

Rigging

R6-FS-6700-7 (08/12)

U.S. Department of Agriculture Forest Service	1. WORK PROJECT/ACTIVITY Rigging	2. LOCATION USFS - Forest Wide	3. UNIT Region 6			
JOB HAZARD ANALYSIS (JHA) References-FSH 6709.11 and -12 (Instructions on Reverse)	4. NAME OF ANALYST Back Country Horsemen of Washington	5. JOB TITLE BCHW Safety Committee		6. DATE PREPARED April 2020		
7. TASKS/PROCEDURES	8. HAZARDS	9. ABATEMENT ACTIONS Engineering Controls * Substitution * Administrative Controls * PPE		10. POST ABATEMENT ACTION RISK RATING (Severity/Probability Matrix)		
			Severity	Probability	Risk Code	
Rigging Equipment	Failure of rigging components can result in loss of load and risk serious injury to ground crew.	Use only components with a known or labeled working load limit. Carefully inspect all components for any defects, signs of over loading or excessive wear.		II – Critical	D – Seldom	4 – Low
Placement and stability of anchors	Unstable placement: the load exceeds the stability of the anchor. Climbing tree to place and maintain anchor. Elevating a tripod upon boulders above trail.	Anchors must be strong enough to safely withstand the force required to move loads. Anchors set for hoists and winches should be set at a convenient height to provide safe and effective operation.		II – Critical	D – Seldom	4 – Low
Working loads	Equipment failure of any rigging component.	Do not exceed the safe working load on all rigging components. A design factor of 5 is chosen most frequently for rope or chain, never load ropes or chains more than 20% of the catalog breaking strength. Operating loads may have to be reduced when other than a straight line pull or other than a new rope or chain is used.		II – Critical	D – Seldom	4 – Low

<p>Working load calculations</p>	<p>Load on any rigging component not calculated correctly.</p>	<p>Properly calculate loads on every rigging component prior to use of rigging. Estimate the weight and size of the moved or lifted object prior to tension. Trail Work Leader can designate an experienced rigger to determine rigging system and components.</p>	<p>II – Critical</p>	<p>D – Seldom</p>	<p>4 – Low</p>
<p>Line safety</p>	<p>Improper inspection of equipment. Faulty setup of equipment.</p>	<p>Crew members will be educated and trained on how to inspect, setup, and operate equipment. All equipment will be inspected prior to use. Use of Personal Protective Equipment (PPE) required at all times as specified in JHA Trail Maintenance – BCHW - 2017.</p>	<p>II – Critical</p>	<p>D – Seldom</p>	<p>4 – Low</p>
<p>Shear Pins</p>	<p>Incorrect placement or improper use of pins can lead to overloading rigging system.</p>	<p>Only use pins rated for grip hoist or other rigging component. Do not use nails, files, drill bits or anything else in place of shear pins.</p>	<p>II – Critical</p>	<p>D – Seldom</p>	<p>4 – Low</p>
<p>Communication</p>	<p>Lack of experience working with rigging equipment and understanding rigging terminology.</p>	<p>Conduct a tailgate briefing session at the beginning of each project. Coordinate how the crew will communicate. Use verbal and nonverbal communication to move load (hand signals and radios). Always acknowledge that commands have been received and understood. Brief and educate the crew on the terminology and use of equipment prior to handling. Implement an Emergency Evacuation Plan (EEP).</p>	<p>III – Marginal</p>	<p>D – Seldom</p>	<p>4 – Low</p>

Stability of Worksite	Footing in a creek, footing on rocks, climbing trees.	Analyze work site for slippery or loose rocks, falling hazards on the ground and/or overhead hazards.	III – Marginal	D – Seldom	4 – Low
Fly Away Zone	Working under the rigging equipment. Exposure to anchor, block, or line failure can lead to serious injury.	Crew members will be directed to stay out from under and well clear of all loads and loaded rigging.	II – Critical	D – Seldom	4 – Low
Tripods	Tipping over, spreading or tie failure.	Never have force vector outside of base of tripod. Check and verify that cotter pins are engaged. Check that top is tied securely. Placement of safety chains at base of tripod.	II – Critical	D – Seldom	4 – Low
Public Safety/Traffic Control	Debris falling onto trail, Failure of rigging equipment.	Crew member assigned to notify public of trail closure, dangerous equipment and estimated time travel through work site. Alert crew to stop and allow public to traverse the work site if/when safe to do so.	III – Critical	D – Seldom	4 – Low
10. LINE OFFICER SIGNATURE BCHW Safety Committee		11. TITLE BCHW Safety Committee	12. DATE May 2020		