

SAFETY TALK

[wire rope]

Inspection

Wire rope in continuous service should be inspected daily before operation.

Damage from wear and tear can reduce rope strength and capacity.

During inspection, look for the following warning signs – most of them indicate that the rope should be replaced.

Broken wires

Replace rope if there are:

- 6 or more broken wires in one lay
- 3 or more broken wires in one strand, in one lay
- 3 or more broken wires in one lay in standing ropes

Worn/abraded wires

Replace rope, if outer wires

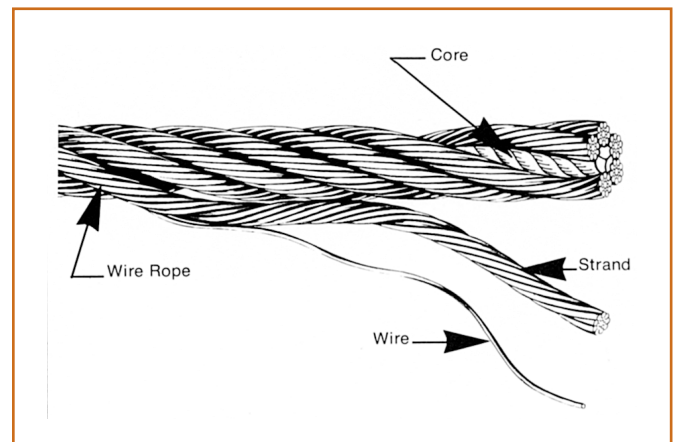
- Become flat from friction
- Become shiny from wear
- Wear exceeds 1/3 of their diameter

Reduced diameter

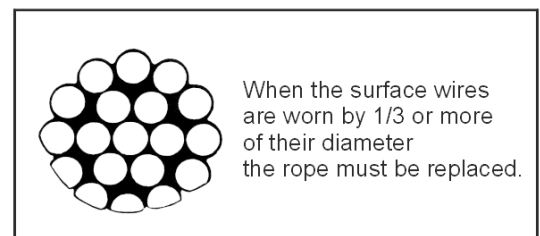
Replace rope if wear on individual wires exceeds 1/3 of their diameter.

Stretch

Replace 6-strand rope if stretch reduces its diameter by more than 1/3.



Enlarged View of Single Strand



Corrosion

Difficult to detect because it's inside the rope.
Look for rust, discolouration and pitting outside.

Cuts/burns

Replace rope if any wires or strands are cut or burned. Damaged ends can be removed and seized, otherwise rope must be replaced.

Bird caging

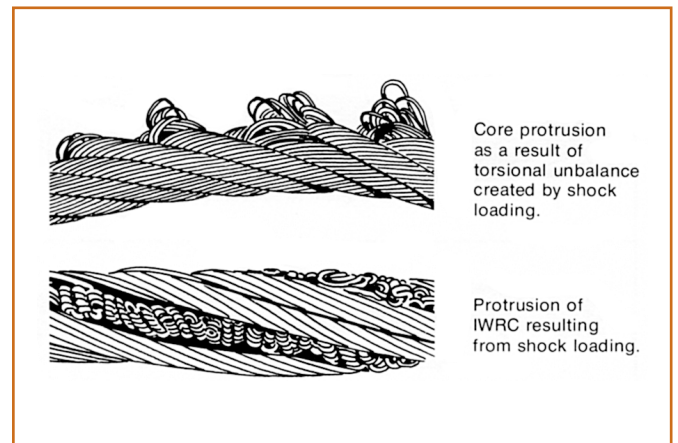
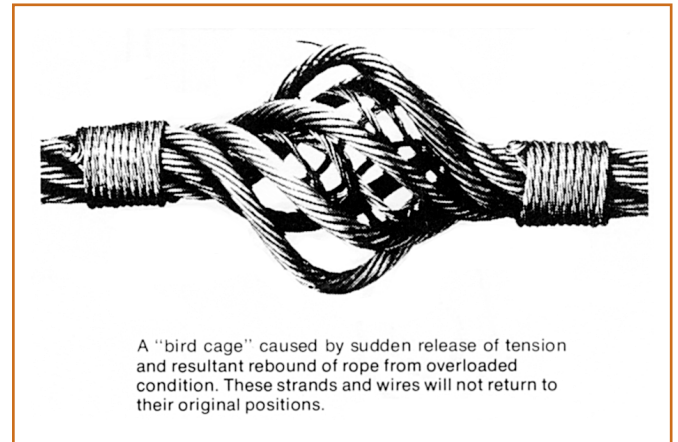
Look for strands opening up in cage-like clusters. If present, rope must be replaced.

Core protrusion

Replace rope when inner core starts poking through strands.

Kinks

Kinks seriously reduce wire rope strength.
Sections with kinks should be cut off.
Otherwise, rope must be discarded.



[Instructor to review wire rope in use on site and to ask crew to inspect samples and arrange for repair or replacement, as required.]

ACKNOWLEDGMENT

With special thanks to the Construction Safety Association of Ontario for permission to reprint.

Attendance Sheet

Department and Division		
Meeting location		Name/Title of employee conducting meeting
Date (yyyy-mm-dd)	Time	Shift
Number in team/department		Number attending

Other safety issues or suggestions made by employees

Record of those attending

Name (please print)	Signature
1.	
2.	
3.	
4.	
5.	
6.	
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12.	
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15.	

Follow-up actions/remarks

Signature	Date
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