

ISOLATING DAMAGED ROPE.*Chris Curtis.*

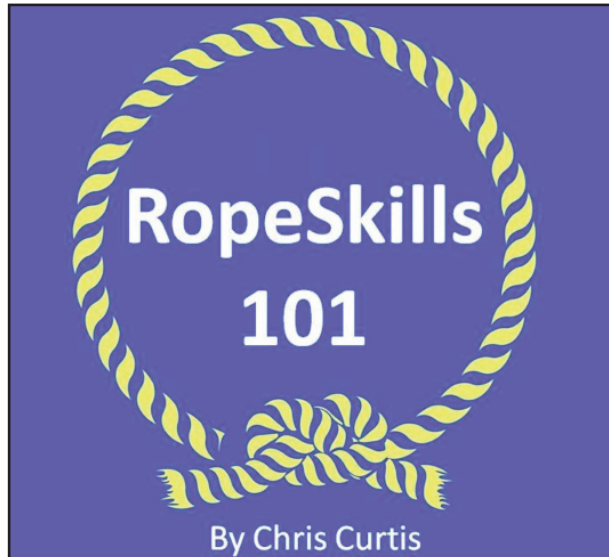
So you are underground caving and have just noticed the rope has some damage, but you still need it until your caving adventure is done. What is the best way to isolate the damage?

The easiest way is to just cut the rope completely at the damage. If the rope is still rigged for use then this may not be an option unless you are the last person going up and the rope won't be needed any longer.

The other disadvantage to cutting the rope while underground is the ends will quickly fray and by the time you get home, you will end up having to cut more off the rope ends.

The ends need to be sealed to prevent fraying with a heat source, and a hot knife is by far the best method of cutting ropes. A hot knife both cuts and seals the rope ends at the same time. A cigarette lighter will help underground to prevent fraying, but it won't be anywhere near as neat and you will most likely end up re-cutting the ends again at home.

For either of the below options make sure to dress correctly and tighten the knots, have at least 100mm of tail past the knot and leave a gap for a carabiner to clip into with your short cowstail for passing during descent or ascent.

**Option A – Flat Overhand bend.**

1. Folding an overhand knot with both ends together.
2. Tie a second overhand knot near the first knot (Photos 1, 2).

Option B – Alpine Butterfly bend.

1. Folding an overhand knot with both ends together.
2. Tie an Alpine butterfly with the overhand knot in the middle of your palm (Photos 3, 4, 5, 6).

The **red star** denotes the damaged area of the rope.
JSSS



Photo 1: Folding an overhand knot with both ends together. **Photo:** Chris Curtis.



Photo 2: Tie a second overhand knot near the first knot. **Photo:** Chris Curtis.



Photo 3: Folding an overhand knot with both ends together. **Photo:** *Chris Curtis.*



Photo 4: Tie an Alpine butterfly with the overhand knot in the middle of your palm. **Photo:** *Chris Curtis.*



Photo 5: Tie an Alpine butterfly with the overhand knot in the middle of your palm. **Photo:** *Chris Curtis.*



Photo 6: Alpine butterfly with the overhand knot. **Photo:** *Chris Curtis.*