure Craft Operator Card is valid for life.



This easy to read and complete course manual not only allows you to successfully pass your exam, but also gives you all the knowledge which will allow you to navigate with confidence.

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This boating safety course manual has been **approved by Transport Canada** strictly on the basis that it meets the minimum requirements of basic boating safety knowledge set out in Transport Canada’s Boating Safety Course and Test Syllabus. (TP 14932 E)

## Most common causes of on-water incidents or fatalities

According to the Lifesaving Society, drowning is the third leading cause of unintentional death for Canadians under the age of 60. Most drowning related deaths can be prevented by taking certain precautionary steps during watersports activities. First and foremost, boaters should always wear their PFD when boating. In 2000, about one-third of all water-related deaths occurred while boating. **Eighty-five per cent of the boating deaths in 2000 (and closer to 90 per cent over the past 10 years) had one thing in common — the victim was not wearing a personal flotation device (PFD) or lifejackets**, although it is a well known fact that most fatal accidents are caused by capsizing, collision or falling overboard.

As well, drinking alcohol on board a pleasure craft is much more dangerous than most people realize. Fatigue, sun, wind and the rocking movement of the boat may all dull your senses. **Alcohol intensifies this effect, and impairs your reaction time, your judgement and thus, your ability to drive your boat. Fatigue can also cause other problems; such as becoming less alert as well as experiencing tunnel vision, thus diminishing your ability to be aware of your surroundings.**

Finally, you should adopt a safe boating attitude at all times; such as keeping a close watch before executing a manoeuvre, driving at a safe speed, being constantly alert to changing weather patterns and using the proper navigation lights from sunset to sunrise.

A boating safety course will help you acquire the necessary knowledge about safe boating techniques in order to keep you and others safe on the water. Learning and becoming more aware of your responsibilities will make for a safer boating environment for all. We hope that this will encourage you to adopt a safe boating attitude and make the boating experience more enjoyable for everyone.



## Boating Terminology

**Bow:** the forward part of a pleasure craft.

**Stern:** the back end of a pleasure craft.

**Starboard:** the right side of a pleasure craft when looking forward. Centuries ago, ships were always moored on the left side; the helm was on the right side and would have hindered mooring.

**Port:** the left side of a pleasure craft looking forward.

**Draft:** the depth of water required for a vessel to float freely. It is, therefore, necessary that the water be deeper than the draft so that the vessel can freely float. Otherwise it may run aground.

**Waterline:** the line marked on the hull of the vessel that separates the submerged part of the vessel from the part above the water level. The waterline must never be submerged. If it is submerged, the vessel has exceeded its maximum load capacity. Furthermore, if this line is lower on one side, it means that the load is unevenly distributed within vessel. These two situations are a danger to the safety of the passengers as well as to the stability of the pleasure craft.

**Hull:** the main body of a vessel, from the deck down. It does not include rigging, superstructure, machinery, or equipment.

**Wake:** the column of water around and behind a moving boat, which is set into motion by it advancing through the water.

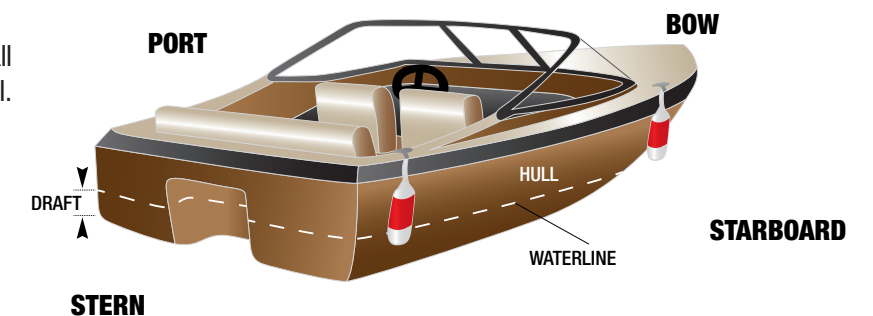
**PFD:** (Personal Flotation Device) is a personal buoyancy aid designed to provide an individual with more floatability while in the water.

**Operate:** control the speed and direction of a pleasure craft.

**Freeboard:** the distance from the waterline to the upper deck level, measured at the lowest point of sheer, where water can enter the boat or vessel.

**Stand-on vessel:** a vessel which has right-of-way while meeting, crossing the path of, or overtaking another vessel, shall maintain her course and speed.

**Give-way vessel:** a vessel that shall keep out of the way of another vessel.





## Boating Terminology (continuation)

**Lifejacket:** comes only in red, orange and yellow making you much more visible while in the water. It has more floatability than the PFD, with the extra advantage of turning you on your back, even while unconscious. Currently, there are three Canadian-approved types to choose from:



### STANDARD TYPE

Are approved for all vessels, except for vessels requiring the SOLAS lifejacket. **They will turn you on your back to keep your face out of the water, even if you are unconscious.** They are available in a keyhole model and come in two sizes: one for those weighing less than 40 kg (88 lbs), the other for those weighing more than 40 kg (88 lbs). The standard type lifejacket must be orange, yellow or red, a whistle must be attached to it and the lifejacket must be of an approved-type. However, compared to PFDs, they are bulky and not as comfortable.



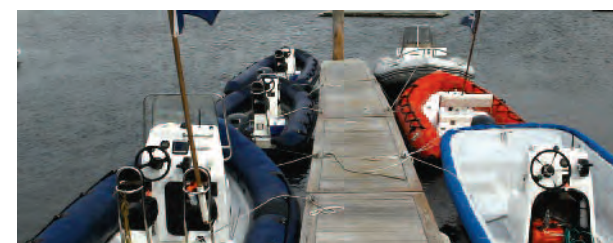
### FOR SMALL VESSEL

Are **approved for small vessels. They have less floatability than the standard type lifejackets.** They will turn you on your back to keep your face out of the water, even while unconscious, but may do so more slowly. They come in two models (keyhole and vest) and are available in three sizes, one for those weighing over 41 kg (90 lbs), another for those weighing between 18 kg (40 lbs) and 41 kg (90 lbs) and the third for people weighing less than 18 kg (40 lbs).

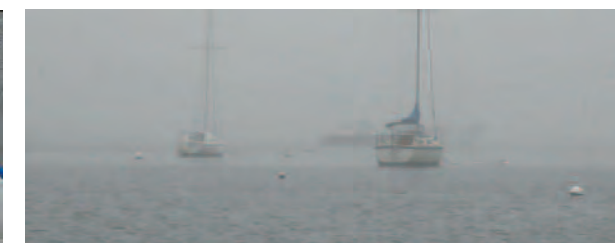


### SOLAS

Safety of Life at Sea (SOLAS) lifejackets meet very high performance standards and are approved for all vessels. The SOLAS **will turn you on your back in seconds to keep your face out of the water, while unconscious.** They come in two sizes: one for those weighing over 32 kg (70 lbs) and the second for those weighing less than 32 kg (70 lbs). They are available in comfortable and compact inflatable models and can be automatically, manually or orally inflated.



**A power driven vessel:** Means any vessel propelled by machinery.



**Restricted visibility:** Means any condition in which visibility is restricted by fog, mist, falling snow, heavy rainstorms, sandstorms or any other cause.



**Pleasure craft:** Means a boat, a ship, a vessel, or any other description of a water craft **that is used exclusively for pleasure**, and does not carry passengers or goods for hire, reward, remuneration or profit.



**Sailing vessel:** Means any vessel under sail, provided that propelling machinery, if fitted is not in use.

**Strong wind warning:** sustained wind speeds in the range of 20 to 33 knots inclusive, as defined by Meteorological Service of Canada.

# Laws and regulations that apply to pleasure craft

Many acts, regulations and a code govern the navigation of a pleasure craft. All pleasure craft operators must know and apply them. A pleasure craft operator who is in contravention of the following acts, regulations and code is subject to penalties or fines.

## They are as follows:

- Canada Shipping Act,
- Contraventions Act,
- Vessel Operation Restriction Regulations,
- Charts and Nautical Publications Regulations,
- Collision Regulations,
- Small Vessels Regulations,
- Criminal Code of Canada.

## Requirement to carry proof of competency

As of September 15, 2009, all operators of motorized pleasure craft must carry proof of competency on board at all times (does not apply to the Northwest Territories and Nunavut). Proof of competency is not required for a pleasure craft without a motor.



## Proof of competency can take one of three different forms:

- A Pleasure Craft Operator Card;
- Proof, such as a course certificate, stating that you have successfully completed a boating safety course in Canada before April 1, 1999; or
- A completed and signed rental boat safety checklist.

If you are a non-resident, visiting Canada by boat, you are not required to carry proof of competency on board as long as your boat is in Canada for less than 45 consecutive days.

If you must show proof of competency (because the above doesn't apply or you want to operate a boat which is licensed or registered in Canada), then you may either show an operator card or similar proof of competency issued by your home state or country. Otherwise, you must show or obtain a Canadian proof of competency. Either way, you must keep proof of residence on board with you at all times.

Certificates of competency, training certificates and equivalencies directly pertaining to the operation of a vessel are recognized as proof of competency when operating a boat fitted with a motor and used for recreational purposes. To obtain the list of equivalencies contact Transport Canada at 1-800-267-6687 or refer to their website at [www.tc.gc.ca/eng/marinesafety](http://www.tc.gc.ca/eng/marinesafety). If you hold any certificate on this list, you need only make sure that you carry your certificate on board. You may carry the original document(s) or a copy of the certificate.

As for the pleasure craft operator card, the operator must have at hand the original card, since a copy is not accepted.



# Laws and regulations that apply to pleasure craft (continuation)

## Restrictions that apply to pleasure craft

### Age/Horsepower restrictions

Youth under 16 years of age may not operate boats with motors over certain horsepower limits unless someone 16 years of age or older is in the boat and directly supervising them. Youth under 16 years of age may not operate a personal watercraft (PWC) under any circumstances.



- Under 12 years of age with no direct supervision, a person may operate a boat with up to 7.5 kW (10 hp);
- Ages 12 to under 16 with no direct supervision, a person may operate a boat with up to 30 kW (40 hp);
- Under 16 years of age, regardless of supervision, may not operate a PWC;
- 16 years of age or older: no horsepower restrictions.



### Vessel Operation Restrictions

Some provinces have adopted speed limits of 10 km/h within 30 m (98'5") of the shoreline on all waters within their boundaries. This speed limit applies in Ontario, Manitoba, Saskatchewan, Alberta and the inland waters of British Columbia and Nova Scotia. This limit is in effect whether it is posted or not. Exceptions include:

- recreational towing where the boat follows a path at a 90° angle to the shore in an area designated by buoys for recreational towing;
- rivers less than 100 m (328') wide, as well as canals and buoyed channels;
- waters where another speed limit is set in accordance to the regulations.



In certain areas, the boating restriction regulations can limit a pleasure craft's maximum horsepower. It is important to inquire about these restrictions. The operator must respect the horsepower limits, whether they are posted or not. To find out where restrictions apply, consult the Vessel Operation Restrictions.

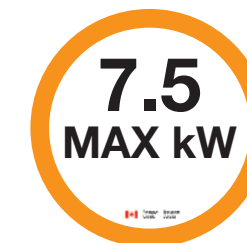
### Vessel Operation Restriction Regulations

Local restrictions have been placed on some Canadian waterways to promote public safety. Boaters are responsible for knowing and complying with these restrictions. Vessel operation restriction signs come in five shapes. The colour of the frame is international orange. When part of a sign has a green border, a special condition applies to the restriction. The symbol tells you the type of restriction that applies. If the sign is arrow-shaped, the restriction applies in the direction of the arrow. Know what these signs mean. To learn more, check out the Vessel Operation Restriction Regulation.

Here are some examples.



No internal combustion or steam engine is permitted



Power limit



Standardized speed limit



No skiing north of the sign

## Laws and regulations that apply to pleasure craft (continuation)

### Muffler Restriction

Every boat equipped with a motor other than a stock (unmodified) outboard engine must have a muffler and use it while operating within five nautical miles (9.26 km) of shore. It must be in good working condition and in operation at all times while the vessel is in use, to prevent excessive noise.

This regulation does not apply if your boat was built before January 1, 1960, or if you are participating in an official competition, formal training, or in final preparation of an official competition.

**A muffler is not required on boats equipped with outboard motors.**

### Licensing, Registration and Canadian Compliance Labeling Requirements

Pleasure craft powered, even temporarily, by an engine or engines of 7.5 kW (10 hp) or more, which are kept and operated mainly in Canada, must be licensed or registered, regardless of where they operate in Canada.



### What is the difference between a pleasure craft licence and registration?

#### Pleasure craft licence

The pleasure craft licensing system allows Search and Rescue personnel to access information 24 hours a day, seven days a week in the event of an emergency. You must display your pleasure craft licence number above the waterline on both sides of the bow, as far forward as practical, and where it is easy to see. The numbers must be in block letters, at least 7.5 cm (3") high, and must contrast with the colour of the background. **You do not need a pleasure craft licence if the boat is registered.**



Pleasure craft licences are free and valid for ten (10) years. You can obtain it by applying to the Pleasure Craft Licensing Centre. It can be transferred to successive owners of the pleasure craft. It must be kept on board at all times. However, **a pleasure craft licence does not prove ownership**. When entering another country, be sure to have proof of ownership for your boat along with its pleasure craft licence. Not having the proper documents on board can result in delays or trouble clearing customs, and even a fine. The information on the licence must be kept up to date. A pleasure craft may be operated without an accurate name or address on the licence until the day on which the owner of the pleasure craft receives an updated licence, up to a maximum of 90 days from the day of the change of name or address, if, in addition to the licence, documents are carried on board confirming the new name and/ or address and the date of the change.

To obtain a pleasure craft licence refer to the website of Transport Canada at [www.tc.gc.ca/eng/marinesafety](http://www.tc.gc.ca/eng/marinesafety)



## Laws and regulations that apply to pleasure craft (continuation)

### Registration

The **Canadian Register of Vessels** is the official register of all registered or listed vessels, vessels under construction and bare-boat charters. It contains information on each vessel, such as ownership and mortgage details, vessel characteristics, such as tonnage, construction material and type. Although there are costs involved, registration gives you some important benefits, which include a proof of ownership (legal title) for your boat, the right to fly the Canadian flag, a unique name, and official number for your boat, as well as the right to use your boat as security for a marine mortgage.

Registration is optional for all pleasure craft, regardless of tonnage and length, as per the *Canada Shipping Act, 2001*. Note that the registration requirements based on tonnage are no longer required.

There are costs associated with registering. However, the registration is good for as long as you own the vessel. You must carry registration documents on board the vessel at all times, together with any other ownership documents, to help avoid delays clearing U.S. or Canada customs, or in case of a fine. All required forms are available from any port of registry across Canada, or visit the Vessel Registration Office website.

This law does not apply if the boat is registered or licensed in accordance with the laws of another country and not principally maintained or operated in Canada, for a life raft or other survival craft that is part of the equipment of a ship, as well as for an amphibious vehicle for which a provincial automobile licence for highway travel is required.

### If I buy a used pleasure craft, how do I transfer the licence to my name?

To transfer a licence to your name, submit the following documents:

- a completed Form 84-0172E, Application for Pleasure Craft Licence;
- proof of ownership of the pleasure craft;
- a signed photocopy of a government issued ID.



If you do not have documents that prove you own the pleasure craft, you will be required to make a declaration under oath stating why you cannot produce the bill of sale or proof of ownership. You can use the sample declaration form provided on the website of Transport Canada.

When applying for a pleasure craft licence, include a signed photocopy of your personal identification document. We will return the photocopy to you when we send you your licence. Your application and supporting documents must be mailed-in for processing to the Pleasure Craft Licensing Centre.

# Laws and regulations that apply to pleasure craft (continuation)

## I am selling my pleasure craft. How do I transfer the licence?

When you sell your pleasure craft, keep a copy of your bill of sale in case someone later questions the ownership of the vessel. Provide the new owner with a signed bill of sale. The new owner will then have to transfer the pleasure craft licence by sending an application form and the necessary documents by mail to the Pleasure Craft Licensing Centre. A pleasure craft that is the subject of a transfer of ownership may be operated until the day on which the new owner of the pleasure craft receives a transferred licence, up to a maximum of 90 days from the day of the transfer of ownership, if documents are carried on board confirming the name and address of the new owner and the date of the transfer of ownership.

For more information, you can call Transport Canada at **1-800-267-6687** or refer to their website at [www.tc.gc.ca/eng/marinesafety](http://www.tc.gc.ca/eng/marinesafety)

## Hull Serial Number (HIN)

All pleasure craft made or imported into Canada must have a Hull Serial Number (HIN) affixed to it. No character of the HIN is to be less than 6 mm (¼") in height and width. The HIN helps to find lost or stolen boats and boats that are subject to a recall. **The HIN must be permanently affixed to the outside upper starboard (right side) corner of the transom (the boat's rear, flat end — above the waterline) or as close to that area as possible.** The HIN is 12 digits long, beginning with the Manufacturer's Identification Code (MIC). Example: ABC2AB41G203

**No person shall alter, deface or remove a hull serial number.** If a vessel is not marked with a hull serial number, the owner of the vessel must make a request for such a number to the builder, manufacturer, rebuilder or importer of the vessel. If, despite reasonable efforts that can be proved in writing, the owner of the vessel is unable to obtain a hull serial number from the builder, manufacturer, rebuilder or importer of the vessel, the vessel is not required to be marked with a hull serial number.



## The Compliance Notices

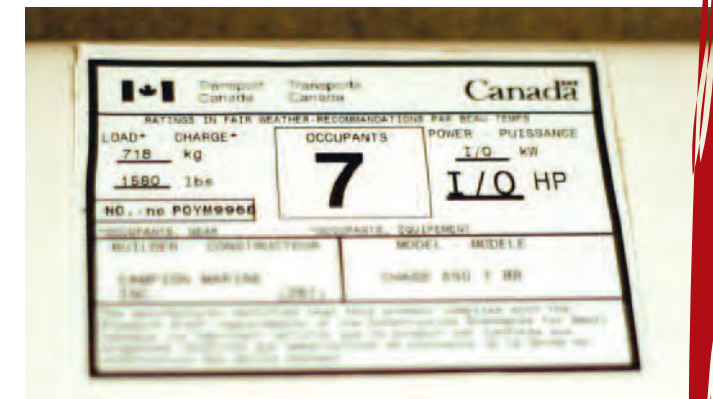
Compliance notices are the manufacturer's or importer's confirmation that the vessel is built in accordance with the construction requirements of the Small Vessel Regulations. Before attaching a compliance notice to a vessel, a manufacturer or importer must produce a Declaration of Conformity for the vessel.



The *Small Vessel Regulations* require, with a few exceptions, that all pleasure craft of less than 24 metres that are or can be fitted with a motor, have a compliance notice affixed to them in a location visible from the helm. Although it is not prohibited to have other types of compliance notices affixed to the vessel, this does not replace the requirement to have a Canadian Compliance Notice attached.

Compliance notices are issued by the manufacturer. There are three types of compliance notices:

- Compliance notice for a pleasure craft measuring up to 6 m long;
- Compliance notice for a pleasure craft measuring more than 6 m long
- Compliance notice for vessels other than pleasure craft measuring more than 6m long.



No one is allowed to remove or alter a compliance notice, or even affix a compliance notice that contains incorrect information about the vessel. The compliance notice specifies the maximum gross load capacity that the craft can hold in order to navigate safely.



# Laws and regulations that apply to pleasure craft (continuation)

## Compliance notice for a pleasure craft measuring up to 6 m long

Compliance notices for pleasure craft up to 6 m (19'8") also have information on recommended maximum safe limits. These recommended maximum safe limits will indicate:

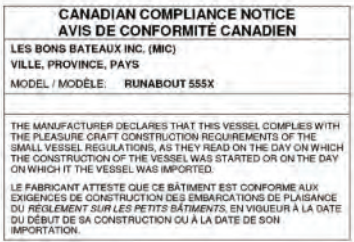
- what outboard motor sizes are safe;
- how many persons allowed on board;
- how much weight the boat can hold.

Remember that this information applies only in good weather. The number of people who can be carried safely depends on the type of boat, where people and equipment are carried, and weather and water conditions. Operators must know and respect their boat's limits.



## Compliance notice for a pleasure craft measuring more than 6 m long

The compliance notice must contain a statement of compliance indicating that the craft was built to the pleasure craft construction requirement of the Small Vessel Regulations.



## Inspection of pleasure craft

The Royal Canadian Mounted Police (RCMP), provincial and municipal police forces and other authorized local authorities enforce the laws that apply to boats. They may inspect your boat and monitor your boating activities to make sure that requirements are being met. This may include checking for safety equipment, your Pleasure Craft Operator Card and careless operation on the water.



## Prohibition of careless operation

No person shall operate a vessel in a careless manner, without due care and attention, or without reasonable consideration for other persons. Here are some examples of behaviors that could be considered careless:

- Operating a vessel at high engine speed in circular or criss-cross patterns for extended periods of time in the same area;
- Jumping waves or the wake of another vessel unreasonably close to that vessel, or so as to cause engine RPM to peak and make unusual or excessive noise;
- Weaving through congested traffic at more than slow speed;
- Swerving at the last possible moment to avoid collision (playing chicken);
- Operating a vessel at a speed higher than is necessary to maintain steerage way when near swimmers, or non-powered vessels.

# Laws and regulations that apply to pleasure craft (continuation)

## Requirements for due care and reasonable consideration for others

According to the Canada Shipping Act, each operator of a pleasure craft, in so far as he/she can do so without serious danger to his/her own craft and the persons on board, shall render assistance to every person who is found at sea and in danger of being lost.

The operator of a pleasure craft **has an obligation to stop and offer assistance when the operator is involved in an accident**. He/she should watch for signals that show distress and need of assistance.

## Rules for safe navigation

*Vessel Operation Restriction Regulations* do not specify any speed limits, because there are too many different factors that can bring a pleasure craft operator to modify his/her speed. Conditions of visibility, traffic density, wind, sea, and current conditions, and the proximity of navigational hazards are different circumstances that will incite a prudent pleasure craft operator to navigate at safe speeds. You must always operate your pleasure craft in such a way as to maintain control at all times. By keeping control of your pleasure craft you can avoid an accident; therefore, protecting the passengers from injury or death.



### A pleasure craft traveling at high speed requires increased stopping distance

This situation requires that the operator be more attentive because he/she has less time to react to changing conditions. In low visibility, such as fog or night navigation, the regulations require that the operator adopt a speed according to the conditions at hand. In the case of restricted visibility (fog, falling snow, heavy rain, etc.) the operator must use a sound signaling appliance in order to signal his/her presence.

A boating restriction regulation may be emitted locally for:

- prohibited vessel types,
- standardized speed limits, and
- maximum engine power limits.

The operator of a pleasure craft **shall at all times proceed with caution at a speed, such that “wake and wash” will not adversely affect:**

- other vessels, such as anchored vessels, grounded vessels, wrecks, dredge, tow;
- rowboats or canoes;
- passing by works such as shoreline, docks, floats, or wetlands;
- other waterways users such as swimmers;
- areas of bathing beaches, areas where divers are working, or areas of anchorage.

One must not forget that the operator of a pleasure craft not in sight of other vessels in or near an area of restricted visibility (fog, falling snow, heavy rain, etc) shall proceed at a safe speed adapted to the prevailing circumstances and conditions of restricted visibility.

**Every vessel shall at all times maintain a proper look-out by sight and hearing as well as by all available means which are appropriate to the prevailing circumstances and conditions, in order to make a full appraisal of the situation and of the risk of collision.**

If necessary, to attract the attention of another vessel, any vessel may make light or sound signals.



In or near an area of restricted visibility, whether by day or night, a power-driven vessel making way through the water shall sound at intervals of not more than 2 minutes one prolonged blast. A power-driven vessel underway but stopped and making no way through the water shall sound at intervals of not more than two minutes, two prolonged blasts in succession with an interval of about two seconds to make its position known to other boaters.



# Laws and regulations that apply to pleasure craft (continuation)

## Navigational requirements

To help make navigation safer, you must have onboard the following for each area you plan to boat in:

- the latest edition of the official produced chart available;
- the latest edition of related documents and publications, including Notices to Mariners, Sailing Directions, tide and current tables, and the List of Lights, Buoys and Fog Signals.



If you are operating a boat under 100 gross tons, you do not have to have these charts, documents and publications on board as long as you are knowledgeable of:

- the location and type of charted navigation routes;
- lights, buoys and marks;
- boating hazards;
- the area's usual boating conditions, such as tides, currents, ice and weather patterns.



Before heading out, you should make sure you know how to plot a course, how to determine your position and how to use a compass, along with nautical charts, electronic navigation equipment and references such as tide tables and Canada's buoyage system.



## Prohibition of dumping of pollutants

The *Regulations for the Prevention of Pollution from Ships and for Dangerous Chemicals* address major risks to the health of our waterways and shorelines such as sewage, garbage and hydrocarbons. Sewage contains, among other things, human or animal body waste, drainage and other waste from toilets.

**If something happens, you have the responsibility to clean up and report the incident.**



These regulations prohibit the use of freestanding portable toilets. However, a portable toilet which is secured to the vessel may be used for temporary storage of sewage. The regulations also require that boats fitted with toilets be equipped with either a holding tank or a marine sanitation device. If your boat was built before May 3, 2007, you must comply with these regulations by May 3, 2012. Boats built on or after May 3, 2007, must comply immediately.





# Laws and regulations that apply to pleasure craft (continuation)

## Criminal Offences

Certain behaviours constitute criminal offences that are punishable under the Criminal Code while operating a pleasure craft. They are:

- Operating a vessel in a dangerous manner;
- Consumption of alcohol/drugs while operating a vessel;
- Operating a vessel while impaired (alcohol/drugs);
- Towing water-skiers without a watch or after dark (one hour after sunset to sunrise);
- Failure to stop at the scene of an accident;
- Failure to comply with demand (demand to stop);
- Sending false distress signals;
- Operating an unseaworthy vessel;
- Tying up to a buoy;
- Operating a vessel while disqualified/prohibited.

In the event that a law enforcement officer asks to check the safety equipment on board, you must comply. You are obligated to comply with any demand or requirement from a law enforcement officer. The officer has the right to ask for proof of identity as well as for proof of competency when you are intercepted. He/she may ask any pertinent questions and it is the officer's right to board the vessel if deemed necessary.



# Planning and preparation for boating trips

The *Small Vessel Regulations* set out the **minimum safety equipment required on board a pleasure craft according to its type and length**. As the owner or operator of a vessel, it is your responsibility to ensure you are in compliance with safety regulations and that all required safety equipments are on board. Otherwise, fines may be imposed if the minimum safety equipment is not met. **As well, you must make sure your vessel's safety equipment is properly maintained and functioning properly**. Before leaving, it is important to notify all persons on board of where it is stored and to demonstrate how to use all the safety equipment, as well as to specify each person's role in case of an emergency. When you rent a pleasure craft, the responsibility for checking the safety equipment on board rests with the driver of the boat.

## The technique for putting on a PFD while in the water:

1. spread the device open with the inside facing up out of the water;
2. rotate the device so as to look at the neck opening;
3. extend both arms through arm openings;
4. lift arms over the head and position the device around the upper body;
6. fasten the device to fit snugly.



**It is very important to regularly check the Personal Floating Devices** in order to be aware of their characteristics and also to make sure that they will keep the persons afloat if needed. We recommend that you show them how to use this equipment in the case of an emergency.

**Always have a PFD or a lifejacket of approved type for each individual on the boat.** The PFD or the lifejacket must be of an appropriate size for each person. During a nautical trip, the PFD must be available at all times within the pleasure craft, for the operator as well as for each passenger. It also needs to be maintained as per manufacture's instructions to make sure that it will be in good working condition if needed in an emergency situation.

## To test the floatability of a PFD or a lifejacket, the following technique can be used:

1. put on the PFD or the lifejacket and fasten all straps;
2. go into the water to your chest;
3. bend your knees and let yourself float;
4. move as much as possible to evaluate the effectiveness of the device;
5. and make sure that the PFD or the lifejacket keeps your chin above water enabling you to breathe easily.



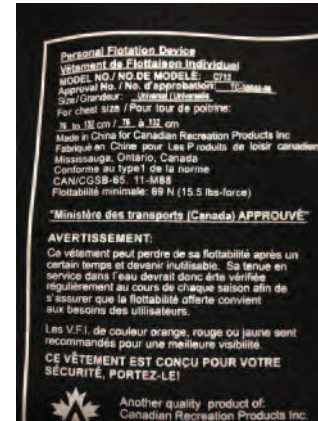


## Planning and preparation for boating trips (continuation)

For a lifejacket to be Canadian-approved, it must have a label affixed that states it has been approved by Transport Canada, the Canadian Coast Guard, Fisheries and Oceans Canada or any combination of the above. Lifejackets approved by the U.S. Coast Guard are not Canadian-approved. However, visitors to Canada may bring their own lifejacket to use on a pleasure craft as long as it fits and it conforms to the laws of their home country.

Currently, **all VHF marine radio operators must have a Restricted Operator Certificate (Maritime) — ROC(M)**. Industry Canada has delegated the ROC(M) to the Canadian Power & Sail Squadrons (CPS). The course teaches emergency radio procedures, and everyday operating techniques. You will learn all about the uses of marine radios, choice of frequencies, operation, phonetic alphabet, procedural words and phrases, as well as Digital Selective Calling and the Global Maritime Distress and Safety System, (DSC/GMDSS).

Transport Canada works with boating safety to offer free courtesy checks for pleasure craft. If you agree to have a check done, a trained boating safety volunteer will board your boat, while alongside a dock or at a boat ramp, to check out the safety equipment and other requirements, identify any problems and discuss general boating safety issues. The act of driving a boat that is known to be in no condition to sail is against the law. The boat, engine and all equipments must be on board at all times and in good working order.



## Minimum Safety Equipment

**Before heading out, it is essential to ensure that the boat is properly equipped and that the required safety equipment is easily accessible.**

Power-driven vessel up to 6 meters (19'8") must have this safety minimum equipment on board:

- PFDs (for everybody on board) ;
- a buoyant heaving line;
- a reboarding device;
- a bailer or a manual bilge pump;
- a manual propelling device or an anchor;
- a watertight flashlight or three (3) flares;
- a sound-signalling device or appliance;
- navigation lights;
- a 5BC fire extinguisher if equipped with an inboard engine.

The longer the boat, extra minimum safety equipment is required.

# Planning and preparation for boating trips (continuation)

## Best planning and preparation practices

Before leaving on a trip, make sure that the vessel is in good working condition, and serviced. Also make sure that you have the adequate oil and fuel supply for the planned voyage. **A handy tip for never running out of gas is: 1/3 for trip out, 1/3 for trip back, 1/3 in reserve.**

**The objective of the trip plan is to facilitate search and rescue in case of distress and/or of no return. A trip plan shall include the following information:**

- name and number of the pleasure craft;
- whether the pleasure craft is a sailing or a power driven craft;
- name, address, and telephone number of the owner;
- the number of persons on board;
- the size, type and colour of the pleasure craft;
- the type of engine;
- distinguishing features of the pleasure craft;
- type of radiotelephone, if any, and channel monitored;
- safety equipment carried including flares, lifejackets, and life rafts;
- description of the trip, time of departure, time of return, proposed route;
- instructions in case of emergency.

Before heading out, the operator of a pleasure craft should complete the plan with the necessary details in order to assist in initiating a call for search and rescue in the case of an emergency. **File the plan with a responsible person** who is familiar with what instructions to follow in case of an emergency. **As well, during the trip, update the plan in order to prevent unnecessary emergency operations.**

If you change your itinerary and decide to come back to port earlier than planned, inform the person who has your trip plan so that this person will not inadvertently start a search and rescue operation. It is, therefore, very important to close a trip plan when you are done.



**If you plan on leaving Canada to enter U.S. waters, you are strongly advised to check the requirements of U.S. Homeland Security.** Rules and regulations can change on short notice for pleasure craft, and it is advisable to gather all the necessary information before leaving Canada.

It is also important to check the nautical charts of the boating area if they exist. They allow you to know where overhead obstacles, bridges and underwater cables in the boating area are located. Looking at tide

tables and current atlases will also help you know about water levels, times of low, slack and high tides, and the direction of water flow. **The latest charts and tide tables published by the Canadian Hydrographic Service (CHS) should be used in order to obtain the most accurate information.** If the area is not covered by nautical charts, talk to local residents who know the waters. They may be able to point out low-head dams, rapids and white water, and describe local wind conditions, currents and areas of rapid highwave buildup.

Weather and water conditions play a big role in your safety on the water. Before heading out, make sure you get the latest forecast for your

area and that you understand what it means. Environment Canada provides marine forecasts in many ways. If you have a marine radio, you can get weather updates while you're on the water. These forecasts provide information on wind speed and direction, weather, visibility and freezing spray (if applicable). Forecasts are issued several times a day. Some forecasts discuss current conditions while others discuss the conditions to expect over several days.

Finally, it is important to determine the acceptable load depending on the boat's maximum load capacity, shown on the capacity plate/label. **Always ensure that the waterline of the boat, which represents the maximum load capacity that can be put in the boat, stays above the water.**





# Mandatory Safety Equipment

## Personal Protection Equipment

### Personal Flotation Devices (PFDs)



PFD means Personal Flotation Device. Personal flotation devices (PFDs) are available in a wide range of approved types, sizes and colours. **While PFDs are more comfortable than lifejackets because they are designed for constant wear, they do not generally offer the same level of protection as lifejackets** for staying afloat, and turning you on your back to keep your face out of the water so you can breathe properly.

When buying a PFD, look for a Transport Canada approval stamp or label. **You must have a PFD that fits each person on your boat. The PFD must be of an appropriate size for each individual. During a nautical excursion it must be available at all times within the pleasure craft.** It is important that an infant

wear a PFD that corresponds to his/her size and weight. An infant can easily lose a PFD that is too big. On the other hand, a PFD that is too small will not ensure proper floatation, and in both cases, the infant is at risk and may drown. Specific PFDs exist for many different sports such as kayaking, canoeing, fishing, sailing, etc. When you buy a PFD, choose the model that is the most appropriate for the activity to be practiced.

The personal flotation devices should be snug fitting, yet allow freedom of movement of arms and legs. If you can't make your life jacket fit snugly, then it's too big. If you can't comfortably put it on and fasten it, it's too small. To assure a snug fit, have someone pull up on the shoulders of your lifejacket while wearing it; your chin, head and neck should not slip through. As for the lifejacket, it must be worn loose to allow the water to flow under the device in order to turn you face up. The lifejacket must offer a sufficient degree of floatability in order to turn an unconscious person face-up in the water and maintain this position until the person is rescued.

Many pleasure craft operators neglect their PFDs. Some people use their PFDs as a cushion in their pleasure crafts. Others use them as fenders to protect the hull while the craft is docking. The material inside the PFD that ensures the floatability may break-up and the external shell may be torn. Some people will expose

their PFDs directly to the sunlight. The ultraviolet rays can damage the fabrics of the PFD. All of these practices are discouraged.

The maintenance of a PFD is simple. The operator of a pleasure craft should clean personal floatation devices and lifejackets with a mild soap or running water, and avoid dry cleaning them or using strong detergents or gasoline to clean them. One must let the PFD dry in the open air, never put them in the dryer, or in constant exposure to sunlight, or close to a direct heat source. On board a pleasure craft, the operator must place the personal floatation devices (PFDs) and the lifejackets that are not being used, in a dry, well ventilated and accessible area.

All of the care that you give to your PFD will prolong its use. **A personal floatation device and/or lifejacket become void if it has been repaired or altered;** therefore, it is no longer usable and must be replaced and thrown away to recycling. This measure may seem somewhat extreme, but one must be made aware that no control method exists to verify the quality of the repair or of the alteration. A repair or an alteration may compromise the floatability of the PFD and consequently, approval by Transport Canada is no longer valid.

Make it a habit to periodically check the floatability of your PFD. It must keep the person face-up in the water. Conventional lifejackets and personal floatation devices both have the same use. Each one has certain advantages and disadvantages.

The PFD is comfortable. It is available in a wide variety of colours and styles with models that are designed for specific nautical sports. The main inconvenience of the PFD is that it offers a lesser degree of floatability. **The standard lifejacket offers a much greater degree of floatability than a PFD.** By its construction, the conventional lifejacket can turn an unconscious person face-up in the water and maintain this position until the person is rescued. However, it has the inconvenience of being larger and less comfortable than a PFD. It is for this reason that the lifejacket is used much less than the PFD.

During any nautical activity, in the case of an emergency, a lifejacket or a PFD placed under the seat in a pleasure craft cannot be of any great use. **Wear it!**

# Mandatory Safety Equipment (continuation)

## Inflatable PFDs



You can also buy inflatable PFDs, but you must understand how to use and care for them if they are to work properly. You must also understand which activities and conditions they are approved for. **Above all, remember that you have to be wearing an inflatable PFD for it to be approved on an open boat. If the boat is not open then you only need to wear it while you're on deck or in the cockpit.**

Inflatable PFDs are not made to be worn:

- by anyone under 16 years old;
- by anyone who weighs less than 36.3 kg (80 lbs);
- on a personal watercraft; or
- for white-water paddling activities.

Inflatable PFDs come in the following two styles:

- vest types that can be inflated orally, manually (with a CO2 system) or automatically; and
- pouch types that can be orally inflated or manually inflated by pulling a toggle to activate a CO2 inflation system.

Although these PFDs inflate quickly, for weak swimmers it can seem like it takes forever. All Canadian-approved inflatable PFDs have an oral inflation tube in case the CO2 inflation system fails. This tube could be hard to use when you are trying to keep your head above water.

An emergency is no time to try out a new device. Inflatable PFDs should come with an owner's manual. Look for it and read it carefully. Try the PFD on under supervision and before heading out to make sure you know how to use it.

## Buoyant heaving lines

A buoyant heaving line is approved for use as long as it:

- floats;
- is in good condition;
- **is made of one full length of rope, not many shorter ropes tied together (at least 15m (49'3") long for boats up to 24m);**
- is long enough for the boat you will be using; and
- is used only as safety equipment so that it is easy to find and use in an emergency.

To improve the accuracy of the throw overboard to a person overboard, a balloon or other floating object should be fixed to the buoyant heaving line. In addition, boaters should practice throwing the buoyant heaving line in order to develop their ability to be effective if an emergency occurs.





# Mandatory Safety Equipment (continuation)

## Approved Lifebuoy



Also, it must not show any tearing, perforation, or mold. It must be quickly accessible in an emergency and is required only on vessels over 9m.

When buying a lifebuoy, look for a Transport Canada approval stamp or label. Lifebuoys must be **at least 610mm (24")** in diameter. SOLAS lifebuoys are 762 mm (30") in diameter. Smaller lifebuoys and horse-shoe-type devices are not approved. **The lifebuoy must be attached to a buoyant line of not less than 15 m in length which must be securely fixed, and in good condition.** Make sure that the grab lines on the lifebuoy are also secure and in good condition.



## Reboarding Devices

A reboarding device allows a person to get back onto the boat from the water. **A transom ladder or swim platform ladder meets this requirement.** The reboarding device must obviously be appropriate to the type of craft. **The vessel's propulsion unit can never be used in gaining access to the vessel from the water.**



## Boat Safety Equipment

### Manual Propelling Devices

A manual propelling device can be:

- a set of oars;
- a paddle; or
- anything that a person can operate by hand or foot to propel a boat, including the rudder on a small open sail boat or a paddle wheel on a paddle boat.



# Mandatory Safety Equipment (continuation)

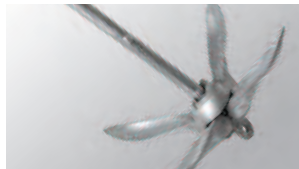
## Anchors

Having the right anchor and cable for your boat is important. If you don't, rough winds and water can cause it to drag, leaving your boat to drift. This is especially dangerous if you are asleep or swimming nearby. Make sure that your boat is well anchored and that the swivel is properly locked, and keep watch to detect signs of dragging.

There are different types of anchors:



**Danforth or fluke anchor:** it uses a stock at the crown to which two large flat triangular flukes are attached. The stock is hinged so the flukes can orient toward the bottom (on some designs they may be adjusted for an optimal angle, depending on the type of bed). Tripping palms at the crown act to tip the flukes into the seabed. The fluke anchor has difficulty penetrating kelp and weed-covered bottoms, as well as rocky and particularly hard sand or clay bottoms.



**Grapnel:** a traditional design, the grapnel is merely a shank with four or more tines. It has a benefit in that no matter how it reaches the bottom one or more tines will be positioned to set. In coral it can often set quickly by hooking into the structure, but may be more difficult to retrieve.



**Plough anchor:** ploughs are popular with cruising sailors and other private boaters. They are generally good in all bottoms, but not exceptional in any of them.



**Mushroom anchor:** the mushroom anchor is suitable where the seabed is composed of silt or fine sand. It is shaped like an inverted mushroom, the head becoming buried in the silt.

When selecting an anchor, its holding power and the type of seabed in which it will be used must be considered. As well, the anchor must be of proper size depending on the pleasure craft. It is best to have a heavier anchor than needed, because a lighter anchor will not keep the pleasure craft in place during bad weather conditions. Regardless of the type of anchor, it must fitted with not less than 15 m of cable, rope or chain or any combination of them, carefully secured to the bow of the boat. Transport Canada suggests a ratio of five (5) to ten (10) times the length of rope to the depth of the water when dropping anchor. Neither rope nor chain is fundamentally superior to a cable. They each have their advantages and disadvantages. However, for small boats, it is recommended to attach an elastic element such as a bending or a shock absorber to the anchor line, in order to absorb sudden shocks that can occur.



## Bailers and Manual Bilge Pumps

Bailers must hold at least 750 ml (0.2 gallon), have an opening of at least 65cm<sup>2</sup> (10 in<sup>2</sup>) and be made of plastic or metal. If you have a manual bilge pump, the pump and hose must be long enough to reach the bilge and discharge water over the side of the boat.

You can make a bailer out of a four-litre rigid plastic bottle (useful for small open boats) by following these steps:

- rinse thoroughly;
- secure the lid;
- cut off the bottom; and
- cut along the side with the handle.





# Mandatory Safety Equipment (continuation)

## Fire-Fighting Equipment

### Portable Fire Extinguishers

Different types of fires require different types of extinguishers. You should buy a fire extinguisher with an ABC rating. The letters on a fire extinguisher determine what types of fires it is designed to fight. Fires are classified as follows:

- Class A: fights a solid combustible (wood, textiles, papers, etc.);
- Class B: fights combustible liquids (flammable liquid, paint, grease, and oil);
- Class C: fights an electrical fire (motor, fuse box and cables).

The number before the letters on the extinguisher tells you how big a fire it will put out compared to other extinguishers. For example, a 10B/C device will put out a larger fire than a 5B/C device. **It is important to know that for boats equipped with an inboard engine, a BC type fire extinguisher is required on board and must be stored in a convenient and easily accessible place. Also, the type of devices on board and the length of the boat will determine the number and type of extinguishers required.**

Any fire extinguisher you choose must be certified and labelled by the U.S. Coast Guard (for marine use), Underwriters Laboratories of Canada (ULC) or Underwriters Laboratories, Inc.(UL). You are no longer allowed to refill halon fire extinguishers.

Check your extinguishers often for correct operating pressure and make sure that you and your guests know how to use them. Have a qualified person service the extinguishers and recharge them as per the manufacturer's instructions. **Take dry chemical devices out of their bracket and give them a few hard shakes in the upside down position (about once a month).**



### Axe

In case of fire, you can use an axe to free up a stuck door on the boat. **It can also be used to put out a fire between the layers of the hull, or to cut a mooring or towing cable during an emergency.**

Any type of axe is acceptable (including a small axe), but it is better to have an axe which also has a pointed end. It should be readily accessible and stored away from the elements.



### Buckets

**The main purpose of the bucket is to put out type A fires.** Type B extinguishers are required on boats that have an in-board engine (inside), but cannot put out type A fires which are solid combustible (wood, textiles). A bucket full of water will help to put out these fires. The only requirement is that the buckets have a capacity of at least 10 litres. The ones made of metal with a round bottom and a hole in the centre, painted in red, are not required on small vessels. However, it is recommended that the buckets are fitted with a lanyard of sufficient length to reach the water from the place where it is stored.



# Mandatory Safety Equipment (continuation)

## Distress equipment

### Marine VHF Radio (Very High Frequency)

Marine VHF radio is generally the best way of sending a distress signal. If you have a VHF radio, keep it tuned to channel 16. Know where you are at all times and be prepared to describe your specific location. Currently, all VHF marine radio operators must have a Restricted Operator Certificate (Maritime) — ROC(M). Industry Canada has delegated the ROC(M) to the Canadian Power & Sail Squadrons (CPS). Contact the CPS or visit [www.cps-ecp.ca](http://www.cps-ecp.ca) for more information about courses available in your area.

If you are buying a new VHF radio, make sure it has the new Digital Selective Calling (DSC) feature on channel 70. This provides automatic digital distress alerts. The Canadian Coast Guard provides DSC channel 70 service on the east and west coasts, as well as on the Great Lakes and the St. Lawrence River.

**Remember, VHF radio channel 16 is used for emergency and calling purposes only.** Once you contact another vessel on channel 16, switch to another working frequency. VHF channel 70 is used only for DSC (digital) communication — not voice. Use your VHF radio as described in the *VHF Radiotelephone Practices and Procedures Regulations*.

While you may be able to get search and rescue assistance from the nearest Canadian Coast Guard Marine Communications and Traffic Services (MCTS) centre by **dialling \*16 on a cell phone, it is not the best substitute for a marine radio.** This is not the best way to issue a distress call. This is why:

- Cell phones can lose their signal or get wet or damaged.
- Calling from your cell phone does not alert nearby vessels that you are in distress — they could be the ones to help you if they could hear you.
- Some cell phone signals cannot be traced back to your location by rescuers.
- Not all cell phone providers offer the \*16 service. Find out if this service is available for your phone.



When in extreme danger (for example, your boat is taking on water and you are in danger of sinking or capsizing), use your VHF radio channel 16 and say “Mayday” — “Mayday” — “Mayday.” Then give the name of your boat, its position, the nature of your problem and the type of help you need.

If you need help but are not in immediate danger (for example, your motor has quit and you cannot reach shore), use channel 16 and say “Pan Pan” — “Pan Pan” — “Pan Pan.” Then give the name of your boat, its position, the nature of your problem and the type of help you need.

Finally, in order to avoid finding yourself in a compromising situation keep up-to-date about the changing weather as well as the most recent navigation security alerts put out by the competent authorities, such as a cargo boat navigating in narrow waters and possibly put your safety at risk. The calling station will then issue a warning using the word « SÉCURITÉ », repeated three times.

### GPS

The GPS is a worldwide radionavigation system made possible by a network of satellites and monitoring stations. Its receivers can calculate where you are, anywhere on the planet, to within 30 m (98'5"). While more and more boat operators rely on marine GPS to tell them where they are on the water, it is a good idea to keep charts on board in case the GPS fails. With the aid of the nautical chart, whether integrated to the GPS or not, the boater can find his/her position on the map, and thus, on the body of water. If charts are integrated into the GPS, it is important to have backups available on paper in case of a GPS malfunction. It is highly recommended that you use fully charged batteries to allow peak performance of the GPS. Be careful to not drop it in the water, as most GPS's are not waterproof.





# Mandatory Safety Equipment (continuation)

## Watertight flashlight

Make sure that the batteries in your watertight flashlight are fully charged before every trip. If you lose power, a watertight flashlight may be your only way to signal for help.

**Watertight flashlights may also qualify as navigation lights on non-powered vessels less than 7m.**



## Flares

Use flares only in an emergency. **Always read the manufacturer's instructions before using flares.** Aerial flares should be fired at an angle into the wind. If the wind is strong, the firing angle must be reduced. **Flares should be kept within reach and stored vertically in a cool, dry place** (such as a watertight container) to keep them in good working condition.



There are four types of approved flares:

The rocket parachute flare

- creates a single red star;
- reaches a height of 300 m (984') and comes down slowly with a parachute;
- is easily seen from the ground or air; and
- burns for at least 40 seconds.

The multi-star flare

- creates two or more red stars;
- reaches a height of 100 m (328'1") and each burns for four or five seconds; and
- is easily seen from the ground or air.

The hand flare

- is a red flame torch you hold in your hand;
- provides limited visibility from the ground;
- is best used to help air searchers locate you; and
- burns for at least one minute.

Smoke Signal

- creates a dense orange smoke;
- is to be used only in daylight.

When buying distress flares, look for a Transport Canada approval stamp or label. Remember that flares are **only good for four years from the date of manufacture**, which is stamped on every flare. Ask the manufacturer how to dispose of your outdated flares.

**Visual signals are not required for boats up to 6m and for human-powered boats.** Flares are not required for a boat that will never be more than one nautical mile (1.852 km) from shore, has no sleeping quarters or is engaged in an official competition or in final preparation for an official competition.

# Mandatory Safety Equipment (continuation)

## Navigation Equipment

### Sound-Signalling Devices or Sound-Signalling Appliance



The sound-signalling device or the sound-signalling appliance is intended to signal and alert other boaters of your presence in restricted visibility and/or in emergency situations. Boats under 12 m (39'4") without a fitted sound-signalling appliance must carry a sound-signalling device. Unlike the sound-signalling device, the sound-signalling appliance is an integral part of the boat, is fixed on it and is in good working order.

A sound-signalling device can be a peaseless safety whistle, a compressed gas horn, an electric horn, a gong or a bell. Whistles with a pea inside are not regulatory as they will not work with water in them.



### Navigation Lights

The navigation lights installed on the pleasure craft show which type of boat is on the water. While navigating at night or by restricted visibility, when you encounter another pleasure craft, the colour of the lights which are visible from the other pleasure craft will help you determine who has priority. You must be aware of the mandatory navigation lights that are required from sunset to sunrise.

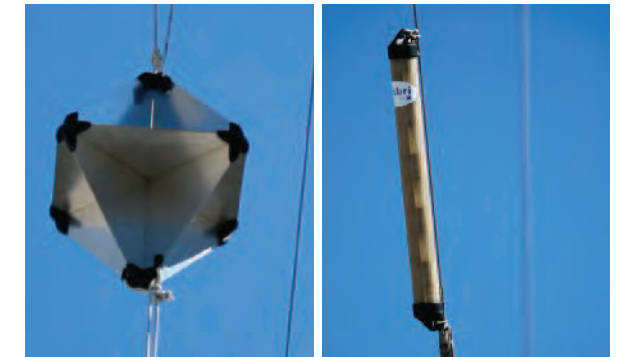


Navigation at night without navigation lights is dangerous to the other vessels in your immediate area. They must also be used in reduced (poor) visibility (ex: fog). Before heading out, make sure your vessel has the proper navigation lights, and that all lights are in working order. Other vessels depend on your navigation lights to avoid collisions. Navigation lights and shapes vary based on the type and length of your boat and the distance in which navigation lights can be seen is dependent on the size of the vessel. See **Rule 22**, set out in the Collision Regulations for more information.

### Radar Reflectors

A radar reflector can enhance your safety on the water, but only if it's big enough and well placed on your boat. Reflectors help larger vessels spot smaller boats on their radar screens, which is often the only way to see you.

When buying a reflector, there is no substitute for size, so buy the biggest one that is practical for your boat. Height is also very important, so also keep this in mind. **Reflectors should be placed above all superstructures and at least 4 m (13'1") above the water if practical.** There are all kinds of reflectors of varying quality on the market, so shop carefully before buying.





## Mandatory Safety Equipment (continuation)

### Magnetic compass

A magnetic compass will help the operator of a pleasure craft to find directions. The compass is essential to navigation especially when visibility is reduced. A magnetic compass is influenced by the proximity of metallic and/or electrical devices, which could provide inaccurate information. Furthermore, it is important to keep magnetic screwdrivers, key chains, flashlights and any other magnetic materials at a distance from the compass.



### Charts

Charts are graphic representations depicting areas of water, depicting the depths, underwater hazards, traffic routes, aids to navigation and adjacent coastal areas. They are intended primarily for mariners to assist navigation; and are published by the **Canadian Hydrographic Service, Department of Fisheries and Oceans**. They are used as navigational aids.



### Topographical Maps

Topographical Maps are maps of the land area depicting natural and artificial features of the land, including elevation contours, shorelines, rocks, land features above water, and planimetric features. They are primarily intended for the use of the general public on land, and are published by Natural Resources of Canada and some provincial authorities. These maps are sometimes used where there are no "Charts" available but do not depict underwater dangers, navigational aids, the channels, nor the anchor zones.



## Sharing the waterways

### Safe speed

Every vessel shall at all times proceed at a safe speed so that you can take proper and appropriate action to avoid collision, and be able to stop in a safe distance, and appropriate to the prevailing circumstances and conditions.

It is important to comply with all boating restrictions, such as speed and engine power limits. Moreover, knowing what the signs encountered along the way mean is critical for safe navigation. If you are ignorant of these restrictions, refer to the *Vessel Operation Restriction Regulations*.



In determining a safe speed the following factors shall be among those taken into account:

- Conditions of visibility (fog, mist, rain and darkness) and your ability to see ahead;
- traffic density including concentrations of fishing vessels or any other vessels;
- manoeuvrability of the vessel with special attention to stopping distance and turning ability in the prevailing conditions;
- at night with the presence of background light such as shore lights or from back scatter of the vessel's own lights;
- conditions of wind, sea and current, and the proximity of navigational hazards;
- the draft in relation to the available depth of water.



## Sharing the waterways (continuation)

A vessel should always be operated in a safe manner. It is important to take all circumstances into consideration which could potentially place the vessel and other vessels in a dangerous situation. For this reason the operator should always be aware of what's happening on the water. The operator must also avoid endangering the safety of persons involved in any activity in all waters. **You should always pay attention to swimmers while navigating.** In order to ensure the safety of others during a sporting, recreational or public event or activity for which a permit has been issued, a person who operates a vessel shall do so in a manner that does not interfere with the event or activity.

**The operator of a pleasure craft shall at all times maintain proper lookout by sight and sound (listening) to keep the vessel or the other vessels out of danger.** The operator must be able to use and recognize the signals from other vessels when navigating by restricted visibility, such as:

- one short blast means : « I am altering my course to starboard »;
- two short blasts means « I am altering my course to port »;
- three short blasts means: « I am operating astern propulsion »;
- five short whistle blows means : « I do not understand your intention. »

A power-driven vessel underway shall keep out of the way of:

- a vessel not under command;
- a vessel restricted in her ability to manoeuvre;
- a vessel engaged in fishing;
- a sailing vessel.

A sailing vessel underway shall keep out of the way of:

- a vessel not under command;
- a vessel restricted in her ability to manoeuvre;
- a vessel engaged in fishing.

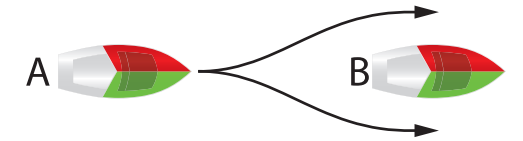
A vessel engaged in fishing when underway shall, so far as possible, keep out of the way of:

- a vessel not under command;
- a vessel restricted in her ability to manoeuvre.

## Collision Regulations

The Collision Regulations stipulate that in all pleasure craft and vessels, someone must be on watch for other vessels or pleasure crafts at all times, in order to prevent a collision between two or more pleasure crafts. At all times the pleasure craft's operator must have a clear view of the waters that he/she is navigating on. It is up to the operator of a pleasure craft to know and apply the International Regulations for preventing collisions at sea, and the Canadian modifications upon the high seas, and in all waters connected therein, which are navigable by vessels.

**Any vessel overtaking any other vessel shall keep out of the way of the vessel being overtaken.** When a vessel is in any doubt as to whether she is overtaking another, she shall assume that this is the case and act accordingly.

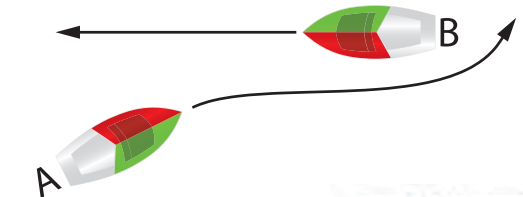


Any alteration of course and/or speed to avoid collision **must be important (noticable) enough to be easily seen by another vessel** observing by sight or radar; a succession of small changes of course and/or speed, should be avoided.

Action taken to avoid collision with another vessel shall be to result in passing at a safe distance. This action will be taken in such a manner to be effective and safe, until the time that the other vessel is finally past and clear.

If necessary, a vessel shall reduce her speed to avoid collision with an other vessel.

**When two power-driven vessels are crossing so as to involve risk of collision, the vessel which has the other on her own starboard side shall keep out of the way** and shall, if such are the circumstances, avoid crossing ahead of the other vessel.



**Every give-way vessel which is directed to keep out of the way of a stand-on vessel shall, so far as possible, take early and substantial action to keep well clear.**

**When one of two vessels is to keep out of the way, the other shall maintain her course and speed.** The latter vessel may however take action to avoid collision, if it becomes clear to her that the vessel which should be keeping out of the way is not taking appropriate action.





# Sharing the waterways (continuation)

## Order of responsibility between vessels

A vessel proceeding along the course of a narrow channel or fairway **shall keep as near to the outer limit of the channel or fairway which lies on her starboard side as is safe and practicable.**



A vessel of less than 20 metres in length or a vessel under sail shall not impede the passage of a vessel which can safely navigate only within a narrow channel or fairway. When operating near large vessels, remember that they have limited visibility, turning, and stopping capabilities. It is important to maintain an all-round lookout at all times and to be prepared to move out of the path of larger vessels.

A vessel engaged in fishing shall not impede the passage of any other vessel navigating within a narrow channel or fairway. As well, a vessel shall not cross a narrow channel or fairway if such crossing impedes the passage of a vessel which can safely navigate only within such channel or fairway.

A vessel nearing a bend or an area of a narrow channel or fairway where other vessels may be obscured by an obstruction shall navigate with particular alertness and caution and shall sound the appropriate signal.

**Any vessel shall, as much as possible, avoid anchoring in a narrow channel.**

A power-driven vessel shall, as much as possible, keep out of the way of a vessel not under command.



**If possible, small crafts should travel in groups to increase their visibility.** They should also stay away from docked ferries, ferries in transit or vessels in tow. Be attentive to the signal from the ferries, be aware that a long blast indicates the start of the dock.

Tugs may tow vessels on a long tow line that extends behind the tug. The tow line is often so long that it hangs below the surface of the water and is almost invisible. **Never pass between a tug and its tow.** If a small boat were to hit the hidden line, it could capsize and be run down by the structure being towed. Many towed structures will also have a long trailing line behind them. Give the tug and its tow plenty of space in every direction.

Ferries operated by cables constitute a special hazard. When the ferry is under way, its cables are pulled taut and extend from both ends. Fatal accidents have occurred when vessels have attempted to pass over or under these cables while the ferry was in operation. When the ferry is secured at its landing, however, the cable is lowered and does not impede navigation. Boaters should use extreme caution around cable ferries and other vessels with other vessels/barges in tow.





## Sharing the waterways (continuation)

### Use of courtesy and common sense

Every boat equipped with a motor other than a stock (unmodified) outboard engine must have a muffler and use it while operating within five nautical miles (9.26 km) of shore. This does not apply to you if your boat was built before January 1, 1960, or if you are in an official competition, in formal training or final preparation for an official competition.



Stay alert! At high speeds, it's hard to see swimmers, water skiers, divers as well as other vessels in time to avoid them. Moreover, don't forget that when you are on the water, it is important to know the depth of water, in order to avoid damaging the engine propeller. In the event that you must recover a person overboard, do not forget to shut down the engines.

It is important to stay away from swimming areas to avoid the risk of injury to swimmers. A boat's wake can damage other vessels, docks and the shoreline. It can also be a risk for swimmers, divers and people on small boats which could capsize. **Pay attention to of how your boat's wake might affect others when determinig your speed.** You will be responsible for any damages or harm you cause.

Oil, fuel, antifreeze and transmission fluids are a few examples of pollutants that harm the environment when pumped overboard, usually by automatic bilge pumps. **In fact, a regulation prohibits the discharge or disposal of fuel, oil, antifreeze and other harmful substances such as cleaning agents into the water.** Bilge cleaners, even biodegradable ones, just break down the oil into tiny, less visible droplets. Absorbent bilge cloths are very useful because they are designed to absorb petroleum products and repel water.

Here are a few tips to help keep bilge pollution to a minimum. Unfortunately invasive species, such as zebra mussels and green crab, have taken over certain local waters. You can do your part by keeping your hull clean. This is very important if you operate your boat on a lake or river and then tow it over land to use in another area. Rinsing or cleaning your hull after use or before entering new waters helps to remove spores and other invasive organisms.





# Sharing the waterways (continuation)

## Displaying the right navigation lights

During night navigation, from sunset to sunrise, or in restricted visibility (fog, falling snow, heavy rainstorms, etc), by displaying the appropriate lights, other craft will know if your craft is under sail, power driven, or at anchor. Large ships, vessels with fishing nets, and tugboats pulling barges will display additional lights so that they can be identified as such. **As well, during night navigation, it will be possible to determine who has the right-of- way when two craft meet by looking at the colour of the other craft's navigation lights.**



**Sidelights:** a red light on the port side and a green light on the starboard side, each displaying a constant beam and affixed in a manner that the light is projected to the front and sides allow you to determine if the oncoming craft is heading towards you or from one side or another.



**Sternlight:** a white light placed as closely as practical at the stern shining constantly, affixed in a manner so that the light will shine out at 135 degrees from the back of the boat and affixed to show the light from aft on each side of a pleasure craft.



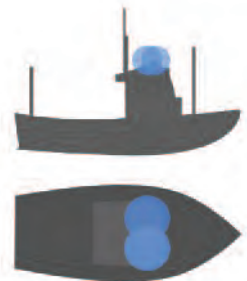
**Masthead light:** a white light placed over the fore and aft centreline of a pleasure craft shining constantly and affixed to show the light from straight ahead to either side of a pleasure craft.



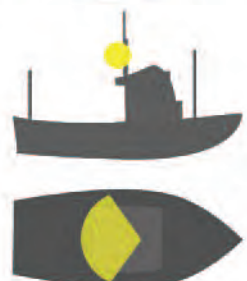
**All-round light:** a white light shining constantly over the horizon at an arc of 360 degrees.



**Blue flashing light:** attributed to all law enforcement agencies and some government agencies, emitting an all-around blue-flashing beam engaged in duties in Canadian waters.



**Special flashing light:** a yellow light placed at the forward end of a towing vessel or vessel being towed.



## Sharing the waterways (continuation)

The following are examples of navigation lights:



Vessel under sail seen from the front



Sail boat under engine power seen from the front



Power driven vessel at anchor



Power driven vessel from left side



Power driven vessel seen from the front

## Recognizing vessels by their lights

Every boat operator must know the rules that apply in the sharing of waterways, in order to safely navigate. When navigating at night or by restricted visibility, the operator must be able to recognize a boat by the colour and positioning of its navigation lights to determine what actions to take to avoid a collision.



According to the *Collision regulations*, an operator of a **power driven pleasure craft of less than 12 metres in length, and underway**, shall display, from sunset to sunrise, in addition to sidelights (red – green), an all-round white light.



According to the *Collision regulations* an operator of a **power driven pleasure craft of more than 12 metres in length, and underway**, shall display, from sunset to sunrise, a masthead light (white) forward, sidelights (red, green), and a sternlight (white).



The operator of a **sailing pleasure craft underway** shall, from sunset to sunrise, display **sidelights** (red, green) and a **sternlight** (white).





## Sharing the waterways (continuation)

A vessel engaged in fishing, other than trawling, shall display two all-round lights in a vertical line, the upper being red and the lower white. When making way through the water, it displays the sidelights and a sternlight.



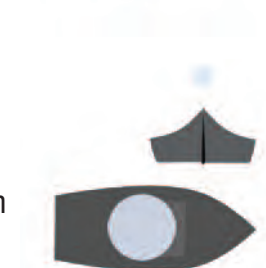
A vessel when engaged in trawling, which means dragging a dredge net or other fishing apparatus through the water, shall display two all-round lights in a vertical line, the upper being green and the lower white. When making way through the water, it shall display sidelights and a sternlight.



The operator of a sailing pleasure craft of less than 7 metres in length not under power (canoe, kayak), underway, shall from sunset to sunrise, display, if practical, sidelights and a sternlight, but if the operator cannot, he/she must have at hand, a flashlight or lighted lantern emitting a white light which must be lit in enough time to prevent a collision.



At anchor, the operator of a pleasure craft shall display, from sunset to sunrise, in the fore part, an all-round white light.



A power-driven vessel when towing shall show sidelights, a sternlight, and a towing light in a vertical line above the sternlight, and two masthead lights in a vertical line. When the length of the tow, measuring from the stern of the towing vessel to the after end of the tow exceeds 200 metres, three such lights in a vertical line shall be displayed.



Apart from the regular navigation lights, when a boat tows another vessel in distress or in need of assistance for any reason, shall take all possible measures to show the relation between the towed vessel and the vessel doing the towing. A vessel towing must try to shine a light on the towing cable to make it as visible as possible, so that other boats do not come into contact with the cable.

A vessel or other structure under tow, if it is less than 25 metres wide, shall display one all-round white light.

Any government vessel or any vessel that is owned or operated by a harbour, river, county or municipal police force may display a blue flashing light to identify itself as such, in the following cases

- when it is providing assistance in any waters to any vessel or other craft;
- when it is engaged in law enforcement duties in Canadian waters.

A power-driven vessel, when pushing another, shall display the sidelights, a sternlight, and two superimposed masthead lights. The vessel being pushed, and not part of a composite unit, must display its sidelights at the bow. When a vessel is pushing another, if both are connected in a rigid, composite unit, they will be regarded as one unit, thus showing the appropriate lights.

# Canadian Aids to Navigation System (CANS)

The buoys and beacons are aids to navigation that are installed by the Canadian Coast Guard to guide merchant ship operators and pleasure craft operators. The aids to navigation are devices or systems that are within the pleasure craft's environment; they warn the operator of dangers or obstructions; like shallow water. The navigational aids are provided to help the operator of a pleasure craft determine his/her position and course, and advise the operator of what is the best or preferred route to take.



## Lateral buoys system

To understand the use of lateral buoys, it is important to understand the meanings of the terms “upstream” and “downstream”. **Upstream is the end of the waterway from where the flow of water originates. Where the flow ends, at the opposite end of the waterway, is downstream.** Using the St. Lawrence River as an example, from Québec City to Montréal you are heading upstream, the water emptying from a river back into the ocean. Gaspé to Québec is “upstream”, and Québec to Gaspé is “downstream”.

The lateral buoys system marks the two sides of a channel (port and starboard).

### Port hand buoy

A buoy that marks the port (left) side of a channel, or where a danger is located. It must be kept on the port (left) side of a pleasure craft when heading upstream. It is painted green. If the buoy has a light, the light is green. Its top is flat. If it is numbered, it bears an odd number.



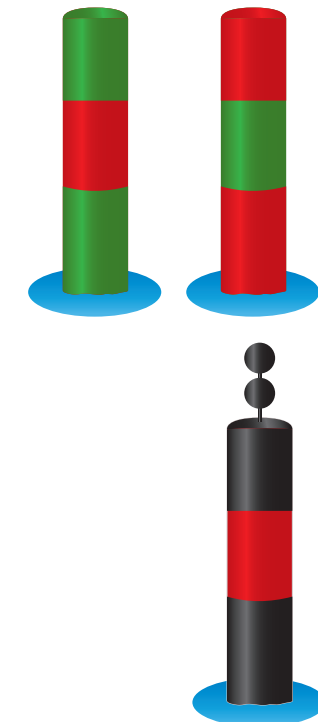
### Starboard hand buoy

A buoy that marks the starboard (right) side of a channel or where a danger is located. It must be kept on the starboard (right) side of a pleasure craft when heading upstream. It is painted red. If the buoy has a light, the light is red. Its top is cone-shaped and if it is numbered, it bears an even number.



### Bifurcation

A buoy used to mark the point at which a channel divides into two branches. You may pass this buoy with red and green bands on either side when moving upstream. The main or preferred channel is shown by the colour of the top band.



### Isolated danger buoy

Is moored on an isolated danger in a secure or safe body of water. It is black and has a red horizontal stripe. If the buoy has a light, it is white.



# Canadian Aids to Navigation System (CANS) (continuation)

## Port hand daybeacon

Is similar to a port hand lateral buoy. It points out the left side of a preferred channel. It must be on the left when the craft is heading upstream. It is a black or green square centered on a white background with a green reflective boarder. It has no lights and is visible only during daylight.

## Starboard hand daybeacon

Is similar to a starboard hand lateral buoy. It points out the right side of a preferred channel. It must be on the right when the craft is heading upstream. It is a red triangle with a white contoured line. It has no lights and is visible only during daylight.

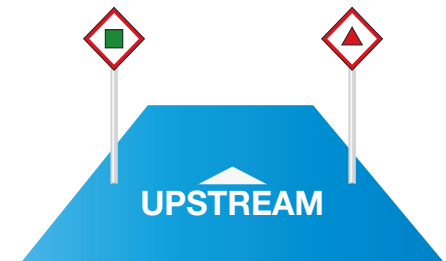
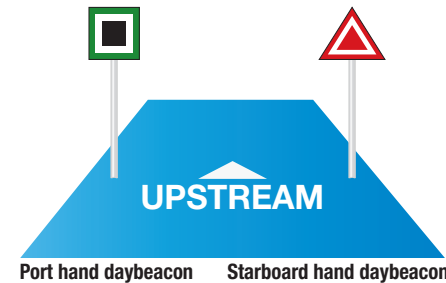
## Junction daybeacon

Marks a point when the channel divides and may be passed on either side. The daybeacon has a red diamond with either a green square or a red triangle inside, showing the main channel.

## Special buoys

### Cautionary buoy

Is a buoy that marks an area where mariners are to be warned of dangers such as firing ranges, raceways, seaplane bases, underwater structures or areas where no safe through-channel exists and where traffic separates. It is yellow.



### Anchorage buoy

Is a buoy that marks the outer limits of designated anchorage areas, is yellow with a black anchor on it.

### Mooring buoy

Is used for mooring or securing vessels, is white and orange, orange covering the top third.

### Information buoy

Is a buoy that displays, by means of words or symbols, information of interest to the mariner. It is white, with an orange, open-faced square symbol on two opposite sides and two orange horizontal bands, one above and one below the square symbols.

### Hazard buoy

Is a buoy that marks random hazards such as rocks and shoal. It is white with an orange diamond on two opposite sides and two orange horizontal bands.

### Control buoy

Is a buoy that marks an area where boating is restricted. It is white, with an orange, open-faced circle on two opposite sides and two horizontal orange bands, one above and one below the circles; a black figure or symbol within the orange circles shows what the restriction is.



# Canadian Aids to Navigation System (CANS) (continuation)

## Keep out buoy

Is a buoy that marks an area where boats are prohibited. It is white. There is an orange diamond and an orange cross within on two opposite sides and two orange horizontal bands.



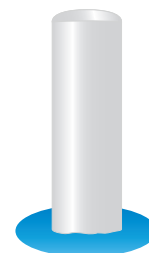
## Diving buoy

During diving operations you must install a diving flag. It is Flag A, red and white. It marks an area where scuba or other such diving activity is taking place. It is white, and is mounted by a red flag with a white diagonal stripe, extending from the tip of the hoist to the bottom of the fly. **If a diving operation takes place from aboard a pleasure craft, flag A (blue and white)** from the International Code of signals which means “I have a diver in the water, keep well clear and at low speed” must be displayed. While navigating, if you see this flag, you must keep well clear of the vessel and the diving site.



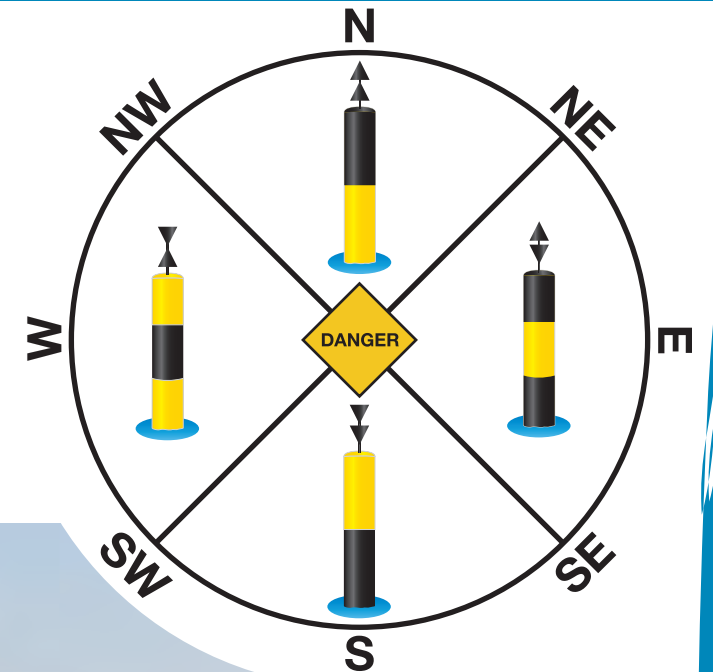
## Swimming buoy

Is a buoy that marks the perimeter of a swimming area. It is white.



## Cardinal buoys

The cardinal buoys point out the whereabouts of danger while referring to the four cardinal points: north, south, east, and west. For example, the north cardinal buoy indicates that navigable waters are north of the north cardinal buoy.





# Preventing emergency situations

## Knowing the limits of the operator and the boat

It is important to be aware of our own capacities when we go on the water. The operator must rely on his experience and his acquired skills to determine if he is qualified to navigate the body of water safely. As well, the operator must ensure that he is familiar with the craft's limitations and handling capabilities. Remember that each boat is different and reacts differently on the water. A larger boat needs a longer braking distance.



## Identifying emergencies due to weather and water conditions

Weather and water conditions play a big role in your safety on the water. Before heading out, make sure you get the latest forecast for your area and that you understand what it means. You should also be aware of local factors (like topography) which may cause weather conditions to differ from the forecast. People who know the area are the best source for this kind of information.



Because summer storms can arise quickly and unexpectedly, you need to stay vigilant and **monitor the changes in the environment. If the sky begins to darken and the weather conditions change, you need to take shelter in a safe area.** Before heading out, checking navigational references such as the charts and tides tables published and updated by the Canadian Hydrographic Service (CHS), or Sailing Directions or some Cruising Guides will help you to identify places to take shelter in event of foul weather.

**Rapids** are considered a local water hazard because they represent a permanent hazard at a determined place. They represent a hazard because of the speed of the current which makes the craft less manoeuvrable. Rapids are usually shallow and are scattered about the surface of the water. Rapids, therefore, endanger the pleasure craft and the crew.

The presence of **overhead cables** above the navigable waters represents a local water hazard, since they are permanently installed. If you are navigating in a sailboat, it is important that you properly evaluate the space between the top of the mast and the overhead cables, because the danger of electrocution is real. Many pleasure craft operators have had their nautical trip end in a dramatic way when their mast came into contact with overhead cables.

**Underwater cables** (laid on the seabed) are also a grave danger. When you drop anchor, it can touch the underwater cable, thus provoking electrocution. You could also capsize the pleasure craft while trying to haul in an anchor which is caught on the cables. There are usually billboards on the water signalling the presence of underwater cables.

**Restricted visibility** such as fog or night navigation, the regulations require that the operator adopt a speed according to the conditions.

**Sudden winds** provoked by specific types of shorelines that surround the body of water may also represent local water hazards. Winds can, without warning, rapidly change speed and direction, thus compromising the safety of your pleasure craft. In shallow water, and when the wind intensifies, the waves can become very large and will break; thus, making it very dangerous to navigate.

**Tides and currents** add to the complexity of navigation. When the tide is in the opposite direction of the wind, you will face the ripples of the waves and this may capsize a pleasure craft, even if the wind is light. In certain places waves can become big very rapidly, especially in waters such as the Great Lakes or the St. Lawrence River where the waters are large enough to allow big waves to form. You must avoid areas where there are rapids or strong currents in order to not capsize. It is also important to know the high and low tides when you anchor, in order not to have the unpleasant surprise of ending up on dry land at low tide.

# Preventing emergency situations (continuation)

## Preventing emergency situations

While on a boat trip, it is highly recommended to encourage all passengers to wear a PFD. If weather conditions deteriorate, or in case of an emergency, each passenger should be wearing his/her PFD.

### Loading

It is important not to overload the boat beyond the maximum load indicated on the compliance notice. Overloading your boat with people, equipment, or both, is dangerous. Your boat's safety on the water depends on how much you put on the boat and where you put it. **Too much weight will make your boat unstable and allow small waves to come on board.** This will also reduce the amount of roll that your boat can handle before its sides dip under water. The heavier the weight carried on board, the more your boat is likely to roll, making it harder for it to stabilize.

As an operator, you must respect the recommended maximum safe limits shown on the Transport Canada compliance notice. But remember, these limits apply only in good weather and it is assumed that the weight is evenly distributed on board, so you should use good judgment when conditions are less than perfect. **Keep the load as low as possible and secure the equipment to the boat to keep it from shifting, making it unstable.**



### The procedure for refuelling

Raw fuel is extremely harmful to the environment and the vapours can create a dangerous fire hazard.



Follow the following refuelling procedure step by step:

- Moor the craft tightly to the dock to prevent spillage;
- Turn off the engine;
- Before refuelling, extinguish all on board flames (smoking or cooking flames etc.);
- All persons not involved must disembark;
- One must not smoke while refuelling;
- Turn off all electronic devices such as radios, switches and batteries; one spark caused by a short circuit could produce an explosion;
- The doors, windows and hatches must be closed. Gasoline fumes are heavier than air, so they could spread to the bottom of the craft and cause an explosion when the engine is started;
- Portable tanks must always be off the boat while refuelling, to prevent spillage onto the boat, thus diminishing the risk of fire or explosion;
- With a fixed tank onboard, make sure to ground the gas nozzle against the filler pipe to ensure safe refuelling of the tank. This will prevent static, as a spark could cause an explosion;
- Do not overfill the fuel tank. Any overflow could leak through the ventilation or into the water and pollute the environment. You are obligated to immediately clean up any gasoline spilled onto the craft or onto the dock. Throw away rags in approved containers;
- Check for vapour odours. If you have an inboard engine, **the blower must be on for at least 4 minutes before starting the engine.** This will enable any dangerous fumes to fully evaporate.





## Preventing emergency situations (continuation)

### Starting the motor in the correct manner

- Couple the gas tank to the motor and pump the gas until a resistance is felt;
- Put the motor in the “lock” position;
- Put the handle into the neutral position;
- Put the gas button to the «on» position;
- Pull on the rip cord; and
- Make sure the motor is running smoothly.



### Carbon monoxide

**Carbon monoxide (CO) is a colourless, odourless toxic gas which can be fatal. The best way to protect yourself and others from carbon monoxide poisoning is:**

- Run the engine at idle only in well ventilated areas;
- Heat the cabin, or do the cooking only when there is proper ventilation;
- Make sure extension cords and cabin areas, including canvas awnings, are well ventilated;
- Only use motors or fuel-burning devices that are certified or designed for maritime use, and make sure that they are used only in well ventilated areas;
- Install a carbon monoxide detector designed for marine use and check the batteries before every departure.



#### Be aware that CO can build up when :

- two vessels are tied to each other;
- you are docked alongside a seawall;
- your load causes the bow to ride high;
- a fuel-burning device or the engine is running while your vessel is idling;
- between the pontoons of your boat when there are swimmers therein.

### Fuel-Burning Devices

**Gas vapours and leaking propane or butane gases are heavier than air and will quickly seep into the lower parts of your boat. They are very hard to dissipate and are highly explosive.** On board devices that run on propane or butane gas may present more risk than gasoline. Here are some tips for using propane and butane safely :

- Use a fuel-burning device only when in a well-ventilated area;
- Secure portable appliances and heaters so that unexpected movement doesn't cause a leak;
- Secure gas cylinders and tanks in a well ventilated area;
- Appliances and systems should be designed for marine use and installed in accordance with a marine standard, as well as to the manufacturer's instructions;
- Always keep watch over open-flame heating, cooking or refrigeration systems.

### Ignition protection

Boats with a gasoline engine or using propane fuelled devices must have ignition-protected electrical devices. These parts are designed and made in such a way that, under normal operating conditions, they will not ignite gasoline or propane fumes or vapours. This device prevents the sparks from coming into contact with the fumes while in use. Only use electrical components that are clearly labelled as ignition protected.

Many older boats, and even some new ones, have been fitted with converted car or truck engines. If you are not sure that your engine is not equipped with ignition-protected parts, have it serviced by a certified marine technician. The mechanic can tell you if a replacement part (or related work done to the engine) has put you or others, at risk because it is not ignition-protected.

# Responding to Emergencies

## Identifying emergency situations and taking appropriate action

### If you fall into the water

- Keep your clothes on;
- To keep as much of the body as possible out of the water, climb onto the pleasure craft or onto a floating object if there is one nearby;
- Huddle with the others if you are two or more;
- If alone, adopt a heat escape lessening position (HELP) in order to maintain your vital organs at the highest temperature possible (maintain body heat);
- If you are in a group, make sure that nobody is missing.



### Overtaken and submerged

Depending on the circumstances, do the following:

- Ensure that everyone puts on a personal flotation device or a lifejacket;
- Keep as close to the craft as possible, depending on the circumstances;
- Do a head count of those who were on board;
- Use or display the signals to show distress and need of assistance.



### Malfunction or breakdown

Take the following steps depending on the circumstances:

- Alter the speed of the craft;
- Anchor the craft;
- Investigate the problem;
- Correct the problem if possible; or
- Use or exhibit signals to show distress and need of help.

The operator should service and maintain the pleasure craft and its equipment on a regular basis to make sure that they work properly at all times, thus reducing the probability of breakdowns.

### Recovering a person who has fallen overboard

As soon as someone notices that a person has fallen overboard, that person must :

- sound the alarm and immediately becomes the look-out, which means, to keep in constant sight of the person who has fallen overboard;
- another person will throw something buoyant with a buoyant heaving line;
- the pleasure craft operator must close-in on the person who has fallen overboard, while at the same time, slowing down;
- the operator will approach the person on the wind-ward side;
- the operator will shut down the motors as soon as the person has grasped the line;
- and recover the person overboard with a reboarding device or a lifting harness.



To ensure the safety of the pleasure craft's passengers, it is important to inform each passenger of where the safety equipment is stored onboard, each one's task during an emergency and the movement of the pleasure craft. Furthermore, it is important to practice these safety procedures beforehand, so that the passengers may become familiar with them. In the case of a real emergency their chances of survival will increase dramatically.



## Responding to Emergencies (continuation)

### Leaking hull or flooding

First, find the source of the leak in the hull, or of the flooding. Is there a breach in the hull such as in the water cooling system? Is an underwater device such as the engine's water cooling system defective? Is the rear bailer of the pleasure craft properly closed? Once you have discovered where the water is entering the vessel, stop the leak or the source of flooding if possible.

If there is a breach in the hull below the waterline, use any type of plug (a piece of wood or textile) in order to close the hole. If it is a crack caused by hitting or rubbing up against rock, you can use an epoxy that hardens or catalyses underwater. If the hole is on the water line, you must heel (incline) the pleasure craft in order to get the crack out of the water. When the water leak has been sealed, bail the accumulated water from the hold or other compartments of the pleasure craft by using hand-held bailers, manual pumps or bilge pumps. Use or show distress signals to signal that you are in need of assistance. If necessary, use channel 16 with a «MAY DAY» signal and/or use pyrotechnic signals.

The pleasure craft operator must always have on board a hull repair kit and tools. A temporary repair will ensure sufficient time in order to get back to shore and; and thus, stop any excess flooding.



### Surviving in cold water

If you end up in the water, do everything you can to conserve energy and body heat. Swim only if you can join others or reach a safe haven. Do not swim to keep warm. **Extend your survival time by:**

- wearing a Canadian-approved lifejacket or PFD. You will lose energy which is vital to survival, trying to keep your head out of the water if you are not wearing one;
- climbing onto a nearby floating object to get as much of your body out of or above the water as possible;
- if possible, adopt a heat escape lessening position (H.E.L.P.): cross your arms tightly against your chest and draw your knees up close to them;
- huddle with others and make sure the sides of everyone's chests are close together, with arms around mid to lower back, and legs intertwined;
- protect yourself by wearing a lifejacket or PFD, multiple light layers of dry clothing and a water or wind-proof outer layer.



Other equipments that come in a variety of styles and names, and provide additional protection from hypothermia include:

- floater or survival suits: a full nose-to-toes PFD;
- anti-exposure worksuits: a PFD with a thermal protection rating;
- dry suits: to be used with a floatation device and a thermal liner;
- wet suits: to be used with a floatation device, traps and heats water against the body ;
- immersion suits: to be used in extreme conditions when abandoning a vessel (usually for off-shore use).

# Responding to Emergencies (continuation)

## Distress signals

The operator of a pleasure craft shall recognize, use or display the following signals to show distress and need of assistance.

### KNOW AND RECOGNIZE THEM!

- Arm signal: outstretch your arms on each side and do slow repetitive gestures from top to bottom. (Do not use this technique near a helicopter because this gesture does not mean the same thing to a helicopter pilot);
- Emergency position indicating radio beacons (EPIRB): this is used to signal an emergency location;
- Signal transmitted by radiotelephony or by any other signal system;
- S O S (...---...) in Morse code or possibly using a flashlight;
- A shot gun or other explosive signal may be fired at intervals of about 1 minute;
- A continuous sound with any fog-signalling device;
- Rockets or shells that shoot up red stars one at a time at short intervals;
- Use distress flags N and C from the International Code of Signals;
- A rocket parachute flare or hand flare shoots up a red light;
- A smoke signal that gives off orange coloured smoke;
- A piece of orange canvas with a black square and a black circle;
- A dye marker;
- A square shape;
- A high intensity white light flashed at regular intervals of 50 to 70 times per minute;
- A signal consisting of a square flag with a ball or anything resembling a ball.



## Identifying medical emergencies and taking appropriate action

### Hypothermia

Hypothermia is caused by an abnormal drop in the body temperature. It usually occurs when exposed to abnormally low temperatures **such as immersion in cold water, exposure to cool air in water-soaked clothing or prolonged exposure to low temperatures.** The degree of hypothermia may vary. Shivering and slurred speech, conscious but distracted at the early stages, slow and **weak pulse, slower breathing, lack of co-ordination**, irrational, confused and sleepy at the intermediate stage. At the final stage, the pulse or breathing may be weak, irregular or absent, and the person may lose consciousness.



**How to react? Start by getting the person out of the source of the cold. It is most important to get the person out of the source of cold**, while at the same time, protecting that person from the elements. Remove the person to the inside of the pleasure craft's cabin. If possible, remove the water-drenched clothing and put him/her in a sleeping bag or cover the person with wool blankets.

If possible, to prevent further loss of body heat, warm the person's body gradually by:

- replacing wet clothing with dry clothing;
- wrapping the person in blankets;
- placing dry coverings over the person;
- covering the person's head and neck;
- covering the person with an insulating device and vapour barrier;
- applying warm, dry objects (40 to 45°C).

Since there is a large amount of body heat loss in these areas, it is important to protect them by donning a cap or hat, and a scarf around the neck. Use or display signals to show distress and need of assistance, if necessary. **If the person asks, give him/her warm liquids but do not give the person alcohol or hot stimulants. Do not rub or massage the surface or extremities of the person's body since this will activate blood circulation and the cold blood from the extremities will return to the vital organs, possibly causing a heart attack.** The shock created by the flow of cold blood to the heart could cause this to happen.



# Responding to Emergencies (continuation)

## Cold-water shock

**Cold-water shock is the first stage of the sudden and unexpected immersion in a water temperature of 15 °C or lower, and occurs during the first minute of exposure.** Cold-water shock likely causes more deaths than hypothermia. Canada's substantially cold waters are especially dangerous when you fall into them unexpectedly. **A person may experience muscle spasms and hyperventilation, pulse and blood pressure may increase.** Sudden immersion into cold water may cause cardiac arrest, even for a healthy person.



The shock of the cold water can also cause an involuntary gasp reflex that can cause victims to swallow water and drown, even for a good swimmer. **Cold water can paralyze the muscles instantly. If you are wearing a lifejacket before falling into cold water, it will keep you afloat while you gain control of your breathing and prevent drowning from loss of muscle control.** Trying to grab a lifejacket while in the water, let alone putting one on, will be very hard because of the changes your body will be experiencing. People in cold-water shock should try not to panic and try to control their breathing.

## Carbon monoxide poisoning

Carbon monoxide poisoning **occurs when you breathe in too much carbon monoxide and it begins to replace the oxygen in your blood.** Without oxygen, cells throughout the body die, and the organs stop working. The main systems affected are the cardiovascular system and nervous system. We all know that carbon monoxide (CO) can be fatal. Hundreds of people, young and old, die from the fumes of this poison every year. The question is how to guard against this so-called "silent killer"?



Poisoning by carbon monoxide is difficult to diagnose. **Symptoms are similar to illnesses such as influenza, the onset of a cold or seasickness.**

- fatigue
- headaches
- vomiting
- shortness of breath
- nausea
- dizziness or fainting
- impaired judgment, confusion
- changes in seeing and hearing capacities

**When you suspect carbon monoxide poisoning, immediately taking the following steps can save lives:**

- Immediately move the victim to fresh air in an open area ;
- See a doctor immediately ;
- Call 911 or another local emergency number for immediate medical attention;
- Do not reboard the boat until you receive an expert opinion from a competent authority (ex: firefighters).

## Heat stroke

Heat stroke is also known as sunstroke. Heat stroke is a life-threatening emergency which requires immediate attention. It occurs mostly in the very young, or the elderly with health problems. Working or exercising in hot weather or hot conditions without drinking the necessary amounts of fluids is the main cause of heat stroke.



**Symptoms of heat stroke :**

- extremely high core temperature of up to 41°C (106°F)
- hot, red, dry skin
- rapid pulse
- rapid, shallow breathing
- headache
- confusion, strange behaviour
- possible fainting, but can be revived



High core temperatures damage the internal organs, especially the brain. The loss of bodily fluids can also produce dangerously low blood pressure. If you suspect someone has heat stroke, begin treating him/her immediately, while someone else calls 9-1-1. **You must do everything you can to cool the heat stroke victim immediately. The best way is to get them out of the sun, immerse the body in cold water, such as a river, stream, or bathtub.** Otherwise, remove most of their clothes, douse them with water, and fan them vigorously. Wrapping in wet sheets can help the body lose heat more quickly. If the person is conscious and alert, offer him or her water or other fluids. Avoid caffeine or alcoholic beverages because they dehydrate the body. The heatstroke victim should also be put in a cool place. Lay them down and give small sips of liquid every few minutes. "Sports" beverages (with no caffeine) are best, but water is often more readily available. You should watch carefully for signs of deterioration, but there's no need to rush to a hospital for a normal case of heat stroke.

# Summary of safety equipment requirements by boat type and length

The following is a list of the safety equipment that every boat must have on board, depending on the length of the boat. The boat's operator must ensure that all the equipment is on board. The safety equipment carried on board must be in good working order, maintained according to the manufacturer's instructions, and readily available in case of emergency. Remember that all the fire extinguishers must be fully charged.

## Non-powered vessels

All human-powered pleasure craft require onboard:

- One (1) lifejacket or PFD for each person on board
- One (1) reboarding device, only required if the vertical height to be climbed to reboard the boat from the water is over 0.5 m (1'8").
- If the non-powered vessel is longer than 6m, a watertight flashlight and six flares other than smoke signals should be added.\*\*\*
- One (1) buoyant heaving line at least 15 m (49'3") long
- One (1) bailer or manual bilge pump \*
- One (1) sound-signalling device or appliance that meets the applicable standards set out in the Collision Regulations
- One (1) magnetic compass \*\*
- One (1) watertight flashlight
- Six (6) Canadian-approved flares of Type A (Rocket Parachute), B (Multi-Star) or C (Hand)\*\*\*
- Navigation lights that meet the requirements set out in the Collision Regulations\*\*\*\*

\*A bailer or manual bilge pump is not required for a pleasure craft that cannot hold enough water to make it capsize or a pleasure craft that has watertight compartments that are sealed and not readily accessible.

\*\*A magnetic compass is not required if the pleasure craft is 8 m (26'3") or less and is operated within sight of seamarks (navigation marks).

\*\*\* Flares are not required for a boat that:

- a) is operating on a river, canal or lake in which it can never be more than one (1) nautical mile (1.852 km) from shore
- b) has no sleeping quarters and is engaged in an official competition or in final preparation for an official competition

\*\*\*\* Navigation lights are only required if the pleasure craft is operated after sunset, before sunrise, or in periods of restricted visibility (fog, falling snow, etc.). For a human-powered vessel, this requirement can be met with a watertight flashlight.



## Paddleboats, watercycles, sealed-hull and sit-on-top kayaks

Paddleboats, watercycles, sealed-hull and sit-on-top kayaks, the operator wearing a lifejacket or PFD need the following safety equipment:

- a) One (1) sound-signalling device or appliance;
- b) One (1) watertight flashlight (only required if the boat is operated after sunset, before sunrise or in periods of restricted visibility (fog, falling snow, etc)).

Note: Under all other circumstances, the requirements for human-powered craft must be followed.



# Summary of safety equipment requirements by boat type and lenght (continuation)

## Small vessel other than the non-powered pleasure craft

Boat type and length ▼	Personal lifesaving apparatus ▼	Vessel Safety Equipment ▼	Visual Signals ▼	Navigation Equipment ▼	Fire-Fighting Equipment ▼
Sail and Power Boats up to 6 m (19'8") ▶	<ul style="list-style-type: none"><li>- One (1) lifejacket or PFD for each person on board</li><li>- One (1) buoyant heaving line at least 15 m (49'3") long</li><li>- * One (1) reboarding device</li></ul>	<ul style="list-style-type: none"><li>- One (1) manual propelling device <b>OR</b></li><li>- One (1) anchor and at least 15 m (49'3") of cable, rope or chain in any combination</li><li>- ** One (1) bailer or manual bilge pump</li></ul>	<p>If boat is equipped with a motor:</p> <ul style="list-style-type: none"><li>- One (1) watertight flash-light <b>OR</b></li><li>- *** Three (3) flares of Type A, B or C</li></ul>	<ul style="list-style-type: none"><li>- One (1) sound-signalling device or appliance</li><li>- Navigation lights (only required if the pleasure craft is operated after sunset, before sunrise, or in periods of restricted visibility (fog, falling snow, etc.)).</li></ul> <p>Note: Sailing vessels less than 7 m in length can meet this requirement with a watertight flashlight.</p> <ul style="list-style-type: none"><li>- ****One (1) magnetic compass</li><li>- *****One (1) radar reflector</li></ul>	<ul style="list-style-type: none"><li>- One (1) 5BC fire extinguisher if equipped with an inboard engine, a fixed fuel tank of any size, or a fuel-burning cooking, heating or refrigerating appliance</li></ul>

\* **Exception for reboarding device**  
The reboarding device is only required if the vertical height that must be climbed to reboard the boat from the water is over 0.5 m (1'8").

\*\* **Exception for Bailers and Manual Bilge Pumps**  
A bailer or manual bilge pump is not required for a boat that cannot hold enough water to make it capsize or a boat that has watertight compartments that are sealed and not readily accessible.

\*\*\* **Exception for Flares**  
Flares are not required for a boat that:

- is operating on a river, canal or lake in which it can never be more than one (1) nautical mile (1.852 km) from shore; or
- has no sleeping quarters and is engaged in an official competition or in final preparation for an official competition.

\*\*\*\* **Exception for magnetic compass**  
Not required if the boat is 8 m (26'3") or less, and operated within sight of navigation marks.

\*\*\*\*\* **Exception for radar reflectors**  
Radar reflectors are required for boats under 20 m (65'7") and boats that are built of mostly non-metallic materials. **A radar reflector is not required if:**

- the boat operates in limited traffic conditions, daylight and favourable environmental conditions, and where having a radar reflector is not essential to the boat's safety; or
- the small size of the boat or its operation away from radar navigation makes having a radar reflector impractical.

# Summary of safety equipment requirements by boat type and lenght (continuation)

## Small vessel other than the non-powered pleasure craft

Boat type and length ▼	Personal lifesaving apparatus ▼	Vessel Safety Equipment ▼	Visual Signals ▼	Navigation Equipment ▼	Fire-Fighting Equipment ▼
<b>Sail and Power Boats over 6 m and up to 9 m (19'8" – 29'6")</b> ▶	<ul style="list-style-type: none"><li>- One (1) lifejacket or PFD for each person on board</li><li>- One (1) buoyant heaving line at least 15 m (49'3") long <b>OR</b></li><li>- One (1) lifebuoy attached to a buoyant line at least 15 m (49'3") long</li><li>- *One (1) reboarding device</li></ul>	<ul style="list-style-type: none"><li>- One (1) manual propelling device <b>OR</b></li><li>- One (1) anchor and at least 15 m (49'3") of cable, rope or chain in any combination</li><li>- ** One (1) bailer or manual bilge pump</li></ul>	<ul style="list-style-type: none"><li>- One (1) watertight flash-light</li><li>- *** Six (6) flares of Type A, B or C</li></ul>	<ul style="list-style-type: none"><li>- One (1) sound-signalling device or appliance</li><li>- Navigation lights (only required if the pleasure craft is operated after sunset, before sunrise, or in periods of restricted visibility (fog, falling snow, etc.)).</li></ul> <p>Note: Sailing vessels less than 7 m in length can meet this requirement with a watertight flashlight.</p> <ul style="list-style-type: none"><li>- ****One (1) magnetic compass</li><li>- *****One (1) radar reflector</li></ul>	<ul style="list-style-type: none"><li>- One (1) 5BC fire extinguisher if equipped with a motor</li><li>- One (1) 5BC fire extinguisher if equipped with a fuel-burning cooking, heating or refrigerating appliance</li></ul>

\* **Exception for reboarding device**  
The reboarding device is only required if the vertical height that must be climbed to reboard the boat from the water is over 0.5 m (1'8").

\*\* **Exception for Bailers and Manual Bilge Pumps**  
A bailer or manual bilge pump is not required for a boat that cannot hold enough water to make it capsize or a boat that has watertight compartments that are sealed and not readily accessible.

\*\*\* **Exception for Flares**  
Flares **are not required for a boat that:**

- is operating on a river, canal or lake in which it can never be more than one (1) nautical mile (1.852 km) from shore; or
- has no sleeping quarters and is engaged in an official competition or in final preparation for an official competition.

\*\*\*\* **Exception for magnetic compass**  
Not required if the boat is 8 m (26'3") or less, and operated within sight of navigation marks.

\*\*\*\*\* **Exception for radar reflectors**  
Radar reflectors are required for boats under 20 m (65'7") and boats that are built of mostly non-metallic materials. **A radar reflector is not required if:**

- the boat operates in limited traffic conditions, daylight and favourable environmental conditions, and where having a radar reflector is not essential to the boat's safety; or
- the small size of the boat or its operation away from radar navigation makes having a radar reflector impractical.



# Summary of safety equipment requirements by boat type and lenght (continuation)

## Small vessel other than the non-powered pleasure craft

Boat type and length	Personal lifesaving apparatus	Vessel Safety Equipment	Visual Signals	Navigation Equipment	Fire-Fighting Equipment
Sail and Power Boats over 9 m and up to 12 m (29'6" 39'4")	<ul style="list-style-type: none"><li>- One (1) lifejacket or PFD for each person on board</li><li>- One (1) buoyant heaving line at least 15 m (49'3") long</li><li>- One (1) lifebuoy attached to a buoyant line at least 15 m (49'3") long</li><li>- *One (1) reboarding device</li></ul>	<ul style="list-style-type: none"><li>- One (1) anchor and at least 30 m (98'5") of cable, rope or chain in any combination</li><li>- One (1) manual bilge pump OR</li><li>- Bilge-pumping arrangements</li></ul>	<ul style="list-style-type: none"><li>- One (1) watertight flash-light</li><li>- *** Twelve (12) flares of Type A, B, C or D, not more than six (6) of which are of Type D</li></ul>	<ul style="list-style-type: none"><li>- One (1) sound-signalling device or appliance</li><li>- Navigation lights</li><li>- ****One (1) magnetic compass</li><li>- *****One (1) radar reflector</li></ul>	<ul style="list-style-type: none"><li>- One (1) 10BC fire extinguisher if equipped with a motor.</li><li>- One (1) 10BC fire extinguisher if equipped with a fuel-burning cooking, heating or refrigerating appliance.</li></ul>

\* **Exception for reboarding device**  
The reboarding device is only required if the vertical height that must be climbed to reboard the boat from the water is over 0.5 m (1'8").

\*\* **Exception for Bailers and Manual Bilge Pumps**  
A bailer or manual bilge pump is not required for a boat that cannot hold enough water to make it capsize or a boat that has watertight compartments that are sealed and not readily accessible.

\*\*\* **Exception for Flares**  
Flares are not required for a boat that:  
•• is operating on a river, canal or lake in which it can never be more than one (1) nautical mile (1.852 km) from shore; or  
•• has no sleeping quarters and is engaged in an official competition or in final preparation for an official competition.

\*\*\*\* **Exception for magnetic compass**  
Not required if the boat is 8 m (26'3") or less, and operated within sight of navigation marks.

\*\*\*\*\* **Exception for radar reflectors**  
Radar reflectors are required for boats under 20 m (65'7") and boats that are built of mostly non-metallic materials. A radar reflector is not required if:  
•• the boat operates in limited traffic conditions, daylight and favourable environmental conditions, and where having a radar reflector is not essential to the boat's safety; or  
•• the small size of the boat or its operation away from radar navigation makes having a radar reflector impractical.

# Summary of safety equipment requirements by boat type and lenght (continuation)

## Small vessel other than the non-powered pleasure craft

Boat type and length ▼	Personal lifesaving apparatus ▼	Vessel Safety Equipment ▼	Visual Signals ▼	Navigation Equipment ▼	Fire-Fighting Equipment ▼
<b>Sail and Power Boats over 12 m and up to 24 m (39'4" – 78'9")</b> ▶	<ul style="list-style-type: none"><li>- One (1) lifejacket or PFD for each person on board</li><li>- One (1) buoyant heaving line at least 15 m (49'3") long</li><li>- One (1) lifebuoy equipped with a self-igniting light or attached to a buoyant line at least 15 m (49'3") long</li><li>- *One (1) reboarding device</li></ul>	<ul style="list-style-type: none"><li>- One (1) anchor and at least 50 m (164'1") of cable, rope or chain in any combination</li><li>- Bilge-pumping arrangements</li></ul>	<ul style="list-style-type: none"><li>- One (1) watertight flash-light</li><li>- *** Twelve (12) flares of Type A, B, C or D, not more than six (6) of which are of Type D</li></ul>	<ul style="list-style-type: none"><li>- One (1) sound-signalling appliance that meets the applicable standards set out in the Collision Regulations.</li></ul> <p>Note: Pleasure craft over 20 m (65'7") in length require a whistle (horn), and a fitted bell.</p> <ul style="list-style-type: none"><li>- Navigation lights</li><li>- One (1) magnetic compass that meets the requirements set out in the Navigation Safety Regulations</li><li>- ***** One (1) radar reflector</li></ul>	<ul style="list-style-type: none"><li>- One (1) 10BC fire extinguisher at all of the following locations:<ul style="list-style-type: none"><li>- at each access to any space where a fuelburning cooking, heating or refrigerating appliance is fitted;</li><li>- at the entrance to any accommodation space; and</li><li>- at the entrance to the machinery space.</li></ul></li><li>- One (1) axe</li><li>- Two (2) buckets of at least 10 L each</li></ul>

\* **Exception for reboarding device**  
The reboarding device is only required if the vertical height that must be climbed to reboard the boat from the water is over 0.5 m (1'8").

\*\* **Exception for Bailers and Manual Bilge Pumps**  
A bailer or manual bilge pump is not required for a boat that cannot hold enough water to make it capsize or a boat that has watertight compartments that are sealed and not readily accessible.

\*\*\* **Exception for Flares**  
Flares are not required for a boat that:  
•• is operating on a river, canal or lake in which it can never be more than one (1) nautical mile (1.852 km) from shore; or  
•• has no sleeping quarters and is engaged in an official competition or in final preparation for an official competition.

\*\*\*\* **Exception for magnetic compass**  
Not required if the boat is 8 m (26'3") or less, and operated within sight of navigation marks.

\*\*\*\*\* **Exception for radar reflectors**  
Radar reflectors are required for boats under 20 m (65'7") and boats that are built of mostly non-metallic materials. A radar reflector is not required if:  
•• the boat operates in limited traffic conditions, daylight and favourable environmental conditions, and where having a radar reflector is not essential to the boat's safety; or  
•• the small size of the boat or its operation away from radar navigation makes having a radar reflector impractical.



# Summary of safety equipment requirements by boat type and lenght (continuation)

## Small vessel other than the non-powered pleasure craft

Boat type and length ▼	Personal lifesaving apparatus ▼	Vessel Safety Equipment ▼	Visual Signals ▼	Navigation Equipment ▼	Fire-Fighting Equipment ▼
<b>Sail and Power Boats over 24 m (78'9")</b> ▶	<ul style="list-style-type: none"><li>- One (1) lifejacket or PFD for each person on board</li><li>- One (1) buoyant heaving line at least 30 m (98'5") long</li><li>- Two (2) SOLAS lifebuoys, of which:<ul style="list-style-type: none"><li>- one (1) is attached to a buoyant line at least 30 m (98 '5") long; and</li><li>- one (1) is equipped with a self-igniting light.</li></ul></li><li>- Lifting harness with appropriate rigging</li><li>- *One (1) reboarding device</li></ul>	<ul style="list-style-type: none"><li>- One (1) anchor and at least 50 m (164'1") of cable, rope or chain in any combination</li><li>- Bilge-pumping arrangements</li></ul>	<ul style="list-style-type: none"><li>- One (1) watertight flash-light</li><li>- *** Twelve (12) flares of Type A, B, C or D, not more than six (6) of which are of Type D</li></ul>	<ul style="list-style-type: none"><li>- Sound-signalling appliances that meet the applicable standards set out in the Collision Regulations</li></ul> <p>Note: Pleasure craft over 20 m (65'7") in length require a whistle (horn), and a fitted bell.</p> <ul style="list-style-type: none"><li>- Navigation lights</li><li>- **** One (1) magnetic compass that meets the requirements set out in the Navigation Safety Regulations</li><li>- ***** One (1) radar reflector</li></ul>	<ul style="list-style-type: none"><li>- One (1) 10BC fire extinguisher at all of the following locations:<ul style="list-style-type: none"><li>- at each access to any space where a fuelburning cooking, heating or refrigerating appliance is fitted;</li><li>- at the entrance to any accommodation space; and</li><li>- at the entrance to the machinery space.</li></ul></li><li>- One (1) power-driven fire pump located outside the machinery space, with one fire hose and nozzle that can direct water into any part of the boat</li><li>- Two (2) axes</li><li>- Four (4) buckets</li></ul>

\* **Exception for reboarding device**  
The reboarding device is only required if the vertical height that must be climbed to reboard the boat from the water is over 0.5 m (1'8").

\*\* **Exception for Bailers and Manual Bilge Pumps**  
A bailer or manual bilge pump is not required for a boat that cannot hold enough water to make it capsize or a boat that has watertight compartments that are sealed and not readily accessible.

\*\*\* **Exception for Flares**  
Flares are not required for a boat that:  
•• is operating on a river, canal or lake in which it can never be more than one (1) nautical mile (1.852 km) from shore; or  
•• has no sleeping quarters and is engaged in an official competition or in final preparation for an official competition.

\*\*\*\* **Exception for magnetic compass**  
Not required if the boat is 8 m (26'3") or less, and operated within sight of navigation marks.

\*\*\*\*\* **Exception for radar reflectors**  
Radar reflectors are required for boats under 20 m (65'7") and boats that are built of mostly non-metallic materials. A radar reflector is not required if:  
•• the boat operates in limited traffic conditions, daylight and favourable environmental conditions, and where having a radar reflector is not essential to the boat's safety; or  
•• the small size of the boat or its operation away from radar navigation makes having a radar reflector impractical.

# Summary of safety equipment requirements by boat type and length (continuation)

## Small vessel other than the non-powered pleasure craft

### Personal Watercraft (PWC)

Personal Watercraft if operator is wearing a lifejacket or PFD, needs only the following safety equipment:

- One (1) sound-signalling device or appliance;
- One (1) watertight flashlight or Three (3) flares of Type A, B or C;
- One (1) magnetic compass if not sailing in sight of navigation marks;
- Navigation lights only required if the boat is operated after sunset, before sunrise or in periods of restricted visibility (fog, falling snow, etc.).

Note: Under all other circumstances, the safety equipment requirements for Sail and powered pleasure craft up to 6 m (19'8") must be followed.



### Sailboards and Kiteboards

Sailboards and Kiteboards: the operator wearing a lifejacket or PFD must have on board:

- One (1) sound-signalling device or apparatus;
- One (1) watertight flashlight (only required if the boat is operated after sunset, before sunrise or in periods of restricted visibility (fog, falling snow, etc)).

Note: Under all other circumstances, the safety equipment requirements for Sail and powered pleasure craft up to 6 m (19'8") must be followed.

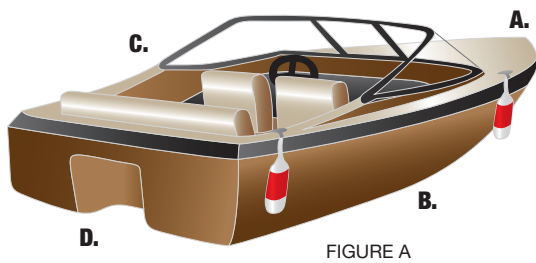




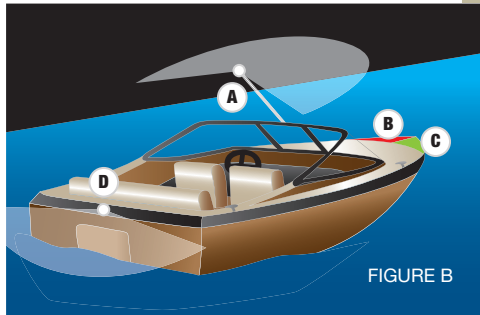
# Questions

See answers at bottom of page

- 1. I am a vessel propelled by machinery.
- 2. I represent the total weight of persons, gear, equipment, stores, fuel, motor assembly and steering controls.
- 3. One knot equals how many km/h?
- 4. «Strong winds» defines sustained wind speeds in the range of...
- 5. Which letter represents the bow in FIGURE A?
- 6. Which letter represents the starboard side of the boat in FIGURE A?
- 7. We are graphic representations depicting bodies of water.
- 8. We are maps of the land area depicting natural and artificial features of the land.



- 9. I help the operator of a pleasure craft find his/her direction.
- 10. I help the operator of a pleasure craft determine his/her position on the water.
- 11. I am the confirmation that the vessel is built in accordance with the construction requirements of the *Small Vessel Regulations*.
- 12. I am the serial number of the hull of your boat.
- 13. I am a document that you should give to a responsible person to help in search and rescue in case of distress and/or no return.
- 14. I am a danger to the craft and persons on board such as: rapids, underwater cables, gales and tides.
- 15. Which letter represents the starboard sidelight in FIGURE B?
- 16. Which letter represents the port-side sidelight in FIGURE B?



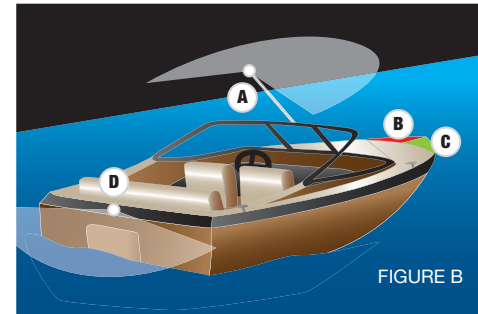
- |                                    |   |                    |
|------------------------------------|---|--------------------|
| 1. A power driven-vessel           | 7. Charts                               | 13. A trip plan    |
| 2. The maximum gross load capacity | 8. The topographical maps               | 14. A local danger |
| 3. 1,8 km/h                        | 9. The magnetic compass                 | 15. C              |
| 4. 20 to 33 knots                  | 10. The GPS (Global Positioning System) | 16. B              |
| 5. A                               | 11. The compliance notice               |                    |
| 6. B                               | 12. Hull Serial Number (HIN)            |                    |

## Questions (continuation)

See answers at bottom of page

17. Which letter represents the white light that projects a beam of 225 degrees toward the front of the boat in FIGURE B?

18. Which letter represents the light that projects a white light of 135 degrees towards the rear of the boat in FIGURE B?



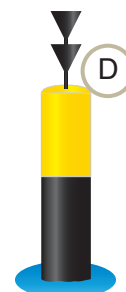
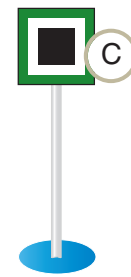
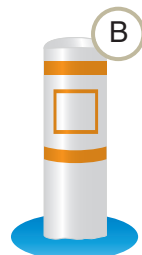
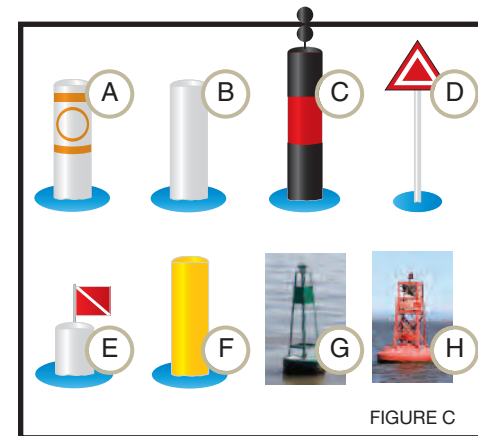
19. Which letter represents a cautionary buoy in FIGURE C?

20. Which letter represents a starboard hand buoy (found on the right side of the channel) in FIGURE C?

21. Which letter represents a swimming buoy in FIGURE C?

22. I'm the first stage of sudden immersion into cold water.

23. What are the names of these buoys and beacons?



24. At what age may we operate a personal watercraft (PWC)?

25. Children under 12, without direct supervision, may operate a boat up to how many hp?

26. Children under 16, without direct supervision, may operate a boat up to how many hp?

27. Is it mandatory to have a chart on board?

28. What should you do before using pyrotechnic distress flares?

29. Name the four types of flares that should be found on board your boat depending on its length and the area of operation.

30. What kind of fire does a class A fire extinguisher fight?

31. In which situation should small crafts travel in groups when possible?

17. A  
18. D  
19. F  
20. H  
21. B  
22. Cold-water shock  
23A. A keep out buoy

23B. An information buoy  
23C. A port hand daybeacon  
23D. A south cardinal buoy  
24. 16 years old  
25. 10hp  
26. 40hp

27. Not if the driver knows the dangers to navigation in the area on which he sails  
28. Read the manufacturer's instructions  
29. The rocket parachute flare, the multi-star flare, the hand flare and smoke signal  
30. Solid combustible (ex: wood, textiles, papers)  
31. When navigating within a narrow channel or fairway



# Questions (continuation)

See answers at bottom of page

32. What is the main purpose of the bucket?

33. What is the emergency channel on a VHF (Very High Frequency) radio?

34. What should you avoid with a compass?

35. Which light set-up should a power driven pleasure craft of less than 12 metres in length, underway display from sunset to sunrise?

36. Which light set-up should a power driven pleasure craft of more than 12 metres in length underway display from sunset to sunrise?

37. Which lights must a vessel under sail display from sunset to sunrise?

38. If you have priority over another vessel, what do you do?

39. What should you first do before setting out on the water?

40. If the boat capsizes, what action should you take?
41. How can we become familiar with our safety equipment?

42. What action should you take in an area where there are swimmers?

43. How many available places should there be in a boat towing a water skier?

44. How do I signal my presence to other vessels in restricted visibility?

45. Name five (5) distress signals.

46. What should the operator of a pleasure craft do when there is a leak in the hull?

47. Name three (3) things you should explain to your passengers when they go out on an excursion with you.

48. What type of boat is equipped with yellow lights?
32. Extinguish type A fires

33. Channel 16

34. Keep it away from metal objects

35. Starboard sidelight (green) and port sidelight (red) and an all-around (white) light.

36. Starboard sidelight (green) and port sidelight (red), masthead (white) that shines forward, and sternlight (white) that shines to the rear

37. Starboard sidelight (green) and port sidelight (red) and a sternlight (white)

38. I maintain my course and speed

39. Check the weather forecasts

40. I try to stay close to the boat and climb onto it if possible. I do not try to swim to shore

41. By practicing safety procedures

42. Keep well clear of these areas

43. At least three

44. By emitting sound signals

45. A continuous sound, flares, MAY DAY, distress flags N and C from the International Code of Signals, slow repetitive gestures from top to bottom with the arms

46. Stop the boat, use tools and materials to temporarily stop the leak and bail the accumulated water

47. Show them where the PFDs are, where the emergency kit is, and show them how to put on a PFD in the water

48. Tugboats

# Questions (continuation)

See answers at bottom of page

49. What type of boat is equipped with flashing blue lights?
50. In which situations should a boat operator slow his boat down?
51. Which piece of safety equipment must be on board if you are in a rowboat at night or sailing in poor visibility, in order to be seen by other boats?
52. How many PFDs should be on the boat?
53. By what organization must the PFDs be approved?
54. What do you do with a broken or torn PFD?
55. How long are flares valid for?
56. To whom should we leave the trip plan?
57. What do we call the loss of body heat in water?
58. The following symptoms are related to which condition: slow pulse, confusion, drowsiness?
59. What condition afflicts a person who experiences muscle spasms and hyperventilation, and whose pulse and blood pressure increase?
60. Name some symptoms of carbon monoxide poisoning?
61. Name some symptoms of heat stroke?
62. What should you do if there are problems with the boat?
63. What is the meaning of the blue and white flag of the International Code of Signals?
64. Name the navigation lights appearing in FIGURE B?
65. What do Aids to Navigation have in common?

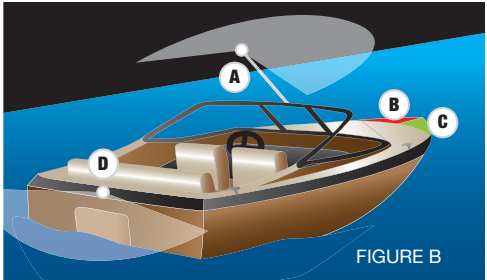


FIGURE B

49. Government vessels and/or boats operated by law enforcement officers
50. The type of boat, poor visibility, traffic on the water, bad weather
51. A watertight flashlight
52. 1 PFD per person
53. Transport Canada
54. You must throw it away
55. 4 years after the date of manufacture
56. To a responsible person
57. Hypothermia
58. Hypothermia
59. Cold-water shock
60. Nausea, headache, vomiting, dizziness
61. High body temperature, rapid pulse, headache
62. You should anchor the boat
63. I have a diver in the water
64. (A) masthead light, (B) port sidelight, (C) starboard sidelight (D) sternlight
65. All are systems or devices, external to a pleasure craft, which help to determine position and course

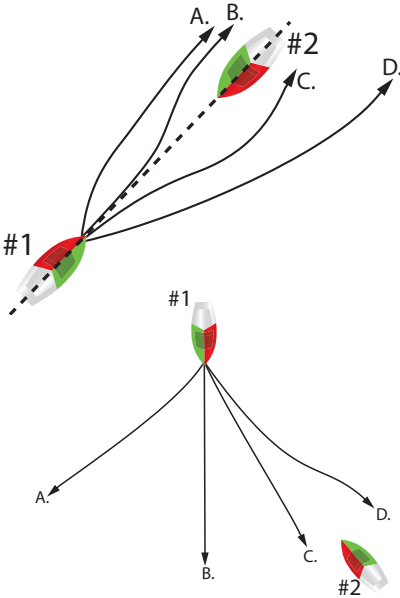


# Questions (continuation)

See answers at bottom of page

66. Which characteristic of the boat should be taken into account to determine the minimum safety equipment required on a pleasure craft?

67. Which route should power driven pleasure craft #1 take when approaching head to head with power driven pleasure craft #2?



68. Which route should power driven pleasure craft # 1 take when another boat is approaching on the port side?

69. When buying a used boat, the transfer of ownership on the pleasure craft licence must be made within how many days?

70. Which lights must a vessel at anchor display from sunset to sunrise?

- 66. The overall length of the pleasure craft
- 67. D
- 68. B
- 69. Up to 90 days
- 70. White light all-round

## TRUE OR FALSE

☐ ☐ 71. A power-driven vessel shall keep out of the way of a sailing vessel.

☐ ☐ 72. Starboard is the right side of a sailboat.

☐ ☐ 73. It is allowed to dump the waste from toilets in the water.

☐ ☐ 74. A vessel overtaking another vessel shall keep out of the way of the vessel being overtaken.

☐ ☐ 75. When two vessels meet head-to-head they must each keep to their right.

☐ ☐ 76. The minimum required length of a buoyant heaving line on a pleasure craft less than 24 meters is 15m.

☐ ☐ 77. A stand-on vessel shall maintain her course and speed.

☐ ☐ 78. A boat operator must keep watch by sight and sound at all times on the water.

☐ ☐ 79. It is prohibited for children between 8 and 12 years of age to drive a power boat.

☐ ☐ 80. MAY DAY should be used only in cases of extreme danger.

☐ ☐ 81. You must respect a speed limit of no more than 10km/hr if you navigate at less than 30 meters from the shoreline in Canadian waters.

☐ ☐ 82. I may operate a VHF radio without a licence.

☐ ☐ 83. The lifejacket must be adjusted to allow water to pass between it and your body.

☐ ☐ 84. Inflatable PFDs must be worn to be approved on an open boat.

- |           |          |           |           |          |
|-----------|----------|-----------|-----------|----------|
| 71. TRUE  | 74. TRUE | 77. TRUE  | 80. TRUE  | 83. TRUE |
| 72. TRUE  | 75. TRUE | 78. TRUE  | 81. TRUE  | 84. TRUE |
| 73. FALSE | 76. TRUE | 79. FALSE | 82. FALSE |          |

# Notes

Lined area for notes on page 106.

Lined area for notes on page 107.



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