

**WAC 296-96-05160 Suspension means.** (1) The following general requirements apply:

(a) Iron (low carbon steel) or steel wire ropes with fiber cores shall be used to suspend cars and counterweights.

(b) The minimum safety factor for suspension ropes shall be 6 times the manufacturers rated breaking strength per rope.

(c) The car, the counterweight end of the car and the counterweight wire ropes (or the stationary hitch ends where multiple roping is used) shall be fastened so that the looped ends of the turned back portion in the rope sockets are clearly visible. Fastenings shall either be:

(i) Individual tapered, babbitted rope sockets; or

(ii) Other types of department approved rope fastenings.

(d) Rope sockets shall develop at least 80 percent of the breaking strength of the strongest rope used in the sockets.

(e) U-bolt rope clips (clamps) cannot be used for load fastenings.

(f) A metal or plastic data tag shall be securely attached to one of the wire rope fastenings each time the ropes are replaced or re-shackled. The data tag shall include:

(i) The diameter of the ropes in inches; and

(ii) The manufacturer's rated breaking strength.

(iii) The month and year the ropes or chain were installed.

(iv) The name of the person or organization who installed the ropes.

(v) All replacements of wire rope or chain shall be in accordance with the lift manufacturer's specifications.

(2) The following requirements apply to specific types of material lifts:

(a) Traction type lifts shall use at least three hoisting ropes.

(b) Lifts suspended by hoisting chains shall comply with the chain manufacturer's specifications for maintenance, inspection, and application.

(c) Lifts using roller chain type lifting chains shall use chains with a 6:1 safety factor based on ASME/ANSI B-29.1M minimum (not average) chain strength.

(d) Drum type lifts, shall use either at least two hoisting ropes or a secondary as well as a primary load path to the hoist shall be employed. Also, the cable secured to the drum shall be at least one and one-half turns around the drum when the carrier is at its extreme limit of travel.

[Statutory Authority: Chapter 70.87 RCW. WSR 18-18-070, § 296-96-05160, filed 8/31/18, effective 10/1/18; WSR 07-24-041, § 296-96-05160, filed 11/30/07, effective 1/1/08. Statutory Authority: RCW 70.87.020, 70.87.030, 70.87.034, 70.87.120, 70.87.185, 70.87.190, 2002 c 98, 2003 c 143 and 2004 c 66. WSR 04-12-047, § 296-96-05160, filed 5/28/04, effective 6/30/04. Statutory Authority: RCW 70.87.020, 70.87.030, 70.87.034, 70.87.120, 70.87.185 and chapter 70.87 RCW. WSR 01-02-026, § 296-96-05160, filed 12/22/00, effective 1/22/01.]