

05 - Boat Handling

Competence (Skills)	Knowledge, Understanding and Proficiency	Level Required		Methods for Demonstrating Competence (Qualification Standard)	Criteria for Evaluating Competence (Performance Standard)
		Coxswain Captain	Crew		
Boat handling theory and techniques		RQ	RQ	<ul style="list-style-type: none"> • Describe the forces acting on a vessel while manoeuvring • List the terms, commands and signals related to manoeuvring a small vessel • Discuss the handling characteristics of a RHIB • Perform basic maneuvers with a twin screw vessel away from the dock • Perform berthing and un-berthing maneuvers • Perform coming alongside another vessel 	
Exhibit good boat handling skills		RQ	OPT	<ul style="list-style-type: none"> • Use single screw propulsion • Use asymmetric or opposed propulsion (twin-screw) • Manoeuvre the vessel forward in a straight line • Manoeuvre the vessel to the sides using the helm 	

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				<ul style="list-style-type: none"> • Stop the boat • Manoeuvre the boat backward • Manoeuvre a boat near other objects • Knowledge to manoeuvre the vessel for berthing, departure from the dock, navigation and anchoring • Knowledge of the vessel's turning circle and manoeuvring characteristics • As applicable, the effect of propellers, rudders, jets and outboard engines when moving ahead and astern and when manoeuvring • Effect of winds and currents when manoeuvring • Understand what constitutes a good anchorage • Know how to properly lower and set an anchor • Know the procedures for riding at 	

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	<ul style="list-style-type: none"> Each crewmember shall turn the vessel around a confined space. Use the throttles and helm to maintain station of a stationary spot. Apply the concept of pivot point in confined spaces allowing enough room for the vessel to swing in a given area. Keep control and awareness of speed, throttles and position of helm to execute a confined space manoeuvre. 			<p>anchor</p> <ul style="list-style-type: none"> Know how to properly weigh and stow the anchor <p>Each crewmember shall define the terms and explain the effect of:</p> <ul style="list-style-type: none"> Wind and current on manoeuvring. Pivot points in forward and reverse. Lever and advantage Transverse thrust Outside arc (for twin engine vessels) 	<p>Each crewmember shall apply the theory to successfully complete the skills.</p> <p>Given a familiar CCGA vessel, reasonable weather conditions, and a confined space (a square with dimensions 1.5 times the boat length or less), each crewmember shall take into account the wind and current and complete the manoeuvres listed in the skills standard. These skills shall be demonstrated at least once without damage to the vessel or other docks and/or vessels.</p>
Control of Vessel	<ul style="list-style-type: none"> Maintain control of the vessel at all times, and under all situations. Continually assess the situation and information flow to make determinations as to the risk level of the vessel, and take 	RQ	OPT	<ul style="list-style-type: none"> Understand the concepts of situational awareness. Understand how monitoring vessel & crew-situation status will assist with maintaining control. 	<p>Lead the crew and vessel through all situations with (full regard to the collision regulations, and the consideration of other traffic. Ensure that the vessel minimizes</p>

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	steps to mitigate or manage risks as they arise.				impact to shorelines, environment, marine mammals, sensitive waterways, and other traffic.
Steer the ship and comply with helm orders.	<p>Knowledge of:</p> <ul style="list-style-type: none"> • use of magnetic and gyro compasses; • helm orders. <p>Ensure that a safe navigational watch is maintained</p> <p>Ensure that a proper lookout is maintained</p>	RQ	RQ	<ul style="list-style-type: none"> • Explain the advantages and disadvantages of radar in RHIB • Operate the installed navigational equipment on a RHIB while underway • Describe the issues relating to maintaining a safe navigational watch • onboard a RHIB • Perform a safe navigational 	A steady course is steered within acceptable limits having regard to the area of navigation and prevailing sea state. Alterations of course are smooth and controlled. Communications are clear and concise at all times and orders are acknowledged in a seaman-like manner

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	<p>Navigate/operate in restricted visibility</p> <p>Navigate/operate in confined waters</p> <p>Navigate RHIBs at high speed</p>			<p>watch onboard a RHIB in an operational environment</p> <ul style="list-style-type: none"> • Value the importance of maintaining a proper lookout in RHIB operations • Perform a proper lookout onboard a RHIB while underway for an extended period • Describe the policies and procedures relating to navigation in restricted visibility • Describe the policies and procedures relating to navigation in confined waters • Operate a RHIB in confined waters • Acknowledge the importance of situational awareness at high speed • Demonstrate situational 	

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				awareness at high speed <ul style="list-style-type: none"> • Discuss high speed manoeuvring characteristics of RHIB • Demonstrate command and control in a high speed environment • Demonstrate an understanding of the uses and limitations of electronic navigational equipment at high speed • Apply principles of passage planning to high speed vessels • Discuss human resource issues relevant to high speed operations • Operate a RHIB at high speed for an extended period 	
Launch and Recovery (From trailer)	Demonstrate the ability to explain the vessel launch and recovery system. Each crew will be able to plan for and brief the crew to carry out a launch or recovery of the vessel. During the launch or recovery the steps will be controlled and guided by the coxswain/crew so that the boat is successfully launched or recovered.	RQ	RQ	The steps to launch and recover shall be listed along with the commands and signals. All hazards shall be identified. Critical inspection points will be listed along with suspected weakness or wear points on the launching system.	Launching will be carried out in a smooth and controlled manner where fluent communication and teamwork are emphasized.

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Start-up and Departure	<p>Given a familiar vessel and reasonable weather conditions each crewmember shall safely start the vessel following all the steps outlined.</p> <p>Each crewmember shall safely and effectively use controlled and planned throttle and helm movements to pull away from the dock.</p>	RQ	RQ	Each crewmember will list the steps to start their vessel. Each crewmember shall describe the dangers involved when missing steps in a pre-departure check and safe start up.	
Depart and come alongside a moving vessel	<p>Ability to:</p> <ul style="list-style-type: none"> • approach, pace, come alongside another vessel while it is underway. 	RQ	OPT		Preparation, boarding, launching and operation of fast rescue boats are within equipment limitations.
Planning Trim Angle and Power Ratio	<ul style="list-style-type: none"> • Each crewmember shall warn the crew of intent to accelerate and safely bring the vessel up onto a plane. Each crewmember will trim engines or trim tabs to vessel's optimum performance for the given RPM and speed. • Each crewmember shall avoid a floating object seen last minute while traveling on a plane. 	RQ	OPT	<ul style="list-style-type: none"> • Each crewmember shall define and explain the terms: • Trim, welled surface, chine hopping, purposing. • Each crewmember shall explain the effects of: • Under trim (trimmed in) • Over trim (trimmed out) • Each crewmember shall describe the steps involved in a high-speed avoidance manoeuvre. 	Given a familiar vessel and reasonable weather conditions each crewmember shall warn the crew of intent to accelerate and bring the vessel safely onto a plane. Each crewmember will trim engines or trim tabs to vessel's optimum performance given RPM and speed.
Shallow Water and Unknown Shore Approach	Before approaching an unknown shore or shallow-confined waters the crewmembers	RQ	OPT	Each crewmember will list the steps to prepare a vessel for the shallows and	Vessel operators will proceed slowly with extreme caution when

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	shall conduct a SAP assessment and assign the roles of forward look out, depth sounder, and navigation watch. Commands and signals shall be stated and acknowledged before the approach.			confined water approach. They will list the commands and signals as well as identify signs of shallow water or isolated shoals/rocks.	approaching unknown waters. If there are any doubts from the crew the vessel will be stopped and position and charts will be checked.
Navigation in Heavy Weather	Each vessel operator will be able to control the vessel in heavy weather by balancing speed with safety and comfort. The boat will be trimmed according to conditions and heading so that the bow does not rise too high or slay too low when making way in head seas or stern seas. The driver will use throttles and steering to effectively reduce excessive pitching or rolling.	OPT	OPT	<ul style="list-style-type: none"> • Evaluate the hazards associated with heavy weather operations for RHIB • Explain heavy weather precautions and procedures in small vessels • Describe precautions to be taken prior to engaging in heavy weather operations • Describe wave theory • Apply wave theory as it relates to RHIB operations • Operate a RHIB in heavy weather • Perform a recovery of person from water in heavy weather • Vessel operators will be able to recognize dangerous conditions such as: surf, breaking, shallow bars or reefs, extreme wind, high 	<ul style="list-style-type: none"> • Operate in heavy weather Operators will conduct the vessel in a manner that emphasizes crew safety over speed of response. • The operator will routinely slow down to check the crew's safety and fatigue during a rough weather transit. • Each operator will know the limitations of the vessel as well as his or her own driving skill. • A coxswain will not hesitate to refuse a JRCC tasking on the basis of these limitations being exceeded.

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				<p>current and standing waves.</p> <ul style="list-style-type: none"> • These conditions will be avoided either by steering clear of the danger or turning back from the mission. 	
Docking	<p>Knowledge of:</p> <ul style="list-style-type: none"> • Approach slowly and come alongside a dock and bring the vessel to a complete stop. • Compensate for wind and current when approaching. • Enter a dock stem first and dock with using the wheel. • Mooring of a vessel and related seamanship work 	RQ	RQ	<p>Each crewmember will explain the effects of wind and current when coming alongside a vessel or docking.</p> <ul style="list-style-type: none"> • Understand the role of ropes, lines, knots and splices in the marine industry • Explain the different construction methods and properties and limitations of synthetic and natural ropes • List the names of the common 	<p>Given a familiar vessel, and reasonable weather conditions each crewmember shall take into account the wind and current and bring the vessel parallel to the dock and to a complete stop. The vessel shall be no more than 0.5 of a metre away from the dock for a period of 10 seconds.</p> <ul style="list-style-type: none"> • Crewmembers will consistently assess and adjust on scene conditions and developing situations with regards to a slow courteous controlled approach when manoeuvring or docking. • Maneuver the vessel with

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				mooring lines and how to properly secure a vessel to a dock (floating and non-floating wharves) <ul style="list-style-type: none"> • Understand the role and when to use fenders • Demonstrate basic knots, bends and hitches 	awareness of public perception professionalism and composure.
Mooring and Securing a Vessel	The crewmember should know the five mooring lines and their purpose. Given a familiar vessel with a minimum of three mooring lines, each crewmember will demonstrate the habits listed in the skill section through exercises like anchoring, towing, and tying up.	RQ	RQ	Each crewmember will identify the following five lines: <ul style="list-style-type: none"> • Bowline • Forward spring line • Breast line • After spring • Stern line 	