Part XII POWERED MOBILE EQUIPMENT

Index

Section		Title		Revision Date
E251		OPERATION AND MAINTENANCE		September 2009
E261		ROLLOVER PROTECTIVE STRUCTURE (ROPS)		September 2009
E263		ROPS CERTIFICATION		September 2009

Explanations

The Standards listed below are referenced in this Part of the Regulations.

Standard Agency	Standard Number	Standard Title
CSA	*Z150*	*Safety Code for Mobile Cranes*
CSA	*C225*	*Vehicle – Mounted Aerial Devices*
NFPA	*1911*	*Standard for Inspection, Maintenance, Testing and Retirement of In – Service Automotive Fire Apparatus, 2007 Edition*
ISO	*9244:1995*	*Earth Moving Machinery – Safety Signs and hazard pictorials – General Principles*
CSA	*B335*	*Safety Standard for Lift Trucks*
SAE	*J1029 MAR86*	*Lighting and Marking of Construction and Industrial Machinery*
CSA	*B352.0 – 95*	*Rollover Protective Structures (ROPS) for Agricultural, Construction, Earthmoving, Forestry, Industrial and Mining Machines – Part 1: General Requirements*
CSA	*B352.1 - 95*	*Rollover Protective Structures (ROPS) for Agricultural, Construction, Earthmoving, Forestry, Industrial and Mining Machines – Part 2: Testing Requirements for ROPS on*

		Agricultural Tractors
CSA	*B352.2 - 95*	*Rollover Protective Structures (ROPS) for Agricultural, Construction, Earthmoving, Forestry, Industrial and Mining Machines – Part 3: Testing Requirements for ROPS on Construction, Earthmoving, Forestry, Industrial and Mining Machines*
SAE	*J1040 MAY94*	*Performance Criteria for Rollover Protective Structures (ROPS) for Construction, Earthmoving, Forestry and Mining Machines*
ISO	*3471:1994*	*Earth-Moving Machinery – Rollover Protective Structures – Laboratory Tests and Performance Requirements*

Section E251 OPERATION AND MAINTENANCE

Subsection E251(3) of the *OHS Regulations* states:

The design, fabrication, use, inspection and maintenance of mobile equipment shall meet the requirements of the following applicable standard or other standards acceptable to the minister:

Lift Truck: *CSA Standard B335 "Safety Standard for Lift Trucks"*

CSA Standard B335 describes training topics and provides detail for some training elements such as load pick-up and stacking. The standard is an expanded one compared to its earlier version. In addition to training requirements, it now includes general lift truck safety information and safe operating procedures, as well as design and construction specifications. The standard includes several sample pre-operation inspection check-lists for operators of electric and internal combustion lift trucks.

CSA Standard B335 also provides for retraining and upgrading. Retraining must occur at intervals not exceeding 3 years. The upgrade training course includes all relevant information, as applicable, with the content, delivery method, and individual learning needs of the operator determining the course length. Knowledge verification and practical evaluation is to be performed in the same manner as for initial training.

Refresher courses and retraining only need cover the aspects of lift truck operation that the operator is considered to be deficient in relative to the performance criteria specified in *CSA Standard B335*. If three years after the last refresher or upgrading course an operator is not considered by the employer to have any deficiencies relative to the performance criteria, the refresher course

could simply be a general job safety review with the operator. Upgrade training is also required when new or modified equipment is to be used, skill or performance deficiencies have been identified, or there are significant changes in the operator's job.

CSA Standard B335 also stipulates that operators undergo practical skills evaluation in accordance with the standard every 18 months, and that the results of this evaluation are documented. The practical skills evaluation must be conducted on the specific work tasks and using the classification of lift truck to which the operator is assigned.

Section E261 ROLLOVER PROTECTIVE STRUCTURE (ROPS)

Rollover protective structures (ROPS) are strong cages, frames, roll bars, or other structures attached to certain types of powered mobile equipment. ROPS systems are designed and built to provide crush protection for an operator during a rollover or accidental upset.

Subsection E261(2) This section pertains to equipment such as industrial ride-on lawnmowers weighing 700 kilograms or more. Rollovers involving industrial ride-on lawnmowers are most often the result of the lawnmowers hitting bumps, wheels dropping into holes, ditches, or structures such as swimming pools, wheels dropping off terraces, embankments, or retaining walls, and operating at full speed on steep slopes or during tight cornering. Rollovers have also occurred when machines have slid down slippery slopes.

Section E263 ROPS CERTIFICATION

The sweep arms on a rubber-tired skidder are intended to deflect material away from in front of the canopy. Sweep arms occasionally get damaged (bent or deformed) through contact with large trees or logs. On some machines the sweep arms are an integral part of the ROPS structure, in which case if the sweep arms are damaged, the ROPS must be replaced or "recertified".

The sweep arms are an integral part of the ROPS on the following skidders:

- Clark Ranger (all models except "D" series),
- Tree Farmer (units with open canopies), and
- Mountain Logger (all models).

The ROPS on the above machines should be replaced and/or recertified as required by Section 263 of the OHS Regulations, when there is structural damage to the sweep arms.

Damage to the sweep arms alone does not invalidate the ROPS certification on the following skidders:

- Timberjack (all models),
- John Deere (all models),
- Tree Farmer (units with enclosed canopies),
- Bombardier (BD l00, BD 200 models),
- Caterpillar (5l8, 528 models), and
- FMC (all models)