

# The Electronic Code of Federal Regulations

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## Editorial Notes:

1. At [44 FR 8577](#), Feb. 9, 1979, and corrected at [44 FR 20940](#), Apr. 6, 1979, OSHA reprinted without change the entire text of [29 CFR part 1926](#) together with certain General Industry Occupational Safety and Health Standards contained in [29 CFR part 1910](#), which have been identified as also applicable to construction work. This republication developed a single set of OSHA regulations for both labor and management forces within the construction industry.

2. Nomenclature changes to part 1926 appear at [84 FR 21597](#), May 14, 2019.

## § 1926.1423 Fall protection.

(a) *Application.*

- (1) [Paragraphs \(b\)](#), [\(c\)\(3\)](#), [\(e\)](#) and [\(f\)](#) of this section apply to all equipment covered by this subpart except tower cranes.
- (2) [Paragraphs \(c\)\(1\)](#), [\(c\)\(2\)](#), [\(d\)](#), [\(g\)](#), [\(j\)](#) and [\(k\)](#) of this section apply to all equipment covered by this subpart.
- (3) [Paragraphs \(c\)\(4\)](#) and [\(h\)](#) of this section apply only to tower cranes.

(b) *Boom walkways.*

- (1) Equipment manufactured after November 8, 2011 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.

(2) *Boom walkway criteria.*

- (i) The walkways must be at least 12 inches wide.
- (ii) Guardrails, railings and other permanent fall protection attachments along walkways are:
  - (A) Not required.
  - (B) Prohibited on booms supported by pendant ropes or bars if the guardrails/railings/attachments could be snagged by the ropes or bars.

- (C) Prohibited if of the removable type (designed to be installed and removed each time the boom is assembled/disassembled).
- (D) Where not prohibited, guardrails or railings may be of any height up to, but not more than, 45 inches.
- (c) *Steps, handholds, ladders, grabrails, guardrails and railings.*
  - (1) Section 1926.502(b) does not apply to equipment covered by this subpart.
  - (2) The employer must maintain in good condition originally-equipped steps, handholds, ladders and guardrails/railings/grabrails.
  - (3) Equipment manufactured after November 8, 2011 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) (incorporated by reference, see [§ 1926.6](#)) or ISO 11660-2:1994(E) (incorporated by reference, see [§ 1926.6](#)) 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).
  - (4) Tower cranes manufactured after November 8, 2011 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) (incorporated by reference, see [§ 1926.6](#)) and ISO 11660-3:2008(E) (incorporated by reference, see [§ 1926.6](#)) or SAE J185 (May 2003) (incorporated by reference, see [§ 1926.6](#)) 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).
- (d) *Personal fall arrest and fall restraint systems.* Personal fall arrest system components must be used in personal fall arrest and fall restraint systems and must conform to the criteria in [§ 1926.502\(d\)](#) except that [§ 1926.502\(d\) \(15\)](#) does not apply to components used in personal fall arrest and fall restraint systems. Either body belts or body harnesses must be used in personal fall arrest and fall restraint systems.

- (e) For non-assembly/disassembly work, the employer 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:
  - (1) When moving point-to-point:
    - (i) On non-lattice booms (whether horizontal or not horizontal).
    - (ii) On lattice booms that are not horizontal.
    - (iii) On horizontal lattice booms where the fall distance is 15 feet or more.
  - (2) While at a work station on any part of the equipment (including the boom, of any type), except when the employee is at or near draw-works (when the equipment is running), in the cab, or on the deck.
- (f) For assembly/disassembly work, the employer 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 15 feet above a lower level, except when the employee is at or near draw-works (when the equipment is running), in the cab, or on the deck.
- (g) *Anchorage criteria.*
  - (1) Sections 1926.502(d)(15) and 1926.502(e)(2) apply to equipment covered by this subpart only to the extent delineated in [paragraph \(g\)\(2\)](#) of this section.
  - (2) *Anchorage 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 [§ 1926.502\(d\)\(15\)](#) would not be met.
    - (ii) Positioning device 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 [§ 1926.502\(e\)\(2\)](#) would not be met.
    - (iii) Attachable anchor devices (portable anchor devices that are attached to the equipment) must meet the anchorage criteria in [§ 1926.502\(d\)\(15\)](#) for personal fall arrest systems and [§ 1926.502\(e\)\(2\)](#) for positioning device systems.
  - (3) *Anchorage for fall restraint systems.* Fall restraint systems must be anchored to any part of the equipment that is capable of withstanding twice the maximum load that an employee may impose on it during reasonably anticipated conditions of use.
- (h) *Tower cranes.*

- (1) For work other than erecting, climbing, and dismantling, the employer 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, except when the employee is at or near draw-works (when the equipment is running), in the cab, or on the deck.
- (2) For erecting, climbing, and dismantling work, the employer 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 15 feet above a lower level.
- (i) [Reserved]
- (j) *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:
  - (1) A qualified person has determined that the set-up and rated capacity of the crane/derrick (including the hook, load line and rigging) meets or exceeds the requirements in [§ 1926.502\(d\)\(15\)](#).
  - (2) The equipment operator must be at the work site and informed that the equipment is being used for this purpose.
  - (3) 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).
- (k) *Training.* The employer must train each employee who may be exposed to fall hazards while on, or hoisted by, equipment covered by this subpart on all of the following:
  - (1) the requirements in this subpart that address fall protection.
  - (2) the applicable requirements in [§§ 1926.500](#) and [1926.502](#).

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### **§ 1926.1424 Work area control.**

(a) *Swing radius hazards.*

(1) The requirements in [paragraph \(a\)\(2\)](#) of this section apply where there are accessible areas in which the equipment's rotating superstructure (whether permanently or temporarily mounted) poses a reasonably foreseeable risk of:

(i) Striking and injuring an employee; or

(ii) Pinching/crushing an employee against another part of the equipment or another object.

(2) To prevent employees from entering these hazard areas, the employer must:

(i) Train each employee assigned to work on or near the equipment ("authorized personnel") in how to recognize struck-by and pinch/crush hazard areas posed by the rotating superstructure.

(ii) Erect and maintain control lines, warning lines, railings or similar barriers to mark the boundaries of the hazard areas. *Exception:* When the employer can demonstrate that it is neither feasible to erect such barriers on the ground nor on the equipment, the hazard areas must be clearly marked by a combination of warning signs (such as "Danger—Swing/Crush Zone") and high visibility markings on the equipment that identify the hazard areas. In addition, the employer must train each employee to understand what these markings signify.

(3) *Protecting employees in the hazard area.*

(i) Before an employee goes to a location in the hazard area that is out of view of the operator, the employee (or someone instructed by the employee) must ensure that the operator is informed that he/she is going to that location.

(ii) Where the operator knows that an employee went to a location covered by [paragraph \(a\)\(1\)](#) of this section, the operator must not rotate the superstructure until the operator is informed in accordance with a pre-arranged system of communication that the employee is in a safe position.

(b) Where any part of a crane/derrick is within the working radius of another crane/derrick, the controlling entity must institute a system to coordinate operations. If there is no controlling entity, the employer (if there is only one employer operating the multiple pieces of equipment), or employers, must institute such a system.