## Balanced Double Braid Inspection



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#### **PROTRUDING STRAND**

Often, a strand will get snagged or pulled out from the rest of the rope. As long as the strand isn't broken, this is a repairable issue.

#### THE CAUSE

Protruding strands are generally caused by pulling or snagging on equipment or surfaces.

#### THE REPAIR

One to four strands spaced out by several feet can be removed and rewoven into the line with minimal impact on strength (less than 12 percent).





#### DEEPLY ABRADED SPOT

Not all abrasion is harmful. However, deeply abraded spots, with more than 50 percent of the strand affected, should be addressed.

#### THE CAUSE

Excessive abrasion can be caused by repeated contact with sharp edges or rough surfaces. Inspect for excessive damage by looking closely at the inner and outer fibers.

#### THE REPAIR

If you encounter a deeply abraded spot, where more than 50 percent of the strand is affected, you can re-splice the rope to repair it.

#### **FUTURE PREVENTION**

Always use slings when lifting, and avoid abrasive situations whenever possible, including rough surfaces and sharp edges. Keep your chocks, bits, winches, drums and other surfaces in good condition and free of burrs and rust. Make sure sheaves are the right size and are free to rotate. Don't drag the rope over rough ground. Be sure to use clamps and similar devices with extreme caution.



#### DISCONTINUITY IN ROPE DIAMETER

Discontinuity in rope diameter can indicate damage to the core of the rope.

#### THE CAUSE

Discontinuity in rope diameter is often caused by overloading or shock loads, resulting in broken internal strands.

#### THE REPAIR

Open the rope sleeve to remove and inspect the core. If the core is parted, you will need to retire the rope.





#### WORN-OUT EYE

Worn-out eyes can be expected after continued use and fatigue of fibers.

#### THE CAUSE

The working end may experience fiber fatigue, creating a worn-out eye.

#### THE REPAIR

To repair a worn-out eye, you'll want to shorten, re-splice and reverse the rope. Proceed by putting the unused end into service.



# Contact

When in doubt, ask for help. We would be happy to help you understand the rope's life cycle in your application.

#### **Contact:**

Yale Cordage Sales 77 Industrial Park Road Saco, ME 04072 (207) 282-3396 yalecordage.com

Disclaimer: This document is intended to be used for general rope inspection guidance and cannot cover all possible conditions, applications, products or use. For additional details, please reference the Cordage Institute Guideline 1401-15. When in doubt, do not use the rope.



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