

# 2019 Western Region COFE Seminar

## Road Construction

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### Timber Cutting

Two tree lengths between cutter and any personnel.

Warning signs and a flagger(s) must be placed in advance of active operations, or other equivalent protection must be used on roads to control traffic where hazardous conditions are created from forest activities

Warning signs must be prominently displayed a minimum of 300 feet in advance of forest activities which create hazardous conditions for road traffic.

Warning signs must be a minimum dimension of 24-inch x 24-inch diamond, have an orange background and have 4-inch black letters.

### Road Construction Equipment

An operator restraint system must be provided and used on all machines manufactured on or after July 1, 2004, and equipped with ROPS, FOPS, reinforced cabs or overhead guards.

Each machine used in forest activities that is manufactured on or after July 1, 2004, must have a fully enclosed cab for the operator which prevents objects from entering the cab.

### Excavations

Each employee in an excavation shall be protected from cave-ins by an adequate protective system

Means of egress from trench excavations. A stairway, ladder, ramp or other safe means of egress shall be located in trench excavations that are 4 feet (1.22 m) or more in depth so as to require no more than 25 feet (7.62 m) of lateral travel for employees.

### Loading logs

Logs stacked on the road side must be placed in a stable position.

On those portions of roads under the direct control of the employer all danger trees that can fall or slide onto roadways must be felled. Loose rocks, stumps and other materials which present a hazard must be secured or cleared from banks.

Machines used for road construction activities on prepared surfaces with a slope of less than 20 percent are not required to have front and/or top cab protective structures when the machine's activities do not expose operators to the hazards of yarding, loading or timber falling.



## Machines used in Forest Activities

### What are the cab requirements?



All cab-designed machines used for forest activities **manufactured on or after July 1, 2004**, must be equipped with a fully enclosed operator cab that meets the requirements on the back of this page. (Cabs on older machines must meet 437-007-0770 requirements.) Machines include, but are not limited to, loaders, processors, skidders, crawler-tractors, shovels, yarders, delimiters, and forwarders. **NOTE:** The operating requirements and slope restrictions required under 437-007-0935(1)&(2) must be followed, regardless of cab guarding requirements.

**BUYERS BEWARE:** Failure to ensure that a machine complies with these requirements may result in a citation and Red Warning Notice that would prohibit the use of the machine.



A machine cab **manufactured on or after July 1, 2004**, is required to have a permanently attached label that is protected from weather damage and contains the following:



- ✓ All the International Organization Standardization (ISO) standards for which the protective structure has met the performance requirements
- ✓ Name and address of the Tip Over Protective Structure (TOPS) or Roll Over Protective Structure (ROPS) manufacturer (unless exempt)
- ✓ Manufacturer's TOPS or ROPS identification number (if any)
- ✓ Machine make and all models or series numbers the structure is designed to fit
- ✓ Maximum machine weight for the TOPS or ROPS

**WARNING:** If the machine does not meet the label requirement, it may not meet other Oregon OSHA cab guarding requirements.

### Loaders/Shovels/Processors/Feller-bunchers/Delimiters

These machines must be equipped with a fully enclosed cab that meets the requirements listed on the back of this page. Most machines with 360-degree upper-structure rotation are not designed and equipped with a certified ROPS. Because of this, machines of this type without ROPS, **manufactured on or after July 1, 2004**, must be limited to use on surfaces that are prepared, excavated, or constructed of solid material with a slope of less than 20 percent **unless** the operator cab is equipped with a certified TOPS and an Off-Boom Side Cab Guard.

**On or after July 1, 2014**, machines of this type **manufactured before July 1, 2004**, that are not equipped and maintained with a front and top guard structure meeting the performance criteria of SAE J1356:FEB88 or ISO 10262:1998 Level II, must meet the same requirements as the newer machines or be limited to the operating surface conditions listed above. They may also be used as an anchor for a cable yarding system where there is a clear path of travel and slopes are limited to 40 percent or less.



Read the complete Oregon OSHA rules for *Machines used in Forest Activities* (Division 7, Subdivision H) at [www.orosha.org/rules\\_laws.html](http://www.orosha.org/rules_laws.html)

## Requirements for Operator Protective Structures on Forestry Machines

Requirement	Applicable Standards	Description and Oregon OSHA Exceptions
Restraint System	SAE J386 or ISO 6683 Oregon OSHA 437-007-0775(5)	Establishes performance requirements for the operator's seat restraint system. <i>Exception:</i> Stationary yarders with guylines. <i>NOTE:</i> Not required to be worn on road graders when the grading activity requires the operator to stand.
Protective Structure Certification Label (sticker)	ISO 3471 or ISO 12117 Oregon OSHA 437-007-0775(6)	Defines label requirements to identify the level of protection for the operator cab, protective structure, or attached guarding. See front page. <i>Exception:</i> None
Operator Protective Structure	SAE J1084 or ISO 8084 Oregon OSHA 437-007-0775(7)	Establishes performance requirements for OPS to provide reasonable protection from objects that could pierce the cab (jill-poke), but not from chain shot. Protection covers the FRONT, BACK, and SIDES of cabs. <i>Exception:</i> Not required for the front window (only), in machines operating in sort yards, on landings and similar prepared surfaces, and when front guard meets SAE J1356 requirements.
Falling Object Protective Structure	ISO 8083 Oregon OSHA 437-007-0775(7)	Performance criteria for the Falling Object Protective Structure (FOPS) energy absorption parameters. <i>Exception:</i> None
Machine Access	SAE J185 or ISO 2867 Oregon OSHA 437-007-0775(9)	Specifies criteria for systems that provide access to the operator cab (e.g., steps, stairways, ladders, handrails, guardrails, and entrance openings). <i>Exception:</i> None
Second Egress	None Oregon OSHA 437-007-0775(10)	Requires a second means of cab egress that can be opened from both the inside and outside without tools. <i>Exception:</i> None
Front and Top Guards	SAE J1356 Oregon OSHA 437-007-0775(11)	Performance criteria for TOP GUARD and FRONT GUARD (vertical and longitudinal loads) energy absorption parameters. <i>Exceptions:</i> (1) Machines used for road construction activities on prepared surfaces with a slope of less than 20 percent, when activities do not expose operators to the hazards of yarding, loading, or timber falling; (2) front-end loaders when equipped with buckets or forks with hold-down grapple arms.
Roll Over Protective Structure	SAE J1040 or ISO 8082 Oregon OSHA 437-007-0775(12)	Performance criteria for acceptable TOP, LATERAL, and FRONT structure deflection in the event of a roll over. <i>Exceptions:</i> (1) Machines with 360-degree upper-structure rotation strictly used on surfaces that are prepared, excavated, or constructed of solid material with less than 20 percent slope, or as a cable yarding anchor used on slopes of 40 percent or less with a clear path of travel; (2) machines with 360-degree upper-structure rotation equipped with a certified TOPS and an Off-Boom Side Cab Guard; (3) high mast log stackers in sorting yards or transfer stations; (4) stationary yarders with guylines.
<b>Acceptable option for ROPS on 360-degree upper-structure rotation machines</b>		
Tip Over Protective Structure	ISO 12117 Oregon OSHA 437-007-0775(14)	Performance criteria for acceptable TOP, LATERAL, and FRONT structure deflection in the event of a tip over. See rule for additional information. <i>Exception:</i> Machines with 360-degree upper-structure rotation strictly used on surfaces that are prepared, excavated, or constructed of solid material with less than 20 percent slope, or as a cable yarding anchor used on slopes of 40 percent or less with a clear path of travel.
– and –	SAE J1356	Guard must comply with the "Front Guard" requirements for energy absorption parameters. <i>Exception:</i> Same as for TOPS.
Off-Boom Side Cab Guard	Oregon OSHA 437-007-0775(14)	

**WARNING:** Required guarding must be designed, constructed, and lab certified to meet all applicable SAE or ISO performance criteria. Repairs or modifications to major structural members of any operator cab, protective structure, or attached guarding must comply with the specific instructions of the original manufacturer or be certified by a professional engineer.