



advantage  
boating 

## Section II: Gear and Equipment

# Lesson Outline



- Lesson objectives
- Introduction
- Required and recommended safety and emergency equipment
- Care and testing for PFDs
- Licensing and registration
- Conformity label
- Capacity plates
- Quiz

# Lesson Objectives



- In this lesson you will learn how to sail safely by understanding and following safety regulations and guidelines.
- You will also learn the Transport Canada requirements for safety and emergency equipment that must be on your boat.



The foundations of sailing are almost complete! In Module I you reviewed the terminology of sailing.

- Before you start to apply your learning on the water, you also need to understand the critical regulations and foundations of safety, including knowing what safety equipment is required for your boat.
- Knowing how to sail safely is extremely important!
- So let's begin!



- Sailing is a wonderful activity which is safe and enjoyable when regulations and safety guidelines, combined with common sense are followed.
- However, like any activity you need to know the potential risks and understand your responsibilities so that you can minimize your risk and maximize your enjoyment.
- This module provides new sailors with enough information and guidance to sail safely.

# Required Safety Equipment – 6 to 9 metres



One CCG (Transport Canada) approved PFD for each person on board of correct size



2

One buoyant heaving line of 15m OR life ring of 610 or 762 mm attached to 15m buoyant heaving line



3

One reboarding device if freeboard over .5 m



4

An anchor with 15m of rode or manual propelling device



5

One bailing bucket or manual bailing device



6

One 5 BC fire extinguisher (2 if fuel source for cooking on board)



7

One watertight flashlight



8

6 type A, B or C CCG approved flares



9

Sound signaling device or appliance



10

Navigation lights that meet the collision regulations requirements

# Sail Canada Recommended Equipment



## Safety equipment requirements for Sail and Power Boats over 6 m and up to 9 m (19'8" - 29'6")

Please note that there have been changes to the requirements for vessels regarding the radar reflector and the compass.

### Sail and Power Boats over 6 m and up to 9 m (19'8" - 29'6")

1. One (1) lifejacket or PFD for each person on board.
2. One (1) buoyant heaving line at least 15 m (49'3") long

OR

One (1) lifebuoy attached to a buoyant line at least 15 m (49'3") long

3. \*One (1) re-boarding device
4. One (1) manual propelling device

OR

One (1) anchor and at least 15 m (49'3") of cable, rope or chain in any combination

5. One (1) bailer or manual bilge pump
6. One (1) watertight flashlight
7. Six (6) flares of Type A, B or C
8. One (1) sound-signalling device or appliance
9. \*\*Navigation lights
10. \*\*\*One (1) magnetic compass

11. One (1) radar reflector (See Note 3) 12. One (1) 5BC fire extinguisher if equipped with a motor

12. One (1) 5BC fire extinguisher if equipped with a fuel-burning cooking, heating or refrigerating appliance

*\*Only required if the vertical height that must be climbed to re-board the boat from the water (freeboard) is over 0.5 m (1'8").*

*\*\*Only required if the boat is operated after sunset, before sunrise or in periods of restricted visibility (fog, falling snow, etc.).*

## Safety equipment requirements for Sail and Power Boats over 6 m and up to 9 m (19'8" - 29'6")

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

### Note 1 – 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.

### Note 2 – 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.

### Note 3 – 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 impracticable.

# Sail Canada Recommended Equipment



- Flashlight: A headlamp or personal light is handy and can be used as SOS signal - Don't forget a spare bulb and batteries!
- First Aid Kit: Make sure supplies are checked regularly. Include items for the type of sailing conditions expected.
- Tools & Spare Parts: Keep extras of critical parts. Good quality multi-tools are useful and also save space.



# Sail Canada Recommended Equipment



- **Softwood Plugs:** Should be attached to the thru hulls.
- **Safety Harness & Lanyard:** Used in high wind or wave conditions at night or when on deck alone to prevent you from falling overboard. Make sure it fits well and is stored properly to minimize exposure to fuel, bilge water and UV.

# Sail Canada Recommended Equipment



- Radar Reflector: Should be mounted at least 4m off the deck in rain catch position (In some cases now required for 6-9 metre boats).
- For small boats the sectional panel type radar reflector is most effective and it can be folded flat when not in use.

# Sail Canada Recommended Equipment



- **Emergency Steering:** Know where it is and how it works. Many boats have a very impractical setup so try it out before you need it and consider modifying for ease of use.
- **Navigation Charts & Equipment:** Should include large scale chart of your sailing area, Sailing Directions, Chart 1 (Symbols & abbreviations), Canadian Aids to Navigation, List of Lights & Buoys, Radio Aids to Marine Navigation, and The collision Regulations.

# Sail Canada Recommended Equipment



- VHF radio: Should have the capability to receive weather stations. Operator needs certification [ROC(M)] as it is a legal requirement.
- Compass: Must have a current deviation card (In some cases now required for 6-9 metre boats) . Deviation card should be checked every time new equipment is added.

# Sail Canada Recommended Equipment

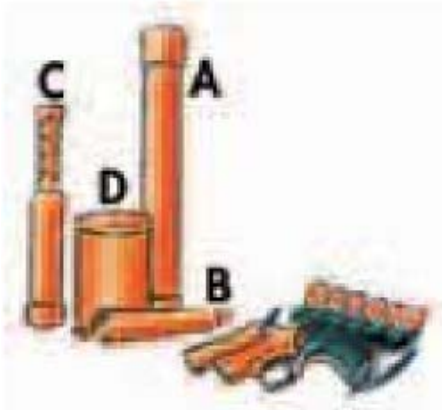


- Depth sounder or Leadline: Electronics are great, but the old fashioned leadline should work effectively too if the sailor knows how to use it.
- One qualified crewmember

# Distress Signals



- **Watertight flashlight:** Almost every boat requires a watertight flashlight or flares.



- **Flares:** Must be approved by Transport Canada. There are four types of approved pyrotechnics (A, B, C, D).

# Distress Signals



- Watertight flashlight: Almost every boat requires a watertight flashlight or flares. In the event of an electrical failure the watertight flashlight may be your only means of signaling for help.

# Distress Signals – Flare Requirements



- Vessels over 6 m up to 12 m are exempt from carrying pyrotechnic distress signals if:
- operating in a river, canal or lake in which it can at no time be more than one mile from shore;

**OR**

- engaged in an official competition or in final preparation for an official competition and have no sleeping arrangements.



# Distress Signals – Flare Requirements



- Examples of where flares are required:
  - vessels operating in any ocean
  - vessels operating in rivers that are navigable and empty into a body of water more than one mile from shore (examples: Fraser River, BC; Red River, MB; St. Mary's, St. Clair, Detroit, St. Lawrence Rivers, ON; St. Lawrence and Saguenay Rivers, QC; Saint John River, NB.)

# Important note about equipment...



- All gear should have a properly designated spot. Labeling the storage locations is also recommended.
- **ALL GEAR MUST BE MAINTAINED SO THAT IT FUNCTIONS PROPERLY AT ALL TIMES!**

# Care and testing of PFDs



- Treat your PFDs like an investment and take good care of them! Lifejackets that are ripped or in poor condition are not considered approved.
- Follow these tips to keep yours in good condition:
  - Check its buoyancy regularly in a pool or by wading out to waist-deep water and bending your knees to see how well you float.
  - Make sure that straps, buckles and zippers are clean and work well.
  - Tug on straps to make sure they are well attached and there is no sign of wear.
  - Dry the lifejacket in open air and avoid direct heat sources.
  - Store it in a dry, well-ventilated place where it is easy to reach.
  - Do not dry clean. Use mild soap and running water to clean.
  - Never sit or kneel on your lifejacket or use it as a fender for your boat.

# Summary



- By knowing critical safety regulations and making sure you have the right equipment, you can be prepared and take the necessary precautions to avoid catastrophe and injury.
- Above all, you learned that safety is your responsibility – you need to take rules and regulations seriously.

# Next Steps!



- In the next lesson, you will focus on learning important safety guidelines and how to avoid hazards.

# Let's practice!



- Complete the following quiz to test your knowledge of safety precautions and regulations.



- Find a partner and take five minutes to test yourself! Without looking at the presentation or your text, try to list all required safety equipment you should have on your boat.
- Review your list against the regulations and see what you missed.