

DOSH DIRECTIVE

Division of Occupational Safety and Health

Department of Labor and Industries

Keeping Washington safe and working

33.20

Rollover Protective Structures (ROPS) and Low-Profile Tractors

Date: (Revised) June 20, 2011

I. Purpose

This directive establishes inspection procedures and enforcement policies related to Rollover Protective Structures (ROPS) and the exemptions from ROPS on low profile tractors in the agriculture industry.

For the purpose of this directive, “CSHO” refers to DOSH Consultants and Inspectors.

II. Scope and Application

This directive applies to all DOSH operations statewide. It replaces all previous instructions on this issue, whether formal or informal.

III. References

- Chapter 296-307 WAC, Safety Standards for Agriculture
- WAC 296-307-080, Rollover Protective Structures (ROPS) for Tractors
- OSHA CFR 1928.51, Rollover Protective Structures (ROPS) for Tractors Used in Agricultural Operations.

IV. Definitions

A. Roll-Over Protective Structures (ROPS) means a structure on a tractor that, in conjunction with a seatbelt, provides a zone of protection for the operator in case of a tractor rollover. The ROPS could be a two-post frame, a four-post frame, or an enclosed ROPS cab. The ROPS could be rigid, foldable or telescopic. For the ROPS to be effective, it must engage in the up position with the seatbelt fastened. ROPS for wheel-type tractors must meet the requirements of CFR 1928.51, and for track-type tractors must meet the requirements of SAE J334a (July 1970) and portions of SAE J167 (1971) Standards.

B. Low-Profile Tractor is a wheel- or track-equipped vehicle where the front wheel spacing is equal to the rear wheel spacing, as measured between the centerlines of the wheels. The clearance from the bottom of the tractor chassis to the ground is 18 inches or less. The highest point of the hood is 60 inches or less, and the tractor is designed so that the operator straddles the transmission when seated.

- C. Designed** means that according to the manufacturer, the tractor's structure (frame and axle housing) must be engineered with sufficient strength to withstand a rollover with ROPS installed.
- D. Minimum** means to the least extent necessary. To put in context, brief excursions outside of areas presenting "overhead clearance problems" are allowable.

Examples are:

- Turning around at the end of rows
- Working through areas, without overhead clearance problems, where the time to engage ROPS exceeds the area work time.

V. Background

Chapter 296-307 WAC, Part F, contains specific requirements related to rollover protective structures (ROPS) used in the agricultural industry. WAC 296-307-08015 (1) exempts "low-profile" tractors, "while they are used in orchards, vineyards or hop yards where the vertical clearance requirements would substantially interfere with normal operations..." and for work related to these uses. WAC 296-307-08015 (2) includes a similar exemption for use inside farm buildings or greenhouses but does not include the exemption for related uses. The "related uses" phrase contained in the requirement has created confusion in the agriculture industry regarding the exemption for ROPS on low-profile tractors.

VI. Enforcement Policy

- A.** In the application of WAC 296-307-080, CSHOs must only apply the exceptions for ROPS on low-profile tractors when there are vertical clearance obstructions substantially interfering with tractor operations in an orchard, vineyard, or hop yard, including work related to or connected to the orchard, vineyard or hop yard having substantial vertical clearance problem. In other words, low-profile tractors are exempt from the ROPS requirements, provided the work activity is related to an exempted use. This remains true regardless of the frequency of the use in question.
- B.** Work related or connected to the exemption means work in connection with the exempted uses. It includes going back to the shop to refuel the tractor, refilling the sprayer, eating lunch, etc. It also includes the travel between blocks where the exemption applies. It does **not** include the travel or work from an exempted area to a block where there are no vertical clearance problems that would substantially interfere with normal operations.
- C.** An employee using a low-profile tractor without ROPS due to overhead clearance problems that would substantially interfere with normal operations in an orchard, vineyard, or hops yard, is permitted to briefly work through non-interfering parts of an orchard, vineyard, or hop yard. However, work through non-exempt areas must be related to work in the exempt area and must be kept to a minimum.

- D. CSHOs must consider it a *de minimis* violation and not issue a citation if an employer is performing related-use work while a low-profile tractor is being used in a farm building or greenhouse where vertical clearance would substantially interfere with normal operations.
- E. Low-profile tractors are also exempt when used with mounted equipment that is incompatible with ROPS (for example, corn pickers, vegetable pickers and fruit harvesters). Tractors attached to hop towers or other implements can roll over on a steep hill or ditch at the end of the rows. If the hop tower or any other implement interferes with the ROPS, the tractor falls under the above exemption.
- F. For all tractors manufactured before October 25, 1976, if the tractor was designed to accommodate the addition of ROPS, then ROPS must be installed on the tractor, **unless** the manufacturer of the tractor provides the employer or the CSHO with proof that the tractor was not designed to be fitted with ROPS, or the tractor falls under the exempted uses.
- G. Homemade ROPS may be strong enough to withstand a roll-over, but they must not be used because the tractor may not be designed to take the ROPS option and the ROPS or tractor may fail in some way and not provide protection to the operator. Only approved OSHA 1928.51 CFR or similar National Consensus Standards ROPS must be fitted to agricultural tractors.
- H. Tractors used in horticulture, aquaculture, etc., are covered by Chapter 296-307 WAC, Safety Standards for Agriculture. Every tractor must have a ROPS fitted unless it is used in, or is itself, in an exempt category.
- I. ROPS on low-profile tractors would not be required where limbs or branches, trellises, overhead watering systems, or anchor wires at the end of a hop/orchard row create clearance problems that would substantially interfere with the normal operations.
- J. When a tractor is traveling between exempt blocks, the exemption clearly applies. The traveling is in conjunction with both exempt blocks.

The following are examples of the proper application of the exemptions:

Example 1:

An employee is using a low-profile tractor in an orchard, vineyard or hops yard, where ROPS would substantially interfere with normal operations, but the tractor must occasionally leave the orchard, vineyard or hop yard to return to its point of origin, refuel, load up the sprayer, return to the mechanical shop or area where ROPS was removed, etc. These uses are considered "related to" or "connected to" the work in the field where the exemption applies. However, if the same tractor moves to a different orchard, hops yard or vineyard where there is no overhead clearance problem, the exemption would **not** apply.

Example 2:

When a dairy farmer's employee uses a low-profile tractor inside a building where ROPS would substantially interfere with normal operations, the exemption would apply. The farmer's employee may leave the building occasionally to return a low-profile tractor to its point of origin, refuel, load the tractor bucket with shavings, eat lunch, etc. These incidental uses are considered "related to" the work in the building where the exemption applies.

Example 3:

An employee using a low-profile tractor without ROPS due to overhead clearance problems that would substantially interfere with normal operations in an orchard, vineyard or hops yard is permitted to briefly travel through non-interfering parts of an orchard, vineyard or hop yard. However, travel through non-exempt areas must be related to work in the exempt area and must be kept to a **minimum**. The employer must be able to explain such related or intermittent usage and why ROPS is not used for the work being performed.

VII. Special Compliance Protocols

CSHOs should contact the Agriculture Specialist in DOSH Standards and Technical Services, if they have questions regarding a specific situation or application of the standard.

Approved:



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For more information about this or other DOSH directives, contact the Division of Occupational Safety and Health at P.O. Box 44610, Olympia, WA 98504-4610, or call 360-902-5436. To review policy information on the DOSH website, go to: <http://www.lni.wa.gov/Safety>.