# care & maintenance

Extreme care must be employed in use of any load bearing device. Misuse may lead to injury. To ensure you select the right product for your application, take into account these key considerations:

- Rope selection must consider all fibre characteristics, manufacturer's load certification and mode/factors as per AS1380.1:1998.
- Ropes should not be subject to dynamic (shock) loading i.e. sudden application of 10-15% of BF rating.
- All mechanical hardware must be free from defect prior to use i.e. pulleys, shackles, terminations etc.
- Ropes should not be subjected to excessive heat abrasion or chemical exposure.
- Strength loss factors must be applied to splicing (10-20% dependant on type) and up to 50% for basic knotting used for joining or termination.

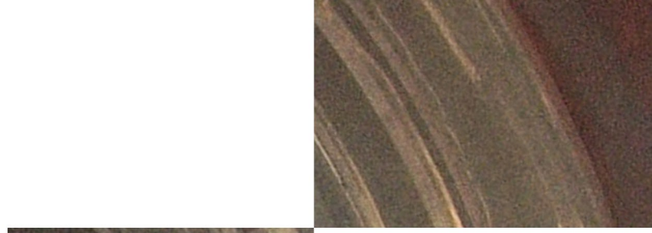
## ALWAYS:

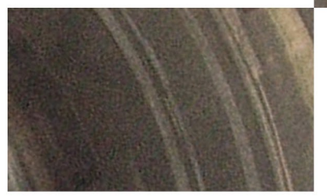
- Consider all factors applying to the job at hand.
- Consider all relevant standard and manufacturer's information provided with the product for use.
- Avoid abrasion, shock loading, overloading, extreme bend ratios or environments.
- Consult Donaghys for further technical information and assistance as required.

During rope inspection, the following should be considered.

## EXTERNAL WEAR

Braids develop fur/pile on the surface as a result of friction and abrasion. This is normal and forms a protective barrier to the main body of the jacket yarns initially.
Excessive wear is indicated by severe yarn filamentation or breakage either distorting the round profile of the braid, breaking yarns or exposing the core materials through the jacket. Note, certified kernmantle braids must have a contrasting colour core to jacket to assist this inspection.
In the event of significant jacket wear the braid must be retired immediately.





## PROTECTIVE MEASURES

Always store, transport and contain braids in a dustproof, strong storage bag which is impervious to light.
Always use Donaghys braids and fibre rope slings only for the purpose they have been designed and intended. It is good practice to maintain a braid history/usage log to assist in determining a responsible retiring date on aged product.

Shelf life for nylon kernmantle braids and synthetic fibre rope slings is estimated as a maximum of 10 years when stored in a cool, dry and UV light excluded environment. There must be no exposure to chemicals or fumes.
In the event of limited casual usage, an estimated six years would apply where no significant wear is evident, internally or externally of the braid.

Always apply conservatism to rope use as the following factors will ensure long life in application:

- A larger/stronger rope will work at lesser loading capacity and last longer.
- Wear sleeves can be used to protect from excess chaffing and localised wear points.
- Always purchase from a reputable certified manufacturer as your best guarantee of reliability.

## INTERNAL WEAR

Dirt, grit or other foreign matter may penetrate between the core and jacket constructions. Examination must be undertaken carefully being mindful not to buckle or distort fibres in this process which may cause problems later.
The presence of large quantities of fibre dust in the centre of the rope indicate that replacement is due.

## CHEMICAL OR SUNLIGHT ATTACK

Degenerative contamination can occur to synthetic fibres through accidental exposure to chemicals.
Nylon is sensitive to strong oxidising agents and mineral acids. It is soluble in formic acid, concentrated sulphuric acid and phenolic compounds. Examination should determine whether any areas or fusion or carbonisation are present. If in doubt, discard the braid.

The entire length of the rope should be carefully inspected prior to and at completion of every use. Avoid using rope that shows signs of wear. If in doubt, retire the rope.
Jackets protect strength integrity of braided rope cores and profile loss % age guide to retirement is:

- 3 strand rope: 8-15%
- 8 & 12 strand braids: 20-25%
- 16 & 24 carrier braid on braid jackets: 40%

Once a rope has been subjected to shock loading, potential internal damage decrees it must be replaced.
Ropes displaying inconsistencies in size, colouration or work hardened (stiffening) should be retired.

## SPLICING

Splicing produces a fastening point which has a strength of up to 90% of the unspliced rope when completed correctly. Inspect regularly and in the case of a plaited rope splice, ensure that no new fibres appear at the neck of the splice. If the rope eye appears to be moving i.e. if clean rope appears, we recommend you seek professional advice of rigging specialists.

## FITTINGS

Ensure that all moving parts of fittings or blocks are performing freely as seized blocks and swivels can damage ropes very quickly. For information on recommended sheave diameters, please consult your retailer.

## CARE

At the end of each season all ropes should be immersed in lukewarm clear water, with non halogenic mild detergent additive if required to remove traces of dirt or salt which can harm ropes. Drying is best achieved in a cool, shaded area with healthy air circulation.

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