

Care, Inspection and Storage of Climbing Equipment



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Introduction

This factsheet provides guidance on the care, inspection and storage of climbing equipment. The points raised are of importance not just to those directly involved in climbing, but to all that may carry or use climbing equipment for safety, confidence or river crossings.

Further editions may be issued in the light of experience from this edition. Publication of further editions will be notified in SCOUTING Magazine, **Talking Points** and the Activities Newsletter.

General

A factsheet such as this can only deal with care and inspection in general terms. **Where a manufacturer's instructions differ from this factsheet those instructions must take priority.** Those responsible for purchasing equipment for Scout use must have sufficient knowledge to select the item(s) most suitable for their needs. Not all retailers have detailed knowledge either of all the products they sell or to advise on what is best for Scouting use. Some items of climbing equipment have for a number of years been marked UIAA to indicate that they have passed the tests of that body. This mark has now been replaced with the European Community CE mark.

Scout Association Leaders and Instructors do have a 'Duty of Care' for those members for whom they are providing instruction or supervision. It is therefore extremely important that the storage and maintenance of equipment used in a potentially hazardous activity is well documented and available for inspection when required.

Equipment use record

It is now a requirement that a record of usage of climbing equipment (including the items mentioned in this factsheet) must be kept.

Because of the wide variation in the quantity, frequency of use, storage conditions, etc. of Scout owned climbing equipment no national system can be laid down. It is for each Group, District or County/Area to determine what is best for them. Any system devised must be simple and understood by all. It is not the responsibility of the Quartermaster alone.

As a minimum the following information must be recorded:

- Date purchased and means of identification e.g. number, letter, etc. applied.
- Date of any repairs or modifications. (Which must only have been done by the manufacturer or done in line with their recommendations)
- Date and number of hours each time the equipment is used, by whom and for what purpose e.g. if leading, abseiling, etc.
- Date of routine inspections based on a time interval rather than a record of actual usage, which may be shorter if usage is high frequency.

- Remarks on any unusual incidents e.g. a fall (long, short, etc.).

All users must accept the discipline of recording usage after every activity, with a designated person in overall control.

None of the above replaces the long-standing tradition that ALL climbing equipment is inspected just before each time it is used. Where a 'life' is quoted below, that should only be considered as a very rough guide. An item of equipment can be damaged beyond further use the first time it is used.

Rope identification

Probably the best identification method is to tape over the rubber 'whipping' at each end of the rope with plastic tape and to use a spirit based felt pen to mark the number etc. Those with a frequent use of ropes, E.g. County, Area or Camp Site should consider a regular replacement plan, with each replacement being ropes of the same colour. Part used ropes might be downgraded to second ropes while the new ropes would become the lead ropes. This is unlikely to be a sensible plan for Groups. Ropes may be cut down in length to remove any damaged part. The log must then clearly show the new reduced length and the rope could have a tag on it to warn potential users of this.

Rope inspection

Ropes should be visually inspected over their full length for cuts and serious abrasion and also run through the hands to detect any local swelling indicating damage to the core. All ropes become 'furry' with use but this is not a reason to discard them. All rope lengthens slightly with use and this is acceptable. Ropes can be washed in hand warm water and this is particularly necessary for ropes used on gritstone or sandstone or after contact with salt water. Special rope wash liquids available from climbing equipment shops should be used and normal household detergents avoided. Drying should be at room temperature and storage should be in a dark, dry, cool place. Sunlight, heat and chemicals all damage nylon.

Rope replacement

For average Scout use a 'life' of up to five years has been suggested. Users should budget for a regular replacement programme and have a contingency budget in case replacement is required as a result of damage. Remember a rope can be irreparably damaged the first time it is used. If there is doubt – retire the rope.

Rope selection

The Association's current policy on climbing ropes (dynamic ropes) only permits the use of 'Single Ropes' (minimum 10 mm) of kernmantel construction. Single Ropes are designated by the manufacturer with a '1' on the rubber whipping at each end of the rope. The reason for this is as follows.

Although there are several factors in the construction of a rope, which affect what might loosely be called its 'strength' in general terms, 9 mm ropes (which are sometimes referred to as 'Half Ropes' and are designated with a ½' on the rubber whipping at each end of the rope), only have about two-thirds the 'strength' of Single Ropes. Should the worst happen and an explanation has to be given in a Coroner's Court it would be difficult to convince him of the sense of using a weaker rope when a stronger one is readily available from climbing shops.

Other Ropes

Dynamic ropes are suitable and safe for all climbing and abseiling purposes. However other ropes variously described as static, low stretch, gym, climbing wall etc. are available. Those are acceptable, provided they have a 10mm diameter, for very limited situations as follows:

- An abseil rope - but never the safety rope, which must always be a dynamic rope.
- Rigging ropes for single pitch climbing.
- Single pitch climbing – but only when the climber is protected at all times from above.

- Climbing Walls – but only with a rope specification for this purpose.
- Only those who are quite confident of their ability to recognize these “other ropes” and are fully conversant with their limitations should use them. The rule is - If in doubt use a dynamic rope!

Only a person who holds the single pitch award may use these other ropes, unless given a special authorisation by the assessor.

Confidence ropes

It is always advisable for a hill walking party to carry a rope even though it is seldom, if ever, used. These ropes are usually referred to as Confidence Ropes. Their use is strictly limited to giving confidence to a nervous walker for a few metres of exposed ground, or for lowering/safeguarding someone down a difficult section. They are **NEVER USED FOR ROCK CLIMBING IN THE NORMAL SENSE OF THE TERM**. Providing these limitations are clearly understood and adhered to, 30 metres of 8 or 9mm dynamic rope is permissible as a confidence rope. These ropes should be cared for and inspected in a similar manner to climbing ropes.

Slings and harnesses

These must be inspected, cleaned and stored as for ropes with the important addition that all stitching needs careful inspection and buckles need checking for mechanical damage. They can be identified by directly marking the tape information panel with a spirit based felt pen or by the use of tape as for ropes. Should stitching need repair discard the sling or harness. Climbing or caving belts must not be used. The suggested life of a sling can be 5-10 years, and for a harness 5 years.

Helmets

Inspect the shell for cracks or chips. It is difficult to say at what point these render a helmet unsafe to use but certainly major defects should mean the helmet is discarded.

Check the integrity of the internal padding, if fitted, and the straps for security of fixing to the shell. Stickers, etc. must not be stuck on the shell **nor should it be marked externally with felt pens**. A helmet should never be repainted because of possible reaction of the paint with the shell material and the chance of covering hairline cracks. Although they appear robust, helmets should be treated with care and not be dropped, thrown, etc. It is suggested that the 'life' for a plastic helmet is 3-5 years and for a composite helmet 10 years.

Identification marks should be made on or attached to the internal webbing.

Karabiners and other climbing hardware

Inspect to ensure that any hinged screw or cammed parts move freely. Only silicon based lubricants should be used. Check for hairline cracks on all metal items and excessive wear on descendeurs. Hidden stresses can be set up if metal items are dropped onto a hard surface so treat them all with care. Nicks in ice axes can be removed and crampon's points sharpened by the careful use of a fine file. Grinding wheels are not suitable. Identification marks can be applied to adhesive tape. Equipment used on sea crags should be washed in fresh water after use. Regular inspection of all equipment is vital.

The above guidance is for those items where failure could be life threatening. It therefore follows that they need the maximum amount of care and control. **Where leaders use their own personal equipment for Scout activities the same standards as given in this factsheet must be applied.**

Equipment Storage

When considering the storage location for climbing equipment, the following points should be considered:

- It should be an area designated for such equipment and not mixed in with tents, cooking pots and similar equipment.
- There should be no risk of contamination with acids, fuels, chemicals etc.
- The location should be dry, cool and dark.

- There should be a clearly designated box, shelf, etc. where faulty or unchecked equipment can be placed until it can be checked, repaired, etc.
- The equipment logs must be kept in the same location as the equipment.

Disposal of equipment

When equipment comes to the end of its usable life it is important that the disposal is carried out in a manner that ensures it is not salvaged and mis-used by another person or Group.

Conclusion

The inspection and care of equipment for outdoor activities is a continuous process. Those using such equipment must constantly watch for signs of weakness or failure. A failure can sometimes have tragic results but even in the best circumstances there will be discomfort and a possible curtailment of long-cherished plans. Knowledge of equipment should always be personal, not gained at secondhand from friends or shop assistants. Study the catalogues and plan your needs with care so that you have precisely what is best for any specific activity. Advice should be available from your County/Area.

Publications cross-reference

Single Pitch Climbing and Abseiling - The Scout Association ISBN 0-85165-294-8.

Rock Notes - Plas-y-Brenin.

Ropes - British Mountaineering Council, 1998 Edition

Mountain Skills Training Handbook – Hill Johnston ISBN 0-7153-1091-7