

WAC 296-32-24032 Personnel lifting—General requirements. (1)

Personnel platforms and/or their suspension systems must be designed, constructed and tested according to ASME B30.23-2005, Personnel Lifting Systems. The design and manufacturer's specifications must be made by a registered professional engineer.

Note: Additional requirements relating to personnel lifting are located in chapter 296-155 WAC, Part L.

(2) Before an employee may perform any job related to hoisting employees aloft for work, the employee shall receive training on all facets of the process. The operator of the hoist shall have a thorough understanding and comply with subsections (2) through (9) of this section pertaining to hoisting employees on the hoist line.

(3) Overhaul ball. This subsection sets forth the minimum requirements for the design and use of an overhaul ball as part of the lifting system.

(a) The weight of the ball shall overhaul the weight of the load line based on its own weight.

(b) If the ball is an integral part of the system and the load goes through the ball, then it must be designed accordingly.

(c) The ball shall be designed with attachment points at the top and bottom.

(d) A maximum of two employees may be attached to the ball at one time.

(4) An anti-two block device shall be used on all hoists, except where an employer can demonstrate that ambient radiation frequency (RFR) precludes that use. In such case, a site-specific rigging plan shall be established and maintained on-site to ensure that two blocking cannot occur and that effective communication between the hoist operator and personnel being hoisted is maintained. This plan may include a cable marking system, an employee situated on the tower in a position to observe the top block, or any other system that will adequately ensure communication. All of the following shall apply:

(a) A qualified person shall make the following determinations:

(i) The rigging, hoist line, and slings shall have a factor of safety of 10:1 against failure during personnel lifts;

(ii) The hoist line used to raise or lower employees must be wire rope and may be equipped with a swivel to prevent any rotation of the employees;

(iii) If a swivel is not used, then an alternate means shall be used to keep the employees under control at all times;

(iv) If spin resistant wire rope is used, additional and more frequent inspections are required due to different wear trends.

(b) When hoisting personnel (versus material), the hoist capacity load rating shall be derated by a factor of two (reduced by one half) and must maintain a 10:1 factor of safety after the reduction is considered. All employees shall be provided with and required to use the proper personal protective equipment (including fall protection equipment) that shall be inspected each day before use.

(c) Except where the employer can demonstrate that specific circumstances or conditions preclude its use, a guide line (tag line) shall be used to prevent the employees or the platform from contacting the tower during hoisting.

(d) The gin pole shall be thoroughly inspected before use by a competent person to determine that it is free from defects including, but not limited to, damaged and/or missing members, corrosive damage, missing fasteners and cracked or broken welds at joints, and general deterioration.

(e) The gin pole shall be attached to the tower as designed by a registered professional engineer. There shall be a minimum of two attachment locations, one at the bottom of the gin pole and one near the top of the tower or the highest position available on the structure.

(f) The personnel load capacity and material capacity of the lifting system in use shall be posted at the site near the location of the hoist operator. If the system is changed (for example, if the gin pole angle is changed), the posted capacity shall be changed accordingly.

(g) In situations where a gin pole is not being used on a communication tower and similar structures, a crown block may be used on the structure instead of a gin pole for access to the work location.

(5) A trial lift of the maximum intended personnel load shall be made from ground level to the location to which personnel are to be hoisted.

(a) The trial lift shall be made immediately prior to placing personnel on the hoist line.

(b) The hoist operator shall determine that all systems, controls, and safety devices are activated and functioning properly.

(c) A single trial lift may be performed for all locations that are to be reached from a single set-up position.

(d) The hoist operator shall determine that no interference exists and that all configurations necessary to reach those work locations remain under the limit of the hoist's rated capacity and additionally maintain a 10:1 factor of safety against failure.

(e) The trial lift shall be repeated prior to hoisting employees whenever the hoist is moved and set up in a new location or returned to a previously used position.

(f) After the trial lift, employees shall not be lifted unless the following conditions are met:

(i) Hoist wire ropes are determined to be free of damage in accordance with WAC 296-32-22555 and 296-155-53404.

(ii) Multiple part lines are not twisted around each other.

(iii) The proof testing requirements have been satisfied.

(g) If the hoist wire rope is slack, the hoisting system shall be inspected to ensure that all wire ropes are properly seated on drums and in sheaves.

(h) A visual inspection of the hoist, rigging, base support, and foundation shall be made by a competent person immediately after the trial lift to determine whether testing has exposed any defect or adverse effect upon any component of the structure.

(i) Any defects found during the inspection that may create a safety hazard shall be corrected and another trial lift shall be performed before hoisting personnel.

(ii) Prior to hoisting employees and after any repair or modification, the system shall be proof tested to its rated load, holding it in a suspended position for 5 minutes with the test load evenly distributed (this may be done concurrently with the trial lift).

(iii) After proof testing, a competent person shall inspect the rigging. Any deficiencies found shall be corrected and another proof test shall be conducted.

(6) A prelift meeting shall be held before the trial lift at each location and each time a new employee is assigned to the operation. The prelift meeting shall meet both of the following requirements:

(a) The hoist operator, each employee to be lifted, and the crew chief shall attend.

(b) The hoist operator shall review the procedures to be followed and all appropriate requirements contained in this rule with the other individuals present.

(7) The employer shall ensure that all trial lifts, inspections, and proof tests shall be performed and documented, and the documentation shall remain on-site during the entire length of the project. The employer shall ensure that the prelift meeting is documented, and the documentation shall remain on-site during the entire length of the project.

(8) Employees shall be hoisted to their work stations by using a personnel platform or by using a boatswain chair and/or boatswain seat-type full body type harness.

(a) When a boatswain chair or boatswain seat-type full body harness is used to hoist employees, the following shall apply:

(i) Not more than two employees may be hoisted at a time.

(ii) When hoisting an employee in a boatswain type full body harness, the harness shall be attached to the hoist wire rope line in such a manner as to utilize the boatswain seat part of the harness, placing the employee into a sitting position and a fall arrest lanyard must be attached from the back D ring of the full body harness to a separate attachment point.

(iii) Only locking-type snap hooks shall be used.

(iv) The harness shall be equipped with two side rings and at least one front and one back D ring.

(v) The hoist line hook shall be equipped with a safety latch that can be locked in a closed position to prevent loss of contact.

(vi) Employees must maintain 100 percent tie-off while moving between the hoist line and the tower.

(b) When a personnel platform is used, the following provisions must be followed:

(i) The maximum rate of travel shall not exceed two hundred feet per minute when a tag or trolley line is used to control personnel hoists. When a tag or trolley line cannot be used, the rate of travel of the employee being hoisted shall not exceed one hundred feet per minute.

(ii) In all personnel hoist situations, the maximum rate shall not exceed 50 feet per minute when personnel being lifted approaches to within fifty feet of the top block.

(iii) The use of free-spooling (friction lowering) is prohibited. When the hoist line is being used to raise or lower employees, there shall be no other load attached to any hoist line and no other load shall be raised or lowered at the same time on the same hoist.

(iv) As-built drawings approved by a registered professional engineer shall provide the lifting capacity of the gin pole and shall be available at the job site.

(v) The gin pole raising line shall not be used to raise or lower employees unless it is rated for lifting employees.

(vi) Employees must maintain 100 percent tie-off while moving between the personnel platform and the tower.

(9) Employees being hoisted shall remain in continuous sight of and/or in direct communication with the operator or signal person. The following shall apply:

(a) In those situations where direct visual contact with the operator is not possible and the use of a signal person would create a greater hazard for the person being hoisted, direct communication alone, such as by radio, shall be used.

(b) When radios are used, they shall be nontrunked closed 2-way selective frequency radio systems. When hand signals are used, the employees must use industry standardized hand signals.

(10) Employees shall not be hoisted during adverse weather conditions (high winds, heat, cold, lightning, rain, snow or sleet) or other impending danger, except in the case of emergency employee rescue. The competent person shall make the determination.

(11) The hoist system (gin pole and its base hoists) used to raise and lower employees on the hoist line, shall not be used unless the following clearance distances in Table 8 are maintained at all times during the lift:

Table 8

Power line voltage phase to phase (kV)	Minimum safe clearance (feet)
50 or below	10
Above 50 to 200	15
Above 200 to 350	20
Above 350 to 500	25
Above 500 to 750	35
Above 750 to 1,000	45

Note: Additional requirements relating to rigging are located in chapter 296-155 WAC, Parts F-1 and L.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, 49.17.060, and chapter 49.17 RCW. WSR 17-20-069, § 296-32-24032, filed 10/2/17, effective 1/1/18.]