Grapple Yarder Operator Assessment

Assessment	This document can be used: • For gathering evidence in a training environment • As a competency check of knowledge on an existing worker; or • As a summative assessment.
Candidate Name	
Assessor Name	
Date of Assessment	
Summary of Assessment	☐ The candidate met all outcomes of the **worker assessment** ☐ The candidate has **NOT** met all outcomes of the **worker assessment** ☐ Gap training plan developed
Date of Reassessment	
Summary of Reassessment	☐ The candidate met all outcomes of the **worker assessment** ☐ The candidate has **NOT** met all outcomes of the **worker assessment**
Instructions	• Complete the assessment with the candidate, adding notes to justify your decisions. • Ensure the first page of this document is completed (all fields). • Develop a gap training plan for practical deficiencies if required. • Use the same form for reassessment (if applicable), only reassessing the areas where gaps exist. • Conduct the competency conversation before conducting the practical assessment.

Note: This worker assessment covers the technical components of a specific role. For general knowledge and a complete picture of a worker's competency, BC Forest Safety recommends the optional Basic Forest Worker competency profile and assessment tools that can be found at www.bcforestsafe.org.

Part 1 - Competency Conversation

General Instructions
To conduct a competency conversation, ask the worker the questions in this first part of the assessment to determine if they understand the knowledge components of their role. It is acceptable to rephrase the question in a way that the worker understands but the worker cannot be given hints to the correct answer. The assessment should not be used as a training opportunity; instead, any deficiencies identified in this assessment should be collected into a gap training plan and addressed with the worker later. **Important Note:** Do not conduct competency conversation while operating equipment.

Training and Assessment Rubric	
Assessment Instruction	S - This means that the candidate must supply all responses listed, as the knowledge is **safety** critical or important. B - This means the candidate must at a minimum verbalize the **bolded** responses, and additional responses are further proof of competence. P - The candidate must give a **percentage** of responses correctly to reasonably show competence in the area.

1009 – Recognize, Evaluate, and Control Hazards related to Yarding

Locator	Questions		
	General Yarding / General Mechanized Harvesting		
1.1	**Name five general hazards related to yarding and the means to control them.** ☐ Overloading of yarding system ☐ Unstable machinery ☐ Equipment in poor location ☐ Anchor failure ☐ Cable failure ☐ Runaway logs ☐ Unstable topography ☐ Phase congestion ☐ Communication failure ☐ Windthrow Assessment Instruction: P – 5 from list		
	Assessment:	☐ Outcome met	☐ Outcome not met
Locator	**Questions**		
2.1	**Name five road change hazards and the means to control them.** ☐ Carrying heavy loads ☐ Handling wire rope ☐ Chainsaw use ☐ Wire rope failure ☐ Strap or anchor failure ☐ Flying debris ☐ Binds or bight ☐ Unplanned rope or wire rigging movement ☐ Tail hold failure ☐ Jaggers puncturing hands ☐ Unrecognized long logs Assessment Instruction: P – 5 from list		
	Assessment:	☐ Outcome met	☐ Outcome not met

Locator	Questions		
3.1	**Name ten breaking out hazards and the means to control them.** ☐ Terrain obstructions ☐ The bight ☐ Unexpected log/deck movement ☐ Unplanned rigging movement ☐ Heavy undergrowth ☐ Wire rope and rigging ☐ Flying debris ☐ Overhead hazards (elevated ropes, rigging, turn) ☐ Other machines and operations ☐ Anchor failure ☐ Incorrect signals ☐ Runaway logs from landing ☐ Slash or butt ends rolling off landing ☐ Hung up drag/turn ☐ Dislodged rocks ☐ Logs or debris ☐ Too close to moving lines Assessment Instruction: P – 10 from list		
	Assessment:	☐ Outcome met	☐ Outcome not met

1068 – Describe Signals Used in Forestry

Locator	Questions
	General Yarding / General Mechanized Harvesting
1.1	**What are the hand signals for:** ☐ Mainline ahead ☐ Mainline ahead fast ☐ Mainline ahead slow ☐ Stop moving line ☐ Slack the mainline ☐ Ahead on haulback ☐ Ahead on haulback slow ☐ Slack the haulback ☐ Tightline ☐ Slack strawline ☐ Lock brake lever ☐ Ahead on strawline ☐ Ahead on strawline slow ☐ Slack mainline all off ☐ Lower guyline ☐ Slack the drop line ☐ Ahead on the drop line ☐ Raise the guyline Assessment Instruction: S
	Assessment: ☐ Outcome met ☐ Outcome not met
Locator	**Questions**
1.2	**What is the signal process before blasting?** ☐ 12 short whistle signals sounded at 1 second intervals ☐ Two minutes elapse after the last warning signal before initiating the blast ☐ After blast and inspection one prolonged whistle of at least 5 second duration must be sounded before permission granted to return announced by radio Assessment Instruction: S
	Assessment: ☐ Outcome met ☐ Outcome not met

Locator	Questions
2.1	**What are the audible signals for yarding:** ☐ Extreme hazard present – *one solid until hazard is clear* ☐ Start Work – *one long* ☐ Stop at any moment – *one short* ☐ Mainline ahead – *three short* ☐ Slack the mainline – *five short* ☐ Slack the haulback – *two short, several short* ☐ Ahead on the haulback – *two short, two short* ☐ Tightline - *three short, two short* ☐ Tightline on inhaul – *three short, two short* ☐ Cancel tight line on inhaul – *three short* ☐ Ahead on strawline – *three short, one short* ☐ Slack the strawline – *three short, one short, several short* ☐ Pick up the guyline - *two short, two short, two short, one short* ☐ Slack the guyline – *two short, two short, two short* ☐ Accident – *seven long* ☐ Check rigging – *five short* ☐ Send out strawline extension – *three short, one short, one short for each extension required* ☐ Send out strawline in haulback eye – *three short, one long* ☐ Chokers required – *two short, one short, or one long for each choker required* ☐ Put on / take off scab block – *one long* ☐ Calling foreman – *four long* ☐ Calling Hooktender – *three long* ☐ Calling Hooktender and crew – *three long several short* ☐ Calling for water bag – *one short, one long* ☐ Calling for block and strap – *one long, one short* Assessment Instruction: S
	Assessment: ☐ Outcome met ☐ Outcome not met

1013 – Describe Rigging Components and Basic Rigging Practices

Locator	Questions		
	General Yarding		
1.2	**What are six major rigging components used in the block / setting / work area?** ☐ Wire rope ☐ Blocks ☐ Straps ☐ Anchors ☐ Guylines ☐ Shackles ☐ Grapple ☐ Butt rigging ☐ Carriages Assessment Instruction: P – 6 from list		
	Assessment:	☐ Outcome met	☐ Outcome not met
2.1	**When conducting basic rigging (pulling strawline), name four things that must be considered.** **Pulling / stringing strawline:** ☐ Jaggers in strawline ☐ Strawline hanging up ☐ Side binds ☐ Stability of logs ☐ Body position (ergonomics) ☐ Ground conditions (terrain constraints) Assessment Instruction: P -4 from list		
	Assessment:	☐ Outcome met	☐ Outcome not met

2.2	**Which rigging components must be inspected and maintained?** ☐ Carriage knobs ☐ Behind and inside plate ☐ Block ☐ Wire rope ☐ Tailhold straps ☐ Shackles ☐ Butt rigging ☐ Grapple ☐ T bar plate Assessment Instruction: S		
	Assessment:	☐ Outcome met	☐ Outcome not met
2.2	**When should wire rope be taken out of service?** ☐ Excessively worn ☐ Wire rope is stranded ☐ Wire rope is excessively kinked ☐ Broken ☐ Crystalized line Assessment Instruction: P – 3 from list		
	Assessment:	☐ Outcome met	☐ Outcome not met
2.2	**When should a block be taken out of service?** ☐ Worn sheave ☐ Worn pins ☐ Worn goose neck ☐ Cracked shell ☐ Worn bearings ☐ Missing bearing seal Assessment Instruction: P – 4 from list		
	Assessment:	☐ Outcome met	☐ Outcome not met

2.2	**When should a shackle or grapple component be taken out of service? (shackles, butt rigging, grapple, quick fix knobs)** ☐ Links are worn ☐ Worn shackle pins ☐ Sheaves are worn on grapple ☐ Gnarled or no matching wedges Assessment Instruction: P – 2 from list		
	Assessment:	☐ Outcome met	☐ Outcome not met
2.4	**When should a twister be used?** ☐ Weak tailhold ☐ For pulling logs back ☐ When hanging on a tree ☐ Poor deflection Assessment Instruction: P – 3 from list		
	Assessment:	☐ Outcome met	☐ Outcome not met
2.4	**What hazards are involved when installing or removing a twister?** ☐ Unsecure footing ☐ Struck by twister stick ☐ Wrapped up in line ☐ Loose clothing Assessment Instruction: P – 2 from list		
	Assessment:	☐ Outcome met	☐ Outcome not met
2.4	**How do you control the hazards of installing or removing a twister?** ☐ Call to confirm ☐ Stay on high side and never let go of stick until firmly secured ☐ Get assistance Assessment Instruction: P – 1 from list		
	Assessment:	☐ Outcome met	☐ Outcome not met

1014 – Describe and Apply Advanced Rigging

Locator	Questions		
	General Yarding		
2.6	**What is the difference between a north / south bend?** ☐ North bend: the mainline runs through the fall block on the butt rigging and is anchored back to the carriage on the skyline ☐ South bend: the mainline runs through the fall block on the butt rigging, through a sheave on the carriage and is anchored back to the fall block on the butt rigging Assessment Instruction: S		
	Assessment:	☐ Outcome met	☐ Outcome not met

1021 – Describe and Operate Grapple Yarder

Locator	Questions		
	General Yarding		
1.7	**Who can remove a lock out tag?** ☐ Only the person who put it on or through dialogue with the person who put it on Assessment Instruction: S		
	Assessment:	☐ Outcome met	☐ Outcome not met
3.1	**What do you check before sending the strawline out?** ☐ Haulback spool Assessment Instruction: S		
	Assessment:	☐ Outcome met	☐ Outcome not met

1022 – Move Equipment

Locator	Questions		
	General Yarding		
1.2	**What considerations should be given when matching equipment prior to snubbing or pulling?** ☐ Availability of equipment for assistance ☐ Grade of slope ☐ Size and stability of equipment and wire rope ☐ Braking capabilities ☐ Traction ☐ Corners ☐ Speed and Power Assessment Instruction: P – 4 from list		
	Assessment:	☐ Outcome met	☐ Outcome not met

Part 2 – Practical Assessment

General Instructions
To conduct the practical assessment, monitor the worker in a variety of situations to determine if they can consistently perform the skill components of their role in a safe and effective manner. Once confident that the worker can conduct the skills consistently, mark the outcome met. If the worker cannot consistently perform the skills required, add this component to the gap training plan. Remember not to distract the operator when conducting the practical assessment.

Training and Assessment Rubric	
Outcome Not Met (ONM)	**Skills:** Can complete the task but only with direct instruction and supervision, may lack consistency in application. **Knowledge:** Does not understand what they are doing, or are not aware of a knowledge deficiency, or need guidance and support. **Attributes:** Displays limited or no professional attributes including being fit for work, prepared for the day, working in an organized manner, achieving work outcomes, or lacks in consistency.
Outcome Met (OM)	**Skills:** Consistently completes the task using safe work practices multiple times in a variety of contexts. **Knowledge:** Has a solid grasp of underpinning knowledge, consistently applies it, and can explain it. **Attributes:** Consistently displays professional attributes including being fit for work, prepared for the day, working in and organized manner and achieving work outcomes.

A) PREPARE FOR THE DAY	OM	ONM	N/A
Arrived on time	☐	☐	☐
Clothing for conditions • Layered clothing appropriate to the elements for working and transport conditions	☐	☐	☐
Nutrition and water • Adequate food for the day • Sufficient hydration for work and weather conditions	☐	☐	☐
Fit for work • Candidate is physically able to do the task • 3-point contact on and off machine • Able to get up and down machine • Able to perform simple maintenance • Able to change attachments • Can fit through escape hatch	☐	☐	☐
Not noticeably impaired • Candidate is not obviously physically or mentally impaired (by drugs, alcohol, personal situations, fatigue)	☐	☐	☐
Knows where ERP is located	☐	☐	☐

B) PERSONAL PROTECTIVE EQUIPMENT (where applicable)	OM	ONM	N/A
Hard hat • CSA – less than 3 years old / ANSI – less than 5 years old • No dents/cracks, modifications • Suspension maintained (4-point min)	☐	☐	☐
Hi-Vis • Minimum 120 square inches front and back • Not faded, discoloured, torn or permanently dirty • Contrasts with the work environment	☐	☐	☐
Leg protection • Minimum 3600/4100 FPM rating • Kevlar not compromised or exposed • Pants maintained and repaired (no loose tears to outer layer)	☐	☐	☐

Face/Eye protection • Face screen free of holes • Moves freely between down and raised position • Safety glasses used when appropriate	☐	☐	☐
Hand protection • Not damaged and free of holes • Appropriate to weather conditions • Sized correctly for hands	☐	☐	☐
Hearing protection • Minimum 24 NRR • Maintained and in working condition	☐	☐	☐
Footwear • Good condition including sole tread pattern • Must be laced	☐	☐	☐
Has fire extinguisher in cab	☐	☐	☐
Dust mask • NIOSH N95 compliant	☐	☐	☐
PPE inspected and maintained	☐	☐	☐
PPE used consistently as required	☐	☐	☐

C) PRE-WORK ACTIVITIES	OM	ONM	N/A
Equipment manuals available	☐	☐	☐
Inspects cables and guylines	☐	☐	☐
Pre-start equipment checks	☐	☐	☐
Checks signaling devices are operating	☐	☐	☐
Ensures clearance in swing zone of grapple yarder	☐	☐	☐

Determines orientation and conditions • Block slope orientation, soil conditions, limitations • Type of terrain • Log landing areas • Corridors • Cross slope movement of lines • Windthrow • Riparian management zones • Trespass	☐	☐	☐
Develops a grapple yarder site • Works with Hook Tender • Removing danger trees • Avoiding natural obstacles • Processing and yarding considerations and loading • Never yarding straight downhill in machine on steep ground where runaway logs can hit machine • Road layout • Suitable anchors • Notch and secure stump • Set correct guylines • Phase coordination (where applicable)	☐	☐	☐
Start-up procedures • Maintain 3-point contact on and off machine • Check gauges • Warning systems • Start and warm up hydraulics • Check transmission • Lights • Wipers • Seatbelt • Lock out • Parking brake • All controls and major systems • Housekeeping	☐	☐	☐

D) COMMUNICATION	OM	ONM	N/A
Attends pre-work meetings	☐	☐	☐
Ensures hazards are understood	☐	☐	☐
Communicates hazards throughout workday	☐	☐	☐
Uses signals as required	☐	☐	☐
Consistently communicates work plans	☐	☐	☐
Professional communication throughout workday	☐	☐	☐

E) ERGONOMICS	OM	ONM	N/A
Lifts correctly (where applicable)	☐	☐	☐
Best practice for body position while operating	☐	☐	☐
Walks safely in the bush (where applicable)	☐	☐	☐

F) OPERATE GRAPPLE YARDER	OM	ONM	N/A
Maintains 3-point contact on and off machine	☐	☐	☐
Operates in accordance with manufacturer's specifications	☐	☐	☐
Changes roads when required	☐	☐	☐
Operates grapple yarder smoothly	☐	☐	☐
Spools lines including change and upend lines	☐	☐	☐
Runs guylines	☐	☐	☐
Moves grapple yarder safely within block	☐	☐	☐
Works safely with other equipment and workers	☐	☐	☐
Monitors performance of equipment while operating	☐	☐	☐
Communicates hazards with hooktender while spotting	☐	☐	☐
Follows voice commands when spotting	☐	☐	☐

Yard / pile logs • Plan and prepare for log landing • Stable piling • Logs piled in lay • Crew in clear • Working draws and ridges	☐	☐	☐

G) COMPLETE TASKS	OM	ONM	N/A
Shut down procedures • Safe parking location • Grapple to the ground • Brakes applied • Lower boom / blade / attachments • Position for ease of access and egress • Cool down before shut-down • Walk around and general check • Secure / lock machine • 3-point contact on and off	☐	☐	☐

Daily maintenance tasks • Lubrication systems • Greasing • Air system reservoir • Water separator • Fuel filters • Inspect and clean components • Housekeeping • Fueling • Check for leaks	☐	☐	☐
Basic repairs • Change hydraulic hoses / fittings / O-rings • Fuel / air filter • Fuel filter • Adjust belt tension • Battery terminals • Fluid levels • Repair air lines • Change air valves and components	☐	☐	☐

This is the last page of the assessment.

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

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