



Australian Government

Australian Maritime Safety Authority

Coxswain Grade 1 Near Coastal

Skills and Knowledge
Required for Marine Order 505
(Certificates of competency
— national law) 2022



TABLE OF CONTENTS

The tables in this document are taken directly from AMSA 730 Skills and Knowledge Required for Marine Order 505 (Certificates of competency — national law) 2022. Only those tables specific to this certificate of competency are included in this document.

TABLE 2	ELEMENTS OF SHIPBOARD SAFETY	5
TABLE 3	FOLLOW SOUND ENVIRONMENTAL WORK PRACTICES	5
TABLE 5A	BASIC ENGINEERING – (PROPULSION LIMITS – OUTBOARD UNLIMITED KW, INBOARD <100 KW)	6
TABLE 5B	COXSWAIN ENGINEERING – (INBOARD PROPULSION SYSTEMS <500 KW)	7
TABLE 6	NAUTICAL KNOWLEDGE (SEAMANSHIP, MANOEUVRING, REGULATIONS)	8
TABLE 7	NAVIGATION AND NAVIGATIONAL EMERGENCIES	10

TABLE 2 – ELEMENTS OF SHIPBOARD SAFETY

Coxswain Grade 1 Near Coastal

Outcome	Content	Standards for evaluating competence
<p>Elements of Shipboard Safety</p> <p>Safety and emergencies including survival craft</p>	<p>Meet operational and emergency safety requirements</p> <ul style="list-style-type: none"> Apply basic survival skills in the event of vessel abandonment Follow procedures to minimise and fight fire on a vessel Meet workplace WHS requirements Survive at sea using survival craft 	<ul style="list-style-type: none"> Practice survival techniques Operate lifesaving and survival equipment Undertake and understand risk management processes including Safety Management System (SMS) operational practices Follow work, health and safety procedures and take action Understand and follow fire minimisation procedures Respond to and fight fires with portable and other firefighting appliances including correct use of vessel closure and shutdown systems Identify and respond to risks associated with confined spaces Practice survival techniques using survival craft

TABLE 3 – FOLLOW SOUND ENVIRONMENTAL WORK PRACTICES

Coxswain Grade 1 Near Coastal

Outcome	Content	Standards for evaluating competence
<p>Environment</p> <p>Follow environmental work practices</p>	<p>Environmental Responsibilities</p> <ul style="list-style-type: none"> Follow environmental workplace practices Contribute to improved environmental work practices Maintain environmental records Precautions to prevent pollution Sensitive sea and restricted sea areas MARPOL Oil spill equipment and its limitations 	<ul style="list-style-type: none"> Identify safe and environmentally acceptable practices for: <ul style="list-style-type: none"> Refuelling Cleaning up fuel or oil spills Understanding garbage, sewage, noise, anchoring or marine life and other environmental type maritime responsibilities Antipollution procedures and equipment

TABLE 5A – BASIC ENGINEERING

(PROPULSION LIMITS – OUTBOARD UNLIMITED KW, INBOARD <100 KW)

Coxswain Grade 1 Near Coastal

Outcome	Content	Standards for evaluating competence
<p>Outcome 5.1 a Perform basic scheduled and running maintenance on outboard and inboard engines and ancillary deck equipment</p>	<ul style="list-style-type: none"> • Steering gear • Ancillary deck equipment • Cooling, lubrication and fuel systems • Bilge pumping arrangements • Monitoring machinery • Report and record machinery malfunction • Low voltage (12V to 24V) electrical systems • Conduct refuelling operations • Comply with emergency shutdown procedures 	<ul style="list-style-type: none"> • Appropriate selection and use of machinery and equipment • Maintenance is undertaken in accordance with the technical specifications, maintenance schedules, vessel operating procedures and regulatory requirements, under the supervision of appropriately qualified personnel • Apply safety precautions and pollution control measures during refuelling as per legislative requirements and vessel operating procedures • Maintenance is undertaken according to safe and environmentally acceptable practices as per vessel or manufacturers procedures • Identify, report and record faults
<p>Outcome 5.2 a Operate inboard and outboard engines</p>	<ul style="list-style-type: none"> • Operate propulsion units and auxiliary systems • Perform pre-start, running and shut-down checks • Inspect the fuel systems appropriate to basic inboard and outboard engines • Safely inspect low voltage electrical systems appropriate to basic inboard and outboard engines • Identify, record and report inboard and outboard operating difficulties 	<ul style="list-style-type: none"> • Operate inboard and outboard engines according to vessel or manufacturers' procedures • Ensure fuel, electrical, steering, propulsion and cooling systems operate effectively and faults can be identified and reported • Trouble shoot faults with navigation lights • Trouble shoot faults with trailer lights • Risks associated with portable fuel tanks • Risks associated with road transport of fuel and oil (trailer boats)

TABLE 5B – COXSWAIN ENGINEERING

(INBOARD PROPULSION SYSTEMS <500 KW)

Coxswain Grade 1

Outcome	Content	Standards for evaluating competence
<p>Outcome 5.1a</p> <p>Operate main propulsion unit and auxiliary systems</p>	<p>Engineering</p> <ul style="list-style-type: none"> • Operate propulsion units and auxiliary systems • Basic operating principles of two- and four-stroke engines • Perform pre-start and shut down checks on petrol, diesel engines • Drive train assembly • Steering gear • Ancillary equipment • Cooling, lubricating and fuel systems • Bilge and fire pumping arrangements • Monitoring machinery • Machinery malfunction • Electrical systems (12 V – 240 V) • Liquid petroleum gas (LPG) • Basic refrigeration • Conduct refuelling operations • Shore power connection – an awareness of hazards • Comply with emergency shut-down procedures 	<ul style="list-style-type: none"> • Operate equipment, machinery, pumping and auxiliary equipment adhering to principles and practices as described in manufacturers' specifications, manuals and vessel operating procedures to ensure vessel is kept in a safe condition • Maintain equipment and pumps according to vessel and/or manufacturers' maintenance requirements • Apply safety precautions and pollution prevention measures during refuelling according to legislative requirements, suppliers' requirements and vessel operating procedures • Operate machinery according to vessel or manufacturers' procedures • Identify and report faults with main propulsion unit and auxiliary systems • Identify and rectify basic faults with main propulsion unit and auxiliary
<p>Outcome 5.1b</p> <p>Perform basic servicing and maintenance of main propulsion unit and auxiliary systems</p>	<ul style="list-style-type: none"> • Bilge and fire pumping systems • Cooling, lubricating and fuel systems • Steering gear • Low Voltage electrical systems • Shore power leads and connections • 2- and 4-stroke engines • Monitoring machinery • Drive chain assembly 	<ul style="list-style-type: none"> • Appropriate selection and use of machinery and equipment • Maintenance is arranged and undertaken in accordance with the technical specifications, maintenance schedules, vessel operating procedures and regulatory requirements • Maintenance is undertaken according to safe and environmentally acceptable practices

TABLE 6 – NAUTICAL KNOWLEDGE (SEAMANSHIP, MANOEUVRING, REGULATIONS)

Coxswain Grade 1 Near Coastal

Outcome	Content	Standards for evaluating competence
<p>Outcome 6.1 Handle a vessel up to 12 metres</p>	<p>Vessel Handling and Manoeuvring</p> <ul style="list-style-type: none"> • Operate a small vessel • Handle a vessel in emergencies • Tow and be towed • Displacement and planning hulls • Understanding of jet units, outboard and inboard propulsion units • Effects of rudders and propellers • Trim and displacement • Manoeuvring characteristics • Berthing and unberthing in various wind and tidal conditions • Anchoring • Manoeuvres in adverse weather conditions • Manoeuvre vessel in various operations and in varying conditions 	<ul style="list-style-type: none"> • Demonstrate knowledge of the features of a vessel, which relate to handling characteristics and compliance with current maritime publications or accepted procedures • Demonstrate techniques to manoeuvre the vessel through: <ul style="list-style-type: none"> - Berthing and leaving a berth - Berthing and unberthing in a pen - Person overboard - Coming to and leaving a mooring - Steering astern through an “s” configuration - Turn short around in a limited space - Towing and being towed - Beaching and refloating safely - Turn a vessel across the tide across the wind • Demonstrate knowledge of the techniques for crossing a coastal bar with and against the sea
<p>Outcome 6.2 Apply seamanship skills aboard a vessel up to 12 metres</p>	<p>Practical Seamanship</p> <ul style="list-style-type: none"> • Identify and demonstrate knowledge • Use and maintain ropes • Secure the vessel at anchor • Secure the vessel at a berth • Check condition and seaworthiness of vessel • Knowledge of structural components and material of a small vessel • Basic stability • Respond to navigational emergencies 	<ul style="list-style-type: none"> • Demonstrate knowledge of various types of hull • Identify deteriorated hull and fittings and understand the reason for the deterioration • Identify rope types and common uses • Tie common knots such as reef knot, bowline, sheet bend, clove hitch, round turn and 2 half hitches and understand their use • Eye splice a fibre/synthetic rope end join two ends complying with the rope manufacturer’s recommendations • Whip an end • Rig a vessel for towing and the towed vessel according to established procedures for varying weather conditions • Prepare and anchor a vessel in varying weather conditions • Weigh anchor • Rig a sea anchor to control rate and direction of drift and/or angle to sea • Use a sea anchor to prevent broaching • Understanding of loading and discharging and movement of weight/s • Take appropriate action in relation to navigational emergencies within sheltered waters

Outcome	Content	Standards for evaluating competence
<p>Outcome 6.3 Comply with regulations to ensure safe operation of a vessel up to 12 metres</p>	<p>Regulations and Port Operations</p> <ul style="list-style-type: none"> • Comply with the International Regulations for the Prevention of Collision at Sea (IRPCS) • Understand and comply with IALA buoyage requirements • Understand the basic operation of risk assessments and safety management systems (SMS) • Maintain records • Understand Commonwealth, State and local regulations 	<ul style="list-style-type: none"> • Identify and implement local, State, Commonwealth and Territory regulations • Apply the duties and responsibility of the Master as per national and international requirements • Undertake watchkeeping duties in compliance with national and international requirements • Apply the International Regulations for the Prevention of Collision at Sea (as amended) • Understand and apply SMS, safety management plans, standard and emergency operating procedures • Understand and comply with the requirements for crew inductions

TABLE 7 – NAVIGATION AND NAVIGATIONAL EMERGENCIES

Coxswain Grade 1 Near Coastal

Outcome	Content	Standards for evaluating competence
<p>Outcome 7.1 Respond to emergency situations</p>	<p>Emergency and Safety Procedures</p> <ul style="list-style-type: none"> • Knowledge of small vessel stability and stability terms • Disabled vessel • Collision, grounding • Person overboard • Heavy weather • Beaching • Cyclone activity in the area 	<ul style="list-style-type: none"> • Respond to emergencies in accordance with vessel procedures and acceptable maritime practices • Use current maritime publications relevant to a 12m vessel
<p>Outcome 7.2 Collect and assess weather forecasts</p>	<p>Meteorology</p> <ul style="list-style-type: none"> • Basic meteorological terms • Sources of weather reports and warnings • Local weather • Cyclone and storm tracking, recording, alerts and warnings 	<ul style="list-style-type: none"> • Obtain weather information applicable to an intended voyage • Apply weather information during voyage planning and explain expected weather patterns • Utilise information for passage planning and navigation • Relate information in forecasts to conditions expected for small vessels
<p>Outcome 7.3 Use navigational information and techniques to conduct a safe passage</p>	<ul style="list-style-type: none"> • Navigation and Local Knowledge • Chart information (symbols and abbreviations) • Coastal features • Dangers to navigation • Compass • Basic pilotage techniques • Speed, distance and time calculations • Use of tide tables • Electronic aids and their limitations 	<ul style="list-style-type: none"> • Navigate the vessel through a pre-planned route with consideration to : <ul style="list-style-type: none"> - Fuel consumption - Courses to steer between turning points - Compliance with all navigational buoys, marks and beacons - Identification and avoidance of navigational hazards • Plot the position derived from GPS • Understand dangers of reliance on use of GPS in coastal areas • Plot visual bearings on a chart to derive a position • Steer a pre-planned course • Apply the International Regulations for the Prevention of Collision at Sea (as amended) • Relationship between degrees and minutes of latitude, with nautical miles are established • Identify the times and heights of high and low water tide tables • Explain the impact of tidal range on chart depths • Use of electronic aids could include but not limited to: GPS, chart plotters, AIS, RADAR, depth sounders, communication systems

