



BC Forest Safety

Marine Package

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Version Control

Version includes date and control number. Comment section lists a summary of changes from previous version.

Version		Comments
2024-07-24	v. 1.0	Final draft
2024-08-06	v. 1.1	Updated address

In consultation with industry subject matter experts, the BC Forest Safety Council (BCFSC) facilitated the production of this material.

Printed copies are considered uncontrolled and may be outdated. Current versions are available from the BCFSC.

Feedback is welcome and may be sent to training@bcforestsafe.org.



Industry Toolbox

A package is the foundation document for an occupation or group of related occupations. The package provides the framework for the occupation(s) and includes:

- Occupational Analysis Chart and descriptions.
- Units of Competency which specify in terms of outcomes what is required to work effectively to a standard required by industry and regulations where applicable.

The purpose of the above documentation and process is to provide industry with a 'toolbox' that will support training and assessment of workers in the relevant occupations.

Occupation Descriptions

The following occupation(s) are part of this package:

- Small Passenger Vessel Operator
- Boom Boat Operator

Small Passenger Vessel Operator

Small commercial passenger vessels are used to transport workers and supplies to remote locations that are generally without road access. It is defined as less than 5 gross tonnes and 12 passengers or less.

A small commercial passenger vessel operator's working environment includes lakes, rivers, and coastal waters. Conditions often include working in isolation with limited direction or supervision, and limited communication. Work is year-round including in inclement weather conditions.

The operator is responsible for the safe operation of the vessel and the safety of the passengers. Work is governed by regulations. Operators may commute long distances or stay in remote camps. They may be self-employed, employees or contractors.

Operating the vessel is often a subset of other forestry occupations.

Boom Boat Operator

A boom boat is used to move log bundles from one point to another by river, ocean, or waterway. A boom boat can also be used to sort logs by species or mill requirements.



Occupational Analysis Chart

This Master OAC outlines the scope of the marine vessel occupations in the forest industry and shows the correlation between the following occupations and their competencies:

1. Small Passenger Vessel (SP)

2. Boom Boat (BB)

OCCUPATIONAL SKILLS A	Describe and Apply Workplace Attributes 1008	Describe Regulations, Legislation and Certifications – Marine Vessels 1091	Describe Marine Vessel Navigation, Systems, and Safety 1136	Describe Boom Boats 1140
	BB SP	BB SP	BB SP	BB SP
OPERATE VESSELS B	Operate Boom Boat 1137	Describe and Operate Small Passenger Vessel 1141		
	BB	SP		



Standards/Guidelines

	General Forestry occupational Skills
	Units that apply to this package

Units of Competency define, in terms of outcomes, the skills, knowledge and attributes required to perform effectively in the workplace. They inform the development of any assessment or evidence requirement and the learning resources.



Unit	1008
Title	Describe and Apply Workplace Attributes
Document	Unit of Competency

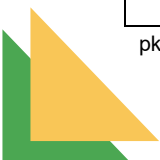
Description	<p>This is a knowledge and ability unit about:</p> <ul style="list-style-type: none"> • Professionalism; • Safe Productivity; and • Physical and Mental Well-Being.
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Regulatory Requirements	<p>It is always the responsibility of any person using these materials to inform him/herself about the Occupational Health and Safety Regulations related to the work being conducted. A full list of OHSR related to this unit can be found in the relevant package.</p>
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Prerequisite(s)	<p>This unit has the following prerequisites for fallers:</p> <ul style="list-style-type: none"> • 1002 – Describe Forest Industry; or • 1033 – Describe Wildfire Preparedness; or • 1034 – Describe Oil and Gas Industry.
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Occupations	<p>This unit is a component of the following occupations:</p> <ul style="list-style-type: none"> • Bucker – Forest Industry, Wildfire Service, Oil and Gas Industry • Faller – Forest Industry, Wildfire Service, Oil and Gas Industry • All Forestry occupations where applicable.
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Element	Competence Outcomes
1. Professionalism	<p>1.1. Describe why it is important to be prepared and demonstrate ability to arrive at work prepared for the task and the day.</p> <p>Work prepared for the task and the day may include:</p> <ul style="list-style-type: none"> • Task specific PPE, additional nutrition and hydration, change of clothes, task specific equipment, and site or work specific paperwork. <p>Be prepared may include:</p> <ul style="list-style-type: none"> • Minimize operational delays, for safety, avoid being rushed, attend safety meetings, ensure tools and equipment are in working order, pre-trips. <p>1.2. Describe how to effectively deal with problems.</p> <p>Problems may include:</p> <ul style="list-style-type: none"> • Personal and interpersonal problems, problems as a result of changing work conditions. <p>1.3. Give and receive constructive feedback.</p> <p>1.4. Explain why it is important to have a good work ethic.</p> <p>Good work ethic may include:</p> <ul style="list-style-type: none"> • Self-respect/pride, respect for others/others respect for you, meet workplace expectations, deliver good product, minimize down time.
2. Safe Productivity	<p>2.1. Demonstrate ability to work in an organized manner within specific worksite requirements.</p> <p>Organized manner may include:</p> <ul style="list-style-type: none"> • Teamwork, predictability, work progressively. <p>2.2. Demonstrate ability to achieve outcomes while maintaining safe work practices.</p>
3. Physical and Mental Well-Being	<p>3.1. Explain why and demonstrate ability to be fit for work.</p> <p>Fit for work must include:</p> <ul style="list-style-type: none"> • Self-awareness, recognition of personal limitations, impairment, drugs, alcohol, nutrition, eating right. <p>3.2. Describe physical conditions that can affect ability to perform</p>



Element	Competence Outcomes
	<p>job and how to mitigate them.</p> <p>Physical conditions may include:</p> <ul style="list-style-type: none"> • Dehydration, frostbite, hypothermia, heat stress, fatigue/exhaustion, injuries. <p>3.3. Describe mental conditions that can affect ability to perform job and how to mitigate them.</p> <p>Mental conditions may include:</p> <ul style="list-style-type: none"> • Mental fatigue, personal problems/emotions, over/lack confidence, sleep deprivation, anger, lack of trust, depression, money stress, family stress, interpersonal behavior, bullying, aggression, target or production fixation, peer pressure, unsafe behavior of others.

Summary of Knowledge and Skills

Summary of Knowledge to be Assessed	<p>For this unit, a competent worker must understand:</p> <ul style="list-style-type: none"> • The importance of arriving at work prepared and on time • How to effectively deal with problems • Why constructive criticism is important • Importance of good work ethic • How to work in an organized manner • Importance of achieving outcomes • Physical conditions that affect work • Mental conditions that affect work.
Summary of Skills to be Assessed	<p>For this unit a competent worker must be able to:</p> <ul style="list-style-type: none"> • Be fit for work • Manage time and productivity including: <ul style="list-style-type: none"> ○ Planning, scheduling and prioritizing of time ○ Working under self-motivation or limited supervision ○ Having a positive hard-working ethic.



	<ul style="list-style-type: none"> • Achieve outcomes.
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General Forestry Assessment Guide

General Information	<p>Competence outcomes requiring “knowledge of” can be assessed through competency conversations or written assessment. Evidence should be on record showing the outcomes have been met.</p> <p>Competence outcomes requiring “ability to” or skills must have evidence on record demonstrating competence multiple times in a variety of contexts and may be holistically assessed with relevant work activities.</p> <ul style="list-style-type: none"> • Training modules are available for this unit. • Training audit/competency check tool is available for this unit. • A competency conversation is available for this unit. • *Skills to be assessed or “ability to” for this unit are holistically assessed with the summative practical tool.
Evidence to be Assessed	<p>Minimum evidence requirements for this unit must include:</p> <ul style="list-style-type: none"> • Completion of training module and formative assessments. • Completion of competency conversation where applicable. • All required “skills to be assessed” demonstrated multiple times in a variety of contexts. Valid evidence must be on record through training audit/competency check tool.
Evidence Sign Off	<p>Evidence must be signed off by designated:</p> <ul style="list-style-type: none"> • Trainer • Assessor • Supervisor. <p>Final evidence sign off for Certificates of Qualification is the responsibility of the Quality Assurance – Internal and External Verifiers, a function of the relevant administrator.</p>



Unit	1091
Title	Describe Regulations, Legislation and Certifications – Marine Vessels
Document	Unit of Competency

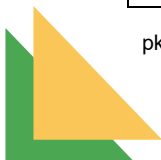
Description	<p>This is a knowledge and ability unit about:</p> <ul style="list-style-type: none"> • Regulations; • Legislation • Certifications; and • Vessel Registration.
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Regulatory Requirements	<p>It is always the responsibility of any person using these materials to inform him/herself about the Occupational Health and Safety Regulations related to the work being conducted. A full list of OHSR related to this unit can be found in the relevant package.</p>
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Prerequisite(s)	<p>This unit has the following prerequisites:</p> <ul style="list-style-type: none"> • There are no pre-requisites for this unit.
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Occupations	<p>This unit is a component of the following occupations:</p> <ul style="list-style-type: none"> • Small Passenger Vessel Operator • Boom Boat Operator.
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Element of Competence	Competence Outcomes
1. Regulations and Legislation	<p>1.1. Describe Transport Canada Regulations.</p> <p>Transport Canada Regulations must include:</p> <ul style="list-style-type: none"> • Collision regulations (safe crossing situations, right of way protocol, lights, sound signals) • Small commercial vessel regulations and standards. <p>1.2. Describe the right and obligation to refuse unsafe work.</p> <p>1.3. Describe the WorkSafeBC regulations related to operating a vessel</p> <p>WorkSafeBC Regulations must include:</p> <ul style="list-style-type: none"> • 17.17, 17.18, 17.22 – 17.26 • Compliance, safety standards, vessel operation. Communication, vessel preparation, maintenance and inspection, anti-skid covering, lighting.
2. Certifications	<p>2.1. Describe certifications required to operate a small commercial marine vessel.</p> <p>Certifications must include:</p> <ul style="list-style-type: none"> • SVOP proficiency (Small Vessel Operator Proficiency) • Marine first aid ticket with marine transport endorsement, Radio Operator Certificate - Marine commercial) (ROC-MC), First Aid level 1 with transport endorsement. <p>Certifications may include:</p> <ul style="list-style-type: none"> • Marine emergency duties A3. <p>Certifications for Boom Boat must include:</p> <ul style="list-style-type: none"> • SVOP proficiency (Small Vessel Operator Proficiency), Small domestic vessel basic safety, Radio Operator Certificate – Marine Commercial (ROC-M) if VHF on board, Marine First Aid with transportation endorsement.



Element of Competence	Competence Outcomes
3. Vessel Registration	3.1. Describe vessel registration requirements . Vessel registration requirements must include: <ul style="list-style-type: none"> • Type of vessel, size (tonnage and length), vessel use (commercial vs. personal) number of passengers, voyage classification (area of operation).

Summary of Knowledge and Skills

Summary of Knowledge to be Assessed	For this unit, a competent worker must understand: <ul style="list-style-type: none"> • Transport Canada Regulations • Right and obligation to refuse unsafe work • WorkSafeBC regulations related to marine vessels • Certifications required to operate a passenger vessel • Vessel registration requirements.
Summary of Skills to be Assessed	For this unit a competent worker must be able to: <ul style="list-style-type: none"> • This is a knowledge only unit.



Marine Assessment Guide

General Information	<p>Competence outcomes requiring “knowledge of” can be assessed through competency conversations or written assessment. Evidence must be on record of competence achieved.</p> <ul style="list-style-type: none">• Training modules are available for this unit.• Competency conversations are available for this unit.
Evidence to be Assessed	<p>Minimum evidence requirements for this unit must include:</p> <ul style="list-style-type: none">• Completion of training module and formative assessments.• Completion of competency conversation where applicable.
Evidence Sign Off	<p>Evidence must be signed off by designated:</p> <ul style="list-style-type: none">• Trainer• Assessor• Supervisor.



Unit	1136
Title	Describe Marine Vessel Navigation, Systems and Safety
Document	Unit of Competency

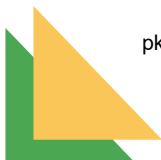
Description	<p>This is a knowledge and ability unit about:</p> <ul style="list-style-type: none"> • Small Commercial Marine Vessels; • Navigations and Systems; and • Safety related to Operating a Small Passenger Vessel or Boom Boat.
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Regulatory Requirements	<p>It is always the responsibility of any person using these materials to inform him/herself about the Occupational Health and Safety Regulations related to the work being conducted. A full list of OHSR related to this unit can be found in the relevant package.</p>
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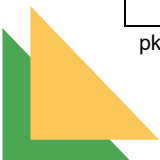
Prerequisite(s)	<p>This unit has the following prerequisites:</p> <ul style="list-style-type: none"> • There are no pre-requisites for this unit.
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Occupations	<p>This unit is a component of the following occupations:</p> <ul style="list-style-type: none"> • Small Vessel Passenger Operator • Boom Boat Operator.
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Element of Competence	Competence Outcomes
1. Small Commercial Marine Vessels	<p>1.1. Explain recommended personal supplies when operating a small commercial marine vessel.</p> <p>Recommended personal supplies may include:</p> <ul style="list-style-type: none"> • Sunglasses, reading glasses, food, water, PPE, appropriate clothing, change of clothing <p>1.2. Describe documentation and requirements associated with use.</p> <p>Documentation for Small Passenger Vessel may include:</p> <ul style="list-style-type: none"> • Logbook – how to fill out, engine hour meter readings (where applicable), fuel, departure and arrival times, destination, and number of passengers • Voyage plan <p>Documentation for Boom Boat may include:</p> <ul style="list-style-type: none"> • Time card – how to fill out, service checklist, safety inspection, start up and shut down times (
2. Navigation and Systems	<p>2.1. Describe aids to navigation</p> <p>Aids to Navigation on a Small Passenger Vessel must include:</p> <ul style="list-style-type: none"> • Compass, Radar, GPS, plotter, sounder, Automatic Information System (AIS), communication devices (radio), paper marine chart. <p>Aids to Navigation on a Boom Boat must include:</p> <ul style="list-style-type: none"> • Communication device, compass.
3. Safety	<p>3.1. Describe basic safety and emergency equipment, operation and deployment on a small commercial marine vessel.</p> <p>Basic safety and emergency equipment on a Small</p>



Element of Competence	Competence Outcomes
	<p>Passenger Vessel must include:</p> <p style="padding-left: 40px;">Fire extinguisher, life jackets (TC approved), flares man overboard float, heaving line, sound device (whistle, air horn), waterproof flashlight, anchor and rhode, bailing device, life rafts, re-boarding device</p> <p>3.2. Recognize, evaluate, and control hazards relate to operating a small commercial marine vessel.</p> <p>Hazards may include:</p> <ul style="list-style-type: none"> • Striking object in water, striking land, collision with another vessel, weather, mechanical failures, passengers who will not remain seated or in designated areas, unruly or impaired passengers, shifting cargo, overhead, pinch, marine wildlife, other vessels, getting lost. <p>3.3. Describe how to respond to an emergency situations on other vessels including limitations and response.</p> <p>Respond must include:</p> <ul style="list-style-type: none"> • Mayday or pan pan • Requirement to aid a vessel in distress • Not putting crew or passengers at risk <p>3.4. Describe environmental and external conditions that affect vessel operation and safe transit times.</p> <p>Environmental and external conditions must include:</p> <ul style="list-style-type: none"> • Tides, currents, winds, weather (fog, precipitation (rain and snow), wind speed and direction), daylight, safe transit time in restricted passages • Location and depth of obstacles or obstructions • Marine wildlife • Other marine vessels. <p>3.5. List factors that may impact vessel stability.</p>



Element of Competence	Competence Outcomes
	<p>Factors may include:</p> <ul style="list-style-type: none"> • Secure cargo to prevent movement, distribution of cargo, total weight of vessel including fuel, crew members, passenger and cargo. • Weather, water trapped on deck, sea conditions, boar design

Summary of Knowledge and Skills

Summary of Knowledge to be Assessed	<p>For this unit, a competent worker must understand:</p> <ul style="list-style-type: none"> • Personal supplies required on a marine vessel • Documentation • Aids to navigation • Basic safety and emergency equipment • How to recognize, evaluate and control hazards • External and environmental conditions that affect vessel operations • Factors that affect vessel stability.
Summary of Skills to be Assessed	<p>For this unit a competent worker must be able to:</p> <ul style="list-style-type: none"> • This is a knowledge only unit



Marine Assessment Guide

General Information	<p>Competence outcomes requiring “knowledge of” can be assessed through competency conversations or written assessment. Evidence must be on record of competence achieved.</p> <ul style="list-style-type: none">• Training modules are available for this unit.• Competency conversations are available for this unit.
Evidence to be Assessed	<p>Minimum evidence requirements for this unit must include:</p> <ul style="list-style-type: none">• Completion of training module and formative assessments.• Completion of competency conversation where applicable.
Evidence Sign Off	<p>Evidence must be signed off by designated:</p> <ul style="list-style-type: none">• Trainer• Assessor• Supervisor.



Unit	1140
Title	Describe Boom Boats
Document	Unit of Competency

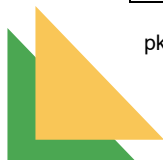
Description	<p>This is a knowledge and ability unit about:</p> <ul style="list-style-type: none"> • Safety; • Planning and Documentation; and • Boat Operations.
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Regulatory Requirements	<p>It is always the responsibility of any person using these materials to inform him/herself about the Occupational Health and Safety Regulations related to the work being conducted. A full list of OHSR related to this unit can be found in the relevant package.</p>
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Prerequisite(s)	<p>This unit has the following prerequisites:</p> <ul style="list-style-type: none"> • 1008 – Describe and Apply Workplace Attributes • 1091 – Describe Regulations, Legislation and Certifications related to Marine Vessels • 1136 – Describe Marine Vessel, Navigation, Systems, and Safety
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Occupations	<p>This unit is a component of the following occupations:</p> <ul style="list-style-type: none"> • Boom Boat Operator.
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Element of Competence	Competence Outcomes
1. Safety	<p>1.1. Describe requirements for working in confined spaces. Working in combined spaces must include:</p> <ul style="list-style-type: none"> • Hazard assessment, pre-entry testing and inspection. <p>1.2. Describe lock out procedures for marine vessels. Lock out must include:</p> <ul style="list-style-type: none"> • De-energized and tagged at battery disconnect
2. Planning and Documentation	<p>2.1. Explain pre-work meeting requirements. Pre-work meeting requirements must include:</p> <ul style="list-style-type: none"> • Operating condition of vessel, hazard assessment, location of personal safety equipment, lifesaving equipment, roles and responsibilities, work plan for day/project, check in procedures, ERP. <p>2.2. Explain basic elements of an emergency response plan and basic components. Basic elements of an ERP must include:</p> <ul style="list-style-type: none"> • Who to contact in an emergency, how to contact them, how to request a higher level of support <p>Basic components of an ERP may include:</p> <ul style="list-style-type: none"> • Contact numbers or radio channel/frequency, designated First Aid, Location of nearest hospitals, Helicopter landing coordinates, muster points/staging area, emergency communication protocols, location of emergency equipment and First Aid, Specific coordinates to location
3. Boat operation	<p>3.1. Describe safe work procedures for operating boom boats. Safe Work Procedures may include:</p> <ul style="list-style-type: none"> • Emergency procedures, refueling procedures, check in procedures, confined space procedures, lock out procedures, three-point contact procedures, securement procedures for deck equipment (tow line, swifter wires, ropes, boom chains)



Element of Competence	Competence Outcomes
	<p>3.2. Describe hazards related to assisting barges and float handling.</p> <p>Hazards may include:</p> <ul style="list-style-type: none"> • Don't be attached to the barge, run over by barge, pulled under by barge, contact and no contact points on barge, pinch points, poor visibility, under powered, unsecured gear, slips, trips, falls, sudden movement, uncovered or unguarded hatches, icing, falling overboard, weather, overhead bundles, gun barrels, winches, fire, flooding, limbs, engine noise, emissions, log teeth. <p>3.3. Describe coiling wires.</p> <p>Coiling wires may include:</p> <ul style="list-style-type: none"> • Jagger's, proper coiling techniques, stowed and tagged for each boom <p>3.4. Describe sorting procedures.</p> <p>Sorting procedures may include:</p> <ul style="list-style-type: none"> • Species, sort recognition

Summary of Knowledge and Skills

Summary of Knowledge to be Assessed	<p>For this unit, a competent worker must understand:</p> <ul style="list-style-type: none">• Recognize, evaluate and control hazards related to boom boats• Working in confined spaces• Lockout procedures• Pre-work meetings• Documentation and reporting requirements• Emergency response plans and extrication of injured workers• Safe work procedures• Winds and tides• Assisting barges and float handling• Coiling wires• Sorting procedures.
Summary of Skills to be Assessed	<p>For this unit a competent worker must be able to:</p> <ul style="list-style-type: none">• This is a knowledge only unit.



Marine Assessment Guide

General Information	<p>Competence outcomes requiring “knowledge of” can be assessed through competency conversations or written assessment. Evidence must be on record of competence achieved.</p> <ul style="list-style-type: none">• Training modules are available for this unit.• Competency conversations are available for this unit.
Evidence to be Assessed	<p>Minimum evidence requirements for this unit must include:</p> <ul style="list-style-type: none">• Completion of training module and formative assessments.• Completion of competency conversation where applicable.
Evidence Sign Off	<p>Evidence must be signed off by designated:</p> <ul style="list-style-type: none">• Trainer• Assessor• Supervisor.



Unit	1137
Title	Operate Boom Boat
Document	Unit of Competency

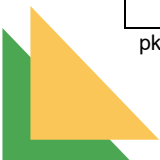
Description	<p>This is a knowledge and ability unit about:</p> <ul style="list-style-type: none"> • Pre –Trip Activities; • Operate Boom Boat; and • Complete Work Activities.
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Regulatory Requirements	<p>It is always the responsibility of any person using these materials to inform him/herself about the Occupational Health and Safety Regulations related to the work being conducted. A full list of OHSR related to this unit can be found in the relevant package.</p>
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Prerequisite(s)	<p>This unit has the following prerequisites:</p> <ul style="list-style-type: none"> • 1091 – Describe Regulations, Legislation, and Certifications related to Marine Vessels • 1036 – Describe Marine Vessel Navigation, Systems and Safety • 1008 – Describe and Apply Workplace Attributes
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Occupations	<p>This unit is a component of the following occupations:</p> <ul style="list-style-type: none"> • Boom Boat Operator.
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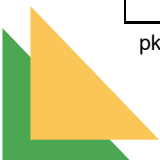
Element of Competence	Competence Outcomes
1. Pre-Trip Activities	<p>1.1. Demonstrate ability to use equipment manuals and specifications to determine safe operating procedures and of boom boats.</p> <p>1.2. Demonstrate ability to conduct a pre-departure inspection. Pre-departure inspection must include:</p> <ul style="list-style-type: none"> • Where fire extinguisher is located, night switch (battery disconnect switch, electrical shut off, lights, bilge pumps, location and operation of all safety equipment on board, first aid equipment (access and sufficient), familiarize yourself with location of shut offs through hull fittings and ensure they are operable, spotlight, all equipment in working order, fuel capacity for trip. <p>1.3. Demonstrate ability to conduct start up procedures including spares. Start up procedures must include:</p> <ul style="list-style-type: none"> • Warm engines, radar, electronics <p>1.4. Demonstrate ability to make a make a communication plan.</p>
2. Operate Boom Boat	<p>2.1. Demonstrate ability to operate engine to specification. Operate engine must include:</p> <ul style="list-style-type: none"> • Optimal and acceptable engine operating parameters • Acceptable range of water and oil temperature and how to remedy common issues. • Departure temperatures – boat brought to certain temperature before starting off, minimum and maximum idle times – owner’s manual. <p>2.2. Demonstrate ability to maintain 360 degrees visual checks when operating boom boat.</p> <p>2.3. Demonstrate ability to operate boom boat within specifications and safe operating procedures.</p> <p>2.4. Demonstrate ability sort and combine logs following safe work procedures</p>



Element of Competence	Competence Outcomes
	2.5. Demonstrate ability to handle barges in accordance with safe work procedures. 2.6. Demonstrate ability to coil wires in accordance with safe work procedures. 2.7. Demonstrate ability to communicate including check-ins throughout workday. 2.8. Demonstrate ability to anchor in a safe manner and location.
3. Complete Activities	3.1. Demonstrate ability to maneuver the vessel for docking in a controlled manner. 3.2. Demonstrate ability to shut down and secure vessel in a safe manner. 3.3. Demonstrate ability to complete documentation at end of trip.

Summary of Knowledge and Skills

Summary of Knowledge to be Assessed	For this unit, a competent worker must understand: <ul style="list-style-type: none"> • This is an ability only unit.
Summary of Skills to be Assessed	For this unit a competent worker must be able to: For this unit a competent worker must be able to: <ul style="list-style-type: none"> • Use equipment manuals • Perform pre departure procedures • Perform start up procedures • Operate engines to specifications • Operate boom boats • Maintain visual awareness • Assess and adapt to changing conditions • Maneuver the vessel for docking • Secure and shut down vessel.



	<ul style="list-style-type: none"> • Complete required paperwork.
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Marine Assessment Guide

General Information	<p>Competence outcomes requiring “knowledge of” can be assessed through competency conversations or written assessment. Evidence must be on record of competence achieved.</p> <p>Competence outcomes requiring “ability to” or skills must have evidence on record demonstrating competence multiple times in a variety of contexts and may be holistically assessed with relevant work activities.</p> <ul style="list-style-type: none"> • Training modules are available for this unit. • Competency conversations are available for this unit.
Evidence to be Assessed	<p>Minimum evidence requirements for this unit must include:</p> <ul style="list-style-type: none"> • Completion of training module and formative assessments. • Completion of competency conversation where applicable.
Evidence Sign Off	<p>Evidence must be signed off by designated:</p> <ul style="list-style-type: none"> • Trainer • Assessor • Supervisor.

Unit	1141
Title	Describe and Operate Small Passenger Vessel
Document	Unit of Competency

Description	<p>This is a knowledge and ability unit about:</p> <ul style="list-style-type: none"> • Pre –Trip Activities; • Operate Small Passenger Vessel; and • Complete Work Activities.
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Regulatory Requirements	<p>It is always the responsibility of any person using these materials to inform him/herself about the Occupational Health and Safety Regulations related to the work being conducted. A full list of OHSR related to this unit can be found in the relevant package.</p>
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Prerequisite(s)	<p>This unit has the following prerequisites:</p> <ul style="list-style-type: none"> • 1091 – Describe Regulations, Legislation, and Certifications related to Marine Vessels • 1036 – Describe Marine Vessel Navigation, Systems and Safety • 1008 – Describe and Apply Workplace Attributes
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Occupations	<p>This unit is a component of the following occupations:</p> <ul style="list-style-type: none"> • Small Passenger Vessel Operator.
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Element of Competence	Competence Outcomes
1. Pre-Trip Activities	<p>1.1. Demonstrate ability to use equipment manuals and specifications to determine safe operating procedures on Small Passenger Vessels.</p> <p>1.2. Demonstrate ability to use navigational aids. <i>Ability to use navigational aids</i> may include:</p> <ul style="list-style-type: none"> • Radar, GPS, plotter, sounder, AIS, communication devices, government issued paper marine charts. <p>1.3. Demonstrate ability to conduct a pre-departure inspection and location. <i>Pre-departure location and inspection</i> must include:</p> <ul style="list-style-type: none"> • Location – Battery disconnect switch, bilge pumps, fuel shut off valves, thru-hull shut off valves. • Inspection – bilge bumps, navigation lights, spotlight, equipment in working order, sufficient fuel, navigation and communication equipment operational, freeing ports are clear of obstructions. <p>1.4. Demonstrate ability to locate all safety equipment and supplies and ensure they meet requirements of the vessel. <i>Safety equipment</i> may include:</p> <ul style="list-style-type: none"> • First Aid kits (access and sufficiency), fire suppression, lifesaving, bilge pumping, flares. <p>1.5. Demonstrate ability to conduct startup procedures <i>Startup procedures</i> must include:</p> <ul style="list-style-type: none"> • Check engine oil and coolant level, check fuel filters, check belts, visual checks for leaks, check bilges (oil and coolant, turn battery switches on, warm engines to specifications, turn on electronics, secure deck, check running lights, check fuel level, check radio <p><i>Startup procedures</i> may include:</p> <ul style="list-style-type: none"> • Pull cowling (outboard), run blowers for ten minutes, turn on heaters. <p><i>procedures</i> must include:</p> <ul style="list-style-type: none"> • Check oil and coolant levels, warm engines to 150

Element of Competence	Competence Outcomes
	<p>degrees, radar, electronics, check fuel filters for water.</p> <p>1.6. Demonstrate ability to make and communicate a sail plan. Communicate must include:</p> <ul style="list-style-type: none"> • Number of persons on board, departure and arrival time and location, anticipated route, and alternate route • Filed with someone who is not on board. <p>1.7. Demonstrate ability to safely load passenger and cargo including securement of cargo (vessel specific). Safely load passenger and cargo must include:</p> <ul style="list-style-type: none"> • Assessing appropriate 'go/ no go' decisions based on the expected conditions, actual conditions, voyage length, ability of the specific vessel and cargo. <p>1.8. Demonstrate ability to conduct a pre-trip orientation. Pre-trip orientation must include:</p> <ul style="list-style-type: none"> • Head count before leaving dock – in log book • Safety orientation for all on board – location of emergency equipment's and exit • Life jackets, fire extinguisher, what various radios do • Defining the passenger area.
2. Operate Small Marine Vessel	<p>2.1. Demonstrate ability to operate engine to specification. Operate engine must include:</p> <ul style="list-style-type: none"> • Optimal and acceptable engine operating parameters to manufacturers specification • Acceptable range of water and oil temperature and how to remedy common issues (stop boat, engage in reverse to clear the water intake) • Departure temperatures – boat brought to manufacturers temperature before starting off, minimum and maximum idle times – owner's manual. <p>2.2. Demonstrate ability to maintain 360 degrees visual checks</p>

Element of Competence	Competence Outcomes
	<p>when operating crew vessel including situational awareness.</p> <p>2.3. Demonstrate ability to operate vessel with manufacturers specifications.</p> <p>Operate vessel must include:</p> <ul style="list-style-type: none"> • Bring the boat to operating speed, trim tabs, outdrive trim angle and maintain the optimal planing attitude • Perform multiple functions at once • Ability to safely and comfortably match the vessel speed, trim, and angle of approach to match those of prevalent conditions (wave, wind, tide) – generally mean going too fast for conditions • Assessing appropriate ‘go/ no go’ decisions based on the expected conditions, actual conditions, voyage length, ability of the specific vessel and cargo.
<p>3. Complete Activities</p>	<p>3.1. Demonstrate ability to maneuver the vessel for docking in a controlled manner.</p> <p>Maneuver the vessel must include:</p> <ul style="list-style-type: none"> • Enough water in landing location, looking for obstructions or obstacles • Assessing current and tide by visual means such as birds, floating debris, kelp • Ensure passengers remain seated and don’t fall between boat and dock. <p>3.2. Demonstrate ability to unload vessel safely including cargo and passengers.</p> <p>3.3. Demonstrate ability to shut down and secure vessel in a safe manner.</p>



Summary of Knowledge and Skills

<p>Summary of Knowledge to be Assessed</p>	<p>For this unit, a competent worker must understand:</p> <ul style="list-style-type: none"> • Equipment manuals
<p>Summary of Skills to be Assessed</p>	<p>For this unit a competent worker must be able to:</p> <p>For this unit a competent worker must be able to:</p> <ul style="list-style-type: none"> • Use equipment manuals • Perform pre departure procedures • Perform start up procedures • Safely load passengers and cargo • Orientate passengers • Operate engines to specifications • Maintain visual awareness • Assess and adapt to changing conditions • Operate vessel • Maneuver the vessel for docking • Safely unload passengers and cargo • Secure and shut down vessel.



Marine Assessment Guide

General Information	<p>Competence outcomes requiring “knowledge of” can be assessed through competency conversations or written assessment. Evidence must be on record of competence achieved.</p> <p>Competence outcomes requiring “ability to” or skills must have evidence on record demonstrating competence multiple times in a variety of contexts and may be holistically assessed with relevant work activities.</p> <ul style="list-style-type: none">• Training modules are available for this unit.• Competency conversations are available for this unit.
Evidence to be Assessed	<p>Minimum evidence requirements for this unit must include:</p> <ul style="list-style-type: none">• Completion of training module and formative assessments.• Completion of competency conversation where applicable.
Evidence Sign Off	<p>Evidence must be signed off by designated:</p> <ul style="list-style-type: none">• Trainer• Assessor• Supervisor.



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