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Part 29: Labor
PART 1926—SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION

Subpart O—Motor Vehicles, Mechanized Equipment, and Marine Operations

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AUTHORITY: Section 107, Construction Work Hours and Safety Standards Act (Construction Safety Act) (40 U.S.C. 333); Secs. 4, 6, 8, Occupational Safety and Health Act of 1970 (29 U.S.C. 653, 655, 657); Secretary of Labor's Order No. 12-71 (36 FR 8754), 8-76 (41 FR 20569), 9-83 (48 FR 35736), 1-90 (55 FR 9033), 6-96 (62 FR 111), or 5-2007 (72 FR 31159), as applicable. Section 1926.602 also issued under 29 CFR part 1911.

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\$1926.600 Equipment.

- (a) General requirements. (1) All equipment left unattended at night, adjacent to a highway in normal use, or adjacent to construction areas where work is in progress, shall have appropriate lights or reflectors, or barricades equipped with appropriate lights or reflectors, to identify the location of the equipment.
(2) A safety tire rack, cage, or equivalent protection shall be provided and used when inflating, mounting, or dismounting tires installed on split rims, or rims equipped with locking rings or similar devices.
(3)(i) Heavy machinery, equipment, or parts thereof, which are suspended or held aloft by use of slings, hoists, or jacks shall be substantially blocked or cribbed to prevent falling or shifting before employees are permitted to work under or between them.
(ii) Whenever the equipment is parked, the parking brake shall be set.
(4) The use, care and charging of all batteries shall conform to the requirements of subpart K of this part.
(5) All cab glass shall be safety glass, or equivalent, that introduces no visible distortion affecting the safe operation of any machine covered by this subpart.
(6) All equipment covered by this subpart shall comply with the following requirements when working or being moved in the vicinity of power lines or energized transmitters, except where electrical distribution and transmission lines have been deenergized and visibly grounded at point of work or where insulating barriers, not a part of or an attachment to the equipment or machinery, have been erected to prevent physical contact with the lines:
(i) For lines rated 50 kV or below, minimum clearance between the lines and any part of the crane or load shall be 10 feet;
(ii) For lines rated over 50 kV, minimum clearance between the lines and any part of the crane or load shall be 10 feet plus 0.4 inch for each 1 kV over 50 kV, or twice the length of the line insulator, but never less than 10 feet;
(iii) In transit with no load and boom lowered, the equipment clearance shall be a minimum of 4 feet for voltages less than 50 kV, and 10 feet for voltages over 50 kV, up to and including 345 kV, and 16 feet for voltages up to and including 750 kV;
(iv) A person shall be designated to observe clearance of the equipment and give timely warning for all operations where it is difficult for the operator to maintain the desired clearance by visual means;
(v) Cage-type boom guards, insulating links, or proximity warning devices may be used on cranes, but the use of such devices shall not alter the requirements of any other regulation of this part even if such device is required by law or regulation;
(vi) Any overhead wire shall be considered to be an energized line unless and until the person owning such line or the electrical utility authorities indicate that it is not an energized line and it has been visibly grounded;
(vii) Prior to work near transmitter towers where an electrical charge can be induced in the equipment or materials being handled, the transmitter shall be de-energized or tests shall be made to determine if electrical charge is induced on the crane.
(A) The equipment shall be provided with an electrical ground directly to the upper rotating structure supporting the boom; and
(B) Ground jumper cables shall be attached to materials being handled by boom equipment when electrical charge is induced while working near energized transmitters.
(C) Combustible and flammable materials shall be removed from the immediate area prior to operations.
(7) Rolling railroad cars. Derrail and/or bumper blocks shall be provided on spur railroad tracks where a rolling car could contact other cars being worked, enter a building, work or traffic area.
(b) Specific requirements. [Reserved]

[44 FR 8577, Feb. 9, 1979; 44 FR 20940, Apr. 6, 1979, as amended at 58 FR 35183, June 30, 1993; 75 FR 48134, Aug. 9, 2010]

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\$1926.601 Motor vehicles.

- (a) Coverage. Motor vehicles as covered by this part are those vehicles that operate within an off-highway jobsite, not open to public traffic.
(b) General requirements. (1) All vehicles shall have a service brake system, an emergency brake system, and a parking brake system.
(2)(i) Whenever visibility conditions warrant additional light, all vehicles, or combinations of vehicles, in use shall be equipped with at least two headlights and two taillights in operable condition.
(ii) All vehicles, or combination of vehicles, shall have brake lights in operable condition regardless of light conditions.
(3) All vehicles shall be equipped with an adequate audible warning device at the operator's station and in an operable condition.
(4) No employer shall use any motor vehicle equipment having an obstructed view to the rear unless:
(i) The vehicle has a reverse signal alarm audible above the surrounding noise level or;
(ii) The vehicle is backed up only when an observer signals that it is safe to do so.
(5) All vehicles with cabs shall be equipped with windshields and powered wipers.
(6) All haulage vehicles, whose pay load is loaded by means of cranes, power shovels, loaders, or similar equipment, shall have a cab shield and/or canopy adequate to protect the operator from shifting or falling materials.
(7) Tools and material shall be secured to prevent movement when transported in the same compartment with employees.
(8) Vehicles used to transport employees shall have seats firmly secured and adequate for the number of employees to be carried.
(9) Seat belts and anchorages meeting the requirements of 49 CFR part 571 (Department of Transportation, Federal Motor Vehicle Safety Standards) shall be installed in all motor vehicles.
(10) Trucks with dump bodies shall be equipped with positive means of support, permanently attached, and capable of being locked in position to prevent accidental lowering of the body while maintenance or inspection work is being done.
(11) Operating levers controlling hoisting or dumping devices on haulage bodies shall be equipped with a latch or other device which will prevent accidental starting or tripping of the mechanism.
(12) Trip handles for tailgates of dump trucks shall be so arranged that, in dumping, the operator will be in the clear.
(13) (i) All rubber-tired motor vehicle equipment manufactured on or after May 1, 1972, shall be equipped with fenders.
(ii) Mud flaps may be used in lieu of fenders whenever motor vehicle equipment is not designed for fenders.
(14) All vehicles in use shall be checked at the beginning of each shift to assure that the following parts, equipment, and accessories are in safe operating condition and free of apparent damage that could cause failure while in use: service brakes, including trailer brake connections; parking system (hand brake); emergency stopping system (brakes); tires; horn; steering mechanism; coupling devices; seat belts; operating controls; and safety devices.

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\$1926.602 Material handling equipment.

- (a) Earthmoving equipment; General. (1) These rules apply to the following types of earthmoving equipment: scrapers, loaders, crawler or wheel tractors, bulldozers, off-highway trucks, graders, agricultural and industrial tractors, and similar equipment.
(b) Seat belts. (i) Seat belts shall be provided on all equipment covered by this section and shall meet the requirements of the Society of Automotive Engineers, J386-1969, Seat Belts for Construction Equipment.
(ii) Seat belts need not be provided for equipment which is designed only for standup operation.
(3) Access roadways and grades. (i) No employer shall move or cause to be moved construction equipment or vehicles upon any access roadway or grade unless the access roadway or grade is constructed and maintained to accommodate safely the movement of the equipment and vehicles involved.
(4) Brakes. All earthmoving equipment mentioned in this §1926.602(a) shall have a service braking system capable of stopping and holding the equipment fully loaded, as specified in Society of Automotive Engineers SAE J237, Loader Dozer-1971, J236, Graders-1971, and J315b, Scrapers-1971.
(5) Fenders. Pneumatic-tired earth-moving haulage equipment (trucks, scrapers, tractors, and trailing units) whose maximum speed exceeds 15 miles per hour, shall be equipped with fenders on all wheels to meet the requirements of Society of Automotive Engineers SAE J321a-1970, Fenders for Pneumatic-Tired Earthmoving Haulage Equipment.
(6) Rollover protective structures (ROPS). See subpart W of this part for requirements for rollover protective structures and overhead protection.
(7) Rollover protective structures for off-highway trucks.
(8) Specific effective dates—brakes and fenders.
(9) Notwithstanding the provisions of paragraphs (a)(5) and (a)(8)(i) of this section, the requirement that fenders be installed on pneumatic-tired earthmoving haulage equipment, is suspended pending reconsideration of the requirement.
(10) Audible alarms.
(11) Excavating and other equipment.
(12) For the purposes of this subpart and of subpart N of this part, the nomenclatures and descriptions for measurement of dimensions of machinery and attachments shall be as described in Society of Automotive Engineers 1970 Handbook, pages 1088 through 1103.
(13) The safety requirements, ratios, or limitations applicable to machines or attachment usage covered in Power Crane and Shovel Associations Standards No. 1 and No. 2 of 1968, and No. 3 of 1969, shall be complied with, and shall apply to cranes, machines, and attachments under this part.
(c) Lifting and hauling equipment (other than equipment covered under subpart N of this part).
(i) Lift trucks, stackers, etc., shall have the rated capacity clearly posted on the vehicle so as to be clearly visible to the operator.
(ii) No modifications or additions which affect the capacity or safe operation of the equipment shall be made without the manufacturer's written approval.
(iii) If a load is lifted by two or more cranes working in unison, the proportion of the total load carried by any one truck shall not exceed its capacity.
(iv) Steering or spinner knobs shall not be attached to the steering wheel unless the steering mechanism is of a type that prevents road reactions from causing the steering handwheel to spin.
(v) All high lift rider industrial trucks shall be equipped with overhead guards which meet the configuration and structural requirements as defined in paragraph 421 of American National Standards Institute B56.1-1969, Safety Standards for Powered Industrial Trucks.
(vi) All industrial trucks in use shall meet the applicable requirements of design, construction, stability, inspection, testing, maintenance, and operation, as defined in American National Standards Institute B56.1-1969, Safety Standards for Powered Industrial Trucks.
(vii) Unauthorized personnel shall not be permitted to ride on powered industrial trucks.
(viii) Use of a safety platform firmly secured to the lifting carriage and/or forks.

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\$1926.603 Pile driving equipment.

- (a) General requirements. (1) Boilers and piping systems which are a part of, or used with, pile driving equipment shall meet the applicable requirements of the American Society of Mechanical Engineers, Power Boilers (section I).
(2) All pressure vessels which are a part of, or used with, pile driving equipment shall meet the applicable requirements of the American Society of Mechanical Engineers, Pressure Vessels (section VIII).
(3) Overhead protection, which will not obscure the vision of the operator and which meets the requirements of subpart N of this part, shall be provided.
(4) Stop blocks shall be provided for the leads to prevent the hammer from being raised against the head block.
(5) A blocking device, capable of safely supporting the weight of the hammer, shall be provided for placement in the leads under the hammer at all times while employees are working under the hammer.
(6) Guards shall be provided across the top of the head block to prevent the crank from jumping out of the sheaves.
(7) When the leads must be inclined in the driving of batter piles, provisions shall be made to stabilize the leads.
(8) Fixed leads shall be provided with ladder, and adequate rings, or similar attachment with loops, so that the loft worker may engage his safety belt lanyard to the leads.
(9) Steam hose leading to a steam hammer or jet pipe shall be securely attached to the hammer with an adequate length of at least 1/2-inch diameter chain or cable to prevent whipping in the event the joint at the hammer is broken.
(10) Safety chains, or equivalent means, shall be provided for each hose connection to prevent the line from thrashing around in case the coupling becomes disconnected.
(11) Steam line controls shall consist of two shutoff valves, one of which shall be a quick-acting lever type within easy reach of the hammer operator.
(12) Guys, outriggers, thrustouts, or counterbalances shall be provided as necessary to maintain stability of pile driver rigs.
(b) Pile driving from barges and floats.
(c) Pile driving equipment.
(2) All employees shall be kept clear when piling is being hoisted into the leads.
(3) When piles are being driven in an excavated pit, the walls of the pit shall be sloped to the angle of repose or sheet-piled and braced.
(4) When steel tube piles are being "blown out", employees shall be kept well beyond the range of falling materials.
(5) When it is necessary to cut off the tops of driven piles, pile driving operations shall be suspended except where the cutting operations are located at least twice the length of the longest pile from the driver.
(6) When driving jacked piles, all access pits shall be provided with ladders and bulkheaded curbs to prevent material from falling into the pit.

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\$1926.604 Site clearing.

- (a) General requirements. (1) Employees engaged in site clearing shall be protected from hazards of irritant and toxic plants and suitably instructed in the first aid treatment available.
(2) All equipment used in site clearing operations shall be equipped with rollover guards meeting the requirements of this subpart.
(i) The overhead covering on this canopy structure shall be of not less than 1/8-inch steel plate or 1/4-inch woven wire mesh with openings no greater than 1 inch.
(ii) The opening in the rear of the canopy structure shall be covered with not less than 1/4-inch woven wire mesh with openings no greater than 1 inch.
(b) Specific requirements. [Reserved]

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\$1926.605 Marine operations and equipment.

- (a) Material handling operations.
(b) Access to barges.
(2) Unless employees can step safely to or from the wharf, float, barge, or river towboat, either a ramp, meeting the requirements of paragraph (b)(1) of this section, or a safe walkway, shall be provided.
(3) Jacob's ladders shall be of the double rung or flat tread type.
(4) A Jacob's ladder shall either hang without slack from its lashings or be pulled up entirely.
(5) When the upper end of the means of access rests on or is flush with the top of the bulwark, substantial steps properly secured and equipped with at least one substantial hand rail approximately 33 inches in height, shall be provided between the top of the bulwark and the deck.
(6) Obstructions shall not be laid on or across the gangway.
(7) The means of access shall be adequately illuminated for its full length.
(8) Unless the structure makes it impossible, the means of access shall be so located that the load will not pass over employees.
(c) Working surfaces of barges.
(2) Decks and other working surfaces shall be maintained in a safe condition.
(3) Employees shall not be permitted to pass fore and aft, over, or around deckloads, unless there is a safe passage.
(4) Employees shall not be permitted to walk over deckloads from rail to coaming unless there is a safe passage.
(5) The employer shall ensure that there is in the vicinity of each barge in use at least one U.S. Coast Guard-approved work vests or buoyant vests.
(6) Employees walking or working on the unguarded decks of barges shall be protected with U.S. Coast Guard-approved work vests or buoyant vests.

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\$1926.606 Definitions applicable to this subpart.

- (a) Apron—the area along the waterfront edge of the pier or wharf.
(b) Bulwark—the side of a ship above the upper deck.
(c) Coaming—the raised frame, as around a hatchway in the deck, to keep out water.
(d) Jacob's ladder—a marine ladder of rope or chain with wooden or metal rungs.
(e) Rail, for the purpose of §1926.605, means a light structure serving as a guard at the outer edge of a ship's deck.

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