

**Performance Rigging Fundamentals Skills Checklist**

Date		
Participant		
Instructor	Perry Beckham	
Location	Riggit Services, 8021 Enterprise, Burnaby BC	

**Grading Rubric for Self, Peer and Instructor Assessment**

<b>Blue Mastery Teach</b>	Exemplary performance, able to explain and demonstrate advanced concepts and techniques. Fine tuned personal fall protection system and advanced application. Impeccable rigging. Completes tasks to high standards, mentors and leads effectively. Safety Role Model
<b>Green Competent Explain</b>	Solid performance, some prompting to explain or demonstrate advanced concepts and techniques. Generally tidy personal fall protection system and appropriate application. Safe, dependable rigging. Completes tasks within scope of practice without direct supervision. No Safety Concerns
<b>Yellow Aware Describe</b>	Inconsistent performance, some coaching required to explain or demonstrate basic concepts Sloppy personal fall protection system and inefficient application. Occasionally sloppy or inappropriate rigging. Difficulty properly performing tasks within scope of practice without direct supervision. Some Safety Concerns
<b>Red No Knowledge</b>	Generally poor performance, unable to describe core concepts or demonstrate basic techniques. Inadequate personal fall protection system and inappropriate application. Rigging is chronically concerning.. Can't properly complete tasks within scope of practice with supervision. Serious Safety Concerns

	<b>Governance/OH&amp;S/Rigging Legislation</b>				
Identify key authorities having jurisdiction in the BC workplace					
Describe the rights of Workers in BC					
Describe the responsibilities of Employers, Supervisors and Workers in BC and reference the legislation that explains this.					
Define Hazard and Risk					
Explain the Hierarchy of Hazard Controls					
Describe a Job Hazard Analysis					
Deliver a Toolbox Talk					
Explain the Hierarchy of Fall Protection					
Describe a Written Fall Protection Plan					
Select and fit appropriate bodywear and equipment for fall restraint, work positioning and fall arrest.					
Rig simple Fall Protection anchors.					
Rig a Travel Restraint line.					
Inspect another workers personal Fall Protection system					

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Reference the legislation for rigging in the BC workplace and identify key safety requirements				
Reference the legislation for Rope Access in BC and identify key safety requirements				
Reference the legislation for Rope Rescue in BC and identify key safety requirements				
<b>Overall knowledge of OH&amp;S, Hazard Management and Rigging Legislation</b>				
<b>Physics, Forces &amp; Engineering</b>				
Explain mass and force in imperial and metric measurements				
Explain Working Load Limits, Safety Margins and Design Factors used for rigging in BC				
Explain vector forces in rigging systems				
Explain mechanical advantage with pulleys				
Describe common compound resultant forces in rigging systems				
Explain Force Limiting and provide examples in rope rigging				
<b>Overall knowledge of Physics, Forces &amp; Engineering</b>				
<b>Knots, Hitches &amp; Bends</b>				
Stopper knot				
Bowline with safety finish (SAR or Yosemite)				
Figure eight rewoven/follow through				
Figure eight on a bight				
Butterfly knot				
Barrel knot				
Clove hitch				
Munter hitch with releasable blocking hitch				
Three wrap prusik				
Double Fisherman's bend				
Figure eight bend				
Prusik on itself				
Purcell prusik				
Carabiner block and tackle				
Radium Release hitch				
<b>Overall skill with knots, hitches and bends</b>				

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<b>Rigging with Kernmantle Static Rope</b>							
Describe the properties of static kernmantle rope, the threats to its integrity and proper management and care including stacking, coiling, bagging							
Describe the properties of, and demonstrate the correct application and use of the basic slings for rigging with rope. (Sewn webbing slings, round slings, Omni Slings, knotted webbing).							
Describe the properties of, and demonstrate the correct application and use of the basic connecting hardware for rigging with rope including carabiners, links, anchor plates, swivels.							
Identify and describe the correct pulleys for rope rigging and demonstrate correct application and use.							
Demonstrate rigging mechanical advantage with in line and attached systems							
Explain the risks of using toothed devices in rope rigging systems							
Identify and describe alternative cammed rope grabs common to rope rigging							
Demonstrate the correct use of prusiks							
Demonstrate the Carabiner Block & Tackle with accessory cord							
Demonstrate the Radium Release hitch with accessory cord							
Demonstrate correct use of Petzl Rig and ID							
Demonstrate rigging a 3:1 raise and lower with a PMP and Petzl Rig							
<b>Overall skill with rope handling competencies.</b>							
<b>Wire Rope Rigging</b>							
Describe the properties of 7 x 19 wire rope, the threats to its integrity and proper management and care including spooling and coiling							
Demonstrate weaving a Farmers Eye and Molly Hogan rigging loop with wire rope							
Demonstrate the correct use of wire clips and “Fist Grips” to create eyes in cable. Identify and explain the manufacturers information for correct application							
Demonstrate the correct pressing of nicopress swaged cable eyes Identify and explain the manufacturers information for correct application							
Identify and describe the correct pulleys for cable rigging and demonstrate the correct application and use							
Demonstrate the correct use of cable hoists (Come alongs)							
Demonstrate correct threading and operation of 5/16 and 7/17 tiffors including correct coiling of cables.							
<b>Overall skill with wire rope handling and rigging.</b>							

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<b>12 Strand Synthetic</b>				Red	Yellow	Green	Blue
Describe the properties of 12 strand Aramid and UHMW rope, the threats to its integrity and proper management and care including stacking and coiling.							
Demonstrate a simple buried eye splice							
Demonstrate the single and double Brummell splice							
Demonstrate splicing paired leashes to length							
Demonstrate the correct use of a bollard for terminating 12 strand synthetic							
<b>Overall skill with 12 strand rope handling and rigging.</b>							
<b>Performance Rigging Operations</b>							
Demonstrate correct operation of capstan winch including correct fairing, correct number of wraps, tie off, use of Rescuscender safety and use of standby mechanical advantage for fouling and pinching.							
Demonstrate the correct operation of a counterweight arbor including capstan overhaul							
Demonstrate the correct operation of a travel winder on a travel/elevate highline or rail							
Demonstrate the correct operation of a slackline travel/elevate rig							
Describe pneumatic motivator basic function, operations and key safety considerations							
Demonstrate the correct use of Goldtail brake bars							
Describe trips common to performance rigging and explain their safety concerns							
Describe hydraulic descender function, operations and key safety considerations							
Demonstrate the correct use of ratchet straps							
Explain the correct use of masonry drills and methods for dust abatement/protection							
Explain the correct use of common masonry anchors including; Wedge anchor (Kwik Bolt), masonry lag (Simpson Strong Tie/Hilti), drop in (Hilti)							
<b>Overall skill with Performance Rigging Operations</b>							

Instructor Comments;