

Oregon OSHA Proposes Changes to the Vehicle Rules in General Industry and Construction July 2007

Text to be repealed/removed is in [~~brackets with line through~~].

Text to be adopted/added is in **bold and underscored**.

437-002-0223 Oregon Rules for Commercial and Industrial Vehicles.

~~[(1) Scope and Application.]~~

~~[(a) This rule shall apply to all motor vehicles used in employment.]~~

~~[(b) All earth moving equipment such as scrapers, loaders, agricultural and industrial tractors, bulldozers, graders, and similar equipment not covered by this rule shall be covered by OAR 437, Division 3/O, 1926.602, Material Handling Equipment.]~~

~~[(2) Definitions.]~~

~~["Commercial-Type Vehicles" – Motor vehicles designed, used or maintained primarily for the transportation of persons or material over private or public roads.]~~

~~[Commercial type vehicles used to transport workers shall be defined as:]~~

~~[(a) Class 'A' vehicle – A vehicle of the bus type designed to carry 12 or more workers; or of the "work crew" type especially built or accommodated for carrying passengers.]~~

~~[(b) Class 'B' vehicle – A vehicle especially built or accommodated for transporting work crews in compartments separate from space used to transport supplies, tools and equipment such as vehicles commonly used by public utilities.]~~

~~[(c) Class 'C' vehicle – A vehicle of the flatbed, pickup body or dump truck body type, or of similar open body construction.]~~

~~[(d) Class 'D' vehicle – A vehicle of the passenger car or station wagon type.]~~

~~["Industrial-Type Vehicles" – Vehicles designed for nonhighway usage, primarily for pulling trailers or other mobile loads, straddle trucks such as lumber carriers, powered industrial trucks, and other types of vehicles especially designed for handling materials.]~~

~~[NOTE: When the term "vehicle" is used in this rule by itself, it is meant to include all definitions found in OAR 437-002-0223(2).]~~

[General Requirements]

[~~(3) Operation of Vehicles.~~]

~~[(a) No employee under 18 years of age shall be permitted to operate a commercial or industrial type vehicle, tractor, power industrial truck or other vehicles of like character.]~~

~~[(b) No operator shall operate any vehicle which is not in safe condition. Any unsafe condition found on any vehicle shall be corrected before the vehicle is placed in service.]~~

~~[(c) Only trained and authorized operators shall be permitted to operate a vehicle. Methods shall be devised to train operators in the safe operation of industrial-type vehicles.]~~

~~[(d) No one but the operator shall be permitted to ride on vehicles unless safe riding facilities are provided for each additional person authorized to ride.]~~

~~[(e) Vehicles shall not be driven up to anyone standing in front of a stationary object.]~~

~~[(f) Vehicles shall not be routed across principal plant thoroughfares and plant exits while work shifts are changing unless pedestrian lanes are provided and suitably guarded.]~~

~~[(g) The right of way shall be yielded to all emergency vehicles.]~~

~~[(h) Drivers of vehicles shall be required to stop at blind crossings and corners where necessary for safe operation.]~~

~~[(i) Drivers of vehicles shall not overtake and pass other vehicles at intersections, blind spots, curves, and other dangerous locations.]~~

~~[(j) The operator shall be required to look in the direction of travel, and to have a clear view of the path of travel, unless guided by a signal person who has a clear view of the route.]~~

~~[(k) Vehicles shall be controlled manually while being pushed or towed except when a tow bar is used. Special precautions shall be taken when pushing vehicles where view is obstructed.]~~

~~[(l) No person shall be allowed to stand or pass under the elevated portion of a vehicle whether loaded or empty.]~~

~~[(m) Workers shall not remain under or work under loads or units of materials being moved.]~~

~~[(n) Workers riding in motor vehicles having adequate seating facilities or in vehicles not equipped with sides and end gates at least 48 inches high shall not stand while the vehicle is in motion, except as permitted in OAR 437-002-0223(11)(e). Passengers must wait for the vehicle to come to a complete stop before boarding or leaving.]~~

~~[(o) No vehicle shall be loaded beyond its safe operating capacity, and all loads shall be stable and well-balanced.]~~

~~[(p) Employees shall not occupy cargo space in a loaded or partially loaded vehicle while vehicle is in motion unless the load is adequately shored, braced, or otherwise secured.]~~

~~[(q) No vehicle shall be driven if so loaded as to be unstable or insecure.]~~

~~[(r) Wheels of vehicles being loaded shall be properly blocked, in addition to having brakes set, where this additional precaution is necessary to prevent movement of vehicles.]~~

~~[(s) When vehicles are parked, the parking brake shall be set. The wheels of vehicles parked on an incline shall be blocked or chocked.]~~

~~[(t) 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.]~~

~~[(4) Hauling of Explosives Prohibited. No explosives shall be hauled on any vehicle while it is engaged in transporting workers. This rule shall not prohibit the driver and one qualified person from riding in a vehicle in which explosives are being hauled.]~~

~~[(5) Railroad Cars.]~~

~~[(a) Spotted railroad cars shall have their brakes set, or wheels blocked, to prevent cars from moving while being loaded.]~~

~~[(b) Derail or bumper blocks shall be provided on spur railroad tracks where a rolling car could contact cars being worked, or could enter a building or a work area or traffic area.]~~

~~[(c) Workers shall not crawl under or pass between railroad cars to cross tracks.]~~

~~[Overhead Lines]~~

~~[(6) Overhead Wires—Operating Near Power Lines. For requirements when working and/or operating vehicles around high voltage power lines, see OAR 437, Division 2/S, Electrical, Rules 437-002-0322, 437-002-0323, 437-002-0324, 437-002-0325, and 1910.333(b).]~~

~~[Vehicle Components]~~

~~[(7) Vehicle Components.]~~

~~[(a) A positive engine shut-off shall be provided within reach of the operator when in normal operating position.]~~

~~[(b) Necessary steps, ladders, handholds, or grab bars shall be provided on vehicles in order to furnish safe access to all accessible areas. Steps shall be constructed or treated to be as slip-proof as possible.]~~

~~[(c) All vehicles whose pay load is loaded by means of cranes, power shovels, loaders or similar equipment shall have a cab shield or canopy adequate to protect the operator from shifting or falling materials.]~~

~~[(d) The backs of vehicle cabs which are exposed to shifting loads shall be provided with a substantial bulkhead or similar device.]~~

~~[(e) Conventional steel vehicle cabs and passenger areas must be capable of withstanding potential impact to which they are exposed.]~~

~~[(f) Vehicles equipped with cabs shall be provided with a door or doors. Doors provided shall open easily.]~~

~~[(g) All vehicles which are equipped with roll-over protective structures, and all commercial vehicles built after 1971 shall be equipped with safety belts for the driver and for any passengers for whom space is provided.]~~

~~[(h) Materials being transported shall not be carried in a manner which would prevent doors of vehicle cabs from being opened. When the load blocks the cab door on the one side of the vehicle, means for easy escape shall be provided, such as a "knock-out windshield" or an opening in rear of driver's compartment leading to rear of vehicle which is open or equipped with a door which can be opened from the inside, or similar means of emergency escape.]~~

~~[(i) When materials, equipment and tools of any type are transported at the same time with workers, the workers and driver shall be protected from the hazards of such materials, equipment or tools by substantial partitions or the securing of the load.]~~

~~[(8) Flashing Warning Lights. Buses having a seating capacity of 12 passengers or more which are used to pick up and discharge worker passengers on the roadway shall be equipped with either a red flashing 4-light system or an amber and red flashing 8-light system.]~~

~~[(9) Construction of Vehicles.]~~

~~[(a) Class "A" and "B" vehicles shall be constructed or accommodated for transporting passengers, and shall be equipped with adequate seats and back rests firmly secured in place, and with such sides and ends as necessary to prevent persons from falling off the vehicle.]~~

~~[(b) Bus type vehicles having an enclosed seating compartment capacity of 12 or more workers, unless loaded from the rear, shall be provided with an emergency exit not less than 24 inches wide by not less than 48 inches high situated at the left side or rear of the vehicle. Doors shall be provided on bus type vehicles and shall be kept closed during transit and must operate freely at all times. They must be constructed as to be easily opened from either inside or outside the vehicle.]~~

~~[(10) Overhead Protection Required. Class "A" and "B" vehicles shall be provided with bodies and tops of sufficient strength to support the entire weight of the fully loaded vehicle on its top or side if overturned. Adequate means of escape and proper ventilation shall be provided.]~~

~~[(11) Class "C" Vehicles. Flatbed trucks, dump trucks and pickups shall not be used to transport workers, except when the following conditions are complied with:]~~

~~[(a) Truck beds shall be adequately secured to the truck frame.]~~

~~[(b) Vehicles with tilting, sliding or otherwise movable decks or bodies shall have decks or bodies secured in a manner to prevent accidental movement. Dump truck bodies shall be secured or the hoist lever locked.]~~

~~[(c) Flatbed vehicles, when provided with seats for the workers, shall be equipped with substantial sides not less than 42 inches high, secured to an end gate or the vehicle cab at the front end, and either with a 42-inch high end gate across the rear, secured to the vehicle sides, or with not less than three chains or ropes securely fastened across the back of the vehicle deck at the following approximate heights: the top rope or chain 42 inches high, the intermediate 28 inches high, and the bottom 14 inches high. Seats shall be firmly secured and no openings larger than 6 inches vertical shall be permitted in sides or in end gates.]~~

~~[(d) Flatbed vehicles not provided with seats shall be equipped with substantial sides and end gates not less than 24 inches high and workers shall be required to sit on the floor.]~~

~~[(e) If sides and end gates are not provided on flatbed vehicles, not more than four persons shall be permitted to ride behind the truck cab, and then only if substantial handholds are provided for their safety and they are required to use the handholds.]~~

~~[Handholds may consist of:]~~

~~[(A) A 3/4-inch or larger pipe secured to cab or cab guard;]~~

~~[(B) The top of the cab guard;]~~

~~[(C) Slotted holes in cab guard; and]~~

~~[(D) A wooden 2-inch by 4-inch bar secured to cab or cab guard.]~~

~~[All handholds shall be of a convenient height. Workers under 16 years of age shall not be permitted to ride in this manner.]~~

~~[(f) Flatbed trucks on which more than four workers are required to stand shall have substantial sides and end gates not less than 48 inches high with no openings larger than 6 inches vertical. Sides and ends shall be secured as required in paragraph (11)(c) above.]~~

~~[(g) Pickup and dump truck tailgates shall be closed and secured and workers shall sit on the floor unless seats firmly secured in place and substantial sides not less than 42 inches high are provided. A chain or rope shall be secured across the rear of such vehicles equipped with seats.]~~

~~[(h) When workers are permitted to sit on low boxes or similar equipment, side rails which will increase height of pickup and dump truck bodies to not less than 36 inches shall be added with no openings larger than 6 inches. When heavy canvas is used as a top and sides and secured to the vehicle sides, the addition of side rails will not be required.]~~

~~[(12) Number of Passengers — Standees — Passenger Compartment. All Class “A” and “B” type vehicles equipped with seats of any kind shall be provided with an aisle (or passageway between seats) at least 12 inches in width leading to the emergency exit. Workers shall not sit on the floor in such aisles or passageways while the vehicle is in motion. Not more than one worker per row of seats shall be permitted to stand. No workers shall be permitted to stand or sit in the driver’s compartment ahead of the front row of seats. Under no circumstances shall boards be placed across an aisle to provide additional seating space. Neither shall seats of any type be placed in an aisle. Substantial handholds shall be provided for standees.]~~

~~[(13) Maximum Time or Distance Permissible for Standees. When workers being transported, in any class of vehicle, are required to stand during transit those persons not provided with seats shall not be permitted to stand for more than 1 hour, or for a greater distance than 45 miles of vehicle travel, whichever is the lesser. A rest period of not less than 15 minutes shall be required before continuing trip unless those standing are given seats.]~~

~~[(14) Passenger Compartments.]~~

~~[(a) Floors and decks shall be suitable for safe footing.]~~

~~[(b) All openings between enclosed passenger compartments and engine or exhaust at which fumes or gases may enter shall be effectively sealed.]~~

~~[(c) Construction of enclosed passenger compartments shall provide a reasonably dust proof and watertight unit.]~~

~~[(d) Floors and interior of sides and ends and tops of compartments used for transporting workers shall be free of inwardly protruding nails, screws, splinters or other protruding objects which might cause injury.]~~

~~[(e) Whenever necessary to protect workers from inclement weather conditions, a top and facilities for closing the sides and ends shall be provided. Tarpaulins or other such removable protective devices shall be secured in place during transit.]~~

~~[(15) Windshields — Windows.]~~

~~[(a) All vehicles with windshields shall be equipped with powered wipers. Vehicles operating in areas or under conditions that cause fogging or frosting, shall be equipped with operable windshield defogging or defrosting device.]~~

~~[(b) Windshield and windows installed on vehicles shall be of a safety glass which will meet the requirements for safety glazing material for use anywhere in a motor vehicle as defined in the American National Standards Institute, Safety Glazing Materials for Glazing Motor Vehicles Operating on Land Highways, No. Z26.1-1950 with addenda No. Z26.1a-1964, or a material which will furnish equivalent safety.]~~

~~[(c) Defective or broken glass in a vehicle which impairs the vision of the operator shall be replaced. Broken or shattered glass which could cause injury to occupants of the vehicle shall be removed and replaced.]~~

~~[(d) Deposits on glass which impair the vision of the operator shall be removed.]~~

~~[(16) Brakes.]~~

~~[(a) All vehicles shall be provided with brakes which are capable of controlling the vehicle while fully loaded on any grade over which they are to be operated.]~~

~~[(b) Parking brakes shall be able to hold the loaded vehicle on any grade on which it is operated, on any surface free of ice or snow.]~~

~~[(c) Brakes on all vehicles must be in safe working condition at all times and shall be tested as often as operating conditions warrant during the time said vehicle is in use.]~~

~~[(17) Steering.— 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. The steering knob shall be mounted within the periphery of the wheel.]~~

~~[(18) Lights.]~~

~~[(a) Controlled lighting of adequate intensity shall be provided in loading areas.]~~

~~[(b) Where general lighting in vehicle operating areas is less than 2 footcandles per square foot, vehicles shall be provided with lights which are adequate to safely illuminate the path of travel.]~~

~~[(c) Vehicles which are operated at night shall have sufficient light at the operator's station to enable the operator to perform his work safely.]~~

~~[(d) Whenever visibility conditions warrant additional light, all vehicles in use shall be equipped with at least two headlights and two taillights in operable condition.]~~

~~[(e) All vehicles, except track and site-clearing machines, shall be equipped with brake lights in operable condition regardless of light conditions.]~~

~~[(19) Inspection, Testing, Maintenance, and Repair.]~~

~~[(a) All vehicles shall be checked at the beginning of each shift to assure that they are in safe operating condition and free of apparent damage that could cause failure while in use.]~~

~~[(b) Any defects which are found during inspection, which materially affect the safe operation of the vehicle will be corrected before the vehicle is placed in service.]~~

~~[(c) Any vehicle which develops defects in parts vital to safe operation during a work shift shall be removed from service until necessary repairs are made.]~~

~~[(d) A safety tire rack, cage, or equivalent protection shall be provided and used when inflating or mounting tires on split rims, or rims equipped with locking rings or similar devices.]~~

~~[(e) Heavy machinery, equipment, or parts which are supported by slings, hoists, jacks, or other devices, shall be blocked or cribbed to prevent falling or shifting before employees are permitted to work under or between them.]~~

~~[(A) Bulldozer and scraper blades, end-loader, end-loader buckets, dump bodies, and similar equipment, shall be either fully lowered or blocked when being repaired or when not in use.]~~

~~[(B) All controls shall be in neutral with motors stopped and brakes set, unless work being performed requires otherwise.]~~

~~[(f) Vehicles 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. This device shall be used to support the body~~

~~when it is raised and left unattended, or while maintenance or inspection work is being done.]~~

~~[(g) The battery shall be disconnected prior to making repairs to a vehicle electrical system where accidental closing of the circuit could cause injury to workers.]~~

~~[(h) All vehicle replacement parts shall meet current safety standards.]~~

~~[(i) Any vehicle that emits hazardous sparks or flames from the exhaust system shall immediately be removed from service and not returned to service until the hazardous emission has been eliminated.]~~

~~[(j) Compartments for workers shall be kept in a clean and sanitary condition, and workers shall assist in maintaining such conditions.]~~

~~[(20) Guards.]~~

~~[(a) Wherever front or rear wheels on all types of vehicles except pneumatic-tired earth-moving equipment, are not guarded by the vehicle body and present a hazard to workers, they shall be guarded with wheel fenders, bumpers, or skirt guards. These guards shall be designed to prevent the operator, or other workers from being struck by the wheels.]~~

~~[(b) Vehicles with maximum speed exceeding 20 mph shall be equipped so that the operator is not exposed to material thrown from the wheels.]~~

~~[(21) Fueling.]~~

~~[(a) Smoking within 35 feet of vehicles being fueled is prohibited.]~~

~~[(b) Vehicle engines, except diesel engines, shall be stopped while being fueled.]~~

~~[(c) Refueling of Class "A" and "B" vehicles shall be done when vehicles are not occupied.]~~

~~[(d) Fueling of vehicles within 35 feet of any open fires, flame, lights, or other sources of ignition is prohibited.]~~

~~[(e) Refilling vehicle tanks using liquefied petroleum gases shall be done only out-of-doors. Maximum quantity of fuel placed in tanks shall not exceed that recommended by the manufacturer.]~~

~~[(f) Any spillage of oil or fuel shall be carefully washed away or completely evaporated and the fuel tank filler cap replaced before restarting engine.]~~

~~[(22) Hauling of Gasoline, etc.]~~

~~[(a) Gasoline and other low flash point liquids shall not be hauled on Class "A," "B" and "D" vehicles transporting workers except when in U.L. approved, closed safety containers of not more than 5 gallons capacity and provided such containers are carried in a safe, suitable location outside the passenger compartment. Such containers shall be carried as far away from the passenger compartment as possible and where they will not block exit from the vehicle and shall be firmly secured to prevent shifting or placed in well-ventilated compartments or racks.]~~

~~[(b) Gasoline in containers larger than 5 gallons may be transported in Class "C" vehicles provided all workers ride in the cab of the vehicle or in a separate compartment.]~~

~~[(23) Warning Devices.]~~

~~[(a) All vehicles shall be equipped with an audible warning device which can be clearly heard above the surrounding noise in the vicinity of the vehicle.]~~

~~[(b) Vehicles with an obstructed view to the rear must have a backup alarm that can be heard over the surrounding noise. If surrounding noise prevents this or if there are so many vehicles using backup alarms that they cannot be distinguished from each other, flashing or strobe lights are acceptable.]~~

~~[The above does not apply when:]~~

~~[(A) the vehicle backs up only when an observer signals the driver that it is safe to do so; or]~~

~~[(B) the operator verifies that there is nobody behind the vehicle or that nobody may enter the danger area without the operator's knowledge.]~~

~~[(c) Adequate and appropriate traffic controls must be provided for all operations on or adjacent to a highway, street, or roadway. The controls must conform to the Millennium Edition of the (FHWA) Manual of Uniform Traffic Control Devices (MUTCD), December 2000. You may obtain a copy of the Millennium Edition from the following organizations: American Traffic Safety Services Association, 15 Riverside Parkway, Suite 100, Fredericksburg, VA 22406-1022; Telephone: 1-800-231-3475; Fax: (540) 368-1722; www.atssa.com; Institute of Transportation Engineers, 1099 14th Street, NW., Suite 300 West, Washington, DC 20005-3438; Fax: (202) 289-7722; www.ite.org; and American Association of State Highway and Transportation Officials; www.aashto.org; Telephone: 1-800-525-5562.]~~

~~[NOTE: Electronic copies of the MUTCD 2000 are available for downloading at <http://mutcd.fhwa.dot.gov/kno-millennium>.]~~

~~[NOTE: A copy of the MUTCD 2000 is available for inspection at the Oregon OSHA Resource Center, 350 Winter Street NE, Basement - Room 26, Salem, Oregon 97301-3882; Telephone: (503) 378-3272, or toll free in Oregon 1-800-922-2689.]~~

~~[NOTE: Employers who are following the most current edition of the Oregon Department of Transportation's Short Term Traffic Control Handbook will be considered to be in compliance with this requirement.]~~

~~[(d) When traffic control devices are required to be used by 437-002-0223(23)(c), they shall be installed at the inception of the project or operations, and shall be properly maintained and operated during the time such special conditions exist.]~~

~~[(24) Control of Exhaust Gases.]~~

~~[(a) Vehicles shall be equipped with a muffler, in good working order, of the type recommended by the vehicle manufacturer.]~~

~~[(b) Exhaust pipes shall be so located as to direct the exhaust gases away from the operator and any passengers.]~~

~~[(c) Any exhaust pipe which is exposed to contact shall be insulated or isolated to protect workers from contact burns.]~~

~~[(25) Sun Shields. All class vehicles shall be equipped with an adjustable sun visor.]~~

~~[(26) Heating of Vehicles. Heating units shall be guarded or covered to prevent workers from being burned by accidental contact.]~~

~~[Safety Equipment]~~

~~[(27) First Aid Kits. Class A and B Commercial type vehicles used for the transportation of workers shall carry a first aid kit suitable for the number of passengers customarily transported. First aid kits shall be located where they are readily available to the driver or crew and shall be maintained in good order.]~~

~~[(28) Fire Extinguishers. Class A and B Commercial type vehicles used to transport workers shall be equipped with a minimum 2-pound type B/C fire extinguisher.]~~

~~[Commercial-Type Vehicles]~~

~~[(29) Rear View Mirrors. All commercial vehicles shall be equipped with outside-mounted rear-view mirrors on each side when the load or passengers obstruct the use of the rear-view mirror located in the cab.]~~

~~[(30) Safety Chains on Commercial Vehicles.]~~

~~[(a) Safety chains or cables shall be so connected to the towed and towing vehicles and to the tow bar as to prevent the tow bar from dropping to the ground in the event the tow bar or coupling device fails.]~~

~~[(b) Safety chains or cables shall have a tensile strength equivalent to the gross weight of the towed vehicle and their means of attachment to the towed and towing vehicles shall be of sufficient strength to control the towed vehicle in event the tow bar or coupling device fails.]~~

~~[(c) No more slack shall be left in safety chains or cables than shall be necessary to permit proper turning.]~~

~~[(d) Towed vehicles having a gross weight of 5,000 pounds or less shall be equipped with one or more safety chains or cables. Towed vehicles having a gross weight in excess of 5,000 pounds shall be equipped with two or more safety chains or cables.]~~

~~[(e) Any coupling device on any towing vehicle used as a connection for the tow bar on any towed vehicle having a gross weight in excess of 5,000 pounds shall~~

~~be firmly attached to the frame or to a solid connection to the frame. This section on safety chains does not apply to a temporarily disabled vehicle being towed by another vehicle, to saddle-mount towing, or to a semitrailer coupled to a towing vehicle with a fifth wheel and kingpin assembly so designed that the upper and lower halves may not be separated without being manually released onto a dolly without a tow bar.]~~

~~[(31) Coupling Device on Commercial Vehicles. Drawbar, coupling device, and other connections provided for towing of trailers shall be of sufficient strength to hold the weight of the towed vehicle upon any grade over which it may be operated. Such connections shall be properly mounted without excessive slack but with sufficient play to allow for universal action of the connections, and shall be provided with a suitable locking means to prevent accidental separation of the towed and towing vehicles.]~~

~~[(32) Signals.]~~

~~[(a) Where the vehicle operator's hand signal cannot be clearly seen, turn signal lights or other means to signal shall be provided.]~~

~~[(b) A red flag shall be placed on the extreme end of materials that project 4 feet or more beyond the vehicle body when transported during daylight hours. A red light shall be displayed at night.]~~

~~[(33) Controls.]~~

~~[(a) 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.]~~

~~[(b) Trip handles for tailgates of dump trucks shall be so arranged that, in dumping, the operator will be in the clear.]~~

~~[Industrial Vehicles]~~

~~[(34) Reserved.]~~

~~[(35) Reserved.]~~

~~[(36) Reserved.]~~

Roll-Over Protective Structures: Overhead Protection

~~[(37) 1] Application. Roll-over protective structures (ROPS) shall be provided, installed and maintained on industrial vehicles which were 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; skid-steer equipment; wheel-type industrial tractors; crawler tractors; crawler-type loaders; and motor graders, with or without attachments, that are used in industrial work. This~~

requirement does not apply to sideboom pipe laying tractors, or other vehicles whose structure prevents overturn, or to tractors used only in farming operations.

([38] 2) ROPS – General Requirements.

- (a) Roll-over protective structures and their supporting attachments to industrial vehicles shall 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 shall be to minimize the likelihood of a complete vehicle overturn, and to minimize the possibility of the operator being crushed.
- (c) A vertical clearance of at least 52 inches between the work deck and the ROPS canopy is required for ingress and egress.
- (d) ROPS which have been removed for any reason, shall be remounted with equal quality, or better, bolts or welding as required for the original mounting.

([39] 3) Defects.

- (a) Defects in ROPS shall be repaired by equal quality or better materials and welding as required for the original structure.
- (b) Minimum performance criteria for roll-over protective structures for designated vehicles are contained 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 J320, September 1972)
 - (B) Wheeled front-end loaders and wheeled dozers. (SAE J394a, September 1972)
 - (C) Track-type tractors and front-end loaders. (SAE J395a, September 1972)
 - (D) Motor graders. (SAE J396a, September 1972)
 - (E) Wheel-type agricultural and industrial tractors. (SAE J167, 1971)
 - (F) Falling object protective structures (FOPS). (SAE J231, May 1971)

([40] 4) Identification of ROPS. Each ROPS shall 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 is designed to fit.

([44] 5) Approved Structures. Any machine in use, equipped with roll-over protective structures, shall be deemed in compliance with OAR 437-002-0223(37) through (41) 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 (March 1967).

(b) Bureau of Reclamation, U. S. Department of the Interior: Safety and Health Regulations for Construction, Part II (September 1971).

Bridges, Roadways, and Ramps

([42] 6) Roadways.

(a) Roadways shall be of sufficient width and evenness to ensure the safe operation of equipment.

(b) Sufficient turnouts shall be provided and a safe side clearance shall be maintained along roads and runways.

(c) Low clearance areas under conveyors which could present a hazard to mobile equipment operations shall be identified by a suitable means, such as signs, contrasting colors, or flags.

(d) Broken planking, deep holes, large rocks, logs or other dangerous surface defects shall be corrected before any equipment is used thereon.

(e) Obstructions to clear view at intersections or on sharp curves shall be removed or all reasonable precautions taken to relieve the hazards of these conditions.

(f) An ample supply of nonskid materials, such as coarse sand or finely crushed rock, shall be available and used on slippery surfaces.

(g) Road grades shall not be too steep for safe operation of vehicles which operate over them and shall not exceed 20 percent in any case unless an auxiliary means of lowering vehicles is provided or unless vehicles are specifically designed and approved for operation on grades in excess of 20 percent.

([43] 7) Access Roadways, Grades.

(a) No employer shall move, or cause to be moved, 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.

(b) Every emergency access ramp and berm used by an employer shall be constructed to restrain and control runaway vehicles.

(c) Elevated bridges, runways or ramps and loading docks shall be constructed to safely support at least four times the weight of any load to which it may be subjected. Ramps shall be covered with a material which will minimize the danger of skidding.

(d) The maximum inclination of a ramp used for wheeled equipment shall not exceed 20 percent from horizontal.

(e) Elevated bridges, ramps or runways used for the travel of wheeled equipment shall have exposed sides guarded with a substantial bull rail or sheer rail of sufficient height to prevent wheeled equipment from going over the rail.

437-002-0227 Additional Oregon Rules for Powered Industrial Trucks.

(1) Overhead Guards.

(a) Where a rider type lift truck operator is exposed to hoisted objects that might fall, or stacked objects that might be dislodged and fall, the truck shall be equipped with an overhead guard. The guard shall be of sufficient strength to support impact load tests as specified in Table OR-N-1:

| <i>Table OR-N-1</i> | | |
|--|---|------------------------------------|
| <i>Rated Truck Capacity at 24" Load Center</i> | <i>Impact Test (Load X Drop Distance)</i> | <i>Minimum Weight of Test Load</i> |
| <i>3,000 and under</i> | <i>4,000 ft.-lbs.</i> | <i>750 lbs.</i> |
| <i>3,001 to 5,000 lbs.</i> | <i>8,000 ft.-lbs.</i> | <i>1,500 lbs.</i> |
| <i>5,001 to 8,000 lbs.</i> | <i>16,000 ft.-lbs.</i> | <i>3,000 lbs.</i> |
| <i>8,001 to 14,000 lbs.</i> | <i>24,000 ft.-lbs.</i> | <i>3,000 lbs.</i> |
| <i>14,001 to 25,000 lbs.</i> | <i>32,000 ft.-lbs.</i> | <i>3,000 lbs.</i> |
| <i>25,001 and over</i> | <i>36,000 ft.-lbs.</i> | <i>3,000 lbs.</i> |

(b) Impact load tests shall be conducted with the guard in place on a vehicle for which it is designed or on a simulated mounting. Running gear need not be in place. The load shall be dropped in free fall from an appropriate height so that the impact is centered approximately above the driver's position. Test loads shall have a length equal to or greater than the width of the guard, and shall strike the canopy at right angles to the vehicle frame.

(c) Guards of a design which has been so tested shall be identified by a metal tag permanently attached to the canopy in a position where it may be easily read from the ground. This tag shall be permanently and clearly marked with the impact test load, expressed in foot-pounds to which guards of the same design have been tested.

Note: Guards required by OAR 437-002-0227(1)(a) through (c), or by the rules following, are not intended to withstand the impact of a capacity load falling from any height.

(d) Guards which are not of a design which has been tested in accordance with OAR 437-002-0227(1)(a) through (c) of this rule, may be constructed of material as specified in Table OR-N-2 or material of equivalent strength:

| Rated Truck Capacity | Round Pipe | | Square Tube (CRS) | | |
|-----------------------|------------|-----------|-------------------|--------------|-------------|
| | (Std.) | (X Heavy) | (XX Heavy) | (3/16" Wall) | (1/4" Wall) |
| 3,000 and under | 1 1/2" | 1 1/4" | | 1 1/4" | |
| 3,001 to 5,000 lbs. | 2" | 1 1/2" | | 1 1/2" | |
| 5,001 to 8,000 lbs. | 2 1/2" | 2" | 1 1/2" | 2" | |
| 8,001 to 14,000 lbs. | 3" | 2 1/2" | 2" | 3" | 2 1/2" |
| 14,001 to 25,000 lbs. | | 3 1/2" | 3" | 3 1/2" | 3" |
| 25,001 and over | | 4" | | 4" | 3 1/2" |

(e) The construction of canopy guards are built in compliance with OAR 437-002-0227(1)(d) shall be based on the strength of four upright members. Guards constructed with less than four upright members shall be of equivalent strength.

(A) Canopy type overhead guard frames shall be braced to overhead members on each side of the frame to provide structural rigidity both longitudinally and transversely.

(B) All guard mountings or attaching brackets shall be constructed and secured to the vehicle in a manner to provide adequate support to the upright members of the canopy type overhead guard.

(C) Cantilever overhead guards shall be of equivalent strength.

(f) Guards shall be constructed in a manner that does not interfere with good visibility, but openings in the top shall not exceed 6 inches in one of the two dimensions, width or length. Guards shall be large enough to extend over the operator under all normal circumstances of operation, including forward tilt.

(A) Provisions shall be made so that failure of the mast-tilting mechanism will not allow the overhead guard to cause injury to the operator.

(B) Lift trucks operated by seated operators shall have not less than 39 inches of clear vertical space between the operator's seat when

depressed and the underside of the guard. Lift trucks operated by standing operators shall have not less than 74 inches of clear vertical space between the platform and the underside of the guard.

Note: Where overall height of truck with forks in lowered position is limited by head room conditions and there is insufficient space for vertical clearance or for the operator to assume a normal driving position, normal overhead guard heights may be reduced, or the overhead guard may be omitted. The height and stability of stacks of piled material, the weight of individual units handled, and the operating space available shall be such as will provide reasonable safety for the operator if it is necessary to remove the overhead guard.

(2) Load Back Rest. Lift trucks which handle small objects or unbanded units shall be equipped with a vertical load back rest.

(a) It shall have height, width, strength, sufficient to prevent the load or any part of it from falling toward the operator.

(b) It shall be constructed in a manner that does not interfere with good visibility.

(c) Size of openings shall not exceed 6 inches in one dimension.

(3) Shear Point Guards. Shear points on forklift loaders and similar type vehicles shall be guarded as necessary to protect operators from hazardous exposure.

(4) Personnel Platforms. Whenever a lift truck is used for lifting personnel without controls at the platform, the following precautions shall be taken for the protection of personnel being elevated:

(a) A work platform equipped with standard guardrails or equivalent means, and firmly secured to the lifting carriage or forks, shall be used.

(b) The hydraulic system shall be so designed that the lift mechanism will not drop faster than 135 feet per minute in the event of a failure in any part of the system.

(c) An operator shall attend the lift equipment while workers are on the platform.

(d) The operator shall be in the normal operating position while raising or lowering the platform.

(e) The vehicle shall not travel from point to point with the work platform elevated at a height greater than 4 feet while workers are on the platform. When necessary at heights greater than 4 feet, inching may be permitted provided it is done at a very slow speed.

(f) If workers on the platform can contact the lift chains or other dangerous pinch or shear points on the mast or carriage, the platform must have a screen or guard that prevents contact.

(5) Equipment and attachments.

(a) Do not allow spinner knobs on vehicles without power steering. Spinner knobs must be on the inside of the steering wheel.

(b) All vehicles must have a working horn that can be heard above surrounding area noise.

NOTE: Paragraph (c) does not apply when the vehicle backs up with an observer or when the operator verifies that there is nobody behind the vehicle or when nobody may enter the danger area without the operator's knowledge.

(c) Vehicles with an obstructed view to the rear must have a backup alarm that can be heard over the surrounding noise. If surrounding noise prevents this or if there are so many vehicles using backup alarms that they cannot be distinguished from each other, flashing or strobe lights are acceptable.

(d) Vehicle brakes must be effective when the vehicle is fully loaded.

437-002-2224 Vehicle Drivers and Riders. (Division 2/N, General Industry)

437-003-3224 Vehicle Drivers and Riders. (Division 3/O, Construction)

(1) Scope. This rule applies, without regard to vehicle ownership when your employees drive or ride as part of their employment.

NOTE: The Oregon Bureau of Labor and Industries (BOLI) administers rules about using minors as drivers. Please contact the nearest BOLI office for more information.

(2) Driver Qualifications. You must not allow an employee to drive a vehicle on a public highway or road unless they have a valid driver's license appropriate for that type vehicle.

(3) General Safety.

(a) Do not allow employees to drive or ride in any vehicle known to be unsafe.

(b) Require employees to report any safety problems effecting vehicles you own or provide.

(4) Rider Safety - General.

(a) Except as in (5), (6) and (7), do not allow employees to occupy a vehicle in excess of its seating capacity.

(b) Require employees to comply with all applicable seatbelt and traffic safety laws.

(5) Rider Safety in the Bed of Dump Trucks, Pickups and Similar Vehicles. Do not transport workers in the beds of dump trucks, pickups or similar vehicles unless these conditions are met when applicable:

(a) When seating is available, it must be secure to the floor and passengers may not stand.

(b) The bed is secure to the frame. Beds that tilt or slide must be secure from movement.

(c) Dump beds must be secure or the activating lever locked.

(d) The total height of the sides of the transport area must be at least 42 inches. If riders sit on the floor, the height must be at least 24 inches.

(e) There must be a tailgate the same height as the sides or three evenly spaced chains, cables or ropes taut across the back.

(f) Not more than 4 workers may ride on a flatbed without sides or a tailgate and then only when the speed will not be more than 30 mph. There must be two handholds for each rider.

(g) Workers must not ride in space with cargo unless it is secure from movement.

(6) Standing Rider Safety – Buses. Riders must not sit on the floor while the vehicle is moving. Riders may stand if these conditions are met:

(a) There must be an aisle at least 12 inches wide leading to the emergency exit.

(b) There are no seats in or boards across the aisle.

(c) There must be handholds for standing riders.

(d) Not more than one rider per row of seats may stand.

(e) Riders may not sit or stand near the driver and not ahead of the forward-most row of seats.

(f) Workers in transit must not stand for more than one hour or 45 miles, whichever is less. At the end of that period, the standing workers must get a seat or the vehicle must stop for a 15-minute rest allowing the workers to get out.

(7) Fueling.

(a) There must be no smoking or other source of ignition within 25 feet of any refueling operation.

(b) Do not fill any container that is not bonded or grounded while it is inside the vehicle, in the pickup bed or anyplace other than on the ground.

(c) Stop the engine (except diesels) during fueling.

(d) Refueling vehicles with LPG must be outdoors.

(8) Hauling gasoline or flammable liquid.

(a) For buses, vehicles that carry 16 or more, crew trucks, vans and passenger cars, use only DOT or UL approved containers that hold 5 gallons or less and secure them in an area separate from passengers.

(b) For pickups, flatbeds and other vehicles not in (a), there is no container size limit as long it is not in an enclosed passenger area.

(9) Hauling Explosives. When hauling explosives, only the driver and one qualified person may be in the vehicle. Comply with OAR 437-002-1910.109 and 437-002-0109.

(10) Loading or Unloading. When loading or unloading vehicles in a manner that is likely to cause the vehicle to move, set the brakes and chock the wheels.

(11) High Voltage Clearances. When operating a vehicle near overhead lines carrying more than 600v, OAR 437-002-0047 applies for general industry employers and OAR 437-003-0047 applies for Construction employers.

(12) Traffic Control. You must require employees to set up appropriate traffic controls when they stop on or adjacent to a highway, street, or road in a way that creates a hazard and when traffic cannot adjust safely on its own. The controls must conform to the Millennium Edition of the (FHWA) Manual of Uniform Traffic Control Devices (MUTCD), December 2000.

NOTE: Get a copy of the Millennium Edition from the following organizations: American Traffic Safety Services Association, 15 Riverside Parkway, Suite 100, Fredericksburg, VA 22406-1022; Telephone: 1-800-231-3475; Fax: (540) 368-1722; www.atssa.com; Institute of Transportation Engineers, 1099 14th Street, NW., Suite 300 West, Washington, DC 20005-3438; Fax: (202) 289-7722; www.ite.org; and American Association of State Highway and Transportation Officials; www.aashto.org; Telephone: 1-800-525-5562.

OR: Download the MUTCD 2000 at <http://mutcd.fhwa.dot.gov/kno-millennium>.

OR: The MUTCD 2000 is available for review at the Oregon OSHA Resource Center, 350 Winter Street NE, Basement - Room 26, Salem, Oregon 97301-3882; Telephone: (503) 378-3272, or toll free in Oregon 1-800-922-2689.

NOTE: Employers who follow the most current edition of the Oregon Temporary Traffic Control Handbook for Operations of 3 Days or Less comply with this requirement.

**437-002-2225 Vehicles for Highway and Road Operation
Characteristics and Maintenance (Division 2/N, General Industry)**

**437-003-3225 Vehicles for Highway and Road Operation
Characteristics and Maintenance (Division 3/O, Construction)**

(1) Scope. This applies to employer-owned vehicles licensed for highway and road use, driven and/or maintained by employees on public or private property, except the following:

(a) Powered Industrial Trucks covered by OR-OSHA standard 1910.178 and OAR 437-002-0227.

(b) Earth moving equipment (scrapers, loaders, bulldozers and graders) covered by OAR 437-003-1926.602.

(c) Manufactured structures, ATVs, golf carts and other similar devices not intended for highway or road use.

NOTE: When operating a vehicle near overhead power lines more than 600 volts, OAR 437-002-0047 applies for General Industry employers and OAR 437-003-0047 applies for Construction employers.

(2) Vehicle Components.

(a) The engine start/stop control must be within reach of the driver.

(b) There must be steps, ladders and railings to allow safe access to and exit from areas on vehicles where employees must access. Steps and rungs must be slip resistant.

(c) Vehicles whose cargo is loaded by cranes, power shovels or other powered loaders must have a cab or cab shield that protects the occupants from the impact of falling material.

(d) Secure all material, equipment or tools to prevent movement or a barrier must be in place to protect the occupants from moving items.

(e) Vehicles with cabs must have a door or doors for entry and exit.

(f) Vehicle cargo must not prevent occupants from exiting under any condition.

(g) Vehicles must comply with ORS 811.225, Failure to Maintain Safety Belts in Working Order.

(3) Flashing Warning Lights. Buses with a capacity of 16 or more passengers must have a working flashing light system that complies with ORS 816.260 if they load or unload passengers on a public highway or road.

(4) Buses and Crew Trucks.

(a) Buses and crew trucks must have a secure seat with back rest for each occupant.

(b) Buses with an enclosed seating area for 12 or more workers, unless loaded from the rear, must have an emergency exit not less than 24 inches wide by not less than 48 inches high on the left side or rear of the vehicle. It must open easily from inside or outside the vehicle.

(5) Passenger Compartments.

(a) Floors and decks must be slip resistant.

(b) Seal openings between the engine compartment and muffler area to prevent carbon monoxide from entering the enclosed passenger compartment.

(c) Enclosed passenger compartment must be substantially dust proof and watertight.

(d) Areas where workers sit or stand must be free of protruding nails, screws, splinters or similar physical hazards.

(e) Protect riders from inclement weather by enclosing riding areas as necessary.

(6) Steering. Do not allow spinner knobs on vehicles without power steering. Spinner knobs must be on the inside of the steering wheel.

(7) Lighting. Where general lighting in vehicle operating areas is less than 2 footcandles per square foot, vehicles must have working lights that sufficiently light the travel path.

(8) Testing, Maintenance, and Repair.

(a) Block or crib heavy machinery, equipment or parts supported by slings, hoists, jacks or otherwise prevent it from falling before employees work underneath or between such objects.

(b) During repair or maintenance set all controls in neutral, stop the motor and set the brakes unless the work requires otherwise.

(c) During maintenance or inspection on vehicles with dump bins, use an attached, lockable support that prevents unintentional lowering of the bin.

(d) Disconnect the vehicle battery when the work allows and the energized system could cause injury.

(9) Warning Devices.

(a) All vehicles must have a working horn that can be heard above surrounding area noise.

Paragraph (b) does not apply when the vehicle backs up with an observer or when the operator verifies that there is nobody behind the vehicle or when nobody may enter the danger area without the operator's knowledge.

(b) Vehicles with an obstructed view to the rear must have a backup alarm that can be heard over the surrounding noise. If surrounding noise prevents this or if there are so many vehicles using backup alarms that they cannot be distinguished from each other, flashing or strobe lights are acceptable.

(10) Control of Exhaust Gases.

(a) Vehicles must have a working muffler.

(b) Exhaust pipes must direct the gasses away from occupants.

(c) Insulate or otherwise protect exhaust pipes exposed to worker contact.

(11) First Aid Kits. Vehicles for transport of 16 or more workers must have a clean, stocked first aid kit with enough supplies for the number of workers usually transported.

NOTE: Laws and/or administrative rules administered by other government agencies require fire extinguishers in vehicles under specifically defined circumstances.

(12) Controls.

(a) Levers that control dump or hoist devices must have a latch or other device that prevents accidental starting or tripping of the mechanism.

(b) The operator of a dump truck must be able to operate the tailgate trip handle from a position clear of the dumping load.

437-002-2226 Vehicles for Use on Property Other Than Public Roads and Highways Operation, Characteristics and Maintenance (Division 2/N, General Industry)

437-003-2226 Vehicles for Use on Property Other Than Public Roads and Highways Operation, Characteristics and Maintenance (Division 3/O, Construction)

(1) Scope. This rule applies to employer-owned vehicles, not licensed or normally operated on public highways or roads, except the following:

(a) Powered Industrial Trucks covered in OR-OSHA standard 1910.178 and OAR 437-002-0227.

(b) Earth moving equipment, (scrapers, loaders, bulldozers and graders) covered by OAR 437-003-1926.602.

(c) Manufactured structures, ATVs, golf carts and other similar devices not intended for highway or road use.

(2) Safe Operation. You must require the driver to:

(a) Look in the direction of travel and have a clear view unless being guided by somebody with a clear view of the route.

(b) Slow or stop as appropriate at intersections and not drive in marked pedestrian lanes.

(c) Not drive a vehicle up to a person standing in front of a stationary object.

(d) Manually control all towed or pushed vehicles unless they use a towbar.

(3) Vehicle Loads. You must protect employees from hazardous vehicle loads by requiring that they:

(a) Not load a vehicle beyond its rated capacity.

(b) Stabilize, lash down or otherwise secure the load.

(c) Never be under an elevated load.

(4) Basic Equipment Requirements. You must assure your vehicles comply with the following:

(a) Vehicles with windshields must have working powered wipers and an effective defroster.

(b) There must be no broken glass that impairs the driver's vision.

(c) When the load or passengers obstruct the use of the interior rear view mirror, there must be an outside rear view mirror on each side of the vehicle.

(d) Vehicle brakes must be effective when the vehicle is fully loaded. The parking brake must hold the loaded vehicle on any slope which it may operate.

NOTE: The rules on safety chains do not apply to saddle-mount towing, or to a semitrailer coupled to a towing vehicle with a fifth wheel and kingpin assembly so designed that the upper and lower halves may not separate without being manually released onto a dolly without a tow bar.

(5) Uncoupled towing. You must assure that:

(a) Towed vehicles with a gross weight of 5,000 pounds or less must have at least one safety chain or cable. Towed vehicles with a gross weight more than 5,000 pounds must have at least two safety chains or cables.

(b) Safety chains or cables must be strong enough to control the towed vehicle in event the tow bar or coupling device fails.

(c) Safety chains or cables must connect to the towed and towing vehicles and to the tow bar so as to prevent the tow bar from dropping to the ground if it or the coupling device fails.

(d) There must be only enough slack in safety chains or cables to permit proper turning.

(6) Coupled towing. You must assure that:

(a) Drawbar, coupling device, and other connections for towing of trailers must be strong enough to hold the weight of the towed vehicle on any grade over which it may operate.

(b) Any coupling device on any towing vehicle used as a connection for the tow bar on any towed vehicle with a gross weight more than 5,000 pounds must be firmly attached to the frame or to a solid connection to the frame.

(c) There must be a suitable locking means to prevent accidental separation of the towed and towing vehicles.

(d) Connections must have only enough slack to allow for universal action of the connections.

NOTE: When operating a vehicle near overhead power lines more than 600 volts, OAR 437-002-0047 applies for General Industry employers and OAR 437-003-0047 applies for Construction employers.

1910.178(m) Truck operations.

NOTE: The Oregon Bureau of Labor and Industries (BOLI) administers rules about using minors as drivers. Please contact the nearest BOLI office for more information.

~~[§1926.601 Motor Vehicles.]~~

~~[NOTE: §1926.601(a) was NOT adopted by OR-OSHA. In Oregon, OAR 437-003-0093 applies:]~~

~~[437-003-0093 Exemption. The requirements of §1926.601, Motor Vehicles, do NOT apply to equipment for which rules are prescribed in §1926.602, Material Handling Equipment.]~~

~~[Stat. Auth.: ORS 654.025(2) and 656.726(3).]~~

~~[Stats. Implemented: ORS 654.001 through 654.295.]~~

~~[Hist: OR-OSHA Admin. Order 6-1991, f. 3/18/91, ef. 4/15/91.]~~

~~[(b) General requirements.]~~

~~[(1) All vehicles shall have a service brake system, an emergency brake system, and a parking brake system. These systems may use common components, and shall be maintained in operable condition.]~~

~~[(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. Cracked and broken glass shall be replaced. Vehicles operating in areas or under conditions that cause fogging or frosting of the windshields shall be equipped with operable defogging or defrosting devices.]~~

~~[(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. All rubber-tired motor vehicle~~

~~equipment manufactured before May 1, 1972, shall be equipped with fenders not later than May 1, 1973.]~~

~~[(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. All defects shall be corrected before the vehicle is placed in service. These requirements also apply to equipment such as lights, reflectors, windshield wipers, defrosters, fire extinguishers, etc., where such equipment is necessary.]~~

~~[Stat. Auth.: ORS 654.025(2) and 656.726(3).]~~

~~[Hist: APD Admin. Order 4-1989, f. 3/31/89, ef. 5/1/89 (temp).]~~

~~[APD Admin. Order 8-1989, f. 7/7/89, ef. 7/7/89 (perm).]~~