

# ACC Mountain Adventures Ropes Policy

August, 2006

## Marking of Ropes

All ropes are to be individually numbered and dated on the ends with permanent marker and those marks are to be heat-sealed under a see-through coating. If the rope has to be cut, the new end should be re-numbered (including the old date), marked with the new rope length and heat-sealed under a see-through coating.

When the middle-mark disappears, re-mark the middle with tape. Marking pens (even those sold by the rope manufacturers) have been proven to reduce the strength of the ropes.

## Storage

Ropes should be stored in a clean, dry place at room temperature, away from direct sunlight, chemicals, petroleum-based products and other liquids. Ropes should be exposed to the air; not sealed in containers.

Ropes should be coiled using the butterfly method. The mountaineer's coil causes the rope to kink.

## Tracking

Each new rope should be entered on a fresh "Ropes Log" form. The form contains:

- the date of purchase
- the rope's ACC-assigned number, it's diameter, length, brand, colour and specified number of maximum leader falls
- a listing of each trip the rope is used for, including:
  - the dates the rope was used
  - the number of days it was used
  - the type of trip (winter glacier travel, summer glacier travel, ice climbing, rock climbing)
  - any reported events affecting the rope (eg. leader falls, rock fall, ice axe or crampon punctures, contact with suspicious liquids, etc.)

It should be a mandatory part of the guide and/ or camp manager reports to list rope use and damage.

## Manual Inspections

When a rope is returned after a trip, it should be briefly visually checked for damage. Damp ropes should preferably be laid on clean ground (not hung). Do not lay the rope on concrete surfaces, as it will be in contact with an oxidizing agent in the concrete. After each summer and winter season, ropes should be closely inspected for damage. Uncoil the rope and carefully look at it while running the entire length through your fingers. Bend the rope along its entire

length, feeling for suspected sheath damage. If you feel lumps or soft spots, if you cannot get the rope to bend evenly, or if the rope bends easily at sharp angles, the rope must be cut or retired. A rope is permanently damaged if there are core strands coming through the sheath. A small number of sheath nicks are acceptable as long as the nick is contained to the sheath only. Tufts of sheath should be cut off so they do not get worse.

### **Cleaning**

If a rope is dirty, it should be washed. To wash a rope, place it in a front loading washing machine set on "cold", or hand wash it in cold water, rinsing well. Top-loading washing machines can stretch and damage the rope. Use "Zero" or other such gentle soap or a mild detergent. Lay out the rope until it is completely dry.

### **Retiring Ropes**

The Mammut recommended rope retirement schedule (which is more conservative than the Beal rope retirement schedule) is as follows:

- up to 7 years if rarely used (2-3 times per year)
- up to 5 years if occasionally used (once per month)
- up to 3 years if regularly used (several times per month)
- up to 1 year if frequently used (every week)
- less than 1 year if used almost daily

Retire a rope that has been damaged by rock fall, crampons or sharp rock edges. If it is certain the damage is limited to an end, the rope can be shortened by cutting off the damaged piece.

Retire a rope that is approaching its maximum number of leader falls (each new rope comes with a specified number). Retire a rope immediately if it suffers a fall that approaches factor 2 (a fall that is twice the distance as the amount of rope run out from the belay).

Assuming a single rope (usually 9.5 to 11 mm) has held less than its maximum number of leader falls and has had no major incidents and no visible damage, it should be relegated to top-roping after a maximum of 1 to 5 years (depending on how much it was used). It should be noted that top-roping is hard on ropes, and the same manual inspections as listed above should be performed regularly.

Assuming a double rope has held less than its maximum number of leader falls and has had no major incidents and no visible damage, it should be relegated to glacier travel after a maximum of 1 to 5 years (depending on how much it was used). The same manual inspections as listed above should be performed regularly.

When ropes start to noticeably lose their dry-coating, they should not be used for ice climbing.

When the rope sheath has multiple nicks (assuming no core fibers showing) or when it is getting “fuzzy”, it should be demoted from lead climbing to top-roping or glacier travel only.

### **Selecting Appropriate Ropes for Camps**

Single-rated ropes (usually 9.5 to 11mm – check the specifications) must be used for all technical lead climbing and top-roping. The only exception to this is if there are a maximum of two climbers – then a pair of double ropes may be used for lead climbing and seconding the route. If a leader has two participants on a technical climb, he/she must use either 2 single ropes or one single rope with the participants tied in at appropriate intervals.

One double rope (usually 8.5 to 9mm) may be used for glacier travel.

The newest ropes should be sent on trips which involve lead climbing. Older ropes should be used for top-roping and glacier travel.