Water Awareness and Charge Certificate Manual

Module 11: Canoe & Kayak Seaworthiness

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Contents

Revision History

Module Title		Comments	Rev No	Revision Date
Module 11:	Canoe and Kayak Seaworthiness	Initial Release	1.0	29 Jul 2011
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Outcomes

After completing this module, the certificate holder will:

- Be able to explain the concept of seaworthiness
- Be capable of inspecting a canoe or kayak and determining if it is seaworthy.
- Know the correct steps for storage and maintenance of canoes and kayaks

1 Seaworthiness

Before the charge holder allows the use of boats of any description for water activities, he or she must ensure that such boats are in a seaworthy condition, and therefore does not form part of the "pre accident" set of parameters which usually are the cause of "accidents".

Seaworthiness of a boat is a direct result of the quality of SEAMANSHIP practiced by person responsible for the boat.

Boats should be inspected before being allowed on the water and the following items are a basic guide to what to look for.

1.1 Kayaks

1.1.1 Hull Integrity

The hull of the kayak, whether made from plastic or from fiberglass, must be free of cracks and holes. There should not be any splits along the seam where the hull and deck are joined. Ensure the cockpit rim (if applicable) and seat are in good condition and firmly attached to the hull.

On older fiberglass kayaks, some seepage can be expected, but this should be so slow as to almost be invisible.

1.1.2 Buoyancy

Some types of kayaks come with integrated airtight buoyancy compartments. These should not have water in them at any time, if there is, the cause of the leak must first be ascertained and steps taken to correct the situation. Sometimes water gets in from ventilation hatches or bung plugs which have been left open to assist with air circulation, and obviously the fitting of tank bungs and hatch covers will form part of the seaworthiness checks.

Most kayaks are not supplied with any form of buoyancy and it is the responsibility of the paddler to ensure that sufficient buoyancy is fitted before the kayak is used. This can take the form of inflatable bags, plastic bottles or blocks of foam/styrene. The buoyancy must be firmly secured into the nose and tail so it does not become dislodged in the event of a capsize or during a portage

1.1.3 Footrest

The footrest is vital to the safe operation of the kayak and must always be present, correctly adjusted and firmly secured.

1.1.4 Rudder

Rudders can be take the form of over-stern or under-stern rudders. In scouting, you are most likely to encounter over-stern rudders.

The rudder assembly is fixed to the stern via a pin. The pin itself should also be secure to prevent it falling out during transport. The rudder assembly must be free to move from side to side. The rudder blade must be straight and free to move up and down in the rudder assembly

The rudder pedals must be fixed to the footrest. A cable attaches the pedals to the rudder assembly. The cable must not have any frayed sections and be routed through tunnels along the seams. The rudder should be adjusted to that when the pedals are evenly pressed, the rudder blade is in line with the long axis of the kayak.

1.2 Canoes

1.2.1 Buoyancy

In general the buoyancy in a canoe will take the form of an airtight compartment or compartments, formed either as integral components of the structure of the boat or as inflatable bags in the bow and stern.

Inflatable bags should be checked that they can maintain pressure after being pumped to the correct pressure. Inflatable bags should not be over inflated (especially in cold conditions such as early mornings), as there is a possibility that excessive pressures could be reached in the bags during the midday period if exposed to direct sunlight. Inflatable bags should not be under inflated as they can possibly slip out from their securing straps. Ensure that no sharp points can puncture the bags. Loose items should not be allowed to fall between the bags and the hull.

Built in compartments should not have water in them at any time, if there is, the cause of the leak must first be ascertained and steps taken to correct the situation. Sometimes water gets in from ventilation hatches or bung plugs which have been left open to assist with air circulation, and obviously the fitting of tank bungs and hatch covers will form part of the seaworthiness checks.

Most canoes, either of fibreglass or wooden construction will leak to some small degree, which may be deemed acceptable depending on circumstances.

1.2.2 Hull Braces

Open decked canoes require horizontal braces to stiffen the hull. Typically there are 2 braces approximately 1/3 of the length of the canoe from each end. These braces must be secure **and must not be used as seats.**

2 Boat maintenance and storage

2.1 Maintenance

Boats should be given regular preventative maintenance to ensure the points highlighted above do not endanger the users. In the event of damage, a skilled person should repair the boat as soon as possible.

Allowing the use of poorly maintained boats will increase the chance of problems occurring when the weather conditions deteriorate.

2.2 Storage

Boats should be stored with suitable weather covers if stored outside. Weather covers should not allow the formation of water puddles which can easily damage them. The covers must be fitted in such away as to allow for air movement underneath to assist with drying out of buoyancy compartments.

Boats must be stored such that any rainwater, or leak water must be able to drain out through bung holes or perhaps self bailers, particularly if they are wooden plywood boats.

Compartment covers should be removed to assist with airflow through the hull.

Boats must be stored on their correct dollies with the cradle support pressure being correctly distributed to the hull.

Long term storage of fibreglass and wooden boats on incorrect dollies or trailers will lead to hull distortions which can damage the hull permanently. Using life jackets to support boats is completely unacceptable.