

Inspection & Retirement Checklist*

Any rope that has been in use for any period of time will show normal wear and tear. Some characteristics of a used rope will not reduce strength while others will.

*REFERENCES Cordage Institute International, *International Guideline CI2001-04, Fiber-Rope Inspection and Retirement Criteria: Guidelines to Enhance Durability and the Safer Use of Rope*, 2004.

SINGLE BRAID Inspection and Retirement

COMPRESSION REPAIR



- WHAT**
 - > Visible sheen
 - > Stiffness reduced by flexing the rope
 - > Not to be confused with melting
 - > Often seen on winch drums
- CAUSE** > Fiber molding itself to the contact surface under a radial load
- CORRECTIVE ACTION**
Flex the rope to remove compression.

ABRASION/VOLUME REDUCTION REPAIR OR RETIRE



- WHAT** > Broken filaments and yarns
- CAUSE**
 - > Abrasion
 - > Sharp edges and surfaces
 - > Broken internal strands
- CORRECTIVE ACTION**
Consult abrasion images found in the mobile app or the Inspection & Retirement Pocket Guide to rate the internal/external abrasion level of rope. Evaluate rope based on its most damaged section.

MELTED OR GLAZED FIBER REPAIR OR RETIRE



- WHAT**
 - > Fused fibers
 - > Visibly charred and melted fibers, yarns, and/or strands
 - > Extreme stiffness
 - > Unchanged by flexing
- CAUSE** > Exposure to excessive heat, shock load, or a sustained high load
- CORRECTIVE ACTION**
If possible, remove affected section and re-splice with a standard end-for-end splice. If re-splicing is not possible, retire the rope.

PULLED STRAND REPAIR



- WHAT**
 - > Strand pulled away from the rest of the rope
 - > Is not cut or otherwise damaged
- CAUSE** > Snagging on equipment or surfaces
- CORRECTIVE ACTION**
Work back into the rope.

CUT STRANDS REPAIR OR RETIRE



- WHAT** > Two or more cut strands in proximity
- CAUSE**
 - > Abrasion
 - > Sharp edges and surfaces
 - > Cyclic tension wear
- CORRECTIVE ACTION**
If possible, remove affected section and re-splice with a standard end-for-end splice. If re-splicing is not possible, retire the rope.

DISCOLORATION/DEGRADATION REPAIR OR RETIRE



- WHAT**
 - > Fused fibers
 - > Brittle fibers
 - > Stiffness
- CAUSE** > Chemical contamination
- CORRECTIVE ACTION**
If possible, remove affected section and re-splice with a standard end-for-end splice. If re-splicing is not possible, retire the rope.

INCONSISTENT DIAMETER REPAIR OR RETIRE



- WHAT**
 - > Flat areas
 - > Lumps and bumps
- CAUSE**
 - > Shock loading
 - > Broken internal strands
- CORRECTIVE ACTION**
If possible, remove affected section and re-splice with a standard end-for-end splice. If re-splicing is not possible, retire the rope.