

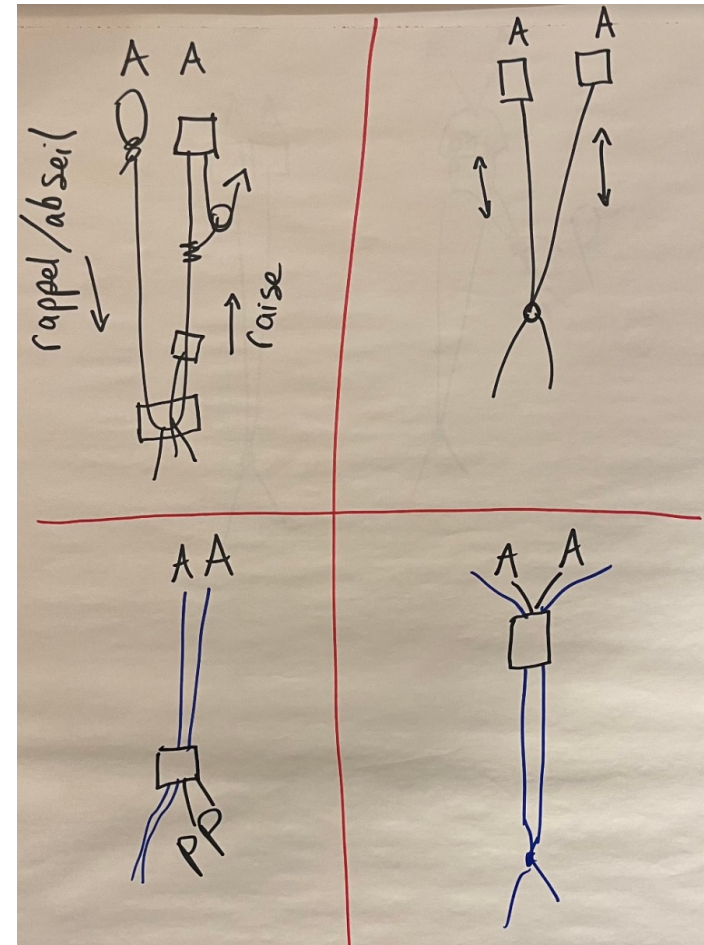
Shared Tension Rope Systems:

Benefits:

- Reduced risk of catastrophic failure from sharp edges
- Reduced system forces
- Reduced stop distance due to pre-load

A Critical Point requires an additional risk assessment

Incorporate Force Limiting





International Commission for Alpine Rescue



TER-REC0005 - Revision Required:

Redundancy for Lowering or Raising People with Fiber Ropes

20171021-TER-REC0005 Terrestrial Rescue Recommendation

1. Introduction

When lowering or raising people with fiber ropes there is always a risk of a rope failing, by it being cut or breaking over an edge. This problem increases with increased tension on fiber ropes. ICAR recommended in 1999 that fully redundant rope systems are used when lowering or raising people with fiber ropes.

Other material or technologies have not yet replaced the use of fiber ropes in mountain rescue operations, so there is continuing need to manage the risk of rope failures.

Recent testing (Mauthner Kirk 2014-16) demonstrated higher risk of sharp edge failure with a dedicated load rope and an un-tensioned back-up rope than techniques which share the load between two ropes. Consequently, ICAR has revised this recommendation in 2017.

2. Recommendation

The ICAR Terrestrial Rescue Commission recommends Two-Tensioned Rope Systems for, high consequence terrain, when lowering or raising with fiber ropes that provide a mutual backup in the event of a failure of one of the rope systems.

Redundant anchor systems should be used for Two Tensioned Rope Systems, preferably with some separation between ropes.

