# ROLLOVER PROTECTIVE STRUCTURES (ROPS) FOR MATERIAL HANDLING EQUIPMENT

#### **COVERAGE**

This section (§1926.1000) applies to the following types of material handling equipment: all rubber-tired, self-propelled scrapers, rubber-tired front-end loaders, rubber-tired dozers, wheel-type agricultural and industrial tractors, crawler tractors, crawler-type loaders, and motor graders, with and without attachments, that are used in construction work. This requirement does not apply to sideboom pipelaying tractors.

The promulgation of specific standards for ROPS for compactors and rubber-tired skid-steer equipment is reserved pending consideration of standards currently being developed.

#### **EQUIPMENT MANUFACTURED ON OR AFTER SEPTEMBER 1, 1972**

Material handling machinery described above and manufactured on or after September 1, 1972, shall be equipped with ROPS which meet the minimum performance standards prescribed in §§1926.1001 and 1926.1002, as applicable.

### **EQUIPMENT MANUFACTURED BEFORE SEPTEMBER 1, 1972**

All material handling equipment described above and manufactured or placed in service (owned or operated by the employer) prior to September 1, 1972, shall be fitted with ROPS which meet the minimum performance criteria detailed in §§1926.1001 and 1926.1002, as applicable or shall be designed, fabricated and installed in a manner which will support, based on the ultimate strength of the metal, at least two times the weight of the prime mover applied at the point of contact.

The design objective shall be to minimize the likelihood of a complete overturn and thereby minimize the possibility of the operator being crushed as a result of a rollover or upset. The design shall provide a vertical clearance of at least 52 inches from the work deck to the ROPS at the point of ingress or egress.

Requirements for installation of ROPS on machines manufactured before July 1, 1969 are reserved pending further study, development, and review.

#### REMOUNTING

ROPS removed for any reason, shall be remounted with equal quality, or better, bolts or welding as required for the original mounting.

#### **LABELING**

Each ROPS shall have the following information permanently affixed to the structure:

- Manufacturer or fabricator's name and address;
- ROPS model number, if any;
- Machine make, model, or series number that the structure is designed to fit.

## MACHINES MEETING CERTAIN EXISTING GOVERNMENTAL REQUIREMENTS

Any machine in use, equipped with ROPS, shall be deemed in compliance with this section if it meets the ROPS requirements of the State of California, 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:

- State of California: Construction Safety Orders, issued by the Department of Industrial Relations pursuant to Division 5, Labor Code, §6312, State of California.
- U.S. Army Corps of Engineers: General Safety Requirements, EM-385-1-1 (March 1967).
- Bureau of Reclamation, U.S. Department of the Interior: Safety and Health Regulations for Construction. Part II (September 1971).

#### **NOTE:**

This Subpart W also includes the following sections that prescribe performance criteria for various ROPS:

§1926.1001 - Minimum performance criteria for ROPS for designated scrapers, loaders, dozers, graders, and crawler tractors

§1926.1002 - Protective frame (ROPS) test procedures and performance requirements for wheel-type agricultural and industrial tractors used in construction

§1926.1003 - Overhead protection for operators of agricultural and industrial tractors

The reader is encouraged to refer to these sections for detailed information.