

## **Newfoundland and Labrador - Terre-Neuve-et-Labrador**

### **Powered Mobile Equipment**

*This material has been extracted from the Acts and Regulations of the Province of Newfoundland and Labrador to aid students in understanding the subject. It is not an official source of information and must not be used for any other purpose.*

Copyright © 2009: Queen's Printer, St. John's, Newfoundland and Labrador

### **Occupational Health and Safety Regulations, 2009 under the Occupational Health and Safety Act (O.C. 2009-233)**

## **PART XII**

### **POWERED MOBILE EQUIPMENT**

#### **Definitions**

- 250.** In this Part
- (a) "mobile equipment" means a wheeled or tracked vehicle which is engine or motor powered, together with attached or towed equipment, but does not include a vehicle operated on fixed rails or tracks;
  - (b) "no significant hazard of rollover" means an area in which there are no grades exceeding 10%, no operating areas with open edges, and no open ramps, loading docks, ditches or other similar hazards which may cause a rollover; and
  - (c) "specific location" means a yard, plant or other clearly defined and limited area in which mobile equipment is operated, but does not include a entire municipality, district, transient forestry operation or construction site.

#### **Operation and maintenance**

- 251.** (1) Mobile equipment shall be maintained in safe operating condition and operation, inspection, repair, maintenance and modification shall be carried out in accordance with the manufacturer's instructions or, in the absence of instructions, as approved by a registered professional engineer.
- (2) Servicing, maintenance and repair of mobile equipment shall be done
    - (a) when the equipment is not in operation; or
    - (b) when the equipment is in operation, where continued operation is essential to the process and a safe means is provided.
  - (3) 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:

<b>Equipment</b>	<b>Applicable Standard</b>
Mobile and Locomotive Cranes	CSA Standard Z150, "Safety Code for Mobile Cranes"
Vehicles with Mounted Aerial Devices (except fire-fighting equipment)	CSA Standard C225 "Vehicle-Mounted Aerial Devices"
Vehicles with Mounted Aerial Devices (fire fighting equipment)	NFPA 1911 "Standard for Inspection, Maintenance, Testing and Retirement of In-Service Automotive Fire Apparatus, 2007 Edition"
Safety and Hazard Warnings	ISO Standard 9244:1995 "Earth moving machinery -- safety signs and hazard pictorials -- General principles"
Lift Truck and Associated Operator training	CSA Standard B335 "Safety Standard for Lift Trucks"

- (4) Maintenance and inspection records shall be maintained and made reasonably available to the operator and maintenance personnel during work hours.
- (5) Mobile equipment used off maintained roads shall be appropriate and safe for the intended use taking into account factors including the nature of the travel surface and its slope and the activities to be undertaken.
- (6) Adequate and approved fire suppression equipment shall be provided where required by the minister.

### **Competency and testing operators**

- 252.** (1) A person shall not operate mobile equipment unless he or she
- (a) has received adequate instruction and has demonstrated to a supervisor or instructor that he or she is a competent equipment operator;
  - (b) has been authorized to operate mobile equipment;
  - (c) is familiar with the operating instructions for particular equipment before he or she attempts to operate it; and
  - (d) has, where required to operate an air brake equipped vehicle, evidence of successful completion of a course on air brake systems issued by an organization acceptable to the minister.
- (2) Subsection (1) does not apply where a trainee operates the equipment under the supervision of a qualified instructor or supervisor as authorized by the employer.

### **Operator's responsibility**

- 253.** (1) The operator of mobile equipment shall operate the equipment safely, maintain full control of the equipment, and comply with the laws governing the operation of the equipment.
- (2) The operator of mobile equipment shall ensure that a worker is not in close proximity to the swing radius of the equipment while it is in operation.

### **Supervisor's responsibility**

- 254.** A supervisor shall not knowingly operate, or permit a worker to operate, mobile equipment which is, or which could create, an undue hazard to the health or safety of a person, or which is in violation of these regulations.

### **Warning signal device**

- 255.** (1) Mobile equipment shall be equipped with an audible warning signal device as follows:
- (a) where the mobile equipment is capable of a forward speed exceeding 8 kilometres an hour;
- (b) where mobile equipment operates in reverse motion, it shall be equipped with a suitable audible warning device that initiates automatically when the equipment starts to move in reverse and which continues to operate while the equipment is moving in reverse; and
- (c) where the mobile equipment is not capable of speeds greater than 8 kilometres an hour, the minister may, in exceptional circumstances, order the use of an audible warning device.
- (2) Where an audible warning device referred to in subsection (1) cannot be clearly heard or identified above the noise of other equipment or surrounding noise, another warning device or measure shall be utilized.

### **Lights**

- 256.** (1) Mobile equipment used during the period from 1/2 hour after sunset to 1/2 hour before sunrise, or when a person or vehicle is not clearly discernible at a distance of 150 metres shall have and use light to adequately illuminate
- (a) the direction of travel;
- (b) the working area about the mobile equipment; and
- (c) the cab instruments.
- (2) A headlight and backing light required by paragraph (1)(a) shall meet the requirements of Society of Automotive Engineers (SAE) J1029 MAR86 "Lighting and Marking of Construction and Industrial Machinery".

### **Rear view mirrors**

- 257.** (1) Mobile equipment shall have a mirror providing the operator with an undistorted reflected view to the rear of the mobile equipment or combination of mobile equipment, except as provided in subsection (2).
- (2) Where necessary to improve rear vision, a combination of parabolic and flat mirrors may be used.

### **Load handling attachments**

- 258.** Buckets, forks, booms, hoists and other load handling attachments shall only be installed on mobile equipment as specified by the equipment manufacturer or where certified by a professional engineer for use on the equipment.

### **Load ratings**

- 259.** (1) Mobile equipment designed and used for lifting, hoisting or similar operations shall have a permanently affixed notation, legible and visible to the operator, stating the rated load of the equipment.
- (2) A load chart shall be displayed in the operator's cab where the rated load varies with the reach of the equipment.

### **Operative protective structures**

- 260.** (1) An equipment operator shall be protected against falling, flying or intruding objects or materials by means of a suitable cab, screen, grill, deflector or guard that meets the design criteria of the Society of Automotive Engineers applicable recommended practice.
- (2) A worker shall not remain in the cab of a vehicle while loads are elevated over the cab unless the cab is protected by an adequate overhead guard.

### **Rollover protective structures**

- 261.** (1) The following types of mobile equipment weighing 700 kilograms or more shall have rollover protective structures ("ROPS"):
- (a) crawler tractors, dozers, loaders and skidders;
  - (b) wheeled tractors, dozers, loaders and skidders;
  - (c) motor graders;
  - (d) self-propelled wheel scrapers;
  - (e) agricultural and industrial tractors;
  - (f) compactors and rollers; and
  - (g) self-propelled rock drills moved by an on-board operator.
- (2) The minister may require a rollover protective structure to be installed on mobile equipment, other than mobile equipment referred to in subsection (1), where the design of the equipment or circumstances of use indicate the need.

### **Rollover protective structure standards**

- 262.** A rollover protective structure shall meet the requirements of one of the following applicable standards or other standard acceptable to the minister:
- (a) CSA Standard B352.0-95 "Rollover Protective Structures (ROPS) for Agricultural, Construction, Earthmoving, Forestry, Industrial, and Mining Machines -- Part 1: General Requirements",
  - (i) CSA Standard 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", or

- (ii) CSA Standard 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 Machine";
  - (b) Society of Automotive Engineers (SAE) Standard J1040 MAY94 "Performance Criteria for Rollover Protective Structures (ROPS) for Construction, Earthmoving, Forestry, and Mining Machines"; and
  - (c) ISO Standard 3471: 1994 "Earth-moving Machinery -- Rollover Protective Structures -- Laboratory Tests and Performance Requirements".
- Rollover protective structure certification
- 263.** (1) A rollover protective structure shall be certified by the manufacturer or a professional engineer as meeting a standard specified in section 262.
- (2) An addition, modification, welding or cutting on a rollover protective structure shall be done in accordance with the instructions of, and be recertified by, the manufacturer or a professional engineer.

#### **Rollover protective structure identification**

- 264.** (1) The following information shall be permanently marked upon a rollover protective structure:
- (a) the name and address of the manufacturer or the professional engineer who certified the rollover protective structure;
  - (b) the model number or other effective means of identifying the machine for which the rollover protective structure was designed;
  - (c) the serial number or other unique means of identifying the rollover protective structure;
  - (d) the maximum weight of the machine for which the rollover protective structure was designed; and
  - (e) the standard to which the rollover protective structure conforms.
- (2) A modified rollover protective structure shall be permanently marked with the following information:
- (a) an identification of the modifications effected;
  - (b) the date of recertification; and
  - (c) the name and address of the recertifying engineer.

#### **Effect of rollover protective structure on visibility**

- 265.** A rollover protective structure or other structure required by this Part for the protection of the operator shall be designed and installed to provide an adequate view to allow the operator to safely use the machine.

#### **Seating and standard requirements**

- 266.** (1) A well designed and constructed, safely located and securely mounted seat and seat belt or other safe facilities shall be provided for the operator of powered mobile equipment and a passenger.

- (2) Safe facilities for an equipment operator, referred to in subsection (1), shall include:
  - (a) footboards or platforms upon which the workers stand or sit, located to protect workers from accidental contact; and
  - (b) handholds; or
  - (c) safety-belts, harnesses, guardrails or other effective means of restraint.
- (3) Subsection (1) does not apply to mobile equipment designed to be controlled by an equipment operator in a standing position.
- (4) Where mobile equipment is equipped with seat belts, in conformity with these regulations or other applicable federal or provincial legislation, the installations shall be maintained and they shall be worn by the equipment operator and passengers at all times while the equipment is in motion, or when operated in a stationary mode.
- (5) Where a road grader is operated with cab doors open, and the equipment operator is necessarily in a standing position and unable to comply with subsection (4), additional restraining devices approved by the minister shall be installed and used to prevent occupants from falling from the cab.
- (6) Where an equipment operator is required to operate in a standing position, there shall be protection provided equivalent to the protection required under subsection (5) in the form of a restraining harness designed to prevent the equipment operator being thrown from the cab in a roll-over situation, but the restraining harness shall have a quick release device.

#### **Start of shift inspection**

- 267.** (1) An operator shall inspect the mobile equipment before the start of operation on the shift and after that where required to ensure the safe operating condition of the equipment and a defect or other condition affecting the safe operation of the equipment shall be reported immediately to the supervisor or employer.
- (2) A repair or adjustment necessary for the safe operation of the equipment shall be made before the equipment is used.

#### **Securing tools and equipment**

- 268.** An operator shall maintain the cab, floor and deck of mobile equipment free of material, tools or other objects which could create a tripping hazard, interfere with the operation of controls, or be a hazard to the operator or other occupants in the event of an accident.

#### **Unattended equipment**

- 269.** An operator of mobile equipment shall not leave the controls unattended unless the equipment has been secured against inadvertent movement, including by setting the parking brake, placing the transmission in the manufacturer's specified park position and by chocking wheels where necessary, and buckets and blades shall be landed in a safe position before equipment controls are left unattended.

### **Securing elevated loads**

- 270.** (1) An elevated load, part, extension or machine, shall not be left unattended by an operator unless it has been immobilized and secured against inadvertent movement.
- (2) Where a worker is required to work beneath an elevated part of mobile equipment, the elevated part shall be securely blocked.
- (3) An hydraulic or pneumatic jack shall not be used for blocking unless it has been fitted with a device to prevent collapse in the event of loss of hydraulic or pneumatic pressure.

### **Swinging equipment**

- 271.** Where the swinging movement of a load, cab, counterweight or other part of mobile equipment creates a hazard, a worker shall not be within range of the swinging load or equipment, and the operator shall not move the equipment when a worker is so exposed.

### **Obstructed view**

- 272.** Where a mobile equipment operator's view of the work area is obstructed, the operator shall not move the equipment until precautions have been taken to protect the operator and another worker from injury, including
- (a) immediately before the movement, the inspection by the operator on foot of the area into which the equipment is being moved;
- (b) direction by a signaller
- (i) stationed in a safe position in continuous view of the operator,
- (ii) having an unobstructed view of the area into which the equipment is being moved, and
- (iii) not being otherwise occupied while the equipment is in motion; or
- (c) direction by a traffic control or warning system.

### **Guy lines**

- 273.** (1) Guy lines passing over travelled roads shall be rigged at a sufficient height to clear all traffic.
- (2) Guy lines which are not at sufficient height to clear all traffic shall be clearly identified in accordance to standards acceptable to the minister.

### **Pedestrian and equipment traffic**

- 274.** (1) Where practicable, designated walkways shall be used to separate pedestrian traffic from areas of operation of mobile equipment.
- (2) Where it is impracticable to provide designated walkways, adequate safe work procedures to minimize the possibility of collision shall be used in hazardous work areas, including
- (a) use of a traffic control system;
- (b) enforcement of speed limits for mobile equipment; and
- (c) a requirement for the pedestrian and the mobile equipment operator to acknowledge each other's presence before the pedestrian proceeds through the hazardous area; or

- (d) other effective means.

### **Securing loads**

- 275. (1) When material or equipment is being transported, it shall be loaded or secured to prevent movement of the load which could create a hazard to workers.
- (2) To protect the crew of a vehicle transporting a load which may shift on rapid deceleration, a means of load restraint shall be provided that
  - (a) prevents significant load shift relative to the carrier under emergency stopping conditions; and
  - (b) meets a standard acceptable to the minister.

### **Restraint for cylindrical objects**

- 276. Cylindrical objects transported on their sides shall be effectively restrained against inadvertent movement.

### **Lift truck loads**

- 277. (1) A unitized load transported on a lift truck shall not project a distance greater than half its height above the fork carriage, back rest or back rest extension of the lift truck.
- (2) No part of a load comprised of loose objects may project above the fork carriage, back rest or back extension of a lift truck.
- (3) A load which could shift during transportation shall be restrained where shifting would result in the instability of the load or the lift truck.

### **Tire installation**

- 278. (1) An employer shall
  - (a) establish and implement safe work procedures for servicing mobile equipment, tires, rims and wheels, including
    - (i) inspecting tire, rim and wheel components,
    - (ii) mounting a tire to the rim and wheel, and inflating a tire,
    - (iii) installing and removing tire assemblies from mobile equipment, and
    - (iv) demounting tires from the rim and wheel assemblies; and
  - (b) ensure that tire limits are not exceeded.
- (2) A worker assigned to work on tires, rims and wheels shall be trained in and follow the safe work procedures established under subsection (1).

### **Equipment and procedures**

- 279. (1) A tire shall be deflated before demounting, and deflation shall be done in an area where ignition sources are controlled or removed.
- (2) A tire, rim and wheel part shall be cleaned and inspected for damage before mounting, and a cracked, broken, bent or otherwise damaged part replaced.
- (3) A tire shall be inflated using a remote chuck with a sufficient length of hose and an inline, hand operated valve with a gauge so the worker is

outside the likely trajectory should wheel components separate during inflation.

- (4) A tire mounted on a multipiece rim wheel shall be placed in a cage or other restraining device when it is being inflated.
- (5) Where a bead expander is used to seat the beads of a tire, it shall be removed before the tire is inflated to more than 34.5 kPa (5 psi).
- (6) Welding or heating on an assembled rim or wheel part is not permitted, except that limited heating to facilitate removal of a wheel from a hub is acceptable after the tire has been deflated by removing the valve core.
- (7) A tire on a multipiece rim wheel shall be deflated to atmospheric pressure by removing the valve core or by other effective means before demounting, and in the case of a dual wheel arrangement, both tires shall be deflated to atmospheric pressure before a wheel nut is loosened.
- (8) Multipiece rim and wheel components shall not be interchanged except as permitted by rim/wheel charts from the appropriate rim/wheel manufacturer.
- (9) A multipiece rim wheel which has been used at less than 80% of the recommended inflation pressure for that application shall be deflated, disassembled and inspected before reinflation.