

(Effective until October 1, 2020)

WAC 296-155-53403 Fall protection. (1) Application.

(a) Subsections (2), (3)(b), (5) and (6) of this section apply to all cranes/derricks covered by this part except tower cranes.

(b) Subsections (3)(a), (4), (7), (10) and (11) of this section apply to all cranes/derricks covered by this part.

(c) Subsections (3)(c) and (9) of this section apply only to tower cranes.

(2) Boom walkways.

(a) Cranes/derricks manufactured after the effective date of this section with lattice booms must be equipped with walkways on the boom(s) if the vertical profile of the boom (from cord centerline to cord centerline) is 6 or more feet.

(b) **Boom walkway criteria.** The walkways must be at least 12 inches wide.

(3) Steps, handholds, ladders, grabrails, guardrails and railings.

(a) All steps, handholds, ladders and guardrails/railings/grabrails must be maintained in good condition.

(b) Cranes/derricks manufactured after the effective date of this section must be equipped so as to provide safe access and egress between the ground and the operator work station(s), including the forward and rear positions, by the provision of devices such as steps, handholds, ladders, and guardrails/railings/grabrails. These devices must meet the following criteria:

(i) Steps, handholds, ladders and guardrails/railings/grabrails must meet the criteria of SAE J185 (May 2003) or ISO 11660-2:1994(E) except where infeasible.

(ii) Walking/stepping surfaces, except for crawler treads, must have slip-resistant features/properties (such as diamond plate metal, strategically placed grip tape, expanded metal, or slip-resistant paint).

(c) Tower cranes manufactured after the effective date of this section must be equipped so as to provide safe access and egress between the ground and the cab, machinery platforms, and tower (mast), by the provision of devices such as steps, handholds, ladders, and guardrails/railings/grabrails. These devices must meet the following criteria:

(i) Steps, handholds, ladders, and guardrails/railings/grabrails must meet the criteria of ISO 11660-1:2008(E) and ISO 11660-3:2008(E) or SAE J185 (May 2003) except where infeasible.

(ii) Walking/stepping surfaces must have slip-resistant features/properties (such as diamond plate metal, strategically placed grip tape, expanded metal, or slip-resistant paint).

(4) Personal fall arrest and fall restraint systems must conform to the criteria in WAC 296-155-24510. Body harnesses must be used in personal fall arrest and fall restraint systems.

(5) For nonassembly/disassembly work, you must provide and ensure the use of fall protection equipment for employees who are on a walking/working surface with an unprotected side or edge more than 6 feet above a lower level as follows:

(a) When moving point-to-point:

(i) On nonlattice booms (whether horizontal or not horizontal).

(ii) On lattice booms that are not horizontal.

(iii) On horizontal lattice booms where the fall distance is 10 feet or more.

(b) While at a work station on any part of the crane (including the boom, of any type).

Note: If the equipment is running and the employee is at or near the draw-works, precautions should be taken to ensure the fall protection gear will not become entangled.

(6) For assembly/disassembly work, you must provide and ensure the use of fall protection equipment for employees who are on a walking/working surface with an unprotected side or edge more than 10 feet above a lower level.

Note: If the equipment is running and the employee is at or near the draw-works, precautions should be taken to ensure the fall protection gear will not become entangled.

(7) **Anchorage criteria.**

(a) Anchorages used for attachment of personal fall arrest equipment must be independent of any anchorage being used to support or suspend platforms and capable of supporting at least 5,000 pounds (22.2 kN) per employee attached, or must be designed, installed, and used as follows:

(i) As part of a complete personal fall arrest system which maintains a safety factor of at least two; and

(ii) Under the supervision of a qualified person.

(b) Positioning devices must be secured to an anchorage capable of supporting at least twice the potential impact load of an employee's fall or 3,000 pounds (13.3 kN), whichever is greater.

(c) Anchorages for personal fall arrest and positioning device systems.

(i) Personal fall arrest systems must be anchored to any apparently substantial part of the equipment unless a competent person, from a visual inspection, without an engineering analysis, would conclude that the criteria in (a) of this subsection would not be met.

(ii) Positioning device systems must be anchored to any apparently substantial part of the crane unless a competent person, from a visual inspection, without an engineering analysis, would conclude that the criteria in (b) of this subsection would not be met.

(iii) Attachable anchor devices (portable anchor devices that are attached to the crane) must meet the anchorage criteria in (a) of this subsection for personal fall arrest systems and (b) of this subsection for positioning device systems.

(8) **Anchorages for fall restraint systems.** Fall restraint systems must be anchored to any part of the crane that is capable of withstanding twice the maximum load that an employee may impose on it during reasonably anticipated conditions of use.

(9) **Tower cranes.**

(a) For work other than erecting, climbing, and dismantling, you must provide and ensure the use of fall protection equipment for employees who are on a walking/working surface with an unprotected side or edge more than 6 feet above a lower level.

Note: If the equipment is running and the employee is at or near the draw-works, precautions should be taken to ensure the fall protection gear will not become entangled.

(b) For erecting, climbing, and dismantling work, you must provide and ensure the use of fall protection equipment for employees who are on a walking/working surface with an unprotected side or edge more than 10 feet above a lower level.

(10) **Anchoring to the load line.** A personal fall arrest system is permitted to be anchored to the crane/derrick's hook (or other part of the load line) where all of the following requirements are met:

(a) A qualified person has determined that the set-up and rated capacity of the crane/derrick (including the hook, load line and rig-

ging) meets or exceeds the requirements in subsection (7)(a) of this section.

(b) The crane operator must be at the worksite and informed that the crane is being used for this purpose.

(c) No load is suspended from the load line when the personal fall arrest system is anchored to the crane/derrick's hook (or other part of the load line).

(11) **Training.** You must train each employee who may be exposed to fall hazards while on, or hoisted by, cranes/derricks covered by this section on all of the following:

(a) The requirements in this part that address fall protection.

(b) The applicable requirements in Parts C-1 and K of this chapter.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, 49.17.060. WSR 16-09-085, § 296-155-53403, filed 4/19/16, effective 5/20/16. Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, 49.17.060 and chapter 49.17 RCW, and 29 C.F.R. 1926, Subpart CC. WSR 13-02-068, § 296-155-53403, filed 12/31/12, effective 2/1/13. Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, 49.17.440, 49.17.060, and 29 C.F.R. 1926, Subpart CC. WSR 12-01-086, § 296-155-53403, filed 12/20/11, effective 2/1/12.]

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(i) Steps, handholds, ladders and guardrails/railings/grabrails must meet the criteria of SAE J185 (May 2003) or ISO 11660-2:1994(E) except where infeasible.

(ii) Walking/stepping surfaces, except for crawler treads, must have slip-resistant features/properties (such as diamond plate metal, strategically placed grip tape, expanded metal, or slip-resistant paint).

(c) Tower cranes manufactured after the effective date of this section must be equipped so as to provide safe access and egress between the ground and the cab, machinery platforms, and tower (mast), by the provision of devices such as steps, handholds, ladders, and guardrails/railings/grabrails. These devices must meet the following criteria:

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(ii) Walking/stepping surfaces must have slip-resistant features/properties (such as diamond plate metal, strategically placed grip tape, expanded metal, or slip-resistant paint).

(4) Personal fall arrest and fall restraint systems must conform to the criteria in chapter 296-880 WAC, Unified safety standards for fall protection.

(5) For nonassembly/disassembly work, you must provide and ensure the use of fall protection equipment for employees who are on a walking/working surface with an unprotected side or edge more than 6 feet above a lower level as follows:

(a) When moving point-to-point:

(i) On nonlattice booms (whether horizontal or not horizontal).

(ii) On lattice booms that are not horizontal.

(iii) On horizontal lattice booms where the fall distance is 10 feet or more.

(b) While at a work station on any part of the crane (including the boom, of any type).

Note: If the equipment is running and the employee is at or near the draw-works, precautions should be taken to ensure the fall protection gear will not become entangled.

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(i) As part of a complete personal fall arrest system which maintains a safety factor of at least two; and

(ii) Under the supervision of a qualified person.

(b) Positioning devices must be secured to an anchorage capable of supporting at least twice the potential impact load of an employee's fall or 3,000 pounds (13.3 kN), whichever is greater.

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(i) Personal fall arrest systems must be anchored to any apparently substantial part of the equipment unless a competent person, from a visual inspection, without an engineering analysis, would conclude that the criteria in (a) of this subsection would not be met.

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(b) The crane operator must be at the worksite and informed that the crane is being used for this purpose.

(c) No load is suspended from the load line when the personal fall arrest system is anchored to the crane/derrick's hook (or other part of the load line).

(11) **Training.** You must train each employee who may be exposed to fall hazards while on, or hoisted by, cranes/derricks covered by this section on all of the following:

(a) The requirements in this part that address fall protection.

(b) The applicable requirements in chapter 296-880 WAC, Unified safety standards for fall protection and Part K of this chapter.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, 49.17.060, and chapter 49.17 RCW. WSR 20-12-091, § 296-155-53403, filed 6/2/20, effective 10/1/20. Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, 49.17.060. WSR 16-09-085, § 296-155-53403, filed 4/19/16, effective 5/20/16. Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, 49.17.060 and chapter 49.17 RCW, and 29 C.F.R. 1926, Subpart CC. WSR 13-02-068, § 296-155-53403, filed 12/31/12, effective 2/1/13. Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, 49.17.440, 49.17.060, and 29 C.F.R. 1926, Subpart CC. WSR 12-01-086, § 296-155-53403, filed 12/20/11, effective 2/1/12.]