

Bio:

Craig McClure is a 15+ year Search and Rescue veteran in the Pacific Northwest and is the founder of The Crackerjack Group. Craig is a founding member and Level 3 Instructor with the International Technical Rescue Association (ITRA). He's currently a SAR volunteer for Deschutes County Oregon, Rescue Leader of the MRA accredited mountain rescue team, an EMT, and specializes in technical and backcountry winter disciplines. He holds an AIARE Avalanche level 2 certification and is an expert backcountry skier. Equally comfortable in the field or command, he's served as the coordinator for the Incident Management team and has participated in approximately 400 missions in his career reaching back to 2004 as a wilderness K9 handler. Craig is a frequent instructor for technical disciplines at SAR conferences, has served as an evaluator for MRA team accreditation, and was a logistics and safety officer and rigger for the first descents into the glacial caves of Mt. St. Helens. He has led and participated in high alpine glacial rescues, big wall vertical rescues, and complex extraction missions.

Craig enjoys teaching and believes his greatest offering is the ability to guide teams as a whole to improve communication, efficiency, and understanding of well-reasoned default operating guidelines. Craig serves on the Curriculum Committee of the Oregon State Sheriff's Association Search and Rescue Advisory Council and is a co-author and instructor of the state SAR Incident Management program. In 2013 he was recognized as the state SAR Volunteer of the Year. He has also served as a sworn Reserve Deputy, and in addition to uniformed patrol, worked seasonally as a snowmobile patrol deputy and as a sworn municipal Police Officer, and is a graduate of the Oregon Department of Public Safety and Standards Police Academy. He is certified NRA Range Safety Officer. Craig brings a solid perspective on leadership, objective-based management, and great personal experience as a field operator.

Abstract:

It is common practice to use a prusik either side of the center pulley on a highline reeve. The prusiks are intended to prevent the rope from unthreading and dropping the load in the event of a reeve line failure. The prusiks must be minded by the attendant during any movement of the load or the prusik opposing the direction of movement will grab and lock the system. Additionally, the prusiks will loosen with movement and may not engage in failure if they are not tended to maintain proper tightness and friction. Because of a documented unreliability of prusiks, and the overtasking of the attendant in minding the prusiks in a complex system, some users are replacing prusiks with ASAPs. This configuration is becoming more commonly used and causes some confusion and discussion as it is an untested solution and has not been confirmed as functional.

- 1) Does the ASAP effectively catch the load in a line failure, with failure at any point between the ASAP and nearest anchor? It is assumed, but should be verified with testing. A concern is that friction and system design may create a slow fall, increasing the actuation distance and fall arrest distance.
- 2) Does the ASAP effectively catch a fall with a failure BETWEEN the ASAPs. The worst case scenario would be failure at the center pulley which leaves the least possible average distance to either ASAP.
 - a. How much rope length is required for "run" to activation?
 - b. Because the line is tensioned, it will retract to some degree. Does that retraction impact actuation?
 - c. Does separation of rope sheath and core impact the ASAPs ability to grab? How much rope is needed below the device for reliable actuation?
- 3) Given testing of the above questions, how much rope must be in service between the devices or between the device and pulley for reliable actuation in a failure?