



## Standard Interpretations

### 06/02/1999 - Fixed ladder requirements for ski lift towers.

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• **Standard Number:** [1910.27](#); [1910.27\(d\)\(1\)\(ii\)](#); [1910.27\(d\)\(5\)](#)

OSHA requirements are set by statute, standards and regulations. Our interpretation letters explain these requirements and how they apply to particular circumstances, but they cannot create additional employer obligations. This letter constitutes OSHA's interpretation of the requirements discussed. Note that our enforcement guidance may be affected by changes to OSHA rules. Also, from time to time we update our guidance in response to new information. To keep apprised of such developments, you can consult OSHA's website at <http://www.osha.gov>.

June 2, 1999

Mr. Michael Berry, President  
National Ski Areas Association  
133 S. Van Gordon St.  
Lakewood, Colorado 80228

Dear Mr. Berry:

This letter is in response to several issues your organization has raised about how certain Occupational Safety and Health Administration (OSHA) safety regulations apply when ski area employees are required to climb ski lift towers.

We understand you were specifically concerned about the requirements for ladder cages on all fixed ladders as they apply to ski lift towers, and the specific dimensions and clearances for ladder rungs on those towers.

#### Clarification of Ladder Cage Requirement

The current OSHA regulation for ladders (29 CFR 1910.27) requires that fixed ladders over 20 feet in length be equipped with cages or ladder safety devices. On several previous occasions, the National Ski Areas Association has pointed out to the agency that, on ski lift towers, the presence of cages presents a significant hazard to riders using the ski lifts, as their skis are likely to become entangled in the cage structure. In addition, in bad weather, the possibility of ice accumulation on the cage creates an unacceptable potential for structural failure. OSHA agrees with your assessment that these conditions create situations where using cages for compliance with the current standard may prove infeasible or may create a "greater hazard."

Paragraphs 29 CFR 1910.27(d)(1)(ii) and 1910.27(d)(5) require cages or ladder safety devices

on ladders more than 20 feet in length. Accordingly, the current OSHA standard allows for an alternative to cages for fixed ladders, as long as the employer provides for 100% fall protection during ascent or descent of the ladder. One example of such a system that would address your specific concerns for maintenance or other operations which require the ascending and descending of towers, would be a fall protection system consisting of a climbing belt or harness equipped with two short lanyards that incorporate snaphooks on the end of the lanyard. The climber would use the system by alternately attaching to the ladder rungs during the climb up or down. Once in place to do work, OSHA would require the climber to be "tied off" or otherwise be protected from falling.

In the event of an emergency or other similar situation where the required use of a ladder climbing device, such as a double clipping lanyard system would delay a rescue or otherwise endanger lives, OSHA would allow climbs for workers complying with the "Qualified Climber" requirements set forth in paragraph 1910.32(b)(5) of OSHA's Walking and Working Surfaces and Personal Fall Protection Proposal, dated April 10, 1990. In addition, the worker would be required to be "tied off" once they reached their work position. Of course, it would incumbent upon the employer to demonstrate that an actual emergency situation existed.

### **Clarification on Dimensions and Clearances of Ladder Rungs**

The current fixed ladder regulation also specifies that the length (distance from side to side) of a ladder rung shall not be less than 16 inches and that the toe clearance from the centerline of the rungs to obstructions behind the ladder (or ski tower) be at least 7 inches. The National Ski Area Association has pointed out many of the ski towers in the United States are less than 16 inches in diameter. For those towers, a 16 inch long ladder rung would create an unacceptable hazard for passing skiers, whose skis may become entangled in that portion of the rung that protrudes beyond the sides of the ski tower. Likewise, for these towers, the requirement for a 7 inch toe clearance tends to create a similar hazard. OSHA acknowledges that, for towers of 16 inches or less in diameter, neither the 16 inch long ladder rung requirement nor the 7 inch toe clearance requirement is feasible.

For ski towers equipped with ladders that do not meet these minimum requirements, a ladder climbing device, such as the double clip harness system described as an alternative to the ladder cage requirement would be deemed an acceptable alternative safety procedure, as long as instruction was provided to all workers reasonably expected to climb towers. The instruction should be part of the training required in the "Qualified Climber" program, and should identify the specific towers at the ski area that have inadequate toe clearance and ladder widths and must be climbed using proper fall protection. In the event of an emergency, a qualified climber, in compliance with the proposed 1910.23 and 1910.32(b)(5) standard, may climb the tower without fall protection.

OSHA believes that the procedures outlined above will provide for the safety of the workers involved in climbing operations without creating unnecessary hazards for skiers or other users of the ski areas. The OSHA field offices have been made aware that the procedures described in this letter constitute an acceptable alternative to ladder cages and other fall protection hazards associated with the ascent and descent of ski towers. A copy of this interpretation has also been provided to the 23 states that operate OSHA-approved State plans. They will be encouraged to adopt similar compliance policies.

If you have any remaining questions concerning these issues, please contact [OSHA's Directorate of Education and Analysis] at (202) 693-2400, or the [Directorate of Enforcement Programs], at (202) 693-2100.

Sincerely,

R. Davis Layne  
Deputy Assistant Secretary for Enforcement

[Corrected 4/4/2005.

**Note: On April 10, 1990 OSHA published proposed revisions to Walking and Working Surfaces; Personal Protective Equipment (Fall Protection Systems); Notices of Proposed Rulemaking; Slips; Falls; Trips in Federal Register 55:13360-13441. It is available electronically only as an abstract. On May 2, 2003 OSHA reopened the rulemaking record on the proposed revisions to Walking and Working Surfaces and Personal Protective Equipment (Fall Protection Systems). It was re-published in its entirety in Federal Register 68:23527-23568 and is available electronically.]**