Coxswain Grade 1
Near Coastal
and
Coxswain Grade 1
(Restricted to 100 Kw inboard powered vessels)
Near Coastal

Skills and Knowledge Required for NSCV Certificates of Competency

PART D CREW COMPETENCIES
TABLE OF CONTENTS

The tables in this document are taken directly from AMSA 730 Skills and Knowledge Required for NSCV Certificates of Competency Part D Crew Competencies. Only those tables specific to this certificate of competency are included in this document.

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>TABLE 2</td>
<td>ELEMENTS OF SHIPBOARD SAFETY</td>
<td>5</td>
</tr>
<tr>
<td>TABLE 3</td>
<td>FOLLOW SOUND ENVIRONMENTAL WORK PRACTICES</td>
<td>5</td>
</tr>
<tr>
<td>TABLE 5A</td>
<td>BASIC ENGINEERING – (PROPULSION LIMITS – OUTBOARD UNLIMITED KW, INBOARD &lt;100 KW)</td>
<td>6</td>
</tr>
<tr>
<td>TABLE 5B</td>
<td>COXSWAIN ENGINEERING – (INBOARD PROPULSION SYSTEMS &lt;500 KW)</td>
<td>7</td>
</tr>
<tr>
<td>TABLE 6</td>
<td>NAUTICAL KNOWLEDGE (SEAMANSHIP, MANOEUVRING, REGULATIONS)</td>
<td>8</td>
</tr>
<tr>
<td>TABLE 7</td>
<td>NAVIGATION AND NAVIGATIONAL EMERGENCIES</td>
<td>10</td>
</tr>
</tbody>
</table>
### TABLE 2 – ELEMENTS OF SHIPBOARD SAFETY

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Content</th>
<th>Standards for evaluating competence</th>
</tr>
</thead>
</table>
| Elements of Shipboard Safety | Meet operational and emergency safety requirements | • Practice survival techniques  
• Operate lifesaving and survival equipment  
• Undertake and understand risk management processes including Safety Management System (SMS) operational practices  
• Follow 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 |
| Safety and emergencies including survival craft | • Apply basic survival skills in the event of vessel abandonment  
• Follow procedures to minimise and fight fire on a vessel  
• Meet workplace OHS requirements  
• Survive at sea using survival craft |

### TABLE 3 – FOLLOW SOUND ENVIRONMENTAL WORK PRACTICES

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Content</th>
<th>Standards for evaluating competence</th>
</tr>
</thead>
</table>
| Environment | Environmental Responsibilities | • Identify safe and environmentally acceptable practices for:  
- 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 |
| Follow environmental work practices | • 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 |
### TABLE 5A – BASIC ENGINEERING

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

Coxswain Grade 1 Near Coastal and Coxswain Grade 1 (Restricted to 100 kW inboard powered vessels)

<table>
<thead>
<tr>
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<th>Content</th>
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</tr>
</thead>
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| **Outcome 5.1 a**  
Perform basic scheduled and running maintenance on outboard and inboard engines and ancillary deck equipment |  
• 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 |  
• 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 |

| **Outcome 5.2 a**  
Operate inboard and outboard engines |  
• 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 |  
• 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) |
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<thead>
<tr>
<th>Outcome</th>
<th>Content</th>
<th>Standards for evaluating competence</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Outcome 5.1 b</strong>&lt;br&gt;Operate main propulsion unit and auxiliary systems</td>
<td><strong>Engineering</strong>&lt;br&gt;• Operate propulsion units and auxiliary systems&lt;br&gt;• Basic operating principles of two- and four-stroke engines&lt;br&gt;• Perform pre-start and shut down checks on petrol, diesel engines&lt;br&gt;• Drive train assembly&lt;br&gt;• Steering gear&lt;br&gt;• Ancillary equipment&lt;br&gt;• Cooling, lubricating and fuel systems&lt;br&gt;• Bilge and fire pumping arrangements&lt;br&gt;• Monitoring machinery&lt;br&gt;• Machinery malfunction&lt;br&gt;• Electrical systems (12 V – 240 V)&lt;br&gt;• Liquid petroleum gas (LPG)&lt;br&gt;• Basic refrigeration&lt;br&gt;• Conduct refuelling operations&lt;br&gt;• Shore power connection – an awareness of hazards&lt;br&gt;• Comply with emergency shut-down procedures</td>
<td>• 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&lt;br&gt;• Maintain equipment and pumps according to vessel and/or manufacturers’ maintenance requirements&lt;br&gt;• Apply safety precautions and pollution prevention measures during refuelling according to legislative requirements, suppliers’ requirements and vessel operating procedures&lt;br&gt;• Operate machinery according to vessel or manufacturers’ procedures&lt;br&gt;• Identify and report faults with main propulsion unit and auxiliary systems&lt;br&gt;• Identify and rectify basic faults with main propulsion unit and auxiliary systems</td>
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<td><strong>Outcome 5.2 b</strong>&lt;br&gt;Perform basic servicing and maintenance of main propulsion unit and auxiliary systems</td>
<td>• Bilge and fire pumping systems&lt;br&gt;• Cooling, lubricating and fuel systems&lt;br&gt;• Steering gear&lt;br&gt;• Low Voltage electrical systems&lt;br&gt;• Shore power leads and connections&lt;br&gt;• 2- and 4-stroke engines&lt;br&gt;• Monitoring machinery&lt;br&gt;• Drive chain assembly</td>
<td>• Appropriate selection and use of machinery and equipment&lt;br&gt;• Maintenance is arranged and undertaken in accordance with the technical specifications, maintenance schedules, vessel operating procedures and regulatory requirements&lt;br&gt;• Maintenance is undertaken according to safe and environmentally acceptable practices</td>
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</tbody>
</table>
### TABLE 6 – NAUTICAL KNOWLEDGE
(SEAMANSHIP, MANOEUVRING, REGULATIONS)
Coxswain Grade 1 Near Coastal and Coxswain Grade 1 (Restricted to 100 kW inboard powered vessels)

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<thead>
<tr>
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<th>Content</th>
<th>Standards for evaluating competence</th>
</tr>
</thead>
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<tr>
<td><strong>Outcome 6.1</strong>&lt;br&gt;Handle a vessel up to 12 metres</td>
<td><strong>Vessel Handling and Manoeuvring</strong>&lt;br&gt;- Operate a small vessel&lt;br&gt;- Handle a vessel in emergencies&lt;br&gt;- Tow and be towed&lt;br&gt;- Displacement and planning hulls&lt;br&gt;- Understanding of jet units, outboard and inboard propulsion units&lt;br&gt;- Effects of rudders and propellers&lt;br&gt;- Trim and displacement&lt;br&gt;- Manoeuvring characteristics&lt;br&gt;- Berthing and unberthing in various wind and tidal conditions&lt;br&gt;- Anchoring&lt;br&gt;- Manoeuvres in adverse weather conditions&lt;br&gt;- Manoeuvre vessel in various operations and in varying conditions</td>
<td>• Demonstrate knowledge of the features of a vessel, which relate to handling characteristics and compliance with current maritime publications or accepted procedures&lt;br&gt;• Demonstrate techniques to manoeuvre the vessel through:&lt;br&gt;  - Berthing and leaving a berth&lt;br&gt;  - Berthing and unberthing in a pen&lt;br&gt;  - Person overboard&lt;br&gt;  - Coming to and leaving a mooring&lt;br&gt;  - Steering astern through an “s” configuration&lt;br&gt;  - Turn short around in a limited space&lt;br&gt;  - Towing and being towed&lt;br&gt;  - Beaching and refloating safely&lt;br&gt;  - Turn a vessel across the tide across the wind&lt;br&gt;• Demonstrate knowledge of the techniques for crossing a coastal bar with and against the sea</td>
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<td><strong>Outcome 6.2</strong>&lt;br&gt;Apply seamanship skills aboard a vessel up to 12 metres</td>
<td><strong>Practical Seamanship</strong>&lt;br&gt;- Identify and demonstrate knowledge&lt;br&gt;- Use and maintain ropes&lt;br&gt;- Secure the vessel at anchor&lt;br&gt;- Secure the vessel at a berth&lt;br&gt;- Check condition and seaworthiness of vessel&lt;br&gt;- Knowledge of structural components and material of a small vessel&lt;br&gt;- Basic stability&lt;br&gt;- Respond to navigational emergencies</td>
<td>• Demonstrate knowledge of various types of hull&lt;br&gt;• Identify deteriorated hull and fittings and understand the reason for the deterioration&lt;br&gt;• Identify rope types and common uses&lt;br&gt;• Tie common knots such as reef knot, bowline, sheet bend, clove hitch, round turn and 2 half hitches and understand their use&lt;br&gt;• Eye splice a fibre/synthetic rope end join two ends complying with the rope manufacturer’s recommendations&lt;br&gt;• Whip an end&lt;br&gt;• Rig a vessel for towing and the towed vessel according to established procedures for varying weather conditions&lt;br&gt;• Prepare and anchor a vessel in varying weather conditions&lt;br&gt;• Weigh anchor&lt;br&gt;• Rig a sea anchor to control rate and direction of drift and/or angle to sea&lt;br&gt;• Use a sea anchor to prevent broaching&lt;br&gt;• Understanding of loading and discharging and movement of weight/s&lt;br&gt;• Take appropriate action in relation to navigational emergencies within sheltered waters</td>
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<tr>
<td>Outcome 6.3</td>
<td>Regulations and Port Operations</td>
<td>Standards for evaluating competence</td>
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| Comply with regulations to ensure safe operation of a vessel up to 12 metres | • 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 | • 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 and Coxswain Grade 1 (Restricted to 100 kW inboard powered vessels)

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Content</th>
<th>Standards for evaluating competence</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Outcome 7.1</strong>&lt;br&gt;Respond to emergency situations</td>
<td><strong>Emergency and Safety Procedures</strong>&lt;br&gt;- Knowledge of small vessel stability and stability terms&lt;br&gt;- Disabled vessel&lt;br&gt;- Collision, grounding&lt;br&gt;- Person overboard&lt;br&gt;- Heavy weather&lt;br&gt;- Beaching&lt;br&gt;- Cyclone activity in the area</td>
<td>• Respond to emergencies in accordance with vessel procedures and acceptable maritime practices&lt;br&gt;• Use current maritime publications relevant to a 12m vessel</td>
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<td><strong>Outcome 7.2</strong>&lt;br&gt;Collect and assess weather forecasts</td>
<td><strong>Meteorology</strong>&lt;br&gt;- Basic meteorological terms&lt;br&gt;- Sources of weather reports and warnings&lt;br&gt;- Local weather&lt;br&gt;- Cyclone and storm tracking, recording, alerts and warnings</td>
<td>• Obtain weather information applicable to an intended voyage&lt;br&gt;• Apply weather information during voyage planning and explain expected weather patterns&lt;br&gt;• Utilise information for passage planning and navigation&lt;br&gt;• Relate information in forecasts to conditions expected for small vessels</td>
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<td><strong>Outcome 7.3</strong>&lt;br&gt;Use navigational information and techniques to conduct a safe passage</td>
<td>• Navigation and Local Knowledge&lt;br&gt;• Chart information (symbols and abbreviations)&lt;br&gt;• Coastal features&lt;br&gt;• Dangers to navigation&lt;br&gt;• Compass&lt;br&gt;• Basic pilotage techniques&lt;br&gt;• Speed, distance and time calculations&lt;br&gt;• Use of tide tables&lt;br&gt;• Electronic aids and their limitations</td>
<td>• Navigate the vessel through a pre-planned route with consideration to:&lt;br&gt;  - Fuel consumption&lt;br&gt;  - Courses to steer between turning points&lt;br&gt;  - Compliance with all navigational buoys, marks and beacons&lt;br&gt;  - Identification and avoidance of navigational hazards&lt;br&gt;• Plot the position derived from GPS&lt;br&gt;• Understand dangers of reliance on use of GPS in coastal areas&lt;br&gt;• Plot visual bearings on a chart to derive a position&lt;br&gt;• Steer a pre-planned course&lt;br&gt;• Apply the International Regulations for the Prevention of Collision at Sea (as amended)&lt;br&gt;• Relationship between degrees and minutes of latitude, with nautical miles are established&lt;br&gt;• Identify the times and heights of high and low water tide tables&lt;br&gt;• Explain the impact of tidal range on chart depths&lt;br&gt;• Use of electronic aids could include but not limited to: GPS, chart plotters, AIS, RADAR, depth sounders, communication systems</td>
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