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VEHICLES

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437-004-3410 Agricultural, Commercial and Industrial Vehicles.

(1) **Scope.** This applies to all motor vehicles used by employees.

(2) **Definitions.**

Agricultural vehicle – A vehicle specifically designed or modified for use exclusively in agricultural operations, and not licensed for use on public roads under Oregon laws.

NOTE: Included in this definition is farm field equipment such as tractors, harvesters, planters or any combination thereof; unlicensed trucks and wagons or trailers such as feeder trucks or wagons and specialized crop handling vehicles; and mobile elevating and rotating work platforms such as orchard aerial lift devices.

Commercial-type vehicles – Motor vehicles primarily for the transportation of persons or material on roads.

Commercial type vehicles used to transport workers are:

Class ‘A’ vehicle – A bus type vehicle or van that can carry 12 or more workers; or the “work crew” vehicle built or altered for carrying passengers.

Class ‘B’ vehicle – A vehicle or van especially built for transporting work crews in compartments separate from the space used to transport supplies, tools and equipment.

Class ‘C’ vehicle – A flatbed, pickup body or dump truck type vehicle, or vehicle of similar open body construction.

Class ‘D’ vehicle – A passenger car or station wagon type.

NOTE: Typically a bus type vehicle has two axles and six tires or three or more axles. This does not include vans.

Industrial-type vehicles – Vehicles designed for non-highway use, primarily for pulling trailers or other mobile loads, straddle trucks such as lumber carriers, power industrial trucks, and other types of vehicles especially designed for handling materials.

NOTE: When this rule uses “vehicle” by itself, it includes all the above definitions.

(3) **General requirements.**

(a) **Operation of vehicles.**

(A) Nobody may operate any unsafe vehicle. Fix unsafe conditions before using it.

(B) Only trained and authorized employees may operate any vehicle.

(C) Only the operator may ride on vehicles unless there are safe riding facilities for additional riders. Persons are never to ride on fenders, axles, hitches, tongues, buckets, forks, drawbars or any other area not intended to carry passengers.

- (D) Do not drive a vehicle up to anyone who is in front of a stationary object.
- (E) The operator must look in the direction of travel, and have a clear view of the path of travel, unless guided by a signal person with a clear view of the route.
- (F) Except when using a towbar, keep manual control over vehicles under tow.
- (G) Do not stand or walk under an elevated part of a vehicle whether loaded or empty unless it is blocked or cribbed according to **OAR 437-004-3410(5)(d)**.
- (H) Workers may not be under loads or units of materials during movement.
- (I) Do not overload any vehicle. Keep loads stable and well balanced.
- (J) Employees must not ride in a loaded or partially loaded cargo space while the vehicle is moving unless the load is adequately shored, braced, or otherwise secured.
- (K) Do not drive a vehicle with an unstable or insecure load.
- (L) Block the wheels and set the brakes when loading Agricultural Vehicles, Class C, Commercial –Type Vehicles and Industrial-Type Vehicles who’s movement might cause a hazard. This does not apply when loading “on the go.”
- (M) The parking brake must be set on parked commercial and industrial vehicles. Block or turn to a curb the wheels of vehicles parked on an incline.
- (N) Do not put arms or legs between working parts or outside the running lines of vehicles.
- (O) Vehicles must have a safe way of access and exit.
- (P) Do not jump on or off moving vehicles.
- (Q) There must be no stunt driving or horseplay.

NOTE: Appendix A is a reprint of Oregon Revised Statutes that govern the use of some agricultural vehicles and equipment on public highways and roads. While Oregon OSHA has the legal authority to cite these sections, law enforcement officers are the usual source of enforcement. We offer these laws here as a courtesy to Oregon agricultural employers and in the interest of employee safety.

- (b) Hauling of explosives.** Only a driver and one other person may ride in a vehicle hauling explosives.
- (c) Operating near power lines.** For requirements when operating vehicles around high voltage power lines, see Subdivision **4/S**.

(d) Parking. When the operator of a commercial or industrial vehicle is not at the controls, the brakes must be set or the wheels blocked to prevent movement. Also, fully lower or block elevated attachments or components against descent. Unattended vehicles must be shut off. If parked on a slope, the wheels of commercial and industrial vehicles must be blocked or chocked.

(e) When towing, there must be a pin or other positive method of keeping the hitch pin in the hitch.

NOTE: Unattended is when the operator cannot see the vehicle or when they are more than 25 feet from it.

(4) Vehicle components.

(a) General.

(A) The engine shut-off device must be within reach of the operator when in their normal operating position.

(B) There must be steps, ladders, handholds, or grab bars on vehicles for safe access. Steps must have slip-resistant surfaces.

(C) The operator's station and work platforms on all agricultural vehicles must have guardrails or other fall protection when any of the following conditions exist:

(i) The operator is standing or not protected from falling by the framework, body, or design of the equipment; or

(ii) The floor of the operator's station is more than 22 inches above the adjacent floor level; or

(iii) The operator's station, regardless of height, is located so that a worker could fall into the path of equipment or into moving parts.

NOTE: For guardrails or similar barricades, the toprail must be 36 inches to 44 inches above the deck; the railing must have a midrail except when it would impair the operator's view to crop gathering or other functions.

(D) All vehicles loaded by cranes, power shovels, loaders or similar equipment must have a cab shield or canopy adequate to protect the operator from shifting or falling materials.

(E) The backs of vehicle cabs exposed to shifting loads must have a substantial bulkhead or similar device.

(F) Loads must not prevent doors of vehicle cabs from opening.

(G) When transporting workers and materials simultaneously, there must be a barrier to protect the workers and driver from the hazards of the materials. Otherwise, anchor or restrain the load.

(H) Class "A" and "B" commercial vehicles and industrial vehicles must have seats and back rests firmly secured in place, and such sides and ends as necessary to prevent riders from falling off the vehicle.

(I) The operator's platform must have a slip-resistant floor.

(J) Operating levers controlling hoisting or dumping devices on haulage bodies must have a latch or other device that prevents accidental starting or tripping of the mechanism.

(K) Trip handles for tailgates of dump trucks must work without endangering the operator.

(L) Surfaces of foot pedals must be slip resistant or have slip resistant coverings.

(b) Passenger compartments.

(A) Floors and decks must have safe footing.

(B) Floors and interior of sides and ends and tops of compartments used for transporting workers must be free of protruding objects that might cause injury.

(c) Windshields – windows.

(A) Windshields and windows must be safety glass that meets the requirements for safety glazing material for use anywhere in a motor vehicle as defined in the American National Standard, Safety Glazing Materials for Glazing Motor Vehicles Operating on Land Highways, Z26.1-1990, or a material that will furnish equivalent safety.

(B) Replace defective or broken glass that impairs the vision of the operator. Remove and replace broken or shattered glass that could cause injury to occupants.

NOTE: There is no requirement to change non-safety glass installed as "original equipment" in agricultural vehicles acquired before March 31, 1975 if it is unbroken. However, when it is replaced, the replacement glass must be approved safety glass.

(d) Brakes.

(A) All commercial and industrial vehicles must have brakes that can control them while fully loaded on any grade over which they might run.

(B) Parking brakes must be able to hold the loaded vehicle on any grade on which it may park, on any surface free of ice or snow.

(C) Brakes must be in safe working condition.

(e) Steering. Use steering or spinner knobs only if the steering mechanism is a type that prevents road reactions from causing the steering wheel to spin. The steering knob must be within the periphery of the wheel.

(f) Lights. Vehicles operated at night must have sufficient light at the operator's station.

(5) Inspection, testing, maintenance, and repair.

(a) Check vehicles as often as needed to assure that they are in safe operating condition and free of damage that could cause failure while in use.

(b) Before using it, fix defects that affect the safe operation of the vehicle.

(c) Do not continue to use a vehicle that becomes unsafe during use.

(d) Block or crib heavy machinery, equipment, elevated parts or parts supported by slings, hoists, jacks, or other devices, to prevent falling or shifting before employees work under or between them.

(A) Fully lower or block bulldozer and scraper blades, end-loader, end-loader buckets, dump bodies, and similar equipment when working on them or when they are not in use.

(B) All controls must be in neutral with motors off and brakes set, unless the work requires otherwise.

(e) Vehicles with dump bodies or other elevating parts must have positive means of support, permanently attached, and capable of being locked in position to prevent accidental lowering of the body. This device must support a raised body during maintenance or inspection work.

(f) Disconnect the battery when repairing a vehicle electrical system if accidental closing of the circuit could cause injury.

(6) Transportation of workers.

(a) Do not transport workers in flatbed trucks, dump trucks and pickups unless:

NOTE: This does not apply to field work or loading or unloading moving vehicles.

(A) Tilting, sliding or otherwise movable decks or bodies are secured to prevent accidental movement. Secure dump truck bodies or lock the hoist lever.

(B) Flatbed vehicles without seats must have sides and end gates at least 24 inches high. Workers must sit on the floor.

(b) Close pickup and dump truck tailgates and make workers sit on the floor unless there are seats secured in place and sides at least 42 inches high. A chain or rope must be across the rear of such vehicles with seats.

(c) When workers sit on low boxes or similar equipment, there must be side rails that increase the height of pickup and dump truck bodies to at least 36 inches. Omit the side rails when there is heavy canvas secured as a top and sides.

(d) In Class "A" and "B" commercial vehicles with seats workers must not sit on the floor in the aisles while the vehicle is moving. Not more than one worker per row of seats may stand. No workers may stand or sit in the driver's area ahead of the front row of seats. Never place boards across an aisle to provide additional seating space. Do not put seats in an aisle. Standing workers must use handholds.

(e) When transporting workers in any vehicle, nobody may stand for more than 1-hour or for more than 45 miles of travel, whichever is less. After that, they must get a rest period of at least 15 minutes or be given a seat.

(7) Fueling.

(a) When fueling vehicles there may be no smoking within 35 feet.

(b) Stop vehicle engines, except diesels, while fueling.

(c) Do not fuel vehicles within 35 feet of any open fires, flame or other sources of ignition.

(d) Refilling of vehicle tanks that use liquefied petroleum gases must be done outside. Do not overfill the tanks.

(8) Hauling of gasoline and other flammables.

(a) Do not transport gasoline and other flammable liquids on commercial vehicles carrying workers except:

(A) In closed containers of not more than 5 gallons capacity, and

(B) The containers must be accepted, labeled or listed. (As per definitions in OAR 437-004-0100 Universal Definitions), and

(C) Do not carry containers inside the passenger compartment, and

(D) Secure the containers to prevent shifting and put them in well-ventilated compartments or racks.

(b) You can haul gasoline in containers of more than 5 gallons in Class "C" commercial vehicles if all workers ride in the cab of the vehicle or in a separate compartment.

NOTE: Appendix A is a reprint of Oregon Revised Statutes that govern the use of some agricultural vehicles and equipment on public highways and roads. While Oregon OSHA has the legal authority to cite these sections, law enforcement officers are the usual source of enforcement. We offer these laws here as a courtesy to Oregon agricultural employers and in the interest of employee safety.

(9) Warning devices.

(a) All commercial and industrial vehicles must have an audible warning (horn) device that can be clearly heard above the surrounding noise near the vehicle.

(b) Vehicles with obstructed view to the rear must have a backup alarm audible above the surrounding noise level, unless:

(A) The vehicle backs up only when an observer signals that doing so is safe; or

(B) The vehicle operator first verifies that no person is in the path of the reverse travel, or can enter it unobserved.

(c) When towing mobile farm equipment, if the driver cannot see the workers in or on the towed unit, there must be a way to communicate with them. Otherwise, there must be a way for the riders in the towed unit to stop it in case of an emergency.

(10) Control of exhaust gases.

(a) Exhaust pipes must direct the exhaust gases away from the operator and passengers.

(b) Insulate or isolate exhaust pipes exposed to contact.

(11) Safety equipment – vehicles operated on public roads.

(a) There must be a first aid kit on Class A and B commercial type vehicles that transport workers. First aid kits must be clean, stocked and readily available to the driver or crew.

(b) There must be a B/C fire extinguisher on Class A and B commercial type vehicles that transport workers.

(c) Vehicles designed to run less than 25 mph must display a “slow moving vehicle” emblem as in 4/J, OAR 437-004-1180, Accident Prevention Signs, Symbols, Tags of the Oregon Occupational Safety and Health Code and in ORS 483.457, “Slow Moving Vehicle Emblem.”

Stat. Auth.: ORS 654.025(2) and 656.726(4).

Stats. Implemented: ORS 654.001 through 654.295.

Hist: OR-OSHA Admin. Order 4-1998, f/8/28/98, ef. 10/1/98.

OR-OSHA Admin. Order 9-2006, f. 9/22/06, ef. 9/22/06.

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Appendix A to 437-004-3410, Specific Equipment

815.110 Requirements for and use of slow-moving vehicle emblem. This section establishes requirements for ORS 815.115. The requirements under this section are in addition to any other requirements for lighting equipment provided by law. Except as specifically provided by an exemption under ORS 815.120, a person violates ORS 815.115 if the person does not comply with any of the following requirements:

(1) The following types of vehicles must display slow-moving vehicle emblems described under ORS 815.060:

(a) Vehicles or combinations of vehicles designed for customary use at speeds of less than 25 miles per hour.

(b) Golf carts or similar vehicles when operated by a disabled person.

(c) Class I all-terrain vehicles operated on a highway under ORS 821.191 (1).

(2) Slow-moving vehicle emblems must meet the requirements for such emblems established by the Department of Transportation by rule under ORS 815.060.

(3) Slow-moving vehicle emblems shall be displayed on the rear of the power unit. When a combination of vehicles is being operated in a manner that obscures the emblem mounted on the power unit, an additional emblem shall be displayed on the rear of the rearmost vehicle in the combination. [1983 c.338 §469; 2001 c.529 §5]

815.120 Exemptions from emblem requirements. This section establishes exemptions from the requirements of ORS 815.110 and 815.115. The exemptions under this section are in addition to any exemptions under ORS 801.026. The exemptions under this section are partial or complete as described in the following:

(1) Vehicles of special interest that are registered under ORS 805.020 are deemed to comply with the requirements if:

(a) The vehicles are equipped with original manufacturer's equipment and accessories, or their equivalent, and are maintained in safe operating condition; or

(b) The vehicles are street rods that conform to ORS 815.107.

(2) Antique vehicles are not subject to the standards if the vehicles are maintained as collectors' items and used for exhibitions, parades, club activities and similar uses, but not used primarily for the transportation of persons or property.

(3) Road machinery, road rollers and farm tractors are not subject to the requirements except as provided in this subsection. Such vehicles or combinations thereof are subject to the requirements if the vehicles are designed for use at speeds less than 25 miles per hour, except when such vehicles are engaged in actual construction or maintenance work and guarded by a flagger or by clear visible warning signs. [1983 c.338 §470; 1985 c.16 §246; 1985 c.69 §8; 1997 c.402 §8]

IMPLEMENTS OF HUSBANDRY

820.400 Unlawful operation of implement of husbandry; penalty.

(1) A person commits the offense of unlawful operation of an implement of husbandry if the person operates an implement of husbandry in violation of any of the following:

(a) Such vehicle must be driven as closely as is practicable to the right-hand edge of the roadbed, including the shoulders, if any.

(b) Such vehicle, if the movement of the vehicle occurs during the hours of darkness, must be equipped and operating two headlights, clearance lights and reflectors marking the overall width as far as practical and visible from the front, rear and sides and a taillight.

(c) No television viewer, screen or other means of visually receiving a television broadcast shall be operated in an implement of husbandry at any time while the implement of husbandry is being operated on a highway.

(d) Such vehicle must display, when driven, a slow-moving vehicle emblem described in ORS 815.060.

(2) The offense described in this section, unlawful operation of an implement of husbandry, is a Class D traffic violation. [1983 c.338 §779; 1985 c.69 §7; 1985 c.393 §55; 1995 c.383 §101]

Stat. Auth.: ORS 654.025(2) and 656.726(4).

Stats. Implemented: ORS 654.001 through 654.295.

Hist: OR-OSHA Admin. Order 9-2006, f. 9/22/06, ef. 9/22/06.

437-004-3420 Working from Vehicles and Vehicle Loads.

(1) Riding on loads. Employees must not ride on top of loads that may dangerously shift, topple over, or otherwise become unstable. Employees must sit when riding on loads, except when doing field work at slow, even speeds over smooth ground.

(2) Field operations. When employees work on the cargo space of moving trucks or trailers, as in field operations, the operator must:

(a) Reduce vehicle speed to the slowest possible.

(b) Operate the vehicle at a steady, smooth rate. Avoid erratic moves.

(c) Travel parallel to rows or corrugations. When necessary to cross corrugations or ditches, warn employees to sit down in a safe place, away from the edge, and to hold on to a secure handhold.

(d) Except for vehicles being loaded while moving, set the brakes during loading.

(3) Load stability. Secure loads against dangerous displacement either by piling or securing to prevent shifting, toppling over or other instability.

(4) Access to the load. There must be adequate access to safely reach the top of the load for manual loading or unloading of high loads.

Stat. Auth.: ORS 654.025(2) and 656.726(4).

Stats. Implemented: ORS 654.001 through 654.295.

Hist: OR-OSHA Admin. Order 4-1998, f/8/28/98, ef. 10/1/98.

437-004-3430 Training for Agriculture Tractor Operators.

(1) Training. Train all employees who drive an agricultural tractor about the operating practices below and about any other practices peculiar to the work environment. Do this training at the time of initial assignment to driving duties and at least annually after that.

(a) Securely fasten your seat belt if the tractor has a ROPS.

(b) Where possible, avoid operating the tractor near ditches, embankments, and holes.

(c) Reduce speed when turning, crossing slopes and on rough, slick or muddy surfaces.

(d) Stay off slopes too steep for safe operation.

(e) Watch where you are going, especially at row ends, on roads, and around trees.

(f) Do not permit others to ride unless there is a safe seat.

- (g) Operate the tractor smoothly – no jerky turns, starts, or stops.
- (h) Hitch only to the drawbar and hitch points recommended by the tractor manufacturer.
- (i) When the tractor is stopped, set brakes securely and use park lock if available.

Stat. Auth.: ORS 654.025(2) and 656.726(4).
Stats. Implemented: ORS 654.001 through 654.295.
Hist: OR-OSHA Admin. Order 4-1998, f/8/28/98, ef. 10/1/98.

437-004-3460 Industrial Vehicles.

- (1) Modifications.** The manufacturer or a professional engineer must direct modifications and additions that affect capacity and safe operation of industrial vehicles. Change the capacity, operations, and maintenance instruction plates, tags, or decals to reflect the changes.
- (2) Nameplates and markings.** All nameplates and markings must be in place and legible.
- (3) Capacity markings.** The rated capacity of each power industrial truck must be legible and in plain view of the operator.

Stat. Auth.: ORS 654.025(2) and 656.726(4).
Stats. Implemented: ORS 654.001 through 654.295.
Hist: OR-OSHA Admin. Order 4-1998, f/8/28/98, ef. 10/1/98.

437-004-3480 Bridges, Roads and Ramps.

- (1) Application.** This applies to bridges, roads and ramps on agricultural places of employment.
- (2) Roads.**
 - (a) Roads must be wide enough to allow safe operation of equipment.
 - (b) Low clearance areas that could present a hazard must have warning signs.
 - (c) Do not drive vehicles on or over broken planking, deep holes, large rocks, logs or other dangerous surface defects.
 - (d) Remove obstructions to clear view at intersections or sharp curves or take precautions to relieve the hazards.
- (3) Bridges, runways and ramps.**
 - (a) Bridges, runways or ramps and loading docks must be built to safely support any anticipated load. Ramp surfaces must have a material that minimizes the danger of skidding. Structural members must be sound and free of decay or deterioration that could reduce safety.

(b) Bridges and culverts must be wide enough to allow safe operation of equipment.

(c) The road surface of bridges and culverts must be safe, free of holes, broken planking, and sloughing, caving, or slipping fill materials or approaches.

Stat. Auth.: ORS 654.025(2) and 656.726(4).

Stats. Implemented: ORS 654.001 through 654.295.

Hist: OR-OSHA Admin. Order 4-1998, f/8/28/98, ef. 10/1/98.

437-004-3550 Servicing Multipiece and Single Piece Rim Wheels.

(1) Workers must use a safety tire rack, cage, or equivalent protection over tires mounted on split rims with locking rings or similar devices, when:

(a) inflating tires; or

(b) adding air to tires on or off the vehicle if the tire was run while flat or if the rim or locking device was disturbed in any way.

NOTE: A tire is flat if it has lost more than 50 percent of its normal pressure.

(2) Airlines used to inflate tires must have clip-on chucks.

Stat. Auth.: ORS 654.025(2) and 656.726(4).

Stats. Implemented: ORS 654.001 through 654.295.

Hist: OR-OSHA Admin. Order 4-1998, f/8/28/98, ef. 10/1/98.

437-004-3600 Roll-Over Protective Structures (ROPS) for Tractors in Agriculture.

(1) **Definitions.**

Agricultural tractor – A two- or four-wheel drive type vehicle, or track vehicle, of more than 20 engine horsepower, designed to furnish the power to pull, carry, propel, or drive implements designed for agriculture. Self-propelled implements are excluded.

Low profile tractor – A wheeled tractor with these characteristics:

The front wheel spacing equals the rear wheel spacing, measured from the centerline of each right wheel to the centerline of the opposite left wheel;

The clearance from the bottom of the chassis to the ground is less than 18 inches;

The highest point of the hood is 60 inches or less; and

The tractor is designed so that a seated operator straddles the transmission.

Tractor weight – Includes the protective frame or enclosure, all fuels, and other components required for normal use of the tractor. Add ballast as necessary to get a minimum total weight of 110 pounds (50.0 kilograms) per maximum power takeoff horsepower at the rated engine speed or the maximum gross vehicle weight specified by the manufacturer, whichever is the greatest. Front end weight must be at least 25 percent of the tractor test weight. If power takeoff horsepower is not available, use 95 percent of net engine flywheel horsepower.

(2) General requirements. Agricultural tractors manufactured after October 25, 1976, and before January 1, 2007, must meet these requirements:

(a) Roll-over protective structures (ROPS) for tractors used in agriculture. A roll-over protective structure must be on each tractor operated by an employee. Except as in **OAR 437-004-3600(5)**, ROPS on wheel-type tractors must meet the test and performance requirements of one of these:

The American Society of Agricultural Engineers Standard (ASAE) S306.3-1974, "Protective Frame for Agricultural Tractors – Test Procedures and Performance Requirements" and Society of Automotive Engineers (SAE) Standard J334-1970, "Protective Frame Test Procedures and Performance Requirements."

ASAE Standard S336.1-1974, "Protective Enclosures for Agricultural Tractors – Test Procedures and Performance Requirements" and SAE J1194-1994.

These ASAE and SAE standards are incorporated by reference. Get copies from:

American Society of Agricultural Engineers
2950 Niles Road, PO Box 229
St Joseph MI 49085

Society of Automotive Engineers
485 Lexington Avenue
New York NY 10017

Copies are available for review at the Oregon OSHA Resource Center, 350 Winter Street NE, Salem, Oregon 97301-3882.

(b) Agricultural tractors manufactured on or after January 1, 2007, must meet these requirements:

(A) Roll-over protective structures (ROPS) for tractors used in agriculture. A roll-over protective structure must be on each tractor operated by an employee. Except as in **OAR 437-004-3600(5)**, ROPS on wheel-type tractors must meet the test and performance requirements of:

(i) 29 CFR 1928.52 Protective frames for wheel-type agricultural tractors – test procedures and performance requirements.

Link:

http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=13076

And

(ii) 29 CFR 1928.53 Protective enclosures for wheel-type agricultural tractors – test procedures and performance requirements.

Link:

http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=13077

Copies of Federal OSHA rules are available at the Oregon OSHA Resource Center, 350 Winter Street NE, Salem, Oregon 97301-3882.

(3) Seat belts.

(a) When these rules require ROPS, the employer must:

(A) Have a seat belt that meets the requirement of this rule on each tractor;

(B) Ensure that workers use a seat belt while the tractor is moving; and

(C) Ensure that the worker tightens the seat belt enough to hold them in the protective area of the ROPS.

(b) Each seat belt must meet the requirements in Society of Automotive Engineers Standard J114-1994, J140-1995, J141-1995, J339-1994, and J800-1994, except;

(c) On suspended seats, fasten the seat belt to the movable part of the seat to accommodate the ride motion of the operator.

(d) The seat belt anchorage must be able to withstand a static tensile load of 1,000 pounds (453.6 kilograms) at 45 degrees to the horizontal equally divided between the anchorages. The seat mounting must be able to withstand this load plus a load equal to four times the weight of all applicable seat components applied at 45 degrees to the horizontal in a forward and upward direction. In addition, the seat mounting must be able to withstand a 500-pound (226.8 kilograms) belt load plus twice the weight of all applicable seat components both applied at 45 degrees to the horizontal in an upward and rearward direction. Floor and seat deformation is acceptable if there is no structure failure or release of the seat adjusted mechanism or other locking device.

(e) The seat belt webbing material must be resistant to acids, alkalis, mildew, aging, moisture, and sunlight.

(4) Protection from sharp surfaces. Sharp edges and corners at the operator's station must not contribute to operator injury in case of a tip over or roll-over.

(5) Exempted uses. OAR 437-004-3600(2) and (3) do not apply to the following uses:

- (a)** "Low profile" tractors used in orchards, vineyards or hop yards where the vertical clearance would interfere with normal use, and while their use is incidental to the work done in that location.
- (b)** "Low profile" tractors used inside a farm building or greenhouse where the vertical clearance does not allow a tractor with ROPS to operate, and while their use is incidental to the work done in that location.
- (c)** Tractors with mounted equipment that is incompatible with ROPS (e.g., corn pickers, cotton strippers, vegetable pickers and fruit harvesters);
- (d)** Track-type agricultural tractors whose overall width (as measured between the outside edges of the tracks) is at least three times the height of their rated center of gravity, and whose rated maximum speed in either forward or reverse is not greater than 7 mph, when used only for tillage or harvesting operations and while their use is incidental thereto, and that:
 - (A)** Does not involve operating on slopes more than 40 percent from the horizontal, and
 - (B)** Does not involve operating on piled crop products or residue, such as, silage in stacks or pits, and
 - (C)** Does not involve operating near irrigation ditches, or other excavations more than 2 feet deep which contain slopes more than 40 percent from the horizontal; and
 - (D)** Does not involve construction type work, such as bulldozing, grading or land clearing.

(6) Remounting. When ROPS is removed for any reason, remount it to meet the requirements of these rules.

(7) Labeling. Each ROPS must have a permanent label that gives the:

- (a)** Manufacturer's or fabricator's name and address;
- (b)** ROPS model number, if any;
- (c)** Tractor makes, models, or series numbers that it is designed to fit; and
- (d)** That the ROPS model was tested according to the requirements of these rules.

Stat. Auth.: ORS 654.025(2) and 656.726(4).

Stats. Implemented: ORS 654.001 through 654.295.

Hist: OR-OSHA Admin. Order 4-1998, f/8/28/98, ef. 10/1/98.
OR-OSHA Admin. Order 9-2006, f. 9/22/06, ef. 9/22/06.

437-004-3650 Roll-Over Protective Structures – Industrial Vehicles.

(1) Application. There must be roll-over protective structures (ROPS) on certain industrial vehicles manufactured after July 1, 1969. ROPS requirements apply to the following types of industrial vehicles and equipment: Rubber-tired self-propelled scrapers; front-end loaders and dozers; wheel-type industrial tractors; crawler tractors; crawler-type loaders; and motor graders, with or without attachments. This requirement does not apply to sideboom pipe laying tractors, or other vehicles whose structure prevents overturn. OAR 437-004-3600 covers ROPS for tractors used only in farming.

(2) ROPS – general requirements.

(a) Roll-over protective structures and their supporting attachments to industrial vehicles must be capable of supporting twice the weight of the vehicle, applied at the point of impact.

(b) The design objective for roll-over protective structures on industrial vehicles is to minimize the likelihood of a complete vehicle overturn, and to minimize the possibility of the operator being crushed.

(c) There must be a vertical clearance of at least 52 inches between the work deck and the ROPS canopy.

(d) Once removed, remount ROPS with bolts or welding or equal or better quality as required for the original mounting.

(3) Defects.

(a) Repairs to defective ROPS must be of equal quality or better materials and welding as on the original structure.

(b) Minimum performance criteria for roll-over protective structures for designated vehicles are in the following Society of Automotive Engineers (SAE) standards:

(A) Prime movers, for scrapers, water wagons, bottom dump wagons, side dump wagons, rear dump wagons, towed fifth wheel attachments. (SAE J1040, 1994)

(B) Wheeled front-end loaders and wheeled dozers. (SAE J1040, 1994)

(C) Track-type tractors and front-end loaders. (SAE J1040, 1994)

(D) Motor graders. (SAE J1040, 1994)

(E) Wheel-type agricultural and industrial tractors. (SAE J167, 1992)

(F) Falling object protective structures (FOPS). (SAE J231, May 1981)

(4) Identification of ROPS. Each ROPS must have the following information permanently affixed to the structure:

- (a) Manufacturer or fabricator's name and address;
- (b) ROPS model number, if any; and
- (c) Machine make, model, or series number that the structure fits.

(5) Approved structures. Any machine in use, with roll-over protective structures, complies with these rules if it meets the roll-over protective structure requirements of the U. S. Army Corps of Engineers, or the Bureau of Reclamation of the U. S. Department of the Interior, in effect on April 5, 1972. The requirements in effect are:

- (a) U. S. Army Corps of Engineers: General Safety Requirements, EM-385-1-1 (September 1996).
- (b) Bureau of Reclamation, U. S. Department of the Interior: Safety and Health Regulations for Construction, Part II (September 1971).

Stat. Auth.: ORS 654.025(2) and 656.726(4).

Stats. Implemented: ORS 654.001 through 654.295.

Hist: OR-OSHA Admin. Order 4-1998, f/8/28/98, ef. 10/1/98.

437-004-3660 Vehicle-Mounted Elevating and Rotating Work Platforms.

NOTE: This section does not apply to aerial devices made and used in orchards or tree operations, such as pruning.

(1) Definitions.

Aerial device. Any vehicle-mounted device, telescoping or articulating, or both, for positioning personnel.

Platform. Any personnel-carrying device (basket or bucket) which is part of an aerial device.

(2) Design requirements.

(a) The equipment operation manual must be with the equipment or the workers using it. Workers must follow the manufacturer's instructions and procedures. Work must not exceed equipment limitations and restrictions.

(b) "Field modification" of aerial lifts for uses other than those intended by the manufacturer are acceptable, if the manufacturer certifies in writing that the modification conforms with ANSI A92.2-1990 and this section and is at least as safe as the equipment was before modification. This certification may also be by any other equivalent entity, such as a nationally recognized testing laboratory.

(c) Platforms must have standard guardrails that conform with OAR 437-004-0320(6).

(d) Gates in platform enclosures must have safety latches that prevent unintended opening.

(e) Articulating boom and extensible boom platforms, primarily designed to carry personnel, must have both platform (upper) and lower controls. Upper controls must be in or beside the platform within easy reach of the operator. Lower controls must allow overriding of the upper controls. Markings must clearly show each control's function.

(3) Specific requirements.

(a) Extensible and articulating boom platforms.

(A) Test lift controls before use to determine that they are in safe working condition.

(B) Allow only trained persons to operate an aerial lift.

(C) Do not belt off to an adjacent pole, structure or equipment while working from an aerial lift.

(D) Stand firmly on the floor of the basket. Do not sit or climb on the edge of the basket or use planks, ladders or other devices for a work position.

(E) Wear a body belt and a lanyard attached to the boom or basket when in an aerial lift. The lanyard must be as short as possible for the work but in no case longer than 6 feet.

(F) Do not exceed the manufacturer's boom and basket load limits. Keep those limits legibly posted on the boom.

(G) Set the brakes and position the outriggers on pads or a solid surface. Chock the wheels before using an aerial lift on an incline.

(H) Do not move an aerial lift truck when the boom is elevated with people in the basket, except for equipment specially designed for such movement.

(I) Do not alter the insulated portion of an aerial lift in a way that might reduce its insulating value.

(J) Except as in (3)(b)(H) above, before moving an aerial lift for travel, inspect the boom(s) to see that it is properly cradled and outriggers are stowed.

(4) Working near overhead high voltage lines.

(a) **Required clearances for stationary work.** Do not require or permit anybody to enter or work near high-voltage lines unless danger from accidental contact with the lines is guarded against or eliminated. Clearances and distances in OAR 437-004-3050 apply.

(b) Clearance or safeguards for moving equipment. Do not move equipment in a way that might allow the people or objects to come within 10 feet of high-voltage lines.

(A) For equipment in transit, on smooth surfaces, the clearance must be at least 4 feet for voltages less than 50 kV., 10 feet for voltages more than 50 kV., up to and including 345 kV., and 16 feet for voltages up to and including 750 kV.

(B) When it is hard for the operator to see well enough to keep the desired clearance, somebody must watch the work and warn the operator.

(C) Movement of the structures supporting the high-voltage lines or any of their equipment, fixtures or attachments must not reduce the 10-foot clearance requirement.

(c) Warning signs required. Post a warning sign, readable from 12 feet, that says, "Unlawful to operate this equipment within 10 feet of high-voltage lines."

(d) Notification to power company and responsibility for safeguards. When working or placing material or equipment within 10 feet of any high-voltage line, the employer must promptly notify the operator of the high-voltage line. Employers are responsible for completing the safety measures required before allowing any work that could impair the clearance.

Stat. Auth.: ORS 654.025(2) and 656.726(4).

Stats. Implemented: ORS 654.001 through 654.295.

Hist: OR-OSHA Admin. Order 4-1998, 1/8/28/98, ef. 10/1/98.

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